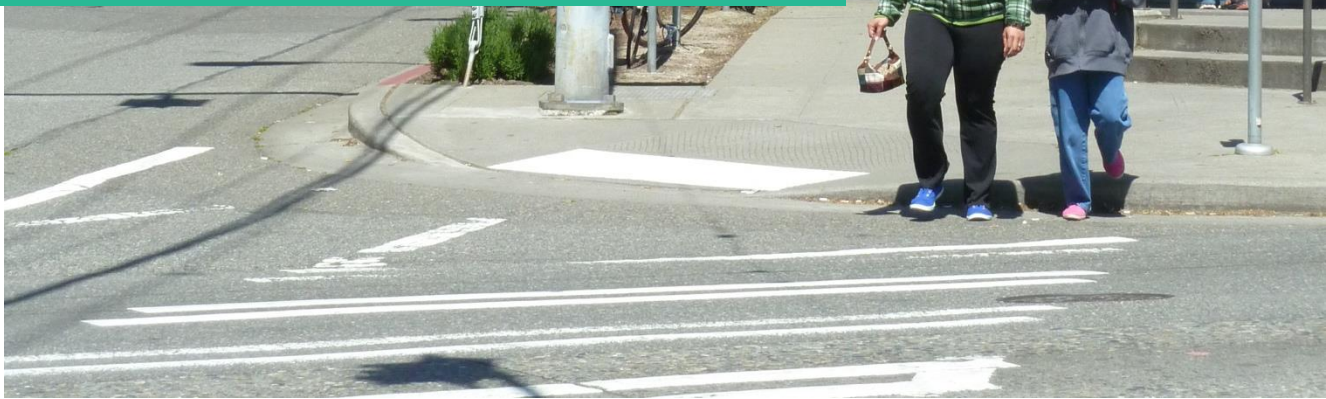


# Draft Design, Policy, and Programming Recommendations

Pedestrian Master Plan

 Montgomery Planning



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# INTRODUCTION



The Pedestrian Master Plan's draft Design, Policy, and Programming Recommendations will help Montgomery County make progress toward becoming more pedestrian-friendly and achieving the goals of the Pedestrian Master Plan. The recommendations in the document are informed by the March 2022 [\*Pedestrian Master Plan Existing Conditions Report\*](#), which provided a deep understanding of existing pedestrian conditions and attitudes in the county and was based on four main data sources:

- A statistically valid **pedestrian survey** that documents pedestrian activity and perceptions for the county as a whole and for different land-use types, sent to 60,000 households;
- A **student travel tally** that describes how public school students arrive to and depart from school, completed by over 70,000 students;
- A **comfortable pedestrian connectivity analysis** cataloging pedestrian conditions along the entirety of the pedestrian transportation network in Montgomery County; and
- A **2015-2020 pedestrian crash analysis** identifying trends in pedestrian crashes.

While pedestrian comfort and safety need to be improved throughout the county, particular areas of focus emerged from the *Pedestrian Master Plan Existing Conditions Report* and are organized around the plan's four goals:

- **Goal 1: Increase Walking Rates and Walking Satisfaction in Montgomery County:** Address issues pedestrians with disabilities encounter, improve pedestrian satisfaction along streets, and improve pedestrian satisfaction at crossings.
- **Goal 2: Create a Comfortable, Connected, Convenient Pedestrian Network in Montgomery County:** Fill sidewalk gaps, prioritize buffers on high-speed streets, provide pedestrian refuges, focus on crossing improvements, improve comfortable access to elementary schools, and prioritize safer crossings to parks.
- **Goal 3: Enhance Pedestrian Safety:** Reduce high-speed pedestrian crashes, address safety disparities, improve lighting, and communicate permitted pedestrian activity.
- **Goal 4: Build an Equitable and Just Pedestrian Network:** Address the above findings in a way that meets the needs of the entire community.

Words or phrases defined in the glossary at the end of this document are underlined at first reference in the text.

## Themes

The draft recommendations are organized around six themes:

- **Build**  
These recommendations identify opportunities to build pedestrian amenities better, faster, safer, and more equitably.
- **Maintain**  
These recommendations clarify existing regulations and propose changes to how the county and private property owners care for sidewalks, pathways, and other pedestrian spaces so that these public investments can provide a high quality of service for everyone for years to come.
- **Protect**  
These recommendations aim to making walking safe in Montgomery County and to eliminate walking-related fatalities and severe injuries in line with the county's commitment to Vision Zero.
- **Expand Access**  
The pedestrian environment is difficult or impossible for some members of the community to use. These recommendations aim to make the pedestrian system more accessible to people with disabilities.
- **Monitor**  
These recommendations track the county's progress in achieving the plan's vision and identify opportunities to improve the quality of pedestrian data collection.
- **Fund**  
Achieving the Pedestrian Master Plan vision will require resources that exceed current spending on pedestrian and safety efforts. These recommendations identify additional potential revenue sources.



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

## B-1: Build more sidewalks faster

The recently approved Complete Streets Design Guide recommends sidewalks on both sides of the street with adequate buffers from traffic. However, the county's busiest roads lack about 220 miles of sidewalk (on one or both sides of the road), about 54% of sidewalks do not meet the minimum widths (5 feet) and about 22% lack a buffer from traffic. With the need for new and reconstructed sidewalks far exceeding the county's capacity to build them, the following key actions help build more sidewalks faster.

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

### Key Actions:

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

An approach to sidewalk construction that relies on community requests does not necessarily address those locations with the greatest need. Using a data-driven approach to allocating the limited resources of the Annual Sidewalk Program will ensure that the highest-priority connections are made and that resources are expended equitably.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT

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

Today, public engagement around sidewalk projects tends to be centered around whether a sidewalk project should be constructed, and some important projects do not advance due to public concerns. The public process around sidewalk construction should be reframed to focus on how the sidewalks in question can best be constructed, not whether they should be

constructed at all. This approach will lead to a more efficient engagement process that uses staff time and funding more effectively, ultimately resulting in more sidewalks being built.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT

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

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

Goal(s): Increase Walking Rates, Comfortable/Connected Pedestrian Network

Lead: MCDGS, MCPS, Montgomery Planning

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

Currently, 41% of pedestrian pathway mileage in the county is rated as uncomfortable or undesirable, based on Montgomery Planning’s [Pedestrian Level of Comfort \(PLOC\)](#) metric. To improve the comfort of walking, this recommendation establishes a minimum comfort standard of “somewhat comfortable” for new and reconstructed sidewalks as part of capital improvement and private development projects. This ensures that future sidewalks and pedestrian pathways are designed and constructed to be navigable and comfortable.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, Montgomery Planning

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

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

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

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, Montgomery Parks



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

**B-1f: Amend Montgomery County's Residential Permit Parking Guidelines to allow MCDOT to remove residential permit parking areas in support of another transportation purpose.**

Executive Regulation 24-16 allows for the creation of residential permit parking areas within 4,000 feet of light rail or Metrorail stations. Often, right-of-way currently dedicated to on-street parking in these locations is needed to improve safety for pedestrians and bicyclists. As the regulation is written, without support from a majority of residents along the block face, the residential permit parking zone cannot be removed, leading to more expensive capital projects because right-of-way purchases or utility relocation may be required to get the project done.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: County Executive



*Residential Permit Parking signage*



## B-2: Pedestrians should not have to press a button to cross the street

Pedestrians should not need to press a button to safely cross the street, and yet in much of Montgomery County, this is the case. Asking permission to cross the street is not something we ask of people traveling by car or bus and a pedestrian-friendly place avoids the “beg button” wherever possible. The key actions below help the county achieve this recommendation by eliminating the need to push a button: in urban areas the default would be to automatically provide pedestrians time to cross the street during every signal cycle; in suburban and country areas where there are often fewer people walking today, the county would use creative technologies to prioritize pedestrians.

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

### Key Actions:

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

Currently, pedestrian phases at signalized intersections can be configured as push-button actuated or recall. Push-button actuation requires the pedestrian to push a button to receive a walk signal and is not automatically triggered. However, in urban areas where pedestrian activity is much greater, recall should be the default configuration as it automatically provides a pedestrian crossing phase every signal cycle and removes the onus from the pedestrian to push a button to request the walk signal.

