

Amendment 101 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 11

Date: 10/02/2023

Amendment No. 101

*(This Amendment amends HoCo by Design Chapter 8: Public School Facilities to remove a reference to recent increases in the Transfer Tax and Public Schools Facility Surcharge and substitute that increasing the percentage of the Transfer Tax designated for school capital projects will assist the school district in meeting its needs.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

3 • Chapter 8: Public School Facilities: 27.

4 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
5 amendment.

6

I certify this is a true copy of

Am 101 CB 28 - 2023

~~passed~~ on 10/11/2023

Failed

Michael DeWitt  
Council Administrator

# Accommodating Future School Needs

To effectively accommodate future school needs, three important “legs of the stool” must all work together: 1) effective land use planning and growth management; 2) adequate school funding and strategic acquisition and construction methods; and 3) attendance area redistricting to efficiently use systemwide capacity.

The General Plan and APFO establish the land use plan, policies, and growth management tools for the first component. HoCo By Design proposes updated policies to better integrate school planning needs, particularly given the limited land available for new schools. As required in the current APFO, a review committee is to be convened within one year of the enactment of HoCo By Design to recommend changes. Continuous review and updates to policies and regulatory tools should occur to adapt to changing demographics, market conditions, and land use patterns. Guidance for the APFO committee is described in the Managing Growth chapter.

Fulfilling the second component is a continuous challenge, particularly in light of increasing levels of service delivery. The issue is compounded by the growing capital needs to replace or renovate older schools that are near the end of their useful lives and that had been designed based on decades-old service level expectations. Furthermore, in recent years school construction costs have increased faster than the general rate of inflation. These challenges call for new and proactive approaches to property identification, evaluation, and acquisition for public school use. In response to these challenges, the SAG discussed various market based approaches that foster public-private partnerships including; establishing a right of first refusal to purchase properties in certain priority geographies for school sites, researching models for government and/or private sector partners to acquire and assemble small parcels to achieve desirable acreages for school sites, using real estate data to monitor leasing and sale opportunities for site or building acquisition, and considering leaseback options as a mechanism to hold land for future school needs.

Fulfilling the third leg is complex and challenging. HCPSS strives to achieve important policy goals including balancing socio-economic equity among schools, keeping neighborhoods together, having a logical feeder system from elementary to middle school and from middle to high school, implementing a fair and efficient pupil transportation system, and other important factors. With limited funding and land availability for new schools, redistricting is a necessary tool to use available systemwide capacity.

Over the last several years, actions have been taken to address each of these three items. APFO has been amended to reduce the amount of development allowed to proceed in a given year, and HoCo By Design recommends further changes to adapt to anticipated growth patterns. To address funding, ~~recent increases in the Transfer Tax and the Public Schools Facility Surcharge will help to pay for school capital needs~~ increasing the percentage of the Transfer Tax designated for school capital projects will assist the school district in meeting its continued needs. However, further funding solutions will be necessary in the years ahead, including working with our state and federal partners.



Finally, the Howard County Board of Education completed a comprehensive redistricting for the 2020/21 school year and high school redistricting in November 2022 in anticipation of the opening of the new Guilford Park High School in the fall of 2023.

Recent amendments to APFO resulting in a stricter School Capacity Test have placed more new residential subdivisions and infill projects in a holding pattern. This may serve as an impediment to housing affordability and lead to reduced capital revenues for schools. Without increased funding from new development, new school construction will be limited. The challenge is to find a balance that works, where growth can generate revenue for the County, while occurring in a predictable and gradual manner. Cutting off one leg of the stool will not solve the problem and could lead to further imbalance. All three legs need to work together to ensure Howard County maintains the superior quality of public education for which it is known.

## PS-5 Policy Statement

The need for school facilities—particularly to support regional early childhood programs in the near term—warrants a more proactive approach to property identification, evaluation, and acquisition for public use.

## Implementing Actions

1. Continue to review and update policies and regulatory tools to better align school planning needs to changing demographics, market conditions, and land use patterns.
2. Consider a right of first refusal strategy to purchase properties proposed for sale in certain priority geographies.
3. Research models for government and private sector partners to acquire and amass small parcels into sites large enough for school use.
4. Use data/intelligence from the real estate industry to monitor leasing and sale opportunities for site acquisition.
5. Consider purchasing available properties in the near term with leaseback options to tenants as a means to hold land for future school needs.

Amendment 102 to Council Bill No. 28 -2023

BY: Deb Jung  
Liz Walsh

Legislative Day 11  
Date: October 2, 2023

Amendment No. 102

(This Amendment makes the following changes to HoCo by Design Chapter 4 and Chapter 11:

Chapter 4: County in Motion

~~Removes all quotes;~~

- Amends the fifth key organization topic relating to the future of the transportation system to include the Baltimore/Washington International Thurgood Marshall Airport (BWI);
- Amends the "Maintaining the Transportation System" section by adding language to the County's future challenges to include meeting climate policy goals by building a zero-emission fleet;
- Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;
- Amends the Safety and the Transportation System section by adding language that consideration should be given to improving walking routes to school;
- Amends the CIM-2 Policy Statement Implementing Action 2 to update the Subdivision and Land Development Regulations to favor land use and development that improves safety, particularly for pedestrians and bicyclists;
- Amends the CIM-3 Policy Statement Implementing Action 2 to ensure investments in the RTA system that accomplish increased service frequencies, improved reliability, and specified additional routes;
- Amends the CIM-3 Policy Statement Implementing Action 3 to provide, support and enhance specified community-based mobility programs;
- Amends the CIM-3 Policy Statement Implementing Action 4 to consider subsidies for income-qualified residents to use existing rideshare programs;
- Amends the CIM-5 Policy Statement Implementing Action 3 to "review" rather than "sustain" and expand efforts to develop and implement Transportation Demand Management programs and adds language to improve the reporting process for outcomes and goals;

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A102 CB28-2023

passed on

10/11/2023

*Michelle Dawson*

Council Administrator

- Amends the CIM-5 Policy Statement Implementing Action 4 to reduce demand for hazard-based school bus service and to assess walking routes for safety and equity;
- Amends the CIM-5 Policy Statement Implementing Actions by adding Action 7 to require safe, non-automobile pathways that connect buildings within specified complexes as well as activity centers to support “park once” behavior and adding Action 8 to consider more funding for electric school buses;
- Amends the Climate Change and Air Quality subsection of the Future of the Transportation System to add commercial airplanes and business jets to the contributors of total carbon dioxide emissions and greenhouse gas emissions in the U.S., adds reducing direct emissions from airplanes, and adds creating more efficient transportation modes with fewer direct emissions;
- Adds a fifth paragraph to the Climate Change and Air Quality subsection relating to requirements of the Design Manual for a noise analysis under specified circumstances and requirements for specified noise mitigation;
- Amends the CIM-8 Implementing Action 3 to ~~require~~ **encourage** the installation of electric vehicle charging stations in private and public space;
- Amends the CIM-9 Implementing Action 2 to develop a plan and transition the County’s fleet to low/no emission vehicles;
- Amends the CIM-10 Policy Statement to add advance land use patterns and site development that support an economically and environmentally sustainable transportation system; and
- Amends the CIM-10 Implementing Actions to add Action 6 to advance the Complete Streets Policy by updating specified regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.

*Chapter 11:  
Implementation*

- Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;
- Amends the CIM-2 Policy Statement Implementing Action 2 to update the Subdivision and Land Development Regulations to favor land use and development that improves safety, particularly for pedestrians and bicyclists;
- Amends the CIM-3 Policy Statement Implementing Action 2 to ensure investments in the RTA system that accomplish increased service frequencies, improved reliability, and specified additional routes;

- Amends the CIM-3 Policy Statement Implementing Action 3 to provide, support and enhance specified community-based mobility programs;
- Amends the CIM-3 Policy Statement Implementing Action 4 to consider subsidies for income-qualified residents to use existing rideshare programs;
- Amends the CIM-5 Policy Statement Implementing Action 3 to “review” rather than “sustain” and expand efforts to develop and implement Transportation Demand Management programs and adds language to improve the reporting process for outcomes and goals;
- Amends the CIM-5 Policy Statement Implementing Action 4 to reduce demand for hazard-based school bus service and to assess walking routes for safety and equity;
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- Amends the CIM-8 Implementing Action 3 to ~~require~~ encourage the installation of electric vehicle charging stations in private and public space;
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- Amends the CIM-10 Implementing Actions to add Action 6 to advance the Complete Streets Policy by updating specified regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.)

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
 2 pages as indicated in this Amendment:

- 3 • Chapter 4, County in Motion: 3, 9, 10, 11, 12, 13, 18, 25, 26, 27, 30, 31, 32, and 34.
- 4 • Chapter 11: Implementation: 23, 24, 25, 27, and 28.

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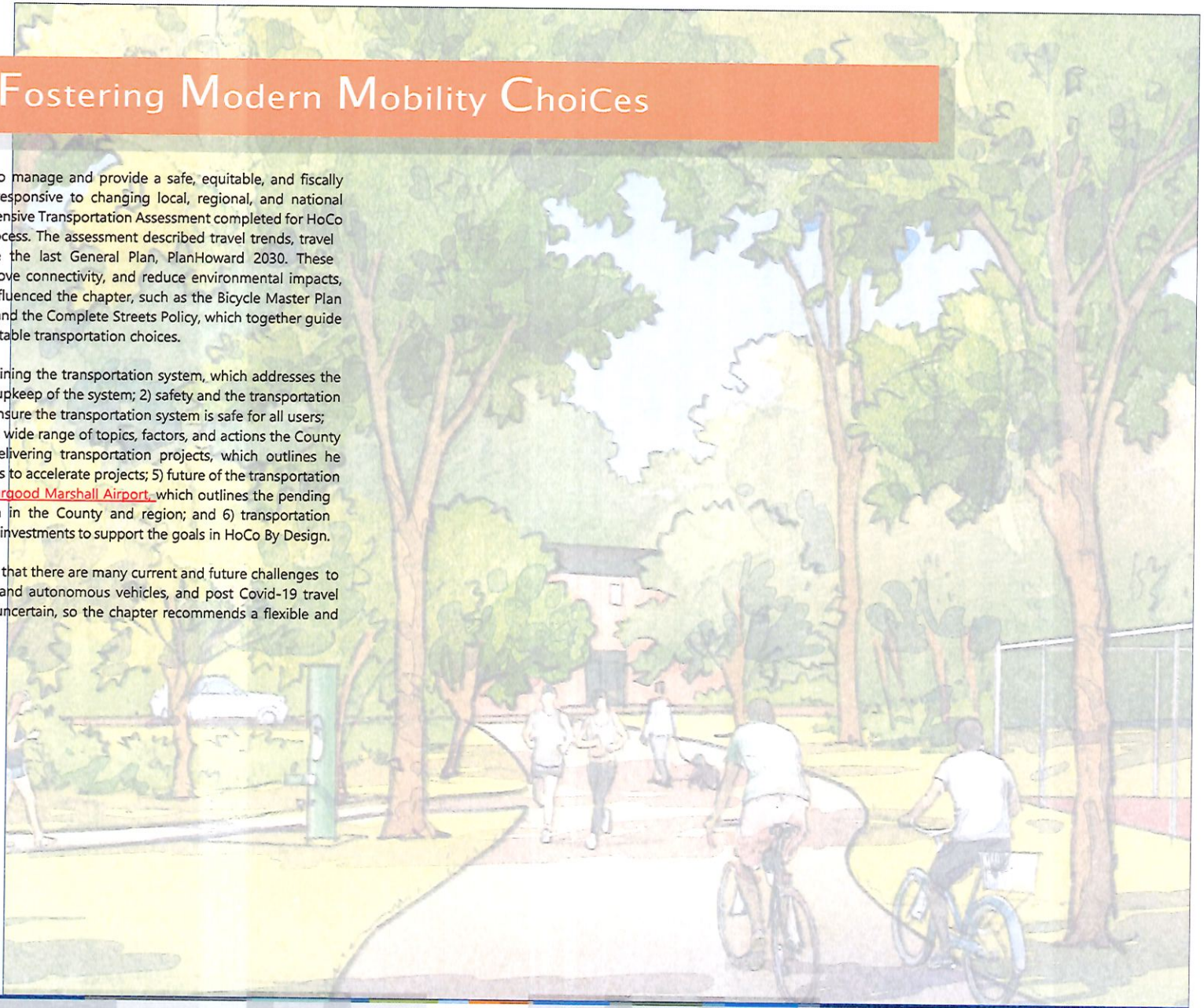
6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
 7 amendment.

# County in Motion : Fostering Modern Mobility Choices

This chapter highlights policies, initiatives, and actions to manage and provide a safe, equitable, and fiscally sustainable transportation system for all users that is responsive to changing local, regional, and national transportation trends. The chapter builds upon a comprehensive Transportation Assessment completed for HoCo By Design and HoCo By Design's public engagement process. The assessment described travel trends, travel forecasts, and county transportation investments since the last General Plan, PlanHoward 2030. These investments included efforts to reduce congestion, improve connectivity, and reduce environmental impacts, among other achievements. Several recent efforts also influenced the chapter, such as the Bicycle Master Plan (BikeHoward), the Pedestrian Master Plan (WalkHoward), and the Complete Streets Policy, which together guide the County's commitment to safety, accessibility, and equitable transportation choices.

This chapter is organized around six key topics: 1) maintaining the transportation system, which addresses the importance of investing in the ongoing maintenance and upkeep of the system; 2) safety and the transportation system, which details the actions the County is taking to ensure the transportation system is safe for all users; 3) transportation mobility and access, which addresses the wide range of topics, factors, and actions the County considers in managing the transportation system; 4) delivering transportation projects, which outlines the challenges in delivering transportation projects and options to accelerate projects; 5) future of the transportation system, including Baltimore/Washington International Thurgood Marshall Airport, which outlines the pending and expected changes facing the transportation system in the County and region; and 6) transportation investment priorities, which details a range of transportation investments to support the goals in HoCo By Design.

Finally, the chapter should be read with the understanding that there are many current and future challenges to which the County will need to react, such as connected and autonomous vehicles, and post Covid-19 travel patterns. The impacts of these and other challenges are uncertain, so the chapter recommends a flexible and nimble policy approach.



# Maintaining the transportation System

Howard County's transportation system is comprised of facilities and operations that provide transportation services and maintain the existing transportation infrastructure. The system reflects public and private investments that are critical to Howard County community members and businesses. Maintaining this investment requires continuous assessment of—as well as repairs and upgrades to—bridges, roadway pavement, bike lanes, sidewalks, signals, and transit buses, to name just a few key items. Each new facility installed or new vehicle purchased adds to the inventory of assets that require regular maintenance to ensure their safety, accessibility, and operability.

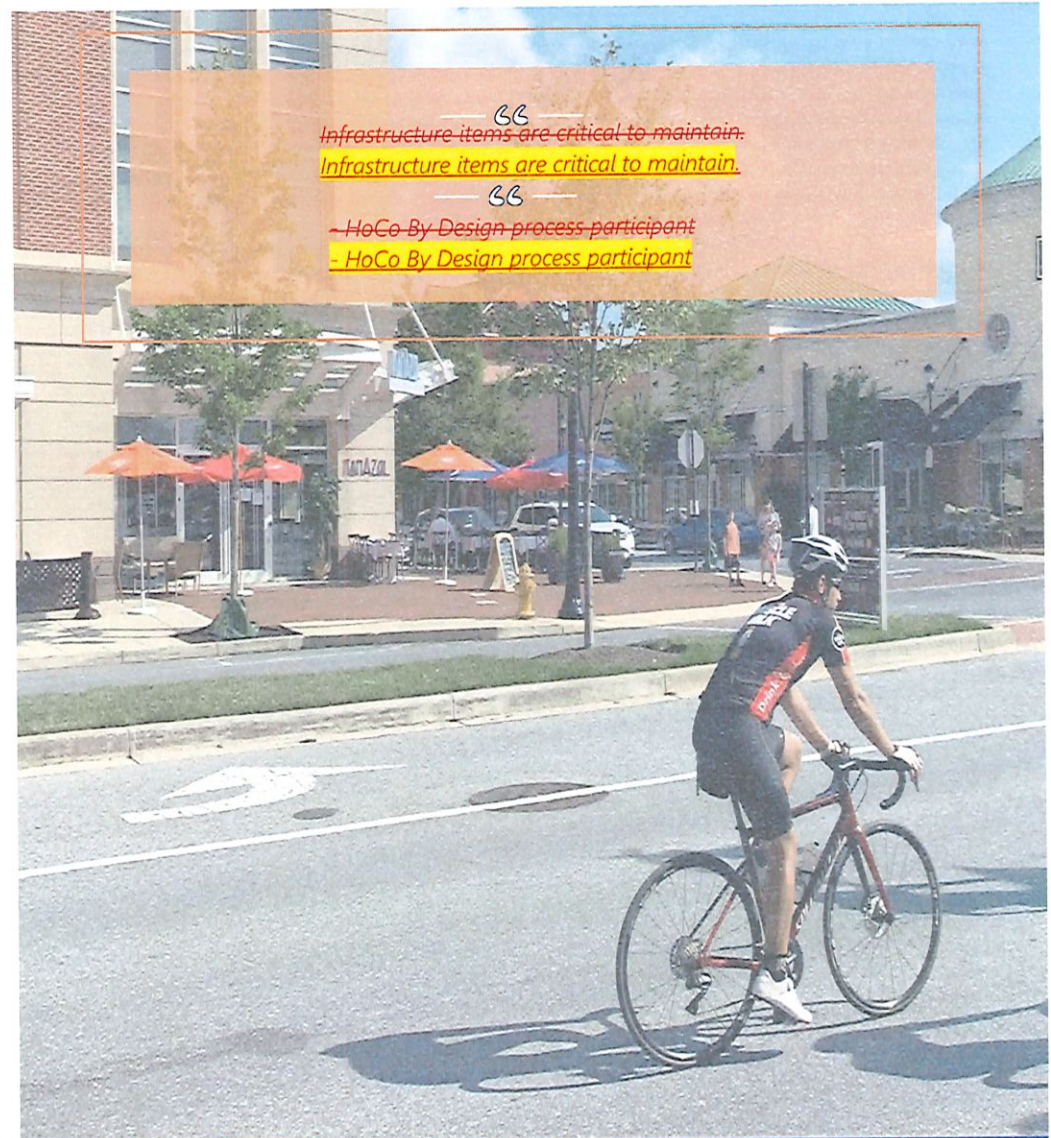
The small sample below shows the scale of the County's investment in the transportation system:

- More than 1,065 miles of sidewalks
- 72 transit buses and support vehicles used to provide transit service
- 8 Regional Transportation Agency (RTA) bus transit lines running service 15 hours a day
- Over 65 miles of bike lanes and pathways
- 1,200 miles of roads, of which 30-40 miles are repaved every year
- Over 100 traffic signals
- 363 bridges
- More than 75 county-owned trucks and heavy equipment used to clear snow, mow roadsides, sweep roads, and repair sidewalks, ramps, roads, and signals

Deferring maintenance and repairs of the transportation system can lead to larger and more frequent repairs, or replacement costs in the future as facilities age or fail. For the public transit system, buses and support vehicles that have exceeded their useful lives become more expensive to maintain and break down more often, which often results in delays and canceled service. In 2021, of the 72 vehicles in the Howard County public transit fleet, 40 vehicles have exceeded their useful life. For the county's road system, despite an anticipated reduction in the number of road miles rated in good condition over the next few years, the County has been able to ensure roads, bridges, and other transportation assets are well-maintained.

Historically, the County has been able to align and adjust transportation budgets to meet most transportation maintenance and replacement needs by annual funding infusions, either from the County or Maryland Department of Transportation. However, these funding infusions can vary widely based on national, state, and local economic conditions. In Fiscal Years 2022 and 2023, the County received an unprecedented level of state and federal funding to replace vehicles, allowing the County to place 28 new vehicles into service, about 39% of the total fleet. However, replacing this many vehicles at one time also means they will exceed their useful lives at the same time. Maintaining a reliable transportation system requires a regular and defined investment program.

The County's challenge over the next two decades will be to prioritize a limited budget for system maintenance to meet a variety of needs across the community, meet climate goals by building a zero-emission fleet, respond to changing maintenance obligations from new engineering and environmental practices, and also communicate how these needs are prioritized. This will require regular evaluation of the maintenance needs of the transportation system and matching these needs to available funding.



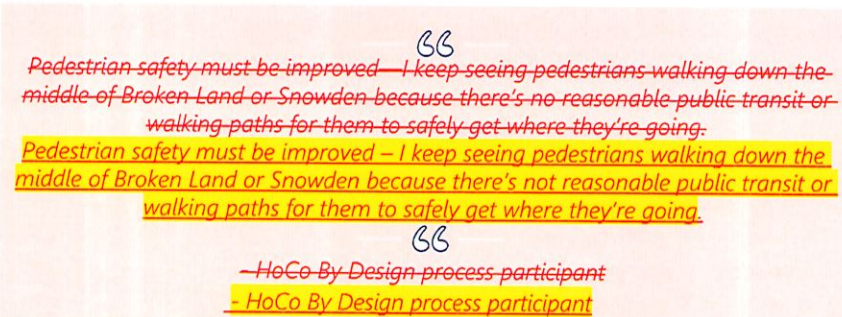
To ensure the long-term viability of the transportation system, policies and actions should advance national best practices. In 2021, Howard County participated in the Capital Improvement Program Development and Promoting Healthy Communities Study (CIP Study) with the Baltimore Metropolitan Council. The study's recommendations were developed by comparing the state of the practice across the Baltimore region's jurisdictions with the best practices found nationwide. The recommendations include specific actions that can be taken, barriers to implementation, and metrics to determine success. For example, the study recommends incorporating an equity lens in the capital planning process. Howard County has begun to adopt this approach for transportation with the inclusion of an Equity Emphasis Area index in the Complete Streets Policy (detailed in the next section of this chapter). The CIP Study's recommendations have been used to guide this chapter's implementing actions. The Supporting Infrastructure chapter also references the CIP Study; please refer to the "Equity in Capital Planning" section of the Supporting Infrastructure chapter for details.

### CIM-1 Policy Statement

Maintain transportation system assets to ensure the viability of the system and safety of users.

### Implementing Actions

1. Develop and regularly update a risk-based asset inventory and management program for all transportation assets and ensure adequate maintenance funding.
2. Closely coordinate system maintenance activities with utilities and private development to minimize future roadway damage.
3. Develop fiscally unconstrained plans for each asset class to communicate the deferred maintenance needs and a pipeline of unfunded projects for consideration.
4. Consider equity emphasis areas in the prioritization of maintenance needs.
5. [Encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure.](#)


  
*Pedestrian safety must be improved—I keep seeing pedestrians walking down the middle of Broken Land or Snowden because there's no reasonable public transit or walking paths for them to safely get where they're going.*
  
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 ~HoCo By Design process participant

## SaFeTy and the transportation System

Howard County is recognized as one of the best places to live in the United States and is one of the safest jurisdictions in the state to drive, take the bus, walk, and bike. However, crashes continue to be one of the leading causes of death and injuries for pedestrians, cyclists, and motorists. Improving the county transportation system's safety is critical to ensuring Howard County remains an attractive and desirable location to live. [Consideration should also be given to improving walking routes to school.](#)

In 2020, Howard County completed its Strategic Road Safety Plan with the goal "to prevent all traffic crash-related fatalities and serious injuries, and to reduce the number and severity of crashes" by articulating realistic, achievable, and data-driven goals and actions. Between 2014 and 2018—the five-year period of data that informed the Strategic Road Safety Plan—Howard County averaged more than 3,900 reported crashes per year for an average of 1,499 people injured per year. During this same time period, 95 community members and visitors died in crashes on roads in the County. As detailed in the plan, of the approximately 19,500 crashes during that time period, the most prevalent factor was distracted driving (involved in 8,800 crashes, or 45%). Another 3,100 crashes involved improper driving behaviors, such as speeding and aggressive driving, and 1,200 crashes involved impaired driving. Finally, 280 crashes involved cyclists or pedestrians. Notably, while two-thirds of all bicycle and pedestrian crashes occurred on local roadways, 85% of all bicycle and pedestrian fatalities occurred on state roadways, which typically have greater traffic volume and higher speeds.

In 2019, the County Council adopted a Complete Streets Policy to ensure that community members using any transportation mode can travel freely, safely, and comfortably throughout the County. The Complete Streets Policy uses an Equity Emphasis Area Index to track implementation, prioritize projects, and evaluate designs. The index uses methodology developed by the Baltimore Metropolitan Council (BMC), which assigns scores to census tracts in Howard County based on multiple factors, including the percent of households in poverty, transit dependent households, non-Hispanic minority individuals, low English-proficiency individuals, Hispanic or Latino individuals, individuals 75 years and older, and disabled individuals. Map 4-1 shows the Equity Emphasis Areas and index scores.



Building on the Complete Streets Policy, the Howard County Design Manual Volumes III and IV (Design Manual) were updated in 2022 to incorporate best practices in street design to accommodate all modes of transportation. The next step in complete streets implementation is to update the Subdivision and Land Development Regulations to ensure that the development process supports the County's vision for complete streets. In early 2020, Howard County also adopted a new pedestrian master plan, WalkHoward, which identifies and prioritizes pedestrian infrastructure needs. A fundamental organizing principle of WalkHoward includes last-mile access, and the plan recommends a series of projects and connections to ensure walking is a safe, effective, and viable recreational and transportation choice. BikeHoward, further described under the "Mobility and Access" section of this chapter, envisions safe bicycling on roads and paths as a means of daily transportation and healthy recreation. BikeHoward calls for the creation of a safe and seamless network of bikeways that connect people to schools, shops, parks, and work, with facilities that serve all skill and comfort levels.

The Strategic Road Safety Plan recommended a safe system approach for the County that identifies the link between priority crash types and the roadway contexts in which they most frequently occur. The system then prioritizes countermeasures that provide a solution to those crash types at the identified location types. This approach is innovative because it can prioritize locations that have a high propensity for crashes to occur even if crashes have not occurred there in recent years. Overall, the system proactively targets road safety improvements in high-risk locations where the most frequent and severe crashes could occur. This effort should also coordinate with and support the Complete Streets Policy and the WalkHoward and BikeHoward capital programs.

Finally, HoCo By Design's Economic Prosperity chapter describes the transportation needs of the agricultural community and conditions that impact safety. Refer to the section "Sustaining our Agricultural Economy" within the Economic Prosperity chapter for details.

### CIM-2 Policy Statement

Design and operate an equitable transportation system that prevents and mitigates the most severe types of crashes for motorists, transit riders, bicyclists, and pedestrians.

### Implementing Actions

1. Prioritize and fund measures outlined in the Strategic Road Safety Plan using a safe system approach to focus education, enforcement, and engineering efforts and investments.
2. Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to provide accommodations and **improve favor land use and development that improves safety**, particularly for pedestrians and bicyclists who are the most vulnerable roadway users.
3. Execute the priorities of WalkHoward and BikeHoward through dedicated funding in the capital budget and efficient project delivery.
4. Ensure that all transportation capital projects include review of potential safety improvements during the project scoping process.



# Mobility and aCCess

Transportation systems are based on two transportation concepts: mobility and access. Mobility is generally defined as the ability to use the transportation system to move from place to place, such as on a highway or on a regional train system. Access is generally defined as how many places one can get to safely and easily. The planning and development of transportation systems balance these two concepts to reflect and advance community goals. Traditionally, Howard County's transportation system was more focused on mobility but is evolving to focus on ensuring and improving access for walkers, cyclists, drivers, and transit riders, a process that is guided by some of the highlighted topics below. Increased multi-modal access is important to serve the County's growing senior community, youth, people with disabilities, and carless community members.

## Transportation Trends, Patterns, and Facts

### Vehicle Miles Traveled

Annual daily vehicle miles traveled in Howard County is in flux as the County and the country emerge from the Covid-19 pandemic. On average, each resident drove approximately 500 more miles per year in 2018 compared to 2013, while the same measure shows that each resident drove approximately 1,300 fewer miles in 2021 compared to 2018. On a per-resident basis, the County's vehicle miles traveled was approximately 37% and 33% higher than the region for those two time periods. This increase is likely a function of longer commute distances between home and work, higher per-resident automobile ownership, and limited transit, bicycle, or pedestrian facilities that support viable non-automobile trips for local travel.

### Congestion, Roads, and Highway Infrastructure

The Maryland State Highway Administration monitors road conditions in the region and reports conditions using a Travel Time Index. The Travel Time Index measures travel time during congested periods of the day and compares it to the same trip made during less congested periods. The regional transportation system in Howard County performs well, with just three exceptions: Route 32, Route 29, and Interstate 95. Projects and studies to address travel time reliability on these roads are underway or complete, and conditions continue to be monitored on other roads, including Route 103, Route 108, Route 144, Broken Land Parkway, and Little Patuxent Parkway. In addition to congestion and delay that occur during peak hours on both local and state roads, many users are impacted by non-recurring delay, which is delay caused by crashes, weather, and other events that cannot be forecasted. These non-recurring events can considerably impact travel time and how users plan their trips.

Howard County's authority for transportation planning and investment is limited based on jurisdictional responsibility associated with different roads in the community. In 2022, the County maintained over 1,000 miles of roads; however, these roads supported only 19% of the average daily vehicle miles traveled in the County. The remaining average daily vehicle miles traveled in the County were on state roads or federal interstates, which the County does not have the authority to maintain or expand to meet future year needs. These systems experience the greatest delay in aggregate, which is primarily attributed to regional traffic. However, many users of the transportation system also experience periodic congestion and delay on the local road system.

— 66 —  
*Great places require access by multiple modes. Keeping children active from a young age is an essential public health imperative.*

Great places require access by multiple modes. Keeping children active from a young age is an essential public health imperative.

— 66 —  
*-HoCo By Design process participant  
- HoCo By Design process participant*



### CIM-3 Policy Statement



Make the transportation system equitable, close mobility gaps, and improve access to jobs, housing, health care, education, and social services.

#### Implementing Actions

1. Continue to monitor system performance, gather input from current riders, and allocate existing resources to maximize ridership and enhance service for current public transit riders.
2. ~~Ensure investments in the Regional Transportation Agency system balance improving service frequencies and adding new routes to unserved areas with transit-supportive land use.~~ Ensure investments in the Regional Transportation Agency system accomplish increased service frequencies, improved reliability, and additional routes to unserved areas by considering transit-supportive land uses.
3. ~~Continue to Provide~~ support and enhance community-based mobility programs ~~and non-governmental organizations that serve for~~ seniors and people with disabilities.
4. Explore flexible transit routing, mobility as a service, and other micro-mobility concepts to provide efficient and economic transit service in lower-density areas of the County. Consider subsidies for income-qualified residents to use existing rideshare programs.

### CIM-4 Policy Statement

Leverage Howard County's position in the Baltimore and Washington regions to advance transportation projects and policies with regional and local impacts, including focusing efforts on governance, accountability, funding policies, and strategies to address unmet transportation service needs.

#### Implementing Actions

1. Continue to engage in regional discussions regarding state and federal investment in regional transit systems to ensure funding and support for Howard County projects, meet the County's goals to enhance and improve access to regional job centers, and maintain the County's position as an attractive location to live and work.
2. Continue to support the collaborative efforts to improve the Regional Transportation Agency of Central Maryland.
3. Continue to partner with Montgomery County and the Maryland Department of Transportation to extend the Flash Bus Rapid Transit Service to Howard County.
4. Support and partner with Maryland Department of Transportation and other regional organizations to expand service and improve reliability on the Camden Commuter Rail Line.
5. Continue to engage and participate in regional and state planning and coordination activities to ensure the needs of freight and goods movements are considered and supported.

### CIM-5 Policy Statement



Deliver transportation system improvements that support efforts to reduce reliance on automobile trips, improve air quality, and give people cost-effective and sustainable choices on how they get to work, home, school, and play.

