




Vision Zero Update and Work Program Discussion

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DESCRIPTION

The purpose of this briefing is to provide an update on the Planning Department's Vision Zero work plan, including a summary of the Department's recent Vision Zero accomplishments and ongoing projects. This briefing will also provide an overview of the county's upcoming Vision Zero 10-Year Strategy.

BACKGROUND

Vision Zero is a proven approach to preventing roadway-related deaths and severe injuries. It represents a fundamental change in how we plan and design our roads, shifting from a focus on maximizing motor vehicle efficiency to ensuring that our roads are safe regardless of whether travel is by car, bus, bicycle or foot. Vision Zero recognizes that people will sometimes make mistakes and that our roads should be designed to ensure those inevitable mistakes do not result in severe injuries or fatalities.

Through its 2016 County Council resolution, Montgomery County committed to eliminating traffic fatalities and severe injuries by 2030. In 2017, the County Executive released an initial two-year action plan of activities to advance the county toward Vision Zero and substantial progress has been made toward most of these items (see Attachment A). In 2020, a One-Year 2020 Action Plan (Attachment B) was released by the county to bridge activities between the current Two-Year Action Plan and the Vision Zero 10-Year Strategy, which will be completed in summer 2021.

PREVIOUS ACTIONS

On January 23, 2020, staff briefed the Planning Board on the Planning Department's Vision Zero Work Plan and received approval from the Board to add a Predictive Safety Analysis project to the department's work program in FY 2020.

STATUS REPORT ON PLANNING DEPARTMENT'S VISION ZERO WORK PLAN

Vision Zero is a multidisciplinary effort that requires the support of all county agencies to be successful. The Montgomery County Planning Department has an important role to play in Vision Zero and can support Montgomery County's program with community engagement, data analysis, master planning, development review and capital project review, among other things.

The Planning Department prepared a Vision Zero Work Plan describing the tasks that the department can undertake to support the county's Vision Zero program. At a high level, the work plan focuses on better understanding the county's safety challenges and solutions needed to address those challenges, and then both sharing our findings with the public and integrating those lessons learned into our planning processes. The work plan includes four sections:

- Building Knowledge and Collaborative Partnerships
- Problem Verification
- Develop Solutions
- Incorporate Solutions into Work Program

Shared with the Planning Board in January 2020, this work plan includes a description of each task, the justification for the task, the required resources and the anticipated timeline to completion. A copy of the work plan is included as Attachment C.

Over the past year, Planning Department staff has made significant progress in advancing actions included in the Vision Zero Work Plan, summarized in Table 1. Most actions are expected to be completed by the end of 2021. Staff anticipates updating the work plan in 2022.

