

Shady GROVE

MINOR MASTER PLAN AMENDMENT



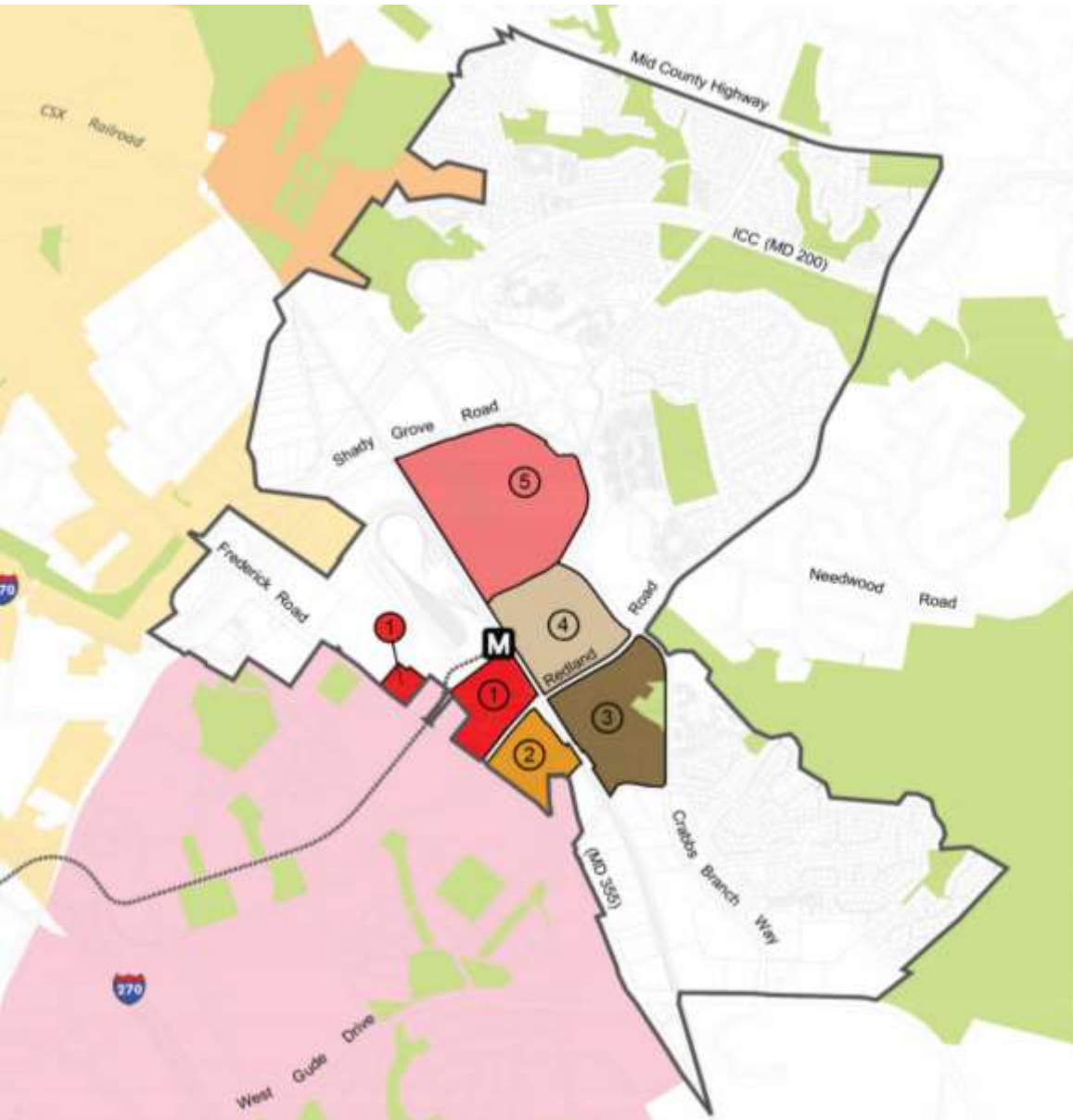
September 10, 2020

Shady Grove Sector Plan

Planning Board Worksession No.4



Prior Planning Board Worksessions



June 23, 2020

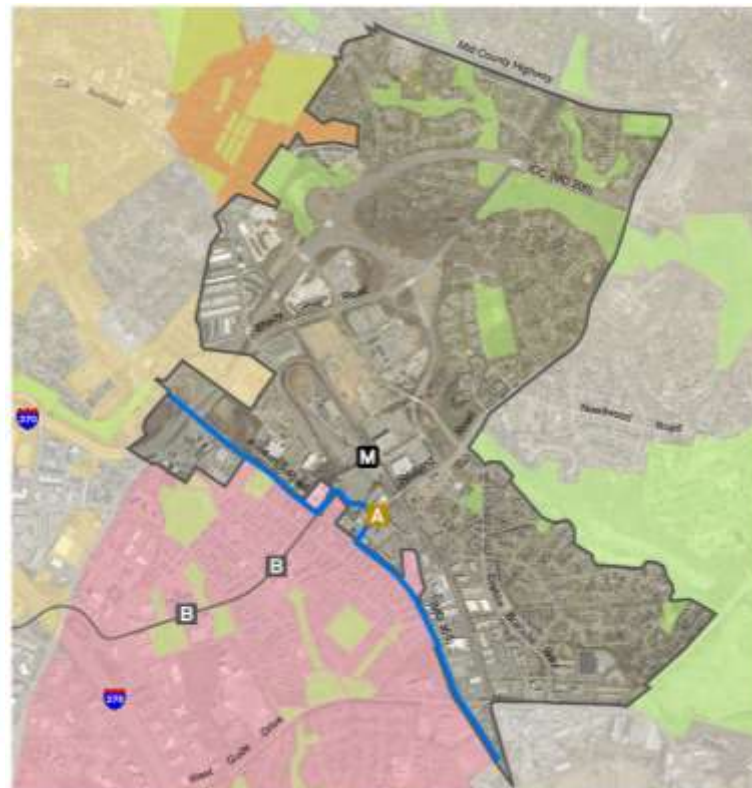
- Metro Neighborhoods: Metro West, Metro South, Old Derwood and Metro North-WMATA

July 9, 2020

- Historic Designation: Derwood Store and Post Office

July 23, 2020

- Key properties, including the Grove, Shady Grove Plaza and Crabbs Branch Way Office Park



Mobility

- Vision Zero
- Interchanges
- BRT: MD 355/CCT
- Transit: Shady Grove and MARC
- Bikeways



*Tree-lined entrance to Metrorail
along King Farm Boulevard Extended*



*Sidewalk gap on
Redland Road*



*Access management conflicts and
poor pedestrian facilities on MD 355*



Shady Grove Metrorail Station Area — West Side

Purpose & Agenda

Purpose:

- Initiate a dialogue on the Plan's transportation recommendations;
- Review transportation related feedback; and
- Suggest updates to Plan's transportation recommendations.

