

STAFF RECOMMENDATIONS FOR AREA-WIDE SYSTEMS

Improving accessibility, protecting the environment and adequately providing schools and parks are the major goals of the area-wide system recommendations.

In testimony and work with other agencies and property owners, some recommendations stand out as needing special attention. Those recommendations include the following items.

Transportation Issues

The primary transportation concerns raised by testimony are:

- Limit Metro parking at Metro station to no more than 6,000 spaces.
- Eliminate the pedestrian route through Park Overlook community.
- Extend Amity Drive to connect to Crabbs Branch Way.
- Support TDM vs. intersection widening to address road capacity.

Parks

The primary parks and recreation concerns are:

- Retaining Blueberry Hill as a park.
- Proposed local park at Jeremiah Park.

Schools

The primary school concern is:

- Stormwater management located off site on Casey at Mill Creek.
- Need for an alternative site if Casey at Mill Creek is not feasible.

Environment

- Concern about forest reserve on the Casey 3 property (intersection of MD 355 and Shady Grove Road).

The following list summarizes the staff recommendations for the area-wide systems.

Item #1 - Transportation System Recommendations

Transit

- Establish a goal of 35 percent transit.
- Limit long-term parking spaces at the Metro station to the current 6,000.
- Locate the proposed LRT yard and shop outside the planning area.
- Retain a 50' easement for future transit services.
- Ensure that the Metro and CCT station design offers cross-platform connections and pedestrian access.
- Support transit service along MD 355.

Pedestrian and Bicycle

- Delete the proposed (B-8) bikeway connection through the Park Overlook community and areas north to the Metro station via a pedestrian path that does not pass through the community.

Roadways

- Establish TDM as the priority in achieving acceptable intersection levels of service.
- Retain the existing and proposed right-of-way for the ICC.
- Provide an interchange at MD 355 and Gude Drive.
- Retain the proposed right-of-way for Shady Grove Road (150 to 120 feet of right-of-way).
- Extend Amity Drive to Crabbs Branch Way.
- Classify Redland Road as a primary residential street from Crabbs Branch Way, north to the planning area's boundary.
- Establish a network throughout the Metro Neighborhoods of business district streets.
- Retain public street connector between Paramount Drive and Indianola Drive.

Operational Recommendations

- Support operational improvements recognizing that the Executive has final approval.

Additional Transportation Items

- Support elimination of the Metrorail turnback at Grosvenor Station.
- Support a new Metrorail station near Montgomery College.

Item #2 – Recommendations for Area-wide Park Facilities

Existing Parks

- Preserve Blueberry Hill Park as a park; remove possibility for its use as a school site.
- Retain Redland Road Park and its active recreational uses.

New Parks

- Create a passive nature park at the existing stormwater management pond.
- Establish Jeremiah Park.
- Create a neighborhood park in the Amity Drive community.
- Establish a network of urban parks, anchored by a Town Common and Town Square, throughout the Metro Neighborhoods.

Trails

- Provide a greenway connection through Mill Creek Stream Valley Park.
- Explore opportunities for a trail connection from Crabbs Branch Stream Valley Park to Rock Creek Park.
- Extend a bike route along Crabbs Branch Way to connect with Washington Grove.
- Provide bikeway access via the Rockville Bicycle Beltway connection that will eventually connect to Rock Creek Regional Park.

- Retrofit existing residential neighborhoods with pedestrian trail connections to link communities with each other and with community destinations.
- Design new residential communities with path and trail connections to park and transit facilities.
- Provide internal trails in all local parks to improve access to all users.

Item # 3 – School Recommendations

- Provide an elementary school site within the planning area on the Casey at Mill Creek site.
- Provide needed middle and high school capacity outside the planning area's boundaries.

Item #4 – Environmental Recommendations

Forest Conservation

- Designate forest reserve areas and find new opportunities for tree planting in the I-370 right-of-way.
- Designate a forest reserve area along MD 355 on the Casey 3 property.

Water Quality and Stormwater Management

- Reforest and protect the Rock Creek stream buffer, and recreate the stream that formerly ran along the west side of the Metro access road.
- Increase landscaping wherever feasible, and encourage low-impact development techniques.
- Ensure that the stormwater management pond continues its environmental function, as it is redesigned as a passive recreation area.

Wetlands

- Inventory wetlands locations and quality.
- Use the Environmental Guidelines and landscaping to limit development encroachment and redevelopment impacts.
- Mitigate any unavoidable development impacts.

Noise

- Support noise compatible site design, noise barrier walls and berms to mitigate noise.
- Ensure compliance with the County's Noise Control Ordinance.
- Investigate eliminating the CSX train whistle as it passes through the planning area.

Air Quality

- Support transit-oriented land uses that should reduce housing development elsewhere.
- Work with Solid Waste Transfer Station to control odors.

ITEM #1: AREA-WIDE TRANSPORTATION SYSTEMS

Plan Vision and Challenges

The Plan views transportation facilities as an integral part of the community, serving mobility and building community. Its recommendations seek to balance transit, pedestrian, bike, and road needs, with attention to streetscape and pedestrian environment.

The transportation items are described below generally according to modal function.

TDM Mode Share Goals

Staff Recommendation

Establish a goal of 35 percent transit mode share for residential development within the Shady Grove Policy Area. Elsewhere in the Sector Plan area, the mode share goals for both commercial and residential development should be established as part of the Shady Grove Transportation Management District (TMD). The Shady Grove TMD should be established to encompass the Sector Plan area.

