

PHED COMMITTEE #1B
February 17, 2006

MEMORANDUM

February 16, 2006

TO: Planning, Housing, and Economic Development Committee
FROM: Glenn Orlin, ^{GO}Deputy Council Staff Director
SUBJECT: Damascus Master Plan—transportation elements

Note: Committee members should bring their copies of the Draft Plan to the worksession.

This memorandum addresses the elements in the transportation chapter of the Final Draft Damascus Master Plan (pp. 43-55) and other transportation-related elements in the plan. The Executive's Fiscal Impact Statement (©1-2) costs out the transportation recommendations in the Draft Plan at about \$2.25 million for Damascus Lane in the business district, \$800,000 for a park-and-ride lot north of town at the intersection of MD 27 and MD 80, and \$2 million/mile for several shared-use paths and sidewalks. The full list of projects is on ©2; no engineering has been conducted for these projects, so the cost estimate may be higher or lower by 50% than what is shown.

Most of the elements discussed in this memo are those about which there is some disagreement with the Final Draft expressed by the Department of Public Works and Transportation (its summary comments are on ©3-5, other specific comments will be referred to throughout this memo), public testimony, or Council staff. Some purely technical corrections will be made to the final document, but they are not identified in this memorandum.

1. The meaning of transportation recommendations in a master plan. Master plans are blueprints for the long-term (20+ years) future of an area: both for how land should be developed (type and density) and what functional facilities, such as road projects, will be needed to serve this development. But incorporating a new road or a road widening in a master plan does not mean it will be built in the short term. In fact, for a project to be built in the short term it would also have to be included in the State or County six-year capital improvements program, which is a separate public process altogether. Incorporating a new road or a road widening in a master plan does not even guarantee it will be built in the long term.

What it does mean is that it is County policy that eventually such a project will be needed, and that every step will be taken to protect the option to build it. For example, it means that sufficient right-of-way will be protected and required for dedication. It means that the right-of-way will not be used in ways that would make it more difficult to build or widen a road in the future. Even if current residents of an area oppose a road project that they believe is neither wanted nor needed during their tenure, incorporating a road project in a master plan allows a future generation of residents to choose differently if conditions change.

2. Land use/transportation balance. With the exception of the Potomac Subregion Master Plan, all master plans adopted by the Council for the past 20 years have been in balance: that is, the planned transportation system can meet the travel demand generated by the planned development. A plan in balance does not mean that traffic conditions at build-out will be deemed 'good' or even 'fair'; more likely the traffic congestion will be at the borderline between 'tolerable' and 'intolerable.'

For most area master plans the analysis of land use/transportation balance has been conducted using the same techniques as was used for Policy Area Transportation Review (PATR) under past Annual Growth Policies: the 'average' peak-hour congestion is measured against a congestion standard for that area. For master plans, however, the average congestion is not calculated at a point four years out, but for life of the plan, which is 20 years in the case of Damascus. Although the Growth Policy no longer utilizes the PATR test, a PATR-type analysis—evaluating the build-out level of congestion—is still useful in determining whether a plan is in land use/transportation balance.

Only part of the Damascus Planning Area had been subject to PATR: the Damascus Policy Area comprised of Traffic Zones 279 and 280 (see ©6). According to the Planning staff's analysis, the Average Congestion Index (ACI) in the Damascus Policy Area at build-out is projected to be 0.57, which is exactly equal to its PATR congestion standard of 0.57. (Today's traffic measures out at an 0.48 ACI.) This analysis, of course, assumes the realization at full build-out of about 7,300 housing units and 2,800 jobs, and all of the remaining planned transportation facilities, in particular the extensions of Valley Park Drive (now under construction) and Woodfield Road (soon to be under construction). It also depends upon the unfettered use of arterial roads and primary residential streets in the plan.

According to Planning staff, the *theoretical* maximum number of housing units in the plan is 7,421 units, 121 units more than the transportation system could support. However, it estimates that the *realistic* maximum number of housing units is 7,253 units, 47 units less than what the system could support.

