MONTGOMERY PLANNING
VISIONZERO

WORK PLAN

VISION ZERO BACKGROUND

Montgomery County is one of the first counties and suburban communities to commit to Vision Zero. The County's neighborhoods and subdivision patterns are largely auto-centric, characterized by long blocks, wide travel lanes and low-densities. Coupled with a transportation system built to prioritize motor vehicle travel, these land use patterns encourage motorists to drive at high speeds and create a highly disconnected walking and bicycling network.

These suburban features present greater challenges to achieving the objectives of Vision Zero than the grid of walkable streets that define the development pattern of many North American cities that have adopted Vision Zero. Montgomery County's land use patterns and the design of its transportation network were intentional and represent the fulfillment of a vision to segregate land uses and connect distant activity centers by high-speed automobile travel. Achieving Vision Zero will require re-envisioning its existing development patterns and transportation network.

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.

WORK PLAN OVERVIEW

To support the successful implementation of Montgomery County's Vision Zero policy, the Montgomery County Planning Department should focus on the following elements:

- Educate residents, community organizations and elected officials.
- Develop collaborative partnerships with local, regional and state agencies, as well as the community, to advance Vision Zero.
- Base recommendations for the Planning Department's work products on robust data analysis that informs changes to County policies and priorities.
- Utilize the master plan process to re-envision our communities, especially our suburban transit corridors and commercial areas, as multimodal complete streets with appropriate land use densities.
- Review and approve regulatory projects with a Vision Zero focus.
- Review capital projects and identify budget priorities that best support Vision Zero.

This work plan includes a list of actions the Planning Department can initiate to support Montgomery County's Vision Zero program, identifies the resources that are needed to complete these tasks and assigns a timeline to each task. The work plan is divided into four sections:

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

BUILDING KNOWLEDGE AND COLLABORATIVE PARTNERSHIPS

The Planning Department engages with the community, appointed and elected officials, and governmental agencies through master plans, regulatory applications, review of capital projects and review of budget priorities. This comprehensive participation provides an opportunity for the Planning Department to educate stakeholders and develop collaborative partnerships to advance Vision Zero. The following list of actions identifies strategies to educate participants, establish a shared understanding of Vision Zero and provide opportunities for collaboration amongst individuals and groups to advance Vision Zero in their communities and throughout Montgomery County.

Develop a Vision Zero Toolkit for Community Organizations	
Lead: Vision Zero Coordinator	**Support**: Communications Team, Transportation Planners
Action: Collaborate with Montgomery County to develop a toolkit for community organizations and community members to build a systematic understanding of Vision Zero and provide resources for advocating on behalf of Vision Zero through participation in master plan development, regulatory review and capital project review / budgeting. Toolkit can be translated into multiple languages and may include: • Educational letters and flyers. • Presentation talking points. • Video that explains Vision Zero in an approachable way. • Yard signs to build awareness of Vision Zero (with messaging such as "20 is Plenty"). • Residential testimonials. • Walk audit checklists.	
Justification: To ensure that community leaders have the resources they need to develop a Vision Zero constituency and to educate other community members about Vision Zero.	
Resources: Communications support	
Timeline: Short Term	

Engaging Hard-to-Reach Communities	
Lead: Vision Zero Coordinator	**Support**: Communications Team
Action: Collaborate with Montgomery County to convene hard-to-reach groups to advance understanding of Vision Zero in their communities. • Identify opportunities to reach community members in the County's Equity Emphasis Areas and vulnerable populations, such as students. • Identify and engage leaders in traditionally hard-to-reach communities.	
Justification: To ensure that all communities are aware of and have the opportunity to participate in Vision Zero.	
Resources: Communications support	
Timeline: Ongoing	

