Preliminary Recommendations

1. Reevaluate the staging triggers.
2. Update the Sector Plan recommendations per the 2016 Subdivision Staging Policy (SSP); Bus Rapid Transit (BRT) on MD 355; and the Corridor Cities Transitway (CCT).
3. Adjustments to land use and zoning as well as public facilities recommendations.

Purpose for the Plan Amendment
Plan Amendment Public Outreach

- November 14, 2018: Open House
- May 20, 2019: Existing Transportation Conditions
- June 26, 2019: Transportation and Land Use Alternatives
- October 16, 2019: Preliminary Recommendations
Vision and Overview

2006 Sector Plan and current draft update highlights:

- Mixed-use area surrounding the Metro Station (Metro Neighborhoods)
- Retention of industrial/office areas.
- Protection of existing residential communities.
- New bikeways and street network.
Key Preliminary Recommendations

- Complete the relocation for all County facilities from the County Service Park (CSP) to other appropriate locations.
- Promote the redevelopment of the Metro Station surface parking and single use commercial properties into mixed-use places.
- Adjust properties that were rezoned via the 2014 District Map Amendment.
- Retain light industrial zoned properties to promote independent entrepreneurs and small businesses.
Approved Development

1. Townes at Shady Grove
2. Shady Grove Station-Westside
3. Shady Grove Station-Jeremiah Park (Eastside)
4. Montgomery County Department of Transportation Fleet Management
5. Maryland Transportation Authority

Preliminary Recommendations
### Preliminary Recommendations

#### Land Use Recommendation

<table>
<thead>
<tr>
<th></th>
<th>Residential</th>
<th>Non-Residential</th>
</tr>
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<tbody>
<tr>
<td><strong>Existing</strong></td>
<td>3,091 dwelling units</td>
<td>4.66 million square feet</td>
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<tr>
<td><strong>Approved-Pipeline</strong></td>
<td>1,729 dwelling units</td>
<td>61,828 square feet</td>
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<tr>
<td>▪ Townes at Shady Grove (multifamily building)</td>
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<td></td>
</tr>
<tr>
<td>▪ Shady Grove Station, Westside and Jeremiah Park</td>
<td></td>
<td></td>
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<tr>
<td><strong>Preliminary Recommendation</strong></td>
<td>4,500</td>
<td>2.30 million square feet</td>
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</table>
Preliminary Recommendations

Metro Neighborhoods
Opportunities

Goals
- To promote walkability
- To provide mixed-use activity centers accessible to serve surrounding areas

Preliminary Recommendations

1. WMATA Parking Areas
2. Metro West Neighborhood
3. The Grove Retail Area
4. Shady Grove Plaza
Land Use and Zoning: Metro West

Existing Zoning

Proposed Zoning

Preliminary Recommendations
Land Use and Zoning: Metro South

Existing Zoning

Proposed Zoning

Preliminary Recommendations
Section 8.1.1 of the Zoning Ordinance
The zones in Article 59-8 were applied by Local Map Amendment before this Zoning Ordinance was adopted. These zones may appear on the digital zoning map, but they cannot be requested by any property owner under a Local Map Amendment or confirmed or applied to any property owner under a Sectional Map Amendment adopted after October 30, 2014.

Existing Planned Development (PD) properties
- Townes at Shady Grove (PD-35)
- Derwood Station (PD-2)
- Park Overlook (PD-5)
Preliminary Recommendations

Municipal Annexations

City of Rockville Maximum Expansion Limits

City of Gaithersburg Maximum Expansion Limits

Bainbridge Shady Grove Metro

Carmax

Town of Washington Grove Maximum Expansion Limits
Urban Design: 2006 Sector Plan

2006 Urban Design Goals

- Organize future development into a series of attractive neighborhoods around the Metro Station
- Protect the Derwood residential communities
- Retain the area’s business parks but promote residential uses to achieve a mixed-use character on selective locations of employment, technology and housing.

2019 Amendment Goals

- Confirm 2006 Plan vision for overall area
- Provide additional guidance for targeted locations to address plan area boundary changes and clarify expectations per 2014 district zoning revisions.
**Preliminary Recommendations**

**Derwood Residential Communities**
- Preserve integrity
- Enhance streetscaping, sidewalks, bike routes, and traffic calming measures
- Provide direct access to Metro
- **Old Derwood**: Redevelop frontages along Redland Road, while retaining existing street pattern and historic resources.

**Employment / Commercial**
- Encourage infill development to provide housing near metro
- Consider reconfiguring existing uses to allow for a mix of uses to be implemented.