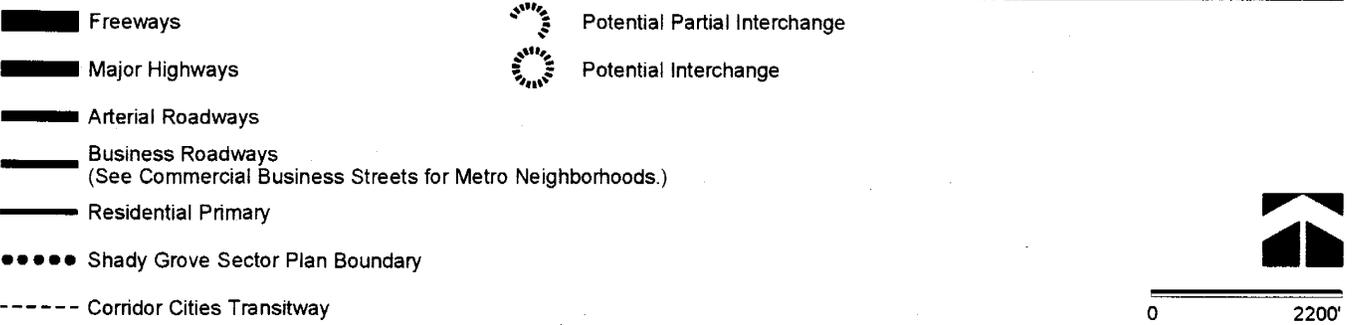
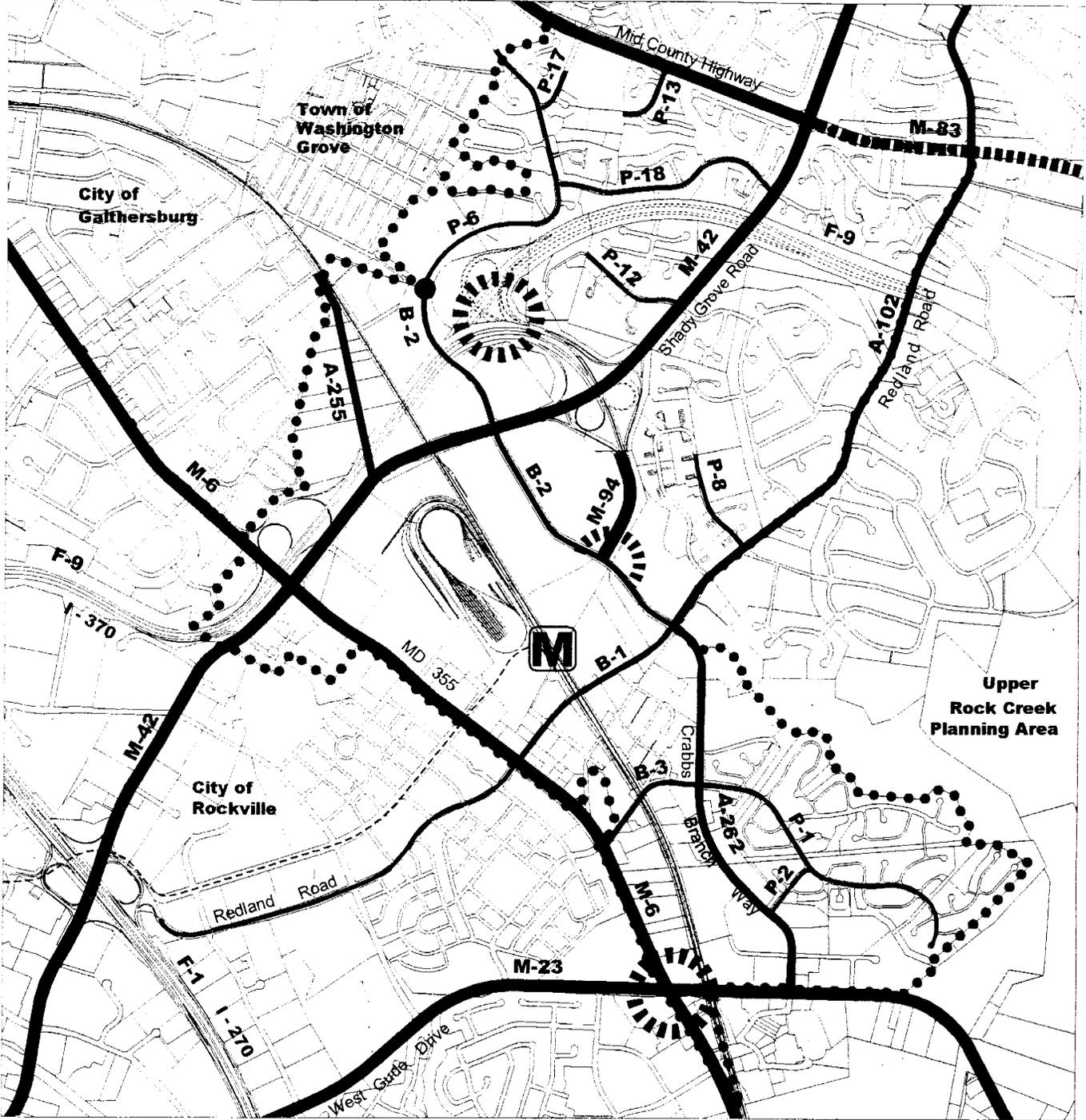
Analysis

The Public Hearing Draft contains several references to a 35% transit mode share goal. The Executive has expressed concerns that the mode share goal is too aggressive and not achievable. Staff based the transportation analysis on an assumption that the 35% transit mode share goal could be achieved for new residential development within the Metro Neighborhoods, an area generally described by the Shady Grove Policy Area. Staff finds that this mode share goal is appropriate for residential development in the Metro Neighborhoods but concurs that it is too high for commercial development within the plan area, based on comparisons to other TMD goals in the County and analyses related to the proposed Shady Grove Transportation Management District. Staff proposes to remove the page 56 reference to the 35% transit mode share goal being applied to employees in the Sector Plan area.

Currently, Montgomery County has four Transportation Management Districts, in the Silver Spring CBD, the Bethesda CBD, the Friendship Heights CBD, and the North Bethesda CBD. The three TMDs covering CBDs have boundaries that are essentially the same as the policy area for the CBDs they cover. The North Bethesda TMD encompasses the Metrorail station policy areas of Twinbrook, White Flint, and Grosvenor, as well as the Rock Spring Park office park. The North Bethesda TMD boundaries therefore do not match any plan area or policy area boundaries.

A fifth TMD has been proposed for Shady Grove since the late 1980s. The Shady Grove TMD concept was developed as part of the 1990 Shady Grove Study Area Master Plan efforts. As envisioned at that time, the TMD was focused on development in the Life Sciences area west of I-270. Portions of the Shady Grove Study Area have subsequently been incorporated into the cities of Rockville and Gaithersburg. Both Montgomery County and the independent municipalities have expressed interest in establishing the Shady Grove TMD but the necessary financial and institutional commitments have not yet been made. Staff believes the Shady Grove Sector Plan

Proposed Roadway Network



provides an opportunity to jump-start the Shady Grove TMD and has therefore recommended that no new development in the Sector Plan area begin until the TMD is established.

Most site planning for large developments in the Shady Grove Study Area Master Plan area have reflected the following transit mode goals proposed for the Shady Grove TMD:

- Transit mode share of 25% for commute trips from residential development
- Transit mode share of 12% for commute trips by employees in the TMD area

These mode share goals are consistent with goals in other TMDs and master plans throughout the County, considering the relationship between regional geography and transit services. Several economic factors, including relative suburban housing prices and core area land values that influence parking fees, reinforce the prevailing regional “peak direction” of commuter flow toward the critical mass of employment in the regional core. This prevailing flow is also dendritic, or branching, in nature, facilitating efficient transit service networks with feeder bus routes and park-and-ride lots in the more distant suburbs feeding trunk lines such as Metrorail and MARC that carry higher volumes as they approach the core. Transit incentives throughout the Washington region generally reflect two characteristics related to the prevailing commuter flow in the suburban corridors such as the I-270 corridor:

- Transit mode share for suburban households is higher than transit use for suburban jobs. Due to the dendritic nature of the prevailing commuter flow, suburban households have a larger geographic catchment area than do suburban jobs.
- Transit mode share for both households and jobs decreases as the distance from the core increases. From the 2003 Census update survey, the percentage of employed residents working in Washington, DC can be viewed as a leading indicator of likely transit usage, due to the prevailing commuter flows. In North Bethesda, 29% of employed residents work in Washington and 18% take transit to work (regardless of their job location). In Germantown, 11% of employed residents work in Washington and 9% take transit to work (regardless of their job location).

Four approved and adopted Sector Plans include specific mode share goals. These four plans correspond to the four areas of the County with existing or proposed Transportation Management Districts. Table 1 provides a comparison of the mode share goals in those four plans.

Table 1: Comparison of Master Plan Mode Share Goals

Master Plan	Commuter Trip Mode Share Goals for		Measured as
	Residents	Employees	
Bethesda CBD (1994)	N/A	37%	Non-auto driver
Friendship Heights (1998)	N/A	39%	Non-auto driver
North Bethesda/Garrett Park (1997)	20%	18%	Non-auto driver
Silver Spring CBD (2000)	N/A	50%	Non-auto driver

The 1990 Shady Grove Study Area Master Plan did not explicitly establish mode share goals as part of the plan recommendations, but did presume TDM actions would allow the maintenance of a 25% transit mode share for commute trips by Plan area residents and a 12% transit mode share for commute trips by Plan area employees. These mode share goals have subsequently been applied in the review of significant development projects in the Shady Grove Study Area plan area.

