

### Overview of Active Transportation

The Baltimore region has over 300 miles of shared-use paths and over 200 miles of bicycle lanes. These numbers continue to increase annually as local jurisdictions, Baltimore Metropolitan Council (BMC) and the Maryland Department of Transportation State Highway Administration (MDOT SHA) work to realize the design and construction of planned bicycle and shared-use facilities.

A regional inventory of pedestrian facilities, primarily sidewalks, does not currently exist for the Baltimore region. However, one is currently under development. This will be the first region-wide comprehensive sidewalk database for the Baltimore region and is anticipated to be used extensively by local governments and BMC in future projects and plans.

*Shared-use paths are separated from the roadway and can be used by walkers, bicyclists, wheel chair users and e-scooter users. Bicycle lanes are dedicated lanes on the roadway for use by bicyclists and e-scooter users and can include painted separation from motor vehicle lanes or physical barriers such as a curb, median, parked cars, a landscaped strip or other type of barrier.*

The COVID-19 pandemic changed many things, including active transportation patterns. Recreational bicycling and walking rates increased nationally. However, transportation trips such as commuting to work by active transportation decreased. E-scooter use through micromobility ridesharing programs (Lime, Spin, LINK, etc.) initially decreased in the Baltimore region but has since almost fully recovered. Coverage has expanded in the region, which will likely lead to even higher rates of use.

Baltimore Metropolitan Council (BMC) and Baltimore Regional Transportation

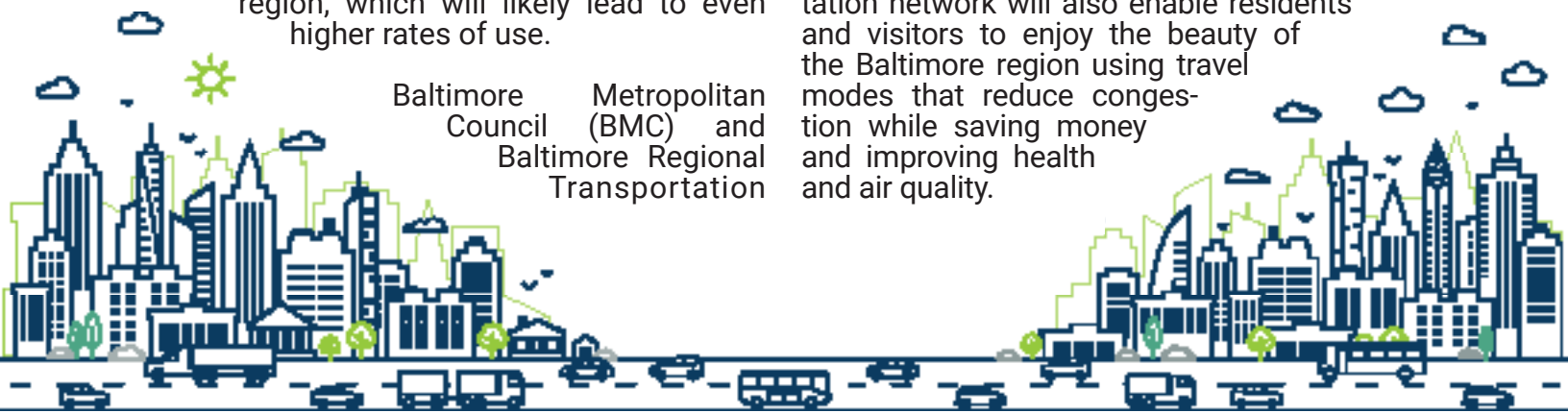
Board (BRTB) collaborate with local and state members to coordinate and promote active transportation planning in the Baltimore region. BMC staff manage studies to develop active transportation networks, lead preliminary design work for shared-use paths and trails and provide technical assistance to local jurisdictions.

*Why active transportation is important to the region:*

- Air Quality
- Equity
- Health
- Safety

While there are many challenges to restore and even increase active transportation trips, there are also opportunities for local, regional and state actors to promote and support expansion of the active transportation network in the Baltimore region. The Infrastructure Investment and Jobs Act significantly increased federal funding for active transportation and the safety of vulnerable road users. The work of BMC, our regional partners and the state to coordinate on active transportation projects and policies places the Baltimore region in a strong position to leverage this increased funding to expand the region's active transportation network and improve safety.

A safe, connected and comfortable active transportation network that appeals to people of all ages and abilities will benefit the region by improving equitable access to housing, job opportunities, transit, core services and recreational amenities while also increasing active transportation rates. A well-developed active transportation network will also enable residents and visitors to enjoy the beauty of the Baltimore region using travel modes that reduce congestion while saving money and improving health and air quality.



## Active Transportation

### Introduction

Active transportation is critical to the Baltimore region's transportation system and includes bicycling, walking, electric scooters and electric bicycles, and using a wheelchair. Almost all trips begin or end with some form of active transportation, including trips made using motor vehicles or transit. Most of us use active transportation on a weekly if not daily basis.

Walking and biking trips make up approximately 7 percent of trips by all modes of travel. While overall numbers are low in the Baltimore region, this figure does not include micromobility ridesharing trips (BMC, 2020) or people using active transportation to access transit. Micromobility in the Baltimore region includes e-scooter and e-bicycle trips. Baltimore City sees more than 120,000 e-scooter and e-bicycle trips per month on average and use is expanding throughout the region (Young, 2022). Active transportation also connects people to transit stops and stations. Creating local and regional active transportation networks with connections to transit has the potential to increase bicycling and walking rates in the region and will expand the reach of each mode. The "first-mile" or "last-mile" connection to transit refers to the beginning or ending of a public transportation trip. Research has



shown that trips over six miles are a strong deterrent to bicycling (Winters, Davidson, Kao, & Teschke, 2011), while most people are willing to walk a quarter or half mile to transit stops and up to one mile to heavy rail transit stations such as MARC or Amtrak (FHWA, 2022). The Federal Highway Administration (FHWA) notes that it is important to provide safe facilities for biking and walking around transit stops.