Educate Community Members, Agency Staff and Appointed/Elected Officials	
Lead: Vision Zero Coordinator	**Support**: Communications Team, Transportation Planners
Action: Collaborate with Montgomery County to educate community organizations, community members, county agencies and appointed and elected officials about Vision Zero and opportunities for engagement. • Organize and implement a Vision Zero summit for established organizations with a stated interest in Vision Zero. • Organize and implement a Citizen's Academy, or program designed to provide community members with a working knowledge of the roles of governmental agencies in Vision Zero and a central resource for community members. • Organize demonstration projects, through placemaking events or tactical urbanism, to exhibit solutions, improvements or strategies consistent with Vision Zero. • Educate county and state employees indirectly through master plans, capital project review and regulatory review. • Educate appointed and elected officials through briefings, master plan development, capital project review and regulatory approvals. • Develop partnerships with other stakeholders, such as the public health community. • Share data and analysis developed through the Problem Verification section of this work plan as well as the best practices identified in the Develop Solutions section to inform educational efforts. • Request Civic Associations and Homeowners Associations to designate a Vision Zero liaison.	
Justification: Build a better understanding of Vision Zero.	
Resources: Communications support	
Timeline: Ongoing	

Vision Zero Electronic Newsletter	
Lead: Vision Zero Coordinator	**Support**: Communications Team
Action: Develop and maintain a Vision Zero electronic newsletter to: • Share information related to new and ongoing plans and projects with a Vision Zero focus. • Provide updates on transportation and planning projects that improve roadway safety. • Share opportunities for interaction and participation to advance Vision Zero strategies. • Offer resources for community members to learn about available or newly developed resources to advance Vision Zero.	
Justification: To inform community organizations and community members of progress toward Vision Zero in Montgomery County and opportunities for involvement.	
Resources: Communications support	
Timeline: Ongoing	

PROBLEM VERIFICATION

A critical first step to successfully implement Vision Zero is to verify the causes of severe injuries and fatalities on the County's transportation network. The Planning Department maintains extensive datasets and is capable of complex data analysis. These resources can be used to systematically identify roadway characteristics that create safety challenges. Data analysis will help Montgomery Planning to prioritize master plan and regulatory recommendations and to provide comments on the capital budget and capital projects and will help community members in advocating for safer streets.

A preliminary analysis of crashes in Montgomery County indicates that roadway safety is a reflection of land use and the County's high-speed, high-volume roads, which often lack safe facilities for pedestrians, bicyclists and transit users. Countywide, between 2015 and 2019 about 30 percent of severe injury crashes and 50 percent of fatalities involve pedestrians and bicyclists. In rural areas motor vehicle occupants represent over 95 percent of these crashes. In the county's major employment and activity centers (Silver Spring, Bethesda, White Flint, Wheaton, Rockville Town Center and Friendship Heights) pedestrians and bicyclists represent approximately 65 percent of these crashes. Proven strategies in cities that have adopted Vision Zero may be appropriate in our major employment and activity centers, but alternative and innovative approaches are needed in the County's rural and suburban areas.

Develop a Severe and Fatal Crash Dataset	
Lead: Vision Zero Coordinator	**Support**: Functional Planning & Policy Division
Action: Create and maintain a dataset to conduct crash analysis based on land use and street characteristics. • Develop systematic procedures for cleaning CountyStat crash data. • Add variables to enrich analysis, including land use context, roadway functional classification, number of travel lanes (total and through), roadway vehicle volumes, posted speed limit and distance between safe crossings. • Incorporate racial, income and health data into the database. • Work with Montgomery County Police Department to clean crash data. • Identify when and where infrastructure conditions have changed during the period of crash data collection.	
Justification: This dataset will enable staff to conduct <u>reactive</u> safety analyses to identify the types of land use and street characteristics that contribute to severe and fatal crashes. It will serve as a building block for a <u>predictive</u> safety analysis.	
Resources: CountyStat crash data and existing GIS resources.	
Timeline: Ongoing	

Develop a Multimodal Volumes Data Collection Plan

Lead: Vision Zero Coordinator	**Support**: Functional Planning & Policy Division

Action: Develop a data collection plan to identify locations where pedestrian, bicycle and motor vehicle volume data is needed to develop a model that estimates volumes where they do not currently exist.

Justification: A data collection plan is needed to identify locations where pedestrian, bicycle and motor vehicle volume data is underrepresented in the department's intersection database.