Although it is not part of the 'land use/transportation' balance calculation, the Planning staff also forecast the congestion at intersections in Year 2025. Allowing for the addition of turning lanes where needed, every intersection but one within the Damascus Policy Area would operate better than the current Level of Service standard 1450 Critical Lane Volume (CLV). The exception is the intersection of Ridge Road (MD 27) and Sweepstakes Road, which would operate at 1489 CLV, only 2.7% over the standard.

There is no area-wide congestion standard for the rural portion of the Damascus Planning Area, which is in the Agricultural Reserve (Traffic Zones 245, 278 and 281, see ©6). But, with the addition of turn lanes, none of the intersections in the rural area is anticipated to exceed the rural intersection standard of 1400 CLV.

Based on this review, Council staff concurs with the Planning staff that the Damascus Master Plan will be in balance if its master-planned land use and transportation facilities are built.

3. *Bypass.* As long as there have been Damascus Master Plans there have been deliberations as to whether or not there should be a north-south bypass around Damascus. This Plan, like the one in 1982 and 1993, does not recommend a bypass. (The bypass routes studied as part of the 1993 plan are on ©7.) It does recommend that the Council direct DPWT to lead a multi-agency and multi-jurisdictional study within two years of this plan's adoption to understand the traffic implications of long-term growth in this part of the state. Then, within two years of the opening of Woodfield Road Extended (now scheduled for the summer of 2008) the Planning Board would decide whether to initiate a master plan amendment process for a bypass (pp. 50-51). Therefore, if an amendment process were initiated in 2010, then in 2012 or 2013 the Council would make a master plan decision about whether or where to reserve right-of-way for a bypass.

DPWT believes very strongly that not identifying a bypass route *in this plan* is a major deficiency of it. Making decisions in this plan about the location of development—especially for the Kingstead/Leishear, Rice/Conway, and Kings Valley LTD properties on the west side and the Burdette and Warfield properties on the east side—as well as the location of additional parkland, historic resources, and environmental features to protect, would preclude and very possibly eliminate any potential bypass route.

DPWT notes that the daily traffic volumes on MD 27 both north and south of Damascus exceed 24,000 daily, which is more than two lanes can carry without severe congestion. The Planning staff forecasts the traffic to rise to 27,500 per day at these locations by 2025, which would be a much slower traffic growth rate in the next 20 years than has been experienced over the past 20. The State Highway Administration's Highway Needs Inventory (HNI)—its long range plan, updated in 2005—shows the need for more capacity on MD 27 from one side of Damascus to the other. The HNI expresses the need for a reconstruction of MD 27 as a multi-lane divided highway through Damascus at a cost of \$78.9 million (see ©8), but the need could be met by a bypass instead.

Council staff agrees with DPWT that a bypass route should have been developed as a result of this plan. The cost and environmental impact of even a two-lane bypass would be significant, but it would substantially improve circulation within Damascus, and relieve its residents from the ever-increasing traffic they experience several hours during most weekday mornings and afternoons. Remember that while traffic congestion 20 years from now is anticipated to be just within the acceptable range, it will be almost 20% worse than now, since the index will climb from 0.48 to 0.57.

Council staff recommends a middle course between the Planning Board and DPWT. While a bypass *route* should be identified and protected from further encroachment, the *building* of a bypass should not be an assumption for the lifetime of this plan. Building a bypass should be resorted to only if other measures to stem congestion ultimately fail. While the Planning Board's series of steps would postpone a route decision much too far into the future, it is unrealistic that the Council will want to remand the Plan now in order to lay out a bypass route.

Council staff recommendations:

1. **The Council and the Executive should request the State Highway Administration to conduct a multi-jurisdictional feasibility study of capacity options in the MD 124/MD 27/MD 75 corridors between I-70 and I-270, including two-lane bypass options around Damascus.** SHA, not DPWT, is the appropriate agency for leading a multi-jurisdictional study. It has experience conducting such studies, which are much less extensive and costly than a full-blown project planning study required under NEPA. Carroll County has already expressed interest in participating in a study.
2. **The Damascus Master Plan should say that any right-of-way for a two-lane bypass identified by this study will be considered consistent with the Plan and can be protected as would any other master-planned right-of-way if it is adopted by a subsequent Council resolution after a public hearing.** This procedure has been used in the Aspen Hill and Silver Spring Master Plans for other transportation facilities.
3. **The Damascus Master Plan should say that a road may not be *built* in this right-of-way until its need has been confirmed in a future comprehensive amendment to the Plan.** To build a bypass *would* require a full-blown project planning study.
4. **As the Council develops the land use recommendations for the Kingstead/Leishear, Rice/Conway, Kings Valley LTD, Burdette, and Warfield properties do nothing that would preclude portions of the 'B,' 'C,' or 'F' bypass route options (©7).**