A connected and safe active transportation network benefits the entire region by improving equitable access to destinations that meet the daily needs of a diverse group of users. This can include connections to transit systems, schools, jobs, core services, parks and more. Broadening transportation choices and potentially increasing active transportation use can increase job opportunities, increase physical activity, reduce motor vehicle traffic congestion on roadways, provide tourism opportunities, and increase economic competitiveness.

Before the COVID-19 pandemic, approximately one third of active transportation trips were taken to shop or to get a meal, approximately 20 percent for commuting and approximately 13 percent for exercise (BMC, 2022). Recreational bicycling and walking rates increased nationally as a result of the COVID-19 pandemic. However, transportation

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## *Baltimore Region Inventory of Bicycle and Shared-Use Facilities*

- 307 miles of shared-use paths
- 9 miles of separated bicycle lanes
- 198 miles of bicycle lanes
- And growing

trips such as commuting to work by active transportation decreased (Eshani, Michael, Duren, Mui & Porter, 2021). E-scooter use through micromobility ridesharing programs (Lime, Spin, LINK, etc.) initially decreased in the Baltimore region during the pandemic, but have almost fully recovered (Young, 2022). These programs have expanded to multiple jurisdictions in the region which will likely lead to even higher rates of use. While there are many challenges, the struggle to recover and increase walking and biking transportation trips provides opportunities for local, regional and state actors to promote and support increased planning and construction of active transportation networks.

The Infrastructure Investment and Jobs Act significantly increased federal funding for active transportation and the safety of vulnerable road users. The work of BMC, our regional partners and the state to coordinate on active transportation projects and policies places the Baltimore region in a strong position to leverage this increased funding to increase the amount of active transportation facilities and improve safety.

This white paper focuses on active transportation in the Baltimore region, including a regional summary, an overview of safety issues and national factors and trends, the interrelatedness of local, regional and state active transportation plans and how active transportation is addressed in the upcoming Long-Range Transportation Plan (LRTP), [Resilience 2050](#).

## **Active Transportation in the Baltimore Region**

Effective and efficient active transportation planning requires an understanding of the current state of existing active transportation infrastructure and the location and type of planned infrastructure. Thorough existing and planned infrastructure inventories allow for successful comprehensive planning, studies and reports which increase the impact of local, regional and state efforts.

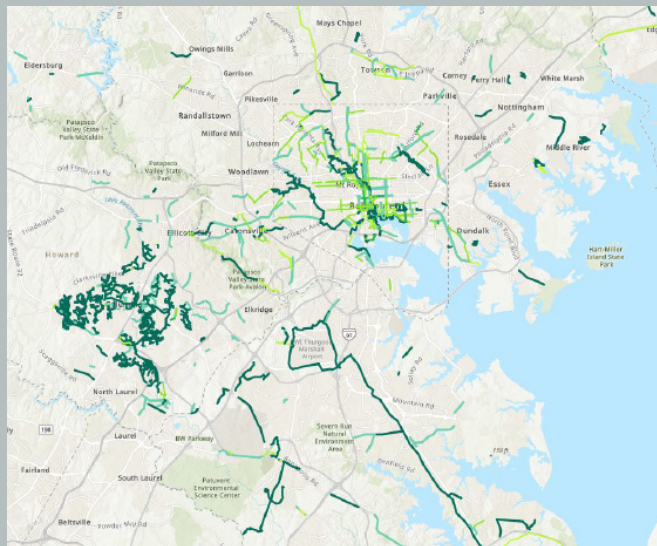
### **Bicycle and Shared-Use Facilities**

The Baltimore region's active transportation system includes approximately 300 miles of shared-use paths, 10 miles of separated bicycle lanes and 200 miles of bicycle lanes. These numbers increase annually as local jurisdictions, BMC and MDOT SHA work to design and construct planned bicycle and shared-use facilities. Refer to Table 1 for a breakdown of miles of bicycle facility types by jurisdiction.

BMC coordinates with local governments to update the regional bicycle facility inventory annually. The bicycle facility inventory began in 2016 and assists with transportation planning, including identifying gaps in connectivity in the network. The inventory includes all existing bicycle trails and lanes (facilities) in the Baltimore region. The data includes trail type, status, side of road, name (if applicable) and speed limit of the roadway (if applicable). This data can be [viewed here](#) and [downloaded here](#) for use with the ArcGIS mapping and analytics software or ArcGIS online.

The regional bicycle facility inventory identifies the following bicycle and shared-use facilities:

- **Shared-use path or transportation trail:** Off-road paths separated from motor vehicle traffic by an open space or



Regional Bicycle Facility Inventory

barrier and intended for use by bicyclists, pedestrians, scooter-users, wheel chair-users and other non-motorized users (AASHTO, 2012). Shared-use paths are not sidewalks which are intended to be used by pedestrians only.

- **Separated bicycle lane:** A bicycle lane that is separated from the vehicular travel lanes with a physical barrier which may be either a curb, median, parked cars, a landscaped strip or other type of barrier that works within the streetscape's character (BMC, 2022).
- **Bicycle Lane:** A dedicated lane for bicyclists that is separate from vehicular travel lanes. It is delineated with striping and pavement markings on the roadway and with signage. This category also includes buffered bicycle lanes, which are bicycle lanes with an additional painted separation from travel lanes. Buffering can also be used between

Table 1: Miles of Bicycle Facility Types by Jurisdiction in the Baltimore Region

Jurisdiction	Shared-Use Path or Transportation Trail	Separated Bicycle Lane	Bicycle Lane	Sharrows, Marked or Signed
Anne Arundel County	59.6	0.5	32.8	17.3
Annapolis	3.6	0	4.0	3.0
Baltimore City	45.3	8.2	48.8	73.1
Baltimore County	45.1	0	28.9	64.1
Carroll County	3.4	0	39.2	0
Harford County	8.3	0	13.1	37.5
Howard County	126.9	0.2	31.1	4.8
Queen Anne's County	15.2	0	0	0
<b>Total</b>	<b>307.4</b>	<b>8.9</b>	<b>197.9</b>	<b>199.8</b>



a bicycle lane and parked cars. Bicycle lanes typically are located to the right side of vehicular travel lanes and generally run in the same direction as traffic, except for contraflow bicycle lanes which travel in the opposite direction of traffic. Bicycle lanes in this category do not have any physical barrier of separation from vehicular travel lanes (other than paint), which distinguishes them from separated bicycle lanes (BMC, 2022).