#### Implementing Actions

1. Construct and enhance transportation facilities to increase connections across Howard County and support the goals of WalkHoward, BikeHoward, and the Complete Streets Policy, with a focus on the equity goals outlined in the Complete Streets Policy.
2. Continue to plan and implement projects that enhance transportation connections to regional job centers and high-quality transit.
3. Sustain Review and expand efforts to develop and implement Transportation Demand Management programs (such as car share, bikeshare, and shared e-scooter systems; telecommute policies; and vanpools) and expand Park and Ride lots, where appropriate. Improve the reporting process for outcomes and goals.
4. Continue to plan and coordinate investments with the Howard County Public School System to increase safe routes to schools, enhance access to the local transit system, reduce demand for hazard-based school bus service, and decrease driving to school. Assess walking routes for safety and equity.
5. Partner with the Maryland Department of Transportation to align commuter bus routes and funding priorities with current and expected travel patterns and complementary regional public transit initiatives.
6. Continue to work with federal, state, and regional partners on preliminary studies for high-quality connections.
7. Require safe, non-automobile pathways that connect buildings within commercial and office complexes as well as activity centers to support "park once" behavior.
8. Consider more funding for electric school buses.

### CIM-6 Policy Statement

Focus on improvements to the transportation system that improve travel reliability.

#### Implementing Actions

1. Evaluate the use of Transportation Systems Management and Operations concepts to manage the County's road system.
2. Develop real-time traffic monitoring and coordinate transportation and emergency resources to address non-recurring congestion due to weather and crashes on the local and regional transportation system.
3. Focus on operations at key intersections while ensuring improved safety for bicycle and pedestrian movements.
4. Optimize signal timing and phasing at key intersections in coordination with efforts to improve pedestrian and bicycle movements and safety, and coordinate signals in major commute corridors during peak time periods.
5. Increase street connections in key locations that provide more route choices to system users.
6. Develop access management approaches through updates to the Zoning Regulations and the Subdivision and Land Development Regulations, design approvals, and coordination with the Maryland Department of Transportation State Highway Administration.

BB

*Walkability in commercial corridors is a big issue in HoCo, so I appreciate solutions to make pedestrian areas a priority. The entire Route 1 Corridor, Route 216, Route 40, and Route 108 come to mind as highly unwalkable and unsafe.*

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BB

*-HoCo By Design process participant  
- HoCo By Design process participant*

## delivering projects

Howard County's Capital Improvement Program (CIP) details how the County is funding transportation projects, either as part of a single project or a program of projects. Funding, planning, designing, and constructing transportation projects is a challenging and lengthy process. Some of these challenges are engineering-based, while others are process and communication focused.

In 2021, Howard County participated in the CIP Development and Promoting Healthy Communities study with the Baltimore Metropolitan Council. This study identified common barriers to communicating how the CIP works, how challenges impact project delivery times and costs, and how the risks of these challenges are incorporated into the CIP process. The study developed a series of best practice recommendations related to the CIP and project delivery:

- Develop a clear internal process to define, identify, and screen capital projects.
- View asset management and State of Good Repair through a resiliency lens. State of Good Repair means a transportation asset is maintained to operate at its full level of performance. Consider the condition of each asset in the prioritization process and the impact that asset's failure could have on transportation services and finances. Maintain a detailed and up-to-date inventory of all assets that includes asset condition. Develop formal processes to monitor the state of assets on a continuous basis.
- Incorporate an equity lens throughout the capital planning process, from start to finish. Equity questions should be considered as needs are identified, measures are prioritized, and impacts are assessed.
- Use digital tools to help the public engage with traditionally lengthy budget documents that may not be easily accessible or understood. Jurisdictions have found ways to improve the flow of information related to capital planning and increase transparency by creating online interfaces that translate the budget.

HoCo By Design's Supporting Infrastructure chapter builds upon the CIP study's recommendations for capital planning.

In 2022, the County initiated a study to develop recommendations for priority sidewalk and safety projects in the Route 1 Corridor and their delivery. It found that a significant amount of local and state funding has been allocated to design and construct projects, but progress has been slow due to challenges with securing rights-of-way for the project, permitting, and contracting. Based on these findings, the County should consider the recommendations from the CIP study. To achieve benefits more quickly while respecting its Equal Business Opportunity Program goals, the County should also adopt programmatic approaches in which the process of design, right-of-way acquisition, permitting, and construction are based on performance-driven design-build contracts.

### CIM-7 Policy Statement



Refine processes and policies to deliver transportation improvements strategically, efficiently, and equitably.

### Implementing Actions

1. Review existing rules, policies, processes, and procurement procedures to identify opportunities to accelerate the planning, design, permitting, or construction of new and equitable transportation projects, including the recommendations from the Capital Improvement Program study.
2. Identify opportunities to minimize the time needed to acquire right-of-way for planning road, sidewalk, or bicycle projects while respecting the rights of private property owners. Alternatively, reevaluate the scope of projects earlier in the planning process if it is determined that there is strong opposition to land acquisition.
3. Implement contracting methods that shorten construction activities for a project, including, but not limited to, design-build provisions for small projects like sidewalks or intersection improvements, contracts that share risk with contractors and support flexible project phasing for larger projects, and incentives for early project completion.



# Future of the transportation System

## Technological and Economic Change

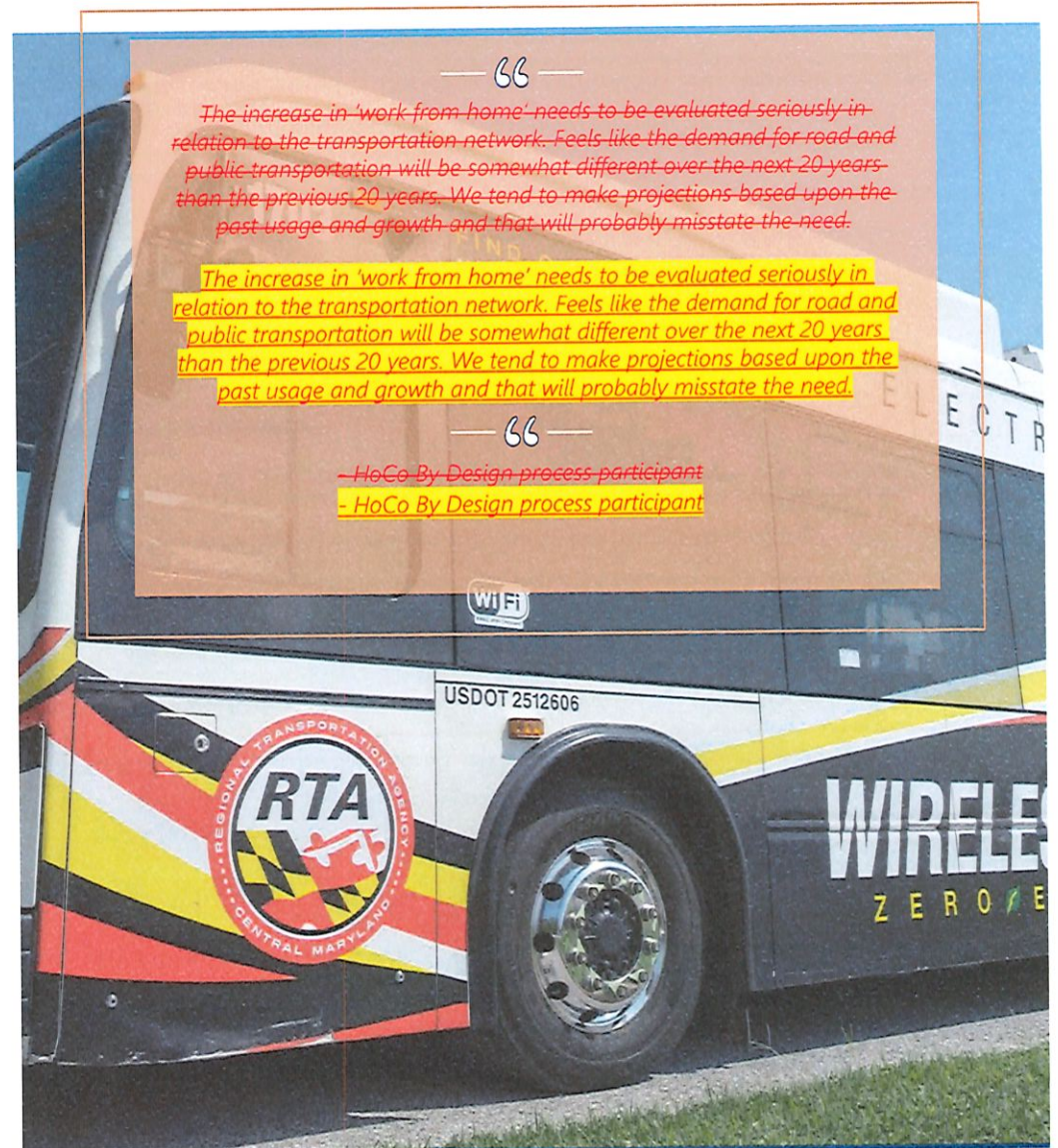
Rapidly evolving transportation technologies and changes to commuting and work patterns accelerated by Covid-19, will likely lead to shifting demands on the transportation system. As a result of this shift in demand, the County might modify its approach to planning its transportation system. In the short-term, it might focus more on integrating technology solutions to address the main effects of connected vehicle (CV) technology and automated vehicles (AV) on safety, mobility, and the environment. In the long-term, the County might focus more on the relationship between evolving transportation developments and shifting employment and housing patterns.

The first waves of change in the transportation industry have been focused on Mobility as a Service (MaaS), such as Lyft, Uber, and ever-evolving micro-mobility technologies deploying e-scooters and bike sharing. MaaS supports living and working in suburban downtowns, as it provides a convenient transportation alternative and can reduce transportation costs for users. The industry is still in its infancy, and the long-term viability of the current business models are not certain.

On the more immediate horizon, connected and automated electric vehicles (CAV) may be prevalent by the early 2030s, and the County should expect them to alter both demand on parking infrastructure and the road system. However, these impacts are very uncertain. Some forecasts claim CAVs will self-park more efficiently than humans can, leading to more efficient use of parking facilities. Changes in parking space needs could have several positive effects. New development in activity centers could share parking with existing projects. Infill and redevelopment could take place without the prerequisite of additional parking facilities, reducing costs. On the other hand, CAVs could also increase vehicle miles traveled (VMT) and cause more congestion as a result of multiple trips when a CAV drops its passenger in front of a destination, parks in a remote lot, and then later returns to pick up its passenger.

In the longer-term, if CAVs mature and are cycled into the vehicle fleet in significant ways, they may alter commuting patterns in the County. CAVs could offer more efficient commutes by reducing travel times, providing community members a greater choice of locations to live in, and shifting demand to areas in the County, or outside, that are further away from job centers or less connected to the highway system. However, like the potential impact on parking demand, the adoption of CAVs may increase VMT as a result of this shift.

The automotive industry is years away from fully leveraging CAV technology and impacts are not yet clear or understood. Further, most regulatory policy will be established at the state and federal levels. The County should monitor the progression of CAV technology and associated regulations, and respond to changes as they occur. The County's response to future changes may include updated road design standards, expanded electric vehicle charging policies, a robust fiber optic communications network, and revised parking requirements. The County may also need to ensure the safety of cyclists and pedestrians if it is not adequately addressed in state and federal regulatory changes.



## Climate Change and Air Quality

As outlined in the Ecological Health chapter, climate change can be generally defined as a significant long-term shift in weather patterns for a specific geographic region. Emissions of the long-lived greenhouse gases carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated gases are causing climate change as they build up and trap heat in the atmosphere. A significant contributor to emissions is the transportation sector. In the United States, transportation accounts for 33% of CO<sub>2</sub> emissions, with 65% of that total resulting from gasoline consumption in cars and light trucks. Commercial airplanes and business jets contribute 10% to U.S. total carbon dioxide emissions and nearly 9% of greenhouse gas emissions in the U.S. Annual vehicle miles traveled (VMT) in Howard County has grown slightly in recent years, increasing by just over 400,000 between 2013 and 2018. This growth in VMT represents nearly 500 additional miles driven by every county resident per year. On a per capita basis, the county VMT is approximately 37% higher than the regional average. This difference is a function of slightly longer commuting distances to Baltimore and Washington, DC, high per capita auto ownership, and a limited number of transit options for most commute trips.

Air pollution levels are reported to the general public via the Air Quality Index (AQI), which measures the level of criteria pollutants (air pollutants that contribute to the formation of ozone and particulate matter, including hydrocarbons, carbon monoxide, and oxides of nitrogen, which can have adverse short- and long-term health effects). In the Baltimore-Washington region, the AQI is driven by ground level ozone and particulate matter. The Clean Air Act enables interstate commissions to develop regional strategies for reducing air pollution. Maryland is part of the Northeast Ozone Transport Region, which includes 12 states and the District of Columbia. At the local level, Howard County is a member of the Baltimore Metropolitan Council (BMC) and its Baltimore Regional Transportation Board (BRTB), which coordinate regional transportation planning and work to reduce emissions from transportation. Under the Clean Air Act, the BRTB cannot approve any project, program, or plan that does not conform to Maryland's State Implementation Plan, which guides Maryland's actions to attain and meet air quality standards.

Reducing emissions and air pollutants from the transportation system will take multiple approaches, including the following: 1) reducing direct emissions from vehicles and airplanes; 2) shifting demand and creating to more efficient transportation modes with fewer direct emissions; and 3) reducing VMT. The national, state, and local vehicle fleet is still primarily comprised of gasoline and diesel vehicles; however, electric and hybrid vehicles are becoming more common. In 2022, less than 1% of the US vehicle fleet was electric but sales were increasing rapidly. Meaningful market penetration of electric vehicles will depend on availability of government incentives, alleviating buyers' range anxiety, and facilitating investment in charging infrastructure. The high cost of electric vehicles is often cited as a barrier, as approximately two-thirds of households that own electric or hybrid vehicles have incomes over \$100,000. Therefore any incentives and supporting policies will need to address the County's equity goals. Shifting demand to other modes, such as transit, walking, and biking, is another reliable and equitable method to reduce VMT and emissions. By investing in reliable transit and safe walking and cycling facilities, the County can ensure that community members will have the option to shift their vehicle trips. Additionally, increasing frequency of transit service not only benefits those who depend on it out of necessity, but also improves the attractiveness of transit to those who are able to choose their mode of travel.

Climate change is also forecast to impact the reliability of the transportation system as periods of higher temperatures increase wear on road surfaces; stronger and more sustained rain events increase flooding on roads, bridges, and culverts; and long-term droughts dry out subsurface soils, leading to subsidence. Additionally, reduced capacity, detours, and crashes from flooding impact travel time, reliability, and safety. As articulated in the BMC's Capital Improvement Program study, viewing asset management and county design standards through a resiliency lens will be critical to ensuring the County's transportation system can continue to operate safely and effectively.

The Volume III Design Manual Complete Streets and Bridges requires a noise analysis if the proposed residences are located within a specified number of feet from a roadway or a rail line, or if the location is within an airport noise zone. The Design Manual also requires noise mitigation through the use of buffers, barriers or acoustical insulation, or through building orientation.

### CIM-8 Policy Statement

Actively plan for and evaluate the impact of technology and climate change on the transportation system.

### Implementing Actions

1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.
2. Amend design standards and asset management approaches to ensure resilience.
3. Support Require Encourage the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.

### CIM-9 Policy Statement

Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.

### Implementing Actions

1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.
2. Develop a plan to-and transition the County's fleet (including school buses and contracted services) to low/ no emission vehicles.
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.
4. Consider targeted financial incentives and the removal of regulatory barriers for property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.

# transportation InvestMent Priorities

Howard County's transportation needs and preferences have changed significantly over the last three decades. Travel demands and commuting patterns have settled along major corridors that are now generally built to their ultimate size and configuration.

While automobile travel will continue to dominate travel patterns for the near future, there is growing and demonstrated community interest in improving the safety and efficiency of the transit, bicycle, and pedestrian networks. Many community members continue to express their desires to replace their work, shopping, or other automobile trips with more economic and environmentally-conscious choices. These preferences are starting to be reflected in the County's shift to building a transportation system focused on travel time reliability, safety, and travel choices for all members of the community. Since the adoption of PlanHoward 2030, substantial investments have been made in transit, bicycle, and pedestrian facilities. Eleven percent of capital transportation spending is focused on these three non-automobile categories while operational and capital investments for the transit system are also increasing dramatically. The future mixed-use activity centers envisioned in HoCo By Design complement this shift to greater walking, bicycling, and transit use. Refer to the Quality By Design chapter and Focus Areas appendix for details on how design can facilitate increased use of non-automobile modes.

To continue to support this shift in direction, the County should use the Significant Transportation Investments to Support Growth & Redevelopment Map and Table (Map 4-2 and Table 4-1) to guide county investments in, and support of, transportation projects and activities. The selection of projects is not intended to be exclusive since many county projects are focused on specific operational issues and might not be shown on the map. Further, projects are not listed in priority order (they have not been prioritized). The projects shown were selected based on travel trends and forecasts, PlanHoward 2030 transportation projects, and more recent functional planning projects—including the Regional Transit Plan for Central Maryland, Walk Howard, the Strategic Road Safety Plan, and the Complete Streets Policy.

The map and table will not only guide county priorities but also support the County's partnerships and advocacy for large regional transportation projects and initiatives. These regional efforts could be funded and implemented by the Maryland Department of Transportation in the Consolidated Transportation Program or advanced in the Baltimore Metropolitan Council's Long-Range Transportation Plan, which is critical to ensuring projects are eligible for federal funding.

Howard County's transportation investment priorities should also be informed by the reality of county transportation funding. County spending for transportation is divided between operating costs, such as transit services and routine maintenance costs, and capital costs, such as engineering intersections, resurfacing roads, rehabilitating bridges, installing traffic signals, maintaining bicycle and pedestrian facilities, and replacing transit vehicles. Both operating and capital funding in the County are limited and can change significantly from year to year, which makes it difficult to sustain a steady pipeline of projects to plan, engineer, and construct over time. As a result, many projects identified for implementation in the CIP have been delayed due to funding constraints, and some older projects may not advance the policies and goals in HoCo By Design. The County should reevaluate the purpose and need of these delayed projects to ensure they are consistent with HoCo By Design.

Map 4-3 shows the current road system in Howard County by functional class. These functional classifications, coupled with design guidance in the Howard County Design Manual, are used to determine the right-of-way and road improvements required for both private development projects and county capital projects. The map divides roads into five functional classifications, primarily organized based on vehicle throughput. New roads, as they are built and accepted into the county road system, are assigned a functional classification based on their design. These five classifications are matched to multi-modal street types in the Howard County Design Manual, which details the process to design a road based on its full context to meet the goals of the Complete Streets Policy (see pages 39-40 below).

To further identify transportation investment priorities, the County should develop a countywide transportation plan that:

- Results from a comprehensive process that engages the County's diverse population, including users of all transportation modes.
- Builds upon the Significant Transportation Investments to Support Growth & Redevelopment Map (Map 4-2), functional plans, and corridor master plans.
- Incorporates complete streets typologies.
- Reevaluates the purpose and need of the existing transportation system and proposed transportation projects to ensure consistency with county goals and funding.
- Aligns with the equity in capital planning approach described in HoCo By Design's Supporting Infrastructure chapter, and the emission reduction goals in the County's Climate Action Plan.

## CIM-10 Policy Statement

Advance transportation planning and transportation investments to support an economically and environmentally sustainable transportation system that moves people safely and efficiently throughout the County and supports the land use and equity goals in HoCo By Design, including its emphasis on mixed-use activity centers. [Similarly, advance land use patterns and individual site development that support an economically and environmentally sustainable transportation system.](#)

## Implementing Actions

1. Develop a countywide transportation plan and conduct a focused transportation study for each activity center in the Route 1 Corridor.
2. Continue to use the Functional Road Classification Map to guide the design, capacity, and function of roads as they are built or improved.
3. Implement HoCo By Design's recommendations for transit service through future transit service functional plans or master plans.
4. Continue to implement recommendations from WalkHoward and BikeHoward as methods to advance the broad concepts and recommendations in the General Plan.
5. Ensure the Design Manual is consistent with the General Plan as part of the regular update process for the Design Manual.
6. [Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.](#)

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-1 - Maintain transportation system assets to ensure the viability of the system and safety of users.</b>		
1. Develop and regularly update a risk-based asset inventory and management program for all transportation assets and ensure adequate maintenance funding.	OOT DPW	Mid-Term
2. Closely coordinate system maintenance activities with utilities and private development to minimize future roadway damage.	OOT Private Partners	Ongoing
3. Develop fiscally unconstrained plans for each asset class to communicate the deferred maintenance needs and a pipeline of unfunded projects for consideration.	DPW	Ongoing
4. Consider equity emphasis areas in the prioritization of maintenance needs.	OOT DPW	Ongoing
5. <u>Encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure.</u>	OOT DPW	Ongoing
<b>CIM-2 - Design and operate an equitable transportation system that prevents and mitigates the most severe types of crashes for motorists, transit riders, bicyclists, and pedestrians.</b>		
1. Prioritize and fund measures outlined in the Strategic Road Safety Plan using a safe system approach to focus education, enforcement, and engineering efforts and investments.	OOT DPW Elected Officials OOB	Mid-Term
2. Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to provide accommodations and <u>improve favor land use and development that improves</u> safety, particularly for pedestrians and bicyclists who are the most	OOT DPZ DPW	Ongoing
3. Execute the priorities of WalkHoward and BikeHoward through dedicated funding in the capital budget and efficient project delivery.	OOT Elected Officials OOB	Ongoing
4. Ensure that all transportation capital projects include review of potential safety improvements during the project scoping process.	OOT DPW	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-3 - Make the transportation system equitable, close mobility gaps, and improve access to jobs, health care, education, and social services.</b>		
1. Continue to monitor system performance, gather input from current riders, and allocate existing resources to maximize ridership and enhance service for current public transit riders.	OOT	Ongoing
2. <u>Ensure investments in the Regional Transportation Agency system balance improving service frequencies and adding new routes to unserved areas with transit supportive land use. Ensure investments in the Regional Transportation Agency system accomplish increased service frequencies, improved reliability, and additional routes to unserved areas by considering transit-supportive land uses.</u>	OOT	Ongoing
3. <u>Continue to provide support and enhance</u> community-based mobility programs <u>and non-governmental organizations that serve for</u> seniors and people with disabilities.	DCRS OOT	Ongoing
4. Explore flexible transit routing, mobility as a service, and other micro-mobility concepts to provide efficient and economic transit service in lower-density areas of the County. <u>Consider subsidies for income-qualified residents to use existing rideshare programs.</u>	OOT	Mid-Term
<b>CIM-4 - Leverage Howard County's position in the Baltimore and Washington regions to advance transportation projects and policies with regional and local impacts, including focusing efforts on governance, accountability, funding policies, and strategies to address unmet transportation service needs.</b>		
1. Continue to engage in regional discussions regarding state and federal investment in regional transit systems to ensure funding and support for Howard County projects, meet the County's goals to enhance and improve access to regional job centers, and maintain the County's position as an attractive location to live and work.	OOT DPW Elected Officials OOB	Ongoing
2. Continue to support the collaborative efforts to improve the Regional Transportation Agency of Central Maryland.	OOT	Ongoing
3. Continue to partner with Montgomery County and the Maryland Department of Transportation to extend the Flash Bus Rapid Transit Service to Howard County.	OOT	Mid-Term
4. Support and partner with Maryland Department of Transportation and other regional organizations to expand service and improve reliability on the Camden Commuter Rail Line.	OOT	Mid-Term
5. Continue to engage and participate in regional and state planning and coordination activities to ensure the needs of freight and goods movements are considered and supported.	OOT	Ongoing



Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-5 - Deliver transportation system improvements that support efforts to reduce reliance on automobile trips, improve air quality, and give people cost-effective and sustainable choices on how they get to work, home, school, and play.</b>		
1. Construct and enhance transportation facilities to increase connections across Howard County and support the goals of WalkHoward, BikeHoward, and the Complete Streets Policy, with a focus on the equity goals outlined in the Complete Streets Policy.	OOT DPW	Ongoing
2. Continue to plan and implement projects that enhance transportation connections to regional job centers and high-quality transit.	DPZ OOT	Ongoing
3. <u>Sustain Review</u> and expand efforts to develop and implement Transportation Demand Management programs (such as car share, bikeshare, and shared e-scooter systems; telecommute policies; and vanpools) and expand Park and Ride lots, where appropriate. <u>Improve the reporting process for outcomes and goals.</u>	OOT DPW	Ongoing
4. Continue to plan and coordinate investments with the Howard County Public School System to increase safe routes to schools, enhance access to the local transit system, reduce demand for <u>hazard-based</u> school bus service, and decrease driving to school. <u>Assess walking routes for safety and equity.</u>	OOT DPW HCPSS	Ongoing
5. Partner with the Maryland Department of Transportation to align commuter bus routes and funding priorities with current and expected travel patterns and complementary regional public transit initiatives.	OOT	Ongoing
6. Continue to work with federal, state, and regional partners on preliminary studies for high-quality connections.	OOT	Ongoing
7. <u>Require safe, non-automobile pathways that connect buildings within commercial and office complexes as well as activity centers to support "park once" behavior.</u>	OOT DPW	Ongoing
8. <u>Consider more funding for electric school buses.</u>	HCPSS	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+)
<b>CIM-6 - Focus on improvements to the transportation system that improve travel reliability.</b>		
1. Evaluate the use of Transportation Systems Management and Operations concepts to manage the County's road system.	OOT DPW	Mid-Term
2. Develop real-time traffic monitoring and coordinate transportation and emergency resources to address non-recurring congestion due to weather and crashes on the local and regional transportation system.	OOT OEM DPW	Mid-Term
3. Focus on operations at key intersections while ensuring improved safety for bicycle and pedestrian movements.	DPW OOT	Mid-Term
4. Optimize signal timing and phasing at key intersections in coordination with efforts to improve pedestrian and bicycle movements and safety, and coordinate signals in major commute corridors during peak time periods.	DPW OOT	Mid-Term
5. Increase street connections in key locations that provide more route choices to system users.	OOT DPW	Mid-Term
6. Develop access management approaches through updates to the Zoning Regulations and the Subdivision and Land Development Regulations, design approvals, and coordination with the Maryland Department of Transportation State Highway Administration.	DPZ OOT	Long-Term
<b>CIM-7 - Refine processes and policies to deliver transportation improvements strategically, efficiently, and equitably.</b>		
1. Review existing rules, policies, processes, and procurement procedures to identify opportunities to accelerate the planning, design, permitting, or construction of new and equitable transportation projects, including the recommendations from the Capital Improvement Program study.	OOT DPW	Mid-Term
2. Identify opportunities to minimize the time needed to acquire right-of-way for planning road, sidewalk, or bicycle projects while respecting the rights of private property owners. Alternatively, reevaluate the scope of projects earlier in the planning process if it is determined that there is strong opposition to land acquisition.	OOT DPW Private Property Owners	Ongoing
3. Implement contracting methods that shorten construction activities for a project, including, but not limited to, design-build provisions for small projects like sidewalks or intersection improvements, contracts that share risk with contractors and support flexible project phasing for larger projects, and incentives for early project completion.	DPW OOT OOP	Long-term

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years Ongoing)
<b>CIM-8 - Actively plan for and evaluate the impact of technology and climate change on the transportation system.</b>		
1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.	DPZ OOT	Mid-Term
2. Amend design standards and asset management approaches to ensure resilience.	DPW OOT DPZ	Mid-Term
3. <b>Support Require Encourage</b> the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.	DPW OCS OOT Private Partners	Ongoing
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.	DPW OOT OCS	Long-Term
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.	OOT	Ongoing
<b>CIM-9 – Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.</b>		
1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.	OCS OOT	Long-Term
2. Develop a plan <del>to</del> <b>and</b> transition the County's fleet (including school buses and contracted services) to low/no emission vehicles.	OOT OCS/HCPSS	Mid-Term
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.	OOT	Ongoing
4. Consider targeted financial incentives to property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.	OOT OCS Private Property Owners	Mid-Term
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.	OOT	Long-Term

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-10 – Advance transportation planning and transportation investments to support an economically and environmentally sustainable transportation system that moves people safely and efficiently throughout the County and supports the land use and equity goals in HoCo By Design, including its emphasis on mixed-use activity centers. <u>Similarly, advance land use patterns and individual site development that support an economically and environmentally sustainable transportation system.</u></b>		
1. Develop a countywide transportation plan and conduct a focused transportation study for each activity center in the Route 1 Corridor.	OOT DPW	Mid-Term
2. Continue to use the Functional Road Classification Map to guide the design, capacity, and function of roads as they are built or improved.	DPW OOT DPZ	Ongoing
3. Implement HoCo By Design’s recommendations for transit service through future transit service functional plans or master plans.	OOT DPZ	Long-Term
4. Continue to implement recommendations from WalkHoward and BikeHoward as methods to advance the broad concepts and recommendations in the General Plan.	OOT	Ongoing
5. Ensure the Design Manual is consistent with the General Plan as part of the regular update process for the Design Manual.	OOT	Long-Term
6. <u>Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.</u>	OOT	Long-Term
<b>EP-1 – Retain and expand the use of industrial land to support employment opportunities that pay a living wage.</b>		
1. As part of the Zoning Regulations update, consider protective measures to ensure an adequate long-term supply of industrial land, such as additional requirements or impact statements for rezoning industrial land, zoning that discourages incompatible uses in heavy industrial areas, heavy buffer requirements for non-industrial users locating near heavy industrial land, or industrial overlay zoning for prime industrial land.	DPZ	Mid-Term
2. Determine how compatible uses can co-locate in designated Industrial Mixed-Use character areas to support industrial operations and create an active sense of place.	DPZ	Long-Term
3. Prioritize for retention industrial land that is uniquely accessible to regional highways for continued industrial use.	DPZ	Mid-Term
4. During the Zoning Regulations update or via Zoning Amendments, favorably consider context-sensitive industrial uses along the Interstate 70 corridor.	DPZ	Mid-Term
<b>EP-2 – Ensure redevelopment is consistent with the character of industrial areas.</b>		
1. Update the Route 1 Design Manual to include Industrial Mixed-Use character areas and incorporate buffers between redevelopment areas and industrial areas.	DPZ	Long-Term

**Amendment 1 to Amendment No. 102 to Council Bill No. 28 -2023**

**BY: Deb Jung**

**Legislative Day 12**

**Date: 10/11/2023**

*(This Amendment to Amendment 9 restores participant quotes, changes "require" to "encourage" in CIM-8 Implementing Action 3 and CIM-8 Policy and Implementing Action.)*

- 1 Substitute pages 1 through 3 of Amendment 102 with the attachment to this Amendment to
- 2 Amendment.
- 3
- 4 Substitute the pages CIM-10, 12, 18, 27, 30, and 32 attached to Amendment 102 with the page
- 5 CIM-10, 12, 18, 27, 30, and 32 attached to this Amendment to Amendment.
- 6
- 7 Substitute the page IMP-27 attached to Amendment 102 with page IMP-27 attached to this
- 8 Amendment to Amendment.

I certify this is a true copy of  
Am 1 Am 102 CB 28-2023  
passed on 10/11/2023  
Michelle Howard  
Council Administrator

Amendment 102 to Council Bill No. 28 -2023

BY: Deb Jung  
Liz Walsh

Legislative Day 12  
Date: 10/11/2023

Amendment No. 102

*(This Amendment makes the following changes to HoCo by Design Chapter 4 and Chapter 11:*

Chapter 4: County in  
Motion

~~— Removes all quotes;~~

- Amends the fifth key organization topic relating to the future of the transportation system to include the Baltimore/Washington International Thurgood Marshall Airport (BWI);
- Amends the "Maintaining the Transportation System" section by adding language to the County's future challenges to include meeting climate policy goals by building a zero-emission fleet;
- Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;
- Amends the Safety and the Transportation System section by adding language that consideration should be given to improving walking routes to school;
- Amends the CIM-2 Policy Statement Implementing Action 2 to update the Subdivision and Land Development Regulations to favor land use and development that improves safety, particularly for pedestrians and bicyclists;
- Amends the CIM-3 Policy Statement Implementing Action 2 to ensure investments in the RTA system that accomplish increased service frequencies, improved reliability, and specified additional routes;
- Amends the CIM-3 Policy Statement Implementing Action 3 to provide, support and enhance specified community-based mobility programs;
- Amends the CIM-3 Policy Statement Implementing Action 4 to consider subsidies for income-qualified residents to use existing rideshare programs;
- Amends the CIM-5 Policy Statement Implementing Action 3 to "review" rather than "sustain" and expand efforts to develop and implement Transportation Demand Management programs and adds language to improve the reporting process for outcomes and goals;

Amendment No. 102

- Amends the CIM-5 Policy Statement Implementing Action 4 to reduce demand for hazard-based school bus service and to assess walking routes for safety and equity;
- Amends the CIM-5 Policy Statement Implementing Actions by adding Action 7 to require safe, non-automobile pathways that connect buildings within specified complexes as well as activity centers to support “park once” behavior and adding Action 8 to consider more funding for electric school buses;
- Amends the Climate Change and Air Quality subsection of the Future of the Transportation System to add commercial airplanes and business jets to the contributors of total carbon dioxide emissions and greenhouse gas emissions in the U.S., adds reducing direct emissions from airplanes, and adds creating more efficient transportation modes with fewer direct emissions;
- Adds a fifth paragraph to the Climate Change and Air Quality subsection relating to requirements of the Design Manual for a noise analysis under specified circumstances and requirements for specified noise mitigation;
- Amends the CIM-8 Implementing Action 3 to ~~require~~ encourage the installation of electric vehicle charging stations in private and public space;
- Amends the CIM-9 Implementing Action 2 to develop a plan and transition the County’s fleet to low/no emission vehicles;
- Amends the CIM-10 Policy Statement to add advance land use patterns and site development that support an economically and environmentally sustainable transportation system; and
- Amends the CIM-10 Implementing Actions to add Action 6 to advance the Complete Streets Policy by updating specified regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.