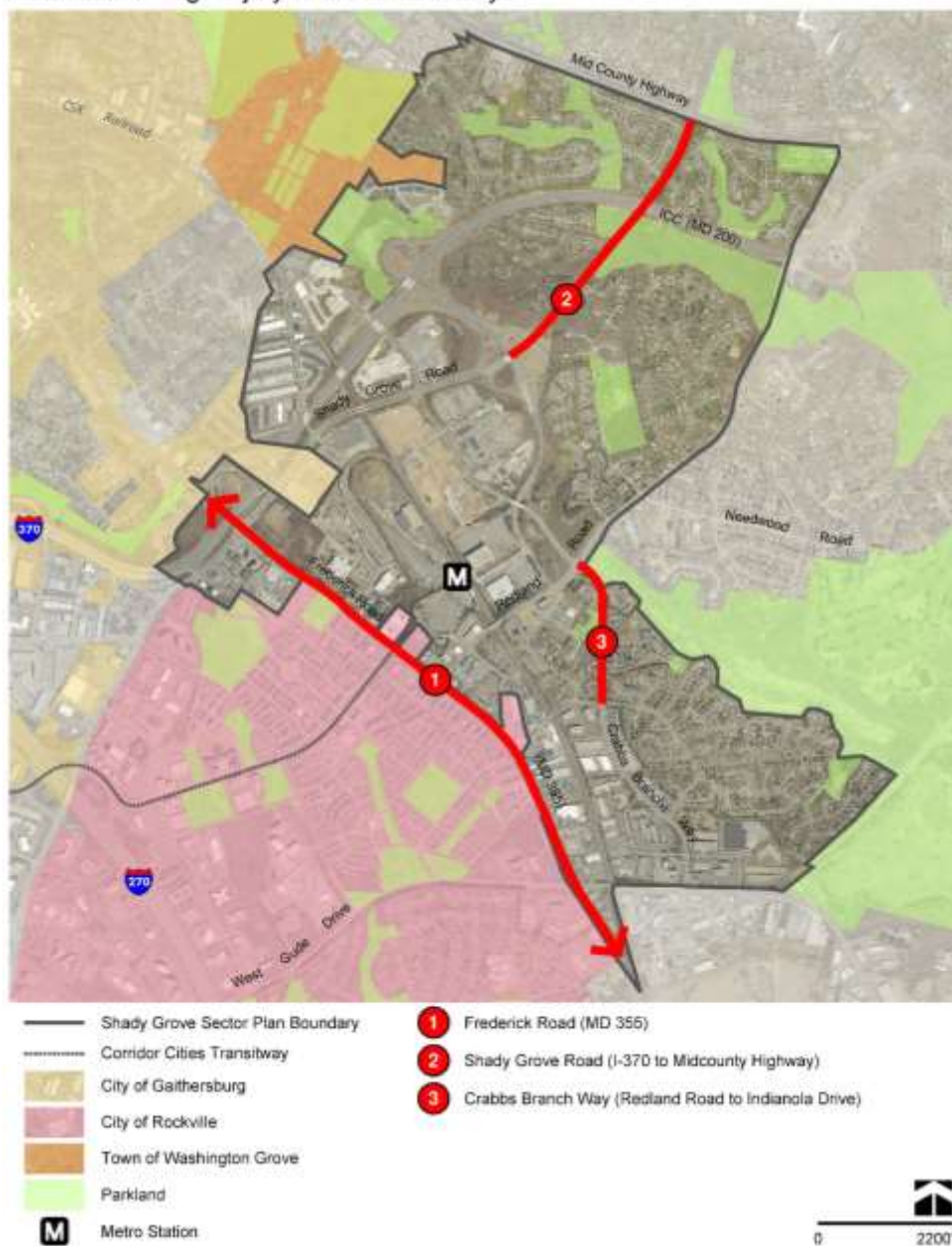
Agenda:

- Vision Zero Overview
- A New Perspective on Capital Improvements
- Draft Plan Comments and Guidance



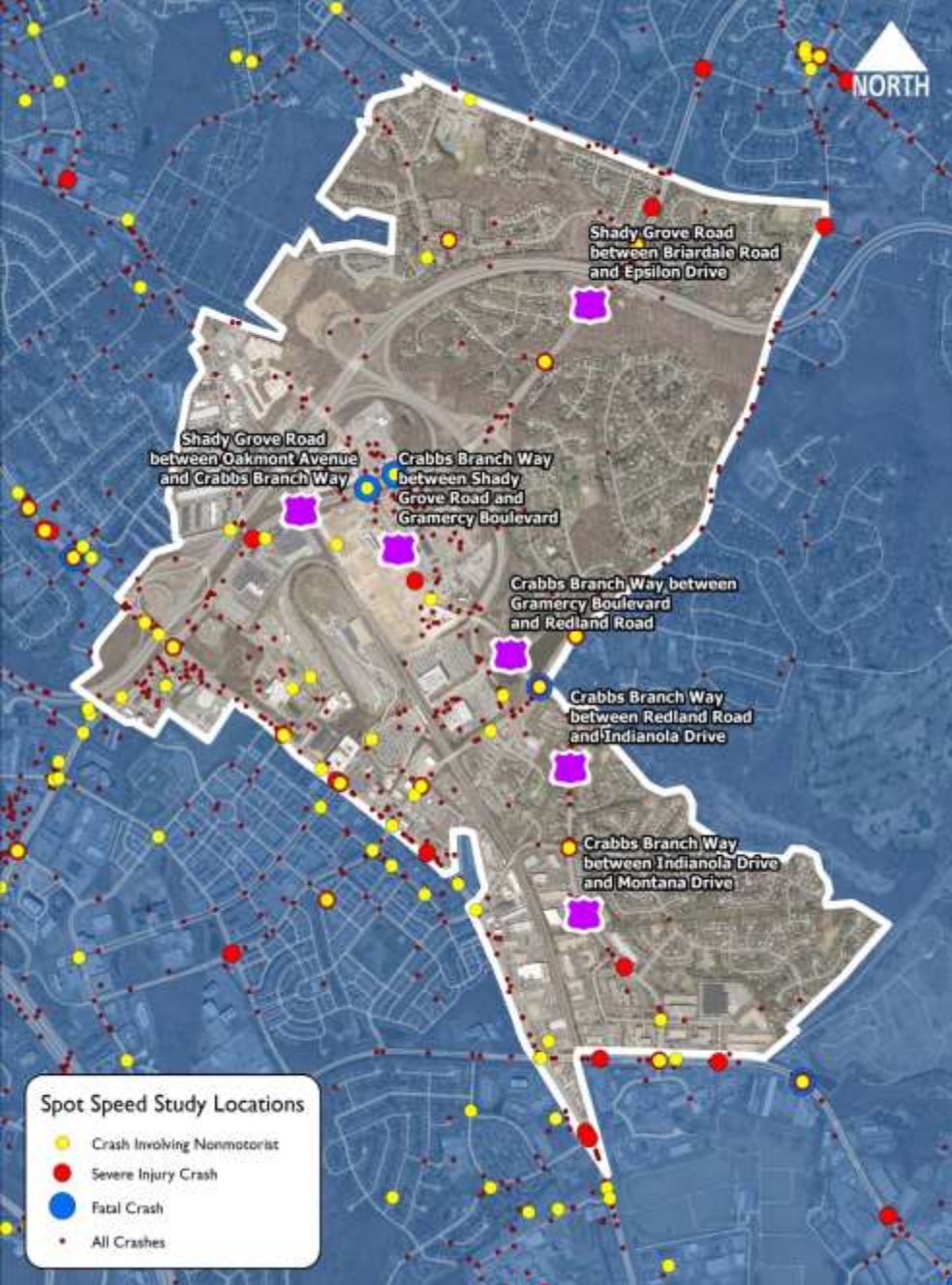
Vision Zero Overview

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High Injury Network

- **High Injury Network (2012-2016 Data):**
 - Five or more serious injuries or fatalities
 - One or more collisions per mile
- **Three significant High Injury Network segments in Sector Plan Area**
 - MD 355 (Shady Grove Road to Gude Drive/points south)
 - Shady Grove Road (I-370/Metro Access Road & Shady Grove road interchange to Midcounty Highway)
 - Crabbs Branch Way (Redland Road to Indianola Drive)
- **One additional partial segment** on Shady Grove Road east of MD 355