- **Signed designated bicycle route:** A roadway that is specifically designated as a bicycle route to a specific destination and includes signage, but does not use specific lane markings for bicyclists. Roadways with "share the road" signs alone are not included (BMC, 2022).
- **Sharrows or marked shared lane:** Bicycle facilities that share the lane with vehicular traffic. Sharrows or pavement markings are used when there is not enough space within the roadway for a bicycle lane, and the roadway is specifically designated for shared-use (BMC, 2022). The placement of sharrows and pavement markings indicates the appropriate positioning of a bicycle in the lane (AASHTO, 2012). Sharrows work best on low volume or low speed streets that connect together sections of the overall bicycle network.

Additional bicycle and shared-use facility types are outlined in the AASHTO Guide for the Development of Bicycle Facilities (2012) and [NACTO Urban Bikeway Design Guide](#).

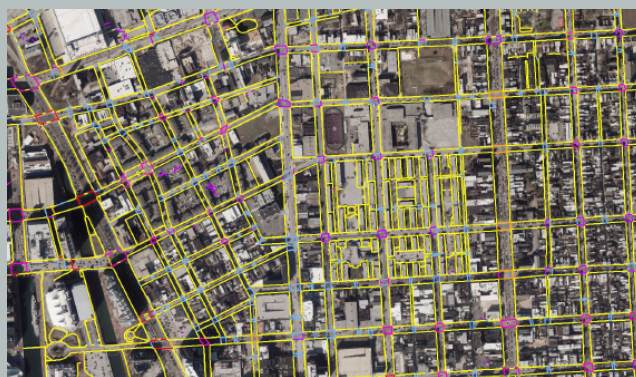
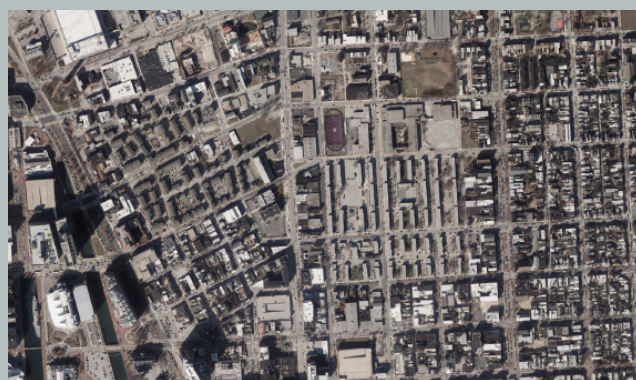
## Pedestrian Facilities (Sidewalks and More)

A regional inventory of pedestrian facilities, primarily sidewalks, does not currently exist for the Baltimore region. However, one is currently under development. The pedestrian facility inventory, under a project lead by BMC, will also include the development of a Pedestrian Infrastructure Assessment Tool for the region. The tool will assist local governments

in prioritizing sidewalk projects, identifying sidewalk mileage and gaps, visualizing sidewalk data and routing and modeling the pedestrian network. In support of the tool, BMC acquired a comprehensive sidewalk and crosswalk dataset for the region created through feature extraction from high resolution imagery using artificial intelligence (AI). This will be the first region-wide comprehensive sidewalk database for the Baltimore region and has impressive potential to be used by local governments and BMC in future projects and plans.

## Micromobility Ridesharing Programs (E-Scooters and E-Bicycles)

Micromobility ridesharing programs are quickly expanding in the Baltimore region and include bicycles, e-scooters and e-bicycles. Micromobility



*Pedestrian Infrastructure Assessment  
regional sidewalk and crosswalk dataset*

ridesharing programs are also sometimes referred to as dockless vehicle programs. Several programs exist throughout the region:

- Baltimore City:** Baltimore City launched a pilot initiative in 2018 and the full dockless vehicle program in 2019 for e-bicycles and e-scooters. Dockless vehicles are equipped with GPS and can be parked in designated areas but do not require being parked at a docking location like a bicycle rack. Dockless vehicles can be located, rented and parked through a smartphone application or text-to-unlock plan. While dockless vehicles are not required to park at docking locations, Baltimore City has a corral program of designated parking spots for dockless vehicles. Riders using these corrals can receive discounts. The program averages 120,000 monthly trips, with more than 5 million trips taken since 2018. Many of these trips potentially replaced motor vehicle trips. The 2022 dockless permits were awarded to three companies who together provide e-scooters, e-bicycles, seated e-scooters and adaptive vehicles for people with special mobility needs. Rules and regulations undergo annual revisions after a 30-day public comment period. Baltimore City rules and regulations affect fleet size, parking requirements, equity zones and distribution, rider education, equity of access, safety and vehicle standards and data reporting formats.
- Aberdeen:** Dockless e-scooters became available in the City of Aberdeen in summer 2022 under a 12-month trial period. The 50 e-scooters can only be operated within city limits.
- Annapolis:** The dockless e-scooter and e-bicycle program launched in the City of Annapolis in spring 2022. The 50 e-scooters



and 50 e-bicycles can only be operated within city limits currently. However, the program may expand to Anne Arundel County into the Parole Town Center area.

- Howard County:** Howard County launched a pilot dockless e-scooter permitting process overseen by the Howard County Office of Transportation. The first permit was granted and 100 to 200 e-scooters will be available in downtown Columbia, Oakland Mills, Wilde Lake, Harpers Choice, and Hickory Ridge. Adjustments to the permitting process and new applications will be considered at the conclusion of the pilot.

## Programs

Education and awareness programs are vital to increasing pedestrian and bicycle safety and allow the community to celebrate together.