Chapter 11:  
Implementation

- Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;
- Amends the CIM-2 Policy Statement Implementing Action 2 to update the Subdivision and Land Development Regulations to favor land use and development that improves safety, particularly for pedestrians and bicyclists;
- Amends the CIM-3 Policy Statement Implementing Action 2 to ensure investments in the RTA system that accomplish increased service frequencies, improved reliability, and specified additional routes;

- *Amends the CIM-3 Policy Statement Implementing Action 3 to provide, support and enhance specified community-based mobility programs;*
- *Amends the CIM-3 Policy Statement Implementing Action 4 to consider subsidies for income-qualified residents to use existing rideshare programs;*
- *Amends the CIM-5 Policy Statement Implementing Action 3 to “review” rather than “sustain” and expand efforts to develop and implement Transportation Demand Management programs and adds language to improve the reporting process for outcomes and goals;*
- *Amends the CIM-5 Policy Statement Implementing Action 4 to reduce demand for hazard-based school bus service and to assess walking routes for safety and equity;*
- *Amends the CIM-5 Policy Statement Implementing Actions by adding Action 7 to require safe, non-automobile pathways that connect buildings within specified complexes as well as activity centers to support “park once” behavior and adding Action 8 to consider more funding for electric school buses;*
- *Amends the CIM-8 Implementing Action 3 to ~~require~~ encourage the installation of electric vehicle charging stations in private and public space;*
- *Amends the CIM-9 Implementing Action 2 to develop a plan and transition the County’s fleet to low/no emission vehicles;*
- *Amends the CIM-10 Policy Statement to add advance land use patterns and site development that support an economically and environmentally sustainable transportation system; and*
- *Amends the CIM-10 Implementing Actions to add Action 6 to advance the Complete Streets Policy by updating specified regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
 2 pages as indicated in this Amendment:

- 3 • Chapter 4, County in Motion: 3, 9, 10, 11, 12, 13, 18, 25, 26, 27, 30, 31, 32, and 34.
- 4 • Chapter 11: Implementation: 23, 24, 25, 27, and 28.

5

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
 7 amendment.

# Maintaining the transportation System

Howard County's transportation system is comprised of facilities and operations that provide transportation services and maintain the existing transportation infrastructure. The system reflects public and private investments that are critical to Howard County community members and businesses. Maintaining this investment requires continuous assessment of—as well as repairs and upgrades to—bridges, roadway pavement, bike lanes, sidewalks, signals, and transit buses, to name just a few key items. Each new facility installed or new vehicle purchased adds to the inventory of assets that require regular maintenance to ensure their safety, accessibility, and operability.

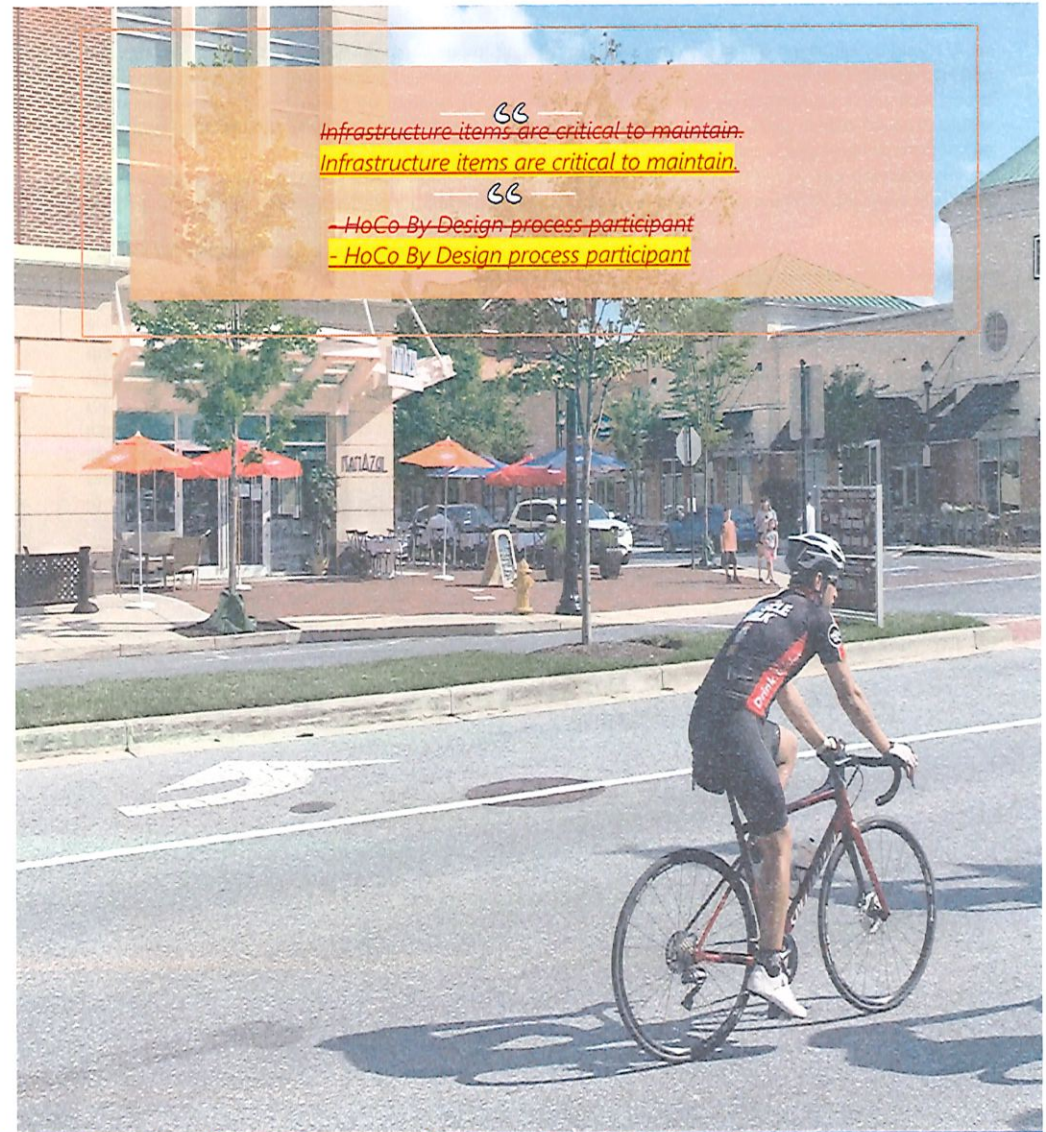
The small sample below shows the scale of the County's investment in the transportation system:

- More than 1,065 miles of sidewalks
- 72 transit buses and support vehicles used to provide transit service
- 8 Regional Transportation Agency (RTA) bus transit lines running service 15 hours a day
- Over 65 miles of bike lanes and pathways
- 1,200 miles of roads, of which 30-40 miles are repaved every year
- Over 100 traffic signals
- 363 bridges
- More than 75 county-owned trucks and heavy equipment used to clear snow, mow roadsides, sweep roads, and repair sidewalks, ramps, roads, and signals

Deferring maintenance and repairs of the transportation system can lead to larger and more frequent repairs, or replacement costs in the future as facilities age or fail. For the public transit system, buses and support vehicles that have exceeded their useful lives become more expensive to maintain and break down more often, which often results in delays and canceled service. In 2021, of the 72 vehicles in the Howard County public transit fleet, 40 vehicles have exceeded their useful life. For the county's road system, despite an anticipated reduction in the number of road miles rated in good condition over the next few years, the County has been able to ensure roads, bridges, and other transportation assets are well-maintained.

Historically, the County has been able to align and adjust transportation budgets to meet most transportation maintenance and replacement needs by annual funding infusions, either from the County or Maryland Department of Transportation. However, these funding infusions can vary widely based on national, state, and local economic conditions. In Fiscal Years 2022 and 2023, the County received an unprecedented level of state and federal funding to replace vehicles, allowing the County to place 28 new vehicles into service, about 39% of the total fleet. However, replacing this many vehicles at one time also means they will exceed their useful lives at the same time. Maintaining a reliable transportation system requires a regular and defined investment program.

The County's challenge over the next two decades will be to prioritize a limited budget for system maintenance to meet a variety of needs across the community, [meet climate goals by building a zero-emission fleet](#), respond to changing maintenance obligations from new engineering and environmental practices, and also communicate how these needs are prioritized. This will require regular evaluation of the maintenance needs of the transportation system and matching these needs to available funding.





To ensure the long-term viability of the transportation system, policies and actions should advance national best practices. In 2021, Howard County participated in the Capital Improvement Program Development and Promoting Healthy Communities Study (CIP Study) with the Baltimore Metropolitan Council. The study's recommendations were developed by comparing the state of the practice across the Baltimore region's jurisdictions with the best practices found nationwide. The recommendations include specific actions that can be taken, barriers to implementation, and metrics to determine success. For example, the study recommends incorporating an equity lens in the capital planning process. Howard County has begun to adopt this approach for transportation with the inclusion of an Equity Emphasis Area index in the Complete Streets Policy (detailed in the next section of this chapter). The CIP Study's recommendations have been used to guide this chapter's implementing actions. The Supporting Infrastructure chapter also references the CIP Study; please refer to the "Equity in Capital Planning" section of the Supporting Infrastructure chapter for details.

### CIM-1 Policy Statement

Maintain transportation system assets to ensure the viability of the system and safety of users.

### Implementing Actions

1. Develop and regularly update a risk-based asset inventory and management program for all transportation assets and ensure adequate maintenance funding.
2. Closely coordinate system maintenance activities with utilities and private development to minimize future roadway damage.
3. Develop fiscally unconstrained plans for each asset class to communicate the deferred maintenance needs and a pipeline of unfunded projects for consideration.
4. Consider equity emphasis areas in the prioritization of maintenance needs.
5. Encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure.

~~BB  
 Pedestrian safety must be improved—I keep seeing pedestrians walking down the middle of Broken Land or Snowden because there's no reasonable public transit or walking paths for them to safely get where they're going.~~  
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 BB  
 –HoCo By-Design process participant  
 - HoCo By Design process participant

## SaFeTy and the tRansportation System

Howard County is recognized as one of the best places to live in the United States and is one of the safest jurisdictions in the state to drive, take the bus, walk, and bike. However, crashes continue to be one of the leading causes of death and injuries for pedestrians, cyclists, and motorists. Improving the county transportation system's safety is critical to ensuring Howard County remains an attractive and desirable location to live. Consideration should also be given to improving walking routes to school.

In 2020, Howard County completed its Strategic Road Safety Plan with the goal "to prevent all traffic crash-related fatalities and serious injuries, and to reduce the number and severity of crashes" by articulating realistic, achievable, and data-driven goals and actions. Between 2014 and 2018—the five-year period of data that informed the Strategic Road Safety Plan—Howard County averaged more than 3,900 reported crashes per year for an average of 1,499 people injured per year. During this same time period, 95 community members and visitors died in crashes on roads in the County. As detailed in the plan, of the approximately 19,500 crashes during that time period, the most prevalent factor was distracted driving (involved in 8,800 crashes, or 45%). Another 3,100 crashes involved improper driving behaviors, such as speeding and aggressive driving, and 1,200 crashes involved impaired driving. Finally, 280 crashes involved cyclists or pedestrians. Notably, while two-thirds of all bicycle and pedestrian crashes occurred on local roadways, 85% of all bicycle and pedestrian fatalities occurred on state roadways, which typically have greater traffic volume and higher speeds.

In 2019, the County Council adopted a Complete Streets Policy to ensure that community members using any transportation mode can travel freely, safely, and comfortably throughout the County. The Complete Streets Policy uses an Equity Emphasis Area Index to track implementation, prioritize projects, and evaluate designs. The index uses methodology developed by the Baltimore Metropolitan Council (BMC), which assigns scores to census tracts in Howard County based on multiple factors, including the percent of households in poverty, transit dependent households, non-Hispanic minority individuals, low English-proficiency individuals, Hispanic or Latino individuals, individuals 75 years and older, and disabled individuals. Map 4-1 shows the Equity Emphasis Areas and index scores.

# Mobility and aCCess

Transportation systems are based on two transportation concepts: mobility and access. Mobility is generally defined as the ability to use the transportation system to move from place to place, such as on a highway or on a regional train system. Access is generally defined as how many places one can get to safely and easily. The planning and development of transportation systems balance these two concepts to reflect and advance community goals. Traditionally, Howard County's transportation system was more focused on mobility but is evolving to focus on ensuring and improving access for walkers, cyclists, drivers, and transit riders, a process that is guided by some of the highlighted topics below. Increased multi-modal access is important to serve the County's growing senior community, youth, people with disabilities, and carless community members.

## Transportation Trends, Patterns, and Facts

### Vehicle Miles Traveled

Annual daily vehicle miles traveled in Howard County is in flux as the County and the country emerge from the Covid-19 pandemic. On average, each resident drove approximately 500 more miles per year in 2018 compared to 2013, while the same measure shows that each resident drove approximately 1,300 fewer miles in 2021 compared to 2018. On a per-resident basis, the County's vehicle miles traveled was approximately 37% and 33% higher than the region for those two time periods. This increase is likely a function of longer commute distances between home and work, higher per-resident automobile ownership, and limited transit, bicycle, or pedestrian facilities that support viable non-automobile trips for local travel.

### Congestion, Roads, and Highway Infrastructure

The Maryland State Highway Administration monitors road conditions in the region and reports conditions using a Travel Time Index. The Travel Time Index measures travel time during congested periods of the day and compares it to the same trip made during less congested periods. The regional transportation system in Howard County performs well, with just three exceptions: Route 32, Route 29, and Interstate 95. Projects and studies to address travel time reliability on these roads are underway or complete, and conditions continue to be monitored on other roads, including Route 103, Route 108, Route 144, Broken Land Parkway, and Little Patuxent Parkway. In addition to congestion and delay that occur during peak hours on both local and state roads, many users are impacted by non-recurring delay, which is delay caused by crashes, weather, and other events that cannot be forecasted. These non-recurring events can considerably impact travel time and how users plan their trips.

Howard County's authority for transportation planning and investment is limited based on jurisdictional responsibility associated with different roads in the community. In 2022, the County maintained over 1,000 miles of roads; however, these roads supported only 19% of the average daily vehicle miles traveled in the County. The remaining average daily vehicle miles traveled in the County were on state roads or federal interstates, which the County does not have the authority to maintain or expand to meet future year needs. These systems experience the greatest delay in aggregate, which is primarily attributed to regional traffic. However, many users of the transportation system also experience periodic congestion and delay on the local road system.



Walkability in commercial corridors is a big issue in HoCo, so I appreciate solutions to make pedestrian areas a priority. The entire Route 1 Corridor, Route 216, Route 40, and Route 108 come to mind as highly unwalkable and unsafe.

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HoCo By Design process participant  
- HoCo By Design process participant

## delivering projects

Howard County's Capital Improvement Program (CIP) details how the County is funding transportation projects, either as part of a single project or a program of projects. Funding, planning, designing, and constructing transportation projects is a challenging and lengthy process. Some of these challenges are engineering-based, while others are process and communication focused.

In 2021, Howard County participated in the CIP Development and Promoting Healthy Communities study with the Baltimore Metropolitan Council. This study identified common barriers to communicating how the CIP works, how challenges impact project delivery times and costs, and how the risks of these challenges are incorporated into the CIP process. The study developed a series of best practice recommendations related to the CIP and project delivery:

- Develop a clear internal process to define, identify, and screen capital projects.
- View asset management and State of Good Repair through a resiliency lens. State of Good Repair means a transportation asset is maintained to operate at its full level of performance. Consider the condition of each asset in the prioritization process and the impact that asset's failure could have on transportation services and finances. Maintain a detailed and up-to-date inventory of all assets that includes asset condition. Develop formal processes to monitor the state of assets on a continuous basis.
- Incorporate an equity lens throughout the capital planning process, from start to finish. Equity questions should be considered as needs are identified, measures are prioritized, and impacts are assessed.
- Use digital tools to help the public engage with traditionally lengthy budget documents that may not be easily accessible or understood. Jurisdictions have found ways to improve the flow of information related to capital planning and increase transparency by creating online interfaces that translate the budget.

HoCo By Design's Supporting Infrastructure chapter builds upon the CIP study's recommendations for capital planning.

In 2022, the County initiated a study to develop recommendations for priority sidewalk and safety projects in the Route 1 Corridor and their delivery. It found that a significant amount of local and state funding has been allocated to design and construct projects, but progress has been slow due to challenges with securing rights-of-way for the project, permitting, and contracting. Based on these findings, the County should consider the recommendations from the CIP study. To achieve benefits more quickly while respecting its Equal Business Opportunity Program goals, the County should also adopt programmatic approaches in which the process of design, right-of-way acquisition, permitting, and construction are based on performance-driven design-build contracts.

### CIM-7 Policy Statement



Refine processes and policies to deliver transportation improvements strategically, efficiently, and equitably.

### Implementing Actions

1. Review existing rules, policies, processes, and procurement procedures to identify opportunities to accelerate the planning, design, permitting, or construction of new and equitable transportation projects, including the recommendations from the Capital Improvement Program study.
2. Identify opportunities to minimize the time needed to acquire right-of-way for planning road, sidewalk, or bicycle projects while respecting the rights of private property owners. Alternatively, reevaluate the scope of projects earlier in the planning process if it is determined that there is strong opposition to land acquisition.
3. Implement contracting methods that shorten construction activities for a project, including, but not limited to, design-build provisions for small projects like sidewalks or intersection improvements, contracts that share risk with contractors and support flexible project phasing for larger projects, and incentives for early project completion.



# Future of the Transportation System

## Technological and Economic Change

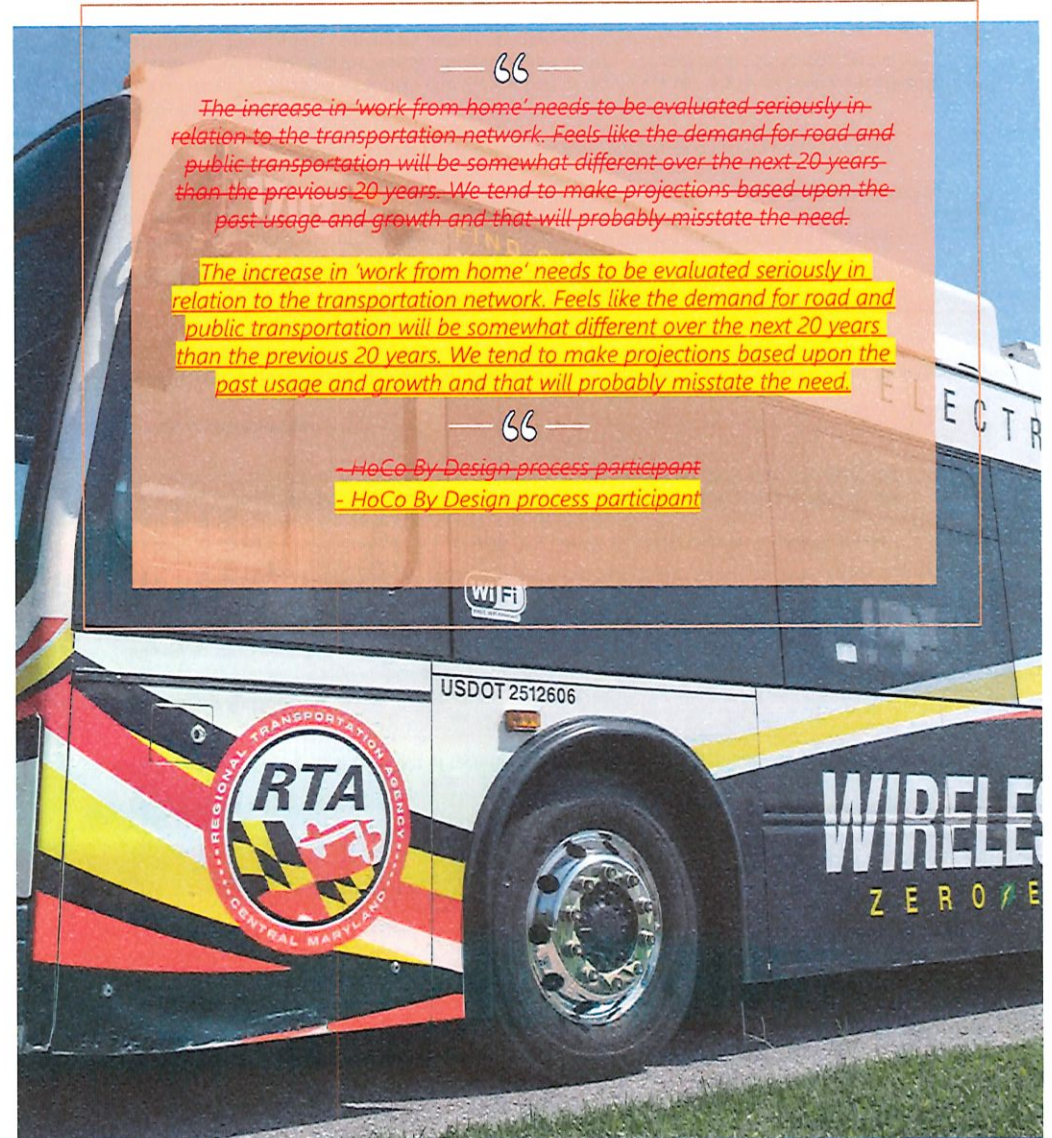
Rapidly evolving transportation technologies and changes to commuting and work patterns accelerated by Covid-19, will likely lead to shifting demands on the transportation system. As a result of this shift in demand, the County might modify its approach to planning its transportation system. In the short-term, it might focus more on integrating technology solutions to address the main effects of connected vehicle (CV) technology and automated vehicles (AV) on safety, mobility, and the environment. In the long-term, the County might focus more on the relationship between evolving transportation developments and shifting employment and housing patterns.

The first waves of change in the transportation industry have been focused on Mobility as a Service (MaaS), such as Lyft, Uber, and ever-evolving micro-mobility technologies deploying e-scooters and bike sharing. MaaS supports living and working in suburban downtowns, as it provides a convenient transportation alternative and can reduce transportation costs for users. The industry is still in its infancy, and the long-term viability of the current business models are not certain.

On the more immediate horizon, connected and automated electric vehicles (CAV) may be prevalent by the early 2030s, and the County should expect them to alter both demand on parking infrastructure and the road system. However, these impacts are very uncertain. Some forecasts claim CAVs will self-park more efficiently than humans can, leading to more efficient use of parking facilities. Changes in parking space needs could have several positive effects. New development in activity centers could share parking with existing projects. Infill and redevelopment could take place without the prerequisite of additional parking facilities, reducing costs. On the other hand, CAVs could also increase vehicle miles traveled (VMT) and cause more congestion as a result of multiple trips when a CAV drops its passenger in front of a destination, parks in a remote lot, and then later returns to pick up its passenger.

In the longer-term, if CAVs mature and are cycled into the vehicle fleet in significant ways, they may alter commuting patterns in the County. CAVs could offer more efficient commutes by reducing travel times, providing community members a greater choice of locations to live in, and shifting demand to areas in the County, or outside, that are further away from job centers or less connected to the highway system. However, like the potential impact on parking demand, the adoption of CAVs may increase VMT as a result of this shift.

The automotive industry is years away from fully leveraging CAV technology and impacts are not yet clear or understood. Further, most regulatory policy will be established at the state and federal levels. The County should monitor the progression of CAV technology and associated regulations, and respond to changes as they occur. The County's response to future changes may include updated road design standards, expanded electric vehicle charging policies, a robust fiber optic communications network, and revised parking requirements. The County may also need to ensure the safety of cyclists and pedestrians if it is not adequately addressed in state and federal regulatory changes.



## Climate Change and Air Quality

As outlined in the Ecological Health chapter, climate change can be generally defined as a significant long-term shift in weather patterns for a specific geographic region. Emissions of the long-lived greenhouse gases carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated gases are causing climate change as they build up and trap heat in the atmosphere. A significant contributor to emissions is the transportation sector. In the United States, transportation accounts for 33% of CO<sub>2</sub> emissions, with 65% of that total resulting from gasoline consumption in cars and light trucks. Commercial airplanes and business jets contribute 10% to U.S. total carbon dioxide emissions and nearly 9% of greenhouse gas emissions in the U.S. Annual vehicle miles traveled (VMT) in Howard County has grown slightly in recent years, increasing by just over 400,000 between 2013 and 2018. This growth in VMT represents nearly 500 additional miles driven by every county resident per year. On a per capita basis, the county VMT is approximately 37% higher than the regional average. This difference is a function of slightly longer commuting distances to Baltimore and Washington, DC, high per capita auto ownership, and a limited number of transit options for most commute trips.

Air pollution levels are reported to the general public via the Air Quality Index (AQI), which measures the level of criteria pollutants (air pollutants that contribute to the formation of ozone and particulate matter, including hydrocarbons, carbon monoxide, and oxides of nitrogen, which can have adverse short- and long-term health effects). In the Baltimore-Washington region, the AQI is driven by ground level ozone and particulate matter. The Clean Air Act enables interstate commissions to develop regional strategies for reducing air pollution. Maryland is part of the Northeast Ozone Transport Region, which includes 12 states and the District of Columbia. At the local level, Howard County is a member of the Baltimore Metropolitan Council (BMC) and its Baltimore Regional Transportation Board (BRTB), which coordinate regional transportation planning and work to reduce emissions from transportation. Under the Clean Air Act, the BRTB cannot approve any project, program, or plan that does not conform to Maryland's State Implementation Plan, which guides Maryland's actions to attain and meet air quality standards.

Reducing emissions and air pollutants from the transportation system will take multiple approaches, including the following: 1) reducing direct emissions from vehicles and airplanes; 2) shifting demand and creating ~~to~~ more efficient transportation modes with fewer direct emissions; and 3) reducing VMT. The national, state, and local vehicle fleet is still primarily comprised of gasoline and diesel vehicles; however, electric and hybrid vehicles are becoming more common. In 2022, less than 1% of the US vehicle fleet was electric but sales were increasing rapidly. Meaningful market penetration of electric vehicles will depend on availability of government incentives, alleviating buyers' range anxiety, and facilitating investment in charging infrastructure. The high cost of electric vehicles is often cited as a barrier, as approximately two-thirds of households that own electric or hybrid vehicles have incomes over \$100,000. Therefore any incentives and supporting policies will need to address the County's equity goals. Shifting demand to other modes, such as transit, walking, and biking, is another reliable and equitable method to reduce VMT and emissions. By investing in reliable transit and safe walking and cycling facilities, the County can ensure that community members will have the option to shift their vehicle trips. Additionally, increasing frequency of transit service not only benefits those who depend on it out of necessity, but also improves the attractiveness of transit to those who are able to choose their mode of travel.

Climate change is also forecast to impact the reliability of the transportation system as periods of higher temperatures increase wear on road surfaces; stronger and more sustained rain events increase flooding on roads, bridges, and culverts; and long-term droughts dry out subsurface soils, leading to subsidence. Additionally, reduced capacity, detours, and crashes from flooding impact travel time, reliability, and safety. As articulated in the BMC's Capital Improvement Program study, viewing asset management and county design standards through a resiliency lens will be critical to ensuring the County's transportation system can continue to operate safely and effectively.

The Volume III Design Manual Complete Streets and Bridges requires a noise analysis if the proposed residences are located within a specified number of feet from a roadway or a rail line, or if the location is within an airport noise zone. The Design Manual also requires noise mitigation through the use of buffers, barriers or acoustical insulation, or through building orientation.

### CIM-8 Policy Statement

Actively plan for and evaluate the impact of technology and climate change on the transportation system.

### Implementing Actions

1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.
2. Amend design standards and asset management approaches to ensure resilience.
3. **Support** **Require** **Encourage** the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.

### CIM-9 Policy Statement

Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.

### Implementing Actions

1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.
2. Develop a plan ~~to~~ **and** transition the County's fleet (including school buses and contracted services) to low/ no emission vehicles.
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.
4. Consider targeted financial incentives and the removal of regulatory barriers for property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-8 - Actively plan for and evaluate the impact of technology and climate change on the transportation system.</b>		
1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.	DPZ OOT	Mid-Term
2. Amend design standards and asset management approaches to ensure resilience.	DPW OOT DPZ	Mid-Term
3. <b>Support Require Encourage</b> the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.	DPW OCS OOT Private Partners	Ongoing
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.	DPW OOT OCS	Long-Term
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.	OOT	Ongoing
<b>CIM-9 – Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.</b>		
1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.	OCS OOT	Long-Term
2. Develop a plan <del>to</del> <b>and</b> transition the County's fleet (including school buses and contracted services) to low/no emission vehicles.	OOT OCS/HCPSS	Mid-Term
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.	OOT	Ongoing
4. Consider targeted financial incentives to property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.	OOT OCS Private Property Owners	Mid-Term
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.	OOT	Long-Term

Amendment 102 to Council Bill No. 28 -2023

BY: Deb Jung  
Liz Walsh

Legislative Day 11  
Date: 10/02/2023

Amendment No. 102

*(This Amendment makes the following changes to HoCo by Design Chapter 4 and Chapter 11:*

- Chapter 4: County in Motion*
- *Removes all quotes;*
  - *Amends the fifth key organization topic relating to the future of the transportation system to include the Baltimore/Washington International Thurgood Marshall Airport (BWI);*
  - *Amends the “Maintaining the Transportation System” section by adding language to the County’s future challenges to include meeting climate policy goals by building a zero-emission fleet;*
  - *Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;*
  - *Amends the Safety and the Transportation System section by adding language that consideration should be given to improving walking routes to school;*
  - *Amends the CIM-2 Policy Statement Implementing Action 2 to update the Subdivision and Land Development Regulations to favor land use and development that improves safety, particularly for pedestrians and bicyclists;*
  - *Amends the CIM-3 Policy Statement Implementing Action 2 to ensure investments in the RTA system that accomplish increased service frequencies, improved reliability, and specified additional routes;*
  - *Amends the CIM-3 Policy Statement Implementing Action 3 to provide, support and enhance specified community-based mobility programs;*
  - *Amends the CIM-3 Policy Statement Implementing Action 4 to consider subsidies for income-qualified residents to use existing rideshare programs;*
  - *Amends the CIM-5 Policy Statement Implementing Action 3 to “review” rather than “sustain” and expand efforts to develop and implement Transportation Demand Management programs and adds language to improve the reporting process for outcomes and goals;*

- Amends the CIM-5 Policy Statement Implementing Action 4 to reduce demand for hazard-based school bus service and to assess walking routes for safety and equity;
- Amends the CIM-5 Policy Statement Implementing Actions by adding Action 7 to require safe, non-automobile pathways that connect buildings within specified complexes as well as activity centers to support "park once" behavior and adding Action 8 to consider more funding for electric school buses;
- Amends the Climate Change and Air Quality subsection of the Future of the Transportation System to add commercial airplanes and business jets to the contributors of total carbon dioxide emissions and greenhouse gas emissions in the U.S., adds reducing direct emissions from airplanes, and adds creating more efficient transportation modes with fewer direct emissions;
- Adds a fifth paragraph to the Climate Change and Air Quality subsection relating to requirements of the Design Manual for a noise analysis under specified circumstances and requirements for specified noise mitigation;
- Amends the CIM-8 Implementing Action 3 to require the installation of electric vehicle charging stations in private and public space;
- Amends the CIM-9 Implementing Action 2 to develop a plan and transition the County's fleet to low/no emission vehicles;
- Amends the CIM-10 Policy Statement to add advance land use patterns and site development that support an economically and environmentally sustainable transportation system; and
- Amends the CIM-10 Implementing Actions to add Action 6 to advance the Complete Streets Policy by updating specified regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.