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

Lead: MCDOT, MDOT SHA



*A pedestrian push button. Photo: Montgomery County Government*

#### **B-2b: Implement passive detection (such as sensors) to eliminate the need for pedestrians to press a button to safely cross the street in areas where pedestrian recall is not desirable.**

In Suburban and Country areas of the county where providing a pedestrian crossing phase via pedestrian recall in every signal cycle may have negative effects on traffic flow, passive detection provides an option that eliminates the need to push a button while minimizing impacts to traffic. Using sensors, the signal detects an approaching pedestrian and adds a phase to the signal cycle so that pedestrian can safely cross the street.

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

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

Lead: MCDOT, MDOT SHA

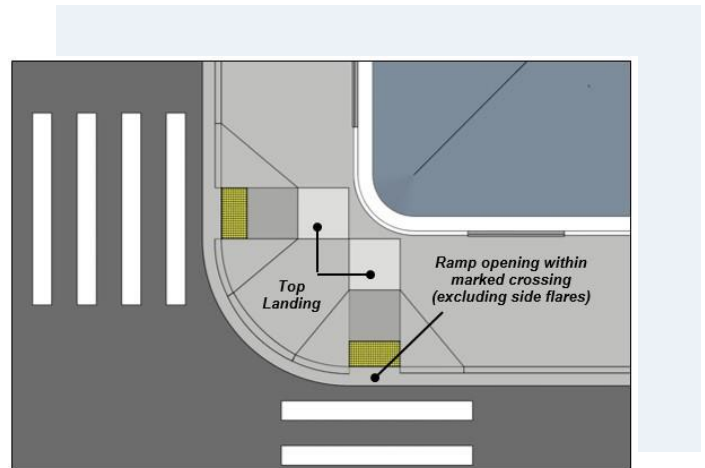
### B-3: Create direct and accessible street crossings

High-quality street crossings connect communities and make it easier to access local destinations like schools, parks, and transit stops. The Pedestrian Level of Comfort analysis for the county found that while the majority of the pathways in the county are comfortable (58%), only 44% of street crossings are comfortable. Coupled with 46 percent satisfaction with the number of marked crosswalks and 42 percent satisfaction with the number of places to safely cross the street in the Countywide Pedestrian Survey, it is clear that street crossings countywide need to be improved. The key actions below achieve the recommendation by encouraging more intuitive curb ramp and crosswalk design, enhancing pedestrian right-of-way while crossing, and supporting the installation of more direct pedestrian crossing locations.

#### Key Actions:

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

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



*Perpendicular curb ramps directly aligned with appropriate crosswalks. Graphic: U.S. Access Board*

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

Lead: MCDOT, MDOT SHA

**B-3b: Update the Complete Streets Design Guide to establish ladder-style, high-visibility crosswalks as the default crosswalk design in Montgomery County.**



*The ladder crosswalk markings on the far right can be compared to the continental and standard markings. Graphic: SF Better Streets*

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

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

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

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

Lead: MCDOT



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

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

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

Goal(s): Equitable and Just Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT, MDOT SHA



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

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

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



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

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

Goal(s): Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT, MDOT SHA

## **B-4: Build more walkable places**

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

### **Key Actions:**

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

To increase walking, plans need to encourage situations where walking is preferable. Creating dense mixed-use clusters and adding density to existing mixed-use clusters is the most effective way to achieve this goal and is strongly emphasized in Thrive Montgomery 2050.

Goal(s): Increase Walking Rates, Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning

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

Making walking the preferred transportation mode for accessing public buildings like schools, community centers, and libraries is strongly influenced by where pedestrian pathways are placed on the site and how they are designed. To make public buildings as pedestrian-friendly as possible, they should be placed adjacent to nearby sidewalks, avoid directing pedestrians through parking lots, provide a welcoming, prominent pedestrian entrance, and incorporate other best practices for safe pedestrian access.

Goal(s): Increase Walking Rates

Lead: MCDGS, MCPS, Montgomery Planning

**B-4c: Revise minimum acreage requirements for school sites to facilitate smaller school footprints better integrated into adjacent communities.**

Minimum acreage requirements can discourage the use of smaller sites and buildings that are embedded within walkable neighborhoods in favor of larger tracts at the edge of the community that are less conducive for walking. Revising minimum acreage requirements would allow more walkable infill parcels to be considered for schools, making it more likely that future students will walk to school.

Goal(s): Increase Walking Rates

Lead: MCPS

**B-4d: Update the Complete Streets Design Guide to include a transit corridor overlay to provide additional context-based guidance on crossings and target speeds.**

Montgomery County's rail and bus rapid transit corridors pass through both Urban and Suburban areas, but existing guidance for the Boulevard street type in the Complete Streets Design Guide does not recommend adequate target speeds and protected crossing spacing along existing and planned transitways —features necessary to enhance pedestrian safety, improve pedestrian comfort, and shorten walking trips. As transit corridors such as Georgia Avenue, Veirs Mill Road, and University Boulevard account for 10% of fatalities and severe injuries but only 1.3% of roadway miles, more frequent protected crossings and lower target speeds are needed on these roads to achieve Vision Zero.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT, Montgomery Planning

**B-4e: Create a grid of streets and alleys along transit corridors with block sizes based on the protected crossing spacing standards in the Complete Streets Design Guide.**

Many of Montgomery County's rail and bus rapid transit corridors are characterized by long blocks and are lined with commercial and residential driveways. Longer block length limits routing options for pedestrians and encourages them to cross streets at unsafe places because protected crossing locations are spaced too far apart. Driveways create conflict points between cars and pedestrians. Tools are needed to reduce the size of these blocks by expanding the street grid and to consolidate and relocate driveways to side streets and alleys.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: Montgomery Planning, MCDOT



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

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

Goal(s): Increase Walking Rates

Lead: MCDOT, Montgomery Planning

**B-4g: Make the Open Parkways along Beach Drive and Sligo Creek Parkway permanent.**

Montgomery County should build on the success of the Open Streets program by taking steps to make it permanent. The Rock Creek and Sligo Creek Parkway trails are some of the most popular in the county. Opening Beach Drive and Sligo Creek Parkway to active transportation permanently will provide more safe, comfortable, and direct spaces for walking and bicycling.

Precedent(s): San Francisco recently made JFK Drive through Golden Gate Park car-free.

Goal(s): Comfortable/Connected Network

Lead: Montgomery Parks

**B-4h: Provide public seating in Downtowns, Town Centers, and along Boulevards.**

For the elderly, people with disabilities, and others, a lack of resting places along a walking route may rule out walking as a mode of transportation. Providing public seating in Downtowns and Town Centers and along Boulevards makes it easier for these individuals to walk in areas of the county with the greatest pedestrian activity. Public seating should be built as part of both public and private projects.

Goal(s): Increase Walking Rates, Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Lead: MCDOT, Montgomery Planning

## B-5: Light pathways and crossings

Pedestrians should be able to see where they're going when walking at night, feel secure walking in the dark, and feel confident that drivers will see them when crossing the street. However, only 32 percent of surveyed residents say they are satisfied with the quality of overhead lighting along pathways and at crossings. The key actions highlight two avenues to achieving improved pedestrian lighting countywide.

### Key Actions:

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

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

Goal(s): Enhance Pedestrian Safety, Increase Walking Rates

Lead: MCDOT, Montgomery Planning

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

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

Goal(s): Enhance Pedestrian Safety, Increase Walking Rates

Lead: MCDOT, Montgomery Planning

## B-6: Shade pedestrian pathways

Shade makes walking more comfortable by lowering the temperature of the air and ground, making a walk more pleasant on a hot day, and mitigating the dangerous effects of climate change. However, only about 25% of sidewalks in the county have shade, and along the county's busiest roads, sidewalks in Equity Focus Areas have less shade than those in other areas of the county. The county's Climate Action Plan includes a specific recommendation to retain and increase tree canopy. These key actions are supportive of that goal by identifying approaches to planting more trees along sidewalks and trails.

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

### Key Actions:

#### **B-6a: Develop and implement a plan to improve shading along sidewalks with a focus on adding shade in Equity Focus Areas.**

Prioritize adding shade along higher classifications streets in Equity Focus Areas.