The difference between transit mode share goals and non-auto-driver mode share goals are that "non-auto driver" includes auto passengers, walkers and bicyclists in addition to transit users. In general, non-auto-driver mode shares are about 10 percentage points higher than transit mode shares. For Montgomery County as a whole in the 2003 Census update survey the transit mode share for residents was 15% and the non-auto-driver mode share was approximately 25% (assuming that the 6% who carpool average one driver and two passengers per car).

In summary, staff recommends clarifying the discussion of transit mode share goals to specify the following:

- The Shady Grove Transportation Management District should be established to encompass the entire Shady Grove Sector Plan area.
- The Shady Grove Transportation Management District should require new residential development within the Shady Grove Policy Area to achieve a 35% transit mode share goal.
- The mode share goals established for both households and jobs in the Shady Grove Transportation Management District should be applied to the remainder of the Sector Plan area.

Limitation on Long-term Metrorail Park-and-Ride Spaces

Staff Recommendation

Limit long-term parking spaces at the Metro station to the current 6,000. Retain the Public Hearing Draft recommendation.

Analysis

The Public Hearing Draft Plan recommends limiting the number of long-term park-and-ride spaces at the Metrorail station to 6,000 to reduce local network traffic volumes and to provide an appropriate balance between the amount of developable area dedicated to parking as opposed to more active transit-oriented land uses.

The provision of long-term parking spaces at Metrorail stations is a double-edged sword. In general, Metrorail parking garages provide a transportation benefit from a regional perspective but have a transportation impact on the immediately adjacent communities.

From a regional perspective, park-and-ride systems provide an opportunity to "intercept" an auto trip and shift the longer portion of the trip to transit. As described in the discussion on transit mode share goals, park-and-ride lots are an integral component of

the prevailing dendritic commuter flow, particularly for trips from households in lower density communities not efficiently served by transit. When park-and-ride lots are at capacity, the ability to intercept the auto trip is lost and the odds are that the entire trip will be made by auto rather than being shifted to transit. Therefore, park-and-ride lots generally improve overall network efficiency by reducing traffic volumes between the lot location and the regional core. From a local perspective, however, the park-and-ride lots create additional traffic on local streets as the intercepted traffic diverts slightly from many various "shortest auto path" routes to collect at the park-and-ride lot location.

The presence of I-370 and the Metro Access Road certainly minimizes the adverse effect of park-and-ride activity on local traffic by providing a relatively direct and uncongested connection between the Shady Grove park-and-ride garages and I-270. The ability of most park-and-ride traffic to avoid local streets and highways, however, is offset by the relatively high number of parking spaces already existing at the station.

Currently, the Shady Grove Metrorail Station has more long-term parking spaces than any other station in the system. WMATA has a total of approximately 47,000 long-term parking spaces, of which approximately 26,600 are at the suburban end-of-line stations shown in Table 2.

Table 2: Long-term Parking Spaces at Suburban End-of-line Metrorail Stations

Station	Number of long-term parking spaces
Shady Grove	5,467
Franconia-Springfield	5,100
Vienna/Fairfax-GMU	3,463
Greenbelt	3,364
Huntington	3,090
Branch Avenue	3,070
Glenmont	1,781
Addison Road-Seat Pleasant	1,268

Most of the other end-of-line stations with 3,000 or more parking spaces have high-end connections to the Interstate system similar to Shady Grove. Direct access ramps are provided at Vienna/Fairfax-GMU to I-66 and at Greenbelt to I-95/I-495. At Franconia-Springfield, access is provided to the I-95 HOV lanes via the Franconia-Springfield Parkway. In summary, staff finds that park-and-ride lots are certainly valuable tools to address regional congestion, but that this tool has already been sufficiently applied at Shady Grove.

The Sector Plan also recommends against additional park-and-ride spaces in the Metro Neighborhoods because space devoted to parking is space not available for developing a residential community, the Plan's primary objective. Developing a residential community at Shady Grove also helps regional traffic congestion by locating new transit riders at the station, thereby eliminating the need for those riders to make the auto portion of a trip to the park-and-ride lot. In 2003, Montgomery County had an average of 1.6 employed residents per townhouse, 1.3 employed residents per garden apartment, and 0.8 employed residents per high-rise apartment. The Public Hearing Draft Plan

recommends approximately 4,000 new dwelling units, with a mix of unit types. Assuming an average of 1.3 employed residents per dwelling unit and the planned 35% transit mode share, the 4,000 dwelling units would generate 1,820 transit commuters. Assuming an average of 1.1 transit commuters per park-and-ride auto, the 4,000 new dwelling units would contribute as many transit riders as 1,650 new park-and-ride spaces.

During the past few months many have asked, “why can’t we have both more parking and residential development?” This solution would seem to be the best if the Plan’s sole objective was to generate transit riders. The concerns described in prior worksessions relate primarily to bulk (as described by building heights and floor area ratios), local peak period traffic volumes, and a sense of place. Creative proposals have been discussed to address these concerns such as providing additional long-term Metrorail parking in slightly more remote locations, such as underground or above the WMATA Metrorail maintenance yard.

Staff considered an amendment to the Public Hearing Draft Plan to state “Limit the number of long-term park-and-ride spaces at the Metrorail station to 6,000 unless additional parking can be provided without increasing the above-ground dimensions of parking garages in the Metro Neighborhoods and without increasing parking-related peak hour traffic volumes.” Such an amendment, if enforced during subsequent planning and design activities, could quantitatively address the concerns related to bulk and peak period traffic. Staff does not propose this amendment, however, because it does not address the sense of place developed during the past three years with affected area stakeholders through the inclusive planning process.

Corridor Cities Transitway (CCT) Yard and Shop

Staff Recommendation

Locate the proposed Light Rail Transit (LRT) yard and shop outside the planning area. Retain Public Hearing Draft recommendation.

Analysis

The Public Hearing Draft Plan recommends that the County “support locating the CCT maintenance yard and shop outside the Shady Grove planning area at a location to be determined.” The Executive staff would prefer that the Sector Plan identify a yard and shop site, even if not a preferred use, pending completion of the Maryland Department of Transportation (MDOT) I-270/US 15 Multimodal Study, which includes the CCT.

MDOT is in the process of selecting preferred highway and transit components for the I-270/US 15 Multimodal Study. The 2002 Draft Environmental Impact Statement (DEIS) for the MDOT study identified several potential sites for a yard and shop site including sites in Clarksburg, Metropolitan Grove, and Shady Grove. Investigations into CCT phasing suggest that the Clarksburg sites are not pragmatic locations for a light-rail facility that would logically be implemented in segments extending northward from Shady Grove. The Metropolitan Grove and Shady Grove sites all face either environmental concerns or the reduction of development potential in the immediate vicinity of a multimodal transit station. The study team has identified an additional yard

and shop site at the Montgomery County Police Department Vehicle Recovery Facility, a site that resolves the concerns with the Metropolitan Grove and Shady Grove sites but is currently undergoing a \$3.4M improvement (County PDF No. 470102).

At Shady Grove, the DEIS identifies five potential yard and shop sites and indicates that three of the sites should be considered further. Two of these three sites are located in the Metro Neighborhoods and would therefore explicitly interfere with the establishment of the residential communities envisioned in the Sector Plan. The third site is the Nissan property west of the CSX tracks and south of Indianola Drive. At this site the yard and shop itself would lie just south of the Metro Neighborhoods but the development potential within the Metro Neighborhoods would be affected by the extension of the 50' right-of-way south along the CSX tracks between the Metrorail station and Indianola Drive.