Chapter 11:  
Implementation

- Amends the CIM-1 Policy Statement by adding a new implementing action to encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure;
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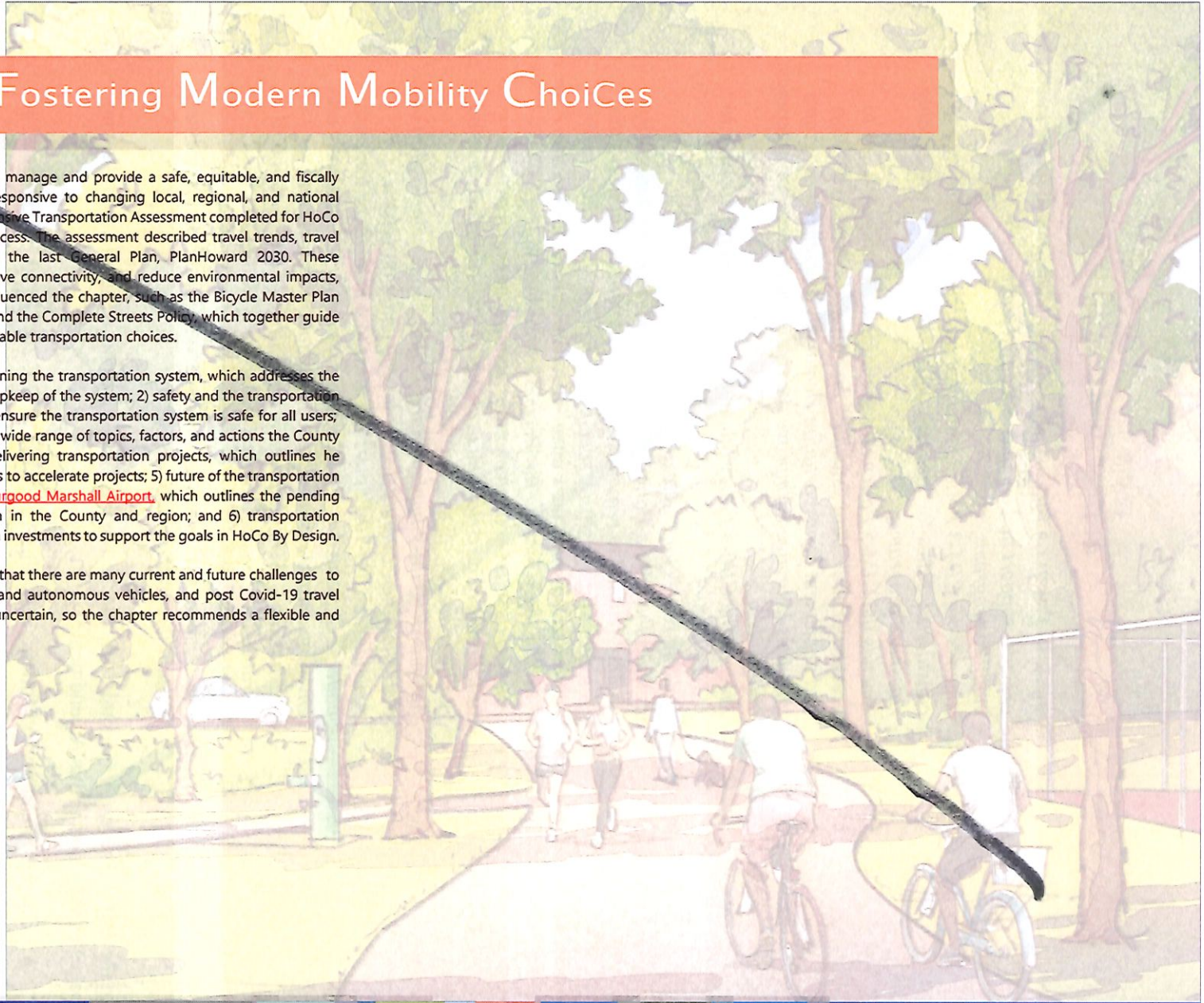
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 7 amendment.

# County in Motion : Fostering Modern Mobility Choices

This chapter highlights policies, initiatives, and actions to manage and provide a safe, equitable, and fiscally sustainable transportation system for all users that is responsive to changing local, regional, and national transportation trends. The chapter builds upon a comprehensive Transportation Assessment completed for HoCo By Design and HoCo By Design's public engagement process. The assessment described travel trends, travel forecasts, and county transportation investments since the last General Plan, PlanHoward 2030. These investments included efforts to reduce congestion, improve connectivity, and reduce environmental impacts, among other achievements. Several recent efforts also influenced the chapter, such as the Bicycle Master Plan (BikeHoward), the Pedestrian Master Plan (WalkHoward), and the Complete Streets Policy, which together guide the County's commitment to safety, accessibility, and equitable transportation choices.

This chapter is organized around six key topics: 1) maintaining the transportation system, which addresses the importance of investing in the ongoing maintenance and upkeep of the system; 2) safety and the transportation system, which details the actions the County is taking to ensure the transportation system is safe for all users; 3) transportation mobility and access, which addresses the wide range of topics, factors, and actions the County considers in managing the transportation system; 4) delivering transportation projects, which outlines the challenges in delivering transportation projects and options to accelerate projects; 5) future of the transportation system, [including Baltimore/Washington International Thurgood Marshall Airport](#), which outlines the pending and expected changes facing the transportation system in the County and region; and 6) transportation investment priorities, which details a range of transportation investments to support the goals in HoCo By Design.

Finally, the chapter should be read with the understanding that there are many current and future challenges to which the County will need to react, such as connected and autonomous vehicles, and post Covid-19 travel patterns. The impacts of these and other challenges are uncertain, so the chapter recommends a flexible and nimble policy approach.



# Maintaining the transportation System

Howard County's transportation system is comprised of facilities and operations that provide transportation services and maintain the existing transportation infrastructure. The system reflects public and private investments that are critical to Howard County community members and businesses. Maintaining this investment requires continuous assessment of—as well as repairs and upgrades to—bridges, roadway pavement, bike lanes, sidewalks, signals, and transit buses, to name just a few key items. Each new facility installed or new vehicle purchased adds to the inventory of assets that require regular maintenance to ensure their safety, accessibility, and operability.

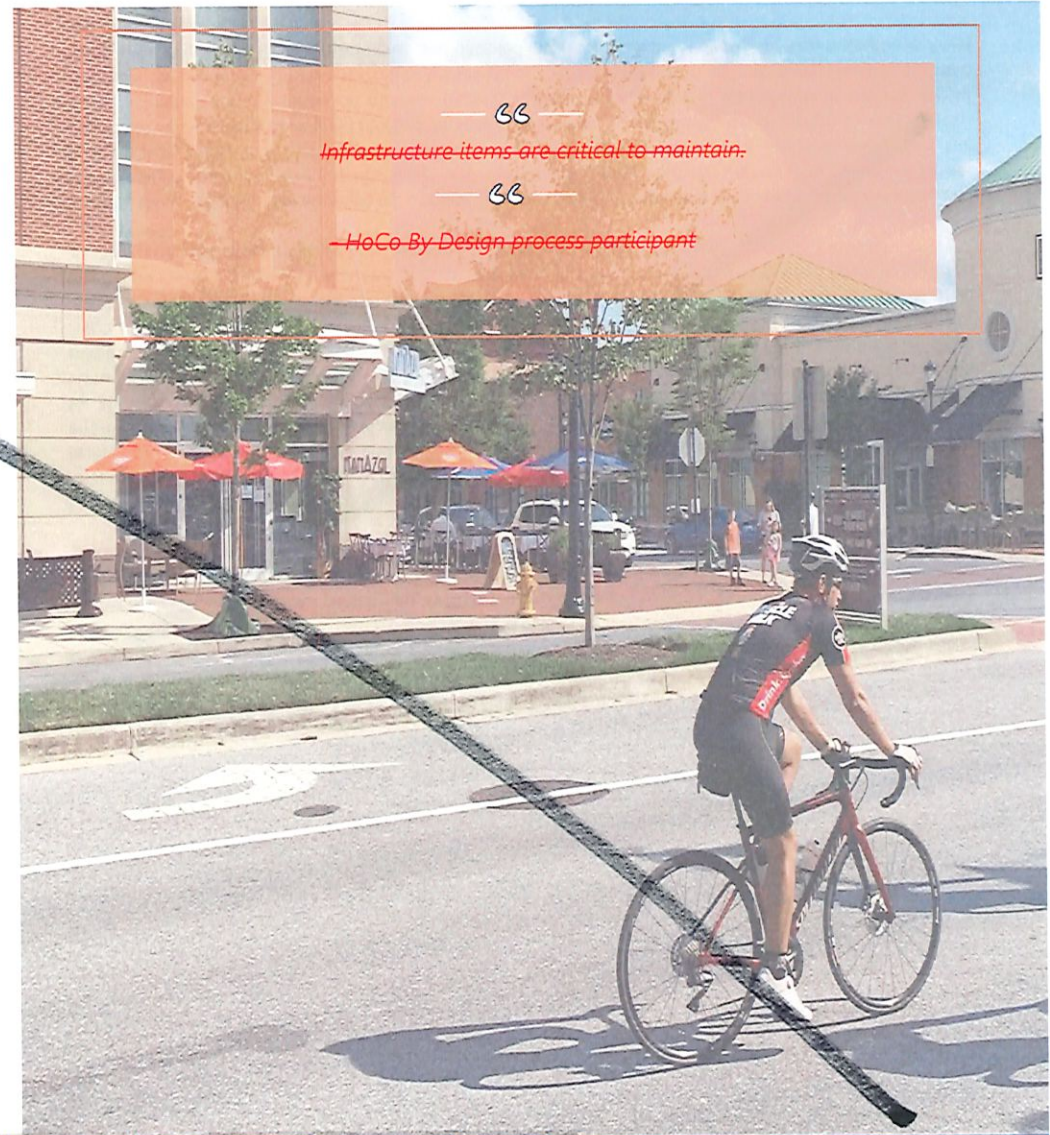
The small sample below shows the scale of the County's investment in the transportation system:

- More than 1,065 miles of sidewalks
- 72 transit buses and support vehicles used to provide transit service
- 8 Regional Transportation Agency (RTA) bus transit lines running service 15 hours a day
- Over 65 miles of bike lanes and pathways
- 1,200 miles of roads, of which 30-40 miles are repaved every year
- Over 100 traffic signals
- 363 bridges
- More than 75 county-owned trucks and heavy equipment used to clear snow, mow roadsides, sweep roads, and repair sidewalks, ramps, roads, and signals

Deferring maintenance and repairs of the transportation system can lead to larger and more frequent repairs, or replacement costs in the future as facilities age or fail. For the public transit system, buses and support vehicles that have exceeded their useful lives become more expensive to maintain and break down more often, which often results in delays and canceled service. In 2021, of the 72 vehicles in the Howard County public transit fleet, 40 vehicles have exceeded their useful life. For the county's road system, despite an anticipated reduction in the number of road miles rated in good condition over the next few years, the County has been able to ensure roads, bridges, and other transportation assets are well-maintained.

Historically, the County has been able to align and adjust transportation budgets to meet most transportation maintenance and replacement needs by annual funding infusions, either from the County or Maryland Department of Transportation. However, these funding infusions can vary widely based on national, state, and local economic conditions. In Fiscal Years 2022 and 2023, the County received an unprecedented level of state and federal funding to replace vehicles, allowing the County to place 28 new vehicles into service, about 39% of the total fleet. However, replacing this many vehicles at one time also means they will exceed their useful lives at the same time. Maintaining a reliable transportation system requires a regular and defined investment program.

The County's challenge over the next two decades will be to prioritize a limited budget for system maintenance to meet a variety of needs across the community, [meet climate goals by building a zero-emission fleet](#), respond to changing maintenance obligations from new engineering and environmental practices, and also communicate how these needs are prioritized. This will require regular evaluation of the maintenance needs of the transportation system and matching these needs to available funding.



To ensure the long-term viability of the transportation system, policies and actions should advance national best practices. In 2021, Howard County participated in the Capital Improvement Program Development and Promoting Healthy Communities Study (CIP Study) with the Baltimore Metropolitan Council. The study's recommendations were developed by comparing the state of the practice across the Baltimore region's jurisdictions with the best practices found nationwide. The recommendations include specific actions that can be taken, barriers to implementation, and metrics to determine success. For example, the study recommends incorporating an equity lens in the capital planning process. Howard County has begun to adopt this approach for transportation with the inclusion of an Equity Emphasis Area index in the Complete Streets Policy (detailed in the next section of this chapter). The CIP Study's recommendations have been used to guide this chapter's implementing actions. The Supporting Infrastructure chapter also references the CIP Study; please refer to the "Equity in Capital Planning" section of the Supporting Infrastructure chapter for details.

### CIM-1 Policy Statement

Maintain transportation system assets to ensure the viability of the system and safety of users.

### Implementing Actions

1. Develop and regularly update a risk-based asset inventory and management program for all transportation assets and ensure adequate maintenance funding.
2. Closely coordinate system maintenance activities with utilities and private development to minimize future roadway damage.
3. Develop fiscally unconstrained plans for each asset class to communicate the deferred maintenance needs and a pipeline of unfunded projects for consideration.
4. Consider equity emphasis areas in the prioritization of maintenance needs.
5. Encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure.

“Pedestrian safety must be improved—I keep seeing pedestrians walking down the middle of Broken Land or Snowden because there's no reasonable public transit or walking paths for them to safely get where they're going.”

—HoCo By-Design process participant

## Safety and the Transportation System

Howard County is recognized as one of the best places to live in the United States and is one of the safest jurisdictions in the state to drive, take the bus, walk, and bike. However, crashes continue to be one of the leading causes of death and injuries for pedestrians, cyclists, and motorists. Improving the county transportation system's safety is critical to ensuring Howard County remains an attractive and desirable location to live. Consideration should also be given to improving walking routes to school.

In 2020, Howard County completed its Strategic Road Safety Plan with the goal “to prevent all traffic crash-related fatalities and serious injuries, and to reduce the number and severity of crashes” by articulating realistic, achievable, and data-driven goals and actions. Between 2014 and 2018—the five-year period of data that informed the Strategic Road Safety Plan—Howard County averaged more than 3,900 reported crashes per year for an average of 1,499 people injured per year. During this same time period, 95 community members and visitors died in crashes on roads in the County. As detailed in the plan, of the approximately 19,500 crashes during that time period, the most prevalent factor was distracted driving (involved in 8,800 crashes, or 45%). Another 3,100 crashes involved improper driving behaviors, such as speeding and aggressive driving, and 1,200 crashes involved impaired driving. Finally, 280 crashes involved cyclists or pedestrians. Notably, while two-thirds of all bicycle and pedestrian crashes occurred on local roadways, 85% of all bicycle and pedestrian fatalities occurred on state roadways, which typically have greater traffic volume and higher speeds.

In 2019, the County Council adopted a Complete Streets Policy to ensure that community members using any transportation mode can travel freely, safely, and comfortably throughout the County. The Complete Streets Policy uses an Equity Emphasis Area Index to track implementation, prioritize projects, and evaluate designs. The index uses methodology developed by the Baltimore Metropolitan Council (BMC), which assigns scores to census tracts in Howard County based on multiple factors, including the percent of households in poverty, transit dependent households, non-Hispanic minority individuals, low English-proficiency individuals, Hispanic or Latino individuals, individuals 75 years and older, and disabled individuals. Map 4-1 shows the Equity Emphasis Areas and index scores.

Building on the Complete Streets Policy, the Howard County Design Manual Volumes III and IV (Design Manual) were updated in 2022 to incorporate best practices in street design to accommodate all modes of transportation. The next step in complete streets implementation is to update the Subdivision and Land Development Regulations to ensure that the development process supports the County's vision for complete streets. In early 2020, Howard County also adopted a new pedestrian master plan, WalkHoward, which identifies and prioritizes pedestrian infrastructure needs. A fundamental organizing principle of WalkHoward includes last-mile access, and the plan recommends a series of projects and connections to ensure walking is a safe, effective, and viable recreational and transportation choice. BikeHoward, further described under the "Mobility and Access" section of this chapter, envisions safe bicycling on roads and paths as a means of daily transportation and healthy recreation. BikeHoward calls for the creation of a safe and seamless network of bikeways that connect people to schools, shops, parks, and work, with facilities that serve all skill and comfort levels.

The Strategic Road Safety Plan recommended a safe system approach for the County that identifies the link between priority crash types and the roadway contexts in which they most frequently occur. The system then prioritizes countermeasures that provide a solution to those crash types at the identified location types. This approach is innovative because it can prioritize locations that have a high propensity for crashes to occur even if crashes have not occurred there in recent years. Overall, the system proactively targets road safety improvements in high-risk locations where the most frequent and severe crashes could occur. This effort should also coordinate with and support the Complete Streets Policy and the WalkHoward and BikeHoward capital programs.

Finally, HoCo By Design's Economic Prosperity chapter describes the transportation needs of the agricultural community and conditions that impact safety. Refer to the section "Sustaining our Agricultural Economy" within the Economic Prosperity chapter for details.

### CIM-2 Policy Statement

Design and operate an equitable transportation system that prevents and mitigates the most severe types of crashes for motorists, transit riders, bicyclists, and pedestrians.

### Implementing Actions

1. Prioritize and fund measures outlined in the Strategic Road Safety Plan using a safe system approach to focus education, enforcement, and engineering efforts and investments.
2. Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to provide accommodations and improve favor land use and development that improves safety, particularly for pedestrians and bicyclists who are the most vulnerable roadway users.
3. Execute the priorities of WalkHoward and BikeHoward through dedicated funding in the capital budget and efficient project delivery.
4. Ensure that all transportation capital projects include review of potential safety improvements during the project scoping process.



## Mobility and aCCess

Transportation systems are based on two transportation concepts: mobility and access. Mobility is generally defined as the ability to use the transportation system to move from place to place, such as on a highway or on a regional train system. Access is generally defined as how many places one can get to safely and easily. The planning and development of transportation systems balance these two concepts to reflect and advance community goals. Traditionally, Howard County's transportation system was more focused on mobility but is evolving to focus on ensuring and improving access for walkers, cyclists, drivers, and transit riders, a process that is guided by some of the highlighted topics below. Increased multi-modal access is important to serve the County's growing senior community, youth, people with disabilities, and carless community members.

### Transportation Trends, Patterns, and Facts

#### Vehicle Miles Traveled

Annual daily vehicle miles traveled in Howard County is in flux as the County and the country emerge from the Covid-19 pandemic. On average, each resident drove approximately 500 more miles per year in 2018 compared to 2013, while the same measure shows that each resident drove approximately 1,300 fewer miles in 2021 compared to 2018. On a per-resident basis, the County's vehicle miles traveled was approximately 37% and 33% higher than the region for those two time periods. This increase is likely a function of longer commute distances between home and work, higher per-resident automobile ownership, and limited transit, bicycle, or pedestrian facilities that support viable non-automobile trips for local travel.


#### Congestion, Roads, and Highway Infrastructure

The Maryland State Highway Administration monitors road conditions in the region and reports conditions using a Travel Time Index. The Travel Time Index measures travel time during congested periods of the day and compares it to the same trip made during less congested periods. The regional transportation system in Howard County performs well, with just three exceptions: Route 32, Route 29, and Interstate 95. Projects and studies to address travel time reliability on these roads are underway or complete, and conditions continue to be monitored on other roads, including Route 103, Route 108, Route 144, Broken Land Parkway, and Little Patuxent Parkway. In addition to congestion and delay that occur during peak hours on both local and state roads, many users are impacted by non-recurring delay, which is delay caused by crashes, weather, and other events that cannot be forecasted. These non-recurring events can considerably impact travel time and how users plan their trips.

Howard County's authority for transportation planning and investment is limited based on jurisdictional responsibility associated with different roads in the community. In 2022, the County maintained over 1,000 miles of roads; however, these roads supported only 19% of the average daily vehicle miles traveled in the County. The remaining average daily vehicle miles traveled in the County were on state roads or federal interstates, which the County does not have the authority to maintain or expand to meet future year needs. These systems experience the greatest delay in aggregate, which is primarily attributed to regional traffic. However, many users of the transportation system also experience periodic congestion and delay on the local road system.



### CIM-3 Policy Statement

 Make the transportation system equitable, close mobility gaps, and improve access to jobs, housing, health care, education, and social services.

#### Implementing Actions

1. Continue to monitor system performance, gather input from current riders, and allocate existing resources to maximize ridership and enhance service for current public transit riders.
2. ~~Ensure investments in the Regional Transportation Agency system balance improving service frequencies and adding new routes to unserved areas with transit-supportive land use.~~  
~~Ensure investments in the Regional Transportation Agency system accomplish increased service frequencies, improved reliability, and additional routes to unserved areas by considering transit-supportive land uses.~~
3. ~~Continue to Provide support and enhance~~ community-based mobility programs ~~and non-governmental organizations that serve for~~ seniors and people with disabilities.
4. Explore flexible transit routing, mobility as a service, and other micro-mobility concepts to provide efficient and economic transit service in lower-density areas of the County. ~~Consider subsidies for income-qualified residents to use existing rideshare programs.~~


### CIM-4 Policy Statement

Leverage Howard County's position in the Baltimore and Washington regions to advance transportation projects and policies with regional and local impacts, including focusing efforts on governance, accountability, funding policies, and strategies to address unmet transportation service needs.

#### Implementing Actions

1. Continue to engage in regional discussions regarding state and federal investment in regional transit systems to ensure funding and support for Howard County projects, meet the County's goals to enhance and improve access to regional job centers, and maintain the County's position as an attractive location to live and work.
2. Continue to support the collaborative efforts to improve the Regional Transportation Agency of Central Maryland.
3. Continue to partner with Montgomery County and the Maryland Department of Transportation to extend the Flash Bus Rapid Transit Service to Howard County.
4. Support and partner with Maryland Department of Transportation and other regional organizations to expand service and improve reliability on the Camden Commuter Rail Line.
5. Continue to engage and participate in regional and state planning and coordination activities to ensure the needs of freight and goods movements are considered and supported.

### CIM-5 Policy Statement

 Deliver transportation system improvements that support efforts to reduce reliance on automobile trips, improve air quality, and give people cost-effective and sustainable choices on how they get to work, home, school, and play.

#### Implementing Actions

1. Construct and enhance transportation facilities to increase connections across Howard County and support the goals of WalkHoward, BikeHoward, and the Complete Streets Policy, with a focus on the equity goals outlined in the Complete Streets Policy.
2. Continue to plan and implement projects that enhance transportation connections to regional job centers and high-quality transit.
3. ~~Sustain Review~~ and expand efforts to develop and implement Transportation Demand Management programs (such as car share, bikeshare, and shared e-scooter systems; telecommute policies; and vanpools) and expand Park and Ride lots, where appropriate. ~~Improve the reporting process for outcomes and goals.~~
4. Continue to plan and coordinate investments with the Howard County Public School System to increase safe routes to schools, enhance access to the local transit system, reduce demand for ~~hazard-based~~ school bus service, and decrease driving to school. ~~Assess walking routes for safety and equity.~~
5. Partner with the Maryland Department of Transportation to align commuter bus routes and funding priorities with current and expected travel patterns and complementary regional public transit initiatives.
6. Continue to work with federal, state, and regional partners on preliminary studies for high-quality connections.
7. ~~Require safe, non-automobile pathways that connect buildings within commercial and office complexes as well as activity centers to support "park once" behavior.~~
8. ~~Consider more funding for electric school buses.~~

### CIM-6 Policy Statement

Focus on improvements to the transportation system that improve travel reliability.

#### Implementing Actions

1. Evaluate the use of Transportation Systems Management and Operations concepts to manage the County's road system.
2. Develop real-time traffic monitoring and coordinate transportation and emergency resources to address non-recurring congestion due to weather and crashes on the local and regional transportation system.
3. Focus on operations at key intersections while ensuring improved safety for bicycle and pedestrian movements.
4. Optimize signal timing and phasing at key intersections in coordination with efforts to improve pedestrian and bicycle movements and safety, and coordinate signals in major commute corridors during peak time periods.
5. Increase street connections in key locations that provide more route choices to system users.
6. Develop access management approaches through updates to the Zoning Regulations and the Subdivision and Land Development Regulations, design approvals, and coordination with the Maryland Department of Transportation State Highway Administration.

Walkability in commercial corridors is a big issue in HoCo, so I appreciate solutions to make pedestrian areas a priority. The entire Route 1 Corridor, Route 216, Route 40, and Route 108 come to mind as highly unwalkable and unsafe.

—HoCo By Design process participant

## delivering projects

Howard County's Capital Improvement Program (CIP) details how the County is funding transportation projects, either as part of a single project or a program of projects. Funding, planning, designing, and constructing transportation projects is a challenging and lengthy process. Some of these challenges are engineering-based, while others are process and communication focused.

In 2021, Howard County participated in the CIP Development and Promoting Healthy Communities study with the Baltimore Metropolitan Council. This study identified common barriers to communicating how the CIP works, how challenges impact project delivery times and costs, and how the risks of these challenges are incorporated into the CIP process. The study developed a series of best practice recommendations related to the CIP and project delivery:

- Develop a clear internal process to define, identify, and screen capital projects.
- View asset management and State of Good Repair through a resiliency lens. State of Good Repair means a transportation asset is maintained to operate at its full level of performance. Consider the condition of each asset in the prioritization process and the impact that asset's failure could have on transportation services and finances. Maintain a detailed and up-to-date inventory of all assets that includes asset condition. Develop formal processes to monitor the state of assets on a continuous basis.
- Incorporate an equity lens throughout the capital planning process, from start to finish. Equity questions should be considered as needs are identified, measures are prioritized, and impacts are assessed.
- Use digital tools to help the public engage with traditionally lengthy budget documents that may not be easily accessible or understood. Jurisdictions have found ways to improve the flow of information related to capital planning and increase transparency by creating online interfaces that translate the budget.

HoCo By Design's Supporting Infrastructure chapter builds upon the CIP study's recommendations for capital planning.

In 2022, the County initiated a study to develop recommendations for priority sidewalk and safety projects in the Route 1 Corridor and their delivery. It found that a significant amount of local and state funding has been allocated to design and construct projects, but progress has been slow due to challenges with securing rights-of-way for the project, permitting, and contracting. Based on these findings, the County should consider the recommendations from the CIP study. To achieve benefits more quickly while respecting its Equal Business Opportunity Program goals, the County should also adopt programmatic approaches in which the process of design, right-of-way acquisition, permitting, and construction are based on performance-driven design-build contracts.

### CIM-7 Policy Statement



Refine processes and policies to deliver transportation improvements strategically, efficiently, and equitably.

### Implementing Actions

1. Review existing rules, policies, processes, and procurement procedures to identify opportunities to accelerate the planning, design, permitting, or construction of new and equitable transportation projects, including the recommendations from the Capital Improvement Program study.
2. Identify opportunities to minimize the time needed to acquire right-of-way for planning road, sidewalk, or bicycle projects while respecting the rights of private property owners. Alternatively, reevaluate the scope of projects earlier in the planning process if it is determined that there is strong opposition to land acquisition.
3. Implement contracting methods that shorten construction activities for a project, including, but not limited to, design-build provisions for small projects like sidewalks or intersection improvements, contracts that share risk with contractors and support flexible project phasing for larger projects, and incentives for early project completion.





# Future of the Transportation System

## Technological and Economic Change

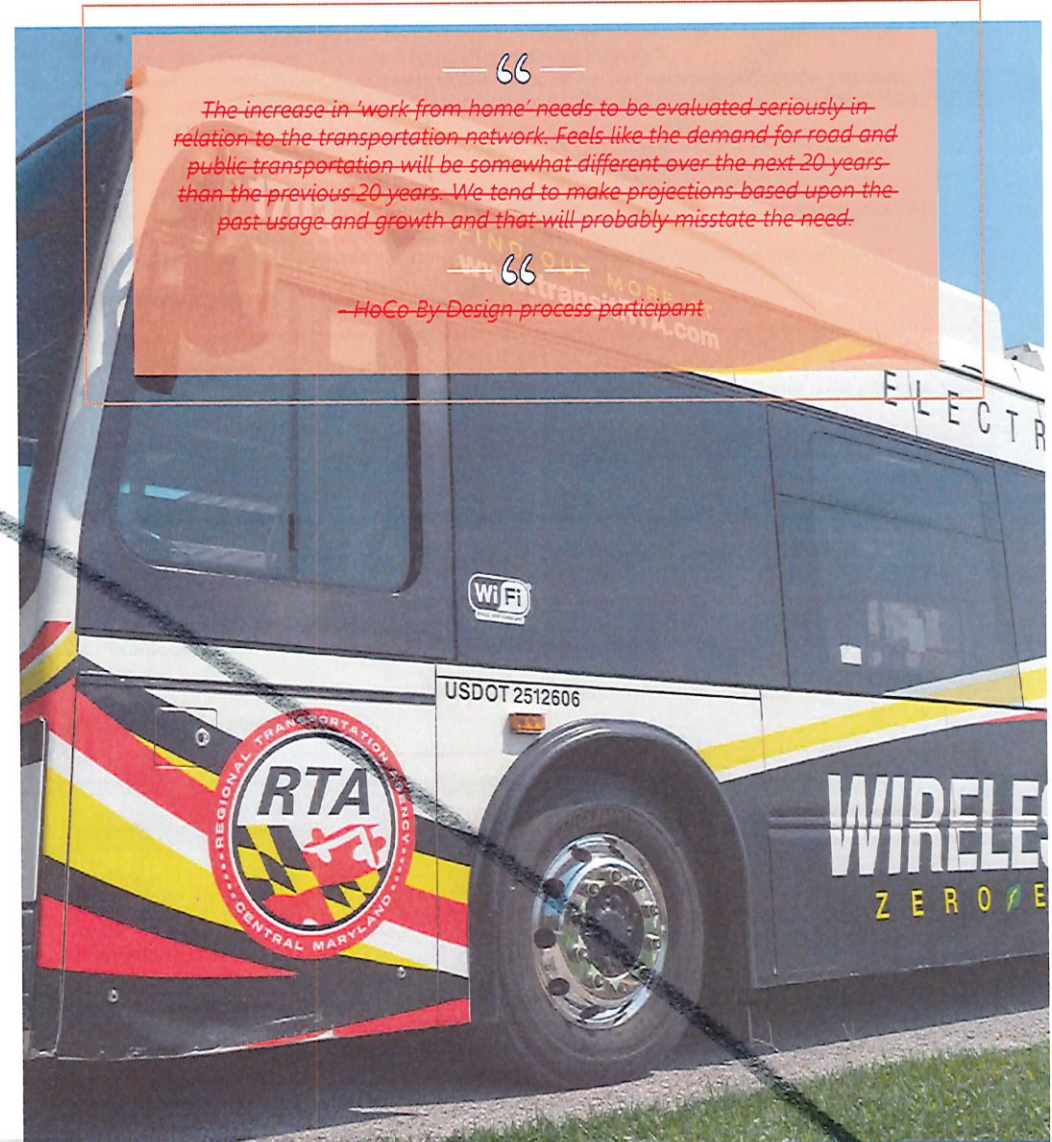
Rapidly evolving transportation technologies and changes to commuting and work patterns accelerated by Covid-19, will likely lead to shifting demands on the transportation system. As a result of this shift in demand, the County might modify its approach to planning its transportation system. In the short-term, it might focus more on integrating technology solutions to address the main effects of connected vehicle (CV) technology and automated vehicles (AV) on safety, mobility, and the environment. In the long-term, the County might focus more on the relationship between evolving transportation developments and shifting employment and housing patterns.

The first waves of change in the transportation industry have been focused on Mobility as a Service (MaaS), such as Lyft, Uber, and ever-evolving micro-mobility technologies deploying e-scooters and bike sharing. MaaS supports living and working in suburban downtowns, as it provides a convenient transportation alternative and can reduce transportation costs for users. The industry is still in its infancy, and the long-term viability of the current business models are not certain.