Bike to Work in the Baltimore region celebrated its 25th anniversary in 2022. The event included almost 1,800 registered participants, up from about 1,200 in 2021. Community members joined in-person events from Annapolis to Bel Air to Columbia to Westminster. Approximately 650 registrants were taking part for the first time. Bike to Work Week is a campaign organized by BMC with local partners that celebrates bicycling as a healthy and affordable commuting option while promoting public awareness of its safety and environmental benefits. Bike to Work Week helps raise awareness of the rules of the road for drivers, pedestrians and bicyclists, and also highlights the need to improve bicycle facilities to improve safety.

BMC also participates in safety programming. BMC and MDOT Motor Vehicle Administration Highway Safety Office (MDOT MVA MHSO) collaborated with local partners to launch the

Look Alive campaign. The campaign seeks to educate drivers, pedestrians and bicyclists about the safe use of roadways in the Baltimore region and to raise awareness about pedestrian and bicycle safety. The campaign includes TV and outdoor advertising, grassroots outreach and media relations.

## Factors and Trends

The rates of bicycling increased nationally during the pandemic (Eshani, Michael, Duren, Mui & Porter, 2021), potentially due to an increase in the number of people biking rather than people biking more often (APA, 2022). However, bicycle commuting trips dramatically dropped during the pandemic and have not returned to pre-pandemic levels (APA, 2022). In the Baltimore region, rates of micromobility (e-scooters and e-bicycles) use decreased during the pandemic. However, micromobility use is now close to surpassing pre-pandemic levels and is exceeding pre-pandemic trips to transit stations (Young, 2022). Micromobility has also expanded to multiple jurisdictions in the region, offering additional active transportation options.

Levels of cycling and walking nationally remain low compared to our international peers. Many factors impact a person's choice to bicycle or walk, including feeling comfortable or safe on a bicycle or pedestrian route, the actual safety of roadways and active transportation facilities, the equitable distribution of active transportation facilities and connections to transit. While overall active transportation numbers remain low nationally and in the Baltimore region, there are many opportunities and champions for growth of the active transportation network. Communities benefit from increased transportation choices, especially for travel modes that reduce congestion while saving money and improving health and air quality.



*Bike to Work Week 2022, Towson Pit Stop*

## Connected Network of Active Transportation Facilities for All Ages and Abilities

A network of well-connected active transportation facilities that appeal to people of all ages and abilities has the potential to increase bicycle and pedestrian rates (Saelens & Handy, 2008). The perception of comfort or traffic stress has been shown in research to impact a person's decision to bicycle, walk or scoot. Guided by the 2040 Maryland Bicycle and Pedestrian Master Plan 2019 Update, MDOT recently completed a [Maryland Bicycle Level of Traffic Stress \(LTS\) analysis](#) of all roadways and bicycle facilities in the state. The LTS analysis identifies how comfortable a bicycle facility or roadway is based on the presence and type of bicycle facility, number of through lanes/traffic volume and speed limit (MDOT SHA, 2022). The LTS analysis assigned ratings from zero to five. A zero is the most comfortable and is suitable for all ages and abilities, such as shared-use paths, and a five indicates roadways where bicycle access is prohibited. A higher LTS score indicates a less comfortable facility which may be less attractive for most people to bicycle on. The LTS analysis will allow MDOT and others to identify gaps in the bicycle network that are currently uncomfortable for most users, which can assist in creating a bicycle network that is appealing and comfortable for all ages and abilities.



Jurisdictions outside the Baltimore region have completed pedestrian LTS analysis. The Baltimore region sidewalk inventory, currently under development, will bring Baltimore region jurisdictions much closer to having the necessary data for a pedestrian LTS analysis. LTS analysis of a geographic area allows for identification of gaps in the active transportation network and aids in identification and prioritization of projects.

## Safety

Non-motorist or pedestrian, bicycle, and scooter user safety is a priority of the BRTB, MDOT and member jurisdictions. Serious and fatal crash rates for drivers and active transportation users are on the rise in the Baltimore region, reflecting national trends (FHWA, 2022). Non-motorists make up a disproportionate share of serious and fatal crashes. Crashes involving non-motorists made up 3.8 percent of all crashes in the Baltimore region in the last five years (2016-2021). However, they accounted for 28.6 percent of all fatalities and 9.3 percent of all injuries (MHSO, 2021).

BRTB and BMC are dedicated to understanding the causes of crashes and identifying appropriate and effective safety countermeasures. Safety planning is a critical component of the LRTP as most safety infrastructure projects and awareness programs take many years to create change. The Transportation Improvement Program (TIP), which is focused on projects funded over the next four fiscal years, also incorporates safety in evaluation criteria.

Agencies throughout the country are focusing on eliminating fatal and serious injury crashes through data-driven systemic approaches including integrating safety into the project selection process and plans at all levels.

Strategies include supporting projects that use the Safe System Approach to increase safety for all and advancing Complete Streets and Vision Zero approaches. A Safe Systems Approach accounts for all roadway users, anticipates that people will make mistakes and emphasizes that road safety is a shared responsibility for all users and those that design, build and operate the roadway system. Staff at BMC work closely with partners in the MDOT SHA, Motor Vehicle Administration and MHSO to implement the Safe System Approach.

Many jurisdictions in the Baltimore region have drafted and adopted Complete Streets policies and plans. Complete Streets focuses on creating roadways that are safe and comfortable for all users and that increase equity and access to destinations (FHWA, 2022).

Jurisdictions in the Baltimore region are also implementing Strategic Highway Safety Plans (SHSP) which focus on furthering collaboration among agencies focused on safety to improve safety outcomes. The collaborative SHSP approach can increase the sharing of resources and knowledge across agencies and result in countermeasures that improve safety more effectively than isolated approaches. Maryland became a Vision Zero state in 2019 and previously was a Toward Zero Deaths state.





Regardless of the name of the program, eliminating all serious and fatal injuries to roadway users is the primary goal.