**Industrial / Institutional**
- Allow limited expansion of existing uses to meet county needs
- Implement measures to reduce noise, odors, and traffic
- Retain existing industrial parks.

**Existing/Potential Mixed-Use**
- Completed/Approved development per 2006 Plan guidance.
- **Recommendation** for above areas: Confirm 2006 Plan guidance

**Amendment Focus Areas**
- Metro Neighborhoods and other commercial properties
- **Recommendation**: Provide additional guidance
Opportunities

- To promote pedestrian friendly environments
- To provide mixed-use activity centers accessible to serve surrounding areas

Goals

- To promote pedestrian friendly environments
- To provide mixed-use activity centers accessible to serve surrounding areas

Preliminary Recommendations
Metro North (1) and Metro West (2) Districts

- Consolidate Parking Facilities to create development pads
deliver a vertical mix of uses
- Create public open space and new streets that connect with adjacent neighborhoods/districts
- Incorporate existing stream as an amenity for new development
- Enhance existing parking structures
Metro South District (1)
- Focus development intensity along Sommerville Drive to improve a connection to Metro, and Redland Road to connect neighborhoods across the tracks
- Explore creative infill development and public open space that builds on the light-industrial character of the district
- Promote adaptive reuse and expansion of existing uses
- Promote retention of existing retail

Preliminary Recommendations
Preliminary Recommendations

Commercial Properties

The Grove (1) and Shady Grove Plaza (2)
- Promote mixed-use development that delivers a mix of housing types, improved streetscape that connects to adjacent development, and accessible public open space.
Historic Resources

- Support the Historic Preservation Commission (HPC) recommendation that the Derwood Store and Post Office should be listed on the Master Plan for Historic Preservation.
  - Support a new zoning recommendation that would permit reuse of the existing structure and some additional residential development.
**Preliminary Recommendations**

**Parks and Open Spaces**

- Create new parks and open spaces in the Metro Neighborhoods for public use to promote a livable environment for existing and future residents, visitors and employees.

- Create new public parks at Piedmont Crossing, Derwood Station and Jeremiah Park properties.

- Link new parks and open spaces with existing and proposed bikeways and trails.

- Retain existing public parks as public open space.
Public Facilities

- Confirm the 2006 Sector Plan recommended public facilities.

- Shady Grove Station redevelopment public facilities.
  - Jeremiah park, school site and library
  - An alternative 1-acre neighborhood park on the former Parks Department site, if it is developed.

- Utilizing acquired land for parks.
  - Derwood Station Neighborhood Park
  - Piedmont Crossing Local Park
Public Schools

- Magruder, Gaithersburg and Richard Montgomery High School clusters provide public school services to the plan area.
- Most of the new residential development will occur in the Gaithersburg cluster.
- Preferred elementary school location remains at Jeremiah Park.
- A new elementary school will be built at Kelley Park in the City of Gaithersburg by 2022 that will serve the Gaithersburg cluster.
- If an elementary school site is not provided in the plan area, then utilize the elementary school site in King Farm to address school needs.
Key Recommendations

- Promote energy efficiency and encourage net zero energy building design.
- Improve the urban environment by incorporating best practices such as goals to reduce heat island effect and promote Environmental Site Design (ESD) in stormwater management practices.
- Retain existing wooded areas where designated, and provide increased tree canopy throughout the Plan area.
- Include sustainable design solutions to create an attractive public realm with integrated green features, and enhanced mobility and walkability.
Environmental Sustainability

**Forest Cover**
- Improve forest and tree cover to at least 50% of the plan area.
- Retain forest on the eastern side of the Grove Shopping Center.
- Require up to 25% tree canopy coverage on redeveloping properties in the mixed-use zones and dense residential and commercial areas.
- Encourage green features (softscaping) in required open space areas and the public realm.
- Prioritize environmental public benefit points for tree canopy cover and energy conservation.

**Water Quality**
- Minimize imperviousness/maximize pervious areas.
- Use native plants that require less watering and fertilization; use rainwater for watering; apply Sustainable Sites Initiatives (SITES) principles.
- Increase forest and tree cover.

**Air Quality and Carbon Emissions**
- Include building design features that keep roofs cool — either green roofs or cool roofs.
- Implement improvements and facilities to make walking and biking to the Metro Station a pleasant and inviting experience. Create human-scale block sizes, through-block connections, paths and sidewalks, bike networks and bike-share stations.
Preliminary Recommendations

Noise
This Plan recommends retaining office, light industrial and automotive uses along the CSX rail tracks, primarily south of Indianola Drive, is more compatible with noise sources.