On the more immediate horizon, connected and automated electric vehicles (CAV) may be prevalent by the early 2030s, and the County should expect them to alter both demand on parking infrastructure and the road system. However, these impacts are very uncertain. Some forecasts claim CAVs will self-park more efficiently than humans can, leading to more efficient use of parking facilities. Changes in parking space needs could have several positive effects. New development in activity centers could share parking with existing projects. Infill and redevelopment could take place without the prerequisite of additional parking facilities, reducing costs. On the other hand, CAVs could also increase vehicle miles traveled (VMT) and cause more congestion as a result of multiple trips when a CAV drops its passenger in front of a destination, parks in a remote lot, and then later returns to pick up its passenger.

In the longer-term, if CAVs mature and are cycled into the vehicle fleet in significant ways, they may alter commuting patterns in the County. CAVs could offer more efficient commutes by reducing travel times, providing community members a greater choice of locations to live in, and shifting demand to areas in the County, or outside, that are further away from job centers or less connected to the highway system. However, like the potential impact on parking demand, the adoption of CAVs may increase VMT as a result of this shift.

The automotive industry is years away from fully leveraging CAV technology and impacts are not yet clear or understood. Further, most regulatory policy will be established at the state and federal levels. The County should monitor the progression of CAV technology and associated regulations, and respond to changes as they occur. The County's response to future changes may include updated road design standards, expanded electric vehicle charging policies, a robust fiber optic communications network, and revised parking requirements. The County may also need to ensure the safety of cyclists and pedestrians if it is not adequately addressed in state and federal regulatory changes.



## Climate Change and Air Quality

As outlined in the Ecological Health chapter, climate change can be generally defined as a significant long-term shift in weather patterns for a specific geographic region. Emissions of the long-lived greenhouse gases carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated gases are causing climate change as they build up and trap heat in the atmosphere. A significant contributor to emissions is the transportation sector. In the United States, transportation accounts for 33% of CO<sub>2</sub> emissions, with 65% of that total resulting from gasoline consumption in cars and light trucks. Commercial airplanes and business jets contribute 10% to U.S. total carbon dioxide emissions and nearly 9% of greenhouse gas emissions in the U.S. Annual vehicle miles traveled (VMT) in Howard County has grown slightly in recent years, increasing by just over 400,000 between 2013 and 2018. This growth in VMT represents nearly 500 additional miles driven by every county resident per year. On a per capita basis, the county VMT is approximately 37% higher than the regional average. This difference is a function of slightly longer commuting distances to Baltimore and Washington, DC, high per capita auto ownership, and a limited number of transit options for most commute trips.

Air pollution levels are reported to the general public via the Air Quality Index (AQI), which measures the level of criteria pollutants (air pollutants that contribute to the formation of ozone and particulate matter, including hydrocarbons, carbon monoxide, and oxides of nitrogen, which can have adverse short- and long-term health effects). In the Baltimore-Washington region, the AQI is driven by ground level ozone and particulate matter. The Clean Air Act enables interstate commissions to develop regional strategies for reducing air pollution. Maryland is part of the Northeast Ozone Transport Region, which includes 12 states and the District of Columbia. At the local level, Howard County is a member of the Baltimore Metropolitan Council (BMC) and its Baltimore Regional Transportation Board (BRTB), which coordinate regional transportation planning and work to reduce emissions from transportation. Under the Clean Air Act, the BRTB cannot approve any project, program, or plan that does not conform to Maryland's State Implementation Plan, which guides Maryland's actions to attain and meet air quality standards.

Reducing emissions and air pollutants from the transportation system will take multiple approaches, including the following: 1) reducing direct emissions from vehicles and airplanes; 2) shifting demand and creating ~~to~~ more efficient transportation modes with fewer direct emissions; and 3) reducing VMT. The national, state, and local vehicle fleet is still primarily comprised of gasoline and diesel vehicles; however, electric and hybrid vehicles are becoming more common. In 2022, less than 1% of the US vehicle fleet was electric but sales were increasing rapidly. Meaningful market penetration of electric vehicles will depend on availability of government incentives, alleviating buyers' range anxiety, and facilitating investment in charging infrastructure. The high cost of electric vehicles is often cited as a barrier, as approximately two-thirds of households that own electric or hybrid vehicles have incomes over \$100,000. Therefore any incentives and supporting policies will need to address the County's equity goals. Shifting demand to other modes, such as transit, walking, and biking, is another reliable and equitable method to reduce VMT and emissions. By investing in reliable transit and safe walking and cycling facilities, the County can ensure that community members will have the option to shift their vehicle trips. Additionally, increasing frequency of transit service not only benefits those who depend on it out of necessity, but also improves the attractiveness of transit to those who are able to choose their mode of travel.

Climate change is also forecast to impact the reliability of the transportation system as periods of higher temperatures increase wear on road surfaces; stronger and more sustained rain events increase flooding on roads, bridges, and culverts; and long-term droughts dry out subsurface soils, leading to subsidence. Additionally, reduced capacity, detours, and crashes from flooding impact travel time, reliability, and safety. As articulated in the BMC's Capital Improvement Program study, viewing asset management and county design standards through a resiliency lens will be critical to ensuring the County's transportation system can continue to operate safely and effectively.

The Design Manual requires a noise analysis if the proposed residences are located within a specified number of feet from a roadway or a rail line, or if the location is within an airport noise zone. The Design Manual also requires noise mitigation through the use of buffers, barriers or acoustical insulation, or through building orientation.

### CIM-8 Policy Statement

Actively plan for and evaluate the impact of technology and climate change on the transportation system.

### Implementing Actions

1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.
2. Amend design standards and asset management approaches to ensure resilience.
3. Support Require the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.

### CIM-9 Policy Statement

Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.

### Implementing Actions

1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.
2. Develop a plan ~~to~~ and transition the County's fleet (including school buses and contracted services) to low/ no emission vehicles.
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.
4. Consider targeted financial incentives and the removal of regulatory barriers for property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.

# transportation investment priorities

Howard County's transportation needs and preferences have changed significantly over the last three decades. Travel demands and commuting patterns have settled along major corridors that are now generally built to their ultimate size and configuration.

While automobile travel will continue to dominate travel patterns for the near future, there is growing and demonstrated community interest in improving the safety and efficiency of the transit, bicycle, and pedestrian networks. Many community members continue to express their desires to replace their work, shopping, or other automobile trips with more economic and environmentally-conscious choices. These preferences are starting to be reflected in the County's shift to building a transportation system focused on travel time reliability, safety, and travel choices for all members of the community. Since the adoption of PlanHoward 2030, substantial investments have been made in transit, bicycle, and pedestrian facilities. Eleven percent of capital transportation spending is focused on these three non-automobile categories while operational and capital investments for the transit system are also increasing dramatically. The future mixed-use activity centers envisioned in HoCo By Design complement this shift to greater walking, bicycling, and transit use. Refer to the Quality By Design chapter and Focus Areas appendix for details on how design can facilitate increased use of non-automobile modes.

To continue to support this shift in direction, the County should use the Significant Transportation Investments to Support Growth & Redevelopment Map and Table (Map 4-2 and Table 4-1) to guide county investments in, and support of, transportation projects and activities. The selection of projects is not intended to be exclusive since many county projects are focused on specific operational issues and might not be shown on the map. Further, projects are not listed in priority order (they have not been prioritized). The projects shown were selected based on travel trends and forecasts, PlanHoward 2030 transportation projects, and more recent functional planning projects—including the Regional Transit Plan for Central Maryland, Walk Howard, the Strategic Road Safety Plan, and the Complete Streets Policy.

The map and table will not only guide county priorities but also support the County's partnerships and advocacy for large regional transportation projects and initiatives. These regional efforts could be funded and implemented by the Maryland Department of Transportation in the Consolidated Transportation Program or advanced in the Baltimore Metropolitan Council's Long-Range Transportation Plan, which is critical to ensuring projects are eligible for federal funding.

Howard County's transportation investment priorities should also be informed by the reality of county transportation funding. County spending for transportation is divided between operating costs, such as transit services and routine maintenance costs, and capital costs, such as engineering intersections, resurfacing roads, rehabilitating bridges, installing traffic signals, maintaining bicycle and pedestrian facilities, and replacing transit vehicles. Both operating and capital funding in the County are limited and can change significantly from year to year, which makes it difficult to sustain a steady pipeline of projects to plan, engineer, and construct over time. As a result, many projects identified for implementation in the CIP have been delayed due to funding constraints, and some older projects may not advance the policies and goals in HoCo By Design. The County should reevaluate the purpose and need of these delayed projects to ensure they are consistent with HoCo By Design.

Map 4-3 shows the current road system in Howard County by functional class. These functional classifications, coupled with design guidance in the Howard County Design Manual, are used to determine the right-of-way and road improvements required for both private development projects and county capital projects. The map divides roads into five functional classifications, primarily organized based on vehicle throughput. New roads, as they are built and accepted into the county road system, are assigned a functional classification based on their design. These five classifications are matched to multi-modal street types in the Howard County Design Manual, which details the process to design a road based on its full context to meet the goals of the Complete Streets Policy (see pages 39-40 below).

To further identify transportation investment priorities, the County should develop a countywide transportation plan that:

- Results from a comprehensive process that engages the County's diverse population, including users of all transportation modes.
- Builds upon the Significant Transportation Investments to Support Growth & Redevelopment Map (Map 4-2), functional plans, and corridor master plans.
- Incorporates complete streets typologies.
- Reevaluates the purpose and need of the existing transportation system and proposed transportation projects to ensure consistency with county goals and funding.
- Aligns with the equity in capital planning approach described in HoCo By Design's Supporting Infrastructure chapter, and the emission reduction goals in the County's Climate Action Plan.

## CIM-10 Policy Statement

Advance transportation planning and transportation investments to support an economically and environmentally sustainable transportation system that moves people safely and efficiently throughout the County and supports the land use and equity goals in HoCo By Design, including its emphasis on mixed-use activity centers. [Similarly, advance land use patterns and individual site development that support an economically and environmentally sustainable transportation system.](#)

## Implementing Actions

1. Develop a countywide transportation plan and conduct a focused transportation study for each activity center in the Route 1 Corridor.
2. Continue to use the Functional Road Classification Map to guide the design, capacity, and function of roads as they are built or improved.
3. Implement HoCo By Design's recommendations for transit service through future transit service functional plans or master plans.
4. Continue to implement recommendations from WalkHoward and BikeHoward as methods to advance the broad concepts and recommendations in the General Plan.
5. Ensure the Design Manual is consistent with the General Plan as part of the regular update process for the Design Manual.
6. [Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.](#)

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-1 - Maintain transportation system assets to ensure the viability of the system and safety of users.</b>		
1. Develop and regularly update a risk-based asset inventory and management program for all transportation assets and ensure adequate maintenance funding.	OOT DPW	Mid-Term
2. Closely coordinate system maintenance activities with utilities and private development to minimize future roadway damage.	OOT Private Partners	Ongoing
3. Develop fiscally unconstrained plans for each asset class to communicate the deferred maintenance needs and a pipeline of unfunded projects for consideration.	DPW	Ongoing
4. Consider equity emphasis areas in the prioritization of maintenance needs.	OOT DPW	Ongoing
5. <u>Encourage the proliferation of non-polluting vehicles by upgrading County fleets and requiring appropriate infrastructure.</u>	OOT DPW	Ongoing
<b>CIM-2 - Design and operate an equitable transportation system that prevents and mitigates the most severe types of crashes for motorists, transit riders, bicyclists, and pedestrians.</b>		
1. Prioritize and fund measures outlined in the Strategic Road Safety Plan using a safe system approach to focus education, enforcement, and engineering efforts and investments.	OOT DPW Elected Officials OOB	Mid-Term
2. Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to provide accommodations and <u>improve favor land use and development that improves</u> safety, particularly for pedestrians and bicyclists who are the most	OOT DPZ DPW	Ongoing
3. Execute the priorities of WalkHoward and BikeHoward through dedicated funding in the capital budget and efficient project delivery.	OOT Elected Officials OOB	Ongoing
4. Ensure that all transportation capital projects include review of potential safety improvements during the project scoping process.	OOT DPW	Ongoing

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-3 - Make the transportation system equitable, close mobility gaps, and improve access to jobs, health care, education, and social services.</b>		
1. Continue to monitor system performance, gather input from current riders, and allocate existing resources to maximize ridership and enhance service for current public transit riders.	OOT	Ongoing
2. <u>Ensure investments in the Regional Transportation Agency system balance improving service frequencies and adding new routes to unserved areas with transit-supportive land use. Ensure investments in the Regional Transportation Agency system accomplish increased service frequencies, improved reliability, and additional routes to unserved areas by considering transit-supportive land uses.</u>	OOT	Ongoing
3. <u>Continue to Provide</u> , support and enhance community-based mobility programs and <u>non-governmental organizations that serve for</u> seniors and people with disabilities.	DCRS OOT	Ongoing
4. Explore flexible transit routing, mobility as a service, and other micro-mobility concepts to provide efficient and economic transit service in lower-density areas of the County. <u>Consider subsidies for income-qualified residents to use existing rideshare programs.</u>	OOT	Mid-Term
<b>CIM-4 - Leverage Howard County's position in the Baltimore and Washington regions to advance transportation projects and policies with regional and local impacts, including focusing efforts on governance, accountability, funding policies, and strategies to address unmet transportation service needs.</b>		
1. Continue to engage in regional discussions regarding state and federal investment in regional transit systems to ensure funding and support for Howard County projects, meet the County's goals to enhance and improve access to regional job centers, and maintain the County's position as an attractive location to live and work.	OOT DPW Elected Officials OOB	Ongoing
2. Continue to support the collaborative efforts to improve the Regional Transportation Agency of Central Maryland.	OOT	Ongoing
3. Continue to partner with Montgomery County and the Maryland Department of Transportation to extend the Flash Bus Rapid Transit Service to Howard County.	OOT	Mid-Term
4. Support and partner with Maryland Department of Transportation and other regional organizations to expand service and improve reliability on the Camden Commuter Rail Line.	OOT	Mid-Term
5. Continue to engage and participate in regional and state planning and coordination activities to ensure the needs of freight and goods movements are considered and supported.	OOT	Ongoing

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-5 - Deliver transportation system improvements that support efforts to reduce reliance on automobile trips, improve air quality, and give people cost-effective and sustainable choices on how they get to work, home, school, and play.</b>		
1. Construct and enhance transportation facilities to increase connections across Howard County and support the goals of WalkHoward, BikeHoward, and the Complete Streets Policy, with a focus on the equity goals outlined in the Complete Streets Policy.	OOT DPW	Ongoing
2. Continue to plan and implement projects that enhance transportation connections to regional job centers and high-quality transit.	DPZ OOT	Ongoing
3. <u>Sustain Review</u> and expand efforts to develop and implement Transportation Demand Management programs (such as car share, bikeshare, and shared e-scooter systems; telecommute policies; and vanpools) and expand Park and Ride lots, where appropriate. <u>Improve the reporting process for outcomes and goals.</u>	OOT DPW	Ongoing
4. Continue to plan and coordinate investments with the Howard County Public School System to increase safe routes to schools, enhance access to the local transit system, reduce demand for <u>hazard-based</u> school bus service, and decrease driving to school. <u>Assess walking routes for safety and equity.</u>	OOT DPW HCPSS	Ongoing
5. Partner with the Maryland Department of Transportation to align commuter bus routes and funding priorities with current and expected travel patterns and complementary regional public transit initiatives.	OOT	Ongoing
6. Continue to work with federal, state, and regional partners on preliminary studies for high-quality connections.	OOT	Ongoing
7. <u>Require safe, non-automobile pathways that connect buildings within commercial and office complexes as well as activity centers to support "park once" behavior.</u>	OOT DPW	Ongoing
8. <u>Consider more funding for electric school buses.</u>	HCPSS	Ongoing

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+)
<b>CIM-6 - Focus on improvements to the transportation system that improve travel reliability.</b>		
1. Evaluate the use of Transportation Systems Management and Operations concepts to manage the County's road system.	OOT DPW	Mid-Term
2. Develop real-time traffic monitoring and coordinate transportation and emergency resources to address non-recurring congestion due to weather and crashes on the local and regional transportation system.	OOT OEM DPW	Mid-Term
3. Focus on operations at key intersections while ensuring improved safety for bicycle and pedestrian movements.	DPW OOT	Mid-Term
4. Optimize signal timing and phasing at key intersections in coordination with efforts to improve pedestrian and bicycle movements and safety, and coordinate signals in major commute corridors during peak time periods.	DPW OOT	Mid-Term
5. Increase street connections in key locations that provide more route choices to system users.	OOT DPW	Mid-Term
6. Develop access management approaches through updates to the Zoning Regulations and the Subdivision and Land Development Regulations, design approvals, and coordination with the Maryland Department of Transportation State Highway Administration.	DPZ OOT	Long-Term
<b>CIM-7 - Refine processes and policies to deliver transportation improvements strategically, efficiently, and equitably.</b>		
1. Review existing rules, policies, processes, and procurement procedures to identify opportunities to accelerate the planning, design, permitting, or construction of new and equitable transportation projects, including the recommendations from the Capital Improvement Program study.	OOT DPW	Mid-Term
2. Identify opportunities to minimize the time needed to acquire right-of-way for planning road, sidewalk, or bicycle projects while respecting the rights of private property owners. Alternatively, reevaluate the scope of projects earlier in the planning process if it is determined that there is strong opposition to land acquisition.	OOT DPW Private Property Owners	Ongoing
3. Implement contracting methods that shorten construction activities for a project, including, but not limited to, design-build provisions for small projects like sidewalks or intersection improvements, contracts that share risk with contractors and support flexible project phasing for larger projects, and incentives for early project completion.	DPW OOT OOP	Long-term

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-8 - Actively plan for and evaluate the impact of technology and climate change on the transportation system.</b>		
1. Evaluate and update parking and land development requirements to reflect greater use of mobility and delivery as service models.	DPZ OOT	Mid-Term
2. Amend design standards and asset management approaches to ensure resilience.	DPW OOT DPZ	Mid-Term
3. <del>Support</del> <b>Require</b> the installation of electric vehicle (EV) charging stations in private and public space, with particular attention to shared parking lots to ensure they are EV ready by including connections and infrastructure.	DPW OCS OOT Private Partners	Ongoing
4. Evaluate and address the potential impact of electric vehicle charging stations on electric power requirements.	DPW OOT OCS	Long-Term
5. Participate in regional and state coordination efforts to ensure federal and state regulations on connected and autonomous vehicles account for vulnerable road users such as pedestrians and cyclists.	OOT	Ongoing
<b>CIM-9 – Support efforts to improve air quality with an emphasis on communities and populations most threatened by high levels of pollution.</b>		
1. Develop land use and environmental policy strategies that reduce the impact of diesel particulate matter in communities adjacent to industrial areas.	OCS OOT	Long-Term
2. Develop a plan <del>to and</del> transition the County's fleet (including school buses and contracted services) to low/no emission vehicles.	OOT OCS/HCPSS	Mid-Term
3. Continue to invest in increasing public transit frequency and walking and cycling infrastructure to support both a more equitable transportation system and shifts away from automobiles to non-automobile modes.	OOT	Ongoing
4. Consider targeted financial incentives to property owners and companies that deploy electric vehicle charging infrastructure, idle reduction technology, and other technologies that capture or mitigate diesel emissions at the source.	OOT OCS Private Property Owners	Mid-Term
5. Consider a subsidy program to support low emission vehicles, bicycles, and scooters in traditionally underserved communities.	OOT	Long-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>CIM-10 – Advance transportation planning and transportation investments to support an economically and environmentally sustainable transportation system that moves people safely and efficiently throughout the County and supports the land use and equity goals in HoCo By Design, including its emphasis on mixed-use activity centers. Similarly, advance land use patterns and individual site development that support an economically and environmentally sustainable transportation system.</b>		
1. Develop a countywide transportation plan and conduct a focused transportation study for each activity center in the Route 1 Corridor.	OOT DPW	Mid-Term
2. Continue to use the Functional Road Classification Map to guide the design, capacity, and function of roads as they are built or improved.	DPW OOT DPZ	Ongoing
3. Implement HoCo By Design’s recommendations for transit service through future transit service functional plans or master plans.	OOT DPZ	Long-Term
4. Continue to implement recommendations from WalkHoward and BikeHoward as methods to advance the broad concepts and recommendations in the General Plan.	OOT	Ongoing
5. Ensure the Design Manual is consistent with the General Plan as part of the regular update process for the Design Manual.	OOT	Long-Term
6. <u>Advance the Complete Streets Policy by updating the Subdivision and Land Development Regulations to favor land use patterns and individual site development that supports an economically and environmentally sustainable transportation system.</u>	OOT	Long-Term
<b>EP-1 – Retain and expand the use of industrial land to support employment opportunities that pay a living wage.</b>		
1. As part of the Zoning Regulations update, consider protective measures to ensure an adequate long-term supply of industrial land, such as additional requirements or impact statements for rezoning industrial land, zoning that discourages incompatible uses in heavy industrial areas, heavy buffer requirements for non-industrial users locating near heavy industrial land, or industrial overlay zoning for prime industrial land.	DPZ	Mid-Term
2. Determine how compatible uses can co-locate in designated Industrial Mixed-Use character areas to support industrial operations and create an active sense of place.	DPZ	Long-Term
3. Prioritize for retention industrial land that is uniquely accessible to regional highways for continued industrial use.	DPZ	Mid-Term
4. During the Zoning Regulations update or via Zoning Amendments, favorably consider context-sensitive industrial uses along the Interstate 70 corridor.	DPZ	Mid-Term
<b>EP-2 – Ensure redevelopment is consistent with the character of industrial areas.</b>		
1. Update the Route 1 Design Manual to include Industrial Mixed-Use character areas and incorporate buffers between redevelopment areas and industrial areas.	DPZ	Long-Term

**Amendment 103 to Council Bill No. 28 -2023**

**BY: Liz Walsh**

**Legislative Day 12  
Date: 10/11/2023**

**Amendment No. 103**

*(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11:*

- Chapter 3: Ecological Health*
- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend **residential** fossil fuel infrastructure;*
  - *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure;*
  - *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties;*
- Chapter 11: Implementation*
- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend **residential** fossil fuel infrastructure;*
  - *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure;*
  - *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties.)*

**I certify this is a true copy of**

Am 103 CB28-2023

**passed on** 10/11/2023

Michelle Howard  
**Council Administrator**



1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

3 • Chapter 3: Ecological Health: 15, 24, and 57;

4 • Chapter 11: Implementation: 16, 18, and 22.

5 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
6 amendment.

7



## EH-2 Policy Statement

Seek to integrate Integrate climate change mitigation and adaptation goals into all county programs and policies receiving county funds, including the Howard County Public School System.

## Implementing Actions

1. Ensure- Accelerate implementation of the Howard County Climate Action Plan update-continues-to-maximize opportunities to mitigate and adapt to climate change with clear goals and strategies and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies.
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.  
6. Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.  
7. Refuse permitting to expand or extend residential fossil fuel infrastructure on county land.

# Protecting Sensitive Environmental Resources

The County Subdivision and Land Development Regulations and Zoning Regulations contain significant provisions for the protection of sensitive environmental resources when properties are developed. This section discusses regulatory protections for water resources, steep slopes, and rare, threatened and endangered species, as well as three zoning districts specifically designed to protect sensitive resources. Additional protective measures for forests and stormwater management requirements are addressed in later, separate sections.

## Water Resources and Steep Slopes

Water resources include rivers, wetlands, floodplains, ponds, lakes, and groundwater. These are vital natural resources that provide drinking water, stormwater management, pollution abatement, floodwater storage, and recreation, as well as important habitat for a wide variety of plant and animal species.

To protect water quality and habitat within streams, the County Subdivision and Land Development Regulations require the following undisturbed streamside buffer areas:

- 75 to 100 feet along perennial streams in residential zoning districts;
- 50 feet along perennial streams in non-residential zoning districts; and
- 50 feet along intermittent streams in all zoning districts.

The regulations also require a 25-foot undisturbed buffer around nontidal wetlands. Additionally, most wetlands in the County are found within the 100-year floodplain, which is protected from disturbance.

County regulations also protect steep slopes of 25% or greater when there is a contiguous area of 20,000 square feet or larger. Disturbing steep slopes can generate excessive erosion and sedimentation that can be difficult to contain even with enhanced sediment and erosion control practices, and once disturbed steep slopes can be difficult to stabilize. This can be especially problematic when these slopes are adjacent to water bodies. When slopes of 15% or greater occur in conjunction with highly erodible soils, these erosion problems are intensified.

To provide the greatest benefit, stream and wetland buffers should be wide enough to allow adequate filtering of overland stormwater runoff, include adjacent steep slopes and highly erodible soils, and be forested. The use of a floodplain buffer can improve resilience to flooding by accounting for future changes in the floodplain due to changing weather patterns (increased rainfall), increased development, or outdated mapping.

County regulations require sediment and erosion control practices comply with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control when development or forestry activities will result in clearing and grading. These practices prevent sediment and other pollutants from leaving a disturbed site and entering nearby water bodies during storm events. The requirements for sediment and erosion control should be reviewed to ensure they are adequate for changing precipitation patterns, especially short-duration, high-intensity storms.

In 2022 the County initiated a Vulnerable Watershed Restoration and Resiliency Program to evaluate whether other watersheds are or will become susceptible to flooding and develop potential capital projects to address the problem areas. For more information about state and county efforts to address flooding, please see Technical Appendix A: Environment.

## Redevelopment

The County's stormwater management regulations also have requirements for redeveloping sites. Redevelopment sites must reduce impervious cover by 50% or provide an equivalent water quality treatment for the first one inch of rainfall using ESD techniques. However, there are no quantity management requirements. The recent update to stormwater management requirements in the Plumtree Branch and Tiber Branch watersheds also added quantity management requirements for redevelopment in those watersheds.

Requiring stormwater management for redevelopment sites offers a significant opportunity to improve water quality and quantity controls for stormwater runoff in areas that were developed prior to current stormwater management regulations. The County should ensure redevelopment is designed and implemented to reduce stormwater runoff and pollutant loadings to the maximum extent practicable. The County should also consider creating incentives for new development and redevelopment to provide on-site or off-site stormwater management that exceeds minimum regulatory requirements.

## Stormwater Management Facilities

Stormwater management systems must be regularly inspected and maintained and, as they age, deteriorated systems must be upgraded or replaced. The County is required by both state and local legislation to conduct inspections of stormwater management facilities every three years. There are approximately 11,000 stormwater management facilities in the County, and approximately 1,634 of these are public facilities maintained by the County.

In general, the County shares maintenance responsibilities with homeowners associations for residential facilities located on open space lots, while non-residential facilities are privately maintained. With increased use of ESD, small treatment facilities have and will continue to become more prevalent. These types of facilities can include downspout infiltration areas or drywells, and bioretention facilities or rain gardens that can be located on private residential lots. The ability to inspect and maintain these facilities over time is an area of concern. Developments with ESD have multiple facilities, which require increasing county resources for inspections. Routine maintenance of ESD facilities located on individual residential lots becomes the responsibility of the individual homeowner, resulting in property owner education and maintenance enforcement issues. Funding for County inspection and maintenance of stormwater management facilities is through the Watershed Protection and Restoration Fund, which is discussed later in this chapter under Managing Natural Resources by Watershed. The County should evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.



### EH-5 Policy Statement

Evaluate and improve stormwater management requirements to enhance climate change resilience.

### Implementing Actions

1. ~~Conduct a~~ **Accelerate completion of the** flooding vulnerability assessment to determine which watersheds are susceptible to chronic flooding under current and expected future precipitation patterns, **and revise capital project priorities and investments accordingly.**
2. Update stormwater management design standards to address current and expected future precipitation patterns. Consider adding quantity management requirements, including management for short-duration, high-intensity storms in vulnerable watersheds.
3. Evaluate opportunities to further reduce stormwater runoff and pollutant loadings when redevelopment occurs.
4. ~~Continue to use~~ **Accelerate use of** a nature-based or green stormwater infrastructure approach (bioretention, swales) in combination with a built or gray infrastructure approach (pipes, ponds) to address flood mitigation and adaptation, to maximize ecological benefits.
5. Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.

## Bee City USA

In 2019, the County Executive signed an Executive Order designating Howard County as a Bee City USA, committing the County to support and encourage healthy pollinator habitat creation and enhancement. This Executive Order notes that bees and other pollinators are responsible for reproduction in almost 90% of the world's flowering plants, including fruits and vegetables, but they have experienced population declines in the United States due to habitat loss, poor nutrition, pesticides, parasites, diseases, and climate change. Under this Executive Order, the County agreed to work with the Howard County Conservancy to enhance understanding among county staff and the public about the vital role that pollinators play and what each person can do to sustain them. Identified techniques include developing and implementing a program to create or enhance pollinator-friendly habitat on public and private land, and adopting an integrated pest management plan designed to prevent pest problems, reduce pesticide use, and expand the use of non-chemical pest management methods.

### EH-11 Policy Statement

Encourage individual environmental stewardship in daily activities on private and public property.

### Implementing Actions

1. The County ~~should continue to shall~~ provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.

### EH-12 Policy Statement

Commit to and support the County's designation as a Bee City USA.

### Implementing Actions

1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.

## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County—one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

### EH-13 Policy Statement

Continue to balance the potential for mineral resource extraction with other land uses.