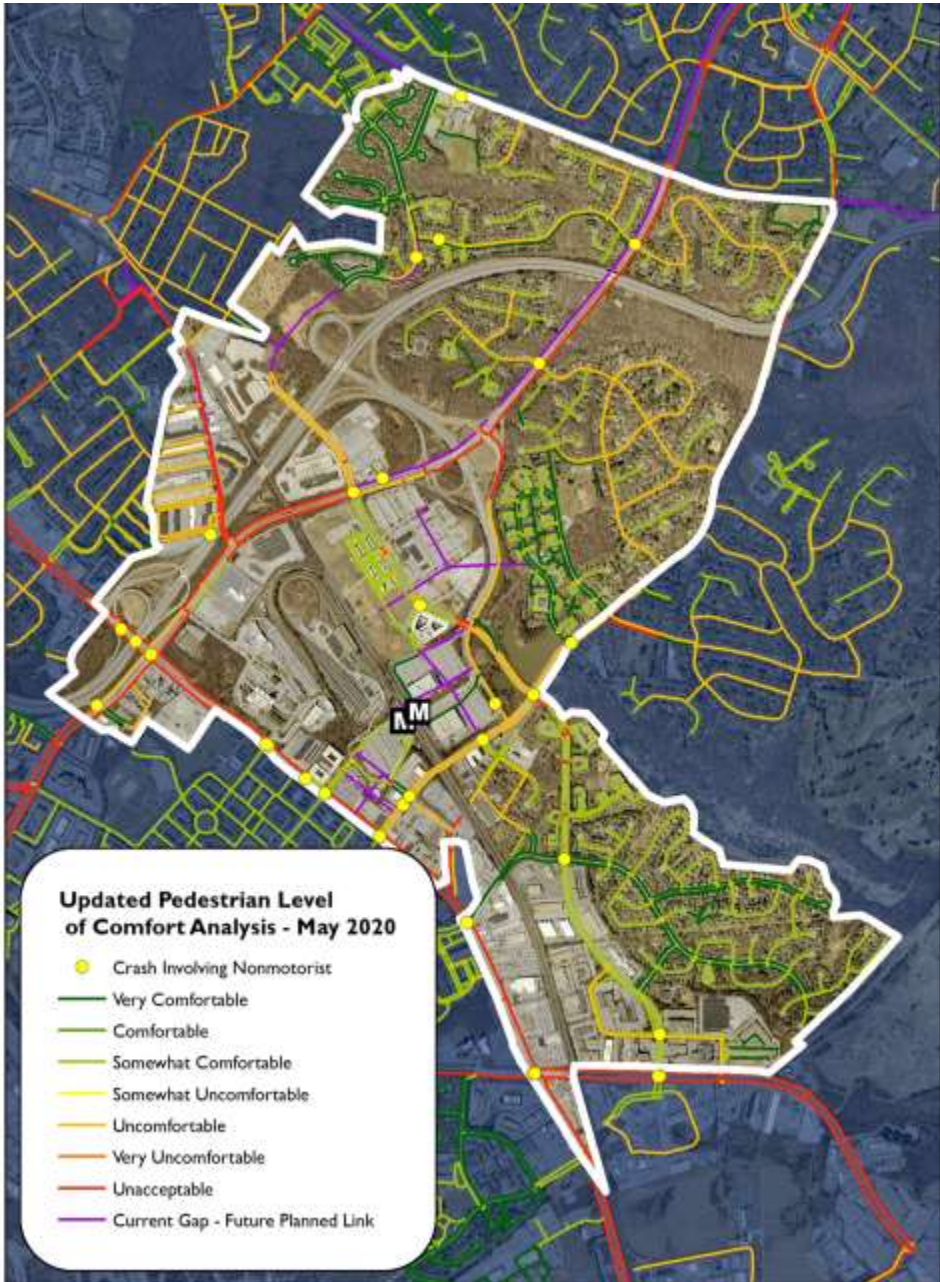
Spot Speed Study & Crash Analysis

January 2015-March 2019

- **48 percent to 84 percent** of drivers exceeded posted speed limits on six studied segments (depicted as  on map)
- **2.45 percent** of crashes resulted in severe injury or fatality
- **3.79 percent** of crashes involved a nonmotorist
- **Six nonmotorist** crashes resulted in severe injury or fatality
- **Three fatalities** occurred in the study area
- **Right-turn movements** accounted for **31 percent** of crashes involving nonmotorists
- **Left-turn movements** accounted for **23 percent** of crashes involving nonmotorists
- Overall, **48 percent** of crashes resulting in a severe injury or fatality involved a **left-turn movement**

Pedestrian Level of Comfort Evaluation

- Context (i.e. urban vs. non-urban)
- Segments:
 - Adequate pedestrian buffer
 - Posted speed
 - Facility width
 - Presence of hazards & obstructions
 - Lighting
- Crossings:
 - Number of lanes
 - Presence of refuges
 - Presence of protected phases
 - ADA Best practices (pushbuttons, detectable warning strips, ramp orientation, ramp quality, etc.)