Should the MDOT selection of a yard and shop location eventually be limited to sites that would limit transit-oriented development in either Metropolitan Grove or Shady Grove, staff would propose that Metropolitan Grove would be the logical yard and shop location based on two planning tenets; one to concentrate development at higher densities closer to the regional core, and the second to concentrate development at higher densities where the higher level of transit service exists (in this case, Metrorail at Shady Grove being a higher level of service than MARC at Metropolitan Grove). Ultimately, considerations beyond planning tenets will be incorporated in the decision.

Staff notes that the Plan recommendation does not preclude the location of the yard and shop within the planning area. Should the yard and shop ultimately be located in the Sector Plan area, a Plan amendment would not be needed. Rather, the recommendation describes a preference that staff suggests should be confirmed as County policy.

CSX Transit Easement

Staff Recommendation

Retain a 50' easement for future transit services. Staff recommends that the Planning Board continue to pursue protection and acquisition of the long-standing transit easement on the west side of the CSX tracks to maximize future transit planning flexibility.

Analysis

The Public Hearing Draft Plan recommends retaining the 50-foot transit easement on the west side of the CSX right-of-way north of the Metrorail station. This easement is designed to improve transit services in the CSX corridor, potentially beyond the timeframe of the Sector Plan.

The Executive staff recommends removing the transit easement from the Plan because the County's emphasis on fixed-guideway transit connecting the I-270 corridor cities now follows the established Corridor Cities Transitway (CCT) alignment being studied by MDOT through King Farm, Crown Farm, Quince Orchard Park, and NIST. Retaining the CSX alignment easement is likely to have some associated public cost. Examples in

the Gaithersburg Vicinity plan area include potential acquisition of the Young and Hershey properties along Oakmont Avenue and the consideration of replacement structures for the Deer Park bridge, currently the subject of facility planning by the Department of Public Works and Transportation (DPWT).

The concept for a transitway in the I-270 corridor described as the Corridor Cities Transitway dates to the 1964 General Plan for Montgomery County. The initial concept followed the CSX alignment between Shady Grove and Metropolitan Grove. Both the Germantown and Gaithersburg Vicinity Master Plans from the early 1970s reflect the CSX alignment. During the 1980s, the current CCT alignment was developed and included in master plan amendments, the CSX transit easement was retained for future flexibility in transit planning efforts. While neither a Metrorail extension nor a new fixed-guideway transit service in this corridor is currently viewed as practical during the next two decades, additional land could be used for other transit-related purposes, such as to help CSX better integrate and support MARC service in the corridor.

The Executive position could be considered consistent with the Planning Board's Transportation Policy Report (TPR) of January 2002. In the TPR, the Corridor Cities Transitway (CCT) is included in the Planning Board's recommended transportation network. The extension of Metrorail or a new transit service along the CSX alignment is not included in the network. However, the MARC service along the CSX corridor remains an integral part of the TPR network.

The City of Gaithersburg Master Plan recognizes the need to swiftly implement the CCT while continuing to pursue long-range strategies for increasing transit service in the CSX corridor. Page 22 of the City's 1997 Transportation Plan states that "The City's longtime practice of requiring property owners along the southerly side of the CSX right of way to dedicate easements for expanded transit in the future should continue."

Metrorail Station Design Details

Staff Recommendation

Ensure that the Metro and CCT station design offers cross-platform connections and pedestrian access. Coordinate with the ongoing MDOT study for design details. Retain Public Hearing Draft Plan recommendation.

Analysis

The Public Hearing Draft Plan describes the desired seamless passenger connection between Metrorail service and the southern terminus of the future Corridor Cities Transitway (CCT). Potential connections have been conceptually designed as shown in the October 2002 DEIS for the MDOT I-270/US 15 Multimodal Study. The Sector Plan retains the basic concepts described in the MDOT DEIS.

Testimony suggests that additional details regarding station design should be included in the Sector Plan and that the potential to co-locate a future Maryland Rail Commuter (MARC) station should be incorporated.

Staff concurs that the MDOT study should be referenced in the Sector Plan as the concepts for the Metro Neighborhoods build upon the station design concepts in the 2002 DEIS. Staff does not recommend including additional design details as recommendations in the Sector Plan, however. The level of detail included in the Shady Grove Sector Plan is similar to the level of detail described in the Silver Spring CBD Sector Plan regarding the Silver Spring Transit Center, where plans for joint development around an existing Metrorail station also include incorporating a new fixed-guideway transit service (the Bicoounty Transitway).

Staff recommends that the Sector Plan neither encourage nor discourage the co-location of MARC service at the Shady Grove Metrorail Station. In theory, the creation of a multimodal transit center should be inclusive of all modes. However, several considerations reduce the value of a future MARC station at Shady Grove. These considerations include spatial constraints in facility design and the almost certain removal of the Washington Grove MARC station. MARC currently is integrated with Metrorail at the Rockville Town Center and will be integrated with the CCT at Metropolitan Grove. A MARC stop at Shady Grove would be more valuable if the planned redevelopment were more commercially oriented (thereby attracting longer distance transit trips from the north) than residentially oriented. Staff therefore does not believe MARC relocation to Shady Grove to be an essential part of the transportation plan.

Our experience with the Silver Spring Transit Center is that the more detailed analysis and coordination that occurs at the project level is necessary to develop site-level recommendations. The Planning Board and County Council will develop CCT terminus recommendations as part of subsequent reviews of joint development projects at the Shady Grove Metrorail Station.

Potential Transit Services Along MD 355

Staff Recommendation

Support transit service along MD 355. Expand and clarify the Public Hearing Draft Plan to recommend further joint study of transit service along MD 355 throughout the I-270 corridor by WMATA, MTA, DPWT, and the Cities of Rockville and Gaithersburg.

Analysis

The last bus service recommendation on Page 56 of the Public Hearing Draft recommends exploring the feasibility of MD 355 transit improvements to connect activity centers with development and to better serve transit needs. This recommendation reflects a common theme in the I-270 Framework Plan to elevate the visibility of MD 355 as Montgomery County's "main street" well beyond the limits of any one municipality or master plan area.

WMATA and Ride-On bus systems in the County are designed to achieve a number of functions with limited funds. The various and often competing functions include increasing both geographic coverage and service frequency, serving a variety of trip purposes, and improving both access and mobility. In general, the Metrorail and MARC rail services provide the backbone of the County's transit services. The bus transit

system is therefore organized primarily around feeder bus routes to the rail stations, per the dendritic network model described in prior paragraphs. For instance, six bus routes travel along MD 355 in the Shady Grove Sector Plan area, including the Metrobus Q2 and Ride-On routes 46, 55, 59, 61, and 67. Of these six routes, only the Ride-On route 55 travels along MD 355 both north and south of Shady Grove; it runs between Germantown and the Rockville Metrorail Station. Four of the other five routes on MD 355 terminate at the Shady Grove Metrorail Station and the fifth leaves MD 355 to travel along Crabbs Branch Way and East Gude Drive on its way to the Rockville Metrorail Station.

Concerns have been expressed during the many public forums for the Shady Grove Sector Plan and I-270 Framework Plan that transit service identity, frequency, and comfort should be improved along MD 355. These improvements might consist of route changes, selected geometric elements such as queue jumpers at signalized intersections, or improved amenities such as bus shelters. These details are generally “below the radar” of master plan recommendations and require further study to determine their feasibility. Staff therefore recommends further study and proposes to clarify and expand the recommendation as indicated above.