### Implementing Actions

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>GCF-1 - Provide limited and predictable Planned Service Area expansions.</b>		
1. Planned Service Area expansions should include a development proposal that is consistent with the General Plan.	DPZ	Ongoing
2. Any Planned Service Area expansion shall establish a transition that is compatible with and enhances surrounding communities, and provides an environmental benefit.	DPZ	Ongoing
3. Any Planned Service Area expansion shall meet the criteria above.	DPZ	Ongoing
<b>EH-1 - Continue to support the County's ecological health.</b>		
1. Integrate the goals of protecting and restoring the County's ecological health when updating county programs and policies.	OCS DPZ DPW DRP HCHD	Mid-Term
2. Ensure adequate funding for programs and measures to protect and restore the County's ecological health.	OCS DRP DPW HSCD Elected	Ongoing
3. Create a dedicated funding source, as was done for the Agricultural Land Preservation Program, for environmental programs.	DPZ OCS Elected Officials OOB	Mid-Term
4. Establish a natural resource protection goal for the County and each major watershed to help protect biodiversity and mitigate climate change.	OCS DPZ	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-2 - Seek to integrate climate change mitigation and adaptation goals into all county programs and policies receiving county funds, including the Howard County Public School System.</b>		
1. <del>Ensure</del> Accelerate implementation of the Howard County Climate Action Plan <del>update continues to maximize opportunities</del> to mitigate and adapt to climate change with clear goals and strategies <u>and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies</u>	OCS	Mid-Term
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.	DPZ OCS	Ongoing
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.	DPW DILP OCS DPZ Private Partners	Ongoing
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.	DILP DPW DPZ OCS Private Partners	Mid-Term
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.	DCRS OEM OHRE OCS DPW HCHD HCEDA	Ongoing
6. Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.	DILP DPW DPZ OCS	Ongoing
7. Refuse permitting to expand or extend residential fossil fuel infrastructure on county land.	DILP DPW DPZ OCS	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-3 - Ensure the Subdivision and Land Development Regulations and Zoning Regulations provide adequate protection for sensitive environmental resources within new development and redevelopment.</b>		
1. Evaluate and enhance protections, including sediment and erosion control, where needed for sensitive environmental resources, such as water resources, steep slopes, and rare, threatened, and endangered species, in the Subdivision and Land Development Regulations.	DPZ HSCD	Mid-Term
2. Explore whether cluster development may also be appropriate in other residential zoning districts during the zoning regulation update process.	DPZ	Mid-Term
<b>EH-4 - Incentivize additional resource protection and restoration measures within new development and redevelopment.</b>		
1. Consider increased use of a density exchange overlay district, in both the West and the East, to protect sensitive resources in areas with unique conditions or resources.	DPZ	Mid-Term
2. Consider incentives to encourage environmental protection and restoration when properties are developed or redeveloped, such as tax credits, density bonuses, housing allocations, and public-private partnerships.	DPZ HCEDA Private Partners	Mid-Term
3. Evaluate and strengthen the Green Neighborhood Program to ensure adequate incentives will increase program use and incorporate new options, such as increased moderate income housing units.	DPZ DILP OCS	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-5 - Evaluate and improve stormwater management requirements to enhance climate change resilience.</b>		
1. <del>Conduct a</del> <b>Accelerate completion of the</b> flooding vulnerability assessment to determine which watersheds are susceptible to chronic flooding under current and expected future precipitation patterns, <b>and revise capital project priorities and investments accordingly.</b>	DPW	Ongoing
2. Update stormwater management design standards to address current and expected future precipitation patterns. Consider adding quantity management requirements, including management for short-duration, high-intensity storms in vulnerable watersheds.	DPZ DPW OCS	Mid-Term
3. Evaluate opportunities to further reduce stormwater runoff and pollutant loadings when redevelopment occurs.	DPZ DPW OCS	Mid-Term
4. <del>Continue to use</del> <b>Accelerate use of</b> a nature-based or green stormwater infrastructure approach (bioretention, swales) in combination with a built or gray infrastructure approach (pipes, ponds) to address flood mitigation and adaptation, to maximize ecological benefits.	DPW DPZ OCS Private Partners	Ongoing
5. Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.	DPW Private Partners	Mid-Term
-		

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-8 - Expand implementation of the Green Infrastructure Network Plan.</b>		
1. Integrate the Green Infrastructure Network Plan implementation actions into the relevant county plans and programs.	DPZ DRP OCS DPW	Ongoing
2. Consider use of an overlay zoning district or other regulatory measures to target resource protection measures for the Green Infrastructure Network.	DPZ	Mid-Term
3. Establish an easement or land purchase program to protect uncommitted parcels within the Green Infrastructure Network.	DPZ OCS	Mid-Term
4. Amend county design standards for roads, bridges, and culverts to facilitate safe passage for wildlife at county road crossings within the Green Infrastructure Network.	DPZ OCS DPW OOT	Mid-Term
5. Conduct studies of existing resource conditions and wildlife use within the network to enhance management of the Green Infrastructure Network.	DPZ OCS	Long-Term
6. Consider expansion of the Green Infrastructure Network to include smaller habitat areas that provide 'stepping stones' to the primary network.	DPZ OCS	Mid-Term
<b>EH-9 - Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.</b>		
1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.	DPZ OCS	Ongoing
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.	DPZ	Ongoing
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.	DPZ OCS	Ongoing
<b>EH-10 - Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.</b>		
1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.	DPZ OCS	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-11 - Encourage individual environmental stewardship in daily activities on private and public property.</b>		
1. The County <del>should continue to</del> shall continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.	DPW DRP DPZ	Ongoing
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.	OCS DRP HSCD Private Property Owners	Ongoing
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.	HCPSS HSCD	Ongoing
<b>EH-12 - Commit to and support the County's designation as a Bee City USA.</b>		
1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.	OCS DRP DPW DPZ	Mid-Term
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.	OCS DRP	Ongoing
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.	OCS DRP Private Partners	Mid-Term
<b>EH-13 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing

**Amendment 1 to Amendment 103 to Council Bill No. 28 -2023**

**BY: Liz Walsh**

**Legislative Day 12**

**Date: 10/11/2023**

**Amendment No. 1**

*(This Amendment to Amendment 103 amends the EH-2 Policy Statement 7<sup>th</sup> Implementing Action to apply to residential fossil fuel infrastructure.)*

- 1 Substitute page 1 of Amendment 103 with the attachment to this Amendment to Amendment.
- 2
- 3 Substitute the pages EH-15 and IMP-16 attached to Amendment 103 with the pages EH-15 and
- 4 IMP-16 attached to this Amendment to Amendment.
- 5

**I certify this is a true copy of**

Am 1 A 103 CB-2023

**passed on** 10/11/2023

Michael J. D'Agostino  
**Council Administrator**



Amendment 1 to Amendment 103 to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 12

Date: 10/11/2023

Amendment No. 103

*(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11:*

- Chapter 3: Ecological Health*
- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend **residential** fossil fuel infrastructure;*
  - *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure;*
  - *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties;*
- Chapter 11: Implementation*
- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend **residential** fossil fuel infrastructure;*
  - *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure;*
  - *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties.)*



## EH-2 Policy Statement

Seek to integrate Integrate climate change mitigation and adaptation goals into all county programs and policies receiving county funds, including the Howard County Public School System.

## Implementing Actions

1. Ensure Accelerate implementation of the Howard County Climate Action Plan update continues to maximize opportunities to mitigate and adapt to climate change with clear goals and strategies and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies.
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.
6. Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.
7. Refuse permitting to expand or extend residential fossil fuel infrastructure on county land.

# Protecting Sensitive Environmental Resources

The County Subdivision and Land Development Regulations and Zoning Regulations contain significant provisions for the protection of sensitive environmental resources when properties are developed. This section discusses regulatory protections for water resources, steep slopes, and rare, threatened and endangered species, as well as three zoning districts specifically designed to protect sensitive resources. Additional protective measures for forests and stormwater management requirements are addressed in later, separate sections.

## Water Resources and Steep Slopes

Water resources include rivers, wetlands, floodplains, ponds, lakes, and groundwater. These are vital natural resources that provide drinking water, stormwater management, pollution abatement, floodwater storage, and recreation, as well as important habitat for a wide variety of plant and animal species.

To protect water quality and habitat within streams, the County Subdivision and Land Development Regulations require the following undisturbed streamside buffer areas:

- 75 to 100 feet along perennial streams in residential zoning districts;
- 50 feet along perennial streams in non-residential zoning districts; and
- 50 feet along intermittent streams in all zoning districts.

The regulations also require a 25-foot undisturbed buffer around nontidal wetlands. Additionally, most wetlands in the County are found within the 100-year floodplain, which is protected from disturbance.

County regulations also protect steep slopes of 25% or greater when there is a contiguous area of 20,000 square feet or larger. Disturbing steep slopes can generate excessive erosion and sedimentation that can be difficult to contain even with enhanced sediment and erosion control practices, and once disturbed steep slopes can be difficult to stabilize. This can be especially problematic when these slopes are adjacent to water bodies. When slopes of 15% or greater occur in conjunction with highly erodible soils, these erosion problems are intensified.

To provide the greatest benefit, stream and wetland buffers should be wide enough to allow adequate filtering of overland stormwater runoff, include adjacent steep slopes and highly erodible soils, and be forested. The use of a floodplain buffer can improve resilience to flooding by accounting for future changes in the floodplain due to changing weather patterns (increased rainfall), increased development, or outdated mapping.

County regulations require sediment and erosion control practices comply with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control when development or forestry activities will result in clearing and grading. These practices prevent sediment and other pollutants from leaving a disturbed site and entering nearby water bodies during storm events. The requirements for sediment and erosion control should be reviewed to ensure they are adequate for changing precipitation patterns, especially short-duration, high-intensity storms.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>GCF-1 - Provide limited and predictable Planned Service Area expansions.</b>		
1. Planned Service Area expansions should include a development proposal that is consistent with the General Plan.	DPZ	Ongoing
2. Any Planned Service Area expansion shall establish a transition that is compatible with and enhances surrounding communities, and provides an environmental benefit.	DPZ	Ongoing
3. Any Planned Service Area expansion shall meet the criteria above.	DPZ	Ongoing
<b>EH-1 - Continue to support the County's ecological health.</b>		
1. Integrate the goals of protecting and restoring the County's ecological health when updating county programs and policies.	OCS DPZ DPW DRP HCHD	Mid-Term
2. Ensure adequate funding for programs and measures to protect and restore the County's ecological health.	OCS DRP DPW HSCD Elected	Ongoing
3. Create a dedicated funding source, as was done for the Agricultural Land Preservation Program, for environmental programs.	DPZ OCS Elected Officials OOB	Mid-Term
4. Establish a natural resource protection goal for the County and each major watershed to help protect biodiversity and mitigate climate change.	OCS DPZ	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-2 - Seek to integrate <u>integrate climate change mitigation and adaptation goals into all county programs and policies receiving county funds, including the Howard County Public School System.</u></b>		
1. <u>Ensure- Accelerate implementation of</u> the Howard County Climate Action Plan <u>update continues to maximize opportunities</u> to mitigate and adapt to climate change with clear goals and strategies <u>and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies</u>	OCS	Mid-Term
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.	DPZ OCS	Ongoing
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.	DPW DILP OCS DPZ Private Partners	Ongoing
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.	DILP DPW DPZ OCS Private Partners	Mid-Term
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.	DCRS OEM OHRE OCS DPW HCHD HCEDA	Ongoing
6. <u>Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.</u>	DILP DPW DPZ OCS	Ongoing
7. <u>Refuse permitting to expand or extend residential fossil fuel infrastructure on county land.</u>	DILP DPW DPZ OCS	Ongoing

Amendment 103 to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 11  
Date: 10/02/2023

Amendment No. 103

*(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11:*

*Chapter 3: Ecological  
Health*

- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend fossil fuel infrastructure;*
- *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure;*
- *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties;*

*Chapter 11:  
Implementation*

- *Amends the EH-2 Policy Statement to integrate climate change mitigation goals into programs receiving County funds and amends the Implementing Actions to accelerate implementation of the Howard County Climate Action Plan and ensure County agency policies align with the plan, accelerate inclusion of on-site renewable power generation at appropriate locations, and refuse permitting to expand or extend fossil fuel infrastructure;*
- *Amends the EH-5 Policy Statement Implementing Actions to accelerate completion of the flooding vulnerability assessment and revise capital project priorities accordingly and accelerate the use of green stormwater infrastructure; and*
- *Amends the EH-11 Policy Statement Implementing Actions to require the County to incorporate environmentally sensitive site development and property management practices on County properties.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

3 • Chapter 3: Ecological Health: 15, 24, and 57;

4 • Chapter 11: Implementation: 16, 18, and 22.

5 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
6 amendment.

7



## EH-2 Policy Statement

Seek to ~~integrate~~ integrate climate change mitigation and adaptation goals into all **county** programs and policies receiving county funds, including the Howard County Public School System.

## Implementing Actions

1. ~~Ensure~~ Accelerate implementation of the Howard County Climate Action Plan ~~update continues to maximize opportunities~~ to mitigate and adapt to climate change with clear goals and strategies and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies.
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.
6. Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.
7. Refuse permitting to expand or extend fossil fuel infrastructure on county land.

# Protecting Sensitive Environmental Resources

The County Subdivision and Land Development Regulations and Zoning Regulations contain significant provisions for the protection of sensitive environmental resources when properties are developed. This section discusses regulatory protections for water resources, steep slopes, and rare, threatened and endangered species, as well as three zoning districts specifically designed to protect sensitive resources. Additional protective measures for forests and stormwater management requirements are addressed in later, separate sections.

## Water Resources and Steep Slopes

Water resources include rivers, wetlands, floodplains, ponds, lakes, and groundwater. These are vital natural resources that provide drinking water, stormwater management, pollution abatement, floodwater storage, and recreation, as well as important habitat for a wide variety of plant and animal species.

To protect water quality and habitat within streams, the County Subdivision and Land Development Regulations require the following undisturbed streamside buffer areas:

- 75 to 100 feet along perennial streams in residential zoning districts;
- 50 feet along perennial streams in non-residential zoning districts; and
- 50 feet along intermittent streams in all zoning districts.

The regulations also require a 25-foot undisturbed buffer around nontidal wetlands. Additionally, most wetlands in the County are found within the 100-year floodplain, which is protected from disturbance.

County regulations also protect steep slopes of 25% or greater when there is a contiguous area of 20,000 square feet or larger. Disturbing steep slopes can generate excessive erosion and sedimentation that can be difficult to contain even with enhanced sediment and erosion control practices, and once disturbed steep slopes can be difficult to stabilize. This can be especially problematic when these slopes are adjacent to water bodies. When slopes of 15% or greater occur in conjunction with highly erodible soils, these erosion problems are intensified.

To provide the greatest benefit, stream and wetland buffers should be wide enough to allow adequate filtering of overland stormwater runoff, include adjacent steep slopes and highly erodible soils, and be forested. The use of a floodplain buffer can improve resilience to flooding by accounting for future changes in the floodplain due to changing weather patterns (increased rainfall), increased development, or outdated mapping.

County regulations require sediment and erosion control practices comply with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control when development or forestry activities will result in clearing and grading. These practices prevent sediment and other pollutants from leaving a disturbed site and entering nearby water bodies during storm events. The requirements for sediment and erosion control should be reviewed to ensure they are adequate for changing precipitation patterns, especially short-duration, high-intensity storms.

In 2022 the County initiated a Vulnerable Watershed Restoration and Resiliency Program to evaluate whether other watersheds are or will become susceptible to flooding and develop potential capital projects to address the problem areas. For more information about state and county efforts to address flooding, please see Technical Appendix A: Environment.

## Redevelopment

The County's stormwater management regulations also have requirements for redeveloping sites. Redevelopment sites must reduce impervious cover by 50% or provide an equivalent water quality treatment for the first one inch of rainfall using ESD techniques. However, there are no quantity management requirements. The recent update to stormwater management requirements in the Plumtree Branch and Tiber Branch watersheds also added quantity management requirements for redevelopment in those watersheds.

Requiring stormwater management for redevelopment sites offers a significant opportunity to improve water quality and quantity controls for stormwater runoff in areas that were developed prior to current stormwater management regulations. The County should ensure redevelopment is designed and implemented to reduce stormwater runoff and pollutant loadings to the maximum extent practicable. The County should also consider creating incentives for new development and redevelopment to provide on-site or off-site stormwater management that exceeds minimum regulatory requirements.

## Stormwater Management Facilities

Stormwater management systems must be regularly inspected and maintained and, as they age, deteriorated systems must be upgraded or replaced. The County is required by both state and local legislation to conduct inspections of stormwater management facilities every three years. There are approximately 11,000 stormwater management facilities in the County, and approximately 1,634 of these are public facilities maintained by the County.

In general, the County shares maintenance responsibilities with homeowners associations for residential facilities located on open space lots, while non-residential facilities are privately maintained. With increased use of ESD, small treatment facilities have and will continue to become more prevalent. These types of facilities can include downspout infiltration areas or drywells, and bioretention facilities or rain gardens that can be located on private residential lots. The ability to inspect and maintain these facilities over time is an area of concern. Developments with ESD have multiple facilities, which require increasing county resources for inspections. Routine maintenance of ESD facilities located on individual residential lots becomes the responsibility of the individual homeowner, resulting in property owner education and maintenance enforcement issues. Funding for County inspection and maintenance of stormwater management facilities is through the Watershed Protection and Restoration Fund, which is discussed later in this chapter under Managing Natural Resources by Watershed. The County should evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.



### EH-5 Policy Statement

Evaluate and improve stormwater management requirements to enhance climate change resilience.

### Implementing Actions

1. ~~Conduct a~~ **Accelerate completion of the** flooding vulnerability assessment to determine which watersheds are susceptible to chronic flooding under current and expected future precipitation patterns, **and revise capital project priorities and investments accordingly.**
2. Update stormwater management design standards to address current and expected future precipitation patterns. Consider adding quantity management requirements, including management for short-duration, high-intensity storms in vulnerable watersheds.
3. Evaluate opportunities to further reduce stormwater runoff and pollutant loadings when redevelopment occurs.
4. ~~Continue to use~~ **Accelerate use of** a nature-based or green stormwater infrastructure approach (bioretention, swales) in combination with a built or gray infrastructure approach (pipes, ponds) to address flood mitigation and adaptation, to maximize ecological benefits.
5. Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.

## Bee City USA

In 2019, the County Executive signed an Executive Order designating Howard County as a Bee City USA, committing the County to support and encourage healthy pollinator habitat creation and enhancement. This Executive Order notes that bees and other pollinators are responsible for reproduction in almost 90% of the world's flowering plants, including fruits and vegetables, but they have experienced population declines in the United States due to habitat loss, poor nutrition, pesticides, parasites, diseases, and climate change. Under this Executive Order, the County agreed to work with the Howard County Conservancy to enhance understanding among county staff and the public about the vital role that pollinators play and what each person can do to sustain them. Identified techniques include developing and implementing a program to create or enhance pollinator-friendly habitat on public and private land, and adopting an integrated pest management plan designed to prevent pest problems, reduce pesticide use, and expand the use of non-chemical pest management methods.

### EH-11 Policy Statement

Encourage individual environmental stewardship in daily activities on private and public property.

### Implementing Actions

1. The County ~~should continue to~~ shall provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.

### EH-12 Policy Statement

Commit to and support the County's designation as a Bee City USA.

### Implementing Actions

1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.

## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County—one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

### EH-13 Policy Statement

Continue to balance the potential for mineral resource extraction with other land uses.

### Implementing Actions

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.



Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>GCF-1 - Provide limited and predictable Planned Service Area expansions.</b>		
1. Planned Service Area expansions should include a development proposal that is consistent with the General Plan.	DPZ	Ongoing
2. Any Planned Service Area expansion shall establish a transition that is compatible with and enhances surrounding communities, and provides an environmental benefit.	DPZ	Ongoing
3. Any Planned Service Area expansion shall meet the criteria above.	DPZ	Ongoing
<b>EH-1 - Continue to support the County's ecological health.</b>		
1. Integrate the goals of protecting and restoring the County's ecological health when updating county programs and policies.	OCS	Mid-Term
	DPZ	
	DPW	
	DRP HCHD	
2. Ensure adequate funding for programs and measures to protect and restore the County's ecological health.	OCS DRP DPW HSCD Elected	Ongoing
3. Create a dedicated funding source, as was done for the Agricultural Land Preservation Program, for environmental programs.	DPZ OCS Elected Officials OOB	Mid-Term
4. Establish a natural resource protection goal for the County and each major watershed to help protect biodiversity and mitigate climate change.	OCS DPZ	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-2 - Seek to integrate climate change mitigation and adaptation goals into all county programs and policies receiving county funds, including the Howard County Public School System.</b>		
1. <u>Ensure</u> Accelerate implementation of the Howard County Climate Action Plan <u>update continues to maximize opportunities</u> to mitigate and adapt to climate change with clear goals and strategies <u>and ensure that the programs and policies of each department and agency are aligned with the plan's goals and strategies</u>	OCS	Mid-Term
2. Evaluate and enhance opportunities where needed for climate change mitigation and adaptation measures in the Subdivision and Land Development Regulations and Zoning Regulations, such as natural resource protection and the provision of renewable energy.	DPZ OCS	Ongoing
3. Enhance county design requirements for county infrastructure and public and private buildings, to ensure these structures will be resilient under projected future weather patterns and minimize resource consumption.	DPW DILP OCS DPZ Private Partners	Ongoing
4. Review and update county Green Building requirements for opportunities to enhance the sustainability of public and private buildings.	DILP DPW DPZ OCS Private Partners	Mid-Term
5. Identify and ensure economically-vulnerable communities, businesses, and households have the resources necessary for mitigation and adaptation measures.	DCRS OEM OHRE OCS DPW HCHD HCEDA	Ongoing
6. <u>Accelerate inclusion of on-site renewable power generation on appropriate existing and new rooftops, canopies and covers.</u>	DILP DPW DPZ OCS	Ongoing
7. <u>Refuse permitting to expand or extend fossil fuel infrastructure on county land.</u>	DILP DPW DPZ OCS	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-3 - Ensure the Subdivision and Land Development Regulations and Zoning Regulations provide adequate protection for sensitive environmental resources within new development and redevelopment.</b>		
1. Evaluate and enhance protections, including sediment and erosion control, where needed for sensitive environmental resources, such as water resources, steep slopes, and rare, threatened, and endangered species, in the Subdivision and Land Development Regulations.	DPZ HSCD	Mid-Term
2. Explore whether cluster development may also be appropriate in other residential zoning districts during the zoning regulation update process.	DPZ	Mid-Term
<b>EH-4 - Incentivize additional resource protection and restoration measures within new development and redevelopment.</b>		
1. Consider increased use of a density exchange overlay district, in both the West and the East, to protect sensitive resources in areas with unique conditions or resources.	DPZ	Mid-Term
2. Consider incentives to encourage environmental protection and restoration when properties are developed or redeveloped, such as tax credits, density bonuses, housing allocations, and public-private partnerships.	DPZ HCEDA Private Partners	Mid-Term
3. Evaluate and strengthen the Green Neighborhood Program to ensure adequate incentives will increase program use and incorporate new options, such as increased moderate income housing units.	DPZ DILP OCS	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-5 - Evaluate and improve stormwater management requirements to enhance climate change resilience.</b>		
1. <del>Conduct</del> Accelerate completion of the flooding vulnerability assessment to determine which watersheds are susceptible to chronic flooding under current and expected future precipitation patterns, and revise capital project priorities and investments accordingly.	DPW	Ongoing
2. Update stormwater management design standards to address current and expected future precipitation patterns. Consider adding quantity management requirements, including management for short-duration, high-intensity storms in vulnerable watersheds.	DPZ DPW OCS	Mid-Term
3. Evaluate opportunities to further reduce stormwater runoff and pollutant loadings when redevelopment occurs.	DPZ DPW OCS	Mid-Term
4. <del>Continue to use</del> Accelerate use of a nature-based or green stormwater infrastructure approach (bioretention, swales) in combination with a built or gray infrastructure approach (pipes, ponds) to address flood mitigation and adaptation, to maximize ecological benefits.	DPW DPZ OCS Private Partners	Ongoing
5. Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance of stormwater management facilities, particularly those facilities located on private residential lots.	DPW Private Partners	Mid-Term
-		

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-8 - Expand implementation of the Green Infrastructure Network Plan.</b>		
1. Integrate the Green Infrastructure Network Plan implementation actions into the relevant county plans and programs.	DPZ DRP OCS DPW	Ongoing
2. Consider use of an overlay zoning district or other regulatory measures to target resource protection measures for the Green Infrastructure Network.	DPZ	Mid-Term
3. Establish an easement or land purchase program to protect uncommitted parcels within the Green Infrastructure Network.	DPZ OCS	Mid-Term
4. Amend county design standards for roads, bridges, and culverts to facilitate safe passage for wildlife at county road crossings within the Green Infrastructure Network.	DPZ OCS DPW OOT	Mid-Term
5. Conduct studies of existing resource conditions and wildlife use within the network to enhance management of the Green Infrastructure Network.	DPZ OCS	Long-Term
6. Consider expansion of the Green Infrastructure Network to include smaller habitat areas that provide 'stepping stones' to the primary network.	DPZ OCS	Mid-Term
<b>EH-9 - Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.</b>		
1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.	DPZ OCS	Ongoing
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.	DPZ	Ongoing
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.	DPZ OCS	Ongoing
<b>EH-10 - Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.</b>		
1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.	DPZ OCS	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-11 - Encourage individual environmental stewardship in daily activities on private and public property.</b>		
1. The County <del>should continue to</del> shall continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.	DPW DRP DPZ	Ongoing
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.	OCS DRP HSCD Private Property Owners	Ongoing
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.	HCPSS HSCD	Ongoing
<b>EH-12 - Commit to and support the County's designation as a Bee City USA.</b>		
1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.	OCS DRP DPW DPZ	Mid-Term
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.	OCS DRP	Ongoing
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.	OCS DRP Private Partners	Mid-Term
<b>EH-13 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing

Amendment 104 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 11

Date: 10/02/2023

Amendment No. 104

*(This Amendment makes the following changes to HoCo by Design Chapter 8 and Chapter 11:*

*Chapter 8: Public School Facilities: - Amends the PS-3 Policy Statement Implementing Actions to add a revision of the County Code to consider school capacity when adopting ZRAs and add a revision of the Zoning Code to consider school capacity in cases before the Zoning Board; and*

*Chapter 11: Implementation - Amends the PS-3 Policy Statement Implementing Actions to add a revision of the County Code to consider school capacity when adopting ZRAs and add a revision of the Zoning Code to consider school capacity in cases before the Zoning Board.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

- 3 • Chapter 8: Public School Facilities: 26;
- 4 • Chapter 11: Implementation: 52.

5

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

I certify this is a true copy of  
Am 104 CB28-2023  
 passed on 10/11/2023  
Mushelut [Signature]  
 Council Administrator

Filed

## Regulatory Process

The County's Subdivision and Land Development Regulations allow for land in a subdivision or building development to be reserved for public facilities, such as schools, if it is not being used as open space. The SAG explored this process as a tool to increasing the Land Bank. The SAG's discussions revealed that the regulations are not aligned well to current development patterns, HCPSS facilities and budget planning timelines, and the County's development review process. The SAG concluded that the reservation process should be evaluated, and regulation changes recommended to increase use of this tool. Further, these regulations were recently expanded to allow for reservation of buildings. If properly timed, such building reservations could allow HCPSS to purchase available properties in the near term with leaseback options to tenants to hold land or buildings for future school needs. Activity center redevelopment and Route 1 redevelopment provide excellent opportunities to exercise building reservations, especially in areas where existing commercial is struggling.

Finally, HCPSS staff have reported challenges with regulations, such as setback, height limits, and other bulk regulations, that limit the developable footprint for buildings, athletic fields, and other site amenities. The Zoning Regulations should be updated to allow for administrative approval of variances to bulk regulations as they relate to school facility development.

## Co-locating Facilities

In the face of dwindling land supply, opportunities to co-locate school facilities with other public amenities, like libraries, park and recreational facilities, community centers, affordable housing, police or fire stations, and athletic fields, allow for optimal use of limited greenfield space and leverage additional funding opportunities. As Blueprint implementation is evaluated, government and commercial centers should be considered to house mandatory prekindergarten programs that are conveniently located, accessible, and/or create opportunities to provide wrap-around services to families and students. These options should be considered during the capital planning process and coordinated with HCPSS to ensure educational programming standards are maintained.

Finally, educational facilities can be integrated into mixed-use activity centers and can serve nearby residences through safe convenient pedestrian connections. Specifically, redevelopment of Gateway into a Regional Activity Center must thoroughly evaluate impacts to school capacity and ensure that the requisite number of schools are integrated and appropriately phased into the redevelopment program. A public-private partnership model may be considered as part of an innovation district design.



## PS-3 Policy Statement

The County and Howard County Public School System (HCPSS) should collaborate on future school siting and develop tools that provide the flexibility needed to allow for alternative school designs, flexible site requirements, and adaptive reuse of underutilized properties.

### Implementing Actions

1. Consider adaptive reuse of commercial real estate for school buildings or HCPSS office space.
2. Consider leasing space for early childhood or other HCPSS programming.
3. Evaluate integrating public prekindergarten into government and commercial centers that encourage convenience for working parents, increase access to communities, and/or create opportunities to provide wrap-around services to families and students.
4. Evaluate the efficacy of using smaller existing HCPSS-owned properties for regional programs and/or shared athletic facilities.
5. Examine alternative school design models that establish a variety of forms to maximize available land resources. This may include higher capacity buildings, smaller footprints, shared site amenities, modular design, and/or vertical construction.
6. Explore opportunities for co-location of school facilities with other public amenities, like libraries, parks, affordable housing, and athletic fields, to make use of limited greenfield space and leverage additional funding opportunities.
7. Ensure future redevelopment of Gateway into a Regional Activity Center includes a thorough evaluation of school capacity and that any deficiencies created through its redevelopment are mitigated by providing requisite school facilities.
8. Ensure development of activity centers includes a review of school capacity needs and opportunities to address those needs within the activity center.

[9. Revise the County Code to consider school capacity when adopting ZRAs and revise the Zoning Code to consider school capacity in cases before the Zoning Board.](#)

## PS-4 Policy Statement

Revisions to the County's Zoning Regulations and Subdivision and Land Development Regulations should provide more flexibility for school site development and remove barriers to efficient use of school site property.

### Implementing Actions

1. The Zoning Regulations update should allow administrative approval of zoning variances as they relate to school facility development.
2. Evaluate the applicability of the Subdivision and Land Development Regulations governing reservations of land for public facilities to determine appropriate changes that would increase utilization.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>QBD-8 - Expand documentation, protection, and education regarding the County's diverse historic resources.</b>		
1. Research and create a mechanism similar to a historic landmarks program that can be used as a tool for identifying valuable historic resources and efforts to protect them.	DPZ	Long-term
2. Expand documentation efforts to include "recent past" buildings, such as those of significance in Columbia and other maturing areas.	DPZ	Long-term
3. Continue to update the Historic Sites Inventory through updated inventory forms for properties added in the 1970s, 1990s and for	DPZ	Ongoing
4. Create more thorough inventories of the County's historic resources and expand documentation of ethnicity, cultural context, and historic relevance to the County's history.	DPZ Non-profit Partners	Long-term
5. Work with nonprofit organizations to create opportunities for the Howard County community to learn about its historic sites, including telling all stories in the County.	DPZ DRP	Long-term
6. Explore grants for documentation of archeological resources, museum collections, and oral histories, and partner on this initiative with local preservation nonprofit organizations.	DPZ	Ongoing
7. Participate in a statewide effort to create one master state map of	DPZ	Long-term
<b>PS-1 - The County, Howard County Public School System (HCPSS), and private sector should work collaboratively to identify school sites that meet the needs of the student population and anticipate future growth patterns.</b>		
1. Examine alternatives to the Adequate Public Facilities Ordinance waiting periods whereby a development proposal offsets the potential impact to zoned schools through an additional voluntary mitigation payment.	DPZ	Mid-Term
2. Ensure coordination of HoCo By Design and the HCPSS capital planning so that school capacity projects are planned in activity center areas identified for transformation on the Future Land Use Map.	DPZ HCPSS	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>PS-2 - The County and Howard County Public School System should partner to leverage additional public and private resources to meet school facility needs and timing.</b>		
1. Examine the costs and benefits of public-private partnership models to address near-term school facility acquisition, construction, and renovation needs, including long-term financial commitments and considerations.	HCPSS Private Partners	Mid-Term
2. Evaluate a trust fund for school site acquisition or partnerships with philanthropic organizations to purchase property and hold it for a short term until school facilities can be built.	HCPSS Private Property	Mid-Term
<b>PS-3 - The County and Howard County Public School System (HCPSS) should collaborate on future school siting and develop tools that provide the flexibility needed to allow for alternative school designs, flexible site requirements, and adaptive reuse of underutilized properties.</b>		
1. Consider adaptive reuse of commercial real estate for school buildings or HCPSS office space.	HCPSS	Mid-Term
2. Consider leasing space for early childhood or other HCPSS programming.	HCPSS	Mid-Term
3. Evaluate integrating public prekindergarten into government and commercial centers that encourage convenience for working parents, increase access to communities, and/or create opportunities to provide wrap-around services to families and	HCPSS	Mid-Term
4. Evaluate the efficacy of using smaller existing HCPSS-owned properties for regional programs and/or shared athletic facilities.	HCPSS	Mid-Term
5. Examine alternative school design models that establish a variety of forms to maximize available land resources. This may include higher capacity buildings, smaller footprints, shared site amenities, modular design, and/or vertical construction.	HCPSS	Long-term
6. Explore opportunities for co-location of school facilities with other public amenities, like libraries, parks, affordable housing, and athletic fields, to make use of limited greenfield space and leverage additional funding opportunities.	HCPSS All Agencies	Ongoing
7. Ensure future redevelopment of Gateway into a Regional Activity Center includes a thorough evaluation of school capacity and that any deficiencies created through its redevelopment are mitigated	DPZ HCPSS	Mid-Term
8. Ensure development of activity centers includes a review of school capacity needs and opportunities to address those needs within the activity center.	DPZ HCPSS Private Partners	Mid-Term
<u>9. Revise the County Code to consider school capacity when adopting ZRAs and revise the Zoning Code to consider school capacity in cases before the Zoning Board.</u>	<u>HCPSS Elected Officials</u>	<u>Mid-Term</u>

Amendment 105\_to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 11  
Date: October 2, 2023

Amendment No. 105

(This Amendment makes the following changes to HoCo by Design Chapter 3, Chapter 5, and Chapter 11:

- Chapter 3: Ecological Health - Removes the entire section titled "Managing Mineral Resources";  
- Removes the EH-13 Policy Statement and Implementing Action;
- Chapter 5: Economic Prosperity - Adds the section titled "Managing Mineral Resources" that was removed from Chapter 3, and adds a planning effort for the reuse of any quarry site that ceases operation during the planning horizon for HoCo By Design;  
- Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action, and adds a required exploration of future reuse of sites;
- Chapter 11: Implementation - Removes the EH-13 Policy Statement and Implementing Action; and  
- Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action, and adds a required exploration of future reuse of sites.)