Pedestrian Level of Comfort Evaluation Base Pedestrian Connectivity

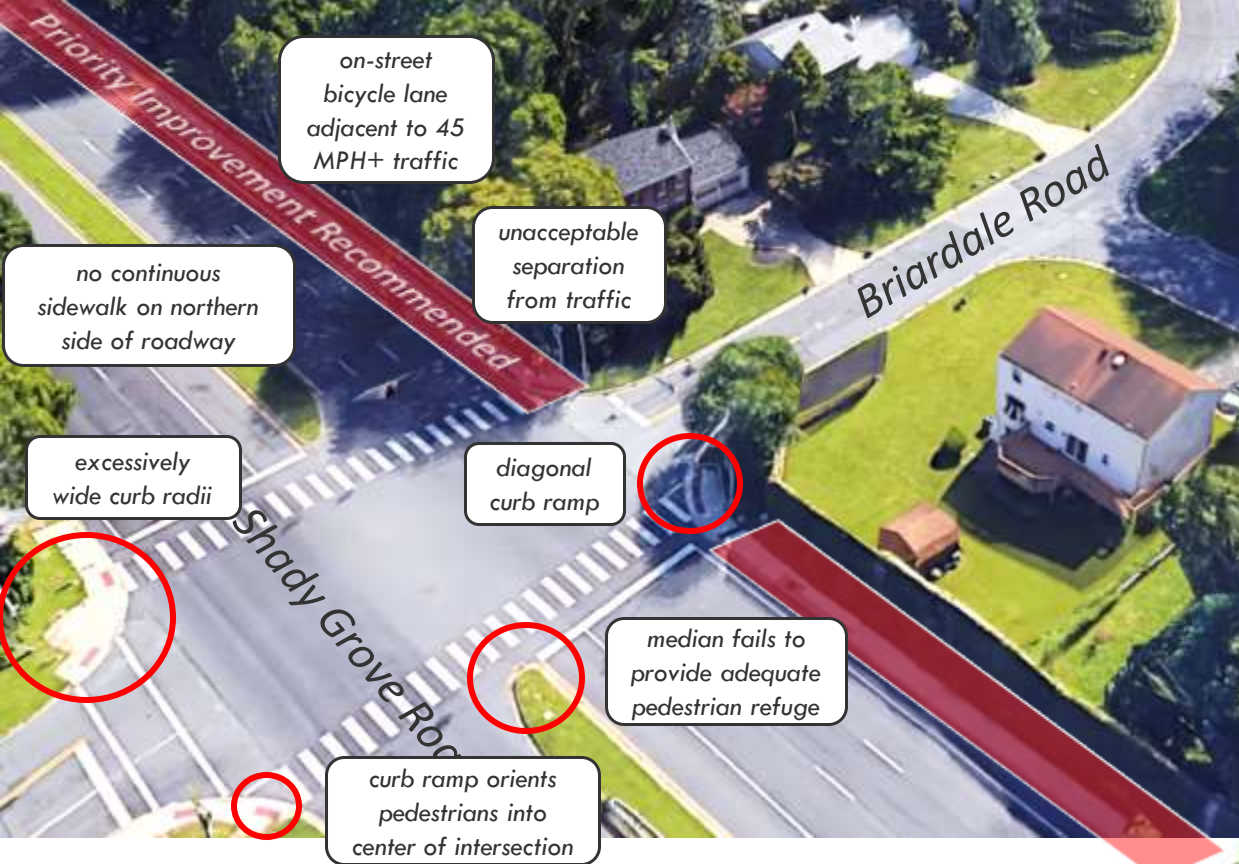


Comfortable Pedestrian Connectivity



Example Barrier Locations



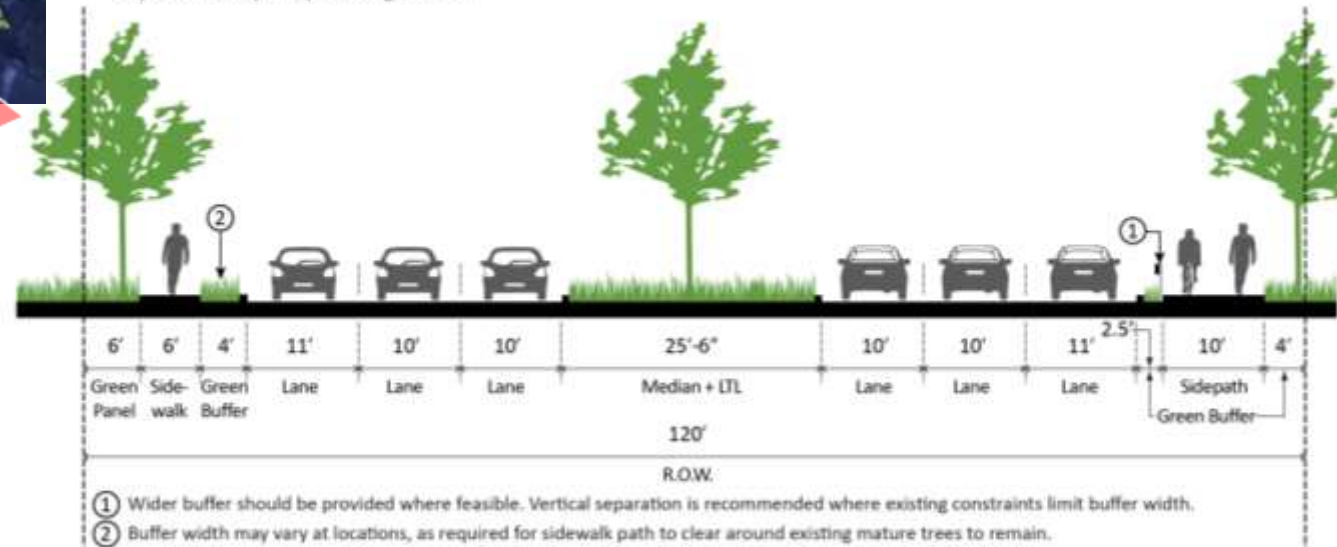


General Vision Zero Recommendations

- Require a minimum of six feet of separation between the roadway and ped/bike facilities.
- Where a six-foot buffer cannot be achieved, require vertical separation to protect users from moving traffic.

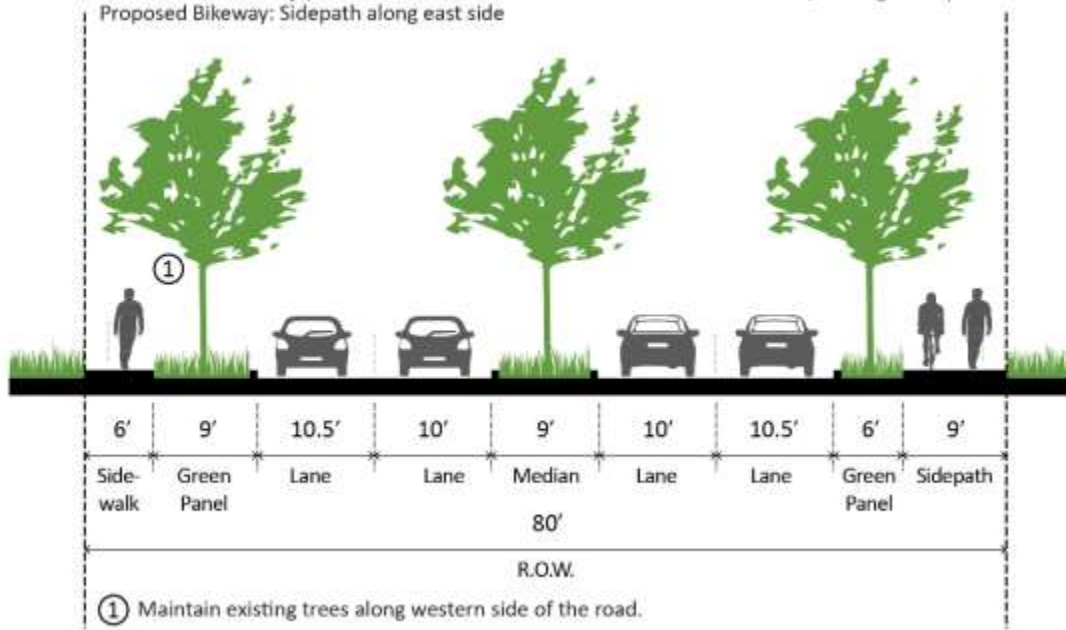
- Ensure all crossings are ADA compliant with curb ramps oriented in the direction of crossing.
- Limit curb radii to maximum of 25 feet.
- Restrict the implementation of additional travel or turn lanes until safety and person throughput can be demonstrated.

Shady Grove Road (6-lane section between Briardale Rd. and MidCounty Hwy., looking North)
Proposed Bikeway: Sidepath along east side





Crabbs Branch Way (4-lane section between Redland Rd. and Indianola Dr., looking North)
Proposed Bikeway: Sidepath along east side