Park Overlook and Redland Road Shared-use Path Connection (B-8)

Staff Recommendation

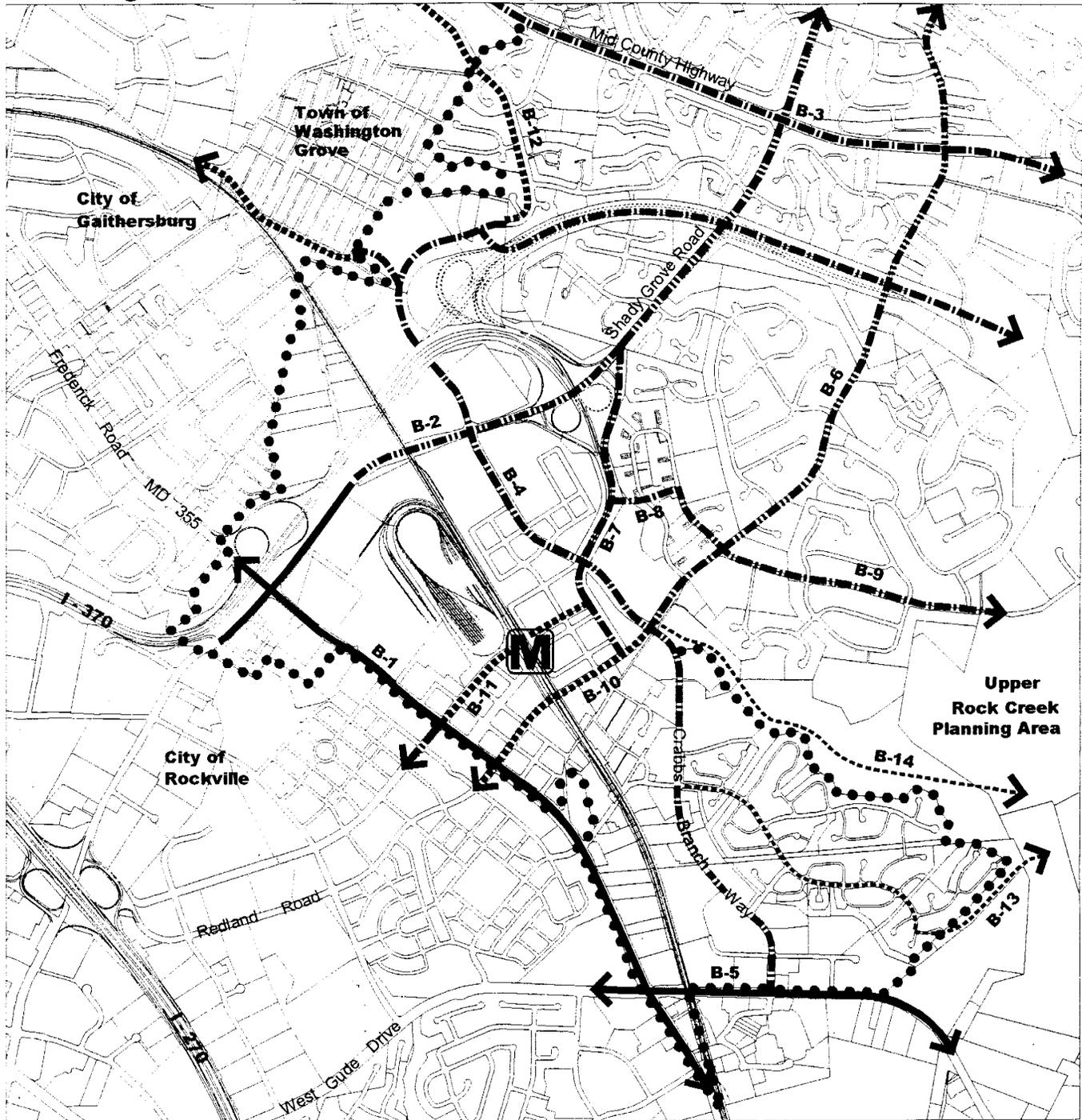
Revise the Public Hearing Draft Plan to remove the Park Overlook shared use path (B-8).

Analysis

The Public Hearing Draft Plan recommends a shared use (Class I) path connecting the Park Overlook community to the Metrorail station, requiring easements from the Park Overlook homeowners association. The purpose for this path is to provide access between the Metrorail station to Blueberry Hill Park and points east along Needwood Road in Upper Rock Creek, including Rock Creek Regional Park. The Upper Rock Creek Plan recommends a shared use (Class I) path along Needwood Road east of Redland Road. The Park Overlook community is opposed to the path through their community.

The proposal for an off-road bike connection through the Park Overlook community was based in part on evolving designs for Redland Road widening between Crabbs Branch Way and Needwood Road (CIP Project No. 500010). The constraints caused by the dam structure carrying Redland Road across Crabbs Branch Way resulted in several concepts for bicycle and pedestrian accommodation. The final design for the Redland Road project includes an eight-foot wide asphalt path on the north side of the road. The Planning Board reviewed the mandatory referral for the Redland Road project at the December 11, 2003 worksession. The inclusion of the shared use path in the Redland Road design eliminates the need for the Park Overlook shared use path connection.

Existing and Proposed Bikeways



- Existing Shared-Use Paths (Class I)
- Proposed Shared-Use Paths (Class I)
- Proposed Bike Lanes (Class II)
- Proposed Shared-Use Roadways (Class III)
- Potential Bikeways (to be determined)
- Shady Grove Sector Plan Boundary

Note: shared-use paths, Class I, are also shown on Pedestrian Network.



General Roadway Network Capacity

Staff Recommendation

Establish TDM as a priority in achieving acceptable intersection levels of service. Add language to the Public Hearing Draft Plan to clarify priorities for travel demand management versus intersection widening.

Analysis

A substantial amount of public testimony expressed concerns that the Shady Grove Sector Plan does not provide sufficient roadway capacity to accommodate the proposed land use vision. The Public Hearing Draft Plan recommends several substantial capital improvement projects to increase roadway capacity, including:

- Implementation of the Intercounty Connector
- Implementation of Midcounty Highway Extended, including study of a grade separated interchange at Shady Grove Road as part of facility planning
- Grade separated interchange at Frederick Avenue (MD 355) and Gude Drive
- Grade separated interchange at Crabbs Branch Way and Metro Access Road
- Widening of Shady Grove Road
- Widening of Redland Road west of Needwood Road.

As described in the memoranda for each of the first three worksessions on the Sector Plan, staff finds that the forecast area-wide levels of traffic congestion (as measured by the Policy Area Review metric of Average Congestion Index) will increase to levels above the current Derwood Policy Area congestion standard, regardless of the land use and zoning actions made in the Sector Plan area. Staff therefore has focused on analysis of congested intersections to assess the adequacy of the transportation network, a practice common to Sector Plan areas.

As presented in prior worksessions, the determination of intersection congestion adequacy depends heavily on the assumptions made regarding turning lanes at intersections. In the packet for Worksession #2, staff presented analyses that indicated all intersections in the Shady Grove Policy Area could operate within the policy area congestion standard of 1800 CLV in the year 2025. In the packet for Worksession #3, staff presented information that suggested several intersections in the Shady Grove Policy Area would have CLVs greater than 1800. The difference between the two presentations is the assumption regarding additional turn lanes beyond those already programmed.