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

Lead: MCDOT, MDOT SHA, Montgomery Planning

#### **B-6b: Create a new Capital Improvement Program (CIP) project to plant and maintain new street trees, especially in areas with poor canopy coverage.**

While the county's Tree Montgomery program and Street Tree Preservation CIP project replace and maintain trees, a new CIP project should be created to plant new street trees.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, County Executive, County Council

### **B-7: Create more pedestrian connections and formalize pedestrian shortcuts**

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

### Key Actions:

#### **B-7a: Increase funding for the Annual Sidewalk Program and other related capital improvement program efforts to address missing, broken, or substandard sidewalks and other infrastructure.**

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

Goal(s): Comfortable/Connected Pedestrian Network

Lead: County Executive, County Council, MCDOT



**B-7b: Create a new Capital Improvement Program (CIP) project to build, reconstruct and resurface master-planned pedestrian shortcuts, Neighborhood Connectors and other pedestrian connections.**

While existing capital improvement program projects are authorized to build, reconstruct, and resurface pedestrian shortcuts, in practice these projects are used to build more substantial pedestrian connections. Therefore, a distinct program focused on building, reconstructing, and resurfacing pedestrian shortcuts and Neighborhood Connectors is needed.

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

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, County Executive, County Council, Montgomery Planning



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

**B-7c: Create a new Capital Improvement Program (CIP) project to build pedestrian and bicycle connections to park land.**

Montgomery Parks will be identifying additional access points and other opportunities on park property to increase pedestrian and bicycle connections. This CIP project would provide dedicated funding to complete projects that connect from park land to the existing pedestrian and bicycle network.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: County Executive, County Council, MCDOT, Montgomery Parks

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

Private property owners regularly seek the abandonment of adjacent rights-of-way. This recommendation would limit the instances where abandonments should be permitted.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning, MCDOT, MCDPS, County Council



*A grassy "paper street" connects two streets between houses*

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

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

Goal(s): Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning, MCDOT

**B-7f: Fund pedestrian and bicycle access improvement to transit stations concurrently or as part of transit projects.**

Transit improvements like light-rail or bus rapid transit have the potential to substantially improve transportation options, however, these investments need to be paired with pedestrian and bicycle station access improvements to be fully realized.

Goal(s): Comfortable/Connected Pedestrian Network, Increase Walking Rates

Lead: MCDOT, MDOT SHA

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

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

### Key Actions:

#### **B-8a: Develop a park access master plan to identify new pedestrian connections to and through parkland.**

Direct and accessible pedestrian connections to and through parks are limited in some locations. This plan will increase hard surface park access points so neighboring communities can more directly access park resources and travel through park land to connect to local destinations.

Goal(s): Comfortable/Connected Pedestrian Network, Increase Walking Rates

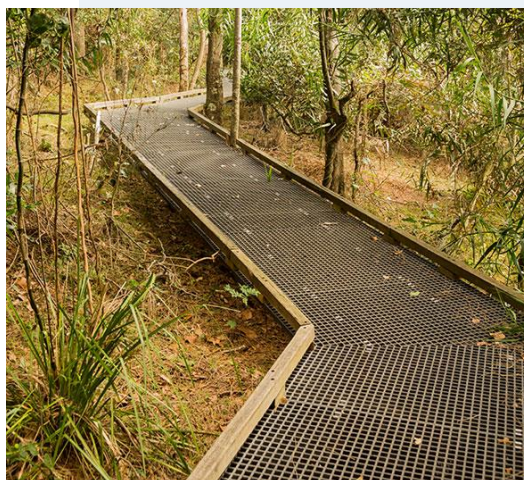
Lead: Montgomery Parks, Montgomery Planning

#### **B-8b: Use environmentally sensitive trail materials and construction approaches to provide pedestrian connections through park land.**

Parks provide immeasurable benefits to their surrounding communities, but they can also be difficult to access and act as barriers between adjacent neighborhoods for pedestrians. With a context-sensitive approach that acknowledges the important role parks can play in pedestrian travel, park land can be an even greater force for connecting communities.

Goal(s): Increase Walking Rates,  
Comfortable/Connected Pedestrian Network

Lead: Montgomery Parks, Montgomery Planning



*Metal boardwalk snakes through park land. Photo: Marco Specialty Steel*

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

Forest conservation areas and their restrictions on disturbance can act as barriers to pedestrian connectivity, leading to more circuitous pedestrian trips or pedestrian trips that



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

Goal(s): Comfortable/Connected Pedestrian Network, Increase Walking Rates

Lead: Montgomery Planning, County Council, Montgomery Parks, MD DNR

**B-8d: Require development projects in areas with impervious surface caps or other similar limitations to prioritize construction of all required sidewalks and bikeways to standard dimensions.**

In certain parts of the county, development projects have moved forward with internal sidewalk networks on only one side of streets to limit impervious surfaces. This makes it more difficult for pedestrians to travel through these communities and encourages driving for walkable trips. Pedestrian pathways and bikeways required by applicable master plans, the Complete Streets Design Guide, the Zoning Code, and county regulations need to be prioritized in all communities.

Goal(s): Comfortable/Connected Pedestrian Network

Lead Agency: Montgomery Planning, MCDOT

**B-8e: Study adjusting impervious surface caps in relevant Special Protection Areas (and other areas with impervious surface restrictions) to take into account the perviousness of planned pedestrian pathways and bikeways.**

In Special Protection Areas and other areas with impervious regulations, sidewalks and other pedestrian amenities along public streets often cannot be constructed without removing impervious surfaces from other locations in the same general area. Sometimes, this tradeoff cannot feasibly be made, so the pedestrian amenities are not constructed. As a result, pedestrian connectivity in these areas suffers. The Planning Department should conduct a study with MCDOT to understand the total impervious impact of planned pedestrian and bicycle infrastructure adjust the relevant impervious caps to take these pathways and bikeways into account — allowing them to be built in these areas, while maintaining water quality.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning, MCDOT, County Council

## B-9: Make traffic calming easier to implement

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

### Key Actions:

#### **B-9a: Assess the impact of Complete Streets Design Guide standards and related procedures on traffic calming implementation.**

The Complete Streets Design Guide increases the type and location of potential traffic calming infrastructure in Montgomery County. Within the next two years, conduct a study to understand where traffic calming has been installed, how long it took to install, how these improvements reduce crash risk, changes to motor vehicle speeds, etc. and determine if changes could be implemented to improve the program.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT

#### **B-9b: Deemphasize pedestrian volumes as a determining factor in deciding where pedestrian or connectively improvements are installed.**

Through the Traffic Engineering Study process, community members can identify safety and connectivity issues and request MCDOT address them with the appropriate treatments. Frequently, the rationale for not installing a safety/connectivity treatment is that the volume of pedestrians who would utilize the improvement is too low. A location with low pedestrian volumes could be a result of many factors including inadequate pedestrian facilities or high vehicle speeds.

Goal(s): Comfortable/Connected Pedestrian Network

Lead Agency: Montgomery Planning, MCDOT

## B-10: Assume county control of state highways

Thrive Montgomery 2050 envisions transforming activity centers and growth corridors into safe, comfortable and irresistible multimodal environments. However, the Predictive Safety Analysis 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. Transferring control of these roads would give the County flexibility in how it retrofits these roads to prioritize walking, bicycling, and transit.

### Key Actions:

#### **B-10a: Develop a plan to assume control of state roadways in Downtowns, Town Centers, and along master-planned BRT corridors in Montgomery County.**

State highways account for 15 miles of road in Downtowns, 80 miles in Town Centers and 46 miles along master-planned BRT corridors in Suburban areas.

Goal(s): Comfortable/Connected Pedestrian Network, Increase Walking Rates, Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: County Executive, State Delegation

### B-11: Make more restrooms available to all

Public restrooms are a matter of equity and quality of life. Access to public restroom facilities can be a determining factor for some when it comes to the decision about if and how to make a trip, so there should be available restrooms where pedestrians want to go. While many stores provide restrooms, restroom access should not be limited to those engaging in commercial activities. Public restrooms particularly benefit pedestrians who are older, younger, are pregnant, have a medical condition or are unhoused. The key action encourages the county to begin addressing this issue.