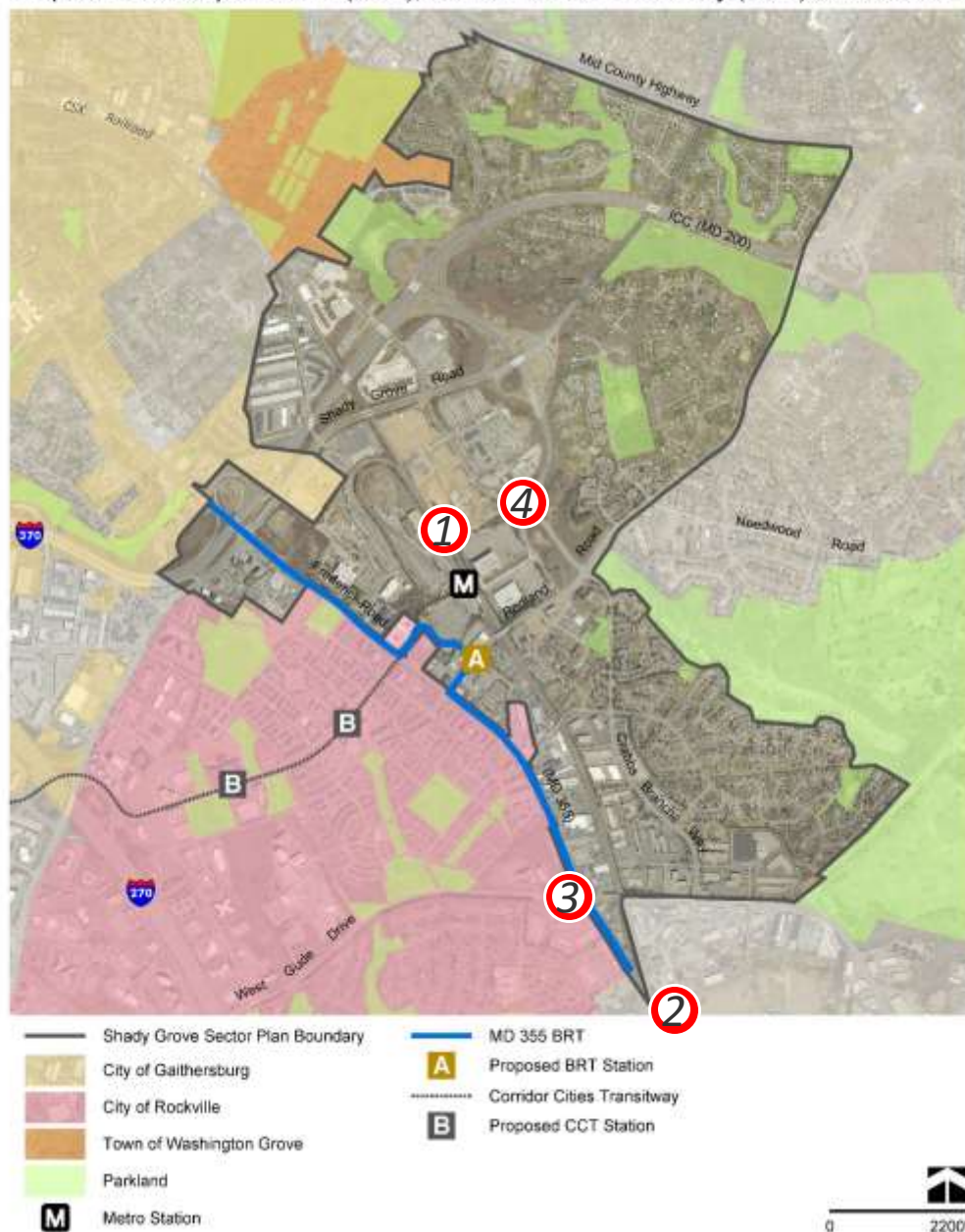
Selected Specific Vision Zero Recommendations

- Pedestrian delay on MD 355
- Vegetated median along Crabbs Branch Way along High-Injury Network (HIN) segment
- Stop controlled crossing facility at Miller Fall Road and the entrance to Shady Grove Middle School
- New sidewalks along gaps on Redland Road, Midcounty Highway, and Shady Grove Road
- Commercial entrance consolidation along MD 355

A New Perspective on Capital Improvements

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Significant Transportation Capital Improvements

Potential Capital Project	Estimated Capital Costs (2019 dollars)
MD 355 Bus Rapid Transitway Alternative B Modified	\$820 million
Corridor Cities Transitway Phase 1	\$838 million
1. MARC Improvements (Must Precede Station) Additional Mainline Track & Railyard Capacity	\$720 million
2. Montgomery College Infill Metrorail Station	Not Studied
3. MD 355 & Gude Drive SPUI Interchange (2006 Plan - Not Recommended)	\$75 million
4. Crabbs Branch/Metro Access Partial Interchange (2006 Plan - Not Recommended)	Not Studied

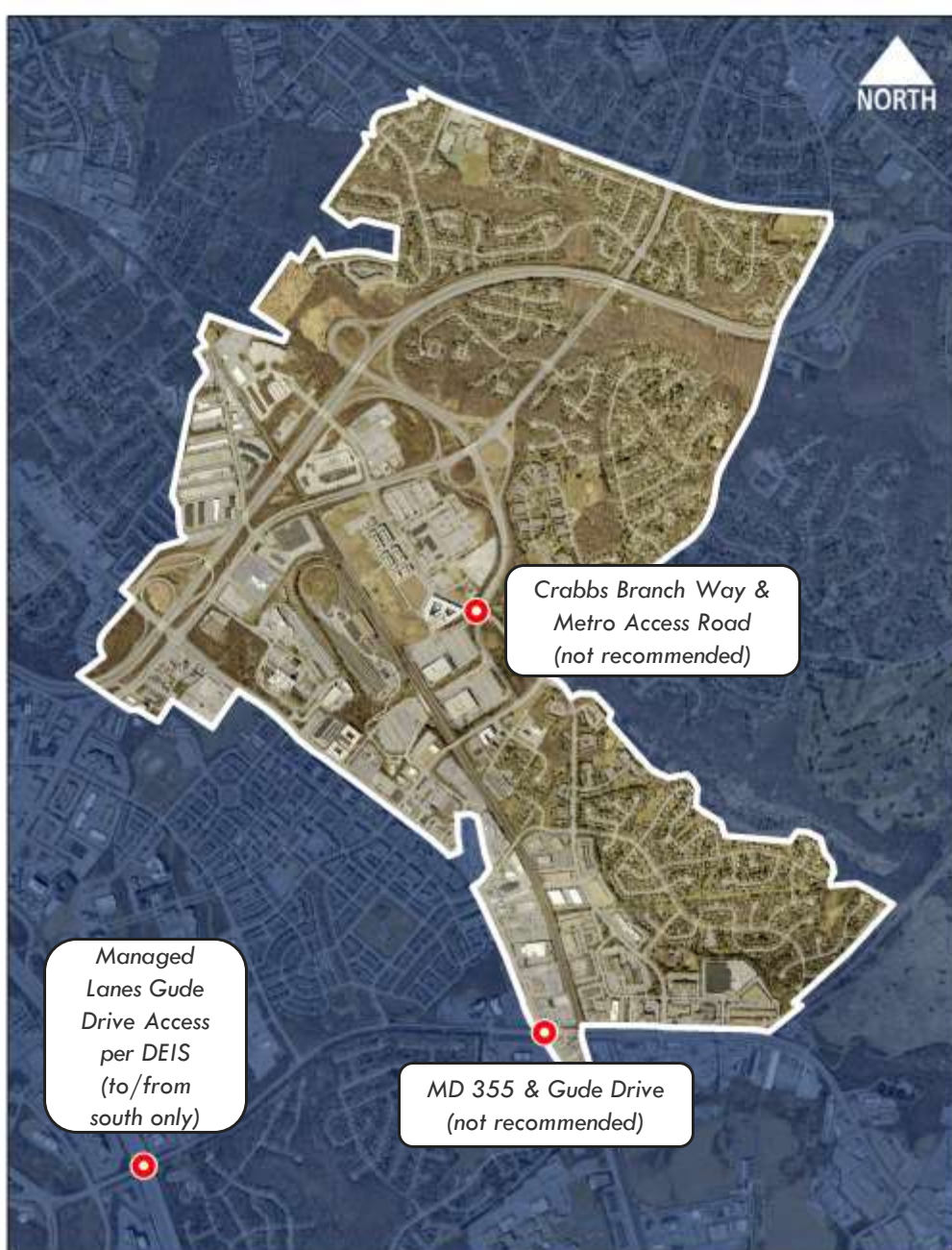
MARC Rail Improvements

- Additional mainline track or (or outright purchase of Brunswick Line) would need to precede Shady Grove Infill MARC Station
- Additional track needs, at minimum, 13 feet per direction. MARC Communities Plan calls for 25 feet of additional ROW in Appendix only—not a regulatory requirement
- Draft Plan does not require dedication, but could include: *“If the Maryland Transit Administration (MTA) develops an implementation plan for additional mainline track along the Brunswick line, properties adjacent to the northern side of the MARC rail line within the Plan area should dedicate width called for by MTA’s Plan.”*