1 In the HoCo By Design General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

- 3 • Chapter 3: Ecological Health: 58;
- 4 • Chapter 5: Economic Prosperity: Create a new EP-61;
- 5 • Chapter 11: Implementation: 22 and 35.

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

**I certify this is a true copy of**

Am 105 - CB28-2023

**passed on** 10/11/2023

Michelle Hartz  
**Council Administrator**

## Bee City USA

In 2019, the County Executive signed an Executive Order designating Howard County as a Bee City USA, committing the County to support and encourage healthy pollinator habitat creation and enhancement. This Executive Order notes that bees and other pollinators are responsible for reproduction in almost 90% of the world's flowering plants, including fruits and vegetables, but they have experienced population declines in the United States due to habitat loss, poor nutrition, pesticides, parasites, diseases, and climate change. Under this Executive Order, the County agreed to work with the Howard County Conservancy to enhance understanding among county staff and the public about the vital role that pollinators play and what each person can do to sustain them. Identified techniques include developing and implementing a program to create or enhance pollinator-friendly habitat on public and private land, and adopting an integrated pest management plan designed to prevent pest problems, reduce pesticide use, and expand the use of non-chemical pest management methods.

### EH-11 Policy Statement

Encourage individual environmental stewardship in daily activities on private and public property.

### Implementing Actions

1. The County should continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.

### EH-12 Policy Statement

Commit to and support the County's designation as a Bee City USA.

### Implementing Actions

1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.

## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County—one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By-Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

### EH-13 Policy Statement

Continue to balance the potential for mineral resource extraction with other land uses.

### Implementing Actions

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.





## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County—one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites. For any activities that cease during the planning horizon for HoCo By Design, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

Continue to balance the potential for mineral resource extraction with other land uses.

### **EP-14 Policy Statement**

#### **Implementing Actions**

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.
2. Explore opportunities for the future reuse of quarry sites.

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-8 - Expand implementation of the Green Infrastructure Network Plan.</b>		
1. Integrate the Green Infrastructure Network Plan implementation actions into the relevant county plans and programs.	DPZ DRP OCS DPW	Ongoing
2. Consider use of an overlay zoning district or other regulatory measures to target resource protection measures for the Green Infrastructure Network.	DPZ	Mid-Term
3. Establish an easement or land purchase program to protect uncommitted parcels within the Green Infrastructure Network.	DPZ OCS	Mid-Term
4. Amend county design standards for roads, bridges, and culverts to facilitate safe passage for wildlife at county road crossings within the Green Infrastructure Network.	DPZ OCS DPW OOT	Mid-Term
5. Conduct studies of existing resource conditions and wildlife use within the network to enhance management of the Green Infrastructure Network.	DPZ OCS	Long-Term
6. Consider expansion of the Green Infrastructure Network to include smaller habitat areas that provide 'stepping stones' to the primary network.	DPZ OCS	Mid-Term
<b>EH-9 - Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.</b>		
1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.	DPZ OCS	Ongoing
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.	DPZ	Ongoing
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.	DPZ OCS	Ongoing
<b>EH-10 - Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.</b>		
1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.	DPZ OCS	Mid-Term

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-11 - Encourage individual environmental stewardship in daily activities on private and public property.</b>		
1. The County should continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.	DPW DRP DPZ	Ongoing
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.	OCS DRP HSCD Private Property Owners	Ongoing
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.	HCPSS HSCD	Ongoing
<b>EH-12 - Commit to and support the County's designation as a Bee City USA.</b>		
1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.	OCS DRP DPW DPZ	Mid-Term
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.	OCS DRP	Ongoing
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.	OCS DRP Private Partners	Mid-Term
<b>EH-13 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
<del>1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.</del>	<del>DPZ</del>	<del>Ongoing</del>

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EP-12 - Reduce regulatory barriers to diversified agricultural operations in both the Rural West and the East.</b>		
1. Update the Zoning Regulations and other policies to promote agricultural expansion and diversification, especially for on-farm processing and other agribusiness opportunities.	DPZ OCS HCEDA	Mid-Term
2. Work with agricultural and community stakeholders to review and update the Zoning Regulations and other regulations to create more opportunities for agritourism.	DPZ OCS HCEDA DILP HCHD	Mid-Term
3. Reduce barriers to the burgeoning demand for on-farm breweries, wineries, cideries, meaderies, and distilleries.	DPZ OCS HCHD HCEDA	Mid-Term
<b>EP-13 - Review transportation planning and road development and maintenance standards to reduce transportation barriers to farming.</b>		
1. Improve rural road conditions by increasing overhead tree clearance and addressing passage at narrow bridges.	DPW OOT	Long-term
2. Reduce conflict between recreational, residential, commercial, and agricultural road uses.	OOT DPW	Long-term
<b>EP-14 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing
2. Explore opportunities for the future reuse of quarry sites.	DPZ	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>DN-1 - Increase opportunities for missing middle housing through the creation and use of zoning tools and incentives.</b>		
1. Evaluate conditions where duplex and multiplex homes can be compatible with existing neighborhoods and permitted by-right in a greater number of residential and mixed-use zoning districts.	DPZ	Mid-Term
2. Identify and eliminate barriers in the Zoning Regulations and Subdivision and Land Development Regulations to housing stock diversification. Ensure that bulk regulations are realistic for these housing types and do not preclude their potential on existing lots.	DPZ	Mid-Term
3. Expand the types of housing allowed in the Zoning Regulations and Subdivision and Land Development Regulations to include missing middle housing types, such as stacked townhomes, cottage clusters, and multiplexes, and consider appropriate parking requirements for these housing types.	DPZ	Mid-Term
4. Evaluate and establish one or more the following zoning tools and incentives as potential opportunities to create missing middle housing: <ul style="list-style-type: none"> <li>a. Zoning overlays or floating zones that could be applied to activity centers, transportation corridors, or other areas that are appropriate for this housing type.</li> <li>b. Smaller lot sizes (lot width and lot area).</li> <li>c. Density-based tools such as transfer of development rights or density bonuses.</li> <li>d. Tax incentives for developers and/or land owners.</li> <li>e. Flexible development standards such as maximum building size or lot coverage.</li> </ul>	DPZ	Mid-Term
5. Establish regulations that disperse missing middle homes throughout the County so that neighborhoods contain a proportionate mix of different housing types and can balance other infrastructure needs.	DPZ DHCD	Mid-Term
6. Explore opportunities to work with public and private partners to build missing middle housing demonstration projects or provide models and designs for these housing types.	HCHC DHCD DPZ	Mid-Term

**Amendment 1 to Amendment 105  
to Council Bill No. 28-2023**

**BY: Christiana Rigby**

**Legislative Day 12  
Date: October 11, 2023**

*(This amendment adds a planning effort for the reuse of any quarry site that ceases operation during the planning horizon of HoCo By Design.)*

- 1 Substitute page 1 of Amendment 105 with the attached page 1 to this Amendment to Amendment.  
2  
3 Substitute the attached pages EP-61 and IMP-35 of Amendment 105 with the attached pages EP-61  
4 and IMP-35 to this Amendment to Amendment.  
5  
6

**I certify this is a true copy of**

Am 1 Am 105 CB28-2023

**passed on** 10/11/2023

*Michelle Howard*  
**Council Administrator**

Amendment 105 to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 11  
Date: October 2, 2023

Amendment No. 105

*(This Amendment makes the following changes to HoCo by Design Chapter 3, Chapter 5, and Chapter 11:*

- Chapter 3: Ecological Health* - Removes the entire section titled “Managing Mineral Resources”;  
- Removes the EH-13 Policy Statement and Implementing Action;
- Chapter 5: Economic Prosperity* - Adds the section titled “Managing Mineral Resources” that was removed from Chapter 3, and adds a planning effort for the reuse of any quarry site that ceases operation during the planning horizon for HoCo By Design;  
- Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action, and adds a required exploration of future reuse of sites;
- Chapter 11: Implementation* - Removes the EH-13 Policy Statement and Implementing Action; and  
- Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action, and adds a required exploration of future reuse of sites.)

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

- 3 • Chapter 3: Ecological Health: 58;  
4 • Chapter 5: Economic Prosperity: Create a new EP-61;  
5 • Chapter 11: Implementation: 22 and 35.

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EP-12 - Reduce regulatory barriers to diversified agricultural operations in both the Rural West and the East.</b>		
1. Update the Zoning Regulations and other policies to promote agricultural expansion and diversification, especially for on-farm processing and other agribusiness opportunities.	DPZ OCS HCEDA	Mid-Term
2. Work with agricultural and community stakeholders to review and update the Zoning Regulations and other regulations to create more opportunities for agritourism.	DPZ OCS HCEDA DILP HCHD	Mid-Term
3. Reduce barriers to the burgeoning demand for on-farm breweries, wineries, cideries, meaderies, and distilleries.	DPZ OCS HCHD HCEDA	Mid-Term
<b>EP-13 - Review transportation planning and road development and maintenance standards to reduce transportation barriers to farming.</b>		
1. Improve rural road conditions by increasing overhead tree clearance and addressing passage at narrow bridges.	DPW OOT	Long-term
2. Reduce conflict between recreational, residential, commercial, and agricultural road uses.	OOT DPW	Long-term
<b>EP-14 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing
2. Explore opportunities for the future reuse of quarry sites.	DPZ	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>DN-1 - Increase opportunities for missing middle housing through the creation and use of zoning tools and incentives.</b>		
1. Evaluate conditions where duplex and multiplex homes can be compatible with existing neighborhoods and permitted by-right in a greater number of residential and mixed-use zoning districts.	DPZ	Mid-Term
2. Identify and eliminate barriers in the Zoning Regulations and Subdivision and Land Development Regulations to housing stock diversification. Ensure that bulk regulations are realistic for these housing types and do not preclude their potential on existing lots.	DPZ	Mid-Term
3. Expand the types of housing allowed in the Zoning Regulations and Subdivision and Land Development Regulations to include missing middle housing types, such as stacked townhomes, cottage clusters, and multiplexes, and consider appropriate parking requirements for these housing types.	DPZ	Mid-Term
4. Evaluate and establish one or more the following zoning tools and incentives as potential opportunities to create missing middle housing: <ul style="list-style-type: none"> <li>a. Zoning overlays or floating zones that could be applied to activity centers, transportation corridors, or other areas that are appropriate for this housing type.</li> <li>b. Smaller lot sizes (lot width and lot area).</li> <li>c. Density-based tools such as transfer of development rights or density bonuses.</li> <li>d. Tax incentives for developers and/or land owners.</li> <li>e. Flexible development standards such as maximum building size or lot coverage.</li> </ul>	DPZ	Mid-Term
5. Establish regulations that disperse missing middle homes throughout the County so that neighborhoods contain a proportionate mix of different housing types and can balance other infrastructure needs.	DPZ DHCD	Mid-Term
6. Explore opportunities to work with public and private partners to build missing middle housing demonstration projects or provide models and designs for these housing types.	HCHC DHCD DPZ	Mid-Term



## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County—one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites. For any activities that cease during the planning horizon for HoCo By Design, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

Continue to balance the potential for mineral resource extraction with other land uses.

### **EP-14 Policy Statement**

#### **Implementing Actions**

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.
2. Explore opportunities for the future reuse of quarry sites.

Amendment 105 to Council Bill No. 28 -2023

R

BY: Liz Walsh

Legislative Day 11  
Date: 10/02/2023

Amendment No. 105

*(This Amendment makes the following changes to HoCo by Design Chapter 3, Chapter 5, and Chapter 11:*

- Chapter 3: Ecological Health* - *Removes the entire section titled "Managing Mineral Resources";*  
- *Removes the EH-13 Policy Statement and Implementing Action;*
- Chapter 5: Economic Prosperity* - *Adds the section titled "Managing Mineral Resources" that was removed from Chapter 3;*  
- *Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action;*
- Chapter 11: Implementation* - *Removes the EH-13 Policy Statement and Implementing Action; and*  
- *Adds the Policy Statement and Implementing Action that were removed from Chapter 3 as a new EP-14 Policy Statement and Implementing Action.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

- 3 • Chapter 3: Ecological Health: 58;  
4 • Chapter 5: Economic Prosperity: Create a new EP-61;  
5 • Chapter 11: Implementation: 22 and 35.

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8



## Bee City USA

In 2019, the County Executive signed an Executive Order designating Howard County as a Bee City USA, committing the County to support and encourage healthy pollinator habitat creation and enhancement. This Executive Order notes that bees and other pollinators are responsible for reproduction in almost 90% of the world's flowering plants, including fruits and vegetables, but they have experienced population declines in the United States due to habitat loss, poor nutrition, pesticides, parasites, diseases, and climate change. Under this Executive Order, the County agreed to work with the Howard County Conservancy to enhance understanding among county staff and the public about the vital role that pollinators play and what each person can do to sustain them. Identified techniques include developing and implementing a program to create or enhance pollinator-friendly habitat on public and private land, and adopting an integrated pest management plan designed to prevent pest problems, reduce pesticide use, and expand the use of non-chemical pest management methods.

### EH-11 Policy Statement

Encourage individual environmental stewardship in daily activities on private and public property.

### Implementing Actions

1. The County should continue to provide leadership by incorporating environmentally sensitive site development and property management practices on County properties.
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.

### EH-12 Policy Statement

Commit to and support the County's designation as a Bee City USA.

### Implementing Actions

1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.

## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

The Maryland Department of the Environment (MDE) issues mining permits per the Surface Mining Act of 1975. MDE identifies three mining operations in Howard County: one in Marriottsville, and two in Jessup. However, one of the Jessup facilities is no longer mining. Both active facilities quarry stone or hard rock. Sand is no longer mined in Howard County.

Howard County's Zoning Regulations allow quarries as conditional uses in rural and industrial areas, subject to certain approvals and limitations. Pre- and post-extraction planning and ongoing management are required to ensure mining operations do not impact quality of life in adjacent neighborhoods. Existing infrastructure, such as roads, must be sufficient. Final use of a mined site is planned prior to any extraction. While it is not anticipated that quarry activities will cease during the planning horizon for HoCo By Design, if they do, a planning effort should be undertaken to identify potential reuse of the sites.

Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

### EH-13 Policy Statement

Continue to balance the potential for mineral resource extraction with other land uses.

### Implementing Actions

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.



## Managing Mineral Resources

A 1981 Maryland Geological Survey study identified Howard County's principal mineral resources as sand and gravel, which are of great importance to the construction industry. These resources are confined mainly to the Coastal Plain portion of the County, specifically from the Howard and Anne Arundel County border westward to approximately midway between Route 29 and Interstate 95. The Maryland Geological Survey also indicates there is potential for crushed stone production west of Interstate 95, based on mineral resources endemic to the Piedmont region of Howard County, but locations were not identified.

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Industrially zoned areas, where mining is a conditional use, are primarily in the Route 1 Corridor and coincide with the Coastal Plain area of the County. This could afford potential opportunities for additional mining, if feasible, but such activities seem unlikely, given existing and planned development in the Corridor.

Continue to balance the potential for mineral resource extraction with other land uses.

### **EP-14 Policy Statement**

#### **Implementing Actions**

1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-8 - Expand implementation of the Green Infrastructure Network Plan.</b>		
1. Integrate the Green Infrastructure Network Plan implementation actions into the relevant county plans and programs.	DPZ DRP OCS DPW	Ongoing
2. Consider use of an overlay zoning district or other regulatory measures to target resource protection measures for the Green Infrastructure Network.	DPZ	Mid-Term
3. Establish an easement or land purchase program to protect uncommitted parcels within the Green Infrastructure Network.	DPZ OCS	Mid-Term
4. Amend county design standards for roads, bridges, and culverts to facilitate safe passage for wildlife at county road crossings within the Green Infrastructure Network.	DPZ OCS DPW OOT	Mid-Term
5. Conduct studies of existing resource conditions and wildlife use within the network to enhance management of the Green Infrastructure Network.	DPZ OCS	Long-Term
6. Consider expansion of the Green Infrastructure Network to include smaller habitat areas that provide 'stepping stones' to the primary network.	DPZ OCS	Mid-Term
<b>EH-9 - Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.</b>		
1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.	DPZ OCS	Ongoing
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.	DPZ	Ongoing
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.	DPZ OCS	Ongoing
<b>EH-10 - Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.</b>		
1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.	DPZ OCS	Mid-Term

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-11 - Encourage individual environmental stewardship in daily activities on private and public property.</b>		
1. The County should continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.	DPW DRP DPZ	Ongoing
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.	OCS DRP HSCD Private Property Owners	Ongoing
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.	HCPSS HSCD	Ongoing
<b>EH-12 - Commit to and support the County's designation as a Bee City USA.</b>		
1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.	OCS DRP DPW DPZ	Mid-Term
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.	OCS DRP	Ongoing
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.	OCS DRP Private Partners	Mid-Term
<b>EH-13 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EP-12 - Reduce regulatory barriers to diversified agricultural operations in both the Rural West and the East.</b>		
1. Update the Zoning Regulations and other policies to promote agricultural expansion and diversification, especially for on-farm processing and other agribusiness opportunities.	DPZ OCS HCEDA	Mid-Term
2. Work with agricultural and community stakeholders to review and update the Zoning Regulations and other regulations to create more opportunities for agritourism.	DPZ OCS HCEDA DILP HCHD	Mid-Term
3. Reduce barriers to the burgeoning demand for on-farm breweries, wineries, cideries, meaderies, and distilleries.	DPZ OCS HCHD HCEDA	Mid-Term
<b>EP-13 - Review transportation planning and road development and maintenance standards to reduce transportation barriers to farming.</b>		
1. Improve rural road conditions by increasing overhead tree clearance and addressing passage at narrow bridges.	DPW OOT	Long-term
2. Reduce conflict between recreational, residential, commercial, and agricultural road uses.	OOT DPW	Long-term
<b>EP-14 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. <u>Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.</u>	DPZ	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>DN-1 - Increase opportunities for missing middle housing through the creation and use of zoning tools and incentives.</b>		
1. Evaluate conditions where duplex and multiplex homes can be compatible with existing neighborhoods and permitted by-right in a greater number of residential and mixed-use zoning districts.	DPZ	Mid-Term
2. Identify and eliminate barriers in the Zoning Regulations and Subdivision and Land Development Regulations to housing stock diversification. Ensure that bulk regulations are realistic for these housing types and do not preclude their potential on existing lots.	DPZ	Mid-Term
3. Expand the types of housing allowed in the Zoning Regulations and Subdivision and Land Development Regulations to include missing middle housing types, such as stacked townhomes, cottage clusters, and multiplexes, and consider appropriate parking requirements for these housing types.	DPZ	Mid-Term
4. Evaluate and establish one or more the following zoning tools and incentives as potential opportunities to create missing middle housing: <ul style="list-style-type: none"> <li>a. Zoning overlays or floating zones that could be applied to activity centers, transportation corridors, or other areas that are appropriate for this housing type.</li> <li>b. Smaller lot sizes (lot width and lot area).</li> <li>c. Density-based tools such as transfer of development rights or density bonuses.</li> <li>d. Tax incentives for developers and/or land owners.</li> <li>e. Flexible development standards such as maximum building size or lot coverage.</li> </ul>	DPZ	Mid-Term
5. Establish regulations that disperse missing middle homes throughout the County so that neighborhoods contain a proportionate mix of different housing types and can balance other infrastructure needs.	DPZ DHCD	Mid-Term
6. Explore opportunities to work with public and private partners to build missing middle housing demonstration projects or provide models and designs for these housing types.	HCHC DHCD DPZ	Mid-Term

Amendment 106 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 11

Date: 10/02/2023

Amendment No. 106

*(This Amendment makes the following changes to HoCo by Design Chapter 10 and Chapter 11:*

*Chapter 10:  
Managing Growth*

- *Amends the section titled "Managing Growth into the Future" to remove the third, fourth, and sixth paragraphs in their entirety, and remove the second and third sentence of the fifth paragraph;*
- *Amends the MG-1 Policy Statement Implementing Actions to evaluate data on existing conditions, and remove an evaluation of the life cycle of new and existing neighborhoods to better understand student growth;*
- *Amends the MG-1 Policy Statement Implementing Actions to remove an evaluation and amendment of APFO standards for transportation adequacy; and*

*Chapter 11:  
Implementation*

- *evaluate data on existing conditions, and remove an evaluation of the life cycle of new and existing neighborhoods to better understand student growth; and*
- *Amends the MG-1 Policy Statement Implementing Actions to remove an evaluation and amendment of APFO standards for transportation adequacy.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
2 pages as indicated in this Amendment:

- 3 • Chapter 10, Managing Growth: 21, and 22;
- 4 • Chapter 11: Implementation: 59.

5

6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

I certify this is a true copy of

Am 106 CB28-2023

on 10/11/2023

Filed

*Michael Howard*

Council Administrator

## Managing Growth into the Future

HoCo By Design recommends a comprehensive review and assessment of APFO. Future land use patterns in Howard County will largely be realized through infill development and redevelopment in activity centers, and to a much lesser extent by suburban development in greenfields. APFO was designed to manage growth in the latter, and now needs to be updated to reflect the land use patterns of the County's future.

Section 16.1100(b)(iv) of the Howard County Subdivision and Land Development Regulations requires that a task force be convened within one year of the adoption of the General Plan to review and recommend changes to APFO. The APFO task force will be responsible for reviewing and updating APFO to support the vision, policies, and implementing actions presented in this Plan. The task force may research alternate APFO models used in other counties in Maryland, particularly those counties where redevelopment and infill are the primary forms of new development.

~~The task force should also explore regulations that consider various development types, locations, and intensities, and incentive-based provisions to expedite capacity improvements. For example, the APFO review should determine whether higher-density, mixed-use projects in activity centers, which may have low student yields, should meet different standards or thresholds, and whether pay-based incentives should be established where suburban-style developments could proceed if a higher school surcharge were paid. The task force should evaluate how APFO may apply to detached accessory dwelling units.~~

~~Not only are development and zoning incentives a vital part of a comprehensive affordable housing strategy, process incentives like APFO should be considered as well. The Dynamic Neighborhoods chapter suggests that the APFO task force assess the applicability of APFO to accessory dwelling units and develop recommendations as applicable. The Housing Opportunities Master Plan also recommends the APFO task force look for opportunities to grant automatic or limited exemptions to incentivize affordable, age-restricted, and missing middle housing developments. Accordingly, the County should evaluate targeted changes to APFO to support the growth required to improve housing affordability and opportunities when the APFO task force convenes following the adoption of the General Plan.~~

The allocation chart presented here is intended to serve as a temporary bridge between the current requirements of APFO and any subsequent revisions to the law that may result from the work of the APFO task force. ~~The task force should consider whether the allocation chart achieves its intended goal and, if so, whether changes to the chart should be made. The task force should also advise whether the allocation chart, if still deemed necessary, should remain in the General Plan or be incorporated into the APFO ordinance.~~

~~The task force should also evaluate existing conditions and emerging trends for new student generation, whether it is due primarily to new housing units or family turnover in existing neighborhoods. Developing an understanding of neighborhood lifecycles will allow for a better assessment of student growth and housing. This understanding should further inform how the APFO school capacity test and associated chart could be changed to optimize growth targets while also maintaining adequate school capacity.~~

Ultimately, the challenge will be to better balance housing market demand, economic development, and fiscal goals with the continued need to provide adequate school capacity and transportation facilities, as changing housing types and patterns emerge in the future. As noted in the Growth and Conservation Framework chapter, HoCo By Design provides a more predictable outlook for infrastructure with its focused approach on redevelopment—as only 2% of the County's already developed land is targeted as activity centers. This approach allows the County and allied agencies to more deliberately plan and budget for infrastructure.

### MG-1 Policy Statement

Evaluate and amend the Adequate Public Facilities Ordinance (APFO) to support the vision and policies presented in HoCo By Design, including current and anticipated development patterns and challenges.

### Implementing Actions

1. As part of the evaluation of APFO, achieve the following:
  - a. Research APFO models used in other Maryland and US jurisdictions that account for infill development and redevelopment to support future growth and transportation patterns as anticipated in this General Plan.
  - b. Assess the applicability of APFO to accessory dwelling units and develop recommendations as applicable.
  - c. Evaluate opportunities to grant automatic or limited exemptions to incentivize affordable, age-restricted, and missing middle housing developments.
  - d. Evaluate the necessity of a housing allocation chart, including its goals, design, and appropriate place in the law.
  - e. Schools:
    - i. ~~Collect data for school demands in the County sufficient to evaluate~~ evaluating existing conditions, emerging trends, and future year needs. ~~This analysis should include an evaluation of the life cycle of new and existing neighborhoods to better understand the origins of student growth.~~
    - ii. Evaluate the extent to which new growth generates revenues to pay for school infrastructure and review alternative financing methods.
    - iii. Evaluate the school capacity test in APFO to determine if intended outcomes are being achieved, and recommend changes to the framework and process to better pace development with available student capacity.
    - iv. Examine alternatives to APFO waiting periods whereby a development proposal offsets the potential impact to zoned schools through an additional voluntary mitigation payment.
    - v. Evaluate the timing and process of the school capacity chart.
  - f. Transportation:
    - i. ~~Evaluate and amend APFO standards for transportation adequacy and develop context-driven transportation adequacy measures that align with the County's land use and transportation safety vision.~~
    - ii. i. Study and develop APFO standards for specific geographic subareas.
    - iii. ii. Study and develop methods to use a fee-based approach to advance the most significant projects in a subarea.
    - iv. iii. Evaluate and amend APFO standards to mitigate trips with investments in bicycle, pedestrian, and transit infrastructure, road connectivity, and safety projects.
2. Appoint an APFO task force within one year of General Plan adoption to review and provide recommendations for APFO updates that reflect the vision and policies in HoCo By Design.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe
<b>MG-1 - Evaluate and amend the Adequate Public Facilities Ordinance (APFO) to support the vision and policies presented in HoCo By Design, including current and anticipated development patterns and challenges.</b>		
<p>1. As part of the evaluation of APFO, achieve the following:</p> <ul style="list-style-type: none"> <li>a. Research APFO models used in other Maryland and US jurisdictions that account for infill development and redevelopment to support future growth and transportation patterns as anticipated in this General Plan.</li> <li>b. Assess the applicability of APFO to accessory dwelling units and develop recommendations as applicable.</li> <li>c. Evaluate opportunities to grant automatic or limited exemptions to incentivize affordable, age-restricted, and missing middle housing developments.</li> <li>d. Evaluate the necessity of a housing allocation chart, including its goals, design, and appropriate place in the law.</li> <li>e. Schools: <ul style="list-style-type: none"> <li>i. Collect data <del>for school demands in the County sufficient to evaluate evaluating</del> existing conditions, emerging trends, and future year needs. <del>This analysis should include an evaluation of the life cycle of new and existing neighborhoods to better understand the origins of student growth.</del></li> <li>ii. Evaluate the extent to which new growth generates revenues to pay for school infrastructure and review alternative financing methods.</li> <li>iii. Evaluate the school capacity test in APFO to determine if intended outcomes are being achieved, and recommend changes to the framework and process to better pace development with available student capacity.</li> <li>iv. Examine alternatives to APFO waiting periods whereby a development proposal offsets the potential impact to zoned schools through an additional voluntary mitigation payment.</li> <li>v. Evaluate the timing and process of the school capacity chart.</li> </ul> </li> <li>f. Transportation: <ul style="list-style-type: none"> <li>i. <del>Evaluate and amend APFO standards for transportation adequacy and develop context-driven transportation adequacy measures that align with the County's land use and transportation safety vision.</del></li> <li>ii. Study and develop APFO standards for specific geographic subareas.</li> <li>iii. Study and develop methods to use a fee-based approach to advance the most significant projects in a subarea.</li> <li>iv. Evaluate and amend APFO standards to mitigate trips with investments in bicycle, pedestrian, and transit infrastructure, road connectivity, and safety projects.</li> </ul> </li> </ul>	<p><b>DPZ</b> DHCD HCPSS OOT DPW</p>	<p>Mid-Term</p>

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<p>2. Appoint an Adequate Public Facilities Ordinance (APFO) task force within one year of General Plan adoption to review and provide recommendations for APFO updates that reflect the vision and policies in HoCo By Design.</p>	<p><b>DPZ</b> OOT DHCD DPW HCPSS</p>	<p>Mid-Term</p>

Amendment 107 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 11

Date: 10/02/2023

Amendment No. 107

(This Amendment makes the following changes to HoCo by Design Chapter 9 and Chapter 11 to:

Chapter 9: Supporting Infrastructure - Adds a statement about redeveloped areas setting aside spaces for recreational activities and open spaces to the fourth Implementing Action to INF-5 Policy Statement; and

Chapter 11: Implementation - Adds a statement about redeveloped areas setting aside spaces for recreational activities and open spaces to the fourth Implementing Action to INF-5 Policy Statement.)

1

2

3 In the HoCo By Design General Plan, attached to this Act as Exhibit A, amend the following  
4 pages as indicated in this Amendment:

5 • Chapter 9: Supporting Infrastructure: page 28.

6 • Chapter 11: Implementation: page 55.

7

8 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
9 amendment.

10

I certify this is a true copy of

Am 107 CB28-2023

dated on

10/11/2023

*Michelle Darrow*  
Council Administrator

*Failed*



## Expansion of the County Park System and Recreation Facilities

As the County's population grows, so will the demands for new and improved parkland and recreational programming. This increased demand will require hiring additional staff, purchasing and replacing park vehicles and equipment, and constructing and maintaining new parks and facilities to address public needs and facility deficiencies identified in the 2022 LPPRP.

The 2022 LPPRP sets an acquisition goal of 25 acres of parks and open space per 1,000 residents. The County currently has 29.5 acres per 1,000 residents. The 2022 LPPRP also uses the Maryland Park Equity Tool to analyze county residents' access to a facility, park, open space, or amenity. In the Rural West, access is measured as a 5- to 15-minute drive. In the East, access is measured as a 5-minute drive or a 10-minute walk. The results of this analysis indicate that there are more areas of low access or low park equity in the eastern part of the County compared to the Rural West. The 2022 LPPRP sets an acquisition goal to prioritize parks and open space acquisition within census tracts with low park equity.

Land acquisition has become a challenge for the department in recent years as large parcels of available land become scarce. As a result, DRP has shifted to acquiring smaller parcels, generally of 25 acres or less. This trend is expected to continue as smaller parcels are acquired in redeveloped areas, especially activity centers, offering an opportunity to increase equitable access to green space and create links to existing open space. Park and recreation facilities in redeveloped areas could include plazas, pocket parks, and amphitheaters, as well as open space connections to nearby parks and pathways. Park and recreation facilities may also be provided through privately-owned playgrounds, dog parks, plazas, or entertainment areas with access restricted to residents of the development.

As inter-departmental needs for the last remaining developable land in the community become more competitive, undeveloped parkland and open space may sometimes be considered for new public facilities. The struggle to protect existing parks and develop new parks to serve a growing population is likely to escalate as the competition for space grows—especially in eastern portions of the County that are inside the Planned Service Area.



### INF-5 Policy Statement

Maintain and expand Howard County's park and open space system and recreation facilities and programs to keep pace with future growth and ensure safe, convenient, and equitable access to residents.

