



VISION ZERO

ENDING TRAFFIC DEATHS
IN MONTGOMERY COUNTY

**OUR PLAN TO ELIMINATE FATALITIES AND
SEVERE INJURIES ON OUR ROADS**

UPDATE TO COUNTY COUNCIL • 11/19/2019



VISION ZERO RECENT ACTIVITY



VISION ZERO RECENT ACTIVITY HIGHLIGHTS

Installed 2 HAWK
beacons with 5 more
planned

Opened 1st protected
bike intersection in the
Mid-Atlantic

New Safe Routes to
Schools Coordinator
completed 27 outreach
events since Aug.

Completed Sidewalk
Inventory

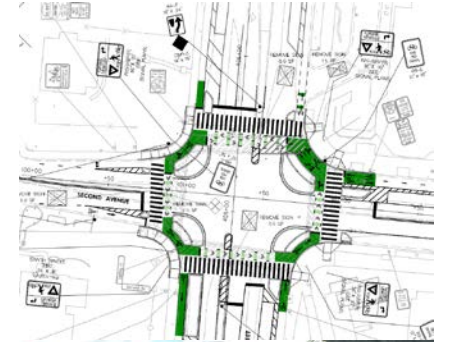
Launched "Be Safe, Be
Seen" safety campaign

Finalizing Road Design
Standards & Project
Prioritization

Piloting Additional
Officers in Central
Traffic Unit for High
Visibility Enforcement

Held 1st Excel Beyond
the Bell On-Bike
Education Course

Finalizing VZ Equity
Task Force
Recommendations



IMPROVING DESIGN STANDARDS & INVENTORY

New Design Guide for Fire Dept. Access



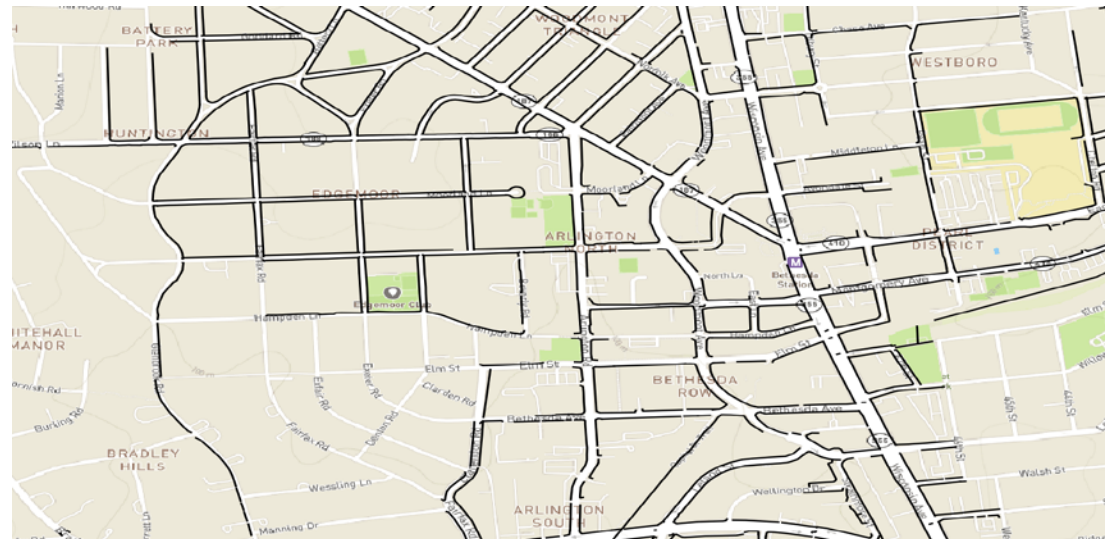
FIRE DEPARTMENT ACCESS PERFORMANCE-BASED DESIGN GUIDE Approved August 2019



Design tradeoffs based on desired Speeds, Lane Width, Roadway Type / Context & Intersections

Pedestrian Zone										Street Zone										Intersection Zone												
Wide Sidewalks	Shared Use Paths	Trees and Greenscape (Buffer Zone)	Street Furniture				Limited Curb Cuts and Driveways	Plazas/Pocket Parks/Parklets	Sidewalk Cafes	Pedestrian Lighting	Wayfinding			Slip Streets	Couplets	Shared Streets (Woonerfs) ⁴	Trees and Greenscape (Median)	On-street Parking	Road/Lane Diet ⁵	Chicanes	Midblock Pedestrian Crossings	Special Pavement Treatment/Speed Tables ⁴	Street Lighting	Multimodal Intersection Design	Curb Extensions/Bulbouts	Modern Roundabouts	Traffic Circles	Crossing Islands ²	Special Pavement Treatment/Speed Tables	Special Pedestrian Signals	Special Bicycle Treatments ³	Special Transit Treatments ⁶
			Seating	Bicycle Parking Facilities	Bollards	Newspaper Racks					Recycling/Garbage Cans	Transit Stops	Information Kiosks																			

Updated Sidewalk Inventory



The Vision Zero Two-Year Action Plan's engineering action items were designed to build a safe systems approach into all our processes and standards and begin studying the High Injury Network.

MCDOT is finalizing its update to roadway design, signage, signals, and roadway marking standards.

In August, MCFRS, DPS, MCDOT, and the Planning Department released an updated Performance-Based Design Guide for Fire Department Access to better balance pedestrian and bicycle safety with public safety needs.



BUILDING COMPLETE STREETS

Park Valley Rd Bridge



2nd/Wayne Ave Protected Bike Lanes



Throughout the County, MCDOT and SHA are making upgrades to roadways to improve protection for vulnerable roadway users. In the past year, MCDOT finished upgrading all County-maintained signalized intersections to a 3.5 feet per second pedestrian crossing standard, completed a sidewalk inventory, and installed innovative roadway treatments including the first protected intersection in the Mid-Atlantic.



Bethesda Bike Loop (construction starts spring 2020)



Amherst Ave Protected Bike Lanes (design 2020)



Executive Blvd Protected Bike Lanes (under construction)

NEW SIGNALS AND BEACONS

Scheduled to be installed are:

Traffic Signal:

- MD 586 & Norris Dr (SHA)

HAWK Beacons:

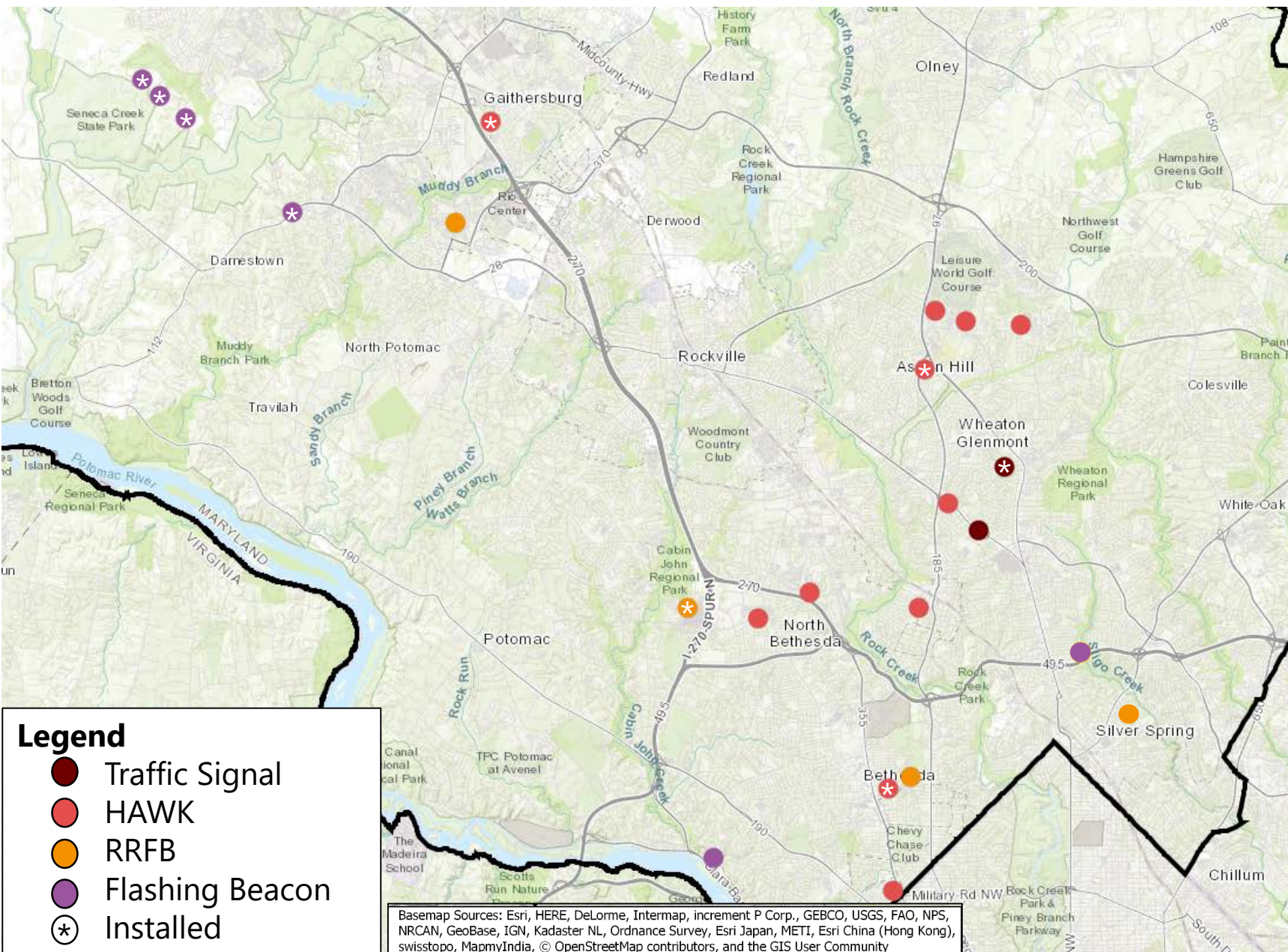
- Willard Ave. & The Hills Plaza (Installation by February 2020)
- Democracy Blvd. & Walter Johnson HS
- Summit Ave & Brookfield Dr
- Bel Pre Rd (upgrade existing RRFBs)
- Tuckerman Ln & Bethesda Trolley Trail
- MD 586 & Andrew St (SHA)
- Muddy Branch & Muddy Branch Square Shopping Center

Rectangular Rapid Flashing Beacons:

- East West Highway & Edgevale St (SHA)
- Dale Drive & Dartmouth Ave

Flashing Beacon:

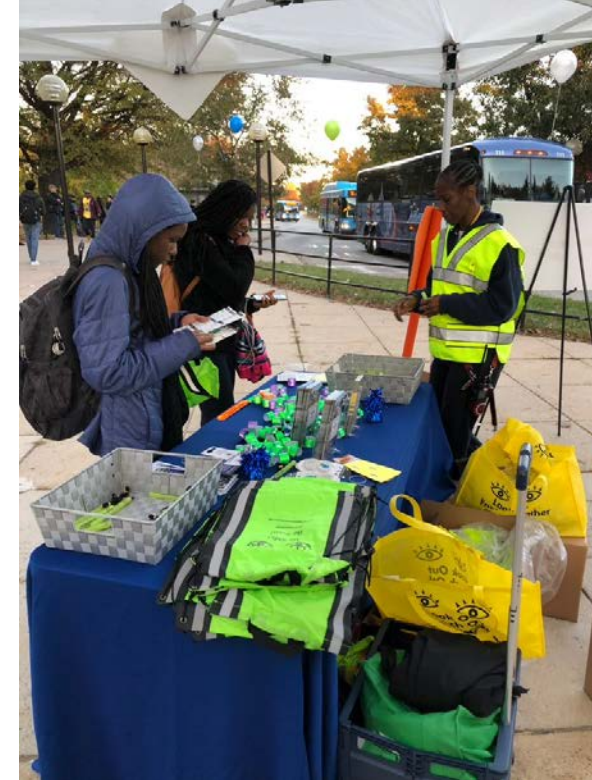
- MacArthur Blvd & Dunrobbin Dr
- Forest Glen Rd & Sligo Creek Park Trail



EDUCATION AND OUTREACH



Pedestrian and Bicycle Safety Education is conducted year-round by outreach teams participating in various community and school events. Our outreach teams participate in dozens of events per year, reaching over 6,000 residents. In addition to those events, the County launched the *Be Safe Be Seen* campaign to keep all roadway users safe during the dark winter months with nearly 20 events across the county.



Social media platforms are also utilized as way to educate cyclists, pedestrians and drivers of all ages.

HIGH VISIBILITY ENFORCEMENT

Oct – Nov: Ped Safety (Street Smart)



Nov - Dec: Seatbelts



Nov - Jan: Impaired Driving



MCPD is conducting a 6-month pilot with a squad of officers (sergeant, corporal, and 10 officers) working out of the central Traffic Division. Their primary focus is high visibility enforcement during morning and evening rush hours and pedestrian details midday. Locations for details are based on known high crash locations.

For the rest of the fall and winter, MCPD's campaigns are pedestrian safety, occupant protection, and impaired driving. The Holiday Task Force began November 13.

- **Sidewalk inventory** complements citizen requests to provide better gap identification and project prioritization.
- **Bus stop audit** along the High Injury Network to identify necessary improvements for riders getting safely to and from the stops.
- **High Injury Network analysis** with MCDOT and SHA to identify potential short- and long-term needs in the top 20 areas.
- **Bicycle-Pedestrian Priority Area** dedicated CIP projects to implement bicycle networks in Silver Spring, Bethesda, Wheaton, Glenmont, Veirs Mill/Randolph, and along the Purple Line.
- **High visibility enforcement** based on crash and ticket history to better utilize enforcement details with new centralized team.
- **Systematic safety analysis** to determine predicted crash rates for the entire roadway network to build a long-term strategy for potential reengineering locations.
- **Targeted messaging** such as the *Be Safe Be Seen* campaign to address increased crashes occurring once the evening rush hour is in the dark. Also developing distracted driving campaign with diverse messaging.
- **Building in equity considerations** for project prioritization to address historic inequities in the built environment.