Resources: Consultant support, existing pedestrian, bicycle and motor vehicle volume data

Timeline: Short Term

Collect Multimodal Counts and Traffic Speed Data

Lead: Vision Zero Coordinator	**Support**: Functional Planning & Policy Division

Action: Collect auto, bicycle and pedestrian volume data at locations identified in the Multimodal Volumes Data Collection Plan.

Justification: This data will be used to develop a model to estimate pedestrian, bicycle and motor vehicle volumes on every road segment in the County.

Resources: New pedestrian, bicycle and motor vehicle volume data.

Timeline: Short Term

Estimate Pedestrian, Bicycle and Motor Vehicles Volumes Countywide

Lead: Vision Zero Coordinator	**Support**: Functional Planning & Policy Division

Action: Develop a model to estimate pedestrian, bicycle and motor vehicle volumes where they do not currently exist and to convert these volumes into annual volumes.

Justification: Measures of exposure such as pedestrian, bicycle and motor vehicle volumes are normalization factors (i.e., the denominator) that equalize for differences in the quantity of potential crash events in different road environments and therefore help to quantify risk.

Resources: Consultant support, existing pedestrian, bicycle and motor vehicle volume data.

Timeline: Short Term

Create a Database to Store Multimodal Counts and Traffic Speed Data	
Lead: Functional Planning and Policy Division	**Support**: Information Technology & Innovation
Action: Modify the existing intersection count application (mcatlas.org/intersections) to include counts at unsignalized and mid-block locations and to include speed data.	
Justification: Successful Vision Zero programs make safety-related data available to the public.	
Resources: Existing GIS resources.	
Timeline: Medium Term	

GIS Layers of Variables that are Hypothesized to be Correlated with Severe and Fatal Crashes	
Lead: Vision Zero Coordinator	**Support**: Functional Planning and Policy Division
Action: Using the Severe and Fatal Crash Dataset, create street segment and crossing GIS layer that identifies variables that are locally hypothesized to be correlated with severe and fatal crashes.	
Justification: This dataset will allow the County to identify variables that are correlated with severe and fatal crashes in Montgomery County.	
Resources: Severe and Fatal Crash Dataset	
Timeline: Short Term	

Develop Safety Performance Factors	
Lead: Vision Zero Coordinator	**Support**: Functional Planning and Policy Division
Action: Develop Safety Performance Factors (SPF) for common crash types involving severe and fatal injuries. SPFs are equations used to predict the average number of crashes per year at a location as a function of exposure and roadway characteristics.	
Justification: Data analysis will help Montgomery Planning prioritize master plan and regulatory recommendations and to provide comments on the capital budget and capital projects.	
Resources: Severe and Fatal Crash Dataset, Estimate of Pedestrian, Bicycle and Motor Vehicles Volumes Countywide and the GIS Layers of Variables Hypothesized to be Correlated with Severe and Fatal Crashes.	
Timeline: Short Term	

Create a Pedestrian Level of Comfort Map	
Lead: Functional Planning and Policy Division	**Support**: N/A
Action: Develop a pedestrian level of comfort methodology and code the pedestrian network countywide.	
Justification: Similar to the Bicycle Level of Stress map, this effort will enable sophisticated analysis of connectivity within geographic areas and to public facilities that will support master plan recommendations and help to prioritize pedestrian improvements.	
Resources: University of Maryland Center for Smart Growth Contract	
Timeline: Short Term	

Develop Procedures for Data Collection and Analysis	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners

Action: Develop procedures for Vision Zero data collection and analysis for master plans and regulatory review, including:
 	
• Data Collection
    o Location and time periods of motor vehicle, pedestrian and bicycle counts, including signalized and unsignalized locations and high-volume mid-block crossing locations.
    o Location and time periods of speed studies.
• Develop a Vision Zero-standard approach to data analysis
    o Crash analysis
    o Conflict analysis
    o Connectivity analyses	

Justification: Effective data collection and analysis is needed to understand where safety problems are most severe and to help prioritize Vision Zero recommendations. Through Vision Zero, safety can be achieved by reducing travel speeds and conflicts.	
Resources: Consultant Support	
Timeline: Short Term	

DEVELOP SOLUTIONS

Once the safety challenges have been systematically identified through data collection and analysis, staff will identify engineering solutions and policy changes that address the challenges present in Montgomery County's diverse land uses – challenges resulting from the segregation of land uses and prioritization of high-speed vehicular travel over several decades. These solutions will be used to incorporate Vision Zero into the department's work program, including master plan recommendations, regulatory approvals/changes and review of capital projects.