Table 1. Status of Planning Department Work Plan Actions

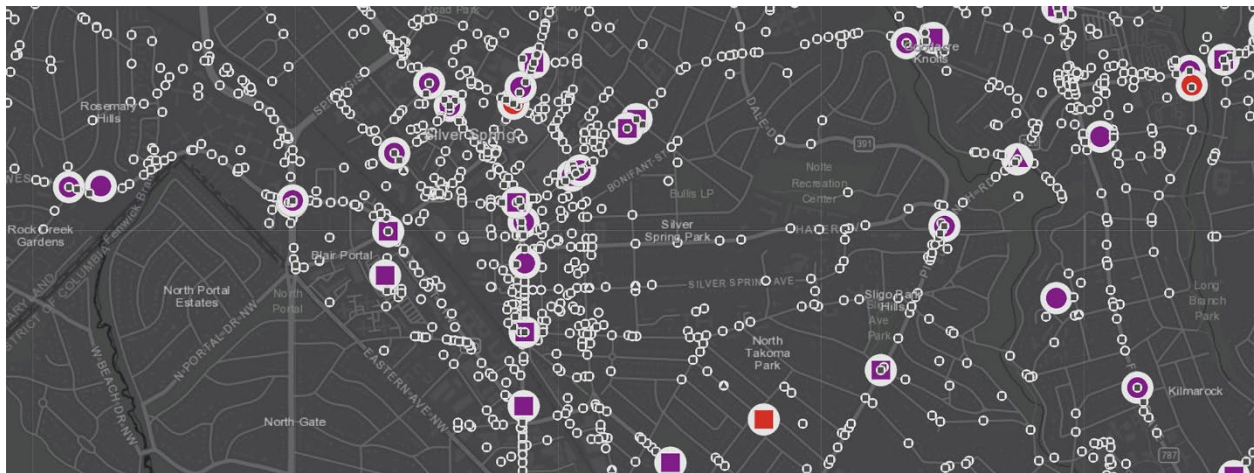
Action	Status
Building Knowledge and Collaborative Partnerships	
Develop a Vision Zero Toolkit for Community Organizations	Underway
Engaging Hard-to-Reach Communities	Not Started
Educate Community Members, Agency Staff and Appointed/Elected Officials	Ongoing
Vision Zero Electronic Newsletter	Ongoing
Problem Verification	
Develop a Severe and Fatal Crash Dataset	Underway
Develop a Multimodal Volumes Data Collection Plan	Complete
Collect Multimodal Counts and Traffic Speed Data	Ongoing
Estimate Pedestrian, Bicycle and Motor Vehicles Volumes Countywide	Underway
Create a Database to Store Multimodal Counts and Traffic Speed Data	Not Started
GIS Layers of Variables Hypothesized to be Correlated with Severe and Fatal Crashes	Complete
Develop Safety Performance Factors	Underway
Create a Pedestrian Level of Comfort Map	Underway
Develop Procedures for Data Collection and Analysis	Underway
Develop Solutions	
Identify Best Practices in Implementing Vision Zero in the Suburbs	Ongoing
Develop Policies for Street Types and Land Use Context	Underway
Develop Complete Streets Design Guide	Underway
Incorporate Solutions into Work Program	
Educate Staff on Vision Zero	Ongoing
Continuing Education	Ongoing
Incorporate Corridor Master Plans into Department Work Program	Underway
Changes to State and Local Policies, Regulations and Laws	Ongoing
Develop a Pedestrian Master Plan	Underway
Incorporate Vision Zero into Master Plans	Underway
Incorporate Vision Zero into Development Review	Underway
Incorporate Vision Zero into the Subdivision Staging Policy	Underway
Capital Project Review	Underway

RECENT VISION ZERO ACCOMPLISHMENTS

Planning Department staff recently released two Vision Zero tools for county staff and the public: an interactive crash map and a Vision Zero Community Toolkit. While the crash map provides users with an understanding of the safety challenges in Montgomery County, the Vision Zero Community Toolkit focuses on identifying the appropriate treatments to address those challenges. Each tool is described in more detail below.

Interactive Crash Map

To achieve Vision Zero, it's important to first understand the county's crash history and conditions that lead to incidents on our roadways. To facilitate crash analysis by both county staff and the public, the Planning Department developed an Interactive Crash Map (<http://www.mcatlas.org/crashmap>) that displays Montgomery County crashes from 2015 to 2019 with tools to allow users to understand crash trends by intersection, corridor, and neighborhood.



Screenshot of the Interactive Crash Map.

The map has several interactive features:

- **Summarize Crashes by Location:** The map summarizes the crash mode, severity, and type based on the current map extents. As a result, these summaries update as the user views different parts of the county.
- **Isolate Crash Types:** Users can update the map view to isolate crashes by mode and severity.
- **Select and Export Crashes:** The map includes a tool to select and download the attributes and locations of crashes of interest.

A brief video tutorial has been developed to help users navigate the interactive features (<https://www.youtube.com/watch?v=p-lrSp1A698>).

The map reinforces several narratives about crash trends in Montgomery County. Most serious injuries and fatalities are located along the county's arterials, such as Georgia Avenue, Old Georgetown Road, and Veirs Mill Road. In addition, while bicycle and pedestrian crashes are less frequent than motor vehicle crashes, they are more likely to result in a serious injury or fatality.

The map will be updated every six months, with the first update expected in summer 2021 to include 2020 crash data.