### Key Actions:

#### **B-11a: Develop and implement a plan to provide public restrooms throughout the county in areas with high pedestrian activity.**

Goal(s): Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Increase Walking Rates

Lead: County Executive, County Council

### B-12: Address curbside management

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

### Key Actions:

#### **B-12a: Develop a curbside management plan and pilot innovative approaches to curbside management.**

Goal(s): Enhance Pedestrian Safety

Lead: Montgomery Planning, MCDOT



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

## MA-1: Fix sidewalks proactively

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

### Key Actions:

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

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

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

Lead: MCDOT

## MA-2: Keep sidewalks and curb ramps clear

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

### Key Actions:

#### **MA-2a: Amend Montgomery County's snow clearance requirement to specify that property owners are required to clear a path at least 4 feet wide on pathways in the public right-of-way adjacent to their property.**

Chapter 49, Section 17 of the County Code requires property owners to clear a path that is wide enough for safe pedestrian and wheelchair use. However, the lack of a specified snow clearance width makes this requirement difficult to enforce as well as difficult to interpret for those unfamiliar with wheelchair operational requirements. This is an equity issue because poorly shoveled sidewalks may keep some members of the community home-bound while others can more easily continue traveling unbothered by snowy obstacles.

Goal(s): Equitable and Just Pedestrian Network

Lead: County Council

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

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

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

Goal(s): Equitable and Just Pedestrian Network, Increase Walking Rates

Lead: DHCA

**MA-2c: Snow clearance on sidewalks along all Downtown Boulevards, Town Center Boulevards, Downtown Streets, Town Center Streets, and Bus Rapid Transit Corridors should be the county's responsibility.**

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

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



important for pedestrian connectivity to rely on individual property owners to ensure they are shoveled.

Goal(s): Equitable and Just Pedestrian Network, Increase Walking Rates, Enhance Pedestrian Safety

Lead: MCDOT

### MA-3: Incorporate roadway maintenance into utility projects

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

#### Key Actions:

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

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, MCDPS



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

## P-1: Disincentivize dangerous vehicles

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

### Key Actions:

#### **P-1a: Ensure county and public agency vehicles are safe for pedestrians.**

While changing vehicle purchasing decisions for the general public is a bigger challenge, the County, M-NCPPC, MCPS and other public agencies have more control over procurement of their own vehicles. The county's Climate Action Plan recommends the complete electrification of the county and public agency fleets. To the extent possible and where appropriate, these same fleets should be comprised of smaller vehicles with enhanced pedestrian visibility. While a specific job function may require a vehicle that has identified pedestrian visibility issues, in general, public agencies should use procurement processes like vehicle purchasing as an opportunity to improve safety.

Goal(s): Enhance Pedestrian Safety

Lead: County Executive, Montgomery Parks, MCPS, MCDGS

#### **P-1b: County and public agency vehicles should have speed governors installed to ensure their drivers adhere to the speed limit.**

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

Goal(s): Enhance Pedestrian Safety

Lead: County Executive, Montgomery Parks, MCPS, MCDGS

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

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

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

Goal(s): Enhance Pedestrian Safety

Lead: Fire & Rescue Service

**P-1d: Develop legislation to create a new class of commercial driver's license required to operate vehicles with identified pedestrian safety and visibility issues.**



*A truck and its front blind spot. Graphic: Consumer Reports*

Where blind spots exist, how tall and heavy a vehicle is, how long the hood and how wide the vehicle are all contribute to how well drivers can see pedestrians, how quickly the vehicles can slow down, and how much damage they can do to a pedestrian (or another road user) in the event of a crash. Drivers of these types of vehicles would benefit from increased education and training, but a commercial driver's license typically is not required in Maryland for vehicles

lighter than 26,000 pounds (a tractor trailer). Requiring a specialized license and associated education to operate these more dangerous vehicles will improve pedestrian safety statewide because drivers will have targeted training on how to safely operate large vehicles.

Goal(s): Enhance Pedestrian Safety

Lead: State Delegation

**P-1e: Develop legislation to improve the driver's license renewal process by implementing a knowledge test requirement.**

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

Goal(s): Enhance Pedestrian Safety

Lead: State Delegation

**P-2: Improve and expand protected crossings**

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

**Key Actions:**

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

The need for new protected crossings at certain mid-block and uncontrolled locations is highlighted in the Existing Conditions Report, which found that 16% of severe and fatal pedestrian crashes take place at uncontrolled intersections and 37% of severe and fatal pedestrian crashes take place midblock. Since the number of protected crossings needs to be substantially increased to comply with the Complete Streets Design Guide, there is a need to prioritize which locations should be addressed first.

Goal(s): Enhance Pedestrian Safety, Comfortable/Connected Pedestrian Network

Lead: MCDOT, MDOT SHA

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

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

Goal(s): Enhance Pedestrian Safety, Comfortable/Connected Pedestrian Network

Lead: MCDOT, MDOT SHA, WMATA

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

Right Turn on Red policies are intended to reduce motor vehicle queues and congestion, and increase driver satisfaction. However, they create safety and discomfort for pedestrians crossing the street, especially the most vulnerable. Safety issues exist because drivers may look left to avoid oncoming vehicles and might not see pedestrians in the crosswalk. Additionally, while sighted pedestrians may be able to navigate around drivers entering into pedestrian space as pedestrians legally cross, pedestrians with low or no vision will have more difficulty. As a result, 80% of respondents are dissatisfied with drivers cutting through the crosswalk in the Existing Conditions Report. Therefore, in areas of the county with higher pedestrian activity such as Downtowns and Town Centers, No Turn on Red should be the default. In other parts of the county, NTOR should be evaluated on a case-by-case basis.



*A sign next to a traffic signal indicates that no vehicles may turn right on a red signal between 7 a.m. and 7 p.m.*



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

Goal(s): Enhance Pedestrian Safety

Lead: MCDOT, MDOT SHA

**P-2d: Prioritize pedestrian crossings using Leading Pedestrian Intervals (or Leading Through Intervals) at signalized intersections along Downtown Boulevards, Downtown Streets, Town Center Boulevards, and Town Center Streets. Everywhere else, implement LPIs within a certain distance of schools, parks, and community centers along those roadways.**

Leading Pedestrian Intervals (LPI) are a proven Federal Highway Administration countermeasure that provide pedestrians an opportunity to establish themselves in the crosswalk in advance of turning vehicles, making them more visible and limiting potential for conflict. Providing LPI near locations with more vulnerable populations and in areas with more pedestrian activity will improve safety.



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

Precedent(s): More than 30% of Seattle traffic signals have a leading pedestrian interval. They recently identified a 50 percent reduction in pedestrian turning collisions and 35 percent reduction in serious and fatal injury collisions at locations with LPIs. LPIs are also a common treatment in Washington, D.C.

Goal(s): Enhance Pedestrian Safety

Lead: MCDOT, MDOT SHA

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

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

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

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT

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

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

Goal(s): Enhance Pedestrian Safety, Comfortable/Connected Pedestrian Network

Lead: MCDOT, MDOT SHA

**P-3: Design pedestrian-safe parking lots**

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

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

**Key Actions:**

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

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

Goal(s): Enhance Pedestrian Safety

Lead: Montgomery Planning, MCDOT, MCDPS

**P-4: Prioritize data-driven roadway safety projects**

A data-driven approach to addressing pedestrian safety is a bedrock component of Vision Zero, allowing jurisdictions to be proactive rather than reactive to systemic issues. The key action identifies a cutting-edge approach to identifying where to invest in safety improvements.

### Key Actions:

#### **P-4a: Use Montgomery Planning's Predictive Safety Analysis as the main tool for prioritizing safety improvements.**

Montgomery Planning's Predictive Safety Analysis is a data-driven approach that seeks to proactively address crash risks throughout the county. It estimates the expected number of crashes at a given roadway segment or intersection based on the attributes and context of that location. This analysis then allows the county to prioritize where and how to most effectively invest in safety improvements through capital projects, development approvals, and master planning.

Goal(s): Enhance Pedestrian Safety

Lead: MCDOT, Montgomery Planning

### P-5: Educate and encourage pedestrians of all ages to walk safely

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

### Key Actions:

#### **P-5a: Conduct pedestrian and bicycle safety educational programs in partnership with agencies such as Montgomery County Public Libraries, Montgomery County Public Schools, and Montgomery County Recreation.**

Collaborating with other agencies on pedestrian safety education would allow Montgomery County to educate new audiences on pedestrian safety.

