VISION ZERO
ZERO TRAFFIC DEATHS IN MoCo

OUR PLAN TO ELIMINATE FATALITIES AND SERIOUS INJURIES ON OUR ROADS BY 2030

2030 ACTION PLAN • FY22-23 WORK PLAN

APRIL 2021 PUBLIC COMMENT DRAFT 1.0

MESSAGE FROM THE COUNTY EXECUTIVE

County Executive
Marc Elrich

As we look forward to reopening and reconnecting after the COVID-19 pandemic ends, we should not settle for going back to normal. We need to work together to build a better normal and part of that better normal is creating a county where you can freely travel without the risk of serious injury or death. My Vision Zero 2030 Plan lays out a path for us to get there.

We have made progress since adopting the first Vision Zero plan in late 2017, but there is much more we can do. The County Government along with our city and state partners have installed new signals and pedestrian beacons to create safer and more frequent crossings, built the first protected intersection in the Mid-Atlantic region, and continued installing sidewalks and protected bike facilities to make our streets more complete. However, the number of serious and fatal injuries remains higher than we can accept.

The Vision Zero 2030 Plan reflects our strong commitment to ending serious and fatal traffic crashes and identifies the partners and resources necessary to meet our goal. I have dedicated over $425 million in county spending over the next six years to bring these safety projects off the page and to our roads. Under this plan, we commit to creating streets made for everyone by building and expanding sidewalks, installing protected bicycle infrastructure, improving safety to and from bus stops, and fixing dangerous intersections. As we construct the Purple Line and bus rapid transit systems, we will build the pedestrian and bicycle infrastructure along with these lines to reimagine our dangerous highways into multi-modal boulevards. The County Government will continue to work with state and federal partners to ensure they are committing funds and prioritizing safety.

While the County puts resources in place to build safer roadways, I encourage you to do your part by putting your phone away while driving, buckling up for every trip and every seat, never drive impaired, and always drive at or below the speed limit. Following the rules of the road keeps you and everyone around you safe.

Vision Zero is an audacious goal. It is one that we can all embrace and champion together in order to bring to zero the number of heartbreaking deaths and serious injuries due to traffic collisions. Together, we can reach Vision Zero by 2030.

County Executive Marc Elrich

ABOUT THIS VERSION OF THE 2030 ACTION PLAN

This version of the Vision Zero 2030 Action Plan was released on April 15, 2021 for public review. The Vision Zero Coordinator will be collecting public feedback from April to June 2021 and incorporating those ideas into a final draft to be published in July 2021.

ACKNOWLEDGEMENTS

Montgomery County Government thanks all the people who contributed their time and thoughts to develop the Vision Zero 2030 Action Plan. The 1,500+ county residents that participated in surveys, interviews, and listening sessions were crucial in developing the priorities for this plan. The dozens of municipal, county, and state government employees that examined the public's input and developed the action items and work plan. The consultant teams of Crash CORE and Brotman, Winter, Fried Consulting, Inc. that aided in the plan development and outreach. The County looks forward to continuing this collaborative community effort to end all traffic fatalities and serious injuries in this decade.

IMAGES

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DEFINITIONS

The following list provides definitions of key terms used in this Plan.

Accessibility. The ability of all people, particularly those with disabilities, to access and use the transportation system.

Aggressive Driving. Maryland law states that a person is guilty of aggressive driving if the person commits three or more of the following offenses at the same time or during a single and continuous period of driving in violation of: failure to obey traffic lights with steady indication, overtaking and passing vehicles, passing on right, failing to obey traffic control device, following too closely, failure to yield right-of-way, or exceeding a maximum speed limit or posted maximum speed limit.

Aggressive Driving Related Crash. A crash in which a driver has more than three of the following values in the contributing circumstance fields of the Maryland crash report: failed to yield right of way, failed to obey stop sign, failed to obey traffic signal, failed to obey other traffic control device, failed to keep right of center, failed to stop for school bus, exceeded speed limit, too fast for conditions, followed too closely, improper lane change, improper passing, failure to obey traffic signs, signals, or officer, disregarded other road markings, other improper action, or operated motor vehicle in erratic/reckless manner.

Autonomous/Automated Vehicle. A vehicle that is capable of sensing its environment and moving safely with little or no human input.

Bicyclist. A person on any type of pedal cycle, including bicycles, tricycles, unicycles, and any trailers or sidecars attached to these cycles.

Complete Streets. Roadways that are designed and operated to provide safe, accessible, and healthy travel for all users of our roadway system, including pedestrians, bicyclists, transit riders, and motorists. On a Complete Street, it is intuitive and safe to cross the street, walk to shops, and bicycle to school. Complete Streets function as a system, ensuring that the transportation network as a whole provides safe and efficient access for all roadway users and only provides designated spaces for each mode when needed.

Contributing Factor. Conditions of the environment (such as lighting, weather), vehicle (brakes, lights), road (debris, obstructions), or driver behavior (inattentiveness, driving under the influence of alcohol or drugs) that contribute to the occurrence of a crash or its severity.

Crash/Collision. A set of events that results in injury or property damage due to the collision of at least one motorized vehicle and may involve collision with another motorized vehicle, a bicyclist, a pedestrian, or a fixed object.

Crash Reduction Factor. The estimate of the percentage reduction in crashes after the implementation of a project or initiative.

Culture of Safety. "The shared belief system of a group of people, which influences road user behaviors and stakeholder actions that impact traffic safety." ("Traffic Safety Culture Primer" 2019).[1]

Distracted Driving Related Crash. A crash where at least one driver in the

crash was reported to be distracted. Distracted is defined by having values of either "failure to give full time and attention" or "cell phone in use" in any contributing circumstance fields, or any of the following values in the driver distracted by field: looked but did not see; other electronic device (tablet, GPS, MP3 player, etc.); by other occupants; by moving object in vehicle; talking or listening on cellular phone; dialing cellular phone; adjusting audio and/or climate controls; using other device controls integral to vehicle; using device/object brought into vehicle (non-electronic); distracted by outside person, object, or event; eating or drinking; smoking related; other cellular phone related; lost in thought; or texting from a cellular phone.

Driver. Operator of a motor vehicle.

Impaired Driving Related Crash. The Maryland definition of an impaired driving crash is: At least one driver in the crash is determined to be impaired by the investigating officer as indicated through the driver condition, blood alcohol content, substance use detected, and contributing factor fields on the Maryland crash report: person condition of "had been drinking," "using drugs," or "influenced by medications and/or drugs and/or alcohol", blood alcohol concentration (BAC) between 0.01 and 0.50, substance use of '"alcohol contributed," "illegal drugs contributed," "medication contributed," or "combination contributed", or contributing circumstance of "under the influence of drugs," "under the influence of alcohol," "under the influence of medication," or "under combined influence."

Injury Severity 01 – No Apparent Injury. A situation where there is no reason to believe that the person received any bodily harm from the motor vehicle crash. There is no physical evidence of injury and the person does not report any change in normal function.

Injury Severity 02 – Possible Injury. Any injury reported or claimed which is not a fatal, suspected serious, or suspected minor injury. Examples include momentary loss of consciousness, claim of injury, limping, or complaint of pain or nausea. Possible injuries are those that are reported by the person or are indicated by his/her behavior, but no wounds or injuries are readily evident.

Injury Severity 03 – Suspected Minor Injury. A minor injury is any injury that is evident at the scene of the crash, other than fatal or serious injuries. Examples include lump on the head, abrasions, bruises, minor lacerations (cuts on the skin surface with minimal bleeding and no exposure of deeper tissue/muscle).

Injury Severity 04 – Suspected Serious Injury. A suspected serious injury is any injury other than fatal which results in one or more of the following: Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood, Broken or distorted extremity (arm or leg), Crush injuries, Suspected skull, chest or abdominal injury other than bruises or minor lacerations, Significant burns (second and third degree burns over 10% or more of the body), Unconsciousness when taken from the crash scene, or Paralysis.

Injury Severity 05 – Fatal Injury. Any injury that results in death within one year after the motor vehicle crash in which the injury occurred. If the person did not die at the scene but died within one year of the motor vehicle crash in which the injury occurred, the injury classification is changed from the attribute previously assigned to the attribute "fatal injury." Note that this definition differs from

Federal reporting, which counts fatal injuries within 30 days of the crash.

Intersection Crash. A crash that occurs within the limits of an intersection.

Intersection Related Crash. Crashes reported as occurring in an intersection or being intersection related. "Intersection related" is not a location type but a judgment about the effects of intersections and their traffic controls upon traffic and crash causation. If the crash is deemed to have occurred as a result of backed-up traffic from an intersection (presumably at a non-intersection location) the junction relationship is "intersection related."

Micromobility. Travel over short distances using lightweight transportation devices such as bicycles and scooters that typically travel at low speeds and designed for a single occupant that do not require a driver's license to operate.

Motorcycle Crash. A crash involving at least one motorcycle, defined as a "motorcycle" body type.

Motorist. Driver or passenger of a vehicle or motorcycle.

Older Driver Related Crash. A crash where at least one driver in the crash was reported to be between the ages of 65 and 110.

Pedestrian. Person on foot (using the 'pedestrian' person type and 'pedestrian on foot' pedestrian type), including a motorist who has exited a vehicle, and people on other conveyances such as wheelchairs, skateboards, roller skates, or roller blades.

Pedestrian Crash. Crash where at least one pedestrian is struck by a moving vehicle.

Police Crash Report Data. Reported, collected, and administered by the Maryland State Police.

Racial Equity and Social Justice. Changes in policy, practice, and allocation of County resources so that race or social justice constructs do not predict one's success, while also improving opportunities and outcomes for all people.

Road System. All of the roads (local and/or highway) that are under the jurisdiction of a single agency (such as state, county, or municipality).

Roadway. A portion of land dedicated for travel by motor vehicles, bicycles, pedestrians, and other conveyances. This includes the general travel lanes and adjacent shoulders, sidewalks, and bike facilities.

Run-off-the-Road Crash. A crash where the first event was recorded as "striking a fixed object" or "running off the road" or the location of the crash was reported as "off-road" or "in the median."

Safe System Approach. Under the safe system approach, road safety is a shared responsibility among everyone, including those that design, build, operate and use the road system. It takes a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles, and road users.

Speed Related Crash. A crash where at least one driver in the crash was reported to be speeding, defined by having values of either "exceeded speed limit" or "too fast for conditions" in any of the contributing circumstance fields.

Unrestrained Occupant. A passenger-vehicle (automobile, station wagon, van, SUV, pickup truck) occupant who is: less than eight years of age recorded as not using a "child/youth restraint," eight years

of age or older recorded as not using a "lap and shoulder belt" or "air bag and belt," or where restraint use was recorded as using "none" or "air bag only."

Vehicle. A device in, upon, or by which a person or property is or may be transported upon a highway, except devices moved by human power or used exclusively on stationary rails or tracks.

Work-Zone Crash. Crashes occurring in a construction/ maintenance zone.

Young Driver Related Crash. A crash where at least one driver in the crash was reported to be between the ages of 16 and 20.

ACRONYMS

The following are acronyms used throughout this Plan.

Acronym	Definition
ABS	Alcohol Beverage Services
ACC	Accessibility
ADA	Americans with Disabilities Act
BRT	Bus Rapid Transit
CAP	Climate Action Plan
County	Uppercased "County" = Montgomery County Government
CEX	Office of the County Executive
CIP	Capital Improvements Program
CRF	Crash Reduction Factor
CSDG	Complete Streets Design Guide
DEP	Department of Environmental Protection
DGS	Department of General Services
HHS	Montgomery County Department of Health and Human Services
HIN	High Injury Network
KSI	Killed or seriously injured
MCDOT	Montgomery County Department of Transportation
MCFRS	Montgomery County Fire and Rescue Service
MCPD	Montgomery County Police
MCPS	Montgomery County Public Schools
MDOT	Maryland Department of Transportation
MDTA	Maryland Transportation Authority
MHSO	Maryland Highway Safety Office
M-NCPPC	Maryland-National Capital Park and Planning Commission
MSP	Maryland State Police
MWCOG	Metropolitan Washington Council of Governments
OHR	Office of Human Resources
OMB	Office of Management and Budget
OPI	Office of Public Information
Parks	Montgomery County Parks Department
PEPCO	Potomac Electric Company
Planning	Montgomery County Planning Department
REC	Department of Recreation
RESJ	Racial Equity and Social Justice
RSC	Regional Service Center
SHA	State Highway Administration
SHSP	Strategic Highway Safety Plan
UD	Urban Districts
WMATA	Washington Metropolitan Area Transit Authority

In remembrance of the
163 people that lost their
lives on our roadways
from 2015 to 2019.

REMEMBERING VICTIMS OF TRAFFIC CRASHES

Every life lost on our roads is more than a statistic. Each death represents a mother, daughter, father, brother, or dear friend that had their life cut short.

As we work together to build a county without traffic deaths, the County wants to remember and share stories of those we lost too soon. If you would like to share a photo and information about a person that was seriously injured or killed in Montgomery County, e-mail VisionZero@MontgomeryCountyMD.gov. We will incorporate their stories throughout the final version of the 2030 Action Plan to celebrate a life lived and remind us all why the only acceptable goal is zero.

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THE VISION ZERO APPROACH TO ROAD SAFETY

The Vision Zero concept for roadway safety was created in Sweden during the 1990's and is widely credited for significant reductions in serious and fatal traffic collisions, despite increased driving, biking, and transit use.[2] At the core of the Vision Zero philosophy is that serious and fatal traffic crashes are unacceptable, preventable, and the design, construction, and maintenance of the roadway system can minimize the consequences of human error. Since Sweden's implementation, Vision Zero has been adopted across the world and as of April 2021 over 40 US jurisdictions.[3] Montgomery County adopted Vision Zero in 2016 and was one of the first county governments to implement a Vision Zero Action Plan in November 2017.

The Montgomery County Council adopted Resolution 18-390 in 2016 to make Montgomery County a Vision Zero community. The above photo with councilmembers, department directors, and civic group members was the County's kickoff for Vision Zero.

Vision Zero Guiding Principles

In reviewing other Vision Zero implementations, leading practices, and input from the Pedestrian, Bicycle, Traffic Safety Advisory Committee, Montgomery County will utilize the following seven guiding principles for implementing Vision Zero.

1. **Transportation–related deaths and serious injuries are preventable and unacceptable.**

2. **Human life takes priority over mobility and other objectives of the road system.** The road system should be safe for all users, for all modes of transportation, in all communities, and for people of all ages and abilities.

3. **Equitably prioritize funding, resources and outreach** to communities that experience a disproportionate burden of traffic-related fatalities and serious injuries.

4. People will make mistakes. The transportation **system should be designed so those mistakes do not lead to serious injury or death.**

5. People are inherently vulnerable, and **speed at the time of collision is a fundamental predictor of crash survival.** The transportation system should be contextually designed for speeds that protect human life.

6. **Policies and resources at all levels of government need to align**, making safety the highest priority for roadways.

7. **All road users have a responsibility to respect one another**, and to behave in a safe manner. Drivers have the potential to do the most harm and have a responsibility to be mindful and respectful of others on the public right of way.

VISION ZERO AND SAFE SYSTEMS

CRASH, NOT ACCIDENT

Traffic crashes are not inevitable accidents. Vision Zero communities study the environmental and behavioral factors that lead to serious and fatal collisions and use leading practices to create a safer system for all roadway users.

Utilizing the safe systems approach to designing and maintaining the roadway system is how communities work towards Vision Zero. Under the safe system approach, road safety is a shared responsibility among everyone, including those that design, build, operate and use the road system. It takes a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles, and road users.

Key to the safe systems approach for mitigating serious and fatal injuries is reducing exposure through separation of roadway users, particularly when travel speeds exceed 30 mph, and reducing vehicle speeds to lower the probability and severity of a crash. Whether walking, rolling, biking, or driving, the speed at the time of the collision has a strong effect on crash survivability. The graphic below shows the speed at which most people can survive the crash. As the speed increases beyond the critical speed, survivability rates drop exponentially.[4,5]
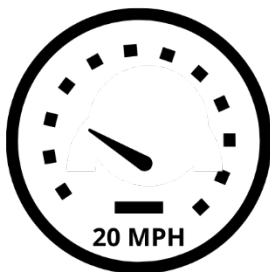
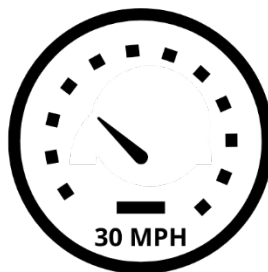*A pedestrian struck at 23 MPH has a 10% risk of fatal injuries, but only 50% chance of surviving at 42 MPH.*

Crash Survivability Drops Significantly Above These Speeds

Pedestrian or Cyclist Struck At...

20 MPH

Side Impact Collision At...

30 MPH

Head On Collision At...

45 MPH

VISION ZERO 2030 PLAN HIGHLIGHTS

The Vision Zero 2030 Action Plan lays out the County's work for rest of this decade to eliminate serious and fatal crashes. All 45 action items were developed to work towards Vision Zero while building a healthy, equitable, just, and resilient community. The full list of action items can be found starting on page 24.

Systematically Updating Road and Transit Networks. Like many US communities, Montgomery County was planned and built for 50-60 years with the goal of moving cars long distances at high speeds. With the Vision Zero goal and the new Complete Streets Design Guide developed under the 2018-19 Action Plan, the County will transform our dangerous highways into multi-modal boulevards so no matter how residents choose to get around it can be done safely. The work includes using data to identify and remediate the most dangerous roads and intersections, building out a complete sidewalk and bike network, more frequent protected crossings, improving pedestrian and bike connections for existing and new rapid transit, and utilizing existing maintenance and transportation projects to proactively improve roadways.

Creating Safe Speeds on All Roads. Because of the prior focus on car movement, many roadways have design and posted speed limits that do not prioritize the safety of all roadway users. In all Vision Zero projects going forward, the County will evaluate and modify speed limits to align with the surrounding land use.