### Implementing Actions

1. Establish land acquisition goals for parks and open space in the Howard County Land Preservation, Parks and Recreation Plan (LPPRP), and prioritize parks and open space acquisition within communities with low park equity.
2. Establish countywide goals and priorities in the LPPRP for recreation facilities and programs that are accessible to all residents.
3. Build partnerships within county government and with other organizations across the County to efficiently share resources.
4. Use flexible designs for parks and open space in more urban areas, such as plazas, pocket parks, and amphitheaters and require redeveloped areas to set aside spaces for recreational activities and open spaces.
5. Partner with other county departments to link parks, open space, and recreation facilities to surrounding communities through transportation improvements.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>INF-4 - Minimize loss of life, loss of property, and injury due to fire or medical emergencies.</b>		
1. Construct and staff new and replacement fire stations in the Capital Improvement Program. Renovate and rehabilitate existing fire stations as appropriate to ensure the continued provision of efficient service.	DFRS	Ongoing
2. Continue to construct underground cisterns to support fire suppression in the Rural West. Determine strategic placement locations for water-holding cisterns that allow for improved water supply access and shortened distance for tanker trucks shuttling water for firefighting operations in the Rural West.	DFRS	Ongoing
3. Provide funding to replace fire and rescue vehicles when needed.	DFRS	Ongoing
4. Complete a strategic plan for the fire department that anticipates future year fire station needs based on the type, location, pattern, and intensity of development envisioned on the Future Land Use Map.	DFRS Elected Officials OOB	Mid-Term
5. Consider opportunities to provide shared-use facilities in some locations of the County to provide fire stations where they are most needed and thereby create equitable access, similar to the Merriweather District Fire Station.	DPW DFRS DPZ	Ongoing
<b>INF-5 - Maintain and expand Howard County's park and open space system and recreation facilities and programs to keep pace with future growth and ensure safe, convenient, and equitable access to residents.</b>		
1. Establish land acquisition goals for parks and open space in the Howard County Land Preservation, Parks and Recreation Plan (LPPRP), and prioritize parks and open space acquisition within communities with low park equity.	DRP	Mid-Term
2. Establish countywide goals and priorities in the LPPRP for recreation facilities and programs that are accessible to all residents.	DRP	Mid-Term
3. Build partnerships within county government and with other organizations across the County to efficiently share resources.	DRP All Agencies Non- profit Partners	Ongoing
4. Use flexible designs for parks and open space in more urban areas, such as plazas, pocket parks, and amphitheaters <u>and require redeveloped areas to set aside spaces for recreational activities and open spaces.</u>	DRP	Ongoing
5. Partner with other county departments to link parks, open space, and recreation facilities to surrounding communities through transportation improvements.	DRP OOT DPZ	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>INF-6 - Continue to invest judiciously to maintain and enhance county facilities and assess county agency space needs against the County's portfolio of spaces.</b>		
1. Use the Capital Improvement Program to evaluate and prioritize county building renovations.	DPW	Ongoing
2. Establish county space standards and evaluate the efficiency of county space usage. Assess future county agency needs for space.	DPW	Ongoing
3. Determine whether it is in the County's best interest to continue all or some leases. Consider opportunities to purchase leased space or construct new office and/or mixed-use spaces.	DPW	Ongoing
4. Determine whether it is in the County's best interest to continue to own or surplus various properties. Consider finite land supply and potential future costs of acquisition as part of such evaluation.	DPW	Ongoing
<b>INF-7 - Partner with the Howard County Library System to provide training and resources needed in the community.</b>		
1. Evaluate the need for additional library capacity in the County to serve planned population and program growth. Provide necessary expansion of resources via additions or new facilities within the Planned Service Area.	HCLS	Mid-Term
2. Enhance the design of existing and any future libraries to both optimize the delivery of service at each library branch and help create a civic focal point. Where feasible, integrate libraries with other complementary public or private facilities.	HCLS DPW Private Partners	Long-term
<b>INF-8 - Continue to support the Howard Community College's expanding abilities to provide higher education for county residents and workers.</b>		
1. Continue the County's commitment to fund expansion of the Howard Community College (HCC) to accommodate enrollment and program growth. Support the HCC in obtaining funding from the State of Maryland and others to invest in the campus.	HCEDA	Ongoing
2. Continue to work with the Howard County Economic Development Authority, the private sector, and other institutions of higher education to meet workforce development and re-training needs, especially in science and technology-related fields.	HCC HCEDA OWD Private Partners	Ongoing
3. Continue to expand non-credit course offerings and cultural programs that promote life-long learning and enhance community life.	HCC	Ongoing

**Amendment 108 to Council Bill No. 28 -2023**

**BY: Deb Jung**

**Legislative Day 12**

**Date: 10/12/2023**

**Amendment No. 108**

*(This Amendment makes the following changes to HoCo by Design Chapters 4 and 11:*

*Chapter 4: County in Motion* - *Adds a new section Future of the Transportation System which provides details for implementing enhancements for Baltimore/Washington International Airport;*  
- *Adds a new Policy Statement and Implementing Actions as CIM-10 which considers ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses those evolving conditions;*  
- *Clarifies Implementing Action #3 to indicate the Howard County agencies will partner with State and Federal agencies to develop environmental policy strategies to mitigate the impact of particulate matter;*

*Chapter 11: Implementation* - *Adds a new Policy Statement and Implementing Actions as CIM-10 which considers ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses those evolving conditions;*  
- *Clarifies Implementing Action #3 to indicate the Howard County agencies will partner with State and Federal agencies to develop environmental policy strategies to mitigate the impact of particulate matter;*  
- *Corrects the format of the new Policy Statement CIM-10.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, add the following pages  
2 as indicated in this Amendment:

- 3 • Chapter 4: County in Motion, insert page 32.1, 32.2, and 32.3.  
4 • Chapter 11: Implementation, insert page 27.1.

5  
6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

**I certify this is a true copy of**

*Am 108 CB28-2023*

**passed on** *10/11/2023*

*Michelle Howard*  
**Council Administrator**

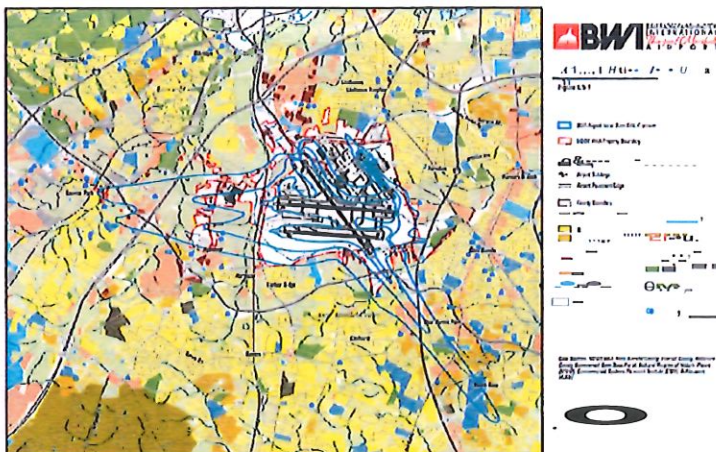
# Future of the Transportation System

## Baltimore/Washington International Airport Flight Paths

Noise associated with air traffic to and from Baltimore/Washington International (BWI) Thurgood Marshall Airport was recognized as far back as the 1982 General Plan, which described an objective "to ensure that general aviation activity does not produce excessive noise in residential areas." Three years after the adoption of Plan Howard 2030, the Federal Aviation Administration (FAA) implemented NextGen, creating an airspace in which planes are flying lower and longer over residential areas resulting in more noise impacts to residents in Howard County than ever before. Hundreds of thousands of noise complaints have been filed with the Maryland Aviation Administration (MAA) by residents impacted by these flight path changes.

To date, the MAA officially recognizes an Airport Noise Zones (ANZ) that was created "to control the incompatible land development around BWI Airport and develop a Noise Abatement Plan (NAP) to minimize the impact of aircraft noise on people living near the Airport." In order to develop residences or community facilities (such as churches, libraries, schools, and hospitals) in the ANZ, the Board of Airport Zoning Appeals (BAZA) must be petitioned and the proposals must meet specific noise reduction standards.

The first ANZ and NAP for BWI were adopted in 1976 and were most recently updated in 2020. In the 2020 update, the MAA expanded the ANZ by approximately 23%, due to various operational details, including changes in flight paths and the aircraft fleet mix. The 2015 adoption of the FAA's NextGen system contributed to many of these operational changes. The ANZ changes have had a significant impact on Anne Arundel County and abutting the Howard County border.



\*Source: MOOT MAA Airport Noise Zone Update, December 2020

To address the noise from BWI Airport, the BWI Roundtable was formed in 2017. It includes representatives from Howard and Anne Arundel Counties appointed by State and Local government representatives. The Roundtable called for changes to the operational procedures and flight patterns to lessen the airplane noise disturbances. These changes are anticipated to go into effect in the spring/summer of 2024.

Another concern expressed by residents pertains to the air pollution that may be caused by airplane particulate matter. Airplane exhaust, like car exhaust, contains a variety of pollutants, such as sulfur dioxide and nitrogen oxides. The County should work with State and Federal partners to mitigate any impact of the particulate matter on the air quality of Howard County communities within the flight paths.

While proximity to BWI serves as an economic generator for the movement of goods and provides many benefits to County residents and businesses who desire convenient access to commercial air travel, such proximity is not without its drawbacks. The County should continue to monitor BWI's flight patterns and the health impacts of aircraft noise and particulate matter on residents. The County should also advocate and participate in discussions with the FAA around mitigation of impacts associated with BWI flight paths. Development within Howard County that falls within the ANZ or directly under Next Gen flight paths should utilize best practices in building standards for attenuating noise. This is particularly important given recent studies on the impact of airport noise conducted at the request of the Maryland General Assembly, and FAA's consideration of changes to noise measurement policies to that more accurately reflect the true impact of noise on residents near airports.

**CIM-10 Policy Statement:** Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.

1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.
2. Continue to encourage the MAA and FAA ~~through County participation in the BWI Roundtable~~ to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.
3. Continue to advocate for State and Federal ~~policies~~ ~~Policies~~ to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). ~~Develop Support efforts by State and Federal partners to develop~~ environmental ~~policy~~ ~~policies and~~ strategies to mitigate the impacts of particulate matter.
4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.
5. ~~Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates. Work with our State and Federal partners to have them develop environmental strategies to mitigate the impacts of particulate matter.~~

**CIM-10 Policy Statement:** Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.

1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.
2. Continue to encourage the MAA and FAA through County participation in the BWI Roundtable to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.
3. Continue to advocate for State and Federal Policies to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). Develop environmental policy strategies to mitigate the impacts of particulate matter.
4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.
5. Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates.

**IMP 27.1 Chapter 11: Implementation**

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<p><b>CIM-10 Policy Statement:</b> Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.</p>		
<p>1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.</p>	<p>OOT Elected Officials</p>	<p>Ongoing</p>
<p>2. Continue to encourage the MAA and FAA through County participation in the BWI Roundtable to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.</p>	<p>OOT Elected Official</p>	<p>Ongoing</p>
<p>3. Continue to advocate for State and Federal policies. Policies to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). Develop Support efforts by State and Federal partners to develop environmental policy policies and strategies to mitigate the impacts of particulate matter.</p>	<p>OOT Elected Officials</p>	<p>Mid-Term</p>
<p>4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.</p>	<p>DPZ OOT DILP</p>	<p>Mid-Term</p>
<p>5. Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates. Work with our State and Federal partners to have them develop environmental strategies to mitigate the impacts of particulate matter.</p>	<p>DPZ OOT</p>	<p>Mid-Term</p>



Amendment 1 to Amendment No. 108 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 12

Date: 10/11/2023

*(This Amendment to Amendment 108 corrects the format of the new Policy Statement CIM-10; and clarifies Implementing Action #3 to indicate the Howard County agencies will partner with State and Federal agencies to develop environmental policy strategies to mitigate the impact of particulate matter.)*

- 1 Substitute the pages CIM-32.3 and IMP-27.1 attached to Amendment 108 with the pages
- 2 CIM-32.3 and IMP-27.1 attached to this Amendment to Amendment.
- 3

**I certify this is a true copy of**

Am 1 A 108 CB28-2023

**passed on** 10/11/2023

  
**Council Administrator**

**CIM-10 Policy Statement:** Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.

1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.
2. Continue to encourage the MAA and FAA ~~through County participation in the BWI Roundtable~~ to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.
3. Continue to advocate for State and Federal ~~policies~~ ~~Policies~~ to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). ~~Develop~~ ~~Support efforts by State and Federal partners to develop~~ environmental ~~policy~~ ~~policies and~~ strategies to mitigate the impacts of particulate matter.
4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.
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CIM-32.3 Chapter 4: County In Motion

**Table 10-1: Implementation Matrix**

Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<p><b>CIM-10 Policy Statement:</b> Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.</p>		
<p>1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.</p>	<p>OOT Elected Officials</p>	<p>Ongoing</p>
<p>2. Continue to encourage the MAA and FAA through County participation in the BWI Roundtable to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.</p>	<p>OOT Elected Official</p>	<p>Ongoing</p>
<p>3. Continue to advocate for State and Federal policies to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). Develop support efforts by State and Federal partners to develop environmental policy policies and strategies to mitigate the impacts of particulate matter.</p>	<p>OOT Elected Officials</p>	<p>Mid-Term</p>
<p>4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.</p>	<p>DPZ OOT DILP</p>	<p>Mid-Term</p>
<p>5. Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates. Work with our State and Federal partners to have them develop environmental strategies to mitigate the impacts of particulate matter.</p>	<p>DPZ OOT</p>	<p>Mid-Term</p>

Amendment 108 to Council Bill No. 28 -2023

BY: Deb Jung

Legislative Day 11

Date: 10/02/2023

Amendment No. 108

*(This Amendment makes the following changes to HoCo by Design Chapters 4 and 11:*

*Chapter 4: County in Motion - Adds a new section Future of the Transportation System which provides details for implementing enhancements for Baltimore/Washington International Airport;*  
*- Adds a new Policy Statement and Implementing Actions as CIM-10 which considers ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses those evolving conditions;*

*Chapter 11: Implementation - Adds a new Policy Statement and Implementing Actions as CIM-10 which considers ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses those evolving conditions.)*

1 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, add the following pages  
2 as indicated in this Amendment:

- 3 • Chapter 4: County in Motion, insert page 32.1, 32.2, and 32.3.  
4 • Chapter 11: Implementation, insert page 27.1.

5  
6 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
7 amendment.

8

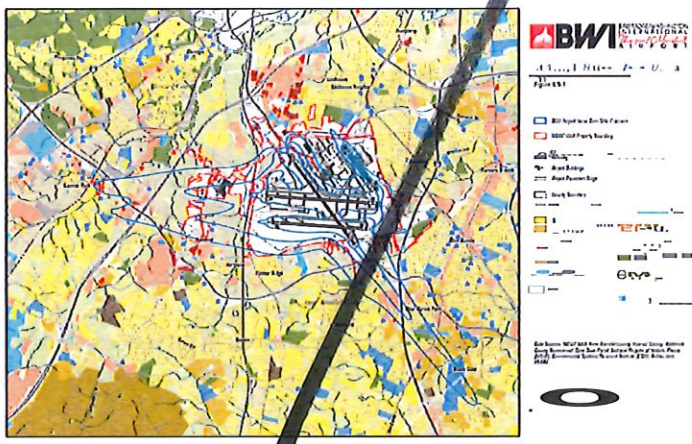
# Future of the Transportation System

## Baltimore/Washington International Airport Flight Paths

Noise associated with air traffic to and from Baltimore/Washington International (BWI) Thurgood Marshall Airport was recognized as far back as the 1982 General Plan, which described an objective "to ensure that general aviation activity does not produce excessive noise in residential areas." Three years after the adoption of Plan Howard 2030, the Federal Aviation Administration (FAA) implemented NextGen, creating an airspace in which planes are flying lower and longer over residential areas resulting in more noise impacts to residents in Howard County than ever before. Hundreds of thousands of noise complaints have been filed with the Maryland Aviation Administration (MAA) by residents impacted by these flight path changes.

To date, the MAA officially recognizes an Airport Noise Zones (ANZ) that was created "to control the incompatible land development around BWI Airport and develop a Noise Abatement Plan (NAP) to minimize the impact of aircraft noise on people living near the Airport." In order to develop residences or community facilities (such as churches, libraries, schools, and hospitals) in the ANZ, the Board of Airport Zoning Appeals (BAZA) must be petitioned and the proposals must meet specific noise reduction standards.

The first ANZ and NAP for BWI were adopted in 1976 and were most recently updated in 2020. In the 2020 update, the MAA expanded the ANZ by approximately 23%, due to various operational details, including changes in flight paths and the aircraft fleet mix. The 2015 adoption of the FAA's NextGen system contributed to many of these operational changes. The ANZ changes have had a significant impact on Anne Arundel County and abutting the Howard County border.



\*Source: MOOT MAA Airport Noise Zone Update, December 2020

To address the noise from BWI Airport, the BWI Roundtable was formed in 2017. It includes representatives from Howard and Anne Arundel Counties appointed by State and Local government representatives. The Roundtable called for changes to the operational procedures and flight patterns to lessen the airplane noise disturbances. These changes are anticipated to go into effect in the spring/summer of 2024.

Another concern expressed by residents pertains to the air pollution that may be caused by airplane particulate matter. Airplane exhaust, like car exhaust, contains a variety of pollutants, such as sulfur dioxide and nitrogen oxides. The County should work with State and Federal partners to mitigate any impact of the particulate matter on the air quality of Howard County communities within the flight paths.

While proximity to BWI serves as an economic generator for the movement of goods and provides many benefits to County residents and businesses who desire convenient access to commercial air travel, such proximity is not without its drawbacks. The County should continue to monitor BWI's flight patterns and the health impacts of aircraft noise and particulate matter on residents. The County should also advocate and participate in discussions with the FAA around mitigation of impacts associated with BWI flight paths. Development within Howard County that falls within the ANZ or directly under Next Gen flight paths should utilize best practices in building standards for attenuating noise. This is particularly important given recent studies on the impact of airport noise conducted at the request of the Maryland General Assembly, and FAA's consideration of changes to noise measurement policies to that more accurately reflect the true impact of noise on residents near airports.

**CIM-10 Policy Statement:** Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.

1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.
2. Continue to encourage the MAA and FAA through County participation in the BWI Roundtable to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.
3. Continue to advocate for State and Federal Policies to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). Develop environmental policy strategies to mitigate the impacts of particulate matter.
4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.
5. Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates.

CIM-32.3 Chapter 4: County In Motion

**CIM-10 Policy Statement:** Pursue ways to reduce the impacts of noise and air pollution generated by air travel and ensure that future residential development addresses these evolving conditions.

1. Continue participating in the BWI Roundtable to track the proposed technical changes requested by the BWI Roundtable and agreed to by the FAA.
2. Continue to encourage the MAA and FAA through County participation in the BWI Roundtable to identify and develop additional and necessary changes to NextGen that reduce airplane noise disturbances.
3. Continue to advocate for State and Federal Policies to help communities monitor the airplane particulate matter in communities within state or federally defined zones associated with BWI flight paths (existing height and noise). Develop environmental policy strategies to mitigate the impacts of particulate matter.
4. Research national trends and implement requirements for innovative building designs that reduce airplane noise in areas highly impacted by BWI operations.
5. Partner with the State of Maryland to implement policies and programs that will reduce and/or minimize impacts on the most highly impacted residents and on future developments. Continue to participate in all future updates to the ANZ and NAP updates.



Amendment 109 to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 11  
Date: 10/02/2023

Amendment No. 109

*(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11 to:*

- Chapter 3:  
Ecological Health*            - *Adds a statement about deer management in residential and recreational areas to the seventh Implementing Action to EH-7 Policy Statement; and*
  
- Chapter 11:  
Implementation*            - *Adds a statement about deer management in residential and recreational areas to the seventh Implementing Action to EH-7 Policy Statement.)*

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In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following pages as indicated in this Amendment:

- Chapter 3: Ecological Health: page 42.
- Chapter 11: Implementation: page 20.

Correct all page numbers, numbering, and formatting within this Act to accommodate this amendment.

**I certify this is a true copy of**

Am 109 CB 28 -2023

**passed on**

10/11/2023

*Michelle Howard*  
**Council Administrator**



### Forest Conservation Act

Since 1993, Howard County's Forest Conservation Act (FCA) has mitigated forest loss caused by development. The FCA contains a series of incentives and penalties to encourage forest retention on development sites and includes reforestation requirements for forest that is cleared. Afforestation (planting of areas presently without forest cover) is also required on sites that don't meet minimum forest cover specifications.

The FCA does not require an equal area replacement for forest cleared, and forest cover continues to be lost to development in Howard County and throughout Maryland. The County updated the FCA in 2019 to enhance forest retention, including changes such as adding site design requirements for larger residential developments to meet 75% of their forest conservation obligation on site. The update increased mitigation requirements by increasing replanting ratios, especially if the replanting was done outside the watershed where the clearing occurred, and limiting use of the fee-in-lieu option for residential developments. The update also made changes to ensure more successful forest plantings, such as increasing the maintenance period for new plantings from two to three years. The County will monitor implementation of the updated FCA to measure its effectiveness and modify the regulations as needed to enhance forest retention and ensure forest plantings are successful.

### Threats to Forest Health

The loss of forest species diversity and the degradation of forests by invasive exotic species are concerns for long-term forest health. Invasive exotic species are not native to the area where they live and are a significant problem because they can displace or kill native species. They lack the predators, competitors, diseases, or parasites that help control their populations in their native habitat. Invasive exotic species can include invertebrates such as the emerald ash borer, which kills ash trees, and plants such as Japanese honeysuckle and English ivy, which can smother trees.

Forest health is also damaged by an overpopulation of deer, which tend to prefer native species when browsing. When deer exceed the carrying capacity of a forest, they can eat most of the understory trees, shrubs, and herbaceous vegetation. Overgrazing of understory damages the ability of forests to regenerate, eliminates shrub and herbaceous species, and reduces bird species that nest within understory habitat. This damage can be compounded by impacts from invasive species, which can quickly cover the empty forest floor and inhibit the regrowth of native species. Invasive species often do not provide the same food, cover, and nesting benefits as native species do for native wildlife.

The Howard County Department of Recreation and Parks implements a comprehensive deer management program that is intended to maintain a stable, balanced deer population. Managing deer populations may also help reduce tick populations and tick-borne diseases such as Lyme disease. The program includes managed hunting on public lands to reduce deer numbers where necessary. Deer are quite adaptable and thrive in suburban environments, but hunting is not feasible in these areas, making it difficult to control their population on a countywide basis. Controlling deer-related impacts using a variety of management tools requires a cooperative effort between public agencies and landowners.

Climate change may exacerbate forest health issues caused by invasive exotic species and deer overpopulations. NOAA's Fourth National Climate Assessment notes that warmer winters in the northeast will likely expand the geographic range and population size of existing invasive exotic insect species, such as the emerald ash borer. There may also be a shift in native plant species to those that are better suited to a warmer climate, but if current species die off and new species are unable to become established, the forest may be unsustainable.

Increased forest management on public and private property can help address these threats to forest health and help forests transition to native species that are adaptable to a warmer climate and provide greater resilience to climate change. Federal and State programs are available to assist forest landowners with forest management. For example, the Maryland Department of Natural Resources will work with property owners to develop forest management or stewardship plans for a nominal fee.

### EH-7 Policy Statement

Expand native tree canopy and forest cover in the County and manage forests to ensure long-term health and sustainability, addressing threats from invasive species, overpopulation of deer, and climate change.

### Implementing Actions

1. Monitor implementation of the recently updated Forest Conservation Act and modify the Act as necessary to ensure adequate protection of forest resources.
2. Update countywide forest cover data on a regular basis to help assess changes in forest cover and manage forest resources over time.
3. Establish and achieve measurable goals for tree canopy, forest cover, and riparian forest buffers in all county watersheds.
4. Prioritize economically-vulnerable communities for native tree plantings to mitigate heat island impacts.
5. Continue and expand forest management on county properties to ensure long-term health and sustainability of the forest.
6. Continue and expand outreach and technical assistance to private forest landowners for forest management to ensure the long-term health and sustainability of the forest.
7. Continue and expand implementation of the county Deer Management Program [and develop safe strategies for deer management in residential and recreational areas](#).

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-6 - Expand the use of watershed management plans to provide a comprehensive framework for protecting and restoring natural resources.</b>		
1. Expand the scope of watershed management plans to set priorities and guide efforts to protect, restore, and improve the County's environmental resources.	DPW DPZ	Mid-Term
2. Continue to coordinate and cooperate with other local, regional, and state agencies and organizations on joint watershed planning and management for the Patuxent and the Patapsco Rivers.	DPZ DPW OCS HSCD HCHD	Ongoing
3. Ensure the Watershed Protection and Restoration Fund has adequate funding to meet National Pollutant Discharge Elimination System stormwater permit requirements and for proactive resource management.	DPW OCS Elected Officials OOB	Ongoing
4. Continue to pursue federal and state grant and cost-share opportunities to secure additional resources for restoration efforts. Apply jointly with community and environmental organizations and with neighboring jurisdictions, as appropriate.	DPW OCS DRP	Ongoing

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-7 - Expand native tree canopy and forest cover in the County and manage forests to ensure long-term health and sustainability, addressing threats from invasive species, overpopulation of deer, and climate change.</b>		
1. Monitor implementation of the recently updated Forest Conservation Act and modify the Act as necessary to ensure adequate protection of forest resources.	DPZ OCS DRP	Ongoing
2. Update countywide forest cover data on a regular basis to help assess changes in forest cover and manage forest resources over time.	OCS DPZ	Mid-Term
3. Establish and achieve measurable goals for tree canopy, forest cover, and riparian forest buffers in all county watersheds.	OCS DRP DPW DPZ	Mid-Term
4. Prioritize economically-vulnerable communities for native tree plantings to mitigate heat island impacts.	DRP DPW OCS DPZ	Ongoing
5. Continue and expand forest management on county properties to ensure long-term health and sustainability of the forest.	DRP	Ongoing
6. Continue and expand outreach and technical assistance to private forest landowners for forest management to ensure the long-term health and sustainability of the forest.	OCS DRP DPZ	Ongoing
7. Continue and expand implementation of the county Deer Management Program <a href="#">and develop safe strategies for deer management in residential and recreational areas.</a>	DRP	Ongoing

Amendment 110 to Council Bill No. 28 -2023

BY: Liz Walsh

Legislative Day 11

Date: 10/02/2023

Amendment No. 110

*(This Amendment makes the following changes to HoCo by Design Chapter 3 and Chapter 11 to:*

*Chapter 3: Ecological Health* - *Adds a new Implementing Action to EH-9 Policy Statement about new agricultural zoning districts; and*

*Chapter 11: Implementation* - *Adds a new Implementing Action to EH-9 Policy Statement about new agricultural zoning districts.)*

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3 In the *HoCo By Design* General Plan, attached to this Act as Exhibit A, amend the following  
4 pages as indicated in this Amendment:

- 5 • Chapter 3: Ecological Health: page 54.  
6 • Chapter 11: Implementation: page 21.

7

8 Correct all page numbers, numbering, and formatting within this Act to accommodate this  
9 amendment.

10

I certify this is a true copy of

Am 110 CB28-2023

passed on 10/11/2023

Not Moved

*Liz Walsh*  
Council Administrator

## ALPP Funding

Since its inception, the ALPP has been funded by a 25% share of local transfer tax revenues. This dedicated funding source has been critical to the success of the program over the years. The County initially compensated property owners in cash for their development rights, but in 1989 established the installment purchase agreement (IPA) method. The initial IPAs provided the property owner with small, incremental principal payments and twice-yearly tax-free interest throughout the length of the term, with a balloon payment of the remaining principal upon maturity of the IPA bond. After about 20 years, the County stopped using balloon payments and began paying the owner in equal amounts over the length of the term. The twice yearly tax-free interest on the remaining principal arrangement did not change. Howard County was the first jurisdiction in the nation to utilize the innovative IPA approach, the template of which has since been copied elsewhere in Maryland and across the country.

The County monitors the fund balance annually to ensure solvency and to anticipate future spending potential. A number of large final IPA payments will come due between 2019 and 2024, resulting in a significant decrease in the fund balance. However, given the waning number of annual acquisitions, the closure of final payouts, and reduced interest rates over time, the fund balance is projected to rebound quickly and significantly starting in the mid-to-late 2020s.

Given the limited amount of remaining land eligible for preservation, the County should consider repurposing a portion of the fund to assist the agricultural community in other ways and to enhance the County's efforts to improve ecological health, as discussed earlier in this chapter. There is precedent for using the ALPP Fund for other agricultural purposes besides acquisition, including support for the Howard Soil Conservation District and the Agricultural Business Development Program within the Howard County Economic Development Authority. However, any significant transition to non-agricultural uses would require legislation at the state level, since the funding is sourced from the transfer tax.

## The Future of ALPP

There are approximately 86 properties totaling just over 3,300 acres that are potentially eligible for the ALPP. Additional recruitment efforts to preserve remaining uncommitted land may prove successful as properties transfer to new ownership. However, it is unlikely that recruitment will result in a significant amount of additional preserved land, since the ALPP is well known throughout the community, given its 40-year operational history in Howard County.

PlanHoward 2030 recognized that uncommitted land was a diminishing resource and that, in addition to acquisition, the focus of the ALPP should shift to stewarding existing easements, and helping farmers confront challenges and embrace opportunities that they may face in the future. In the intervening years since the adoption of PlanHoward 2030, the ALPP has been active and successful in these endeavors. There have been 26 properties preserved, totaling 1,480 acres. As of this General Plan, two additional properties totaling 55 acres are in the acquisition pipeline. The ALPP established and implemented an easement stewardship program, whereby most properties received their first monitoring inspection in well over a decade. Monitoring helps determine whether the terms and conditions of each easement are being met, such as maintaining the agricultural suitability of the land. Lastly, ALPP staff continues to partner with the County's other agricultural agencies to provide financial incentives, technical assistance, and general support to the farming community as it grows and diversifies.

## EH-9 Policy Statement

Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.

## Implementing Actions

1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.
4. [Define and apply one or more new zoning districts specific to agricultural use and preservation.](#)

## EH-10 Policy Statement

Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.

## Implementing Actions

1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-8 - Expand implementation of the Green Infrastructure Network Plan.</b>		
1. Integrate the Green Infrastructure Network Plan implementation actions into the relevant county plans and programs.	DPZ DRP OCS DPW	Ongoing
2. Consider use of an overlay zoning district or other regulatory measures to target resource protection measures for the Green Infrastructure Network.	DPZ	Mid-Term
3. Establish an easement or land purchase program to protect uncommitted parcels within the Green Infrastructure Network.	DPZ OCS	Mid-Term
4. Amend county design standards for roads, bridges, and culverts to facilitate safe passage for wildlife at county road crossings within the Green Infrastructure Network.	DPZ OCS DPW OOT	Mid-Term
5. Conduct studies of existing resource conditions and wildlife use within the network to enhance management of the Green Infrastructure Network.	DPZ OCS	Long-Term
6. Consider expansion of the Green Infrastructure Network to include smaller habitat areas that provide 'stepping stones' to the primary network.	DPZ OCS	Mid-Term
<b>EH-9 - Continue to promote agricultural land preservation, recognizing that uncommitted land in the Rural West is a diminishing resource.</b>		
1. Build on the successes of the Agricultural Land Preservation Program (ALPP) and continue acquiring land through the ALPP.	DPZ OCS	Ongoing
2. Continue to promote other land preservation options, such as the dedication of easements to the County through the subdivision process, the purchase of easements by the Maryland Agricultural Land Preservation Foundation program, and the donation of easements to nonprofit land trusts.	DPZ	Ongoing
3. Continue to implement the Agricultural Land Preservation Program easement stewardship activities to monitor compliance.	DPZ OCS	Ongoing
<u>4. Define and apply one or more new zoning districts specific to agricultural use and preservation.</u>	DPZ	Ongoing
<b>EH-10 - Expand the scope of potential uses of the Agricultural Land Preservation Program Fund.</b>		
1. Work with various stakeholders to identify areas for the most appropriate and effective potential uses of the fund, including support for environmental programs, while ensuring continued funding of the ALPP.	DPZ OCS	Mid-Term

Table 10-1: Implementation Matrix		
Policy and Implementing Actions	Lead Agency	Timeframe (Mid-Term five-year, Long-Term six+ years, Ongoing)
<b>EH-11 - Encourage individual environmental stewardship in daily activities on private and public property.</b>		
1. The County should continue to provide leadership by incorporating environmentally sensitive site development and property management practices on county properties.	DPW DRP DPZ OCS	Ongoing
2. Continue existing and expand current outreach programs to promote and assist private property owners with the implementation of stewardship practices.	OCS DRP HSCD Private Property Owners	Ongoing
3. Increase opportunities for student participation in environmental outreach and education and stewardship practices on school properties.	HCPSS HSCD OCS DRP	Ongoing
<b>EH-12 - Commit to and support the County's designation as a Bee City USA.</b>		
1. Integrate pollinator-friendly practices into county policies, programs, and capital projects.	OCS DRP DPW DPZ	Mid-Term
2. Incorporate improvements to the County's pest management policies and practices as they relate to pollinator conservation.	OCS DRP	Ongoing
3. Develop and implement a program to create and enhance pollinator-friendly habitat on public and private land.	OCS DRP Private Partners	Mid-Term
<b>EH-13 - Continue to balance the potential for mineral resource extraction with other land uses.</b>		
1. Continue to allow mineral resource extraction as a conditional use in the Zoning Regulations in appropriate locations.	DPZ	Ongoing