Identify Best Practices in Implementing Vision Zero in the Suburbs	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners, Community Planners and Urban Designers
Action: This investigation will look at best practices in suburban counties that have adopted Vision Zero (Macon, Georgia; Alameda, California; and Contra Costa, California) and cities that have suburban areas (New York; Alexandria, Virginia) and will include: • Best practices to manage suburban arterial speeds. • Best practices to reduce suburban arterial conflicts. • Identify context-sensitive design characteristics to reduce vehicular speeds.	
Justification: To understand how other jurisdictions approach transportation safety on suburban roads.	
Resources: Consultant Support	
Timeline: Medium Term	

Develop Policies for Street Types and Land Use Context	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners
Action: Develop policies for different combinations of street typologies and land use context to address the safety challenges identified in the Problem Verification section. Policies will include these areas: • Access management • Frequency of safe crossings in urban areas, transit corridors, suburban areas and rural areas • Locations where unsignalized trails crossings are acceptable	
Justification: Bring Montgomery County's policies in line with strategies to reduce severe and fatal crashes.	
Resources: Consultant Support	
Timeline: Medium Term	

Develop Complete Streets Design Guide / Roadway Functional Classification Study	
Lead: M-NCPPC and MCDOT	**Support**: DPS
Action: This project has two main elements: • A Complete Streets Design Guide to design and operate roads to provide safe, accessible and healthy streets for all users of our roadway system in support of the County's Vision Zero policy, and • A replacement for Montgomery County's roadway functional classification system that organizes categorizes streets based on how they are used by people and their land use context, rather than the current approach that largely organizes street based on how vehicles use them.	
Justification: Montgomery County's road design standards are out of date.	
Resources: Consultant Support	
Timeline: Ongoing	

INCORPORATE SOLUTIONS INTO WORK PROGRAM

Using the results of the Develop Solutions section of this work plan, staff will work to incorporate solutions to the identified safety challenges into the Planning Department's work program through master plan recommendations, regulatory approvals/changes and review of capital projects.

Educate Staff on Vision Zero	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners

Action: Educate staff about Vision Zero:
 	
• Vision Zero briefing to all staff.
    ○ Provide clear and consistent messaging for staff on the importance of Vision Zero, roles and responsibilities.
• Master Planners:
    ○ Meet with teams of recently initiated master plans to provide guidance on incorporating Vision Zero into their planning effort.
    ○ Convene a meeting with all master plan teams to discuss how to incorporate Vision Zero into master plans.
    ○ Incorporate Vision Zero into the General Plan.
• Regulatory Planners:
    ○ Meet with regulatory supervisors to identify opportunities and challenges to incorporating Vision Zero into regulatory review.
    ○ Convene a meeting with all regulatory reviewers to discuss how to incorporate Vision Zero into development review, our authority in code to request Vision Zero improvements, and how to overcome challenges with incorporating Vision Zero into development review.	

Justification: Master plan and regulatory staff must understand the principles of Vision Zero to build a culture of safety in the Planning Department.	
Resources: Existing Staffing	
Timeline: Short Term	

Continuing Education	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners, Communications Staff
Action: Continue education on Vision Zero through conferences, webinars, etc. for staff to remain current on the latest data and solutions as well as the challenges and opportunities associated with the integration of Vision Zero into master plans, regulatory review and capital projects.	
Justification: Continuing education allows for an evolution of Vision Zero in our work.	
Resources: Conference and webinar fees	
Timeline: Ongoing	

Incorporate Corridor Master Plans into Department Work Program	
Lead: Area Teams	**Support**: Functional Planning and Policy Division

Action: Based on the analysis conducted in the Problem Verification section, recommend additional master plans to the Planning Department's work program:
 	
• Potential Corridors
    ○ High Injury Network: Randolph Road, Georgia Avenue and University Boulevard.
    ○ Bus Rapid Transit Facility Planning Studies: New Hampshire Ave (FY22 – 24), Old Georgetown Road (FY 24 – 25)
• Develop procedures with MCDOT on an approach to conducting corridor master plans.	