Elevating Racial Equity and Social Justice. Serious and fatal crashes happen across the county, but disproportionately impact neighborhoods where a majority of residents live in poverty or a majority of residents are people of color. The Plan calls for prioritizing these neighborhoods for infrastructure investments, improving outreach and two-way communication with impacted residents, and reimaging public safety to provide purposeful policing that addresses safety and past injustices.

Ending Impaired Driving Deaths. Drunk and drugged driving are a leading contributing factor for fatal crashes and curbing impaired driving takes more than police enforcement. The Plan calls for a public health approach to address substance abuse in our community and utilizing government and non-profit partners to implement the new strategy.

Montgomery County as a Leading Employer in Safety. Montgomery County Government as one of the county's largest employers has over 3,600 vehicles and 9,000 employees driving each day. The Plan calls for improving the safety of the vehicle fleet as they are replaced and implementing updated driver training to employees. These efforts not only improve safety, but potentially save taxpayer money through reduced crashes.

Prompt Emergency Medical Care. When crashes do occur, prompt care by first responders and hospital care are critical aspects of preventing serious injuries from becoming fatal. The Plan continues to prioritize safe and efficient response and care while assuring the safety of first responders on the scene.

2018-2020 VISION ZERO OVERVIEW

Montgomery County launched its first Vision Zero Action Plan in November 2017. Highlights from Vison Zero projects and campaigns since Vision Zero was adopted are shown below. Note that year 3 was during the COVID-19 pandemic, which affected all programs but particularly slowed outreach and enforcement campaigns. [a, b]

14.5 Miles of New Bikeways

35 New Traffic Signals and Beacons

16.5 Miles of New Sidewalk

7.4 Miles of Highway Lane Widths Reduced to Lower Speeds

26 Highway Miles with Speed Limit Reductions

100% of County Streetlights Converted to LED

1,921 Crosswalks Refreshed

6,463 Carseats Installed

1,151,806 Citations Issued by Automated Speed Enforcement

7,421 Arrests for Driving while Impaired

[a] Bikeways mileage includes all bikeways – conventional bike lanes, separated bike lanes, bike friendly shoulders, sidewalk bikeways, and paved off road trails.
[b] Automated speed enforcement citations and sidewalk mileage based on fiscal years 2018 to 2020.

CURRENT STATE OF ROADWAY SAFETY

Crash Frequency and Societal Costs

From 2015 to 2019, over 23,000 collisions each year were reported to Montgomery County's Emergency Communication Center. Below is a crash clock showing the frequency of certain crash types in Montgomery County and the economic and societal costs of those crashes.

Event	Occurrence[c]
Collision	**000** days, **00** hours, **23** minutes
Collision with Injuries	**000** days, **02** hours, **06** minutes
Collision with Person Walking	**000** days, **18** hours, **06** minutes
Collision with Serious or Fatal Injuries	**001** days, **06** hours, **53** minutes
Collision with Person Biking	**002** days, **15** hours, **53** minutes
Collision with Fatal Injuries	**012** days, **00** hours, **19** minutes
Person in Motor Vehicle Killed	**021** days, **17** hours, **43** minutes
Person Walking Killed	**030** days, **22** hours, **47** minutes
Person Biking Killed	**202** days, **21** hours, **20** minutes

A person was seriously injured or killed in a crash on average every 1.25 days.

[c] The event clock is designed to convey the frequency of crashes in Montgomery County, but should not be taken to imply regularity in the commission of recorded vehicle collisions. The event clock represents the ratio of crashes to a fixed time interval.

[d] Economic and comprehensive costs were calculated based on the average cost by injury severity reported by the National Safety Council and the total count of injuries reported to county and municipal police from 2015-2019. Costs were in 2019 dollars.

Crash Trends

Serious and Fatal Collisions 2015-2019

In developing the 2030 Action Plan, collision data covering 2015 to 2019 were analyzed. There were 1,419 collisions that resulted in 1,461 serious injuries and 163 fatalities to drivers, passengers, pedestrians, and bicyclists.

From 2015 to 2019, the number of serious collisions declined 15%, but from 2018 to 2019 were largely unchanged at 236 and 239, respectively.[e] The declines were attributed to improvements for motor vehicle occupants. The number of serious injury crashes for people biking and walking increased from 72 in 2015 to 80 in 2019.

The County averaged 30 fatal collisions a year from 2015 to 2019. Fatal collisions declined from 2015 to 2017, but increased since 2017. People biking and walking represented 45% of fatal collisions, which was significantly higher than the 14% of total injury collisions recorded during the five years.

Note that the crash data presented do not include every collision that occurred in the county during the analysis period. The main areas excluded are the interstates (I-495 and I-270), the Intercounty Connector (MD-200), and roads maintained by the Federal Government. These areas were omitted for two reasons. First, MCPD's records did not include reports from all police departments operating within Montgomery County. Second, the action plan was designed to focus on areas where the County Government has some control over the roadway for design or enforcement.

Reports Included	Reports Not Included
Montgomery County PD	MD State Police
Rockville PD	MD Transit Authority
Gaithersburg PD	Chevy Chase Police
M-NCPPC Park Police	Federal Agencies
Takoma Park	

SERIOUS AND FATAL COLLISIONS
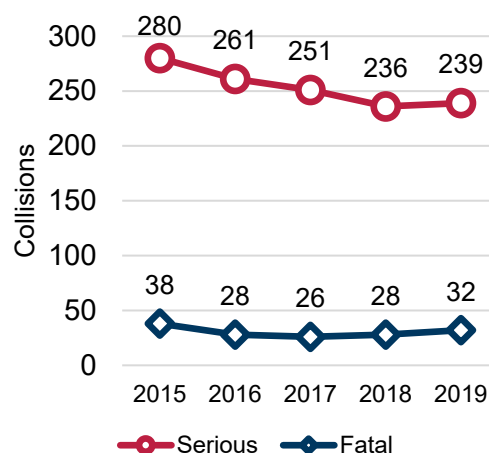
PEDESTRIANS AND CYCLISTS AS A PERCENTAGE OF INJURY CRASHES

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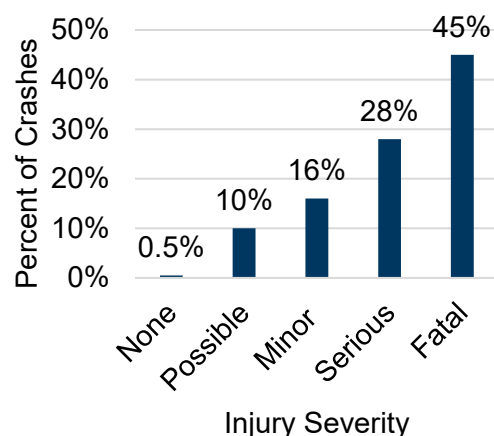
[e] See the full definition of injury severity levels in the definitions section.

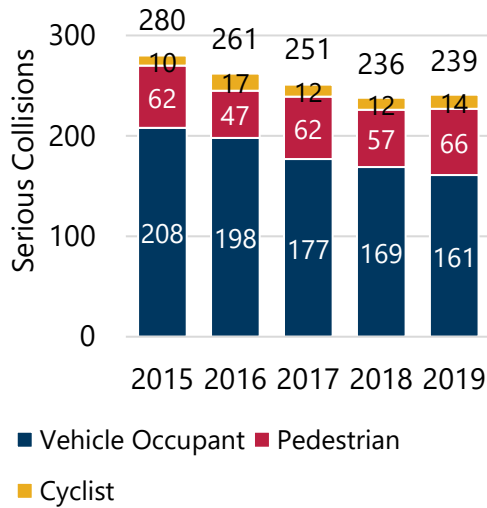## SERIOUS COLLISIONS, 2015-2019[f]

FATAL COLLISIONS, 2015-2019
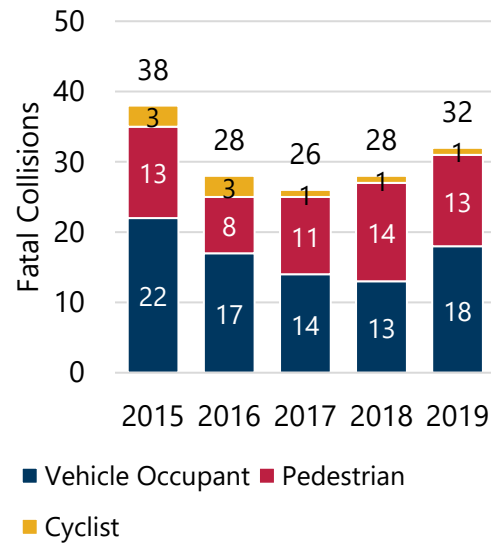
Fatal Crash Rate Comparison

The National Highway Traffic Safety Administration (NHTSA) maintains a census of all motor vehicle crashes with a fatal injury in the United States.[g] Using NHTSA data combined with data on traffic volume allowed for comparing fatality rates across jurisdictions Montgomery County's fatal crash rate was well below national and state averages for 2015 to 2019. The County's fatal crash rate per 100 million vehicle miles travelled was 78% below the national and 55% below the state average.

2015-2019 FATAL CRASH RATE PER 100 MILLION VEHICLE MILES TRAVELED (VMT)

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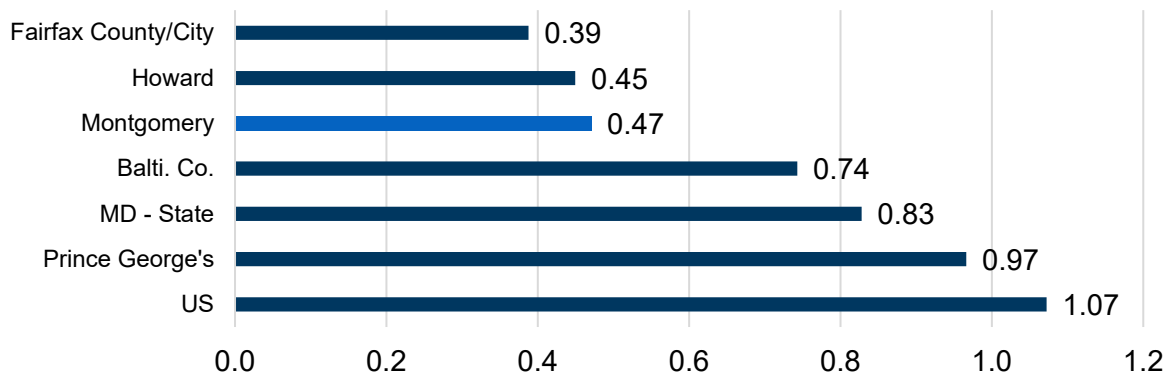
[f] Collisions with both fatal and serious injuries are shown in the fatal collisions chart to avoid double counting crashes. There were 1,267 serious crashes, but due to five crashes having more than one type of roadway user seriously injured, the total if adding up all road users was 1,272 serious crashes.

[g] To allow for comparisons across jurisdictions, the Montgomery County rates included all roads in the county (local roads and highways, interstates, and federal roads).

High Injury Network (under construction)

The high injury network (HIN) highlights the roads with the highest serious and fatal crash rates. Prioritizing safety modifications at these high crash locations can help the county in reaching its interim crash reduction targets and its ultimate Vision Zero goal. The high injury network was last updated in 2017 as part of the 2018-19 Vision Zero Two-Year Action Plan using crash data covering 2012 to 2016. An update to the HIN is currently underway and targeted for release on or before the first 2030 Plan listening session on April 28.

While the HIN update is underway, a crash density map is provided below to demonstrate the areas of the county with the highest concentrations of serious and fatal injury crashes from 2015 to 2019. As with the earlier HIN, the highest concentrations of serious and fatal crashes were in Wheaton, Aspen Hill, and Germantown.

2015-2019 Serious and Fatal Crash Density
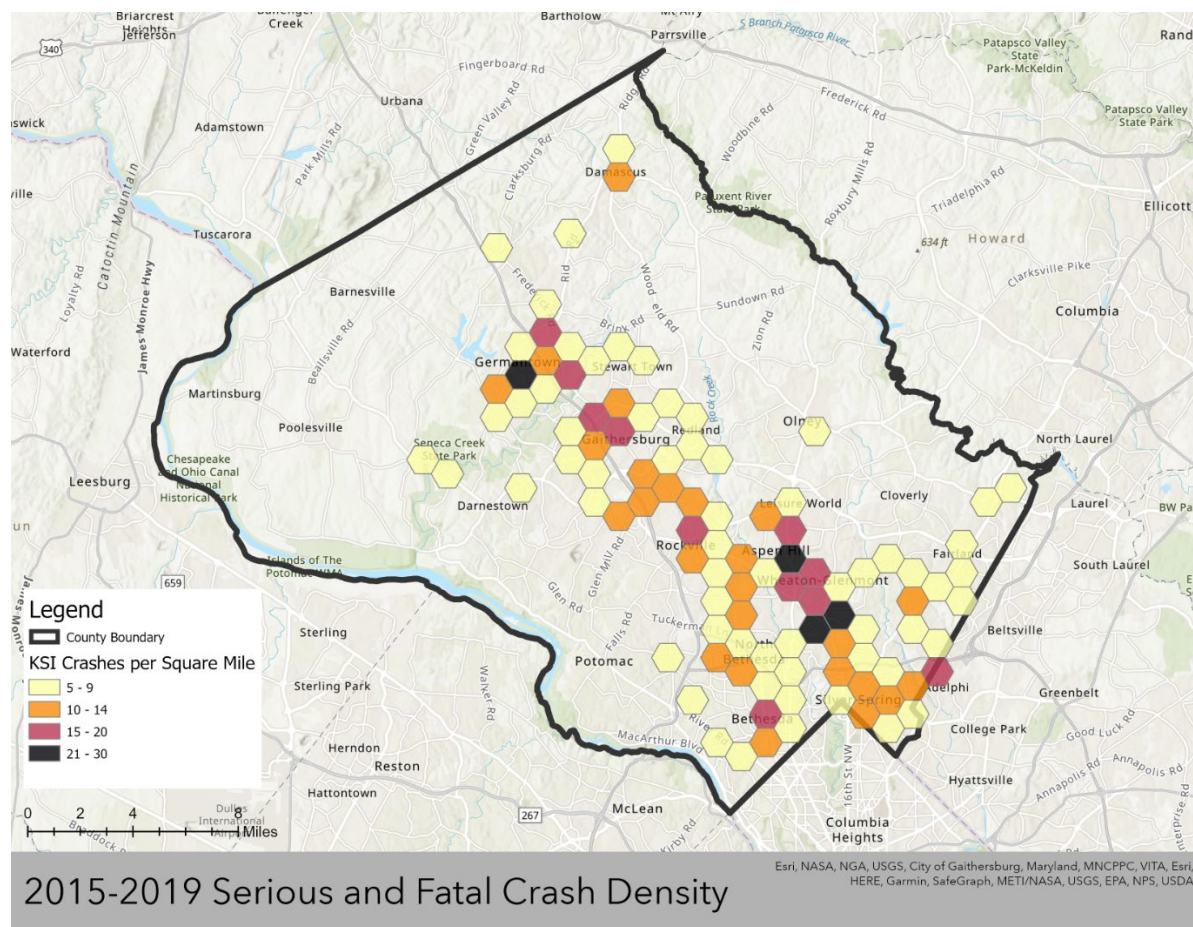
Collision Factors Summary

The following three pages provide a high level summary of some of the top contributing factors for serious and fatal crashes. For a deeper look at the data, see the data report.

Motor Vehicle Occupants

From 2015 to 2019, there were 997 crashes where a motorist was seriously injured or killed. There were 84 fatal crashes with 95 people fatally injured.

People and Vehicles

- Older driver involved (65+): Serious 20%, Fatal 24%
- Young driver involved (16-20): Serious 15%, Fatal 18%
- Motorcycle / Moped: Serious 12%, Fatal 24%

Crash Location & Type

- Nighttime Crash: Serious 27%, Fatal 44%
- Hit and Run: Serious 3%, Fatal 1%
- State road: Serious 58%, Fatal 56%
- Intersection related*: Serious 57%, Fatal 48%
- Run off the road*: Serious 22%, Fatal 38%
- Single Vehicle: Serious 26%, Fatal 40%

Pre-Crash Behavior

- Occupant Unrestrained: Serious 10%, Fatal 33%
- Distracted: Serious 54%, Fatal 9%
- Impaired: Serious 14%, Fatal 27%
- Speeding: Serious 14%, Fatal 24%

■ Serious (%) ■ Fatal (%)

*Data shown exclude crashes that did not begin on a roadway (i.e., parking lot or private property crashes).

Pedestrians

From 2015 to 2019, there were 353 crashes where a pedestrian was seriously injured or killed. There were 59 fatal crashes with 59 pedestrians fatally injured.

	Serious (%)	Fatal (%)
Driver Age		
Older driver involved (65+)	20%	15%
Young driver involved (16-20)	5%	5%
Pedestrian Age		
Older pedestrian involved (65+)	16%	37%
Young pedestrian involved (<21)	18%	8%
Crash Location & Type		
Nighttime Crash	44%	66%
Hit and Run	12%	12%
State road	40%	54%
Intersection related*	55%	56%
Driver Left Turn	8%	13%
Driver Moving at Constant Speed	65%	44%
Pre-Crash Behavior		
Distracted Driver	42%	5%
Pedestrian Impaired	7%	20%
Driver Impaired	2%	12%
Driver Speeding**	4%	3%

*Data shown exclude crashes that did not begin on a roadway (i.e., parking lot or private property crashes).