Goal(s): Enhance Pedestrian Safety

Lead: MCDOT, MCPL, MCR, MCPS

#### **P-5b: Shift the programming and education elements of the county's Safe Routes to School (SRTS) Program to Montgomery County Public Schools and create SRTS initiatives, including pedestrian/bicycle education, in individual schools.**

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

Goal(s): Increase Walking Rates, Enhance Pedestrian Safety

Lead: MCPS, MCDOT

### P-6: Make the walk to school safer and more direct

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

#### Key Actions:

##### **P-6a: Prioritize locations for additional school crossing guards and advocate for additional funding.**



*Crossing guards guide students across Veirs Mill Road*

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

Goal(s): Enhance Pedestrian Safety, Increase Walking Rates

Lead: MCPS

##### **P-6b: Fund Walking School Buses to reduce the need for motorized school buses.**

A walking school bus is a group of students walking to/from school with the guidance of adults. They help students get to school in the same way that school buses do, but in a more

active, independent, and healthful way. Funding could be used to incentivize participation, provide promotional materials, and other general support. The success of this effort would be measured by the number of students walking to school as part of Walking School Buses and the reduction in conventional school buses needed to transport kids to school.

Goal(s): Increase Walking Rates

Lead: MCPS

**P-6c: Develop and implement School Streets — partial roadway closures immediately adjacent to schools during arrival and dismissal — at several schools as a pilot.**

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



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

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

Goal(s): Enhance Pedestrian Safety, Increase Walking Rates

Lead: MCDOT, MCPS

**P-6d: Develop and implement a countywide transportation demand management plan for schools addressing all school-related travel, including travel by students, parents, and staff members.**

Concerns about school-related traffic can limit the county's ability to expand existing schools or build new schools on sites in existing neighborhoods. One way to address these concerns is



through the development and implementation of a transportation demand management plan that discourages travel in a private car and encourages the use of safer and more sustainable modes, including walking by all users of MCPS facilities, including teachers, administrators, staff, students, and local residents. Similar plans already exist for private schools.

Goal(s): Increase Walking Rates

Lead: MCPS, MCDOT

## P-7: Address access management

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

Pedestrian satisfaction with how frequently driveways cross the sidewalk is 31%.

### Key Actions:

#### **P-7a: Implement the recommendations in the Access Management Study.**

Goal(s): Enhance Pedestrian Safety

Lead: Montgomery Planning, MCDOT



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

### EA-1: Reduce tripping hazards

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

#### Key Actions:

##### **EA-1a: Prioritize the repair of brick sidewalks that have identified accessibility challenges.**

**Require new or rehabilitated brick sidewalks to be constructed using non-slip materials and with patterns, spacing and installation methods designed to minimize disturbance for wheeled vehicles.**

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

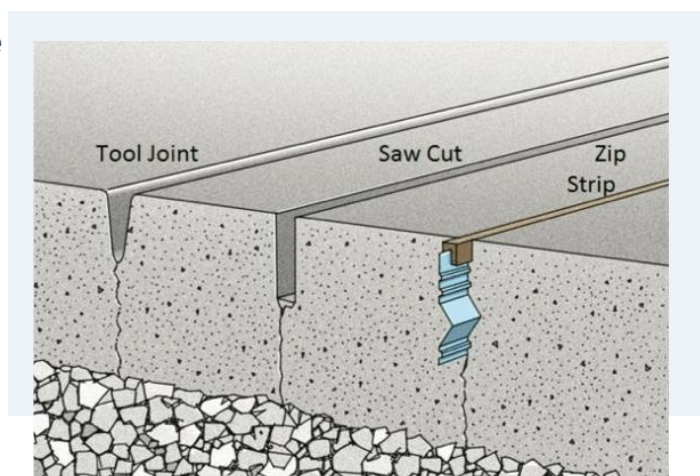
Goal(s): Equitable and Just Pedestrian Network, Increase Walking Rates

Lead: MCDOT, MDOT SHA, Montgomery Planning

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

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

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



*Tooled joints are less clean and a bit wider than saw cut joints.  
Photo: StrongholdFloors*

Goal(s): Equitable and Just Pedestrian Network, Increase Walking Rates

Lead: MCDOT, MDOT SHA, Montgomery Planning, MCDPS

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

Temporary patches and poor repair work create tripping hazards and other accessibility challenges. Improving the speed with which these utility cuts are successfully repaired will improve accessibility.



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

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

Lead: MCDOT, MCDPS

**EA-2: Remove sidewalk obstructions**

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

**Key Actions:**

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

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

Goal(s): Equitable and Just Pedestrian Network, Enhance Pedestrian Safety

Lead: MCDOT, Montgomery Planning, MDOT SHA, PEPCO, Telecommunications Companies

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

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

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

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

Lead: MCDOT, Montgomery Planning, MDOT SHA, PEPCO, Telecommunications Companies



*Traffic signal control cabinet in the sidewalk in downtown Silver Spring.*

**EA-2c: Develop regulations for autonomous robots and other similar devices using pedestrian space.**

Delivery robots and other similar vehicles operating on sidewalks can create accessibility challenges by blocking sidewalks. Their use and behavior should be regulated to eliminate these challenges.

Goal(s): Equitable and Just Pedestrian Network

Lead: MCDOT

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

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



*Scooters blocking the sidewalk*

Goal(s): Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT

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

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

**Key Actions:**

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

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

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

Goal(s): Enhance Pedestrian Safety, Equitable and Just Pedestrian Network



Lead: MCDOT, MDOT SHA

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

The Maryland Manual of Uniform Traffic Control Devices (MdMUTCD) requires that “a buffer interval consisting of a steady UPRAISED HAND (symbolizing DONT WALK) signal indication shall be displayed for at least three seconds prior to the release of any conflicting vehicular movement.” The MdMUTCD also provides an option for using the buffer interval when calculating pedestrian clearance times, which can lead to insufficient crossing time for slower pedestrians.

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

Goal(s): Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT, MDOT SHA

**EA-4: Make pedestrian signals more accessible**

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

## Key Actions:

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

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

Goal(s): Equitable and Just Pedestrian Network

Lead: MCDOT, MDOT SHA



*This pedestrian is unable to reach an Accessible Pedestrian Signal in Downtown Silver Spring because the push button is located on a raised surface that her wheelchair cannot navigate.*

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

Currently, many traffic signals in Montgomery County do not provide feedback to pedestrians that the push button has been actuated. Providing a confirmation light reduces confusion about whether pedestrians will have a crossing phase by confirming that a request for a pedestrian phase has been made, reducing the likelihood that pedestrians will cross the street without the pedestrian signal.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, MDOT SHA

### **EA-4c: For Accessible Pedestrian Signal (APS) locations where every signal cycle has a pedestrian phase, provide signage that pressing the button is not required to cross the street.**

Pedestrians often arrive at an intersection unsure if they need to press the button to trigger a pedestrian crossing phase. For locations where a pedestrian phase is provided every cycle, informing pedestrians that there is no need to press the button



*An accessible pedestrian signal reads "Accessible Message Only" and has a confirmation light. Photo: SFMTA*

makes the pedestrian experience easier and increases confidence in pedestrian signals overall.

Precedent(s): In San Francisco, APS at locations where there is always a pedestrian signal read “Accessible Message Only” so people know they do not need to press to safely cross.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, MDOT SHA

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

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

### Key Actions:

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

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

A comprehensive TWSI network would allow pedestrians with visual disabilities to navigate more safely and directly, increasing confidence in orientation and allow the successful completion of a wider range of trips.

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

Goal(s): Equitable and Just Pedestrian Network



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

Lead: MCDOT, MDOT SHA, Montgomery Planning, WMATA

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

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

Goal(s): Equitable and Just Pedestrian Network

Lead: County Executive

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

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

**Key Actions:**

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

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

Goal(s): Equitable and Just Pedestrian Network, Increase Walking Rates

Lead: Montgomery Parks

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

Accessible Sensory Trails are trails designed to provide access to nature for everyone, including people with low or no vision, emotional and intellectual disabilities, and wheelchair users. They generally include different activities designed to encourage interaction with nature, as well as interpretive signage in large print and Braille.

Goal(s): Equitable and Just Pedestrian Network

Lead: Montgomery Parks



## EA-7: Exceed existing accessibility requirements

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

### Key Actions:

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

Goal(s): Equitable and Just Pedestrian Network

Lead: Montgomery Planning, MCDPS, County Council

## EA-8: Regulate shared spaces

Shared spaces where people using different travel modes intermingle can add to the vitality of communities by encouraging pedestrian activity and allowing the reimagination of important civic spaces. At the same time, it is necessary for these spaces to be better regulated to ensure pedestrians, and especially pedestrians with disabilities, can safely and directly travel between Points A and B. These key actions identify two ways to improve these spaces through changes to law and the development of regulations.