MD 355 & Gude Drive Interchange

- Rockville, MCDOT concerned with removal based on potential proximate managed lanes access
- Overpass est. \$25M; SPUI est. \$75M
- Negligible benefit along MD 355 due to upstream queuing
- Managed lanes access to Shady Grove WMATA Metrorail is via I-370 and Metro Access Road
- Forthcoming *County Growth Policy* recommends 100 seconds per vehicle delay threshold



Mobility: MD 355 and Gude Drive

- The Georgia Avenue and Randolph Road Interchange cost \$74.8 million (\$44.4M construction, \$30.4M engineering and acquisition)¹
- The State and County funded 42.8% percent of the project. Additional funds were provided by the Federal Government¹
- Assuming the interchange at MD 355 and Gude costs roughly \$75 million, **what alternative items could be funded?**

Items		\$32 million	\$75 million
high-visibility crosswalk markings ²		1.9 million linear feet of high-visibility markings	4.6 million linear feet of high-visibility markings
Linear feet of ten-foot wide sidepaths ²		476,190 linear feet of sidepaths	1,116,071 linear feet of sidepaths
ADA compliant replacement curb ramps ²		8,333 replacement curb ramps	19,531 replacement curb ramps
percent of 56-acre industrial site at \$60 PSF		21.9%	51.2%
percent of the entire MD 355 BRT system ³		3.9%	9.2%

Sources:

¹Maryland State Highway Administration, 2015: http://apps.roads.maryland.gov/WebProjectLifeCycle/MO854_51/HTDOCS/Documents/Informational_Public_Workshop/MD%2097%20RR%20Project%20Fact%20Sheet---071715.pdf

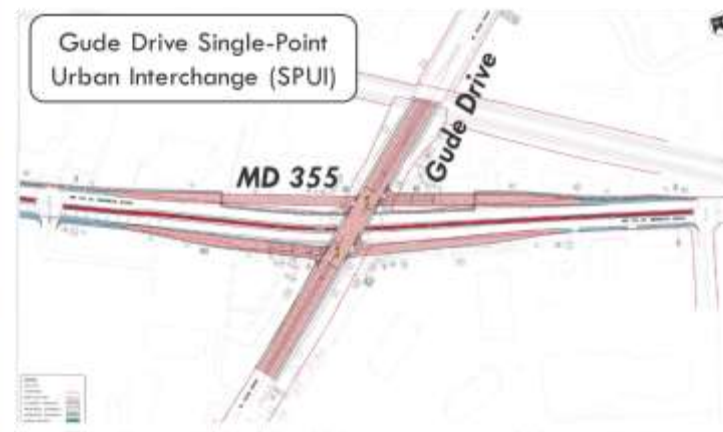
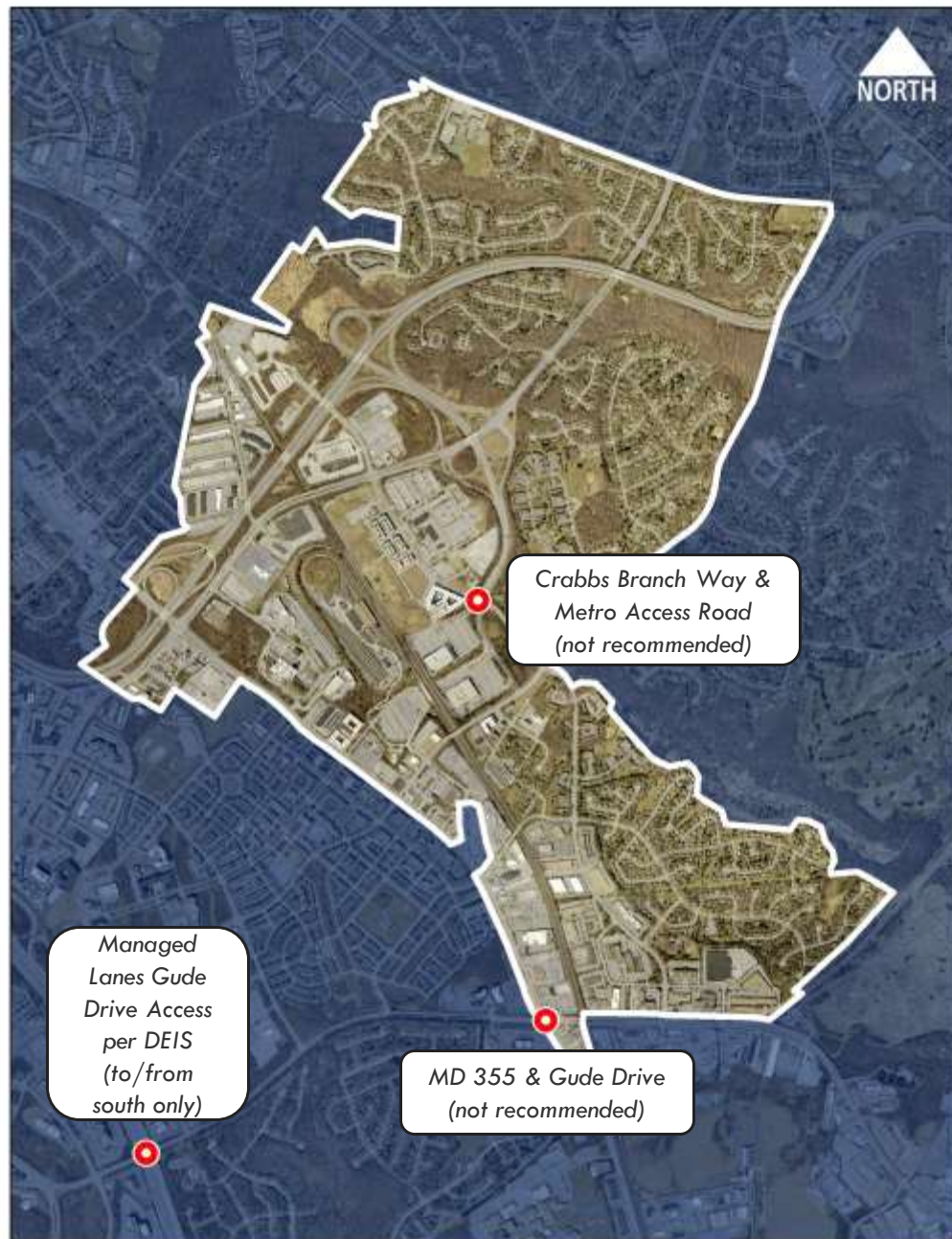
²Virginia Department of Transportation, 2017, Fairfax County Parkway & Franconia-Springfield Parkway Corridor Study, Appendix L, Planning Level Cost Estimates

³Montgomery County Department of Transportation, 2019, Draft Corridor Summary Report, Executive Summary

MD 355 & Gude Drive Interchange

Revised Draft Plan Recommendation

- Amend the existing ~~Subdivision Staging Policy~~ **County Growth Policy** congestion standard for this intersection to be no less than ~~80 seconds~~ **100 seconds** of delay per vehicle to have a more consistent transportation policy approach for the MD 355 Corridor.