When the Council reviewed the last Damascus Master Plan in 1992, DPWT and Council staff made the same points about a bypass, and Council staff recommended a specific route to be protected but not to be built for at least 10 subsequent years. A majority of the Council rejected the proposal, primarily because it was developed after the Planning Board's Draft Plan was released, and so it was only partially vetted by the community. Nevertheless, by not taking steps to identify and protect a bypass route then, finding a route now will be much more difficult. Waiting until 2012-2013 to identify a protected route will be too late.

4. ***Two-lane road policy.*** The Planning Board recommends that each road outside the Town Center should have no more than two through lanes (one in each direction), although it can have one or more auxiliary lanes for turning, acceleration, deceleration, or parking. DPWT objects to this policy, pointing out that the traffic volumes on roads in Potomac and northern Olney—the two other plans with such a policy—are significantly lower than MD 27 and MD 124, and that their forecasted traffic volumes are beyond what a two-lane road can carry without significant congestion.

During the development of the Plan the Planning staff examined the possibility of four-lane non-divided, five-lane non-divided (with a center turn lane) and four-lane divided (with a median) cross-sections for MD 27 and MD 124. They noted that in many locations such widenings would severely impact fronting residences. The four-lane non-divided cross-section would consume less added right-of-way, but an examination of State highway accident statistics found that it would be the least safe design for MD 27 and MD 124, where there are no access controls (see ©9).

The Planning Board opted for the two-lane policy because the planned development would still fit within the congestion standard by 2025, and that it was the least costly and impactive approach. The Board is recommending that the minimum right-of-way of MD 27 through Damascus be set at 100' to add auxiliary turning lanes and pedestrian and bicycling amenities. It would also be wide enough for a 4-lane divided highway should a future Plan deem that it is warranted, and as the HNI suggests.

Another possibility, which is entirely consistent with the recommendations in the Final Draft, would be to reconstruct portions of MD 27 and MD 124 as a three-lane road with two through lanes and a continuous center turn lane. The accident rate for a 3-lane non-divided cross-section is much lower than for 4- or 5-lane non-divided roads (©9). The center turn lane would provide for Damascus residents living directly on MD 27 or MD 124 a refuge that would allow them to enter and exit their driveways more safely and without causing additional congestion. A 3-lane cross-section would provide a slight improvement to area-wide congestion that may be reflected in the ACI. The additional 10-11' for the turn lane would neither incur a significant impact on front yards nor on pedestrians crossing the road.

Council staff recommendation: Concur with the Final Draft.

5. Damascus Lane. The Planning Board proposes revising Damascus Boulevard—a planned east-west thoroughfare connecting MD 27 to MD 124 parallel and south of Main Street in the Town Center—to Damascus Lane, a small access lane accessing the rear of the Main Street businesses and the trailhead of the Magruder Branch Trail. Due to terrain and environmental constraints the Final Draft calls for a two-lane road with no on-street parking and a sidewalk for only part of its length. The minimum right-of-way would be 60' (the 66' entry in the table on page 48 will be corrected in the adopted plan).

This Damascus Lane concept is exhibited on page 18. It shows a two-lane road with either bike lanes or a shared-use roadway for its full length, and a sidewalk on one side of the street and in only one segment of the road.

DPWT believes the minimum right-of-way should be 80' because the many features in the concept—including the sidewalk, grading, and planting strips—will require more space, and further space is needed for the recommended storm drain and stormwater management facilities recommended in the Environmental Resources chapter (page 61). DPWT also points out that the built section of Damascus Boulevard/Lane already has an 80' right-of-way.