Vision Zero Community Toolkit

Different roadway design elements can improve or reduce roadway safety. For example, providing a median crossing island for pedestrians on multi-lane roadways can reduce pedestrian crashes by over 30 percent. The Planning Department’s Vision Zero Community Toolkit is a resource intended to help community members understand and advocate for specific types of road safety designs to reduce crashes involving motor vehicles, bicyclists, and pedestrians. It consists of over 40 design treatments and outlines how each treatment can address road safety challenges in different contexts throughout Montgomery County. The toolkit is included as Attachment D.

The Vision Zero Community Toolkit will help users identify which design strategies are best suited for the specific safety challenges of their neighborhood. For example, certain treatments are aimed at reducing vehicle speeds, while others provide safer crossings for bicyclists and pedestrians. Because not all treatments are suited for all roadway types, this toolkit highlights which ones are most effective in a given context.

ONGOING VISION ZERO EFFORTS

In addition to the recently completed tools, additional Vision Zero projects are underway at the Planning Department.

Predictive Safety Analysis

The Predictive Safety Analysis is a proactive data-driven approach to transportation safety. This analysis will estimate the expected number of crashes at a given roadway segment or intersection based on the attributes of that location. This analysis will then allow the county to prioritize where and how to most effectively invest in safety improvements through capital projects, development approvals, and master planning to prevent crashes from happening.

The Predictive Safety Analysis uses the context and characteristics of locations that have a history of crashes to understand which combination of attributes may have contributed to these events. To inform this analysis, Montgomery Planning is developing an equation that estimates the number of bicycle, pedestrian, and vehicle crashes for common crash types at intersections and segments throughout the county. This algorithm looks at several variables, including land use context (urban, suburban, and rural), roadway characteristics (speed limits, traffic signals, and presence of sidewalks or bikeways), and the level of travel activity (the number of pedestrians, bicyclists, and motorists using a roadway or intersection).



Graphic depicting the context characteristics contributing to crash risk.

Montgomery County is one of the first jurisdictions of its size and land use mix to undertake a predictive analysis with this level of rigor and detail. This marks a shift from a transportation safety approach that focuses on locations where high rates of severe injuries or fatalities have occurred to one that proactively identifies and treats locations with similar high-risk characteristics.

To complete the Predictive Safety Analysis, the Planning Department has contracted with the Highway Safety Research Center (HSRC) at the University of North Carolina. The analysis is currently underway: preliminary results are expected by the end of the summer, with final results to be presented to the Planning Board by the end of 2021 or early 2022.

Vision Zero in Master Plans

Vision Zero plays a role not just in transportation-focused plans and studies, but it should also be considered and addressed in master plans. The Vision Zero in Master Plans effort will develop a step-by-step process for master planners to integrate Vision Zero into functional, area and sector master plans. This effort will include modules associated with each stage of the planning process:

- Pre-Planning and Scope of Work
- Public Engagement
- Existing Conditions Analysis
- Recommendations
- Plan Development and Messaging

These modules will address several topics, such as data needs, relevant stakeholders and resources, analysis guidance, effective communication strategies, and approaches to reconciling diverse recommendations. This is a short-term effort, expected to be completed in summer 2021.

VISION ZERO 10-YEAR STRATEGY

The County Executive's Office is currently leading the development of a Vision Zero 10-Year Strategy to guide the county towards achieving Vision Zero by 2030. The strategy is being developed through three interagency working groups:

- **Complete Streets** is addressing street design and engineering, as well as speed management
- **Multimodal Future** is addressing improved mobility options, land use planning, and vehicle design and technology
- **Culture of Safety** is addressing education, enforcement and regulation, and post-crash emergency response

Seven Planning Department staff participated in the working groups, and each working group included at least one Planning Department staff member. The draft Vision Zero 10-Year Strategy is expected to be released to the public for feedback this spring, and it is expected to be finalized by early summer. The Planning Board will be provided with an opportunity to review and comment on the draft once it has been released.

ATTACHMENTS

- Attachment A: Two-Year Vision Zero Action Plan
- Attachment B: 2020 Vision Zero Action Plan
- Attachment C: Planning Department Vision Zero Work Plan
- Attachment D: Vision Zero Community Toolkit