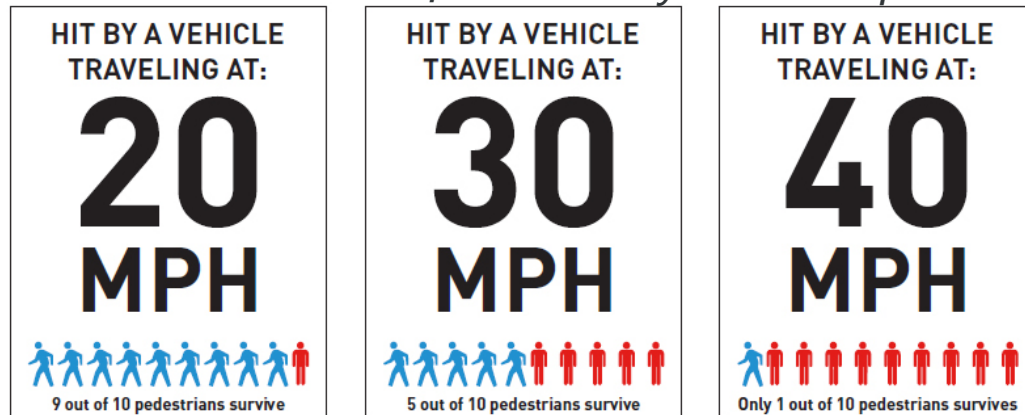
APPENDIX: VISION ZERO ACTION PLAN UPDATES



VISION ZERO PRINCIPLES

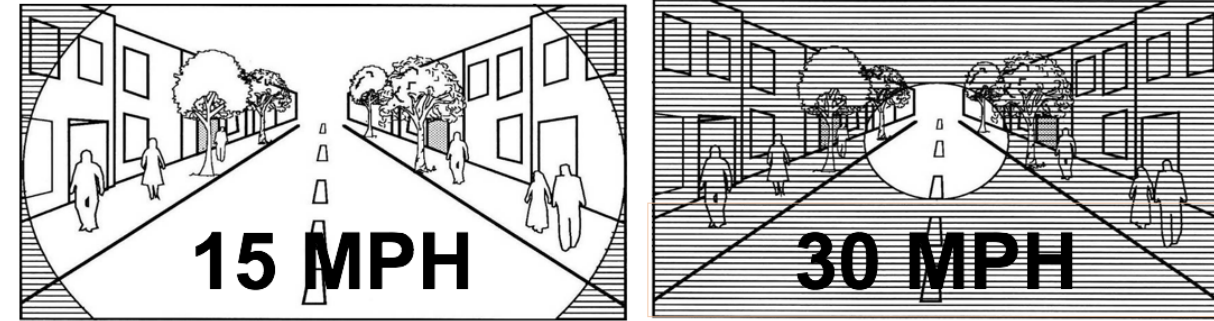
1. Transportation-related deaths and severe injuries are **preventable and unacceptable**.
2. **Human life takes priority over mobility** and other objectives of the road system. The road system should be safe for all users, for all modes of transportation, in all communities, and for people of all ages and abilities.
3. Human **error is inevitable**; the transportation system should be designed to anticipate error so the consequences are not severe injury or death.

Pedestrian Chance of Survival by Vehicle Speed



Graphic courtesy of: [Vision Zero Network](https://www.visionzero.net/)

Driver Cone of Vision by Vehicle Speed



4. People are inherently vulnerable, and **speed is a fundamental predictor of crash survival**. The transportation system should be designed for speeds that protect human life.
5. **Safe human behaviors**, education, and enforcement are essential contributors to a safe system.
6. **Policies and practices at all levels of government need to align**, making safety the highest priority for roadways.

A COMPREHENSIVE EFFORT



To reach our Vision Zero goals, there are numerous municipal, county, and state agencies involved. The core group that receives the most funding and critical to Vision Zero’s success are shown in the dark blue inner circle. The outer light blue circle highlights the many partner departments and agencies that have a role in creating safe streets for all roadway users. All of these groups are brought together by the County Executive’s Office through the Assistant Chief Administrative Officer overseeing the initiative.

TWO-YEAR ACTION PLAN – ACTION ITEMS



Engineering

- Design facilities that prioritize safety above all else
- Key Outcome: Reductions in severe and fatal collisions in High Injury Network (HIN)



Enforcement

- Encourage safe behaviors using evidence-based high visibility enforcement
- Key Outcome: Hours of dedicated enforcement for factors contributing to severe and fatal collisions



Education

- Engage the public to promote the importance of traffic laws and safe behaviors
- Key Outcome: Increased awareness of dangerous driving, biking, and walking behaviors



Traffic Incident Management

- Ensure that when a collision occurs, prompt care is provided
- Key Outcome: Maintain response times for traffic collisions with injuries based on dept. standards



Law, Policy, and Advocacy

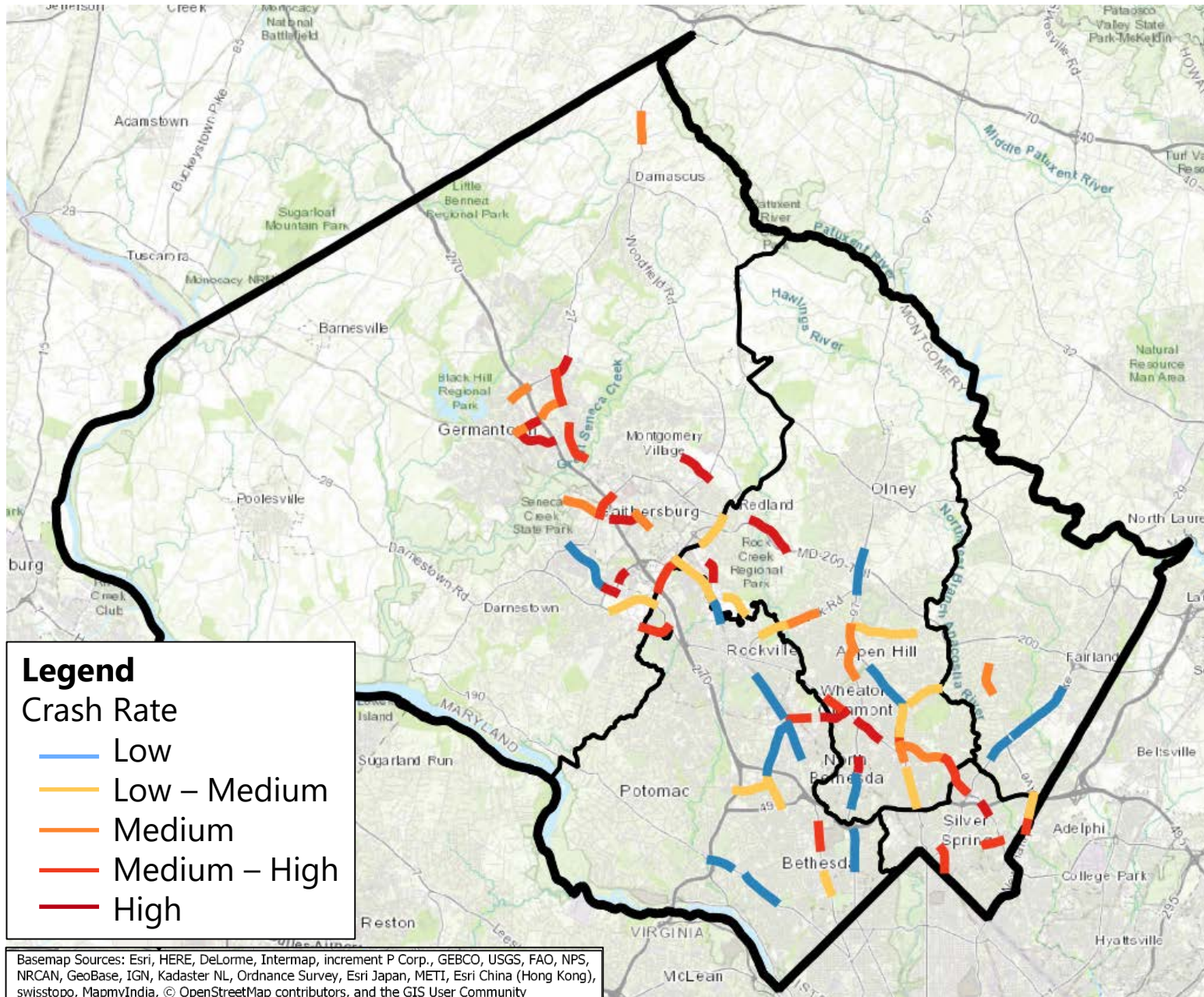
- Improve the way traffic safety is managed by changing codes, laws, and policies that do not align with Vision Zero
- Key Outcome: Passage of significant laws and policies required to implement Vision Zero