Justification: Master-planning provides an effective means of re-envisioning development patterns and the transportation network as multimodal, mixed-use communities.	
Resources: Existing Staffing	
Timeline: Long Term	

Changes to State and Local Policies, Regulations and Laws	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners
Action: Collaborate with MCDOT to identify changes to state and local regulations that support Vision Zero, including: local authority to reduce speed limits, strengthen access management regulations for development approvals and provide policies that reduce lane widths, target speeds and curb radii outside of urban road code areas.	
Justification: This is an action in Montgomery County's Two-Year Action Plan.	
Resources: Existing Staffing	
Timeline: Medium Term	

Develop a Pedestrian Master Plan	
Lead: Functional Planning and Policy Division	**Support**: Transportation Planners
Action: Complete a Pedestrian Master Plan for the County to address the unique issues faced by pedestrians and people with disabilities.	
Justification: This is an action in Montgomery County's Two-Year Vision Zero Action Plan.	
Resources: Consultant Support	
Timeline: Ongoing	

Incorporate Vision Zero into Master Plans	
Lead: Vision Zero Coordinator	**Support**: Transportation Planners, Community Planners, Design and Communication Staff

Action: Based on the analysis conducted in the Problem Verification section, incorporate Vision Zero into master plans areas through these items:
 	
• Collect pedestrian, bicycle and motor vehicle volume data at signalized and unsignalized crossings and mid-block crossings and speed data for specific master plans.
• Create a more refined evaluation of the master plan area:
    ○ Roadway characteristics conducted in the problem verification section to identify safety issues.
    ○ High-priority areas such as schools, libraries, major transit stations and other public facilities for the ability to walk and bicycle comfortably.
• Develop a master-planning toolkit to address common transportation safety issues.	

Justification: Master-planning provides an effective means of re-envisioning development patterns and the transportation system to create a safe transportation network.	
Resources: Consultant Support	
Timeline: Medium Term	

Incorporate Vision Zero into Development Review	
Lead: Vision Zero Coorindator	**Support**: Transportation Planners, Community Planners and Design Staff
Action: Incorporate Vision Zero into development review through these items: • Educate the development community on Vision Zero principles. • Develop toolkit for regulatory reviewers to reduce speeds and conflicts by creating a sense of enclosure, consolidating access points, creating a finer-grained network of streets and concentrating greater levels of activity, which can result in more frequent, safe crossings and create more activity. • Establish a Vision Zero finding for regulatory projects.	
Justification: Development projects have the ability to improve safety by reducing conflict points and reducing street design speeds.	
Resources: Existing Staffing	
Timeline: Short Term	

Incorporate Vision Zero into the Subdivision Staging Policy	
Lead: Functional Planning and Policy Division	**Support**: Transportation Planners
Action: Update the Subdivision Staging Policy to reflect an effective transportation safety element: • Incorporate safety evaluation and data collection in traffic studies, including travel speed data. • Incorporate safety into transportation system performance measures and technical analysis.	
Justification: The Subdivision Staging Policy currently analyzes motor vehicle mobility but does not evaluate transportation-system safety.	
Resources: Consultant Support	
Timeline: Ongoing	

Capital Project Review	
Lead: Functional Planning and Policy Division	**Support**: Transportation Planners
Action: Incorporate Vision Zero into recommendations on the capital budget and capital projects: • Identify and prioritize transportation safety projects for inclusion in the capital budget based on crash severity, equity, etc. • Incorporate a Vision Zero review for mandatory referrals and facility planning studies.	
Justification: Designing transportation infrastructure to be safe is the primary way to achieve Vision Zero.	
Resources: Existing Staffing	
Timeline: Ongoing	

RESOURCE SUMMARY

This section of the work plan includes an initial summary of the resources that will be needed to accomplish the actions in the work plan, identifies those items that are existing (FY20), proposed (FY21) and potential future (FY22 and beyond) work program items and the level of effort to implement each action (* = relatively easy, *** = relatively difficult).