Council staff recommendation: Concur with the Final Draft, except that the concept should show a continuous sidewalk from MD 27 to MD 124. The sidewalk is needed for pedestrians walking through the business district and to the trailhead. The roadway grading and a single sidewalk should fit within 60'.

6. Definition of Roadway Classifications. One set of major decisions in any master plan—and Damascus is not excluded in this regard—is the proper functional classification of the streets and highways in the plan. In every master plan, each road is classified according to the degree to which it serves two diametrically opposed functions: providing mobility, and providing direct property access. For example, a freeway's function is entirely devoted to providing mobility, and it provides no property access. A tertiary residential street (such as a cul-de-sac) provides no mobility and exists only for property access. Other classifications—major highways, arterials, business district streets, primary residential streets, and secondary residential streets—fall between these extremes, with differing emphases on mobility and property access.

Functional classification decisions are extremely important in master plans because many formal and informal policies flow from them: road design standards, allowable traffic calming measures, cut-through traffic restrictions, priority for snow removal, routing of transit buses, priority of sidewalk requests, etc. The Roadway Classification table on pp. 46-48, therefore, is the key part of the transportation recommendations in the master plan. Unfortunately, what is missing from the Final Draft (as is in most plans) is a clear, succinct definition of each classification.

Council staff recommendation: Include at the bottom of page 44 a new 'ROAD NETWORK' section, similar to that shown on ©10. The text on ©10 are the definitions from the White Oak Master Plan, but they are appropriate definitions for the Damascus Master Plan or any other plan. Definitions for 'country arterial,' 'country road,' 'rustic road,' and 'exceptional rustic road' should be included as well.

7. Oak Drive/Valley Park Drive realignment. The northern leg of Oak Drive intersects MD 27 on the west just a few hundred feet from where Valley Park Drive intersects MD 27 on the east. The text on page 48 (under 'Oak Drive') sends a mixed message. First it states that Oak Drive should be realigned to meet Valley Park Drive at Ridge Road, noting that it would eliminate the two existing offset 'T' intersections. Finally, though, it states: "The Plan recommends a *study* [emphasis mine] of this realignment, including evaluation of a pedestrian underpass of Ridge Road."

The realignment will be a challenge, since there are homes which are in close proximity. A road with a non-standard width and alignment may be necessary to avoid residential impacts. But the single crossing would be safer and more convenient for travel to and from Baker Middle School and Oak Ridge Conservation Park.

Council staff recommendation: Amend the text to read, "The Plan recommends an evaluation of a pedestrian underpass of Ridge Road."

8. Country roads. The Final Draft recommends that Howard Chapel Drive (northeast of Damascus between MD 108 and Long Corner Road) be designated as a country road. Currently

it is classified as a secondary residential street. DPWT believes it should be a primary residential street due to existing and planned land uses it serves.

Council staff recommendation: Concur with the Final Draft. A country road has the same function as a primary residential street but has less rigid design standards in deference to its pastoral setting.

The Final Draft also recommends reclassifying the northern portion of Kings Valley Road, between Mountain View Road and Bethesda Church Road, from a primary residential street to a country road. DPWT opposes this change, pointing out that elsewhere the Plan states that residents of the Kingstead/Leishear development "are more likely to use Kings Valley Road as their primary access rather than Ridge Road" (p. 26).

Council staff recommendation: This decision should follow from the Council's decision on the Kingstead/Leishear property. If, in fact, the development will have its primary access onto Kings Valley Road, then it should remain classified as a primary residential street and the development should bring the road up to that standard. If not, it should be reclassified as a country road, given the road's low utilization and pastoral setting.

9. Park-and-ride lot at MD 27/MD 80 intersection. The Final Draft recommends a new park-and-ride lot at or near this intersection, which is the focal point for southbound traffic from Frederick, Howard, and Carroll Counties. DPWT warns that the lot would have to have at least 200 spaces to generate sufficient demand for a bus route to extend to it. Since such a lot would consume a large area, it believes a specific site should be identified. DPWT also recommends that both an on-road and off-road bikeway be planned to extend up to this lot; the Final Draft currently calls for only an on-road bikeway.