**Though a small percentage of drivers were reported exceeding the speed limit or driving too fast for conditions, a driver operating at the speed limit of 35MPH or more can still seriously injure a pedestrian.
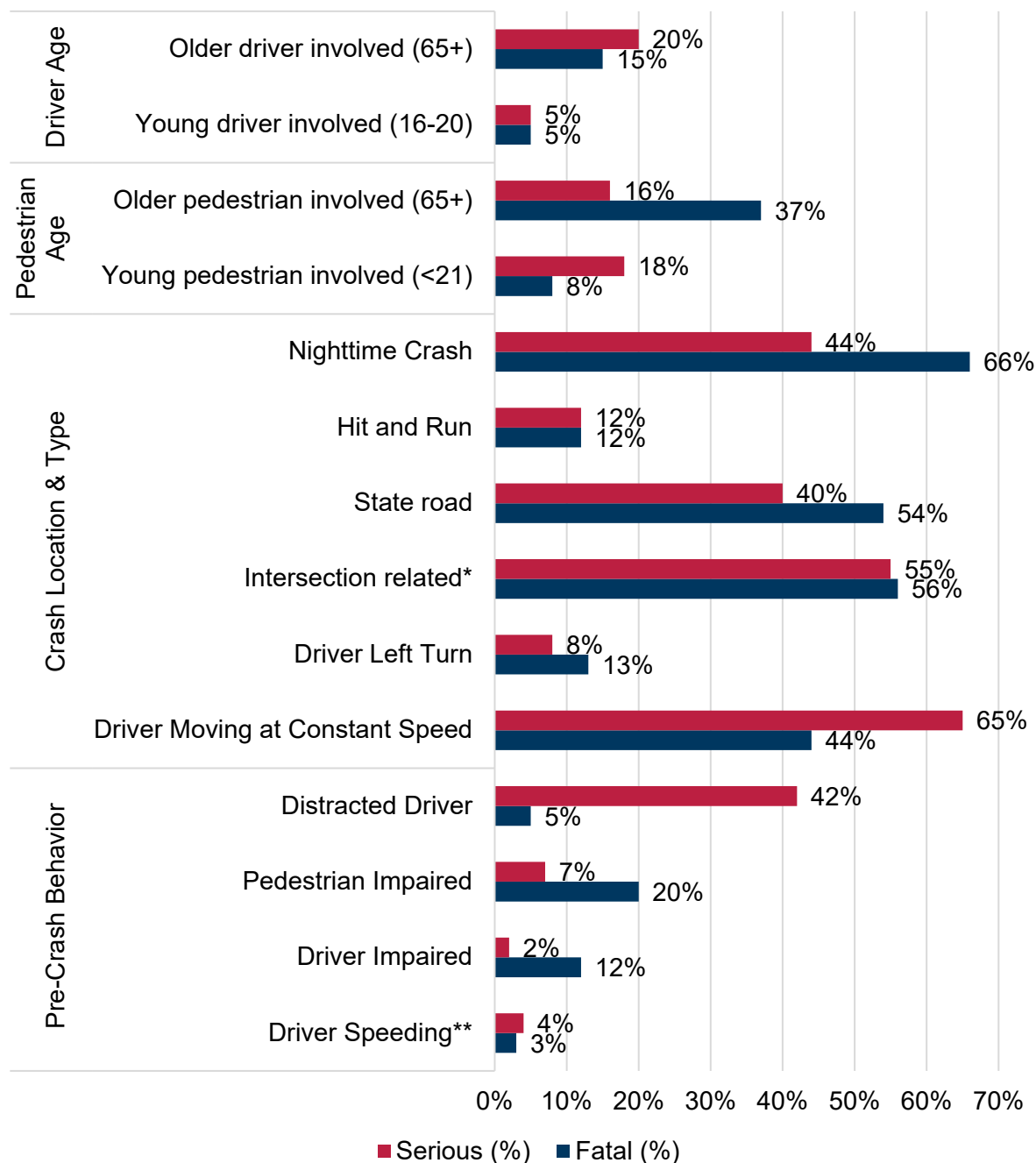
Cyclists

From 2015 to 2019, there were 74 crashes where a cyclist was seriously injured or killed. There were 9 fatal crashes with 9 cyclists fatally injured.

Driver Age
- Older driver involved (65+): Serious 14%, Fatal 11%
- Young driver involved (16-20): Serious 5%, Fatal 11%

Bicyclist Age
- Older bicyclist involved (65+): Serious 17%, Fatal 22%
- Young bicyclist involved (<21): Serious 23%, Fatal 33%

Crash Location & Type
- Nighttime Crash: Serious 18%, Fatal 44%
- Hit and Run: Serious 12%, Fatal 0%
- State road: Serious 40%, Fatal 67%
- Intersection related*: Serious 66%, Fatal 56%
- Driver Left Turn: Serious 28%, Fatal 0%
- Driver Moving at Constant Speed: Serious 30%, Fatal 78%

Pre-Crash Behavior
- Distracted Driver: Serious 46%, Fatal 0%
- Bicyclist Impaired: Serious 2%, Fatal 11%
- Driver Impaired: Serious 0%, Fatal 0%
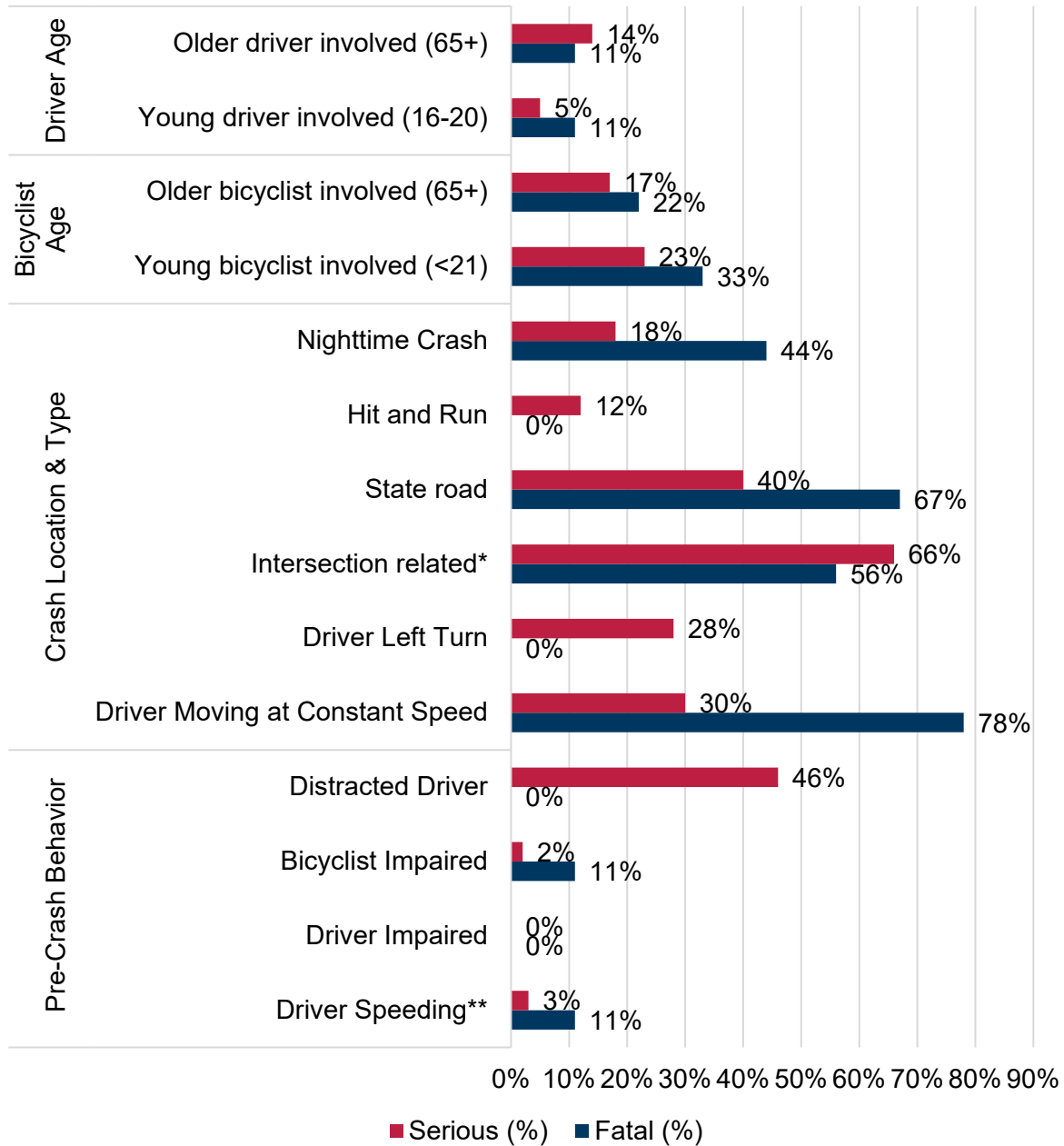- Driver Speeding**: Serious 3%, Fatal 11%

■ Serious (%)   ■ Fatal (%)

*Data shown exclude crashes that did not begin on a roadway (i.e., parking lot or private property crashes).

**Though a small percentage of drivers were reported exceeding the speed limit or driving too fast for conditions, a driver operating at the speed limit of 35MPH or more can still seriously injure a cyclist.

Equity and Serious and Fatal Collisions

Reaching Vision Zero requires reckoning with and addressing past and present practices that have created disparate outcomes by ethnicity and race, age, and gender. Although anyone can suffer an injury on the roadway, crash, hospital, and vital records show that some neighborhoods and groups of people bear a larger share of the burden than others. Communities with higher proportions of Black, Indigenous, and People of Color suffer more serious injuries and death compared to White, non-Hispanic majority communities. Our youngest and oldest neighbors have higher injury rates compared to middle aged adults. Men have higher fatality rates than women, but women are more likely to visit the emergency room for injuries. Closing these gaps will be crucial to improving roadway safety.

The Vision Zero program hosted an Equity Task Force in 2019 that made a series of recommendations for engineering, education, and enforcement actions to center equity in the development of the 2030 Plan. The task force's recommendations are available on the Vision Zero website.
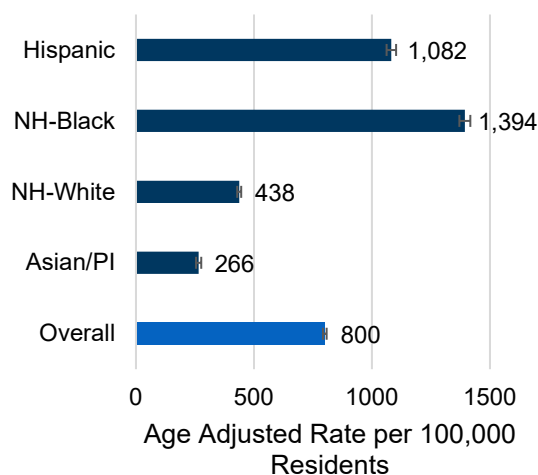
Racial Equity and Vision Zero
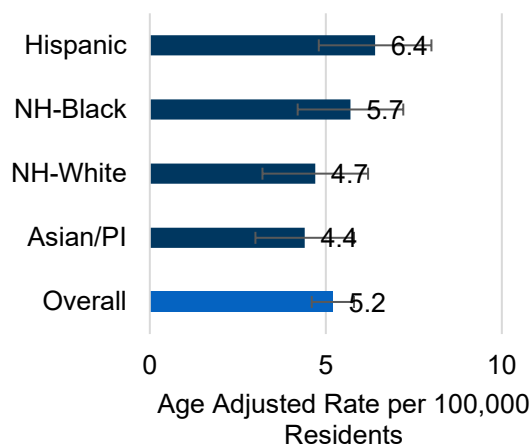
Current Disparities

Across the United States, there are disparate traffic fatality rates by ethnicity and race and Montgomery County mirrors the national trend. An analysis of pedestrian deaths nationwide by Smart Growth America found Black people were struck and killed by drivers at an 82 percent higher rate than White, non-Hispanic Americans.[6] Based on hospital and medical examiner records, there were

clear disparities between ethnic and racial groups in Montgomery County. Black and African American Montgomery County residents had an emergency room admission rate for motor vehicle crashes 136% higher than Asian/Pacific Islander residents and 104% higher than White, Non-Hispanic residents.[h]

Emergency Room Visits for Motor Vehicle Crashes by Ethnicity/Race 2015-2019

	Age Adjusted Rate per 100,000 Residents
Hispanic	1,082
NH-Black	1,394
NH-White	438
Asian/PI	266
Overall	800

Mortality Rate for Motor Vehicle Crashes by Ethnicity/Race 2015-2019

	Age Adjusted Rate per 100,000 Residents
Hispanic	6.4
NH-Black	5.7
NH-White	4.7
Asian/PI	4.4
Overall	5.2

---

[h] Currently Maryland crash reports do not include a crash participant's ethnicity and race, but hospital and medical examiner records provide a proxy. Data exclude non-Montgomery County residents.

Structural racism in prior planning, housing, and transportation polices and investments plays a large role in the racial disparities seen in roadway safety. For nearly 100 years, Black people were locked out of homeownership opportunities due to racially restrictive deed covenants and redlining Black neighborhoods from access to government loans and services. The explicit redlining and racial covenants shaped roads and transit networks. Communities with higher rates of poverty and minority populations, identified as Equity Emphasis Areas by the Metropolitan Washington Council of Governments, surround the County's busiest highways.[7] Living near busy highways coupled with higher transit use and lower car ownership compared to White, Non-Hispanic residents equates to more exposure and risk of being struck while crossing multilane highways on foot.[8] Studies on behavioral differences between ethnic and racial groups for roadway safety have mixed or inconclusive findings and tend to not account for intersections between race, socioeconomics, gender, age, land use, environment, an individual's risk tolerance, or rely on self-reported behavior.[9, 10, 11] Rectifying the explicit and implicit exclusion of Black, Hispanic, and People of Color communities will significantly impact safety outcomes for the whole county.

Addressing Disparities

While the County Government has taken steps to tackle the ethnic and racial disparities for traffic safety, the Vision Zero 2030 Plan seeks to eliminate the gap by:

Examining each action item's impact on racial equity. Each action item in the Plan was rated for how it address the gap and flags items that need additional consideration to avoid expanding the gap.

Project selection triage. A recommendation from the 2019 Vision Zero Equity Task Force was to improve the triaging of incoming project requests to ensure resources are being placed where the need is greatest and address historical disinvestment. The 2030 Plan continues to use a variety of data sources and leading practices to identify high-risk roads and intersections and will evaluate currently request-driven programs to redefine the balance between proactive and community request driven projects.

Focused engagement with traditionally underserved neighborhoods. The Plan identifies resources and opportunities to improve two-way communication between traditionally underserved neighborhoods and the County Government. The Plan includes expansions of our community ambassador program and Safe Routes to School, adding additional communication channels and feedback tools, and improving outreach to limited English-speaking residents.

Reimagining Public Safety. The County Government is overhauling its policies and procedures for public safety departments to address implicit bias and institutional racism. As part of this effort, the 2030 Plan continues to implement a recommendation from the Equity Task Force to create a "Focus on the Five" program to focus traffic enforcement efforts on dangerous behaviors, restructuring the Police's Traffic Division to improve communication and accountability, and utilizing automated enforcement.

Age and Vision Zero

Current Disparities

The youngest and oldest people on our roads had higher serious and fatal injury rates compared to other age groups in the county. For drivers, the injury rate declined from the younger to older drivers until the 80+ age group. For pedestrians, the opposite trend emerged as injury rates increased with age, except for pedestrians aged 20-29 which had an injury rate closer to the 70+ groups. For cyclists, the differences in injury rates from ages 10 to 70 were relatively minor with the biggest difference being nine killed or seriously injured (KSI) collisions per 100,000 county residents between those age groups. Within the 10 to 19 age group, 67% were high-school aged (15–18 years old) and there were 3 fatalities, the most of any age group.

Injury rate disparities by age can be attributed to driving experience, ability to recover from crash injuries, and declines in perception/reaction times, vision, and mobility with age. A Governors Highway Safety Association report on teen driving fatalities found the proportion of fatal crashes involving speeding was higher for teen drivers at 43% compared to 30% for other age groups. Teen drivers were inexperienced and unable to recognize and quickly react appropriately to dangerous situations.[12] The human body's ability to withstand the impact of a crash declines with age as a 30-year-old

pedestrian has a similar risk of serious injury or death at 35 mph as a 70-year-old at 25 mph.[13] Older adults have declines in vision, cognitive functioning, potential complications from medicines, and have slower walking speeds that impact their ability to navigate compared to younger adults.[14,15] Accounting for older adults is critical for Vision Zero as their share of the population is projected to grow from 14% in 2015 to 21% in 2045.[16]

Addressing Disparities

To support our younger and older roadway users, the Vision Zero 2030 Plan will:

Context sensitive design. As safety projects are implemented, project designs will incorporate the surrounding community's needs such as the existence of a high-density senior population, school zone, or recreation center to set speed limits, roadway configurations, and signal timing to meet those needs.

On-bike education for kids. Teaching children to ride a bike demonstrates how to safely ride and introduces them to an active form of transportation they can use for a lifetime.

Partnering with local and national groups for outreach. Community and national organizations provide relevant experience and knowledge to help address youth and older adult safety.

Our youngest and oldest residents were most at risk for serious and fatal collisions.	🚗	🚶	🚴
	1. **16-19**: 256 2. **80+**: 126 3. **20-29**: 139	1. **80+**: 48 2. **70-79**: 46 3. **20-29**: 42	1. **70-79**: 12 2. **10-19**: 11 3. **40-49**: 8

Key: Rates are total collisions per 100,000 registered drivers for drivers and per 100,000 residents for pedestrians and cyclists. Rates exclude people in crashes that lived outside Montgomery County.

Expansion of community ambassador programs. Building on the Vision Zero Youth Ambassador program will allow for more county residents regardless of age to champion Vision Zero in their community.

Alternative transportation options. The County offers numerous free and subsidized transportation programs for youth and older adults that residents may not be aware of when they are deciding if they need to have a car.