As noted in the draft Transportation Appendix materials included as an attachment to the Worksession #3 packet, this Sector Plan, like most others, does not explicitly recommend roadway capacity improvements to achieve current Local Area Transportation Review standards for four reasons:

- The balance between vehicular congestion and pedestrian accessibility should be made on a case-by-case basis through subdivision cases or facility planning studies as needs arise.

- The level of travel demand forecasting performed for the Sector Plan analysis is useful for assessing long-term trends, but not for programming 20-year needs on an intersection-specific basis.
- Current Annual Growth Policy (AGP) processes allow CLV congestion standards to be exceeded in Metro Station Policy Areas as long as operational analyses demonstrate that vehicle queues do not block upstream intersections.
- AGP standards and practices are re-evaluated every two years and are subject to change during the 20-year Sector Plan timeframe.

Staff proposes that as development occurs within the Sector Plan area, the Planning Board seek to address traffic congestion using the following priorities:

- Establish a priority for travel demand management (TDM), including but not necessarily limited to the current AGP Alternative Review Procedure for Metro Station Policy Areas of allowing a developer to meet LATR requirements by paying a higher impact tax and mitigating 50% of their peak hour trips through TDM techniques as specified in a contract with the Planning Board and DPWT.
- Consider alternative operational methods to address traffic congestion, including but not necessarily limited to the current AGP procedure for conducting queuing analyses in Metro Station Policy Areas.
- Consider intersection widening solutions only after the TDM and operational solutions have been examined and adequate conditions still cannot be achieved.

Staff recommends that the information in the two bulleted lists above be incorporated into the text of the Transportation Chapter to provide informational context and guidance during Plan implementation.

Intercounty Connector and Midcounty Highway Extended

Staff Recommendation

Retain the existing and proposed ICC right-of-way and Midcounty Highway Extended. Retain the Public Hearing Draft recommendation.

Analysis

The Executive recommends further discussion of the Intercounty Connector (ICC) and Midcounty Highway Extended (M-83) in the Shady Grove Sector Plan. Staff has recommended a consistent approach to the ICC in both the Upper Rock Creek and Olney Master Plans, summarizing the current recommendations, describing the Transportation Policy Report (TPR) recommendations for Option 1 and Option 2, and referencing the current Draft Environmental Impact Statement (DEIS) being conducted by the Maryland Department of Transportation (MDOT). The County Council has endorsed this approach with its approval of the Upper Rock Creek Master Plan in February 2004.

The Public Hearing Draft summarizes the Planning Board position on the ICC and M-83 (page 61), although with far greater brevity than described in the Upper Rock Creek or Olney Master Plans. Staff condensed the ICC discussion contained in Upper Rock Creek and Olney to be consistent with the style of the remaining portions of the Sector Plan.

Staff is working closely with the MDOT staff involved in ICC project planning and has established a schedule of eight worksessions for Planning Board review and decision-making during the EIS process. Worksession #3 is tentatively scheduled for June 3, 2004. Pertinent elements of the ICC described in the Shady Grove Sector Plan, including the M-83 connection, the parallel shared-use path, and potential pedestrian underpasses, are being discussed with SHA. At this time, the potential for each of those elements being incorporated in the current SHA project remains uncertain. Staff believes that the ICC planning process remains the more appropriate medium for evaluating and documenting the ICC project progress, and therefore proposes to retain the brief description contained in the Public Hearing Draft Plan.

MD 355 Urban Boulevard and Gude Drive Grade Separation

Staff Recommendation

Provide an interchange at MD 355 and Gude Drive. Retain Public Hearing Draft recommendation.

Analysis

The Public Hearing Draft Plan recommends that MD 355 be developed as an urban boulevard through the Sector Plan area, retaining the six-lane major highway classification but designed with the pedestrian amenities and landscaping associated with its treatment in downcounty CBDs such as Bethesda and Friendship Heights.

Traffic congestion along MD 355 is a concern throughout the Sector Plan area, particularly in the Metro Neighborhoods where the land use objective is to provide a relatively seamless extension of the urban fabric of King Farm across MD 355 toward the Metrorail station. In this area, staff considered three options for MD 355, including developing a one-way roadway couplet and additional grade separations in addition to the recommended at-grade boulevard treatment.

In theory, the one-way roadway couplet would be the most cost-effective means for managing person-throughput along MD 355 while minimizing pedestrian crossing distances. In the one-way couplet scheme, existing MD 355 could be narrowed to carry southbound traffic past King Farm and the roadway identified as Street D would be widened to carry northbound MD 355 traffic and tapered to meet MD 355 near Paramount Drive and north of King Farm Boulevard. The fatal flaw to the one-way roadway couplet scheme is that it cannot be implemented piecemeal as development occurs, but would require either premature displacement of existing uses or an unprecedented level of private and public sector schedule coordination. Pedestrian considerations also form a secondary concern. While one-way street systems theoretically improve both vehicular and pedestrian safety, substantial public concern exists regarding travel speeds on one-way street networks.

Capital cost is the primary drawback to depressing MD 355 through the Metro Neighborhoods. The desired block spacing is too short to develop a grade separation for one intersection only, such as at Redland Road. Depressing MD 355 from north of King Farm Boulevard to Indianola Drive would not be cost-effective. For comparison purposes, a similar four-block section of MD 355 briefly considered for grade-separation in project planning for the Rockville Town Center was estimated to cost \$280M.

At Gude Drive, the Public Hearing Draft Plan recommends a grade-separated interchange, a recommendation consistent with both the Planning Board's January 2002 Transportation Policy Report and the December 2002 Transportation Plan adopted by the City of Rockville. Neither the City's plan nor the Public Hearing Draft Plan recommends a particular design concept or right-of-way. Past experience has shown that detailed project planning studies are necessary to evaluate tradeoffs between alternative interchange concepts and precisely determine right-of-way needs. The business community in the MD 355 South neighborhood has expressed concern regarding visibility of and access to their businesses during and after interchange construction. These issues will be addressed during the project planning study for the interchange.

Shady Grove Road Widening

Staff Recommendation

Achieve a 150-foot right-of-way west of I-370 and 120-foot right-of-way east of I-270 for Shady Grove Road. Retain Public Hearing Draft recommendation.

Analysis

The Public Hearing Draft Plan recommends that Shady Grove Road be designated as a six-lane major highway with bike lanes (Class II) and sidewalks throughout the Plan area. The recommended minimum right-of-way width is 150' west of I-370 and 120' east of I-370. The Department of Public Works and Transportation (DPWT) has essentially completed the widening of Shady Grove Road to six lanes (CIP Project No. 509967) that implements the Sector Plan recommendation east of I-370 from a planning-level perspective.

Public testimony included several concerns regarding traffic operations and safety along Shady Grove Road as a result of the DPWT project. In particular, concerns relate to safety along eastbound Shady Grove Road between its two signalized intersections with the Metro Access Road and Briardale Road. In this area, the addition of the third northbound through lane resulted in changes to merging operations for traffic turning right from the Metro Access Road as well as the removal of a separate right-turn lane for Briardale Road. Separate left-turn lanes from Shady Grove Road to Briardale Road have been retained.

In general, this portion of Shady Grove Road has exhibited safety characteristics slightly better than the average multi-lane divided highway. During 2001 and 2002, there were a total of 127 reported accidents in the 1.6 mile segment between I-370 and Muncaster Mill Road (MD 1-15). With a segment average daily traffic (ADT) volume of approximately 42,000, staff estimates the accident rate for this period to be 266

accidents per 100 million vehicle miles (MVM) of travel. This accident rate is lower than the statewide average rate of 334 accidents per 100 MVM on urban arterials with four or more lanes. The 2001 and 2002 data, of course, does not reflect the conditions after the widening project described in the testimony. Post-widening accident data is not yet available.