- Additional noise mitigation may be appropriate for residential areas along Shady Grove Road and Mid-County Highway, if it is consistent with the County’s noise standards.

Climate Protection
- Make attainment of net zero carbon emissions an aspirational goal in all new development and redevelopment. Include as many of the following recommendations as practical in development plans:
  - Promote site and building design for energy conservation and higher levels of LEED certification or a comparable rating system.
  - In parking areas where trees cannot easily be planted and maintained (ex. rooftop garage parking), consider shading features that include solar panels.

Environmental Sustainability

Existing Watershed
Key Recommendations

- Establish new **Non-Automotive Driver Mode Share (NADMS)** goals that promote multimodal approaches to transportation.

- Support the **MD 355 Bus Rapid Transit (BRT)** route along Frederick Road (MD 355) and the **Corridor Cities Transitway (CCT)**.

- Support the 2006 **Shady Grove Sector Plan** recommendation for a **MARC Station** at the Metro Station.

- Provide new streets that permit alternative ways to navigate the Plan area.

- Utilize **Vision Zero** as a framework to address High Injury Network roadways in the Plan area.

- Amend the 2006 **Shady Grove Sector Plan** and the 2018 **Bicycle Master Plan** to support **safe, feasible bicycle facilities**.

- Remove the planned **interchange at MD 355 and Gude Drive** from the **Master Plan of Highways and Transitways**.
Mobility Priorities and Goals

Priorities:
- Re-envision plan area streets to prioritize, in the respective order:
  1. Safety
  2. Choice
  3. Person Throughput

Residents:
- Promote efficient mobility investment, focusing on the safety and health of the transportation network’s most vulnerable road users.

Commuters:
- Promote efficient mobility investment, focusing on person throughput rather than vehicle throughput.
Moving safely within one’s community is a right, regardless of mode choice:

- Traffic-related deaths are preventable.
- All users—drivers, bicyclists, and pedestrians—make imperfect choices.
- Focus on prevention of severe and fatal crashes, which includes assessment of user vulnerability.
  - Crash severity > Crash frequency
- Takes a systems approach to transportation.

1,347 crashes between January 2015 and May 2019:

- 30 severe crashes
- 3 fatal crashes
- 51 crashes involving nonmotorists; 6 severe or fatal nonmotorist crashes

Mobility: Vision Zero

Shady Grove Crashes

- Crash Involving Nonmotorist
- Severe Injury Crash
- Fatal Crash
- All Crashes
**Mobility: Vision Zero**

**Montgomery County’s High Injury Network**

**County Roadways**
- No. 1: Crabbs Branch Way, Redland Road to Indianola Drive
- No. 7: Shady Grove Road, Metro Access Road to Midcounty Highway

**State Roadway**
- No. 6: Frederick Road (MD 355), Gude Drive to Shady Grove Road
**Mobility: Vision Zero**

<table>
<thead>
<tr>
<th>Geometric Improvements</th>
<th>Operational Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Add Appropriate Pedestrian Buffers between Sidewalk and Roadway</td>
<td>• Add Leading Pedestrian Intervals (LPI)</td>
</tr>
<tr>
<td>• Remove Channelized Right Turns (where operationally feasible)</td>
<td>• Activate Pedestrian Recall within Metro Station Policy Area Streets</td>
</tr>
<tr>
<td>• Add Center ADA Compliant Medians at Targeted Locations</td>
<td>• Remove Permissive Lefts at Targeted Locations</td>
</tr>
<tr>
<td>• Reconstruct Curb Ramps to be ADA Compliant at Targeted Locations</td>
<td>• Add Right-Turn On Red Restrictions (RTOR)</td>
</tr>
<tr>
<td>• Tighten Curb Radii</td>
<td>• Increase All Red Time</td>
</tr>
<tr>
<td></td>
<td>• Reduce Speed on High-Injury Network Roads</td>
</tr>
<tr>
<td></td>
<td>• Implement Speed Cameras at Targeted Locations</td>
</tr>
</tbody>
</table>

*Images:*
- Excessive speeding on Redland Road down grade toward the Metrorail station entrance
- Multiple right-turn violations at Crabbs Branch Way & Redland Road
- Multiple crashes related to red light violations at Crabbs Branch Way & Indianola Drive
Mobility: Vision Zero – Crabbs Branch Way

- Explore opportunities for turn lane removal on Crabbs Branch Way between Redland Road and Indianola Drive:
  - Segment is on County’s high-injury network
  - Existing segment includes two travel lanes and center turn lane
  - Minimal turning needs due to limited access points
Mobility: Bicycle Network

- 2006 Shady Grove Sector Plan Recommendations amended by Bicycle Master Plan, approved December 2018 (shown right).