Gender and Vision Zero

Current Disparities

Males made up the majority (60%) of persons killed or seriously injured across all roadway users. By roadway user, men were the majority except for motor vehicle passengers where men were 45%. For fatal injuries, the breakdown was 65% male and 35% female. The gender gap in Montgomery County was similar to the nationwide totals where 71% of people fatally injured in a car crash were male. According to research by the International Institute for Highway Safety, "men typically drive more miles than women and more likely to engage in risky driving practices, including not using safety belts, driving while impaired by alcohol, and speeding." [17]
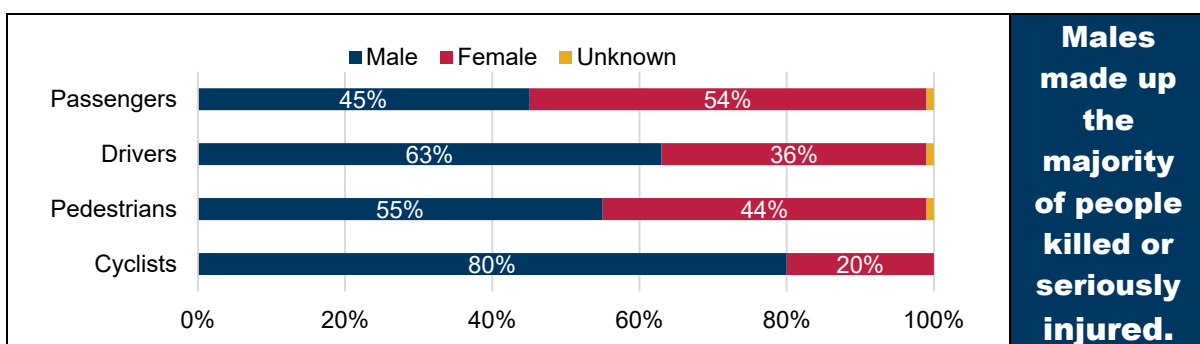
Addressing Disparities

While the 2030 Plan does not explicitly address the gender disparity in the action items, work on speed management and ending impaired driving deaths will tackle these majority male crash types. Safety campaigns will be designed to address risky behavior and use relevant messaging to reach an audience of young males where appropriate.
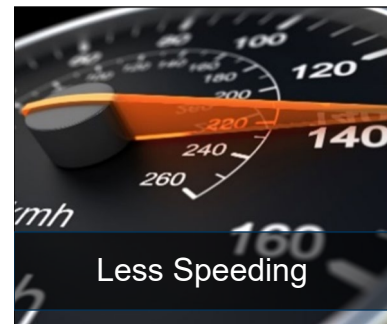

Racial Equity and Social Justice Act

In 2019, Montgomery County passed the Racial Equity and Social Justice Act. The act was implemented to eliminate racial disparities and inequities by mandating a racial equity and social justice impact statement for bills and budget proposals, created an Office of Racial Equity and Social Justice, and required a racial equity and social justice action plan to eradicate institutional racism from County policy and operations. Learn more by visiting the Office of Racial Equity's website.

Legend: ■ Male ■ Female ■ Unknown

Roadway User	Male	Female
Passengers	45%	54%
Drivers	63%	36%
Pedestrians	55%	44%
Cyclists	80%	20%

Males made up the majority of people killed or seriously injured.

HIGHLIGHTS FROM COMMUNITY CONVERSATIONS

Over the summer and fall of 2020, the Vision Zero program within the Office of the County Executive sponsored a series of surveys, interviews, meetings, letters to community organizations, and listening sessions (focus groups). The goal was to hear from a diverse array of resident perspectives on the current state of road safety and what they would like to see happen over the next decade to make the county's roads safer. In total, there were 1,577 survey respondents, 208 residents interviewed or participated in a community listening session, and 12 community organizations returned priority letters. The community feedback was summarized and provided to the workgroups developing the Plan during the workgroups' third meetings in November 2020 to incorporate as they developed the Plan's action items. For further details about the different outreach efforts and results, see the Phase I Public Outreach Summary report.

Community Priorities

More Sidewalks

More Bike Lanes

Safer Crossings

Safe Bus Stop Access

More Communication

Less Speeding

Stopping for pedestrians
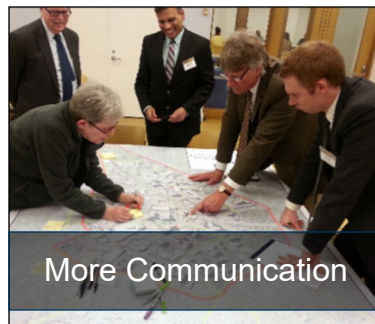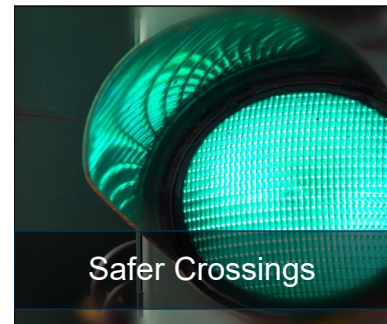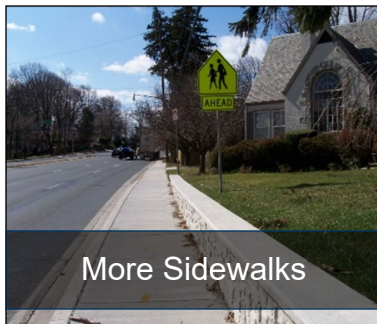
Across all outreach efforts, the following were identified as top priorities for Montgomery County residents to improve road safety.

Building new and improving existing sidewalks. Residents felt unsafe walking around the county because many neighborhoods lack sidewalks. For sidewalks along multi-lane roadways, residents felt unsafe walking on narrow sidewalks located adjacent to fast car traffic and having utility poles and other obstructions further shrinking space for pedestrians. Having more sidewalks with a buffer from car traffic was a common desire across communities, demographics, and outreach efforts.

Expanding the bikeway network. Residents felt biking in the county was the least safe travel mode compared to driving and walking. Those wanting to bike more, but currently felt unsafe to do so, mentioned that bicycle lanes separated from car traffic would encourage them to bike in the county. The expansion of bike lanes next to the curb was a concern for people with disabilities. In conversations with people with disabilities, their top concerns with the new bike lanes were accessibility to the curb and sidewalk and navigation to and from floating bus stops.

More safe crossing opportunities for pedestrians and cyclists. Community members noted that many parts of the county, particularly along highways, have long distances between crossings with a traffic signal or beacon present to stop cars as they attempted to cross. In listening sessions, participants mentioned they would cross outside crosswalks because the distance was too far to the nearest protected crossing.

Safer access to and from bus stops. Transit riders had concerns about access and amenities at bus stops around the county. Bus stops along busy roads are not always located near an intersection or with traffic control device, making access on foot difficult. Riders would like to see more shelters and trees near stops to provide respite from the elements, trash and recycling receptacles, and potentially cameras to address crime.

More proactive and intentional engagement from the County Government. In community interviews and listening sessions, participants mentioned they were not aware or concerned people in their community were not aware of on-going County Government planning efforts and ways to interact with the county to provide feedback or resolve an issue. The County needs to use multiple communication channels (websites, surveys, newsletters, town halls, etc.) and across multiple languages to ensure all voices are heard in the decision-making process.

Improving driver behavior for speeding and stopping for pedestrians. Residents frequently mentioned drivers speeding and not yielding to pedestrians as the top unsafe behaviors on county roads. When ranking priorities in the survey, respondents were more supportive of lowering speed limits than expansion of automated enforcement. There was more support for automated speed enforcement than against, but perceptions about speed enforcement being about revenue than safety persist.

ALIGNING VISION ZERO WITH OTHER INITIATIVES

The Vision Zero 2030 Action Plan was drafted in parallel with other county and state plans that will affect the future of the transportation network: the Maryland 2021-2025 Strategic Highway Safety Plan, the General Plan update (Thrive 2050), and the Climate Action Plan.

Maryland Strategic Highway Safety Plan

The Maryland Strategic Highway Safety Plan (SHSP) sets the strategies and crash reduction targets for statewide roadway safety over the next five years. The 2021-2025 SHSP was the first update since the State adopted Vision Zero in 2019 and incorporated the safe systems approach into the strategies. The implementation of the SHSP is split into six emphasis area teams with statewide participation and Montgomery County employees serve on each team.

The Vision Zero 2030 Plan is Montgomery County's local road safety plan under the SHSP. While the plans were structured differently, there is significant overlap between the SHSP strategies and the 2030 Plan's action items. Montgomery County will not reach Vision Zero without a strong partnership and commitment from the State Government as 53% of the county's serious and fatal collisions were on State maintained roadways.

General Plan Update (Thrive 2050)

Thrive Montgomery 2050 is a general plan for the county with a 30-year horizon. It sets a vision for the county and encompasses broad, county-wide policy recommendations for land use, zoning, housing, the economy, equity, transportation, parks and open space, the environment, and historic resources. Thrive 2050's recommendations provide guidance for future master plans, county and state capital improvement processes, and other public and private initiatives that influence land use and planning in the county. Thrive 2050 is the first update to the General Plan since 1993. The transportation chapter of Thrive 2050 integrates Vision Zero into the policy and practice recommendations which call for prioritizing non-auto travel modes in the coming decades.
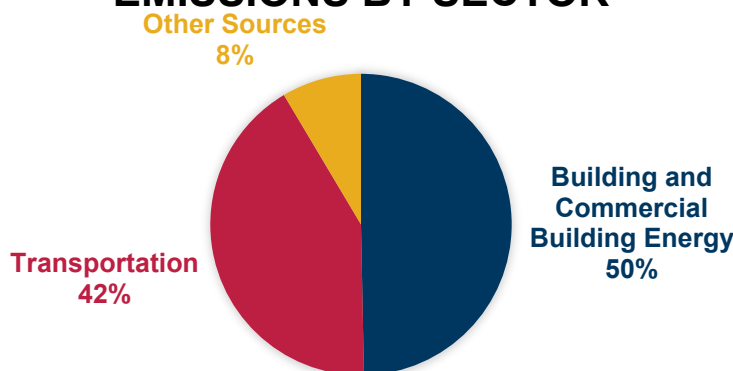
Climate Action Plan
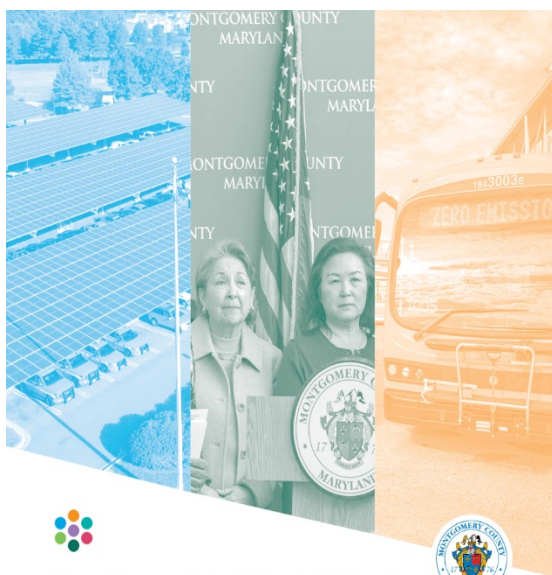
The Climate Action Plan (CAP) is Montgomery County's strategic plan to cut greenhouse gas emissions 80% by 2027 and 100% by 2035 compared to 2005 levels. The CAP also details the effects of a changing climate on Montgomery County and includes strategies to reduce climate-related risk to the County's residents, businesses, and the built and natural environment. The climate actions outlined in the CAP outline the path to meet the County's ambitious climate goals while building a healthy, equitable, and resilient community.

Transportation is a key action sector in the CAP because 42% of greenhouse gas emissions come from community transportation.[18] Like Thrive 2050, the CAP's transportation action items are focused on increasing active transportation options like biking, walking, and micromobility services with the necessary safe and supportive infrastructure to support the mode shift. The CAP also includes strategies to electrify private and public transportation options or use other zero emissions power sources by 2035. The County will need to support programs and resources, such as educational campaigns and financing tools, to support Electric Vehicle (EV) adoption. As expansive, accessible public EV charging infrastructure network will be needed to support widespread EV adoption.

MONTGOMERY COUNTY GREENHOUSE GAS EMISSIONS BY SECTOR

Other Sources 8%

Transportation 42%

Building and Commercial Building Energy 50%

ROAD TO ZERO

January 2002
Blue Ribbon Panel Report on Pedestrian and Traffic Safety Released

December 2007
Pedestrian Safety Initiative Launched
(Full funding started in July 2009)

October 2015
MCDOT adopts "Moving Forward Together" vision document

February 2016
County Council adopts Vision Zero Resolution

June 2016
County Executive establishes Vision Zero Steering Committee

November 2017
Two-Year Action Plan Approved

January 2020
2020 Action Plan Approved

June 2020
Kickoff Community Meeting for the Vision Zero 2030 Action Plan

April 2021
Public Draft of Vision Zero 2030 Plan Released

July 2021
Vision Zero 2030 Action Plan Approved

2022 and Beyond
Biennial work plan updates

2025
Review and revise the long-term action items in 2030 Plan

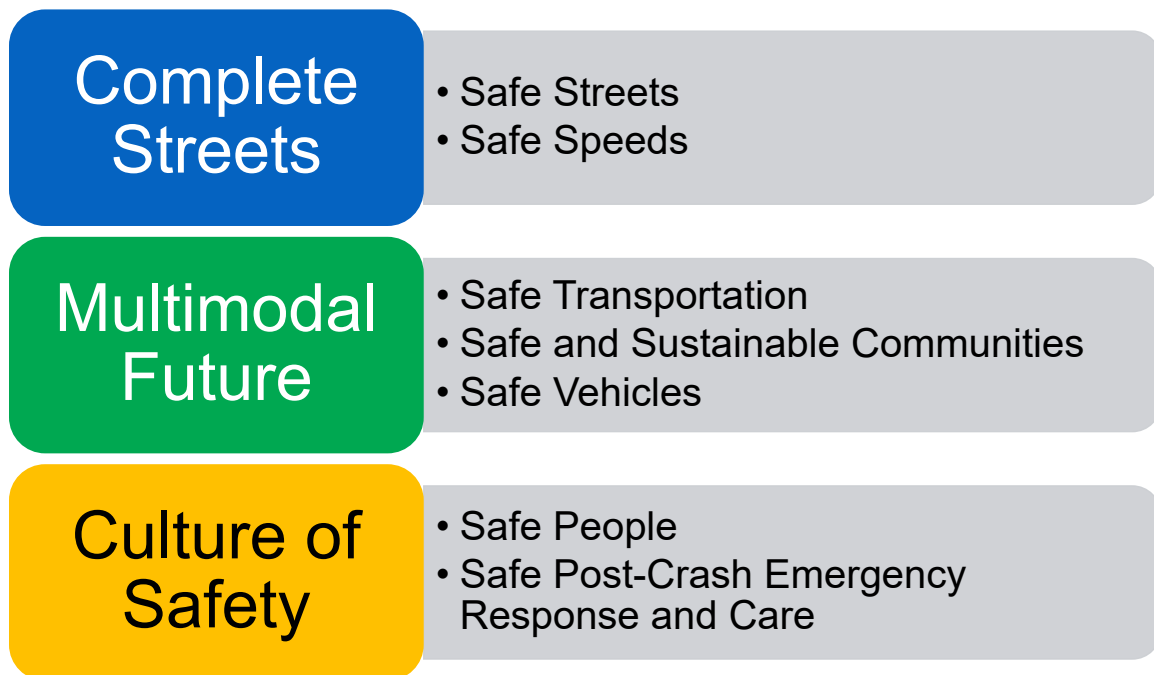**2030**
__Zero__ traffic fatalities and serious injuries

2030 ACTION PLAN AND FY22-23 WORK PLAN

Plan Organization – Pillars and Action Areas

The goal of zero serious and fatal injuries appears impractical, and yet no higher number is acceptable. The 2030 Vision Zero Action Plan sets out an ambitious agenda with 45 actions for the County Government to implement over the next 9 years and detailed work plans for the upcoming two fiscal years. The 2030 Plan includes items that will require new investments, but the real value of Vision Zero lies in the ability to reorient and refocus existing programs and projects with data-informed, systematic, and equitable approaches that make more effective use of current resources.

The Plan's action items and focus areas were based on the World Resource Institute's (WRI) "Sustainable and Safe: A Vision and Guidance for Zero Road Deaths" eight action areas for implementing the safe systems approach.[19] The eight action areas were further clustered into three overarching groups based on the overlap between action areas and for assignment to the workgroups developing the action items. The departure from the traditional "3 E's" (engineering, education, and enforcement) approach for traffic safety planning was intentional to highlight the primary role roadway design and operation has on reducing traffic deaths. Enforcement and education remain a critical aspect of the safe system but work as compliments to safe street design.

From WRI's action areas, a new key action area hierarchy for implementing Vision Zero in Montgomery County was created. Safe was placed at the beginning of each action area to emphasize that the Plan places safety at the forefront of all transportation planning. The 2030 Action Plan was built around three pillars and seven action areas:

Complete Streets	• Safe Streets • Safe Speeds
Multimodal Future	• Safe Transportation • Safe and Sustainable Communities • Safe Vehicles
Culture of Safety	• Safe People • Safe Post-Crash Emergency Response and Care

Collision Reduction Targets

To get to zero serious and fatal collisions on our roadways by 2030, the County has set ambitious interim targets. By the end of the first two year work plan, serious and fatal collisions for all roadway users will be reduced by 10%. By 2026, serious and fatal collisions will be cut by 40%.

The reduction targets were set using the five-year average of serious and fatal collisions from 2015 to 2019 as a baseline. The targets were not adjusted for the COVID-19 pandemic as the full effect of the "new normal" were unknown and traffic volume may return or exceed pre-pandemic levels.