ENGINEERING PROJECTS FOR VISION ZERO



ENG-1: CRASH ANALYSIS



MCDOT worked with CountyStat to identify the High Injury Network on County roadways within the County crash map. There are ten roads in the County High Injury Network. MCDOT then investigated the crash data and relevant study data for these roads to compile a list of projects tailored to ensure safety for all road users.

MCDOT and SHA partnered together to identify a State-road High Injury Network. Ten State corridors were identified from crash data and MCDOT and SHA compiled a list of projects for the corridors.

NEW HAWK BEACONS

Aspen Hill Rd HAWK Beacon Installed May 2019



To improve pedestrian safety, MCDOT is installing High-Intensity Activated crossWalk (HAWK) beacons at:

- Willard Ave. & The Hills Plaza (Installation by February 2020)
- Democracy Blvd. & Walter Johnson HS
- Summit Ave & Brookfield Dr
- Bel Pre Rd (upgrade existing RRFBs)
- Tuckerman Ln & Trolley Trail
- MD 586 & Andrew St (SHA)
- Muddy Branch & Muddy Branch Square Shopping Center

A previously planned HAWK beacon for Randolph Rd. & Livingston St. was upgraded to a full traffic signal.

NEW RECTANGULAR RAPID FLASHING BEACONS

RRFB on Bel Pre Road



Rectangular Rapid Flashing Beacons (RRFBs) are another tool to direct drivers' attention towards pedestrian activity. To improve pedestrian safety, MCDOT will install these beacons at:

- Forest Glen Rd & Sligo Creek Park Trail
- East West Highway and Edgevale St (SHA)
- Dale Drive & Dartmouth Ave

The City of Rockville installed RRFBs in high crash locations on East Middle Lane and Beall Ave.

NEW PEDESTAL BEACONS



To improve pedestrian safety, MCDOT installed pedestal beacons along the PEPCO Natural Trail where roadway intersections are encountered, including:

- Schaeffer Rd.
- Black Rock Rd.
- MD 118 (Germantown Road)
- MD 28 (Darnestown Road)

M-NCPPC is considering installing pedestal beacons at other trail crossings throughout the County.

MCDOT will install flashing pedestrian beacons at:

- MacArthur Blvd & Dunrobbin Dr
- Forest Glen Road & Sligo Creek Park Trail

ENG-4: REVIEW TRANSIT STOPS



MCDOT is dedicated to ensuring safe pedestrian access to and from transit stops throughout the County. The Bus Stop Audits performed along transit corridors are an enhancement of existing efforts conducted in conjunction with our Pedestrian Road Safety Audits. MCDOT performed Bus Stop Audits for the following corridors:

- Middlebrook Rd.
- MD 355 (Wheatfield Dr. to Middlebrook Rd.)
- Randolph (Rock Creek Park to Colie Dr.)
- Wheaton CBD