Council staff recommendation: Concur with the Final Draft, except that the Plan note that the lot should have no less than 200 spaces and it should state how many acres will be needed. Rather than pinning SHA or DPWT to a specific site for this lot, there should be flexibility to select any available site in the vicinity. But the Plan should be more precise about the size of the lot. Council staff does not understand the rationale for an off-road bike path merely to connect the park-and-ride lot with Damascus.

10. Damascus Parking District. The discussion of the Town Center suggests shared parking arrangements or a formal Parking District (p. 20), and the travel demand management section recommends studying the creation of a Parking District (p. 55). DPWT believes this proposal should be elaborated upon more fully by analyzing its feasibility and practicality, or it should be deleted from the Plan.

Council staff recommendation: Delete specific references to a Parking District. A Parking District could be studied even if it is not mentioned in the Plan. Citing it in the Plan implies that there is a good possibility that it will be created, when it is actually more of a long shot. Shady Grove is a more likely candidate for a new Parking District, yet there is no mention of a study in the recently adopted Shady Grove Sector Plan.

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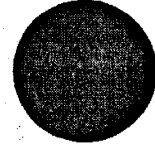
Douglas M. Duncan
County Executive

Bruce Romer
Chief Administrative Officer

MEMORANDUM

December 13, 2005

018982



TO: George L. Leventhal, President
Montgomery County Council

FROM: Lisa W. Rother, Planning Manager
Planning Implementation Section *LWR*

SUBJECT: Report on Capital Projects Implementing the Final Draft Damascus Master Plan

Pursuant to the Regional District Act, the capital facilities necessary to implement the Planning Board Draft Damascus Master Plan are shown on the attached chart. Cost information is provided as well, although specific costs can not be determined until facility design is complete. Cost estimates on the chart include engineering, construction, site improvements, and, if required, land purchase costs.

If you have any questions about these facilities, please call me at 240-777-2593. The Executive Branch staff will be available during the County Council's Worksessions on the plan.

LWR:jgs

Attachment



Planning Implementation Section

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COMMUNICATIONS SECTION

DAMASCUS SECTOR PLAN: PROPOSED CAPITAL PROJECTS

December 13, 2005

Project Type	Project	Page #	Estimated cost (\$000)	Implementing Agency
Pedestrian facilities	Implement sidewalk or shared-use path connections to key activity centers, including: <ul style="list-style-type: none"> • Along Ridge Road and Woodfield Road between the Town Center and Sweepstakes Road • Along Bethesda Church Road, Valley Park Drive, and Sweepstakes Road • Along Oak Drive connecting Baker Middle School and the Damascus Recreation Center • Along Ridge Road between the Town Center and Gue Road • Along Damascus Road between the Town Center and access to the future Seneca Springs Park site 	51	2,000 per mile ¹	DPWT, SHA, Developer Participation
Roadways	Construct new Business Street connecting Ridge Road to Woodfield Road (60 foot recommended right-of-way)	44	\$2,250	DPWT
Transit	Construct a Park and Ride lot in the vicinity of the intersection of MD27 and MD 80	55	\$800	DPWT; SHA
Parks and Open Space	Develop Seneca Springs Local Park and Woodfield Local Park with recreation facilities such as a soccer field, playfield, playground, and trails	66	\$1,925 ²	M-NCPPC
	Add the designated portion of the Little Bennett Creek Headwaters Area to the park system	69	Dedication	M-NCPPC
	Add the Western Tributary of Seneca Creek Stream Valley to the park system	69	Dedication	M-NCPPC
	Augment Damascus Recreation Center with additional athletic fields, a skateboard park and a roller hockey court.	77	\$750 ²	Recreation Department

Notes and assumptions: Projects include engineering, construction, and site improvements, but not land costs, unless noted. Because there is little engineering data available on which to base the transportation estimates, they are expected to be accurate within a range of +50% and -50%.

1) Cost estimate for shared use paths to include engineering, construction, site improvements, and land purchase, if required. Actual miles to be determined at time of CIP submission.

2) Facility planning will determine extent of construction and associated costs.