## Transit

Active transportation and public transit make natural partners as public transit riders often walk, bicycle or use e-scooters or e-bicycles to and from their transit stops. Also, trip distance is an important factor in the choice to walk or bicycle. Active transportation travel is well suited to bicycling trips of less than six miles and walking trips of less than one mile. Access to transit expands the reach of active transportation travel throughout a region and beyond. Nationally, agencies have focused on improving active transportation facilities within walking, bicycling and scooting distance of transit access and on coordinating with transit providers to ensure that active transportation can be combined with transit for longer regional trips.



Public transit systems in the Baltimore region include buses, trains, light rail transit, ferries and paratransit. Access to public transit can be enhanced by improving last mile connectivity, also known as “first-mile/last-mile” active transportation connections. Improving last mile connectivity increases equity by improving access to employment and core services for residents with low incomes, individuals with disabilities, children and older adults.

MDOT Office of Planning and Capital Programming has conducted an analysis of fixed-rail transit station walksheds. A walkshed includes the facilities that a pedestrian can walk from a given point outward using pedestrian infrastructure. Sections of roadway without sidewalk are a common way for a walkshed to

terminate. Walkshed analysis can be used to identify gaps in the pedestrian network, allowing agencies to develop recommendations and prioritize improvements to the network.

BMC and BRTB promote active transportation connectivity to transit through projects such as the Pedestrian Infrastructure Assessment tool and regional sidewalk inventory (discussed above). The tool and sidewalk and crosswalk inventory would allow agencies to assess the pedestrian access to transit stops such as bus stops, expanding on the work completed by MDOT OPCP which focused on heavy rail stations. The regional bicycle facility inventory, which BMC leads annually, is also a helpful source of information to analyze bicycle access to transit and last mile connectivity.

The COVID-19 pandemic has affected transit ridership, with national ridership at 39 percent of pre-pandemic levels for the week ending April 9, 2022. While public transit ridership has not made a steady recovery, transit remains an important travel mode, especially for those who rely on transit and active transportation to access jobs and meet their everyday needs.

## Equity

A connected active transportation network is critical for linking community members of all ages and abilities, especially those who walk or bicycle out of necessity rather than choice, to core services and amenities. The uneven distribution of high quality active transportation and transit access can impact the safety, mobility, health and economic benefits of disadvantaged communities. Nationally, lower income communities of color are overrepresented in bicycle and pedestrian crashes (Roll & McNeil, 2022). In addition, rents and home prices tend to be higher in more walkable and bikeable areas (Cortright, 2009). Agencies around the nation are analyzing active transportation networks with an equity lens based on socioeconomic factors that may impact a community’s mobility. Such

Equity is also incorporated in BRTB and BMC projects through the [Vulnerable Population Index \(VPI\)](#). The VPI allows the BRTB to identify areas with concentrations of seven groups determined to be vulnerable based on an understanding of federal requirements and regional demographics (BMC, 2018). These groups include low-income populations, minorities, those with limited English proficiency, persons living with a disability, the elderly, and carless households. These populations have historically been underserved by the transportation system and may face challenges to accessing employment and core services. The VPI is used in multiple BRTB projects and assessments. For example, the Pedestrian Infrastructure Assessment Tool includes VPI criteria in the analysis of sidewalk connectivity and to assist in the prioritization of improvements. The VPI will also be used in the upcoming BRTB project to develop an integrated vision for a regional bicycle network.

analysis can be used to ensure the active transportation network is accessible for vulnerable populations and underserved communities.

The active transportation network and its connections to transit in the Baltimore region is critical to increasing access to services and amenities for people of all ages and abilities. Several of the scoring criteria for projects submitted for inclusion in the L RTP include equity components. For example, the Complete Streets technical scoring criteria includes an assessment of the inclusion of Complete Streets features and the project's impact on improving accessibility for low-income and minority populations.

### Public Health

Research has shown that bicycling and walking can assist in people meeting recommended levels of physical activity (Pucher, Buehler, Bassett, & Dannenberg, 2010) and potentially improve public health due to the health benefits of increased physical activity (Oja, et al., 2011). A well connected and comfortable

active transportation network can increase access to recreational areas and parks. Also, replacing a vehicle trip with biking, walking or scooting reduces greenhouse gas emissions that contribute to poor air quality. However, walking and bicycling rates are impacted by the presence or lack of sidewalks and other pedestrian infrastructure, bicycle lanes, shared-use paths and bicycle boulevards (Dill, 2009).

### Economic Competitiveness

A thriving regional economy is tied to improved job opportunities, social mobility and strong communities. Impact reports of trails networks have shown that active transportation and recreation can support a region's competitiveness as they are valued by existing and potential residents and visitors. A connected active transportation network can support a region's sustainability and resilience, while encouraging tourism and spending in businesses nearby. Destination active transportation trails such as the Great Allegheny Passage in western Maryland and Pennsylvania can be particularly popular draws for tourists. Active transportation infrastructure can increase the value of nearby properties, increasing the demand for and vitality of communities. However, rising property values can raise issues of affordability and potential displacement. There is a national discussion about the role of communities and policymakers in mitigating the risks associated with rising property values.

### Connection to Other Plans

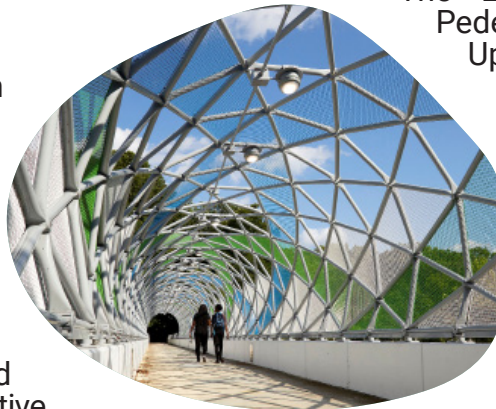
Local efforts continue to support pedestrians, bicyclists and micromobility users in the Baltimore region. MDOT continues similar efforts at the state level and BMC works at the regional level. Local, regional and state plans and efforts impacting active transportation include not only bicycle and pedestrian master plans, but also Complete Streets, Vision Zero

and safety action plans. Refer to Table 2 for more detail. The efforts of these plans build upon each other. For example, various local and state plans will be used to inform the upcoming BRTB project to develop an integrated vision for a regional bicycle network.