ENG-9: BUILDING LOW-STRESS BIKE NETWORK

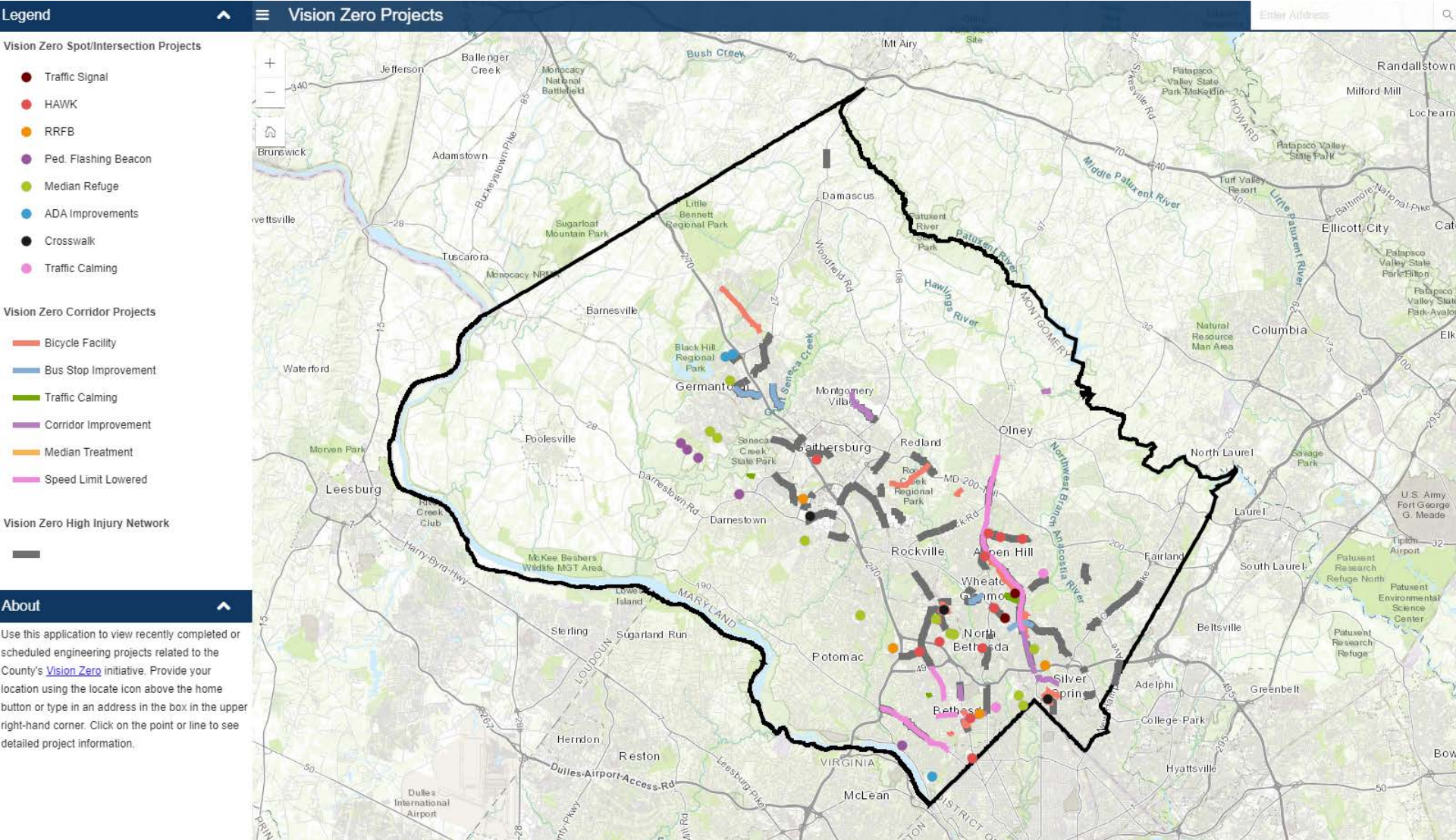


MCDOT completed the 2nd/Wayne Ave cycletrack in Downtown Silver Spring in early October, which features the state's first protected intersection and bike signal.

Upcoming projects include:

- **Bethesda** – multiple facilities with notice to proceed anticipated for spring 2020
- **Wheaton** – Amherst Ave in design during 2020
- **Aspen Hill** – Neighborhood Greenway Pilot is under study through fall 2019

VISION ZERO PROJECT MAP



MCDOT and CountyStat developed an interactive project map to highlight Vision Zero related projects happening across the county.

Since the initial launch of the map, SHA projects have been included such as speed limit reductions on major highways and signal projects.

The map can be found on the [Vision Zero homepage](#).

TWO-YEAR ACTION PLAN STATUS - ENGINEERING

Action Item	Due Date	Status	Notes
ENG-1 Crash Analysis: Identify High Injury Network (HIN) for Modification	Identify priority HIN projects by 1/31/2018	Complete	Identified High Injury Network. Identified initial list of potential engineering options. Performed 2nd round of reviews of County-maintained portion of the HIN. Began some HIN projects such as restriping on Crabbs Branch Way and implementing Pedestrian Road Safety Audit recommendations on Middlebrook Rd and Bel Pre Road. Reviewed SHA HIN projects with District 3 team. SHA has started some HIN projects, others are in design.
ENG-2 Update County Road Design Standards	Publish revised road designs by 11/1/2019	On-Going & On-Schedule	MCDOT and M-NCPPC are advancing on this action item together under joint funding. MCDOT is also updating its existing lighting, signing, marking, and signals standards. Public feedback has started with one session in spring 2019 and another scheduled for winter 2019/2020.
ENG-3 Expand Road Safety Audits	Implement new process by 11/1/2018	Complete	MCDOT added a preconstruction RSA activity to its design process.
ENG-4 Review Transit Stops	Develop program review requirements by 5/1/2018	Complete	MCDOT identified 265 bus stops to be reviewed and potentially modified. MCDOT completed Middlebrook & MD 355 bus stop audits. MCDOT performed two additional bus stop audits in November 2018 for Wheaton CBD and Randolph Road with final recommendations nearly complete.
ENG-5 Evaluate Trail Crossings and Intersections	Develop list of priority trail crossings and intersections for modification by 11/1/2018	Complete	Parks is improving 18 mid-block crossings. MCDOT is coordinating with M-NCPPC on crossings for Rock Creek Trail, Diabase Trail, Hoyles Mill Trail, Muddy Branch Greenway Trail, Northwest Branch Trail, Upper Rock Creek Trail, Cabin John Trail, and more. MCDOT has conducted and reviewed speed studies and crossing plans. Construction is already complete on five of the crossings and underway on others.
ENG-6 State/County Project Collaboration	Identify potential project areas by 1/1/18	Complete	SHA and MCDOT are prioritizing work on MD-97 (Georgia Ave) and MD-586 (Veirs Mill Rd) to develop short- and long-term solutions for pedestrian safety. SHA and MCDOT are jointly investigating and implementing safety improvements along a MD 97 corridor including curb markings, sidewalk stamps, speed limit reduction, non-traversable median, lighting improvements, signal installations, HAWK signal, RRFB signal, and lane narrowing. SHA Administrator Greg Slater has promised increased focus on pedestrian safety by his agency to include lowering speed limits to 30 MPH or lower in all central business districts and improving pedestrian crossings. Changes by SHA to MD-97 detailed at https://www.roads.maryland.gov/pages/release.aspx?newsId=3350