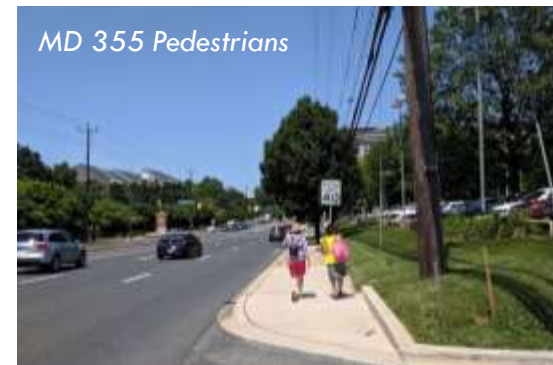
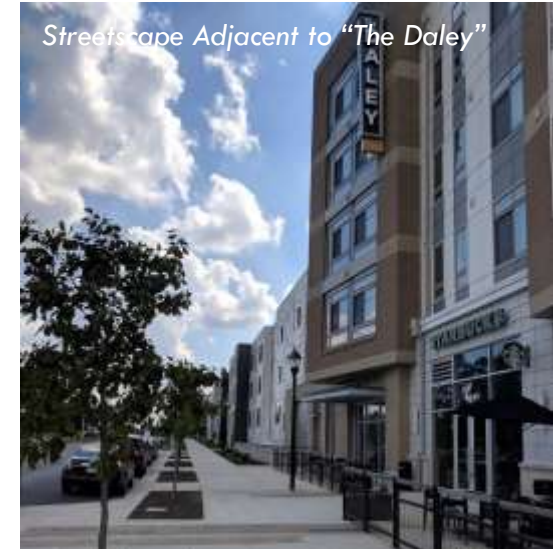
Draft Plan Comments & Guidance

Shady Grove Minor Master Plan Amendment



Previous Planning Board Comments

- Agree with removal of **MD 355 & Gude Interchange**
- Location and land needs associated with **infill MARC Rail Station**
- Coordination with other agencies and planning efforts
 - Maryland Department of Transportation's **Managed Lanes**
 - Maryland Transit Administration **MARC Rail**
 - **Maryland Transportation Authority** (MDTA)
 - Planning Department's **Corridor Forward: The I-270 Transit Plan**
- Safety and capacity at specific intersections:
 - Safety at **Shady Grove Road & Crabbs Branch Way**
 - Safety and capacity at **MD 355 and Shady Grove Road**
 - Capacity at **Shady Grove Road and Choke Cherry Road** (outside planning area)





Car stopped beyond stop bar



Permeable asphalt path and substandard on-street bike lane



Previous Planning Board Comments: Shady Grove Road & Crabbs Branch Way

- Contributing factors to intersection nonmotorist crashes and killed or seriously injured (KSI) crashes:
 - Permissive lefts (one fatality)
 - Poor right-turn stop compliance
 - Speed (one fatality)
- 2006 Plan recommended pedestrian underpass; 2020 Plan steps away from recommendation
- Plan addresses speed reduction
- Transportation appendix includes specific safety information for intersection and potential improvements
 - MCDOT is using appendix to inform traffic calming at the intersection

Previous Planning Board Comments: Shady Grove Road & MD 355

I-370 overpass limits capacity enhancements on northern intersection leg

1. Consistent with Vision Zero principles, ~~if future amendments to the County's Subdivision Staging Policy (SSP) recommend alternative or differing operational adequacy metrics than average intersection delay~~, remove the channelized right turns at Shady Grove Road and MD 355.

2. Restrict future widening at Shady Grove Road and MD 355. This recommendation excludes any widening or improvements necessary to support BRT, bicycle, and pedestrian needs.

free rights at northbound, southbound, and westbound legs

no pedestrian crossing on southern intersection leg (location of breezeway recommendation) & significantly long crossing distances over multiple lanes

compliance issues for dynamic-right turn on westbound approach

Requested Planning Board Guidance: Non-Auto Driver Mode Share Goals

MCDOT Request	Response	Proposed Draft Plan Additions/Edits
Explain how the NADMS goals will be achieved.	The best mechanism to improve transit ridership is to make it more competitive with driving. The Plan supports restrictions on new auto capacity enhancements until person-throughput can be demonstrated.	<i>This plan recommends restrictions on the implementation of additional travel or turn lanes until safety and, person-throughput, and progress toward the Sector Plan's NADMS goals can be demonstrated.</i>
Reduce the NADMS target for the Metro Station Policy Area (MSPA) from 50 to 45 percent.	The MSPA target of 50 percent is consistent with other Metrorail-proximate Plans.	No proposed changes.
Reduce the NADMS target for the Sector Plan Area (excluding the MSPA) from 35 to 30 percent.	The 35 percent goal for the Sector Plan Area (beyond the MSPA) could be achieved by improving bike/ped/micromobility access to Metro and marketing to single family properties in the Sector Plan Area.	<i>Expand the Greater Shady Grove Transportation Management District to include the entirety of the Sector Plan Area.</i>

Requested Planning Board Guidance: Non-Auto Driver Mode Share Goals

MCDOT Request	Response	Proposed Draft Plan Additions/Edits
Reduce the NADMS target for employees commuting into the Plan area from 25 to 20 percent.	Modeling suggests that, without intervention, transit mode share will be just over 10 percent. We agree that there are limited connections from the east to the Plan area.	<i>Increase the existing NADMS goal for employees commuting into the Plan who reside elsewhere from 12.5 to 25 percent 15 percent.</i>
Emphasize comments related to micromobility throughout the document.	Staff supports this recommendation and will add references to micromobility throughout the Plan. Staff will include an additional macro-level recommendation.	<i>Support micromobility in the Plan area through the provision of planned bicycle facilities and dedicated space for accessible, weather-protected storage in new developments.</i>

Requested Planning Board Guidance: Midcounty Highway

current terminus
at Shady Grove Road

Mill
Creek
Park

Proposed Trail

implementation would
have environmental
drawbacks, including loss
of mature tree canopy