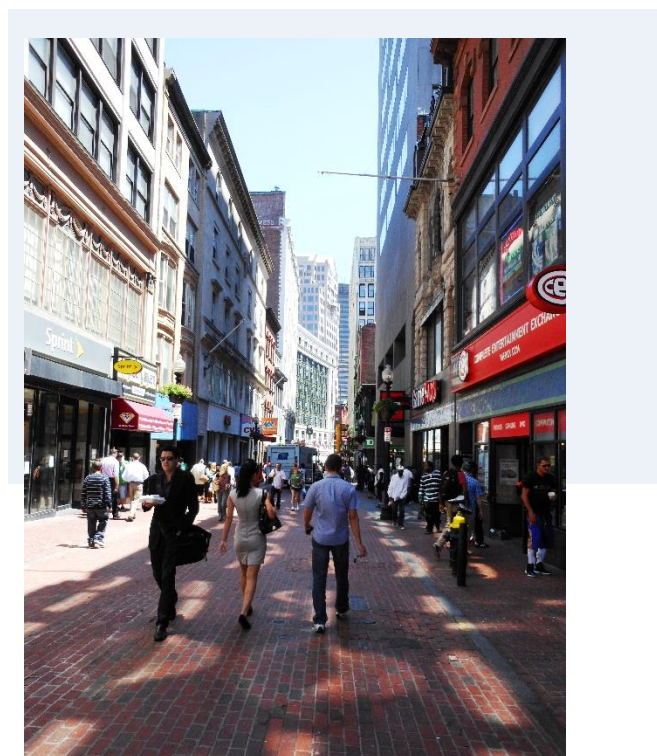
### Key Actions:

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

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

Goal(s): Enhance Pedestrian Safety

Lead: State Delegation



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



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

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

Goal(s): Equitable and Just Pedestrian Network

Lead: MCDOT, MCDPS, Montgomery Planning



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

**EA-9: Make work zones more accessible**

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

**Key Actions:**

**EA-9a: Require anyone who works in the public right-of-way to take ADA training and maintain ADA certification. Implement penalties for observed ADA noncompliance during construction or maintenance that deviates from what was approved on right-of-way permits. Approved right-of-way permits should be easily accessible so members of the public can understand what has been approved.**

Precedent(s): Minnesota DOT has an ADA Certification Course.

Goal(s): Equitable and Just Pedestrian Network

Lead: MCDOT, MCDPS

## MONITOR



Monitoring recommendations track the county's progress in achieving the Pedestrian Master Plan's goals and objectives and to identify opportunities to improve the quality of the data collected countywide so decisions on project prioritization and funding can be more equitable.

### MO-1: Track implementation of the Pedestrian Master Plan

The Pedestrian Master Plan contains performance measures to better understand progress toward achieving plan goals over time. A biennial monitoring report would allow planners, elected officials and members of the public to track progress on Pedestrian Master Plan implementation and help guide future priorities. In conjunction with the Bicycle Master Plan Biennial Monitoring Report, the Pedestrian Master Plan Biennial Monitoring Report would be merged with the Planning Department's Travel Monitoring Report to present a comprehensive review of transportation conditions in the county.

#### Key Actions:

##### **MO-1a: Develop a Pedestrian Master Plan Biennial Monitoring Report.**

Create a monitoring report that is reviewed by the Planning Board and County Council's Transportation and Environmental (T&E) Committee in the fall of odd-numbered years to influence the county's capital budget.

Goal(s): Increase Walking Rates, Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: Montgomery Planning

##### **MO-1b: Conduct a Biennial Pedestrian and Bicycle Survey**

Conduct a comprehensive pedestrian and bicycle survey every two years to better understand the effects of Pedestrian Master Plan implementation. Data collected will include satisfaction metrics, trip purpose, average distance traveled, and others. The results of the survey will be incorporated in the Biennial Monitoring Report.

Goal(s): Increase Walking Rates, Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: Montgomery Planning

##### **MO-1c: Conduct a student travel tally annually.**

The 2019 MCPS Student Travel Tally is an invaluable tool to increase understanding of student travel patterns. Conducting this travel tally annually will allow policymakers to better

understand changes in student travel behavior that may result from improvements to pedestrian infrastructure, programming, and policy.

Goal(s): Increase Walking Rates

Lead: MCPS, Montgomery Planning

**MO-1d: Develop a public-facing dashboard that shows sidewalk coverage and other pedestrian metrics.**

A regularly-updated dashboard would provide transparency in implementation of the Pedestrian Master Plan. The dashboard would include data about Pedestrian Level of Comfort changes over time, comfortable pedestrian connectivity, crashes, sidewalks constructed, and other metrics to provide members of the public insights into the state of pedestrian activity and infrastructure.

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

Lead: Montgomery Planning

**MO-2: Conduct a pedestrian 311 equity review**

Pedestrian safety and equity concerns should be addressed equitably. However, studies in other communities have shown that overreliance on 311 reporting to inform safety improvements leads to inequitable outcomes because residents in some communities are less likely to use 311 due to technology issues, lack of time, distrust in government, and other barriers. The key action identifies a path forward to improve equity.

**Key Actions:**

**MO-2a: Conduct a study to determine how 311 reporting of pedestrian safety and accessibility concerns is distributed across the county and whether reliance on 311 leads to inequitable outcomes.**

Goal(s): Equitable and Just Pedestrian Network

Lead: County Executive



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

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

More revenue is needed so faster progress can be made on addressing the county's pedestrian infrastructure deficit. The key actions for this recommendation include shifting funding from other priorities to pedestrian efforts and developing creative revenue streams.

#### Key Actions:

##### **F-1a: Price parking spaces in county-operated facilities at market rates and use net proceeds to fund pedestrian, bicycle, and safety projects in the surrounding community.**

Charging market rates for parking reduces driving/car ownership, lowers vehicle miles traveled, and helps achieve climate goals. Revenue from parking fees can help fund pedestrian infrastructure near where the parking facilities are located, providing direct community benefits that make it easier and safer to walk.

Goal(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT, County Council

##### **F-1b: Implement a non-regressive tax to fund pedestrian and safety improvements.**

There is insufficient funding to address the deficiencies in the pedestrian network countywide. An additional funding source would allow more projects to be completed quickly without diverting funding from other priorities. While there are many, potential taxation options include a property tax only for properties assessed higher than a certain amount; a property tax that only applies to properties that change hands after the tax is created; a recordation tax; a vehicle property tax on vehicles above a certain value; and an income tax on earners making more than a certain amount.

Precedent(s): Seattle has a voter-approved transportation levy that is property tax-based.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: County Council

**F-1c: Develop a plan to increase Automated Traffic Enforcement ticket fines to match those in neighboring jurisdictions and use the revenue to fund safety improvements.**

There is a nexus between unsafe driving behaviors and improving the quality of the pedestrian/bicycle environment. Using automated traffic enforcement revenue as a way to fund active transportation projects improves safety for all road users while also making non-auto modes more attractive to drivers.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: County Executive

**F-1d: Develop legislation to tie vehicle registration fees to safe vehicle design.**

As described in Recommendation P-1, vehicle design is closely connected to pedestrian safety. Acknowledging that vehicle design regulation is a federal issue, the state should develop legislation to have lower registration fees for vehicles that are safer for pedestrians and higher fees for vehicles that are more dangerous for pedestrians. The net increase in registration fees could fund additional pedestrian and bicycle projects statewide.

Precedent(s): Washington, D.C. is on the cusp of increasing registration fees for vehicles weighing over 6,000 lbs.