- ensuring road improvements deliver Context Driven objectives; and
- leveraging innovation and technology to improve pedestrian safety (MDOT SHA, 2022).

## State Plans

The MDOT SHA Context Driven Guide was developed as a planning and design guide focused on creating a safe multimodal transportation system. The guide outlines six contexts: Urban Core, Urban Center, Traditional Town Center, Suburban Activity Center, Suburban and Rural, and provides illustrative transportation design and treatments for the different contexts (MDOT SHA, 2020). The guide encourages exploration of the opportunities available based on the characteristics of each context. The guide outlines proven treatments for the different contexts including reduced speed limits, protected bicycle lanes, leading pedestrian intervals, continental crosswalks and much more.



The focus of the MDOT SHA Pedestrian Safety Action Plan (PSAP) is to reduce traffic-related serious injuries and fatalities of vulnerable users, including pedestrian and bicyclists, in Maryland as a part of a Vision Zero strategy. The PSAP compliments other pedestrian safety efforts lead by the state by focusing on actionable steps to improve pedestrian safety. The final plan is scheduled to be released in late 2022. Goals of the plan include:

- supporting agency partners and peer pedestrian and bicycle safety programs;
- direct investment and implementation of countermeasures where there are known pedestrian and bicycle safety challenges;

The 2040 Maryland Bicycle and Pedestrian Master Plan 2019 Update is an update of the 2014 plan with the vision that “Maryland will be a great place for biking and walking that safely connects people of all ages and abilities to life’s opportunities” (MDOT SHA, 2019). Goals of the plan include:

- improving the safety of bicycle and pedestrian travel through education, enforcement and infrastructure solutions;
- enhancing transportation choice and multimodal connectivity through linked networks;
- supporting efficient and equitable planning and project development with data-driven tools and innovative techniques;
- building partnerships to promote active transportation and strengthen the health of our communities; and
- advancing bicycling and walking as an economic development strategy (MDOT SHA, 2019).

## Regional Plans and Projects

BMC and BRTB collaborate with local and state members to coordinate and promote active transportation planning in the Baltimore region. BMC staff conduct studies to develop active



**Table 2: Local and State Plans Connected to Active Transportation**

Agency	Plan Name	Status
<b>City of Annapolis</b>	Bicycle Master Plan	Adopted in January 2012
<b>Baltimore City</b>	Bicycle Master Plan	Adopted in 2015, update scheduled to be completed spring 2023
	Complete Streets Manual	Completed in 2021
<b>Baltimore County</b>	Phase I: Eastern County Bicycle & Pedestrian Plan	Adopted in 2006
	Phase II: Western County Bicycle & Pedestrian Plan	Adopted in 2012
	Bicycle and Pedestrian Master Plan	Underway
<b>Anne Arundel County</b>	Pedestrian & Bicycle Functional Master Plan	Completed in 2013
	Walk & Roll Anne Arundel!	Underway, scheduled to be completed fall 2022
	Vision Zero Anne Arundel County	Draft completed in January 2022
<b>Carroll County</b>	Freedom Area Bicycle and Pedestrian Master Plan	Completed in 2013
	Bicycle-Pedestrian Master Plan	Approved in November 2019
<b>Harford County</b>	Bicycle & Pedestrian Master Plan	Adopted in 2013, update completed in 2022
<b>Howard County</b>	WalkHoward	Adopted in 2020
	BicycleHoward	Adopted in 2016, scheduled to be updated in late 2022
	Complete Streets Design Manual	Accepted in 2022
<b>MDOT SHA</b>	Context Driven Guide	Adopted in 2020
	Pedestrian Safety Action Plan (PSAP)	Underway
	2040 Maryland Bicycle and Pedestrian Master Plan	Adopted in 2019

transportation networks, lead preliminary design work for shared-use paths and trails and provide technical assistance to local jurisdictions.

Beginning in late 2022, BMC will lead the effort to develop a vision for an integrated regional bicycle network in coordination with member jurisdictions. The plan will focus on developing a regional bicycle and shared-use facility network that will improve regional connectivity, safety, mobility and access to jobs, recreational opportunities and other daily activities for all ages and abilities.

As mentioned previously, BMC is leading the effort to develop a regional pedestrian facility inventory and a Pedestrian Infrastructure Assessment Tool, which will assist local governments in analyzing their pedestrian network.

BMC also leads projects focused on advancing the design of bicycle, pedestrian, and shared-use facilities of regional significance. BMC, in collaboration with local partners, led the concept plan for the Patapsco Regional Greenway (PRG), a proposed 40-mile, shared-use trail running through the Patapsco Valley from Baltimore's Inner Harbor to Sykesville in Carroll County. BMC has subsequently worked with local and state partners on the preliminary design of two PRG segments, the Elkridge to Guinness segment in Howard and Baltimore Counties and the Sykesville to McKeldin segment in Carroll County. BMC is beginning preliminary design of the PRG segment from Guinness to Southwest Area Park in Baltimore County. This segment will connect with the Elkridge to Guinness segment at the southern end and the Patapsco Light Rail Station on the northern end.

BMC is also working on a Concept Plan for Bicycle and Pedestrian Improvements along US 40 (Aberdeen to Havre de Grace). The goal of the project is to develop a multimodal concept plan for a 5.1 mile segment of US 40 that can guide the development of a cohesive, comfortable, convenient and safe facility

## ***BMC-Led Active Transportation Projects***

### **Complete:**

- Preliminary design of the PRG Elkridge to Guinness segment in Howard and Baltimore Counties
- Preliminary design of the PRG Sykesville to McKeldin segment in Carroll County
- Love to Ride bicycle challenges

### **Underway:**

- Pedestrian Infrastructure Assessment Tool, region wide
- Regional pedestrian infrastructure network
- Concept Plan for Bicycle and Pedestrian Improvements along US 40 (Aberdeen to Havre de Grace)
- Preliminary design of the PRG Guinness to Southwest Area Park segment in Baltimore County

### **Upcoming:**

- Vision for an Integrated Regional Bicycle Network, region wide
- Preliminary design of another PRG segment

### **Ongoing:**

- Bike to Work Week
- Regional Bicycle Facility Inventory
- Look Alive safety campaign
- Regional bicycle and pedestrian volume counts
- Cost Estimating Tool for bicycle infrastructure projects

serving both bicyclists and pedestrians. The concept plan will be used for program specific construction projects and may be used to guide design standards for future development along the corridor.