Action	Section	Resources	Timeline	Applicable Projects and Initiatives	Level of Effort
Develop a Vision Zero Toolkit for Community Organizations	Building Knowledge	Communications Support	Short Term	No	**
Engaging Hard-to-Reach Communities	Building Knowledge	Communications Support	Ongoing	No	***
Educate Community Members, Agency Staff and Appointed/Elected Officials	Building Knowledge	Communications Support	Ongoing	No	***
Vision Zero Electronic Newsletter	Building Knowledge	Communications Support	Ongoing	No	*
Develop a Severe and Fatal Crash Dataset	Problem Verification	CountyStat crash data and existing GIS resources.	Ongoing	No	**
Develop a Multimodal Volumes Data Collection Plan	Problem Verification	Consultant support, existing pedestrian, bicycle and motor vehicle volume data	Short Term	Transportation Modeling for the Pedestrian Master Plan (FY 20)	**
Collect Multimodal Counts and Traffic Speed Data	Problem Verification	New multimodal counts and traffic speed data	Short Term	Data for Vision Zero (FY 20)	*
Estimate Pedestrian, Bicycle and Motor Vehicles Volumes Countywide	Problem Verification	Consultant Support, Existing Pedestrian and Bicycle Counts	Short Term	Request Year End Funds (FY 20)	***
GIS Layers of Variables that are Hypothesized to be Correlated with Severe and Fatal Crashes	Problem Verification	Severe and Fatal Crash Dataset	Short Term	Request Year End Funds (FY 20)	***

Montgomery County Planning Department
Vision Zero Work Plan

Action	Section	Resources	Timeline	Applicable Projects and Initiatives	Level of Effort
Develop Safety Performance Factors	Problem Verification	Severe and Fatal Crash Dataset, Measure of Exposure for Walking and Bicycling, Transportation Network Dataset	Short Term	Request Year End Funds (FY 20)	***
Create a Pedestrian Level of Comfort Map	Problem Verification	Consultant to refine Pedestrian Level of Comfort methodology	Short Term	Pedestrian Connectivity Mapping (FY 20)	***
Develop Procedures for Data Collection and Analysis	Problem Verification	Consultant Support	Short Term	No	*
Develop Complete Streets Design Guide / Roadway Functional Classification Study	Develop Solutions	Consultant Support	Ongoing	Roadway Functional Classification System (FY 19)	***
Educate Staff on Vision Zero	Incorporate Solutions into Work Program	Existing Staffing	Short Term	No	**
Continuing Education	Incorporate Solutions into Work Program	Conference and webinar fees	Ongoing	No	*
Capital Project Review	Incorporate Solutions into Work Program	Existing Staffing	Ongoing	No	*
Incorporate Vision Zero into Development Review	Incorporate Solutions into Work Program	Existing Staffing	Short Term	No	*
Incorporate Vision Zero into the Subdivision Staging Policy	Incorporate Solutions into Work Program	Consultant Support	Ongoing	Policy Area and Local Area Transportation Update (FY 20)	***
Develop a Pedestrian Master Plan	Incorporate Solutions into Work Program	Consultant Support	Ongoing	Pedestrian Master Plan (FY 20)	***
Create a Database to Store Multimodal Counts and Traffic Speed Data	Problem Verification	Existing GIS resources	Medium Term	No	**

Action	Section	Resources	Timeline	Applicable Projects and Initiatives	Level of Effort
Identify Best Practices in Implementing Vision Zero in the Suburbs	Develop Solutions	Consultant Support	Medium Term	No	**
Develop Policies for Street Types and Land Use Context	Develop Solutions	Consultant Support	Medium Term	No	**
Changes to State and Local Policies, Regulations and Laws	Incorporate Solutions into Work Program	Existing Staffing	Medium Term	No	***
Incorporate Vision Zero into Master Plans	Incorporate Solutions into Work Program	Consultant Support	Medium Term	No	*
Incorporate Corridor Master Plans into Department Work Program	Incorporate Solutions into Work Program	Existing Staffing	Long Term	No	*