- Plan Amendment will supersede 2018 Bicycle Master Plan recommendations.

- Plan Amendment will balance visionary framework of the 2018 Bicycle Master Plan with context, feasibility, and constructability.
Mobility: Key Transit Recommendations

**Corridor Cities Transitway**

- Support the continued pursuit of locally serving rapid transit service, such as the CCT.
- Study the CCT’s alignment, alternatives, and potential ridership to maximize feasibility and future returns.

**MD 355 Bus Rapid Transit (BRT)**

- Prioritize planning, design, and construction investment of a MD 355 BRT dedicated lane alternative.
- Locate a BRT station at Shady Grove Metro Station, or the closest extent possible based on operational needs.
- Support an infill BRT station at Indianola Drive and MD 355 and consider station land needs as development occurs.

**Transitways Interface with Metro Station**

- Provide dedicated bus lanes through the station area vicinity to support the reliability of dedicated service
Mobility: Vehicular Transportation Analysis

**Study Contents**
- 19 study intersections
- Three (3) policy areas with different congestion standards:
  - Shady Grove Metro Station Area (red): 120 seconds/vehicle
  - Rockville City (orange): 63 seconds/vehicle
  - Derwood (orange): 59 seconds/vehicle

**Plan Amendment Modeling**
- Speed reduction on Shady Grove Road & Crabbs Branch Way
- Removal of center turn lane on Crabbs Branch Way
- Assumes achievement of Non-Auto Drive Mode Share Goals:
  - 50 percent target for Metro Station Policy Area home-based work trips
  - 35 percent target for Plan Area (excludes Metro Station Policy Area)
  - 25 percent target for all employees working within the plan area
- Mitigation at three (3) targeted intersections:
  - MD 355 and Shady Grove Road – phasing changes
  - MD 355 and King Farm Boulevard – EB left-turn pocket
  - MD 355 and Gude Drive – 80 second delay threshold w free rights; widening
Preliminary Recommendations

Mobility: MD 355 and Gude Drive

At Grade Alternatives:
- Adjusting the Highway Capacity Manual (HCM) standard to either 80 seconds/vehicle or 100 seconds/vehicle
- Northwest Jug Handle

Above Grade Alternatives:
- East-West Overpass
- North-South Left Flyovers
- Single Point Urban Interchange
Mobility: MD 355 and Gude Drive

At Grade Alternative

- Adjusting the Highway Capacity Manual (HCM) standard to either 80 seconds/vehicle or 100 seconds/vehicle

Advantages

- Minimizes cost: +/- $5M, allowing funds to be used for other mobility needs
- Creates consistent delay “measurement of effectiveness” application for BRT corridors

Disadvantage

- Additional MD 355 lanes require more crossing distance for pedestrians
- “Free rights” allow turning at high speeds, reducing safety for pedestrians
Mobility: MD 355 and Gude Drive

At Grade Alternative
- Northwest ‘Jug’ handle

Advantages
- Left turn phases removed from the intersection of MD 355 and Gude Drive
- Minimizes distance for pedestrian crossings
- Creates opportunity for new signalized pedestrian crossing at W. Gude Drive

Disadvantages
- Potentially infeasible - significant impacts to an existing forest conservation area and recently approved development.
- Creates indirect travel route
Preliminary Recommendations

Above Grade Alternative
- Gude Drive Overpass – At Grade Single Point Urban Interchange

Advantages
- Compressed tighter footprint than other
- Free flow movement of east-west traffic

Neutral
- Carl Henn Millennium Trail remains at grade (no significant ramping), but pedestrians and cyclists cross “free-rights”

Disadvantages
- BRT remains signalized; however, could be improved with Transit Signal Priority
- Additional MD 355 lanes require more crossing distance for pedestrians
- Cost +/- $25M

Mobility: MD 355 and Gude Drive
Above Grade Alternative
▪ Left Turn Flyover

Advantages
▪ Northbound and southbound left turn movements are uncontrolled, reducing the number of signal phases from 4 to 3

Disadvantages
▪ Column placement prohibits dedicated median running BRT
▪ Creates unusable lot in southeast corner
▪ Estimated cost +/- $25M
Mobility: MD 355 and Gude Drive

Above Grade Alternative
▪ Above Grade Single Point Urban Interchange

Advantages
▪ North and south bound left turn movements would be uncontrolled, reducing the number of signal phases from 4 to 3.