TWO-YEAR ACTION PLAN STATUS - ENGINEERING

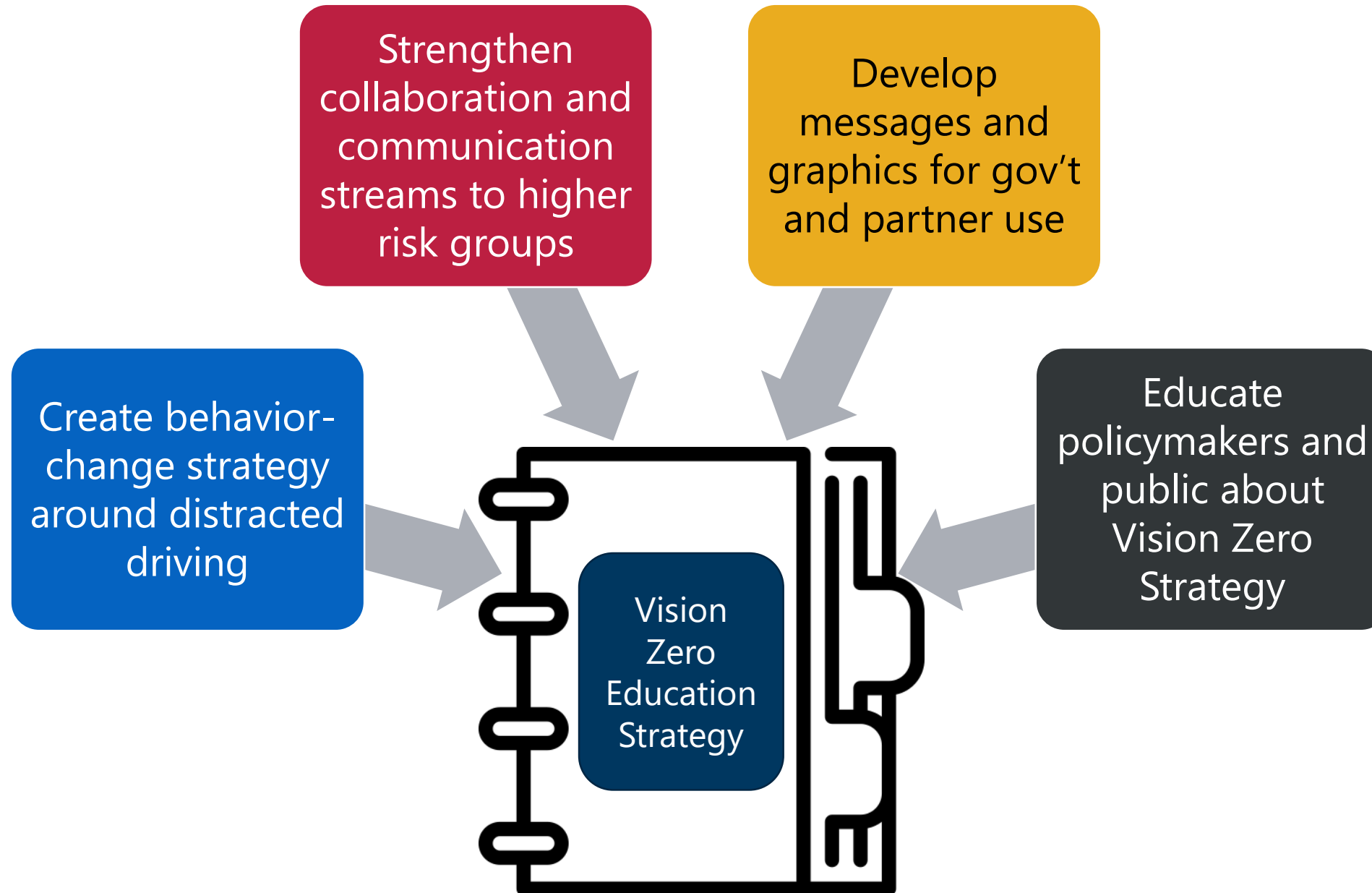
Action Item	Due Date	Status	Notes
ENG-7 Improve Pedestrian Signals	All pedestrian signals retimed to 3.5 feet/second by November 2019	Complete	MCDOT reset the crossing time at each of the County's pedestrian signals to a 3.5 ft/sec standard. MCDOT is also updating and installing new pedestrian signals and beacons throughout the County, including Muddy Branch Rd & Harmony Hall Rd (complete), Forest Glen Rd & Sligo Creek Pkwy, Aspen Hill Rd & Northgate Shopping Center (complete), Democracy Blvd & Walter Johnson HS, Willard Ave & The Hills Plaza, Tuckerman Ln at Bethesda Trolley Trail, Summit Ave & Brookfield Dr., Muddy Branch Rd & Suffield Dr, Dale Drive & Dartmouth Ave, and MacArthur Blvd & Dunrobbin Dr. An additional pedestrian signal at Randolph Road and Livingston Street was turned into a full signal.
ENG-8 Accelerate Sidewalk Building	Publish list of high priority areas lacking sidewalks by 4/1/18	On-Going & On-Schedule	MCDOT completed a sidewalk evaluation throughout the entire County, not just the HINs. The top 20 HIN locations (County and State) have been evaluated. In addition to the gap analysis required in the Two-Year Plan, the study evaluates ADA ramp provision and other impediments to sidewalk travel.
ENG-9 Expand Low-Stress Bicycle Network	On-going effort	On-Going & On-Schedule	Significant additions coming to Silver Spring and Bethesda BiPPAs for separated bicycle facilities. Construction of Second/Wayne Ave Cycletrack was completed in early Oct. County Council approved the updated Bicycle Master Plan on 11/27/18. MCDOT has developed a website, video, and brochure about how to use these new facilities at montgomerycountymd.gov/lookout



EDUCATION AND VISION ZERO



EDUCATION PLAN AND IMPROVED BRANDING



The Public Information Office developed a new education strategy in 2018 to better focus our education efforts around Vision Zero principles and the crash data.

In July, PIO and CountyStat redesigned the Vision Zero webpage to better highlight ongoing projects and events as well as link to all partners' pages.

VISION ZERO YOUTH AMBASSADOR PROGRAM



MCDOT partnered with the National Organizations for Youth Safety (NOYS) on a Vision Zero Youth Ambassador program. The program kicked off in January 2019 with Ambassadors attending a special training on pedestrian, bicycle and road safety, storytelling and public speaking.

The program concluded with a youth summit October 21st where the Ambassadors hosted an interactive safety lab attended by over 150 local middle and high school students.



TWO-YEAR ACTION PLAN STATUS - EDUCATION

Action Item	Due Date	Status	Notes
EDU-1 Create Comprehensive Outreach Strategy	Publish Strategy by 5/1/18	Complete	The Public Information Office completed the 2019 strategy and the Steering Committee has committed resources to the plan. The plan was finalized on October 24, 2018.
EDU-2 Expand Safe Routes to School Activities	Expand SRTS by start of 2019-2020 school year	On-Going & On Schedule	Walk to School Day events were held on Wednesday, Oct 2. http://www.walkbiketoschool.org/ MCDOT hired a Pedestrian, Bicyclist, Traffic Safety Outreach Program Coordinator in early Sept 2019; this position focuses a lot on Safe Routes to School educational programs. MCDOT attended many Back to School Nights this fall to encourage safe walking and biking practices. MCDOT hosted the Vision Zero Youth Ambassador Summit with National Organizations for Youth Safety on October 21 at Glenmont Local Park. MCDOT has expanded its Safe Routes to School Engineering Program as well, with MCDOT staff and two separate consultant teams performing Walkability Audits to improve and upgrade walking and biking infrastructure around MCPS schools. MCDOT and MCPS are coordinating together on Safe Routes to School programs.
EDU-3 On-bike Education Programs for Kids	Agreement with MCPS by 2019-2020 school year	On-Going & On Schedule	MCPS, MC Rec Dept, and MCDOT are coordinating together on this action item. A pilot program kicked off in April 2019 at Oak View ES in Silver Spring. MCDOT did not win grant funding for a permanent Safety Garden to be installed in the County but is researching other funding options.
EDU-4 Vision Zero Outreach Grant Program	Solicit proposals by 6/1/2018	No Resources	Due to budget constraints, the FY20 approved budget does not fund this item.
EDU-5 Safety Awareness Training for County Employees	Complete first round of awareness trainings by 11/1/2018	Behind Schedule	Currently developing targeted material for key departments and divisions. Held a focus group of County employees from 9 different departments to assess new distracted driving campaign on 4/24 and pop-up events in Wheaton on 5/4 and 7/27 in Rockville. Contractor is using feedback to develop next drafts due in December.
EDU-6 Cross-Departmental Team Building	Hold at least two collaboration events by 11/1/2018	Behind Schedule	MCDOT, MCFRS, MCPD, MCPS, PIO, and CEX staff have partnered in the fall "Be Safe, Be Seen" pedestrian safety outreach campaign. Developing a job shadowing opportunity for police and DOT employees this fall. MCPD will also have officers trained on roadway engineering practices from UMD.