Goal(s): Comfortable/Connected Pedestrian Network, Enhance Pedestrian Safety

Lead: State Delegation



# SUMMARY



## Recommendations by Goal

Rec #	Goal 1: Rates & Satisfaction	Goal 2: Comfort	Goal 3: Safety	Goal 4: Equity
<b>Build</b>				
B-1a		X	X	X
B-1b		X	X	
B-1c	X	X		
B-1d		X		
B-1e		X		
B-1f		X		
B-2a		X		X
B-2b		X		X
B-3a			X	X
B-3b			X	X
B-3c			X	X
B-3d		X	X	X
B-4a	X	X		
B-4b	X			
B-4c	X			
B-4d		X	X	
B-4e		X	X	
B-4f	X			
B-4g		X		
B-4h	X	X		X
B-5a	X		X	
B-5b	X		X	
B-6a		X		X
B-6b		X		X
B-7a		X		
B-7b		X		
B-7c		X		
B-7d		X		
B-7e		X		
B-7f	X	X		
B-8a	X	X		
B-8b	X	X		

Rec #	Goal 1: Rates & Satisfaction	Goal 2: Comfort	Goal 3: Safety	Goal 4: Equity
B-8c	X	X		
B-8d		X		
B-8e		X		
B-9a		X	X	
B-9b		X		
B-10a	X	X	X	X
B-11a	X	X		X
B-12a			X	
<b>Maintain</b>				
MA-1a		X		X
MA-2a				X
MA-2b	X			X
MA-2c	X		X	X
MA-3a		X		
<b>Protect</b>				
P-1a			X	
P-1b			X	
P-1c			X	
P-1d			X	
P-1e			X	
P-2a		X	X	
P-2b		X	X	
P-2c			X	
P-2d			X	
P-2e		X	X	
P-2f		X	X	
P-3a			X	
P-4a			X	
P-5a			X	
P-5b	X		X	
P-6a	X		X	
P-6b	X			
P-6c	X		X	
P6-d	X			
P-7a		X		

Rec #	Goal 1: Rates & Satisfaction	Goal 2: Comfort	Goal 3: Safety	Goal 4: Equity
<b>Expand Access</b>				
EA-1a	X			X
EA-1b	X			X
EA-1c		X		X
EA-2a			X	X
EA-2b		X		X
EA-2c				X
EA-2d			X	X
EA-3a			X	X
EA-3b			X	X
EA-4a				X
EA-4b		X		
EA-4c		X		
EA-5a				X
EA-5b				X
EA-6a	X			X
EA-6b				X
EA-7a				X
EA-8a		X		
EA-8b				X
EA-9a				X
<b>Monitor</b>				
MO-1a	X	X	X	X
MO-1b	X	X	X	X
MO-1c	X			
MO-1d		X		X
MO-2a				X
<b>Fund</b>				
F-1a		X		
F-1b		X	X	
F-1c		X	X	
F-1d		X	X	

## Recommendations by Agency

Rec #	MCDOT	MDOT SHA	MCDPS	MCPS	Montgomery Planning	Montgomery Parks	Utilities	County Executive	County Council	State Delegation	WMATA	MCPL	MCR	MCDGS	MD DNR	MCDHCA	MCFRS
<b>Build</b>																	
B-1a	X																
B-1b	X					X											
B-1c				X	X									X			
B-1d	X				X												
B-1e	X					X											
B-1f								X									
B-2a	X	X															
B-2b	X	X															
B-3a	X	X															
B-3b	X																
B-3c	X	X															
B-3d	X	X															
B-4a					X												
B-4b				X	X									X			
B-4c				X													
B-4d	X				X												
B-4e	X				X												
B-4f	X				X												
B-4g						X											
B-4h	X				X												
B-5a	X				X												
B-5b	X				X												
B-6a	X	X			X												
B-6b	X							X	X								
B-7a	X							X	X								
B-7b	X				X			X	X								
B-7c	X					X		X	X								
B-7d	X		X		X				X								
B-7e	X				X												

Rec #	MCDOT	MDOT SHA	MCDPS	MCPS	Montgomery Planning	Montgomery Parks	Utilities	County Executive	County Council	State Delegation	WMATA	MCPL	MCR	MCDGS	MD DNR	MCDHCA	MCFRS
B-7f	X	X															
B-8a					X	X											
B-8b					X	X											
B-8c					X	X			X						X		
B-8d	X				X												
B-8e	X				X				X								
B-9a	X																
B-9b	X				X												
B-10a								X		X							
B-11a								X	X								
B-12a	X				X												
Maintain																	
MA-1a	X																
MA-2a									X								
MA-2b																X	
MA-2c	X																
MA-3a	X			X													
Protect																	
P-1a				X		X		X						X			
P-1b				X		X		X						X			
P-1c																	X
P-1d										X							
P-1e										X							
P-2a	X	X															
P-2b	X	X									X						
P-2c	X	X															
P-2d	X	X															
P-2e	X																
P-2f	X	X															
P-3a	X	X	X														
P-4a	X				X												



Rec #	MCDOT	MDOT SHA	MCDPS	MCPS	Montgomery Planning	Montgomery Parks	Utilities	County Executive	County Council	State Delegation	WMATA	MCPL	MCR	MCDGS	MD DNR	MCDHCA	MCFRS
P-5a	X			X								X	X				
P-5b	X			X													
P-6a				X													
P-6b				X													
P-6c	X			X													
P-6d	X			X													
P-7a	X				X												
<b>Expand Access</b>																	
EA-1a	X	X			X												
EA-1b	X	X	X		X												
EA-1c	X		X														
EA-2a	X	X			X		X										
EA-2b	X	X			X		X										
EA-2c	X																
EA-2d	X																
EA-3a	X	X															
EA-3b	X	X															
EA-4a	X	X															
EA-4b	X	X															
EA-4c	X	X															
EA-5a	X	X			X						X						
EA-5b								X									
EA-6a						X											
EA-6b						X											
EA-7a			X		X				X								
EA-8a										X							
EA-8b	X		X		X												
EA-9a	X		X														
<b>Monitor</b>																	
MO-1a					X												
MO-1b					X												

Rec #	MCDOT	MDOT SHA	MCDPS	MCPS	Montgomery Planning	Montgomery Parks	Utilities	County Executive	County Council	State Delegation	WMATA	MCPL	MCR	MCDGS	MD DNR	MCDHCA	MCFRS
MO-1c				X	X												
MO-1d					X												
MO-2a								X									
<b>Fund</b>																	
F-1a	X								X								
F-1b									X								
F-1c								X									
F-1d										X							

## GLOSSARY



**Abandonment:** An amendment to a plat of subdivision that releases the right-of-way from future public use.

**Access Management Study:** A study to coordinate regulation and design of access between roadways and land development to systematically improve the safety and efficiency of moving people and goods while reducing conflicts between all modes of transportation using and crossing the roadway, including cars, heavy vehicles, transit, bicycles, and pedestrians.

**Accessible Pedestrian Signals (APS):** Devices that communicate information about the WALK and DON'T WALK intervals at signalized intersections and mid-block crossings in nonvisual formats to pedestrians who are blind or who have low vision.

**Accessibility:** People with a disability are afforded the opportunity to acquire information, engage in interactions, and enjoy services in a similar amount of time and effort as people without a disability.

- **ADA Accessibility Guidelines:** Accessibility standards issued under the Americans with Disabilities Act (ADA) that apply to places of public accommodation, commercial facilities, and state and local government facilities in new construction, alterations, and additions.
- **Architectural Barriers Act Accessibility Standards:** Federal requirements to ensure that buildings and facilities are accessible to and usable by persons with disabilities.
- **Maryland Accessibility Code:** The section (Chapter 09.12.53) of the Maryland code that provides for the accessibility and usability of buildings and facilities by individuals with disabilities.
- **Public Rights-of-Way Accessibility Guidelines (PROWAG):** A draft set of guidelines that will address access to sidewalks and streets, crosswalks, curb ramps, pedestrian signals, on-street parking, and other components of public rights-of-way.

**Annual Sidewalk Program:** Montgomery County's funding program to retrofit sidewalks on roadways where none have previously existed. The projects under the Annual Sidewalk Program are derived from resident requests and are installed without the guidance of an engineer. Learn more at: <https://www.montgomerycountymd.gov/dot-dte/sidewalk/>

**Automated Traffic Enforcement:** Infrastructure involving video cameras and other sensors used to police speed and other traffic safety infractions in an impartial way.

**Bus Rapid Transit (BRT):** A high-quality and high-capacity bus-based transit system that delivers fast, comfortable, reliable and cost-effective transit service.

**Capital Improvement Program (CIP):** A six-year comprehensive statement of the objectives of capital programs with cost estimates and proposed construction schedules for specific projects. The proposed Montgomery County CIP is submitted by the County Executive to the County Council every two years and a general amendment is typically submitted in the off-years. See Montgomery County's Capital Improvements Program at [montgomerycountymd.gov/omb/](https://montgomerycountymd.gov/omb/).