2023
2-Year Work Plan
10% Reduction

2026
Halfway to 2030
40% Reduction

2030
Vision Zero
100% Reduction
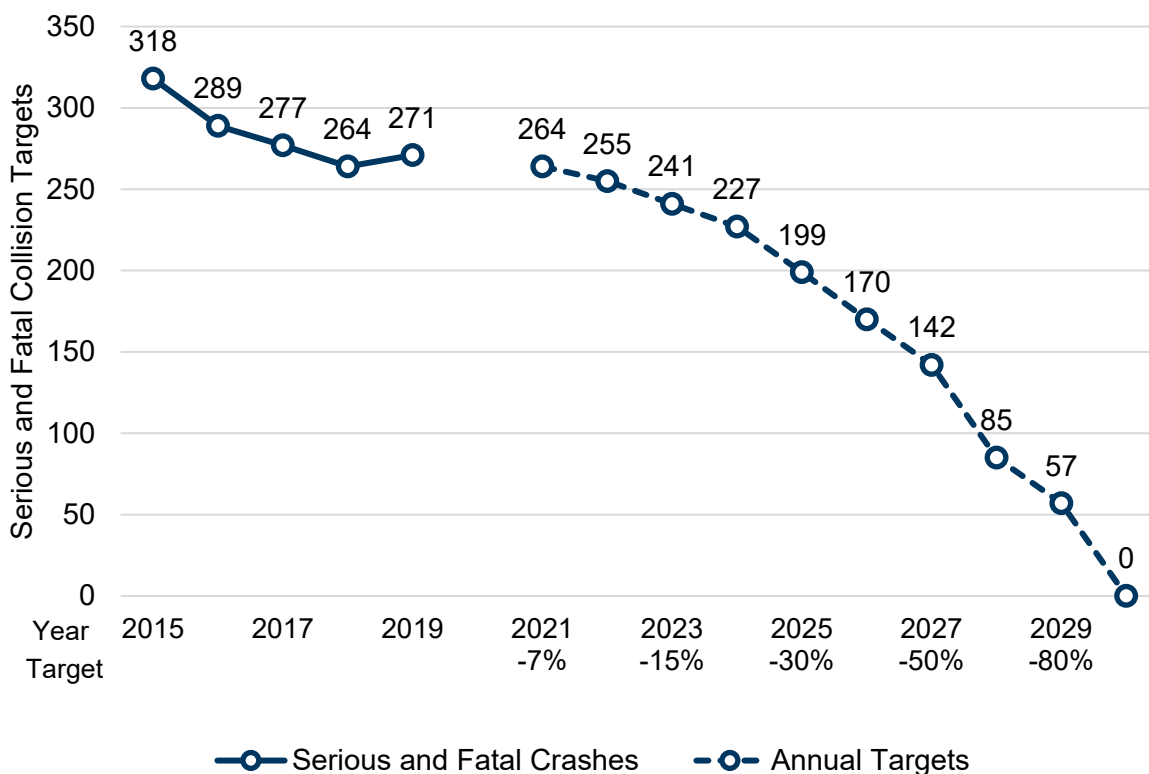
Plan Checkpoints

Acknowledging the need to balance between long-term planning, making immediate improvements, and adjusting as new opportunities and challenges arise, the 2030 Vision Zero Plan has multiple checkpoints to evaluate what is working, integrate new evidence and technologies, and adapt to changing budget and external factors. Implementation of Vision Zero for 2021-2030 will have the following schedule for updates:

- **Every even fiscal year (FY22, FY24, etc.)** the detailed, short-term work plan for the next two fiscal years will be updated. New funding requests will largely be in the second, odd fiscal year of the plan to align with the County's Capital Improvements Program (CIP) budgeting process.
- **Fifth year (2025) review action items.** During the year 2025, the County Executive's Office will convene workgroups to evaluate the implementation of Vision Zero and, as necessary, update the long-term action items based on evidence, leading practices, and budget. This update will also align with the update of Maryland's Strategic Highway Safety Plan.

Organizational Oversight and Partnerships

Many departments and agencies across all levels of government must work together to achieve Vision Zero. To facilitate the implementation of the 2030 Plan, the Vision Zero Coordinator or County Executive designee will continue to host regularly scheduled coordination and information sharing meetings.

a. Host a steering committee of key departments that will implement that plan and require coordination of efforts. The steering committee will be chaired by a representative of the County Executive's Office.
b. Hold larger Vision Zero Partners meetings between departments and agencies to ensure employees across the government are up to date on Vision Zero efforts and can provide on-going feedback.
c. The Pedestrian, Bicycle, Traffic Safety Advisory Committee will continue as the County Government's public body to provide public involvement and input for Vision Zero programs. Implementing departments will also work with advisory committees across the county.
d. Update public tracking of the action plan bi-monthly on the Vision Zero website.

Beyond the County-sponsored meetings, representatives from County Government will participate on state and national planning efforts.

a. County employees will be active participants for the State Strategic Highway Safety Plan's Emphasis Area Teams.
b. Partner with other Vision Zero communities and organizations like the Road to Zero Coalition to advocate for federal support and policy to achieve Vision Zero.

2030 Plan Action Items

Priority Action Items

The 2030 Plan sets out an ambitious agenda with 45 recommended actions and funding to achieve Vision Zero over the coming decade. Priority actions listed below have the potential to have the highest impact on reducing serious and fatal injuries, can be applied across the transportation network, and support safe travel for all modes. These actions can be performed in many locations across the County's roadway system or at targeted locations with the highest crash risk. As budgeting and implementation decisions are made, priority should be given to these actions.

Action Item	Why a priority action?
S-1: High Injury Network Projects	Projects funded under S-1 are directly supporting improvements along known high-crash corridors and intersections.
M-1: Examine Speed Limit on all Projects	Speed management is a fundamental factor in reducing serious and fatal injuries for all road users.
S-3: Frequent, Protected Crossings	Providing safe, convenient crossings can improve safety for people walking, biking, and driving through intersections and mid-block crossings by providing clear right-of-way and controlling vehicle turning movements.
T-1: Pedestrian and Bicycle Infrastructure Improvements Along New Transportation Projects	As new transit along high crash highways is implemented, it presents a once-in-a-generation opportunity to redevelop highways into safer multi-modal boulevards.
S-4: Signal Timing and Phasing	Signal phasing and timing changes have demonstrated safety impacts and can be implemented systematically where warranted.
S-7: Separated, Low-Stress Bicycle Facilities	Creating separated spaces for all users of the transportation network in dense, multi-modal areas provides for enhanced safety, comfort, and predictability for movements.
S-13: Sidewalk Construction and Upgrades	The lack of sidewalks was a commonly mentioned safety issue from community interviews and surveys. Sidewalks provide separation for pedestrians from general travel lanes.
T-2: Transit Stop Safety	Many transit stops in the County lack a safe and convenient crossings. Pedestrians have been struck and killed when walking to and from bus stops in the County.
S-10: Provide Safety Upgrades During Routine Maintenance	Utilizing planned roadway and tree maintenance projects provides opportunities to implement safety projects across the county.
P-4: Ending Impaired Driving Deaths	Impaired driving is a leading contributing factor in fatal crashes in Montgomery County and across the world. 28% of fatal crashes in the county involve an impaired person.

How to Read the Action Item Descriptions

The action items in the 2030 Plan have the same structure to detail why the item is in the plan, its potential impact on safety, accessibility, equity, and budget, the short-term work planned, and the operating and capital budget programs that support that action item.

S-1: High Injury Network Projects: Implement safety countermeasures on identified high-risk road segments and intersections. The County must coordinate with the State for state-maintained portions of the network.

A

Lead: Transportation, State Highway Admin.   **Contributor:**

B   **C**

CRF: 3	**ACC:** 3	**RESJ:** 3	**INVEST:** 1	**Priority:** ☑

D   **E**   **F**   **G**   **H**

Why Do This? Vision Zero requires a proactive approach in order to place resources in areas with the highest return on safety and more equitable distribution compared to request-driven programming. Road safety audits can reduce crashes upwards of 60%.

I

FY22 Work plan:
Studies: Aspen Hill (Georgia Ave and Connecticut Ave), 2 High Injury Network corridors
Design: Randolph Rd, New Hampshire
Begin construction: Shady Grove Rd (signal modifications), Crabbs Branch Way, Sam Eig Hwy, and Bel Pre Rd (beacons).

J

FY23 Work plan:
Studies: 3 High Injury Network corridors
Design: 2 High Injury Network corridors
Begin construction: Randolph Rd HIN

K

Budget Sources: P500333 - Pedestrian Safety

L

A - Section Abbreviation Letter – Action Item Number: Action Item Short Name: 10-year action item description. This describes the ongoing work throughout the plan's lifetime to fully implement the action item.

B - Lead: Department(s) that will be directly involved and providing resources to implement the action item.

C - Contributor: Department(s) that have a minor or supporting role and work with the lead department(s) to implement the action item.

D – CRF (Crash Reduction Factor): Rating from 1 to 3, with three being highest, of the percentage decrease in crashes expected based on leading practices and evidence from County or relevant studies.

- N/A – Enabling Step: The action itself will not reduce crashes but will aid the County in implementing Vision Zero.
- 1 - Limited evidence that the action has a direct impact on reducing crashes or existing evidence show low impact on crashes (<10%).
- 2 - Existing evidence show medium impact on crashes (11-45%).
- 3 - Existing evidence show high impact on crashes (>45%).

E – ACC (Accessibility Impact): Rating from 1 to 3, with three being highest, of the positive impact the action item would have on safe travel for people with disabilities in the County.

- N/A – Enabling Step: The action itself will not impact accessibility but will aid the County in implementing Vision Zero.
- 1 - Without careful consideration for accessibility, implementation could negatively harm accessibility for people with disabilities. This includes introduction of new designs to the County.
- 2 – Implementation would not largely affect accessibility compared to the current state.
- 3 – Implementation would positively affect accessibility compared to the current state.

F – RESJ (Racial Equity and Social Justice): Rating from 1 to 3, with three being the highest, of the positive impact the action item would have on reducing the disparate traffic safety outcomes between race and ethnic groups.

- N/A – Enabling Step: The action itself will not impact racial equity but will aid the County in implementing Vision Zero.
- 1 - Without careful consideration for racial equity, implementation could further the gap or planned expenditures do not address the existing gap.
- 2 – Implementation makes some efforts of closing the gap.
- 3 – Implementation addresses existing inequities and works to close the gap.

G – INVEST (New Investment Estimate): Rating from 1 to 3, with three being highest, of the estimated annual impact to the County budget above current funding to implement the action item over the next decade:

- 1 – Implementation can be done within current resources <u>or</u> additional costs are low (<$100k).
- 2 - Implementation would have a marginal increase in annual budgets ($100k to $1M).
- 3 - Implementation would require a substantial increase in annual budgets (>$1M).

H – Priority: If checked, the action item is a top ten action item for the Action Plan. Priority actions have the potential to have the highest impact on reducing serious and fatal injuries, can be applied across the transportation network, and support safe travel for all modes.

I – Why do this?: An explanation of why this action item is in the Plan and how it is expected to affect traffic safety in the county.

J and K – Year 1 and Year 2 work plans: List of work to be performed during the first and second fiscal years. Items in year one are typically within the current scope of existing resources. Year 2 is a full budget update year, so potential new funding requests are here.

L – Budget Sources: Programs and projects in the operating and capital budgets for the County that will provide resources to complete the action items for the two years of the Plan. If there are outside grant opportunities to support work in the action item, the grant source is listed.

Complete Streets

As one of the first counties in the United States to adopt the Vision Zero framework for transportation safety, an overarching question when creating the 2018-19 Vision Zero Action Plan was "what does Vision Zero look like in a community that has urban areas with rapid transit options and mixed use development, suburban single family housing neighborhoods, and rural areas with active farms?" Examples of Vision Zero implementation in the United States were largely limited to major cities prior to Montgomery County's adoption, so not all the lessons and plans were applicable to Montgomery County. To blaze a path forward for counties implementing Vision Zero, the 2018-19 Action Plan prioritized updating the County's road design standards and roadway classifications to define what safe and complete streets look like in the county.

The new Complete Streets Design Guide developed in partnership by the Transportation and Planning Departments defined twelve street types to create complete streets that are compatible with the varying road types and land use contexts across the county. These complete streets are "designed and operated to provide safe, accessible, and healthy travel for all users of our roadway system, including pedestrians, bicyclists, transit riders, and motorists. […] Complete Streets function as a system, ensuring that the transportation network as a whole provides safe and efficient access for all roadway users and only provides designated spaces for each mode when needed." [20]

With the new Guide, the Vision Zero 2030 Plan was developed to make those designs come to life and create streets with frequent, protected crossings, adequate space accommodating those walking, biking, using assistive mobility devices, and roadway features to keep all vehicles traveling at safe speeds.

Tracking Implementation for Complete Streets
The following measures will be used to track progress on transforming the road network.

- Number of serious and fatal injury crashes along the High Injury Network
- Percentage of High Injury Network Streets with new traffic safety treatments
- Number of total intersections with new traffic safety treatments
- Linear feet of sidewalk built
- Miles of separated bicycle facilities built

Complete Streets Action Items Summary

Action	Lead	Contributor	Priority Action	On Page #
S-1: High Injury Network Projects	MCDOT, SHA	N/A	Yes	29
S-2: Intersection Redesign	MCDOT, SHA	N/A	No	30
S-3: Frequent, Protected Crossings	MCDOT, SHA	Parks	Yes	30
S-4: Signal Timing and Phasing	MCDOT, SHA	N/A	Yes	31
S-5: Corridor Access Management	MCDOT, SHA	N/A	No	31
S-6: Roadway Departure	MCDOT, SHA	N/A	No	32
S-7: Separated, Low-Stress Bicycle Facilities	MCDOT, Parks, SHA	Planning	Yes	33
S-8: Safe Trail Crossings	Parks	MCDOT	No	34
S-9: Safe Routes to School Engineering Projects	MCDOT, MCPS, SHA	Planning	No	34
S-10: Provide Safety Upgrades During Routine Maintenance	MCDOT, SHA	Utility Companies	Yes	35
S-11: Improved Lighting	MCDOT, PEPCO	N/A	No	35
S-12: Sidewalk Repair and Clearance	MCDOT	SHA	No	36
S-13: Sidewalk Construction and Upgrades	MCDOT	SHA	Yes	36
S-14: High Visibility Equipment and Markings	MCDOT, SHA	N/A	No	37
S-15: Shared Streets	MCDOT, Parks, UD	Planning	No	37
S-16: Data Informed Decisions	MCPD, MCDOT, Planning, OMB	CEX, MHSO, MSP	No	38
S-17: Equitable Project Intake and Selection	MCDOT, OMB	CEX	No	39
M-1: Examine Speed Limit on all Projects	MCDOT, SHA	N/A	Yes	40
M-2: Speed Management Policy	MCDOT, SHA	N/A	No	40
M-3: Enforcement of Speed Limits	MCPD	MCDOT	No	41

Safe Streets

Montgomery County will utilize the safe systems approach to upgrade our roadways, sidewalks, and bike paths, with priority for projects in high crash risk areas, to prevent serious and fatal injuries.

S-1: High Injury Network Projects: Implement safety countermeasures on identified high-risk road segments and intersections. The County must coordinate with the State for state-maintained portions of the network.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 3[21,22]	ACC: 3	RESJ: 3	INVEST: 2	Priority: ☑

Why Do This? Vision Zero requires a proactive approach in order to place resources in areas with the highest return on safety and more equitable distribution compared to request-driven programming. Road safety audits can reduce crashes upwards of 60%.

FY22 Work Plan:

Studies: Aspen Hill (Georgia Ave from Hewitt Avenue to Bel Pre Road and Connecticut Avenue from Georgia Ave to Independence Street), 2 additional High Injury Network corridors.

Design: Randolph Rd from Collie Drive to Hunters Lane, New Hampshire Avenue from the Capital Beltway to Piney Branch Road.

Begin construction: Shady Grove Rd from I-270 to Frederick Road (signal modifications), Crabbs Branch Way from Shady Grove Road to Indianola Drive, Sam Eig Highway from end of I-370 to Diamondback Drive, and Bel Pre Road from Georgia Avenue to Layhill Road (beacons).

FY23 Work Plan:

Studies: 3 High Injury Network corridors.
Design: 2 High Injury Network corridors.
Begin construction: Randolph Rd HIN.

Budget Sources: P500333 - Pedestrian Safety, P507017 – Intersection and Spot Improvements

Grant opportunities – MWCOG Regional Safety Program (study and design only), MDOT SHA Highway Safety Improvement Program

BEFORE

AFTER

Curb bump outs for pedestrian safety. Above is an example of a smaller scale change to the roadway made by MCDOT as part of a pedestrian road safety audit along Lockwood Drive to the west of New Hampshire Avenue. By bumping out the sidewalks, adding high visibility crosswalk markings, and signs, pedestrians now have less exposure to traffic and higher visibility from people driving.

S-2: Intersection Redesign: Shorten crossing distances for pedestrians and cyclists and slow down the turning speed of vehicles through intersection modifications. Utilize quick build materials where appropriate.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 3[23]	ACC: 3	RESJ: 2	INVEST: 2	Priority:

Why Do This? Reducing pedestrian exposure and slowing turning vehicles can prevent crashes and serious injuries. 56% of serious and fatal injuries occurred at or related to intersections.

FY22 Work Plan:

1) Inventory all free right turns/"porkchops" on County and State roadways. Identify priority intersections for safety upgrades (complete removal, install raised crosswalk, signage, etc.)
2) Utilize quick build materials (flex posts, quick curb, signage, and paint) for interim safety treatments.
3) Design reconfiguration of Old Georgetown Road and Rockville Pike intersection with removal of hot right turn lanes.

FY23 Work Plan:

1) Begin construction Randolph Road HIN intersection improvements.
2) Construct reconfiguration of Old Georgetown Road and Rockville Pike intersection with removal of hot right turn lanes.
3) Construct Old Georgetown Road & Tilden Lane intersection improvements.
4) Begin construction of Tower Oaks & Montrose Road intersection improvements.
5) Begin construction of Seneca Road & Esworthy Road intersection improvements.

Budget Sources: P500333 - Pedestrian Safety, P507017 - Intersection and Spot Improvements, P502106 - White Flint Metro Station Access Improvements

S-3: Frequent, Protected Crossings: Provide additional protected crossing locations by installing new traffic signals and beacons, with priority installations in high crash risk areas with infrequent crossing opportunities.

Lead: Transportation, State Highway Admin.			Contributor: Parks	
CRF: 3[24]	ACC: 3	RESJ: 2	INVEST: 2	Priority: ☑

Why Do This? Provide safe, convenient crossings to reduce crossing outside of crosswalks. Pedestrian hybrid beacons can reduce pedestrian-involved crashes by 55%.

FY22 Work Plan:

1) Three pedestrian hybrid beacons along Bel Pre Road between Georgia Avenue and Aspen Hill Road.
2) Install pedestrian hybrid beacon at Westlake Drive & Lakeview Drive.
3) Install two pedestrian hybrid beacons along Fenton Street at Roeder Road and Whole Foods Driveway.
4) Install pedestrian hybrid beacon at Randolph Road & Randolph Village.
5) Install new traffic signal at Sangamore Road & Walhonding Road.