TWO-YEAR ACTION PLAN STATUS - EDUCATION

Action Item	Due Date	Status	Notes
EDU-7 Raise Awareness Sleep and Safety	Complete first round of awareness trainings by 11/1/2018	Complete	Drowsy driving messages have been sent to shift work employees as part of their safety meetings.
EDU-8 Future Technology Task Force	1st Report by 12/31/2018	Behind Schedule	This item will be reevaluated for the 2020 Action Plan. MCDOT and other experts presented to the County Council on September 26, 2017 about the future of autonomous vehicles in Montgomery County. Video of session is at: http://montgomerycountymd.granicus.com/MediaPlayer.php?view_id=169&clip_id=13823&meta_id=143448
EDU-9 Training in the Community	12/1/2018	On-going	Currently developing targeted material for key departments and divisions. Held a focus group of County employees from 9 different departments to assess new distracted driving campaign on 4/24 and pop-up events in Wheaton on 5/4 and 7/27 in Rockville. Contractor is using feedback to develop next drafts due in December. Currently using materials developed by Public Information Office, MHSO, and NHTSA.

A large, bold, red stamp with a distressed, ink-like texture. The text "WE'RE HIRING!" is written in all caps, slanted slightly to the right, and framed by two thick red horizontal lines.

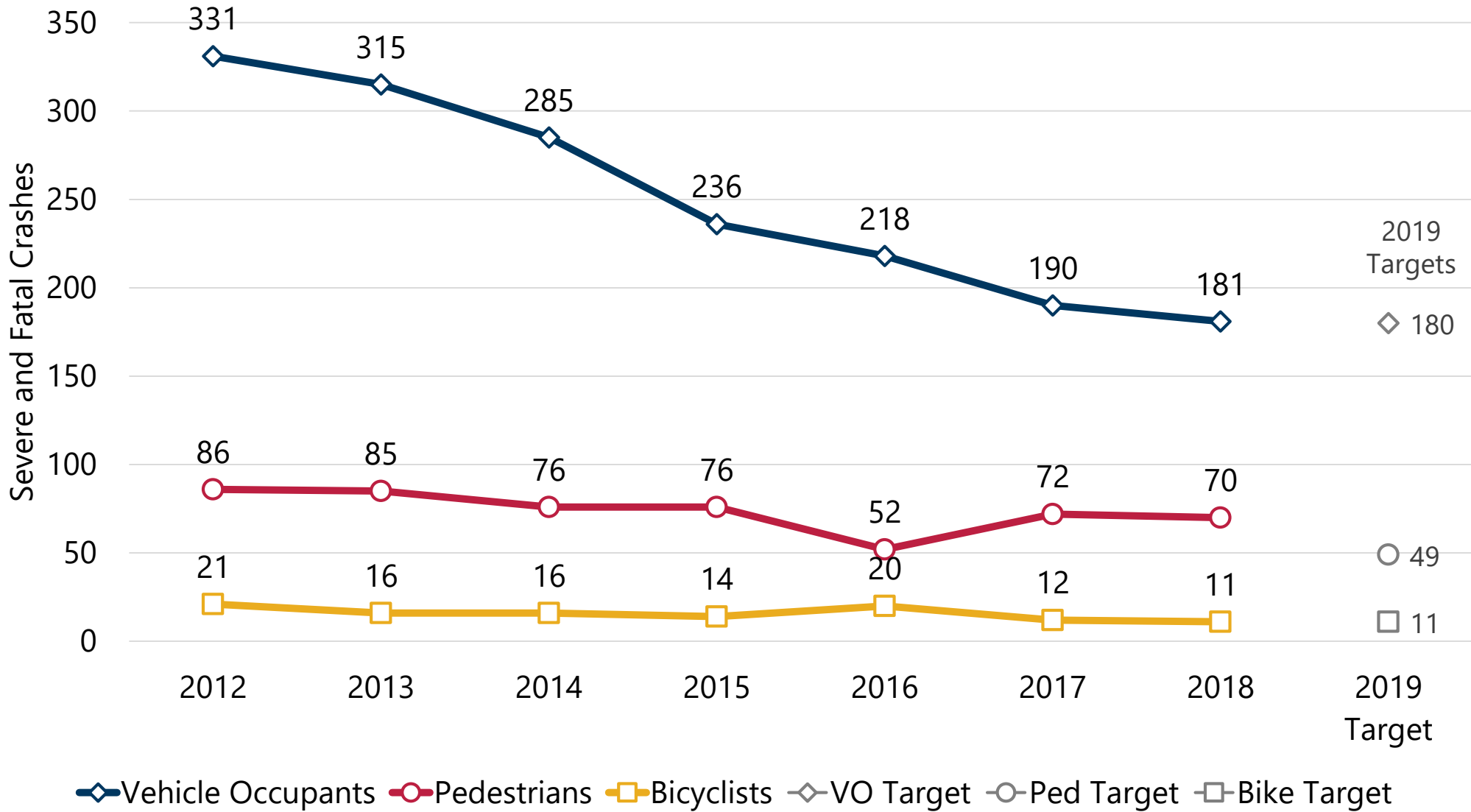
CountyStat currently provides interim support for Vision Zero coordination. The Request for Proposal (RFP) for a Vision Zero coordinator via a contractor was released by Procurement on May 16 with a deadline for responses of June 14. Bids received did not score high enough to move forward with a contract. The County Executive approved moving forward with a full-time, merit position for the coordinator. The position is currently being advertised through November 29 with a target of hiring in January (February a possibility if the advertising must be extended to get more applications).