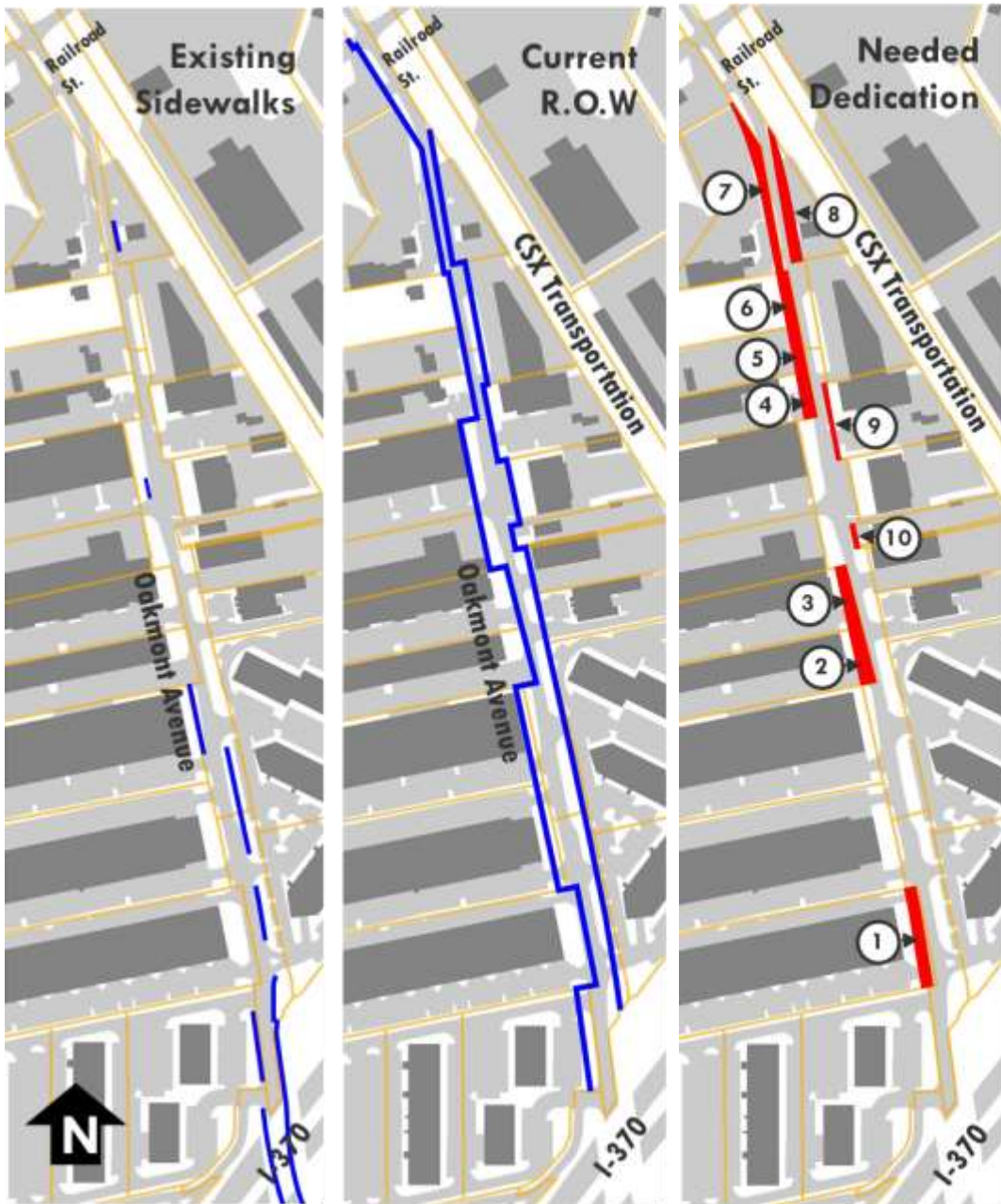
Redland
Local Park

unconstructed segment
remains master-planned

Council Resolution 18-957 directs
staff to exclude unconstructed
Midcounty Highway segment for
master-plan travel demand modeling

MD 200

interchange with MD 200 not
constructed in 2009; would
present significant expense



Requested Planning Board Guidance: Oakmont Avenue

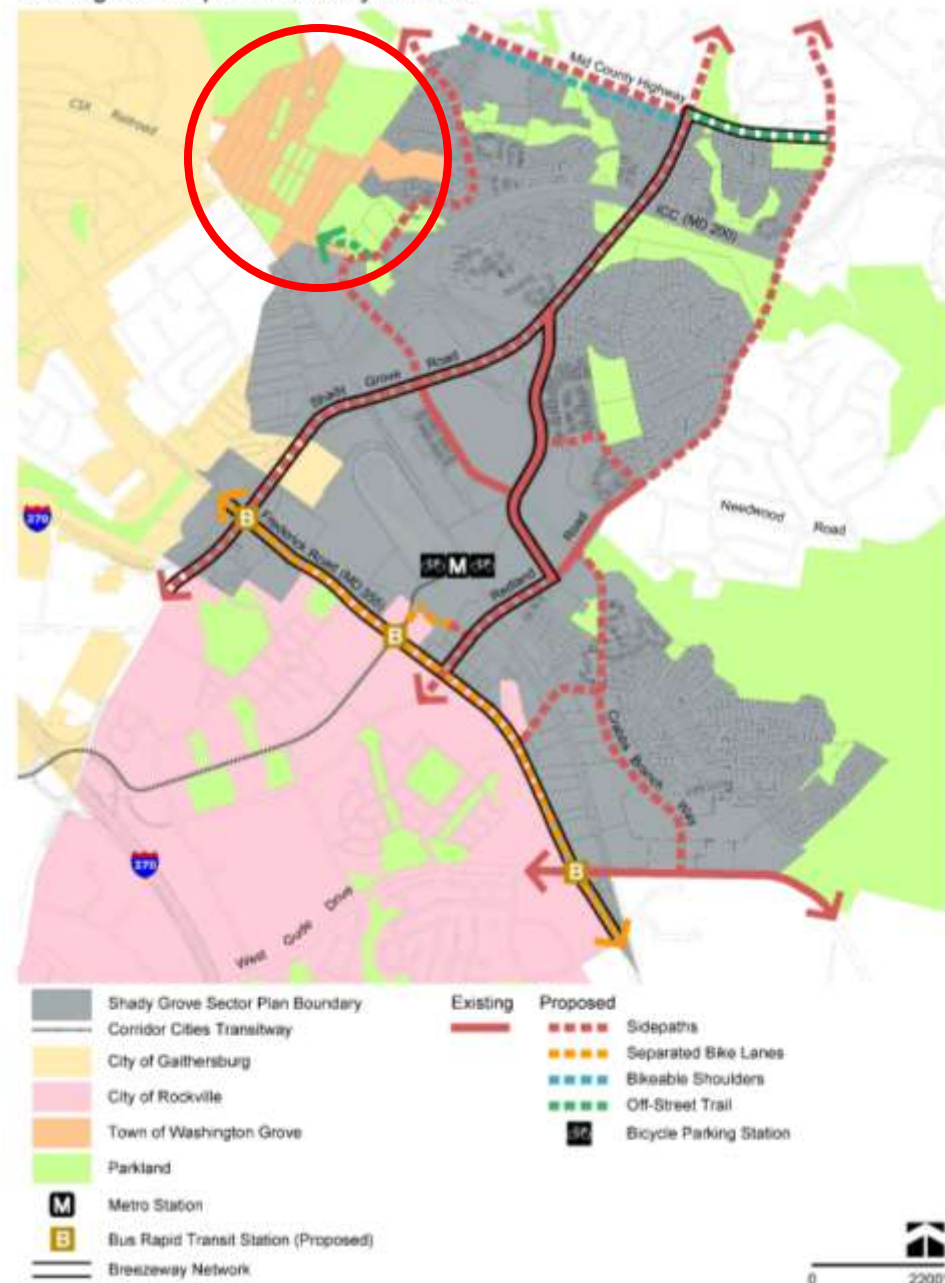


Existing Oakmont Avenue

Approx. Dedication:

1. 8500 Oakmont Ave. ±5175 sf
2. 16760 Oakmont Ave. ±3773 sf
3. 16770 Oakmont Ave. ±3434 sf
4. 16830 Oakmont Ave. ±2643 sf
5. 16840 Oakmont Ave. ±2470 sf
6. 16850 Oakmont Ave. ±2882 sf
7. 16900 Oakmont Ave. ±5934 sf
8. 16905 Oakmont Ave. ±5495 sf
9. 16821 Oakmont Ave. ±1316 sf
10. 16801 Oakmont Ave. ±511 sf

- Oakmont Avenue currently classified as 80-foot arterial
- Draft Plan recommends 60-foot Industrial Roadway
- Draft Plan does not rezone nearby light industrial properties
- Continuous sidewalk with separation is possible in proposed 60-foot section
- Significant capital improvement project to relocate utility lines and storm swale
- *Encourage coordination between existing property owners, the County, and the Town of Washington Grove to improve pedestrian safety along Oakmont Avenue, including the provision of a continuous sidewalk on at least one side of the roadway.*



Requested Planning Board Guidance: Bicycle Connection to Washington Grove

- Plan recommends removal of the Oakmont Avenue sidepath to avoid setting up false expectations
- Safe parallel connections to Washington Grove recommended via Brown Street
- The Town of Washington Grove has requested that the Plan's bicycle table be revised from "Brown Street" to "Washington Grove"
 - MCDOT is currently examining multimodal connections through Piedmont Crossing Local Park
 - Staff supports request, but notes that it is atypical and results in some ambiguity

Staff Contacts

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Shady Grove Minor Master Plan Amendment Transportation Support



Next Worksessions

Planning Board Review

- **September 24:** Parks and Open Spaces/Community Facilities/Sustainability/ Land Use wrap up