FY23 Work Plan:

Install at minimum three signals and beacons.

Budget Sources: P507154 - Traffic Signals, P500333 - Pedestrian Safety, P507017 - Intersection and Spot Improvements

S-4: Signal Timing and Phasing: Where appropriate, modify signal phasing and timing to provide protection for all road users.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 2 [25, 26]	ACC: 3	RESJ: 2	INVEST: 2	Priority: ☑

Why Do This? 56% of serious and fatal injuries occurred at or related to intersections. Signal phasing changes, such as providing pedestrians 3-7 seconds to cross roadways before vehicles can turn can lower pedestrian-vehicle crashes by 13% at intersections.

FY22 Work Plan:
1) Develop updated signal policy/guidelines for expansion of No Turn on Red, Lead Pedestrian Intervals, auto pedestrian recall, pedestrian/ vehicle detection equipment, overnight traffic signal flash operations, exclusive vs permissive phasing for left turns across more than two lanes, and priority corridors for new signals and beacons.
2) Signal phasing and timing changes along HIN corridors moving to construction in S-1.

FY23 Work Plan:
1) Begin implementation of new signal policy.
2) Signal phasing and timing changes along HIN corridors moving to construction in S-1.

Budget Sources: P507154 - Traffic Signals, P500333 - Pedestrian Safety, P507017 - Intersection and Spot Improvements

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S-5: Corridor Access Management: Assess and remediate left turn safety issues posed by uncontrolled turning movements to and from arterial and collector roads to neighborhoods and driveways with direct access.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 2 [27]	ACC: 3	RESJ: 2	INVEST: 2	Priority:

Why Do This? 20% of serious and fatal crashes that occurred at or was related to an intersection or interchange had no traffic control device or person present.

FY22 Work Plan:
Evaluate signalized and unsignalized left turns across more than two lanes for potential safety issues in High Injury Network corridors.

FY23 Work Plan:
1) Implement safety improvements to address identified left turn issues at 5 intersections.
2) Explore new grant and funding opportunities to support work in this action item.

Budget Sources: P507154 - Traffic Signals, P507017 - Intersection and Spot Improvements

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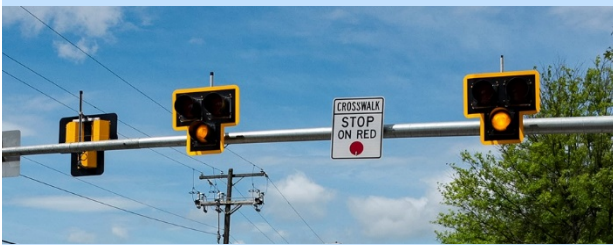
Pedestrian hybrid beacons are traffic control devices to stop vehicular traffic for pedestrians crossing at unsignalized locations where a full traffic signal may not be necessary. These devices are particularly useful for providing more mid-block protected crossings.

S-6: Roadway Departure: Improve roadways where run off the road crashes are prevalent, at curves and along country roads, utilizing repaving and safety programs. Prevent run-off-the-road events using higher friction road surface materials and guardrails, reduce serious collisions by removing fixed objects and using breakaway poles.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 2[28, 29]	ACC: 2	RESJ: 2	INVEST: 2	Priority:

Why Do This? 24% of serious injury or fatal crashes for drivers and passengers involve running off the road and 34% of driver or passenger fatalities occur at curves in the road.

FY22 Work Plan:

Identify road sections with high risk for run-off-the-road crashes and prioritize needed improvements.

FY23 Work Plan:

1) Utilize paving and safety programs to begin systematically upgrading dangerous roadway segments using proven countermeasures such as rumble strips, signage, high friction pavement, safety curb, etc.
2) Explore grant and funding opportunities to support work in this action item.

Budget Sources: P508113 - Guardrail Projects,
Explore grant and funding opportunities to support work in this action item

S-7: Separated, Low-Stress Bicycle Facilities: Build bikeways identified as the Tier 1 network of the Bicycle Master Plan. Prioritization of any bike facility projects must also prioritize upgrading known high crash risk roads. Tier 2 and 3 should be considered when opportunities arise such as redevelopment, repaving, or would increase safety on a high crash risk road.

Lead: Transportation, Parks, State Highway Admin.			**Contributor:** Planning	
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 3	**Priority:** ☑

Why Do This? Creating separated spaces for all users of the transportation network in dense, multi-modal areas provides for enhanced safety, comfort, and predictability for movements.

FY22 Work Plan:

Design:
> 1) Capital Crescent Surface Trail – Phase II
> 2) Fenton St Cycletrack
> 3) Dale Drive Shared Use Path
> 4) Marinelli Road (Phase II)

Construction starting or continuing on:
> 1) BiPPA - Wheaton CBD
> 2) Glenmont/Aspen Hill Neighborhood Greenway
> 3) Grove St Neighborhood Greenway Pilot
> 4) Metropolitan Branch Trail
> 5) Marinelli Road (Phase I)

FY23 Work Plan:

Design:
> 1) Bethesda Loop (phase II & III projects)
> 2) Washington Grove Connector
> 3) Sandy Spring Bikeway

Construction starting or continuing on:
> 1) Capital Crescent Trail along Purple Line
> 2) BiPPA - Purple Line
> 3) BiPPA - Veirs Mill Rd/Randolph Rd
> 4) Marinelli Road (Phase II)
> 5) Bethesda Loop (phase II projects)
> 6) Fenton Street and Philadelphia Avenue intersection improvements
> 7) MacArthur Blvd (Segment I)

Budget Sources: P502002 - BiPPA Improvements - Wheaton CBD, P507596 - Bikeway Program Minor Projects, P502003 - BiPPA Improvements - Veirs Mill/Randolph, P502004 - BiPPA Improvements - Purple Line, P501532 - BiPPA Improvements (Countywide), P500119 - Bethesda Bikeway and Pedestrian Facilities, P501316 - Capital Crescent Trail, P501110 – Metropolitan Branch Trail, P502001 – Fenton Street Cycletrack,
Grant opportunities: MDOT Kim Lamphier Bikeways Network Program, MWCOG Transportation Land-Use Connections Program

S-8: Safe Trail Crossings: Systematically upgrade the 156 trail crossings for safety improvements. Create standalone CIP projects for larger improvements such as CCT at Little Falls Parkway.

Lead: Parks			Contributor: Transportation	
CRF: 2[30]	ACC: 2	RESJ: 2	INVEST: 1	Priority:

Why Do This? Park trails cross 156 intersections in the County and create conflict points between trail users and cross traffic.

FY22 Work Plan:
Continue systematic upgrades of trail crossings at 8-12 crossings per year.

FY23 Work Plan:
Continue systematic upgrades of trail crossings at 8-12 crossings per year.

Budget Sources: P871905 - Vision Zero (Parks)

S-9: Safe Routes to School Engineering Projects: Ensure MCPS school walksheds have the infrastructure necessary to encourage students to safely walk to school (sidewalks, protected crossings, crossing guards, appropriate speed limits, etc.)

Lead: Transportation, State Highway Admin., Public Schools			Contributor: Planning	
CRF: 3[31]	ACC: 3	RESJ: 2	INVEST: 1	Priority:

Why Do This? Road safety audits proactively identify small, medium, and long-term changes necessary to improve safety at intersections and along corridors. Crashes after safety audits can be reduced between 10-60%.

FY22 Work Plan:
1) Implement new requirement for new construction or major reconstruction at school site to perform road safety audit.
2) Perform five walkability audits.
3) Construct short and mid-term recommendations for at minimum five school walksheds.
4) Construct three spot improvements within school walksheds.

FY23 Work Plan:
1) Reduce speed limits on targeted roadways around priority schools.
2) Evaluate CSDG to consider how transit corridors, school zones and walksheds should be incorporated as an overlay for the new street types.
3) Perform five walkability audits.
4) Construct short and mid-term recommendations for at minimum five school walksheds.
5) Construct three spot improvements within school walksheds.

Budget Sources: P509036 - Transportation Improvements for Schools, P500333 - Pedestrian Safety, P509337 – Facility Planning-Transportation, Operating Budget Program – Community/Transportation Safety

S-10: Provide Safety Upgrades During Routine Maintenance: Utilize repaving, tree pruning, and other maintenance schedules to provide lane widths, pedestrian and bicycle infrastructure, and other safety countermeasures as described in the CSDG that will bring the design speed closer to the speed limit and clear sightlines and walking paths from overgrowth.

Lead: Transportation, State Highway Admin.		Contributor: Utility companies		
CRF: 2[32]	ACC: 3	RESJ: 2	INVEST: 2	Priority: ☑

Why Do This? Utilizing planned roadway and tree maintenance projects provides opportunities to implement safety projects across the county.

FY22 Work Plan:
1) Develop and implement a new project workflow and checklist to aid in coordinating projects for annual paving season.
2) Kensington Parkway shoulder improvements.

FY23 Work Plan:
Explore resources in MCDOT to assist in coordinating and implementing projects across government, development, and utilities.

Budget Sources: P508527 - Resurfacing: Primary/Arterial, P500511 - Resurfacing: Residential/Rural Roads, P500700 – Street Tree Preservation

S-11: Improved Lighting: Improve nighttime illumination through utilizing leading practices for illumination and lighting, regular identification and replacement dark or dim streetlight luminaires, and installing lighting in areas with high crash risk and high pedestrian crossing locations.

Lead: Transportation, PEPCO		Contributor: N/A		
CRF: 2[33]	ACC: 2	RESJ: 2	INVEST: 1	Priority:

Why Do This? Two-thirds of pedestrian fatalities occurred in the dark.

FY22 Work Plan:
1) Update the County's streetlight policy with emphasis on improving safety at intersections and high pedestrian and bicycle traffic areas.
2) Encourage use of MC311 and streetlight apps to report burnt out lights.
3) Bethesda CBD upgrades thru FY26.
4) Infill lighting projects based on crash and safety data.

FY23 Work Plan:
1) Bethesda CBD upgrades thru FY26
2) Infill lighting projects based on crash and safety data.

Budget Sources: P507055 – Streetlighting, P500512 - Streetlight Enhancements - CBD/Town Center

S-12: Sidewalk Repair and Clearance: Ensure sidewalks are in good repair, free from obstructions, and exceed the Americans with Disabilities Act (ADA) requirements. Continue to update sidewalk survey to proactively address trip and other hazards from uneven or blocked sidewalks.

Lead: Transportation			Contributor: State Highway Admin.	
CRF: 1	ACC: 3	RESJ: 2	INVEST: 2	Priority:

Why Do This? Moving sidewalk repairs to a more proactive repair model will identify and fix problems without a community request, but will still allow for requests.

FY22 Work Plan:
Utilize sidewalk survey to prioritize fixes and repairs for critical maintenance issues.

FY23 Work Plan:
Utilize sidewalk survey to prioritize fixes and repairs for critical maintenance issues.

Budget Sources: P508182 - Sidewalk and Curb Replacement

S-13: Sidewalk Construction and Upgrades: Construct and reconstruct sidewalks with proper clearance and street buffer zones as recommended in the Complete Streets Design Guide. Leverage temporary measures, such as walking lanes, on low traffic volume roads.

Lead: Transportation			Contributor: State Highway Admin.	
CRF: 2 [34]	ACC: 3	RESJ: 2	INVEST: 1	Priority: ☑

Why Do This? Providing separation between pedestrians and motor vehicles creates room for error (roadway departures and falls) and encourages active transportation options.

FY22 Work Plan:
1) Planning for Veirs Mill Rd BiPPA.
2) Grove St Walking Lane Pilot Treatment .
3) Construct sidewalk upgrades along MD355 in White Flint.
4) Construct Oak Drive Sidewalk.
5) Sidewalk program minor projects – construct 24,000 LF of sidewalk.

FY23 Work Plan:
1) New shared use path: Good Hope Rd.
2) Sidewalk program minor projects construct 24,000 LF of sidewalk.

Budget Sources: P506747 - Sidewalk Program Minor Projects, P502106 - White Flint Metro Station Access Improvements, P501908 – Oak Drive/MD 27 Sidewalk

S-14: High Visibility Equipment and Markings: Continue using regular maintenance to upgrade traffic signals to have retroreflective borders and refresh/install new crosswalks with continental striping.

Lead: Transportation, State Highway Admin.			Contributor: N/A	
CRF: 2[35, 36]	ACC: 3	RESJ: 2	INVEST: 1	Priority:

Why Do This? Improving visibility of traffic signals, signs, and crosswalks can improve driver compliance.

FY22 Work Plan:

1) Refresh / install at minimum 500 crosswalks with continental striping.
2) Install at minimum 10 retroreflective borders at new / existing signalized / PHB intersections.

FY23 Work Plan:

1) Refresh / install at minimum 500 crosswalks with continental striping.
2) Install at minimum 10 retroreflective borders at new / existing signalized / PHB intersections.

Budget Sources: Operating Program – MCDOT - Community/Transportation Safety, P507154 - Traffic Signals

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S-15: Shared Streets: Develop a permanent version of the Shared Streets program created in 2020 to rethink how public right-of-way is used that can prioritize non-motorist travel and provide benefits to businesses and residents.

Lead: Transportation, Parks, Urban Districts			Contributor: Planning	
CRF: 1	ACC: 2	RESJ: 2	INVEST: 1	Priority:

Why Do This? The Shared Streets program created during the COVID-19 pandemic provided a model to make quick changes to the roadway to benefit restaurants, retail, walking, and cycling.

FY22 Work Plan:

1) Continue Shared Streets programs during the public health emergency and explore future applications of lessons learned for permanent application.
2) Apply for MWCOG grant to develop a neighborhood greenway design toolkit to aid in converting existing temporary greenways to permanent treatments and future expansion.

FY23 Work Plan:

1) Update neighborhood block party permit to account for new shared streets when public health emergency is lifted.
2) Develop a strategic plan for the possible continuation and expansion of Shared Streets model.

Budget Sources: Operating Program – MCDOT – Community/Transportation Safety, P507596 - Bikeway Program Minor Projects (for greenways)
Grant opportunities: MDOT Kim Lamphier Bikeways Network Program, MWCOG Transportation Land-Use Connections Program

S-16: Data informed decisions: Utilize and combine data sources regarding crashes, infrastructure, land use, traffic volume, etc. to identify high crash risk areas and potential countermeasures. Infuse data in the budget and decision-making process to improve safety and equitable outcomes.

Lead: Police, Planning, Transportation, Management and Budget			**Contributor:** Vision Zero Coordinator, Maryland Highway Safety Office, Maryland State Police		
CRF: N/A	**ACC:** N/A	**RESJ:** N/A	**INVEST:** 1	**Priority:**	

Why Do This? Vision Zero requires a proactive approach in order to place resources in areas with the highest return on safety and more equitable distribution compared to request-driven programming.

FY22 Work Plan:
1) Planning Dept. will complete the predictive safety analysis that identifies corridors and intersections with the highest potential for certain crash types.
2) Vision Zero Coordinator along with MCPD will create fatal and serious crash dashboard on Vision Zero website to provide regular updates to the public.
3) MCDOT will develop staff training for developing standardized estimates for a project's safety impact.
4) MCPD will implement updated refresher training for Sergeants approving reports.

FY23 Work Plan:
1) The Office of Management and Budget will update the Pedestrian Safety Impact Statement for CIP projects to new Vision Zero statement.
2) The Office of Management and Budget, Transportation, and Police will provide for all standalone CIP projects linked to Vision Zero provide past crash history and expected crash reduction from project implementation in its project description form.
3) MCDOT to explore implementation of changes to their current asset management system to allow for easier tracking of changes to the network and interoperability between divisions.

Budget Sources: Operating Program – Vision Zero Non-Departmental Account, Operating Program – MCDOT – Community/Transportation Safety

S-17: Equitable Project Intake and Selection: Regularly review program intake processes to ensure resources are being used equitably, meeting community needs, and working towards Vision Zero.

Lead: Transportation, Management and Budget			Contributor: Vision Zero Coordinator	
CRF: N/A	ACC: N/A	RESJ: N/A	INVEST: 1	Priority:

Why Do This? Implementing Vision Zero requires all traffic safety programs to be data informed, proactive, and equitable, which may come from County identification of issues and resident requests. Improving the triage of incoming requests was a priority recommendation from the Equity Task Force.

FY22 Work Plan:
1) Review program intake process to ensure resources are based on equity, safety, need, and data: sidewalk minor projects program
2) Review program intake process to ensure resources are based on equity, safety, need, and data: requests to Traffic Engineering and Operations.

FY23 Work Plan:
Review program intake process to ensure resources are based on equity, safety, need, and data: bicycle minor projects program.

Budget Sources: Operating Program – Vision Zero Non-Departmental Account

Safe Speeds

Montgomery County will use planned projects to align the recommended safe speed for the roadway and land use context with the design of the roadway. The County will utilize outreach and enforcement efforts to explain the dangers of speeding and enforce the speed limit.

M-1: Examine Speed Limit on all Projects: On all safety and maintenance projects, use the opportunity to modify the roadway design to bring the design speed in line with the desired target and posted speed limit.

Lead: Transportation, State Highway Admin.			Contributor: N/A		
CRF: 2[37]	ACC: 2	RESJ: 3	INVEST: 1		Priority: ☑

Why Do This? Speed management is a fundamental factor in reducing serious and fatal injuries for all road users.

FY22 Work Plan:
1) Implement 20 is Plenty pilot project.
2) Update County and State laws and policies to allow setting speeds as recommended in the CSDG.

FY23 Work Plan:
Implement speed limit reductions along roads receiving safety and maintenance treatments as appropriate.

Budget Sources: P509523 – Neighborhood Traffic Calming, P509036 - Transportation Improvements for Schools, P500333 - Pedestrian Safety

M-2: Speed Management Policy: Utilize leading, evidence-based practices for setting context sensitive speed limits that align with Vision Zero and the safe systems approach.

Lead: Transportation, State Highway Admin.			Contributor: N/A		
CRF: N/A	ACC: N/A	RESJ: N/A	INVEST: 1	Priority:	

Why Do This? Speed management is a fundamental factor in reducing serious and fatal injuries for all road users.