**Complete Streets Design Guide (CSDG):** A guide for designing, operating, and maintaining streets to provide safe accommodations for all users, including people who walk, bicycle, use transit and drive motor vehicles. Learn more: [montgomeryplanning.org/planning/transportation/complete-streets/](https://montgomeryplanning.org/planning/transportation/complete-streets/)

**Corral:** An on-street or off-street space designated for parking micromobility devices such as bicycles and scooters.

**Conflict Point:** Locations where motor vehicles, pedestrians and bicycles cross paths.

**County Code:** Montgomery County's collection of written laws located at: [codelibrary.amlegal.com/codes/montgomerycounty/](https://codelibrary.amlegal.com/codes/montgomerycounty/)

- **Chapter 49 (Road Code):** The section of Montgomery County's code that addresses road design standards.
- **Chapter 59 (Zoning Code):** The section of Montgomery County's code that addresses what can be built on a particular parcel of land.

### Crossing Locations:

- **Mid-block Crossing:** A marked crossing located in between two crossings.
- **Controlled Crossing:** Locations where sidewalks or designated walkways intersect a roadway at a location where traffic control (traffic signal or STOP sign) is present.
- **Uncontrolled Crossing:** Locations where sidewalks or designated walkways intersect a roadway at a location where no traffic control (traffic signal or STOP sign) is present.
- **Protected Crossing:** A crossing designed to improve the safety and comfort of pedestrians and bicyclists crossing the street with traffic control devices, such as full traffic signals and Pedestrian Hybrid Beacons, that prohibit conflicting left turns and through vehicular movements.

**Curbside Management Plan:** A plan that guides the use of space along the street curb, including loading and unloading passengers and freight, motor vehicle and bicycle parking, parklets, outdoor dining, etc.

**Dockless Vehicle:** A shared-mobility vehicle that is available to the public to rent in public space, does not require any specialized installations of equipment other than the vehicle itself, and can be located and unlocked using a smartphone application or by manually entering a customer's account number.

**Easement:** A contractual agreement to gain temporary or permanent use of, and/or access through, a property.

**Equity Focus Area (EFA):** Parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also speak English less than very well. Learn more: [montgomeryplanning.org/planning/equity-agenda-for-planning/the-equity-focus-areas-analysis/](https://montgomeryplanning.org/planning/equity-agenda-for-planning/the-equity-focus-areas-analysis/)

**Forest Conservation Plan:** A document that outlines the specific strategies for retaining, protecting, and reforesting or afforesting areas on a site, pursuant to the 1991 Maryland Forest Conservation Act.

Forest Conservation Plans are approved by the Planning Board with conditions that are binding on applicable private and public development, and certain land disturbing activity. Learn more: [montgomeryplanning.org/development/development-applications/forest-conservation-plan/](http://montgomeryplanning.org/development/development-applications/forest-conservation-plan/)

**Impervious Surface:** Any surface that prevents or significantly impedes the infiltration of water into the underlying soil, including structures, buildings, patios, decks, sidewalks, compacted gravel, pavement, asphalt, concrete, stone, brick, tile, swimming pools, and artificial turf.

**Leading Pedestrian Interval (LPI):** An approach to traffic signalization that allows pedestrians or bicyclists to enter the intersection in advance of vehicles traveling in the same direction.

**Marked Crosswalk:** Pavement markings that indicate the preferred location for pedestrians to cross the street and help motorists identify areas to look for pedestrians. Marked crosswalks may be located at intersections or mid-block locations.

- **Ladder-Style Crosswalk:** A type of high-visibility marked crosswalk that uses pavement markings that are both parallel and perpendicular to the motor vehicle path of travel.
- **Continental Style Crosswalk:** A type of high-visibility marked crosswalk that uses pavement markings that are parallel to the motor vehicle path of travel.
- **High Visibility Crosswalk:** a type of marked crosswalk that uses enhanced pavements markings to improve the visibility of pedestrians to approaching motorists.
- **Transverse Edge Line:** Crosswalk markings that are perpendicular to the motor vehicle path of travel that indicate the preferred location for pedestrians to cross the street.

**Maryland Manual of Uniform Traffic Control Devices (MdMUTCD):** The combined document of the national set of traffic control device standards and guidance promulgated by Federal Highway Administration (FHWA) rulemaking on December 16, 2009 and Maryland Supplement to the MUTCD.

**Master Plan:** Comprehensive amendments to the General Plan for the Maryland-Washington Regional District (“On Wedges and Corridors”) that provide detailed and specific land-use and zoning recommendations for specific areas of the County. They also address transportation, the natural environment, urban design, historic resources, public facilities, and implementation techniques.

**Neighborhood Connector:** Short paths that provide critical connection in the residential walking and bicycling network. They create shortcuts and often bypass or minimize the amount of travel along higher-stress streets.

**Paper Street:** A dedicated public right of way for a road or street that has not been built.

**Passive Detection:** A means of detecting the presence of pedestrians in a stationary or moving state at the curbside of and/or in a pedestrian crossing by means other than those requiring physical actuation by the pedestrian.

**Pedestrian Clear Zone:** The primary portion of the sidewalk that is intended to be free from landscaping, street furniture, structures, or furnishings.



**Pedestrian Crossing Phase Configuration:** At signalized intersections, pedestrian phases can be configured as recall or pushbutton actuated.

- **Pedestrian Recall:** A traffic signal function in which the pedestrian crossing phase is triggered automatically, without the need to push a button to request the right-of-way.
- **Pushbutton Actuation:** A traffic signal function in which the pedestrian crossing phase is triggered manually by pushing a button to request the right-of-way.

**Pedestrian Level of Comfort (PLOC):** A methodology that captures how comfortable it is to walk and roll in different conditions in Montgomery County. Learn more here: [mcatlas.org/pedplan/](https://mcatlas.org/pedplan/)

**Pedestrian Clearance Interval:** The pedestrian clearance time is intended to allow pedestrians who started crossing during the walk interval to complete their crossing.

**Predictive Safety Analysis:** Montgomery Planning's study that estimates the expected number of crashes at a given roadway segment or intersection based on the attributes and context of that location. This analysis then allows the county to prioritize where and how to most effectively invest in safety improvements through capital projects, development approvals, and master planning. Learn more: [montgomeryplanning.org/planning/transportation/vision-zero/predictive-safety-analysis/](https://montgomeryplanning.org/planning/transportation/vision-zero/predictive-safety-analysis/)

**Raised Crossing:** Raised crosswalks that span the entire width of the roadway, often placed at midblock crossing locations.

**Right-of-Way (ROW):** A strip of land intended for use by the public. A public right-of-way is occupied or intended to be occupied by a road, bikeway, sidewalk, path, or transit facility, as well as any ancillary facilities such as storm drains and stormwater management facilities. Public utilities such as electric transmission lines, telephone lines, cable TV lines, gas mains, water mains, and sanitary sewers may be permitted in the public right-of-way. A public right-of-way may be obtained by dedication as part of the development process or purchased in whole or in part by a public agency.

**Right Turn on Red (RTOR):** A principle of law permitting vehicles at a traffic light showing a red signal to turn into the direction of traffic nearer to them when the way is clear, without having to wait for a green signal.

**Safe Routes to School (SRTS):** Programs that aim to make it safer for students to walk and bike to school and encourage more walking and biking where safety is not a barrier.

**Speed Governor:** A device installed in a vehicle to limit the top speed that vehicle can achieve.

**Special Protection Area (SPA):** A geographic area where existing water resources and related environmental features are of high quality or unusually sensitive, and proposed land uses would threaten the quality or preservation of those resources if special water quality protection measures, closely coordinated with land use controls are required to prevent proposed land uses from threatening the quality or preservation of those resources. SPAs are designated by the County Council under Section 19-62(a) of the Montgomery County Code. Learn more: [montgomeryplanning.org/planning/environment/water-and-wetlands/special-protection-areas/](https://montgomeryplanning.org/planning/environment/water-and-wetlands/special-protection-areas/)

**Streeter**: A dining concept to create additional restaurant seating outdoors, especially with the use of temporary street closures.

**Student Travel Tally**: A quick, in-class survey that provides valuable information on student travel patterns, including arrival and departure mode of transportation.

**Traffic Calming**: Physical changes to a street or roadway used to improve safety by decreasing traffic speed and volume. Methods of traffic calming include traffic circles, speed humps, and curb extensions.

**Vision Zero**: A strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, and equitable mobility for all.

**Vision Zero 2030 Plan**: Montgomery County's plan of activities to eliminate all traffic fatalities and severe injuries by 2030, available here: <https://www.montgomerycountymd.gov/visionzero/>.