DPWT is aware of the concerns raised by the community about the conditions on northbound Shady Grove Road between I-370 and Briardale Road. DPWT has proposed an FY05 spot improvement to address those concerns as part of the Intersection and Spot Improvements PDF (Project No. 507017) in the County Executive's recommended CIP for FY05-10 being discussed by the County Council this spring.

Amity Drive Extension

Staff Recommendation

Extend Amity Drive to Crabbs Branch Way. Retain Public Hearing Draft recommendation. Classify Redland Road as an arterial from Crabbs Branch Road, north to the planning area's boundary.

Analysis

The Public Hearing Draft Plan recommends extending Crabbs Branch Way and Amity Drive to provide a continuous road connection. This recommendation essentially retains the recommendation proposed in the 1985 Gaithersburg Vicinity Master Plan, although the Shady Grove Plan recommends reclassifying Crabbs Branch Way from an industrial roadway to a commercial business district street.

The extension of Amity Drive is needed to:

- Provide access to the planned residential community
- Serve the planned elementary school
- Improve access to Metrorail for the broader Mill Creek community
- Improve transportation network connectivity.

Two primary residential streets, Amity Drive and Epsilon Drive, serve as the only points of access for approximately 550 households that form the majority of the Mill Creek community. The Shady Grove Sector Plan envisions another 130 households and a future elementary school on the Casey at Mill Creek site.

Several individuals have expressed concern that the new connection will exacerbate community cut-through traffic. Staff estimates that the Amity Drive extension would increase total traffic in the community, but spread both local and through traffic out over three access points rather than the existing two, thereby reducing the average traffic load of each access point. Table 3 shows how current and forecast ADT volumes at a "cordon line" drawn around the current Mill Creek community would be affected by the extension of Amity Drive.

Table 3: Effect of Amity Drive Extended on Forecast ADT Volumes at Mill Creek Cordon

Location	Current ADT	2025 ADT with Amity Drive Extended	2025 ADT without Amity Drive Extended
Amity Drive, south of Washington Grove Lane	3,700	5,300	4,400
Epsilon Drive, north of Shady Grove Road	4,000	3,300	4,700
Amity Drive Extended, east of Crabbs Branch Way	N/A	3,900	N/A
Cordon Total	7,700	12,500	9,100
Number of access points	2	3	2
Average ADT per access point	3,850	4,133	4,550
Estimated number of through trips	1,100	2,400	1,600

The difference between the subtotal of 12,500 vehicles with Amity Drive Extended and 9,100 vehicles without Amity Drive Extended is attributed to a mixture of both local and through traffic, as without Amity Drive Extended, staff presumed that the future additional households would be constructed “outside” the Mill Creek cordon line and that the elementary school access would be provided from both sides of the cordon.

The effect of extending Amity Drive appears dramatic when expressed in terms of percentages. As indicated in Table 3 above, staff estimates that extending Amity Drive will increase through trips by about 50%. Perhaps most striking, testimony from the community of roughly 30 homes on the current Amity Drive “cul-de-sac” that extends 700 feet south of Epsilon Drive would experience a greater than tenfold increase in traffic volumes.

However, regardless of whether or not Amity Drive is extended, the forecasted traffic volumes on the remainder of the primary residential street network generally range from between 3,000 and 6,000 vehicles per day, typical for primary residential streets. At the other end of the spectrum, the County Council has determined in the Upper Rock Creek Plan that Redland Road should remain a two-lane primary residential roadway east of Needwood Road despite a current volume of over 13,000 vehicles per day.

Some testimony supports the Sector Plan proposal for a new elementary school at the Casey site but opposes the Amity Drive extension. Staff has assumed this possibility, for hypothetical purposes only, in the evaluation described in Table 3. Staff does not support constructing a new elementary school with access limited to two cul-de-sacs.

Staff supports the community interest in minimizing the adverse effects of cut-through traffic. The Public Hearing Draft Sector Plan recommends consideration of traffic calming measures along Amity Drive to address these adverse effects.

Redland Road East of Crabbs Branch Way

Staff Recommendation

Classify Redland Road as a primary residential street from Crabbs Branch Way, north to the planning area's boundary. Revise the Public Hearing Draft Plan recommendation for roadway functional classification, right-of-way width and number of lanes to be consistent with County Council action on the Upper Rock Creek plan.

Analysis

Redland Road forms the southeastern boundary of the Shady Grove Sector Plan area between Crabbs Branch Way and the Midcounty Highway Extended right-of-way. The Upper Rock Creek Plan area lies across Redland Road. The Shady Grove Public Hearing Draft Plan recommends that the portion of Redland Road east of Crabbs Branch Way be reclassified from its current status as a two-lane primary residential roadway (P-7) with a minimum 70' right-of-way width to an arterial roadway (A-102) with a minimum 80' right-of-way width. Between Crabbs Branch Way and Needwood Road, the Shady Grove Public Hearing Draft Plan recommends four through travel lanes, reflecting the design of the current DPWT project (CIP No. 500010).

The Shady Grove Public Hearing Draft Plan recommendation for Redland Road is consistent with the Upper Rock Creek Planning Board Draft Plan. Staff maintains that this portion of Redland Road functions as an arterial today and should therefore be classified as an arterial roadway.

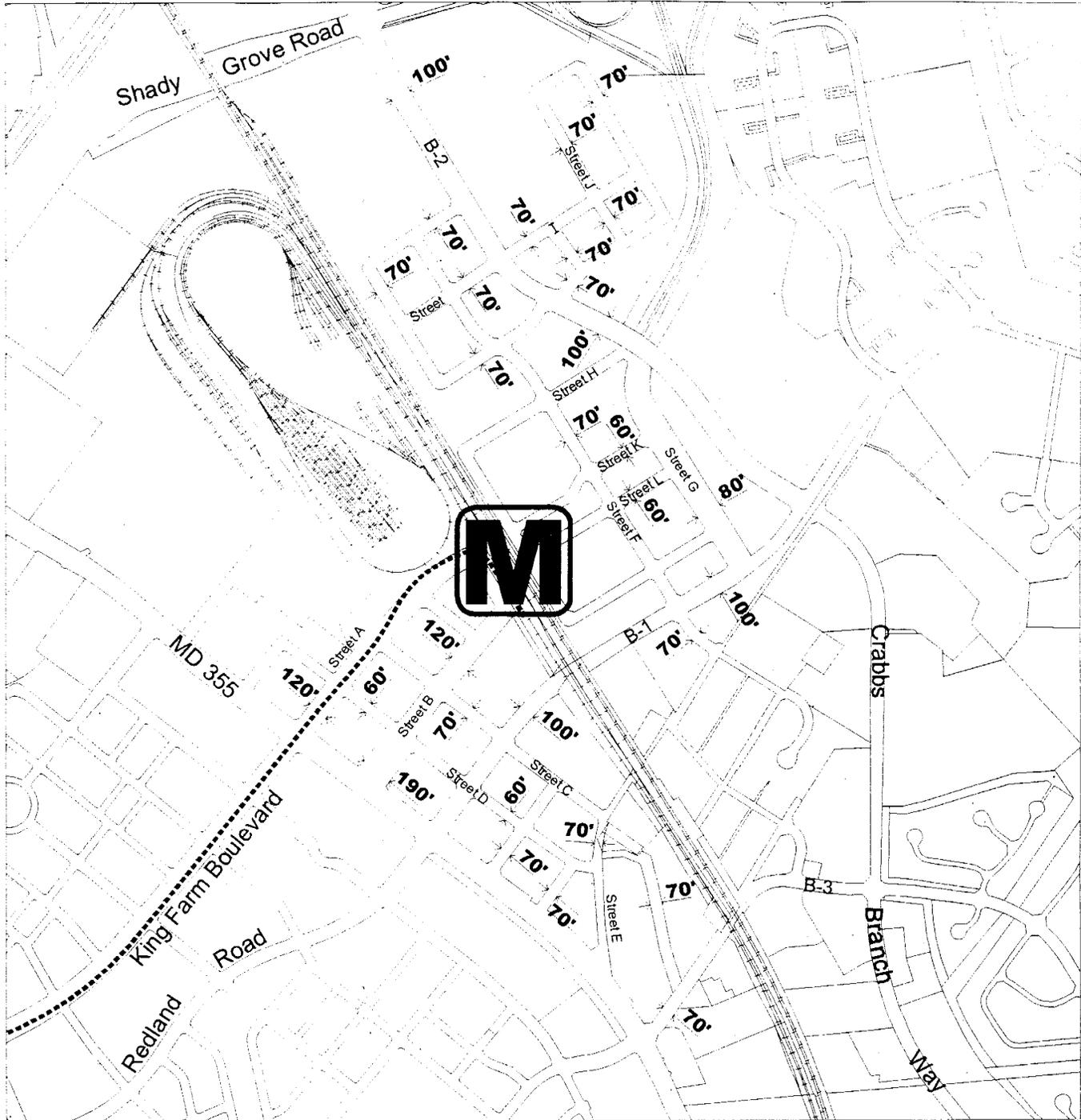
However, in their review of the Upper Rock Creek Master Plan, the County Council voted to retain the current primary residential roadway classification and 70' right-of-way for this portion of Redland Road. Staff therefore recommends revising the Shady Grove Sector Plan to be consistent with County Council action on Upper Rock Creek Plan.