FY22 Work Plan:
Update internal policies for reviewing and setting speed limits and use tools such as USLIMTS2 and safe systems to determine appropriate and context-sensitive speeds.

FY23 Work Plan:
Update County and State laws and policies to allow setting speeds as recommended in the CSDG.

Budget Sources: Operating Program – MCDOT - Community/Transportation Safety

M-3: Enforcement of Speed Limits: Utilize hybrid (automated and officer initiated) approach for keeping vehicles at or below the speed limit.

Lead: Police*		Contributor: Transportation*		
CRF: 2[38]	ACC: 2	RESJ: 1	INVEST: 1	Priority:

Why Do This? High Visibility Enforcement is a proven countermeasure and universal traffic-safety approach designed to create deterrence and change unlawful and risky driving behaviors.

FY22 Work Plan:
Continue using County and MHSO funding for saturation patrols against speeding and aggressive drivers.

FY23 Work Plan:
Continue using County and MHSO funding for saturation patrols against speeding and aggressive drivers.

Budget Sources: Operating Program – MCPD - Field Services
Grant opportunity: MHSO Grants and Projects for Safety (GPS)

*Lead and contributor roles may change depending on pending legislation.

Multimodal Future

The Montgomery County of the future will have many safe and efficient travel options including Metrorail, Purple Line, commuter rail (MARC), bus rapid transit, regional and local buses, and a network of sidewalks and bikeways. New technologies such as autonomous vehicles, improved telepresence options, and micromobility (e-scooters and e-bikes) emerge.[39] With the robust transit and cycling networks, the number of people required to drive to reach their destination will decline. The changes will aid in reaching Vision Zero with fewer drivers on the road and people taking safer transit options, upgraded bikeways and sidewalks are intuitive and low-stress for most people to use, and vehicles have multiple crash avoidance technologies built in.[40]

The 2030 Vision Zero Plan does not repeat the many important land use actions recommended in Thrive 2050 and the Climate Action Plans necessary to build this multimodal future. The plan focuses on the safety aspects to ensure that the design, construction, and operation of existing or new travel options do not create hazards and work to remove existing ones.

Tracking Implementation for Multimodal Future
The following measures will help track progress on transforming the transportation network.

- Annual vehicle miles traveled.
- Travel mode split.
- Percentage of transit stops along multi-lane roads located at or near a protected crossing.

Multimodal Future Action Items Summary

Action	Lead	Contributor	Priority Action	On Page #
T-1: Pedestrian and Bicycle Infrastructure Improvements Along New Transportation Projects	MCDOT	SHA	Yes	44
T-2: Transit Stop Safety	MCDOT	WMATA, SHA	Yes	45
T-3: School Bus Stop Safety	MCPS	MCDOT	No	45
T-4: Eliminate sidewalk obstructions	MCDOT, SHA, DEP	N/A	No	46
T-5: Maintenance of Travel (MOT) during sidewalk and road closures	DPS, MCDOT, SHA	N/A	No	46
T-6: Bike and micromobility parking	MCDOT	N/A	No	47
T-7: Pick up / Drop Off Zones and Loading Management	MCDOT, Planning	N/A	No	47
T-8: Snow Removal from Bike Facilities, Sidewalks, and Transit Stops	MCDOT, Parks, SHA	DGS	No	48
T-9: Parking Lot Design and Construction	Planning	MCDOT	No	48
T-10: Safety Audit of County Owned Parking Lots and Garages	MCDOT	N/A	No	49
C: Transportation and Land Use Planning	Planning	MCDOT	No	50
V-1: Safer County Vehicle Fleet	DGS	MCDOT, MCPD, MCFRS	No	51
V-2: Prepare for Autonomous Vehicles	CEX	MCDOT, DGS, Planning	No	51

Safe Transportation

No matter how one gets around Montgomery County today or in the future, there must be safe ways to access transit, schools, businesses, and homes. Action items under Safe Transportation work to upgrade access to existing and future transit stops, prioritize uses for curbside space, and improve safety accessing and navigating parking facilities.

T-1: Pedestrian and Bicycle Infrastructure Improvements Along New Transportation Projects: Build pedestrian and bicycle infrastructure and wayfinding for Purple Line and future Bus Rapid Transit (BRT) routes to create complete streets on transit corridors.				
Lead: Transportation			**Contributor:** State Highway Admin.	
CRF: 3[41]	**ACC:** 3	**RESJ:** 3	**INVEST:** 3	**Priority:** ☑

Why Do This? Implementation of new transit along high crash highways presents a once-in-a-generation opportunity to redevelop highways into safer boulevards.

FY22 Work Plan:

Continue design on:

      1) Veirs Mill Road Bus Rapid Transit

      2) MD 355 Bus Rapid Transit

Begin construction on:

      1) Capital Crescent Trail

      2) Metropolitan Branch Trail

FY23 Work Plan:

Continue design on improvements:

      1) Veirs Mill Road Bus Rapid Transit

      2) MD 355 Bus Rapid Transit

Start Construction of Purple Line BiPPA improvements.

Develop wayfinding standards for navigating to new transit systems.

Budget Sources: P502004 – BiPPA Improvements – Purple Line, P502101 - US 29 Bicycle and Pedestrian Improvements, P501318 - Bus Rapid Transit: System Development, P501913 – Bus Rapid Transit: Veirs Mill Road, P502005 - Bus Rapid Transit: MD 355

Grant opportunities: MDOT Kim Lamphier Bikeways Network Program, MWCOG Transportation Land-Use Connections Program

T-2: Transit Stop Safety: Provide safe crossings to and from transit stops through auditing transit stops and implementing audit recommendations. Develop consistent bus stop infrastructure (poles, benches, shelters, etc.)

Lead: Transportation		Contributor: WMATA, State Highway Admin.		
CRF: 3[42]	ACC: 3	RESJ: 3	INVEST: 2	Priority: ☑

Why Do This? Many transit stops in the County lack a safe and convenient crossing. Pedestrians have been struck and killed when walking to and from bus stops in the County.

FY22 Work Plan:
1) Scope of Ride On Bus Route Restructuring Study incorporates leading practices for safe bus stop placement in developing recommended route changes.
2) Upgrades for 2-3 corridors along high crash risk routes.

FY23 Work Plan:
1) Upgrades for 2-3 corridors along high crash risk routes.
2) Advance design of pilot program in Downtown Silver Spring for urban navigation for people with no and low vision.

Budget Sources: P502107 - Ride On Bus Route Restructuring Study, P507658 - Bus Stop Improvements

T-3: School Bus Stop Safety: Systematically review and upgrade school bus stop locations and pick up/drop off at schools to ensure student safety.

Lead: Public Schools		Contributor: Transportation		
CRF: 1	ACC: 3	RESJ: 2	INVEST: 1	Priority:

Why Do This? Provide pickup and drop off locations that minimize the need to cross or wait for a bus along multi-lane roads.

FY22 Work Plan:
Continue review of bus stops along major roadways and moving them to nearby local streets where possible.

FY23 Work Plan:
Continue review of bus stops along major roadways and moving them to nearby local streets where possible.

Budget Sources: Montgomery County Public Schools – Student Transportation

T-4: Eliminate sidewalk obstructions: Provide clearance space on sidewalks and consider restrictions or bans to ensure placement of signs, newspaper boxes, and trash bins do not block safe passage.

Lead: Transportation, State Highway Admin., Environmental Protection			**Contributor:** N/A	
CRF: 1 [43]	**ACC:** 3	**RESJ:** 2	**INVEST:** 2	**Priority:**

Why Do This? Two cyclists were killed in the past five years when they struck an object on the sidewalk and fell into the roadway.

FY22 Work Plan:
Develop pilot project along University Blvd W for pads along residential properties with no space to place receptacles outside of sidewalk.

FY23 Work Plan:
Finalize implementation and evaluate pilot project. If successful and funded, expand to similar corridors.

Budget Sources: To be determined

T-5: Maintenance of Travel (MOT) during sidewalk and road closures: Ensure construction and other road closures do not create roadway safety hazards by utilizing County and State laws and policies to enforce the law and communicate with the public about closures and how to report violations.

Lead: Permitting Services, Transportation, State Highway Admin.			**Contributor:** N/A	
CRF: 1	**ACC:** 3	**RESJ:** 2	**INVEST:** 2	**Priority:**

Why Do This? Short and long-term closures for construction can create unnecessary safety hazards, particularly for pedestrians and cyclists if their travel options are cut off.

FY22 Work Plan:
1) Develop model regulations for construction and utility closures that accounts for maintenance of all travel modes where applicable.
2) Utilize Department of Permitting Services and other data sources to provide real-time notifications on an online map.

FY23 Work Plan:
Relevant departments need to identify options and resources for updated regulations to be enforced.

Budget Sources: Operating Program – DPS – Zoning, Well, and Septic Code Compliance

T-6: Bike and micromobility parking: Install micromobility corrals across the County, with priority in major activity centers, to provide safe and convenient parking for bikes and other micromobility devices (e.g., e-scooters) to keep the sidewalks, bike lanes, and roads clear.

Lead: Transportation			**Contributor:** N/A	
CRF: 1	**ACC:** 3	**RESJ:** 2	**INVEST:** 1	**Priority:**

Why Do This? The County is encouraging use of more transportation options and keeping bikes and e-scooters off the sidewalk and road helps to eliminate sidewalk obstructions.

FY22 Work Plan:
1) Identify and prioritize public spaces across Red Policy Areas and Parking Lot Districts that will benefit from micromobility corrals.
2) Continue and expand efforts to encourage proper use and storage of micromobility devices.

FY23 Work Plan:
Evaluate effectiveness of corrals that have been installed.

Budget Sources: Grant opportunities: MWCOG Transportation Land-Use Connections Program

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T-7: Pick up / Drop Off Zones and Loading Management: Prioritize curbside space to meet the needs and policy goals for urban areas and ensure use reduces conflict amongst road users. This includes creating and expanding pick up/drop off zones, unloading, and short-term parking close to building entrances.

Lead: Transportation, Planning			**Contributor:** N/A	
CRF: 1	**ACC:** 3	**RESJ:** 2	**INVEST:** 1	**Priority:**

Why Do This? Curbside space, particularly in urban centers, has competing needs for transportation, parking, loading, and delivery which can create potential safety and accessibility conflicts between road users.

FY22 Work Plan:
Finalize Urban Loading and Delivery Management study on freight and parcel delivery.

FY23 Work Plan:
1) Develop curbside management strategies and regulations to include passenger loading.
2) Implement priority recommendations for pilot in Bethesda from Urban Loading and Delivery Management Study (study to be completed by fall 2021).

Budget Sources: To be determined

T-8: Snow Removal from Bike Facilities, Sidewalks, and Transit Stops: Clarify County Government's responsibility for snow clearance from sidewalks and bike lanes similar to how it is cleared from roadways.

Lead: Transportation, Parks, State Highway Admin.		**Contributor:** General Services		
CRF: 1	**ACC:** 3	**RESJ:** 2	**INVEST:** 3	**Priority:**

Why Do This? Provide equitable snow removal services for all transportation modes.

FY22 Work Plan:

Explore code modifications and other legal avenues needed to expand street snow removal procedures to minimize snow blockage in front of curb cuts and bus shelters and transit stops as appropriate and applicable.

FY23 Work Plan:

Procure additional equipment or contractor service if need to ensure protected bike lanes can be cleared.

Budget Sources: Operating Program – Transportation Management, Operations and Emergency/Storm Response

T-9: Parking Lot Design and Construction: Parking lots that are redeveloped or constructed are safe for pedestrians, cyclists, and people using assistive mobility devices to access and navigate.

Lead: Planning		**Contributor:** Transportation		
CRF: N/A	**ACC:** N/A	**RESJ:** N/A	**INVEST:** 1	**Priority:**

Why Do This? 16% of serious and fatal pedestrian involved crashes occur in parking lots and driveways.

FY22 Work Plan:

No year one item.

FY23 Work Plan:

1) Utilize mandatory referral process to prioritize parking lot safety improvements.
2) Update parking lot design standards to ensure new or rebuilt lots prioritize and provide parking for people with disabilities, bikes, and micromobility.

Budget Sources: To be determined

T-10: Safety Audit of County Owned Parking Lots and Garages: Review and modify County owned parking lots and garages to eliminate conflicts when entering and navigating the facilities.

Lead: Transportation			Contributor: N/A		
CRF: 1	ACC: 3	RESJ: 2	INVEST: 2	Priority:	

Why Do This? Condition exist that may result in pedestrians and cyclists being struck near the entrances and exits to County owned lots and garages.

FY22 Work Plan:

Conduct a safety analysis of existing county owned lots and garages to prioritize properties that may need modifications.

FY23 Work Plan:

Implement a safety upgrade program for County lots and garages based on the safety analysis.

Budget Sources: P501312 – Facility Planning Parking: Wheaton Parking District, P501313 – Facility Planning Parking: Bethesda Parking Lot District, P501314 – Facility Planning Parking: Silver Spring Parking Lot District

Safe and Sustainable Communities

To achieve Vision Zero, land use and roadway designs need to be compatible. The Vision Zero 2030 Action Plan will continue to sync up land use and roadways through integrating Vision Zero and its safe systems approach into master planning for communities, transportation demand management programs, and roadway design guidelines.

The Montgomery County Planning Department supports Vision Zero implementation through community engagement, stakeholder facilitation, data analysis and a focus on long-term visioning:

- **Master Planning.** Through master planning, Montgomery Planning engages the community to re-envision our auto-oriented roadways as safe, complete streets for walking, bicycling, and driving.

- **Development and Capital Projects.** The Montgomery County Planning Board helps to implement the vision of master plans by reviewing proposed development and capital projects, including mandatory referrals.

- **Data Analysis.** The Planning Department has extensive data collection and analysis resources to identify roadway characteristics that create safety challenges and to propose proven changes to improve safety.

- **Community Support and Engagement.** The department provides support for building a Vision Zero constituency.

The below action item displays the larger initiatives led by the Planning Department to shape land use and transportation planning. The Planning Department is also a joint lead or partner for other action items throughout the Plan. For the Planning Department's detailed Vision Zero Work Plan, visit the Planning Department's Vision Zero website at https://montgomeryplanning.org/planning/transportation/vision-zero/.

C: Transportation and Land Use Planning: Incorporate Vision Zero and a safe systems approach into functional and area master plans, development review, and subdivision staging.				
Lead: Planning		**Contributor:** Transportation		
CRF: N/A	**ACC:** N/A	**RESJ:** N/A	**INVEST:** 1	**Priority:**
Why Do This? Land use planning is closely connected with the success of expanded mobility choices and lowering the distance and number of trips needed to be made by car.				
FY22 Work Plan: 1) Approval of updated General Plan (Thrive 2050). 2) Develop a framework for incorporating Vision Zero in Master Plans.				
FY23 Work Plan: Approval of Pedestrian Master Plan.				
Budget Sources: Montgomery County Planning				

Safe Vehicles

Having safe vehicles on our roadways is crucial for our safety goals, but is an area where the County Government has limited influence. Montgomery County will partner with peer Vision Zero jurisdictions, the Road to Zero coalition, and other stakeholders to push State and Federal rule makers to improve crash survivability for those in and outside of vehicles, improve vehicle technology, and prepare the county for vehicles that will become fully autonomous.

V-1: Safer County Vehicle Fleet: When replacing County fleet and emergency response vehicles, ensure the vehicles are equipped with life-saving crash avoidance technology and vehicles are right sized for the areas they serve.				
Lead: General Services		**Contributor:** Transportation, Police, Fire/Rescue Service		
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 2	**Priority:**
Why Do This? Vehicle technologies now available, such as automatic braking, lane assist, and pedestrian detection can reduce the probability of being involved in a crash.				
FY22 Work Plan:				
As part of the zero emission fleet plan, include considerations for new safety features that may be part of the EV package from vehicle manufacturers.				
FY23 Work Plan:				
As vehicles are replaced, purchase vehicles meeting minimum safety packages defined by DGS.				
Budget Sources: Montgomery County Motor Pool Internal Service Fund				

V-2: Prepare for Autonomous Vehicles: Prepare the County's infrastructure for vehicles that will communicate with each other and the infrastructure.				
Lead: Vision Zero Coordinator		**Contributor:** Transportation, General Services, Planning		
CRF: N/A	**ACC:** N/A	**RESJ:** N/A	**INVEST:** 1	**Priority:**
Why Do This? Autonomous vehicles may not be a major percentage of the cars on the road by 2030, but investments and planning are needed to prepare for these vehicles.				
FY22 Work Plan:				
Continue connected infrastructure pilot and participation on Maryland Connected and Automated Vehicles Working Group.				
FY23 Work Plan:				
Establish a Future Technology Task Force to plan for connected autonomous vehicles (CAVs) and the increase in personal conveyances.				
Budget Sources: Operating Program – Vision Zero Non-Departmental Account				

Culture of Safety

Vision Zero requires more than improved transportation infrastructure; it requires building a culture of safety. A safety culture not only reduces risky behaviors such as speeding and impaired driving, but grows protective behaviors such as wearing seatbelts or purchasing a vehicle based on its safety ratings.

An example of effective cultural change that has saved lives is the focus on seatbelt use in the United States. Through education and enforcement campaigns like *Click It or Ticket*, states passing primary seatbelt laws, and vehicle manufacturers installing belt use reminders, seatbelt use has improved from 60% in 1995 to 90% in 2018. As a result, unrestrained passenger vehicle occupant fatalities are decreasing and nearly 15,000 lives are saved each year by seatbelts.[44] Using this and other proven examples will help Montgomery County curb the most dangerous behaviors on our roadways and build respect for everyone sharing the road.

Seatbelts save 15,000 lives in the US every year.

Tracking Implementation for Culture of Safety
The following measures will help track progress on building a culture of safety.

- Community rating for ease of travel by bike, car, public transportation, and walking
- Percentage of drivers in Montgomery County wearing seatbelt.
- Percentage of crashes with "big five" violations – speeding, impairment, distraction, occupant protection, and failure to yield right-of-way.
- Reduction in collisions involving County-owned vehicles.
- Percentage of County employees given safety awareness training.
- Maintain response times for traffic collisions with injuries based on department standards.