MCDPWT Comments on

Damascus Master Plan – Planning Board (Final) Draft (M-NCPPC, August 2005)

General Concerns

1. The principal problem with this master plan Draft is that its Transportation Element (Transportation Chapter) fails to adequately support and serve the proposed land uses, and the other Elements, of the Plan. This document is supposed to be a “comprehensive amendment” which will “look ahead 20 years from the date of adoption.” However, the Transportation Element, unlike all other Elements, does not provide adequate solutions to meet the transportation challenges which the next 20 years will pose. Therefore, it is an **incomplete** document lacking a comprehensive strategy for balanced community building.

The most serious single issue is that the plan fails to propose a transportation network which will adequately handle the forecasted travel demand within the horizon timeframe. The combined Draft provisions of retaining a two-lane road system, while failing to assess the impact of a bypass, is a recipe for failure and amounts to the imposition of a lower quality of life on the residents of the Planning Area. MNCPPC staff's own projections show that the currently heavy traffic volumes on Damascus roads will increase in the future. SHA's “Highway Needs Inventory” further shows that additional widths are needed on the State highways in the Planning Area. Without some form of offsetting capacity increases, the existing congested conditions will only get worse. The Town Center will be overwhelmed with traffic, resulting in a degraded pedestrian environment which is the exact opposite of what is envisioned elsewhere in the Plan. Also, emergency vehicle response times could be seriously hampered.

The Draft solution to this problem is anemic, basically involving expanding pedestrian and bicycle paths plus expanding transit options. With regard to a bypass, the Plan supports only a “thorough analysis” of whether one is needed, and that only “after the completion of Woodfield Road Extended.” The problem with this strategy is that it lacks the necessary comprehensiveness to ensure a viable solution. All the land use, housing, community facility, environmental protection, parkland, and historic preservation decisions will be made upon plan adoption. But the key transportation decision (whether to increase capacity by providing a bypass, or by widening the existing roadways instead) will be made later. This is an unworkable approach for two reasons:

- First, if a bypass is not considered at the same time as the other Elements, **it will be precluded later**, due to the fact that there will be no corridor available, free of parkland, historic resource, and other land use encroachments, to place an alignment.
- Second, not recommending sufficient right-of-way widths for existing roadways at the same time as land use decisions are made will make it

infinitely more difficult to obtain necessary capacity due to insufficient building setbacks and lack of adequate dedications later.

This Plan needs to tackle this major Transportation problem in a comprehensive manner considering all other plan Elements now. Putting off a bypass study until two years after Woodfield Road Extended opens is simply a waste of time; MNCPPC knows enough now to forecast future traffic volumes and thereby test the benefits and impacts of bypass alternatives against widening existing roads alternatives. Providing sufficient capacity to the roadway network will better meet the transportation goal and better support transit and travel demand services. Otherwise, the increased land use density proposed in this Plan without increased transportation capacity will equal gridlock.