Disadvantages
▪ Property and utility impacts
▪ Corridor travel time improvements minimal
▪ Carl Henn Millennium Trail ramps up and crosses four conflict points, including two yield movements
▪ Estimated Costs: $50-75M+
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 Government\(^1\)

- Assuming the interchange at MD 355 and Gude costs roughly $75 million, what alternative items could be funded?

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

Sources:

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

\(^3\)Montgomery County Department of Transportation, 2019, Draft Corridor Summary Report, Executive Summary
Staging

Background

- Staging typically links the provision of new development to public infrastructure, including roadways, transit, schools and parks within the life of the Master/Sector Plan.
- Staging is in addition to the Subdivision Staging Policy (SSP) requirements since it deals with issues that are applicable to the specific plan area.
- Typically, the funding of new infrastructure in a staging plan is a public obligation.
- Some plans, such as White Flint (2010) and Great Seneca (2010), focus only on mobility requirements since these are necessary to create the place as recommended in the plan.
Staging

Preliminary Recommendation
- No staging.
- Public facilities are being implemented.
- Higher NADMS goals for the Metro Neighborhoods.
- MD 355-Gude Drive is addressed via adjusting the HCM standard, up to 80-100 seconds/vehicle, along with physical changes.

<table>
<thead>
<tr>
<th>Before Stage 1</th>
<th>Before Stage 2</th>
<th>Before Stage 3</th>
<th>Build-out</th>
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<tbody>
<tr>
<td>2,640 dus 40%</td>
<td>3,640 dus 55%</td>
<td>6,340 dus 70%</td>
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<tr>
<td>1,570 jobs 22%</td>
<td>2,650 jobs 40%</td>
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<tr>
<td></td>
<td></td>
<td>7,000 jobs</td>
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</table>

- Adopt zoning and sectional map amendments
- Establish TMD
- Evaluate TMAps and intersections for conformance to standards
- Fund Metro Access Partial Interchange
- Fund MD 355/Gude Drive interchange or other improvements to achieve acceptable service level
- Planning Board finding to proceed to Stage 2
- Fund library
- Construct elementary school unless MCP has alternative means to serve children
- Fund construction of second local park
- Review all public facilities and determine whether any changes to the Plan are required
- Fund Redland Road and Crabbs Branch Way roadway improvements
- Fund pedestrian underpass
- Fund area-wide pedestrian and bikeways
- Planning Board finding to proceed to Stage 3

2006 Sector Plan staging with CSP relocation

- Approved/Implemented
- Partially Implemented
- Not Implemented
Recommended Public Benefits

The optional method in the Employment Office (EOF), Commercial Residential Town (CRT), and Commercial Residential (CR) Zones require public benefits from a minimum of two to four categories. This Sector Plan encourages redeveloping properties in the Metro Neighborhoods and other key locations to utilize the optional method and to provide the following public benefits, which are priorities for this Plan area:

- Fifteen (15) percent Moderately Priced Dwelling Units (MPDUs) as the highest priority public benefit.
  - 25 percent on the WMATA-Metro property.

- The provision of major public facilities, including but not limited to the implementation of significant multimodal transportation improvements, including segments of transitways, a recreation center, new neighborhood parks and open spaces, and undergrounding of utilities.

- Connectivity and mobility, including but not limited to, neighborhood services, streetscape improvement, public parking, minimum parking and trip mitigation through the provision of multimodal improvements, including transitways and Vision Zero improvements.

- Quality building and site design, including but not limited to, exceptional design, public open space, and public art.

- Diversity of uses and activities, including but not limited to, moderately priced dwelling units, dwelling unit mix, care centers, small business opportunities, and enhanced accessibility for seniors or the disabled.

- Protection and enhancement of the natural environment, including but not limited to, tree canopy, vegetated roof, habitat preservation and restoration, and energy conservation and generation.
Social Equity

**Housing**
- Affordable: 15% MPDUs

**Healthy community**
- Vision Zero
- Bikeways and trails
- Environmental sustainability

**Economy**
- Retention of small businesses and entrepreneurs along Crabbs Branch Way and Oakmont Avenue Industrial Corridor.
- Promoting mixed-use development in proximity to the existing Metro Station.
Next Steps

Planning Board Review
- December 5: Preliminary Plan Recommendations
- Working Draft: TBD

Public Hearing
- January 2020

Worksessions
- Winter 2020