Culture of Safety Action Items Summary

Action	Lead	Contributor	Priority Action	On Page #
P-1: Outreach and Education to the Community	MCDOT, CEX	OPI, RSC	No	54
P-2: Collaboration with Community Partners and Ambassadors	MCDOT, CEX	RSC, OPI, MCPS, REC	No	55
P-3: Coordination of Campaigns	CEX	MCDOT, MCPD, OPI	No	56
P-4: Ending Impaired Driving Deaths	CEX, MCPD	MCDOT, OPI, HHS, ABS, MHSO	Yes	56
P-5: Expansion of Automated Enforcement	MCPD	MCDOT	No	57
P-6: Focus on the Five	MCDOT	MCDOT	No	57
P-7: Expand Safe Routes to School	MCDOT	MCPS	No	58
P-8: Bike Riding and Safety Courses	MCDOT	MCPS	No	58
P-9: County Employees using Fleet Vehicles	DGS, FIN, MCPD, MCFRS	N/A	No	59
P-10: Conspicuity for County Employee Uniforms	MCPD, MCDOT, MCFRS	N/A	No	59
R-1: Prompt Medical Service	MCFRS	MCPD	No	60
R-2: Planning and Coordination for Safe Traffic Incident Management	MCFRS, MCPD	CEX	No	60

Safe People

Culture of Safety actions are intended to improve two-way communication between the County Government and communities most impacted by serious traffic crashes, empower communities to speak up for safety, and vigilant use of officer and automated enforcement.

P-1: Outreach and Education to the Community: Improve project communication and outreach to a broader audience and on multiple communication channels utilizing County Government outreach staff on safety topics relevant to Montgomery County's identified safety problems and demographics.					
Lead: Transportation, Vision Zero Coordinator			**Contributor:** Public Information Office, Regional Services Centers		
CRF: 1	**ACC:** 2	**RESJ:** 3	**INVEST:** 2	**Priority:**	
Why Do This? The Equity Task Force recommended the County take a more proactive approach to engage communities that may not be represented in the process and to prioritize vulnerable road users. This action item lays out how the County will be more proactive in its outreach.					
FY22 Work Plan: 1) As part of the communication guide update, develop updated communication and outreach strategy for safety projects and campaigns. 2) Coordinate safety campaigns with regional, state, and federal agencies and continue seeking grant funding to support efforts. 3) Add motorcycle safety, "move over" law, and older adult safety to the annual safety campaign calendar.					
FY23 Work Plan: 1) Identify resources to aid in developing communication and outreach plans for projects with particular focus on multi-lingual outreach. 2) Coordinate safety campaigns with regional, state, and federal agencies and continue seeking grant funding to support efforts.					
Budget Sources: Operating Program – Vision Zero Non-Departmental Account, Operating Program – MCDOT - Community/Transportation Safety					

P-2: Collaboration with Community Partners and Ambassadors: Work with existing community groups, County outreach staff, and community ambassadors to increase the amount of public feedback and raise awareness for traffic safety projects and campaigns.

Lead: Transportation, Vision Zero Coordinator		**Contributor:** Regional Services Centers, Public Information Office, Public Schools, Recreation		
CRF: 1[45]	**ACC:** 2	**RESJ:** 3	**INVEST:** 2	**Priority:**

Why Do This? There are limited community outreach resources in departments, so utilization of community partners and ambassadors is necessary to reach more residents.

FY22 Work Plan:
1) Update Vision Zero communication guidelines and policy developed in 2018. The update needs to identify local groups (HOAs, PTAs, Condo Associations, etc.) that can be engaged in traffic safety messaging.
2) Continue annual youth ambassador program.
3) Partner with regional and national groups to create older driver and pedestrian campaigns to raise awareness of vulnerability at different ages, changes in reaction times, how to navigate new infrastructure such as protected bike lanes, and transit options for older residents.
4) Work with MCPS to add safety materials for students applying for school parking permits.
5) Utilize the Street Smart driving simulator to raise awareness of common crash scenarios between motor vehicles and pedestrians and cyclists.
6) Work with REC summer camps and AAA Patrol Camp for safety outreach.
7) Work with fellow members of the State's Pedestrian Bicycle Emphasis Area Team (P-BEAT) to identify areas for improvement in MVA renewal questions and provide recommendations.

FY23 Work Plan:
1) Expansion of ambassador program to include adult component.
2) Continue to assess partnerships and establish new ones.
3) Reach out to local driving schools and provide materials about Vision Zero and sharing the road.

Budget Sources: Operating Program – Vision Zero Non-Departmental Account, Operating Program – MCDOT - Community/Transportation Safety

P-3: Coordination of Campaigns: Wrap around planned safety projects with education, encouragement, outreach, and enforcement.

Lead: Vision Zero Coordinator			Contributor: Transportation, Police, Public Information	
CRF: 2[46]	ACC: 2	RESJ: 1	INVEST: 1	Priority:

Why Do This? Utilization of education, outreach, and enforcement before and after engineering treatments can improve safety beyond the engineering treatment and helps to engage the neighborhood.

FY22 Work Plan:

Create corridor project plans that account for education, outreach, and enforcement to bookend engineering projects under S-1.

FY23 Work Plan:

Create corridor project plans that account for education, outreach, and enforcement to bookend engineering projects under S-1.

Budget Sources: Operating Program – Vision Zero Non-Departmental Account, Operating Program – MCDOT - Community/Transportation Safety

P-4: Ending Impaired Driving Deaths: Implement a multifaceted program towards ending impaired driving deaths with focus on prevention and treatment.

Lead: Vision Zero Coordinator, Police			Contributor: Transportation, Public Information, Health and Human Services, Alcohol Beverage Services, Highway Safety Office	
CRF: 2[47]	ACC: 2	RESJ: 2	INVEST: 2	Priority: ☑

Why Do This? Impaired driving is a leading contributing factor in fatal crashes in Montgomery County and across the world. 28% of fatal crashes in the county involve an impaired person.

FY22 Work Plan:

1) Bring together stakeholders to develop an action plan focused on ending impaired driving deaths in Montgomery County.
2) Promote and increase number of joint operations with municipal and State Police as part of high visibility enforcement campaigns focused on interstates and major arterials.

FY23 Work Plan:

1) Implementation of anti-drunk and -drugged driving program developed in FY22.
2) Expand driving under the influence of drugs (DUID) and advanced roadside impaired driving enforcement (ARIDE) training for all MCPD cadets at the academy.

Budget Sources: Operating Program – Vision Zero Non-Departmental Account
Grant opportunity: MHSO Grants and Projects for Safety (GPS)

P-5: Expansion of Automated Enforcement: As technology advances and privacy concerns are addressed, update State law to remove barriers that limit the use of automated traffic enforcement and take advantage of new technologies available.

Lead: Police			Contributor: Transportation	
CRF: 2[48]	ACC: 2	RESJ: 2	INVEST: 1	Priority:

Why Do This? Automated traffic enforcement has proven to reduce injury crashes and removes potential for human bias. ATE reduces red light running and can lower serious and fatal injuries by approximately 14%.

FY22 Work Plan:

1) Expand deployment of red light and speed cameras to areas with known high crash risk.
2) Support state legislation to expand location qualifications for automated speed enforcement to include areas identified as high crash risk and documented speeding problems and remove time limits for ATE around school zones.

FY23 Work Plan:

Support State legislation to expand automated enforcement for additional violations such as bus lanes, distraction, move over law, occupant protection, over height vehicles, and block the box if the technology has been proven effective, equitable, and protects drivers from unnecessary surveillance.

Budget Sources: Operating Program – MCPD - Field Services

P-6: Focus on the Five: Focus the efforts of MCPD officers on curbing the most dangerous behaviors (occupant protection, speeding and aggressive driving, not yielding right of way, impairment from alcohol or drugs, and distraction) and less on non-moving violations.

Lead: Police			Contributor: Transportation	
CRF: 2[49]	ACC: 2	RESJ: 1	INVEST: 1	Priority:

Why Do This? The 2019 Vision Zero Equity Task Force recommended adopting a program similar to San Francisco's "Focus on the Five" enforcement program to focus MCPD's enforcement efforts around known risky behavior and deemphasize non-moving violations.

FY22 Work Plan:

1) Bring more district motor units under the centralized Traffic Division for coordination and prioritization of enforcement efforts.
2) Continue roll-out of "focus on the five" high visibility enforcement (HVE) program in coordination with outreach. Develop a short explainer document on importance of "focus on the five" and equitable traffic enforcement.
3) To offset the financial impact of enforcement, work with State and County legislators, State's Attorney Office to provide alternatives to fines such as community service or attending classes.

FY23 Work Plan:

Continue "focus on the five" HVE and assess the initiative's impact on racial equity and social justice to determine if the execution of the program leads to inequitable outcomes.

Budget Sources: Operating Program – MCPD - Field Services
Grant opportunity: MHSO Grants and Projects for Safety (GPS)

P-7: Expand Safe Routes to School: Expand the County's Safe Routes to School (SRTS) activities to all schools and initiate comprehensive traffic safety education and age appropriate outreach for pedestrian, bicycle, and driver safety.

Lead: Transportation			Contributor: Public Schools	
CRF: 2[50]	ACC: 2	RESJ: 2	INVEST: 2	Priority:

Why Do This? Through Safe Routes to School, the County Government and Public Schools can initiate targeted education and engineering projects to improve the pedestrian environment and encourage more students to walk or bike to their school.

FY22 Work Plan:

1) Develop additional virtual outreach training to expand train-the-trainer program.
2) Partner with additional PTA and Community Associations to increase engagements to parents.

FY23 Work Plan:

Explore opportunities for expanding staff or contractors to support Safe Routes to School outreach focused on outreach to limited English families.

Budget Sources: Operating Program – MCDOT - Community/Transportation Safety
Grant opportunity: MHSO Grants and Projects for Safety (GPS)

P-8: Bike Riding and Safety Courses: Expand adult and child beginner biking courses through Commuter Services and Safe Routes to School. Incorporate micromobility device training (e.g., e-scooters).

Lead: Transportation, Public Schools			Contributor: N/A	
CRF: 1	ACC: 2	RESJ: 2	INVEST: 2	Priority:

Why Do This? Bicycle safety courses introduce students to riding a bike and practicing safe behaviors.

FY22 Work Plan:

1) Expand multi-lingual outreach for adult training programs.
2) Host at minimum five bicycle rodeos at different schools.

FY23 Work Plan:

1) Implement on-bike education program in County Schools.
2) Host at minimum five bicycle rodeos at different schools.

Budget Sources: Operating Program – MCDOT - Community/Transportation Safety
Grant opportunity: MHSO Grants and Projects for Safety (GPS)

P-9: County Employees using Fleet Vehicles: Provide a safe driving program for all County employees that utilize County fleet vehicles.

Lead: General Services, Finance, Police, Fire/Rescue			Contributor: N/A	
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 2	**Priority:**

Why Do This? The County Government as an employer needs to keep its employees safe and a reduction in crashes involving County vehicles can save taxpayer dollars.

FY22 Work Plan:
1) For departments with driver training (Police, Fire/Rescue Service), include in practical driver training and tests about limiting distractions, seat belt use, and safe speeds similar to current "Arrive Alive" program in MCPD.
2) For non-public safety employees, provide defensive driver training using County Computer Based Training Program and programs similar to the Smith System.
3) Update MCPD policies and training for limiting distractions while driving such as limiting mobile data terminal use for Police Officers.

FY23 Work Plan:
Implement a collision review committee to review crashes involving County vehicles and resulting in injuries for departments currently without a review committee.

Budget Sources: Various department budgets

P-10: Conspicuity for County Employee Uniforms: Provide high visibility gear for employees working in or near roadways as uniforms are replaced or purchased for new employees.

Lead: Police, Transportation, Fire/Rescue			Contributor: N/A	
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 1	**Priority:**

Why Do This? County employees working on or near roadways can improve their visibility of passing drivers by wearing high visibility gear.

FY22 Work Plan:
1) Identify all county positions that require field work and work with County unions to upgrade uniform policies to include high visibility outer wear.
2) As uniforms are replaced or purchased for new employees, provide high visibility gear.

FY23 Work Plan:
As uniforms are replaced or purchased for new employees, provide high visibility gear.

Budget Sources: Various department budgets for uniforms

Safe Post-Crash Response and Care

Rapid response and care to car collisions is crucial, but cannot come at the expense of safety for first responders. Collisions are a leading cause of fatalities for both police and fire public safety employees. The County will ensure the protection of the public and its employees through safe responses and on-scene traffic management.

R-1: Prompt Medical Service: Ensure proper emergency medical care for crash victims through prompt response to incident and proper medical care.					
Lead: Fire/Rescue			**Contributor:** Police		
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 1	**Priority:**	
Why Do This? Prompt emergency response, transport, and care from nearby trauma centers can decrease the morbidity and mortality of crash victims.					
FY22 Work Plan: Maintain time to scene and time to hospital response times that meet or exceed department standards.					
FY23 Work Plan: Maintain time to scene and time to hospital response times that meet or exceed department standards.					
Budget Sources: Operating Program – MCFRS - Operations					

R-2: Planning and Coordination for Safe Traffic Incident Management: Utilize leading practices, policies, and technology to eliminate secondary crashes that occur while first responders are on the scene.					
Lead: Fire/Rescue, Police			**Contributor:** Vision Zero Coordinator		
CRF: 1	**ACC:** 2	**RESJ:** 2	**INVEST:** 1	**Priority:**	
Why Do This?					
FY22 Work plan: Finalize updates to MCFRS and MCPD traffic incident management policies.					
FY23 Work Plan: Pilot project for temporary traffic control devices (e.g. truck mounted attenuators or arrow boards) and tow trucks similar to the State Highway Administration's CHART program on the interstates.					
Budget Sources: Seek grant funding or sponsorship for pilot.					

Appendix I: Plan Development Phases

The initial Vision Zero 2018-19 Action Plan called for a long-term plan to reach Vision Zero by 2030. A project plan for creating the Vision Zero 2030 Action Plan began in February 2020 with the hiring of a full-time Vision Zero Coordinator. The initial plan was to have a nine month process and have a plan in place by the end of 2020. The COVID-19 pandemic caused the outreach and workgroup plans to be completely rewritten by March. After reconfiguring the development plan, the project started in earnest on June 18, 2020 with a virtual community kickoff meeting featuring County Executive Elrich and Councilmember Hucker. During that meeting, a three phase development plan lasting a year was presented. Below were the initial phases and timelines for developing the plan.

PHASE I –
FACT FINDING
June – Aug 2020
- Community survey
- Community letters
- Community meetings
- Targeted outreach
- Updated data analysis and leading practices research
- MCG surveys and interviews
- Deliverable: Background packets for workgroups

PHASE II –
WORKGROUPS
Sept 2020 – Jan 2021
- 3 workgroups
- Meet 5 times
- Develop objectives, strategies, action items, and performance measures
- Co-chairs supported by contractors to build on progress each meeting
- Deliverable: Working draft of 10-year strategy and 2-year action plan

PHASE III –
COMMUNITY REVIEW
Feb – May 2021
- Facilitated reviews
- Continued outreach to traditionally underrepresented communities
- Iterative drafts
- Deliverable: Final draft of 10-year strategy and 2-year action plan

Phase I: Fact finding

From June to October 2020, the Vision Zero Coordinator lead a series of outreach initiatives to gather county residents' priorities and desires for safer roads. At the kickoff meeting on June 18, a community survey was released to gather resident's input on what currently made them feel safe or unsafe while traveling in the county and what they would like to see in the future. Also in June, the Coordinator sent letters to community organizations with interests in community and traffic safety to gather their input. The Vision Zero and Climate Change Coordinators teamed up to create a youth ambassador and focus group program. Under the banner of "Resilient Montgomery," the youth ambassadors were trained and tasked with performing interviews with people in their communities while the focus groups (listening sessions) were recruited for participation. Overall, over 1,500 residents and 12 community organizations provided feedback during Phase I. The results from Phase I are in the Public Engagement Supplement Report.

Phase II: Workgroups

From September 2020 to January 2021, 3 workgroups met monthly to develop the action items for the 2030 Action Plan. The Vision Zero Coordinator assembled 70 municipal, county, and state employees representing 19 agencies and departments for the workgroups. The workgroups were assigned specific topic areas based on the safe systems approach to develop action items:

- Complete Streets
    - Street Design and Engineering
    - Speed Management

- Multimodal Future
    - Land Use Planning
    - Improved Mobility Options
    - Vehicle Design and Technology

- Culture of Safety
    - Enforcement, Laws, and Regulations
    - Education and Capacity Building
    - Post-crash Emergency Response and Care

Each meeting had a specific purpose:

1. Baselining – overview of Vision Zero and the plan development process.

2. External factors – examine factors outside of the local and state government's control that may have an impact of traffic safety in the coming decade.

3. Community priorities and strategy development – workgroup members were given a summary of the community priorities received during Phase I and started brainstorming action items.

4. Prioritization – workgroup members reviewed proposed action items and prioritized items based on their impact and feasibility.

5. Review – workgroup members reviewed and finalized their recommendations.

After the last workgroup meeting in late January, departments listed as leads and contributors were given the workgroups' recommended action items and tasked with developing a year one and two work plan. The action items and work plan were finalized in April 2021 and the Plan was released for public review.

Phase III: Community Review

(This space reserved for a summary of Phase III, which began April 15, 2021).

Appendix III: Data Analysis Supplement

Additional data and analysis can be found in the supplemental document available at
https://www.montgomerycountymd.gov/visionzero/Resources/Files/vz2030-data.pdf.

Appendix IV: Public Engagement Supplement

Detailed information on the outreach performed to develop the 2030 Vision Zero Action Plan
and summaries of each campaign is available at
https://www.montgomerycountymd.gov/visionzero/Resources/Files/vz2030-community.pdf.

ENDNOTES

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4 Brian Tefft, "Impact Speed and a Pedestrian's Risk of Severe Injury or Death," AAA Foundation for Traffic Safety, September 2011, https://aaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/.

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6 "Dangerous by Design 2021," Smart Growth America, March 2021, https://smartgrowthamerica.org/dangerous-by-design/.

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