CRASH STATISTICS



SEVERE & FATAL CRASHES BY YEAR

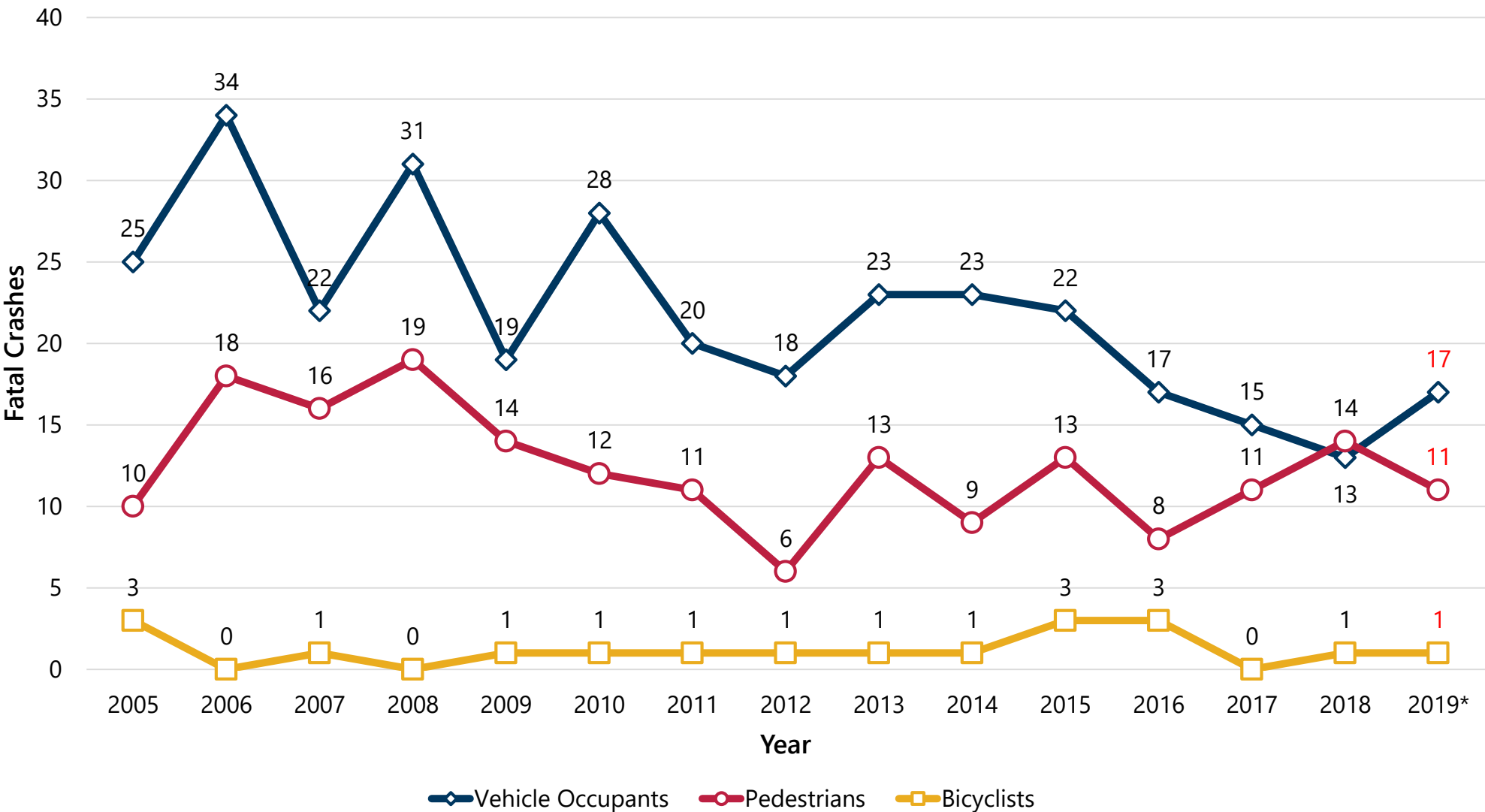


The Vision Zero Two-Year Action Plan set out reduction targets of 20% and 35% in 2018 and 2019 compared to the 2012-2016 average.

Current estimates for 2019 show the severe and fatal totals ending close to the 2018 totals, which would be near the target for vehicle occupants and missing the target for pedestrians and cyclists.

Source: MCPD
*2018 data are preliminary and subject to change

FATAL CRASHES BY YEAR

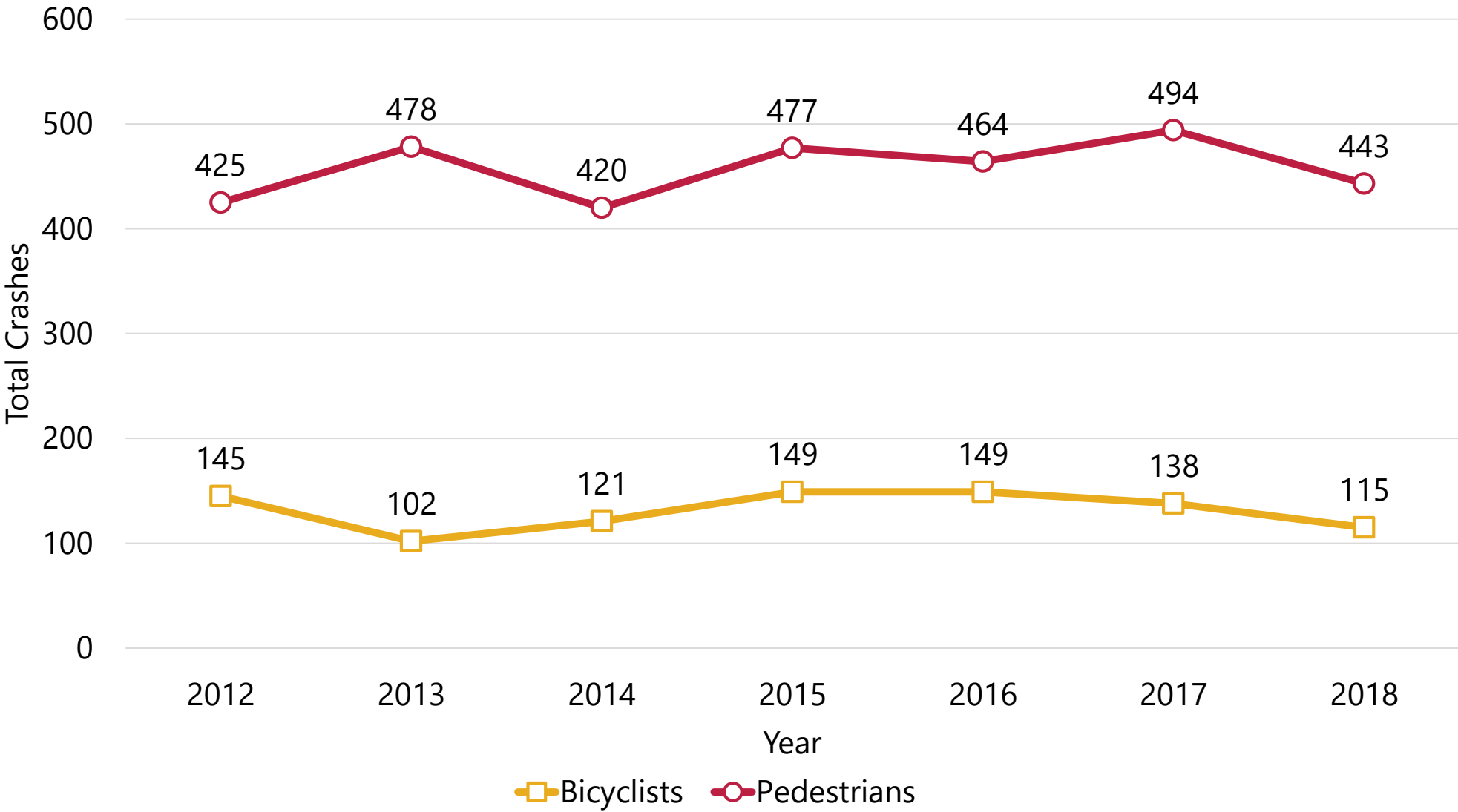


After four consecutive years of decline and a record low in 2018, the number of fatal crashes for vehicle occupants increased in 2019.

2019 fatal crashes for pedestrians and cyclists are likely to end near the historic average.

Source: MCPD Collision Reconstruction Unit
*2019 data as of 11/17/2019

PEDESTRIAN AND CYCLIST-INVOLVED CRASHES BY YEAR



Between 2012 and 2017, the county averaged 460 pedestrian and 134 cyclist-involved crashes. 2018 was below the five year average with 442 pedestrian and 115 cyclist-involved crashes.

Source: MCPD