### Active Transportation Planning and Funding in the Baltimore Region

Along with the previously discussed planning projects and studies, BMC and BRTB assist member jurisdictions by facilitating coordination, promoting the sharing of ideas and information and promoting active transportation.

### Bicycle and Pedestrian Advisory Group

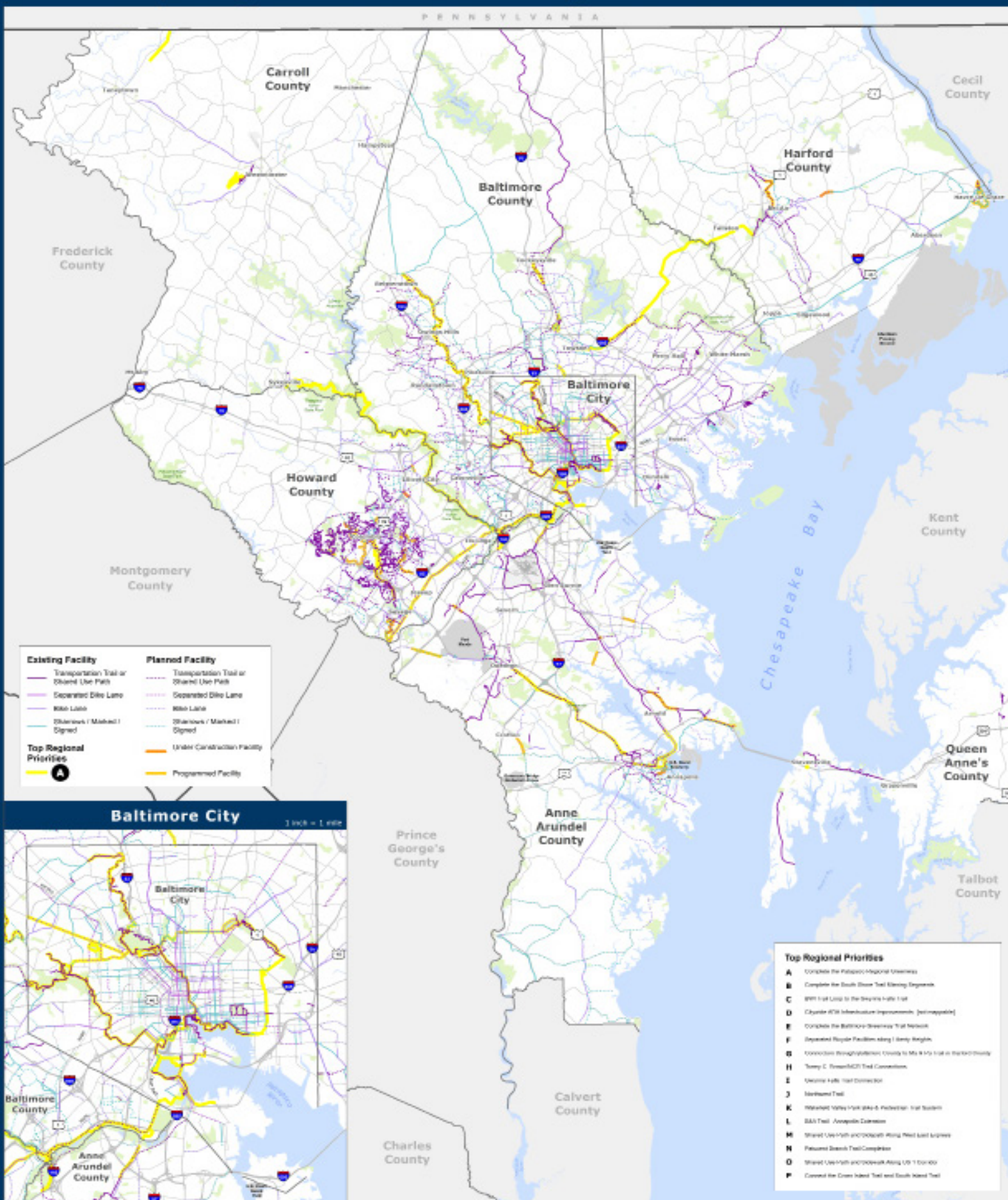
The Bicycle and Pedestrian Advisory Group (BPAG) is a BRTB subcommittee made up of representatives from the seven jurisdictions in the Baltimore region and representatives from Maryland Departments of the Environment, Planning & Transportation. BPAG meetings serve as a place to share information and ideas for improving active transportation in the region. Important regional initiatives such as the annual regional bicycle facility inventory emerged from BPAG. The subcommittee also advises the Technical Committee and BRTB on active transportation issues.

**Table 3: Top Regional Active Transportation Priorities**

Title	Location	Length
<i>Complete the Patapsco Regional Greenway</i>	Region-wide	40 miles
<i>Complete South Shore Trail missing segments</i>	Anne Arundel County	13.14 miles
<i>Connect BWI Trail Loop to Gwynns Falls Trail</i>	Anne Arundel County	1.3 miles
<i>Citywide ADA infrastructure improvements</i>	Baltimore City	N/A
<i>Complete the Baltimore Greenway Trail Network</i>	Baltimore City	35 miles
<i>Separated bicycle facilities along Liberty Heights</i>	Baltimore City	3.5 miles
<i>Connection through Baltimore County to the Ma &amp; Pa Trail in Harford County</i>	Baltimore County and Harford County	17.3 miles
<i>Torrey C. Brown/NCR Trail connections</i>	Baltimore County	7 miles
<i>Gwynns Falls Trail connection</i>	Baltimore County	18 miles
<i>Northwest Trail</i>	Carroll County	5.6 miles
<i>Wakefield Valley Park Bicycle &amp; Pedestrian Trail System</i>	Carroll County	8 miles
<i>B&amp;A Trail - Annapolis Extension</i>	City of Annapolis and Anne Arundel County	4.3 miles
<i>Shared-Use Path and Sidepath along West East Express</i>	City of Annapolis	2.2 miles
<i>Completion of the Patuxent Branch Trail</i>	Howard County	6 miles
<i>Shared-use path and sidewalk along US 1 Corridor</i>	Howard County	10.9 miles
<i>Connect the Cross Island Trail and South Island Trail</i>	Queen Anne's County	3 miles