Metro Neighborhood Commercial Business Street Classification and Urban Design

Staff Recommendation

Establish a network throughout the Metro Neighborhoods of commercial business district streets.

Commercial Business Streets for Metro Neighborhoods



Note : All 70' ROW streets to have parking on both sides.
 All 60' ROW streets to have parking on one side only.
 Final alignment of proposed roads to be determined by the Preliminary Plan.

----- Corridor Cities Transitway



Analysis

Page 65 of the Public Hearing Draft Plan describes a network of commercial business streets to serve the Metro Neighborhoods. Three public streets, Redland Road, Crabbs Branch Way, and Somerville/Paramount Drive, already exist. Most of the new streets have a recommended 70' right-of-way and a variety of streetscape treatments as indicated on pages 68 and 69 of the Plan.

Testimony suggested that these new local streets be classified as residential streets, rather than commercial business streets; or that they be designated with 60' right-of-way widths to improve pedestrian accessibility.

The classification and streetscape designation of the new Metro Neighborhood streets serve several functions. First, the business street classification recognizes that commercial land uses will be integrated within these neighborhoods. Second, the business street classification recognizes the desired urban streetscape fabric, most pronounced by the extension of sidewalks between the building face and the curb with street trees located in planters rather than in a continuous grass panel. Finally, the recommendation for a 70' right-of-way but only two through travel lanes on most streets accommodates on-street parking.

Paramount Drive to Indianola Drive Connector

Staff Recommendation

Retain the roadway connection between Paramount and Indianola Drives.

Analysis

Page 65 of the Public Hearing Draft Plan describes a network of commercial business streets to serve the Metro Neighborhoods. Required Master Plan streets shown on page 65 are also listed in the street and highway classification table on pages 66 and 67.

The figure on page 65 identifies a new, unlabeled, roadway generally within a 70' right-of-way located along the western boundary of the Nissan dealership connecting Paramount Drive (also described as Street "E" or B-8) to Indianola Drive (also described as B-3). The right-of-way shown at northern end of the street is 40' in width.

The purpose of this street is twofold. First, it provides a connection for local traffic in the Metro South neighborhood south of Redland Road to access southbound MD 355 via Indianola Drive. The intersections of MD 355 with both Indianola Drive and Redland Road are currently signal-controlled. Paramount Drive at MD 355 is limited to right-in, right-out movements only. The proposed street connecting Paramount Drive to Indianola Drive would therefore allow motorists to safely travel south from the Metro South neighborhood without first heading north to Redland Road. The second purpose of the proposed street is to generally improve pedestrian and vehicular access by reducing block sizes throughout the Metro Neighborhoods.

The Nissan property owners have expressed concern that the imposition of a 70' right-of-way across their property limits redevelopment potential, is not needed to serve the Metro Neighborhoods, and may be unsafe due to the proximity of the roadway's southern terminus to the Indianola Drive bridge across the CSX tracks.

Staff estimates that currently, about 10 vehicles during the AM peak hour and 70 vehicles during the PM peak hour try to head southbound along MD 355 from development in the Metro South neighborhood. All these vehicles must make circuitous movements as no left turns are allowed onto Rockville Pike from public streets serving the Metro South neighborhood. The development scenario presented in the Public Hearing Draft Plan would result in approximately 70 vehicles during the AM peak hour and 100 vehicles during the PM peak hour seeking to head southbound along MD 355 from the Metro South neighborhood. The Public Hearing Draft Plan also recommends widening of Redland Road in part to permit westbound left turns from westbound Redland Road to southbound MD 355. (In the Worksession #2 scenario, the higher development levels in the Metro South neighborhood increase these estimates to 90 vehicles in the AM peak hour and 140 vehicles in the PM peak hour.) In summary, the provision of a new street connection to Indianola Drive would relieve the burden on Redland Road, but staff finds that a public street is not essential to implementing the Master Plan vision.

Staff finds that the proposed roadway would not present a safety problem as it would intersect Indianola Drive approximately 450' west of the CSX track bridge, similar to the 470' distance along Redland Road between the existing Somerville Drive intersection and the CSX bridge. Staff does recognize the impact that the right-of-way constraint would have on the property, requiring approximately 1.2 acres from a 5.2-acre property.

Staff recommends clarifying the Sector Plan by placing an asterisk on the 70' ROW label on page 65 with a footnote stating, "this public street is desirable but not required."

Operational Issues

Staff Recommendation

Support operational improvements while recognizing that the Executive has final approval of implementation. Revise Public Hearing Draft Plan language to clarify that comments regarding design details and operational improvements support further study rather than implementation.

Analysis

The Executive staff identified several transportation system recommendations regarding design details and operational improvements that are typically not incorporated as hard and fast recommendations in master plans, including:

- Increased local bus service within a five-mile radius of the Metrorail station
- Increased MARC service frequency
- Use of programs such as Flexcar
- Bus stop relocation

- Specification of asphalt for sidewalk paving

Staff will work with Executive staff to ensure that wherever these operational concepts are presented in the Plan they are described in terms that indicate support for these recommendations and that the Executive has final approval.

Additional Transportation Items

Staff will also incorporate the following Planning Board guidance into the Transportation Plan revisions:

- Support for increased Metrorail service frequency including elimination of the Metrorail “turnback” at the Grosvenor station
- Support for a new Metrorail station near the Montgomery College Rockville Campus.
- Support specification of Pleasant Road as a primary residential street (P-58) between Shady Grove Road and the Rockville city boundary.