# Top Regional Active Transportation Priorities



Baltimore Metropolitan Council  
1500 Whitestone Way, Suite 300  
Baltimore, MD 21230  
www.BaltoMetro.org

Prepared by Transportation Planning Division  
Projected Coordinate System - NAD 1983 State Plane (TC)  
Data Source - BMC, © HERE 2022, TIGER/Line®, MTA  
August 2022



1:126,720

0 2 4 6 8  
Miles

1 in = 2 miles

## BRTB Planning

BRTB is mandated by the federal government to annually update and approve the TIP, which includes all transportation projects requesting federal funds for the next four fiscal years. Projects are required to be in the LRTP to be included in the TIP. While the TIP is a short range program of improvements, the LRTP includes projects the region expects to implement over the next 20 years. As projects move from concept to implementation, they move from the LRTP to the TIP.

The LRTP currently under development, Resilience 2050, outlines goals and strategies for the region that guide the planning and implementation of transportation projects and programs. Four of the nine goals directly relate to active transportation, including improve accessibility, increase mobility, improve system safety and improve and maintain the existing infrastructure. These goals are accompanied by supporting strategies which can be [viewed here](#).

The LRTP process includes collecting public feedback. Many of the comments on the goals and strategies pertained to active transportation.

A few of the things we've heard so far during the development of the LRTP:

- There is an increasing interest in active transportation in the region
- There is a need for comfortable and safe facilities for people using active transportation
- There are gaps in the active transportation system and its connections to complementary modes such as transit
- There is a desire for a regional network of active transportation facilities that are distributed equitably and that leverage transit and other modes

Projects submitted for inclusion in the LRTP are analyzed using a project scoring methodology that includes policy and technical scores. The policy score is worth 40 points and the technical score is worth 50 points. The policy score is based on project priority for the submitting jurisdiction and if the project has financial support from MDOT. The technical score is based on criteria drawn from the regional goals such as safety, accessibility, mobility and complete streets. BMC staff score projects submitted by jurisdictions based on the technical scoring methodology.

The Complete Streets technical scoring criteria is used to evaluate how a project contributes to creating a safe and comfortable environment for active transportation users. Complete Streets accounts for 5 out of 50, or 10 percent, of technical scoring points. Projects are evaluated as follows:

**Complete Streets Features:** Projects receive up to four points for having Complete Streets features which can include but are not limited to the following:

- Traffic and Safety (controlled intersections; reduced turn radii; turn restrictions; crosswalks; lighting; traffic calming/speed reduction strategies)
- Bicycle Facilities (buffered bicycle lanes; cycle tracks; shared-use paths)
- Pedestrian Facilities (improved driveway crossings; median treatments; mid-block crossings including RRFB and HAWK signals; new sidewalks; widened and/or buffer improvements to existing sidewalks; improved ADA features)
- Transit Facilities (bus rapid transit typical sections; TSP; bus pull out areas; dedicated bus lanes)

**Equity Areas:** Projects anticipated to improve access to Complete Streets for low-income and minority populations can receive up to one additional point.



Let us know what you think about this paper!  
[publicinput.com/Resilience2050whitepapers](https://publicinput.com/Resilience2050whitepapers)

In addition to the active transportation emphasis in LRTP goals and strategies and project scoring, a list of top active transportation projects totaling more than 175 miles of bicycle and pedestrian facilities will be presented to the BRTB for consideration under set-aside funding. In previous LRTPs, the Patapsco Regional Greenway and Baltimore Greenway Trails Network were included. The BRTB has not yet determined the amount of set-aside funding for Resilience 2050. However, the 2019 LRTP included \$105 million in set-aside funding.

The list of top regional active transportation priorities was developed in collaboration with over 20 representatives from each jurisdiction in the region and MDOT. The priorities included in the list are grounded in adopted bicycle, pedestrian, Complete Streets and park and recreation plans. The top priorities will inform Resilience 2050, assist in cross jurisdictional collaboration and inform future efforts to develop a vision for an integrated regional bicycle network.

The top active transportation priorities include at least one priority in each jurisdiction in the Baltimore region, with many being cross-jurisdictional. The priorities are included in Table 3 and the preceding map. The table order is alphabetical by jurisdiction and is not reflective of project priority.

## Conclusions

The COVID-19 pandemic impacted all aspects of our lives, including how we



get around. Nationally, active transportation was not evenly affected by the pandemic. Bicycling and walking rates increased. However, transportation trips such as commuting to work decreased. Micromobility rideshare use also decreased during the pandemic, but has almost fully recovered. Rideshare programs have expanded coverage to new areas in the region, which may lead to an even larger increase in 2023.

While there are many challenges to restoring and increasing walking and biking transportation trips, there are also opportunities for local, regional, and state actors to promote and support expansion of the active transportation network in the Baltimore region. The increase in funding from the Infrastructure Investment and Jobs Acts along with the ongoing coordination of BMC, our regional partners and the state puts the Baltimore region in a strong position to leverage this increased funding to expand the region's active transportation network.

A safe, connected and comfortable active transportation network that appeals to people of all ages and abilities will benefit the region by improving equitable access to housing, job opportunities, transit, core services and recreational amenities while also increasing active transportation rates. A well-developed active transportation network will also enable residents and visitors to enjoy the beauty of the Baltimore region using travel modes that reduce congestion while saving money and improving health and air quality.