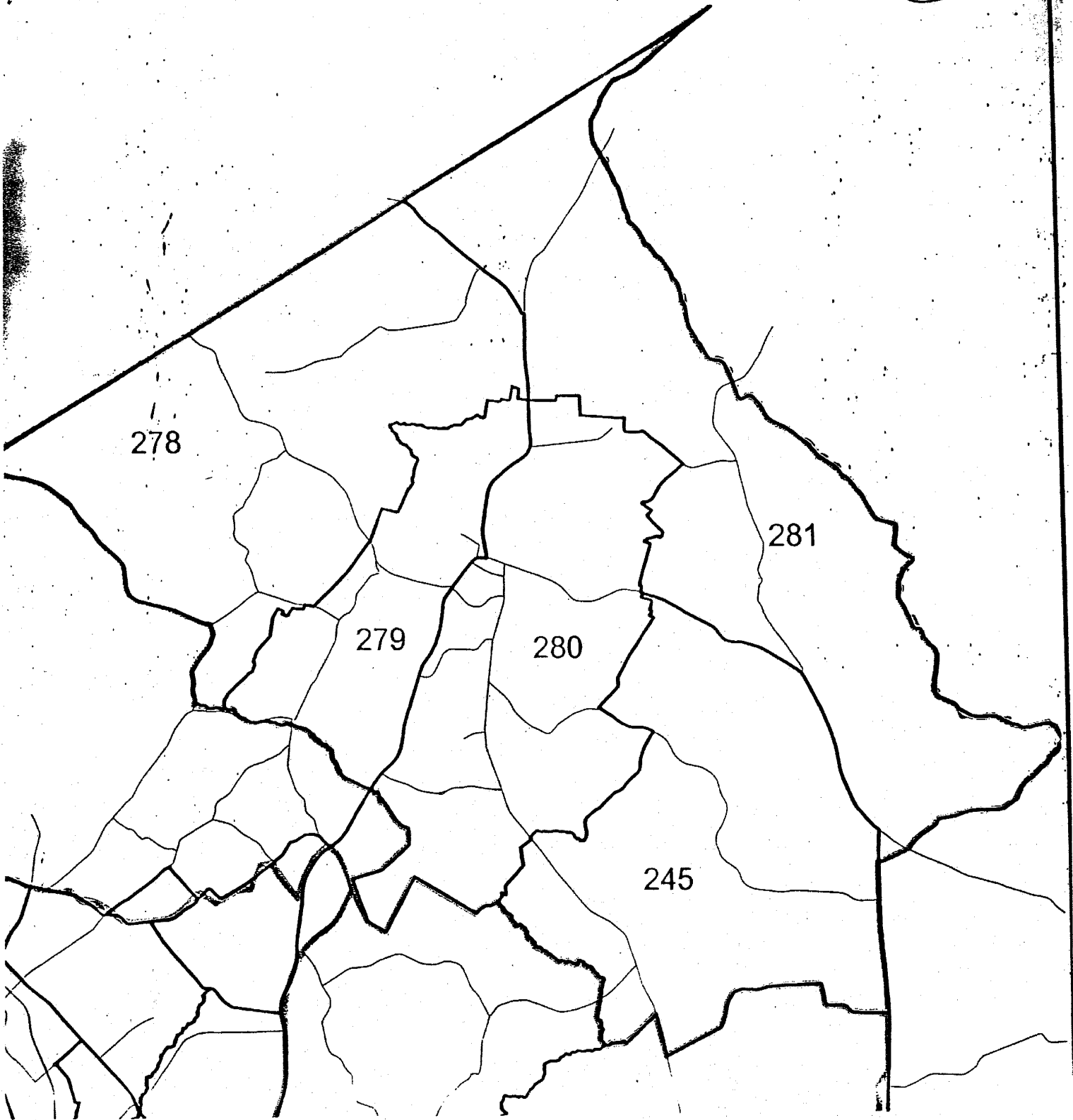
2. The "Two Lane Road Policy" proposed in the Plan is troublesome, especially without a bypass recommendation. Some comparative traffic volume data is illustrative here. Year 2004 annual average daily traffic volumes (AADT) for certain highway segments in the Damascus Area are as follows:

MD 27 just south of MD 80 -	24,075 AADT
MD 27 just north of MD 108 -	22,075 AADT
MD 27 just south of Hawkes Road -	24,275 AADT

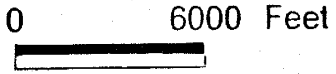
These are very high daily volumes for a two lane roadway, which is the case for each example above. Elsewhere in Montgomery County, most roadway segments carrying these volumes of traffic are already multilane, are programmed to be reconstructed as multilane, or are master planned to become multilane. None of the roadways in the Potomac Subregion, or the northern Olney, planning areas (the other two places having a two lane road policy) had two lane roadways with AADT volumes as high as these in 2004. To compound matters, there is only one alternative to MD 27 in the Damascus area, namely Woodfield Road. If either one or the other roadway is closed due to an accident or other incident, the "bailout" traffic then has only a single, two lane road to use as an alternate. This Plan's two lane road policy, coupled with the lack of a bypass, is problematic.

3. The Plan document has **internal inconsistencies** between text, tables, and figures, and between chapters. This results in lack of clarity which leads to confusion over the envisioned outcome. This will be especially true once the plan is adopted and used as the basis for reviewing implementation (either private sector development or public sector projects). Specific recommendations should clarify, not confuse, the Plan vision. A principal example of confusing guidance in the Draft pertains to Damascus Lane. In the transportation chapter it is shown as a business district road with an on-road bikeway. However, in the community facilities chapter, it is shown as parkland (specifically part of Magruder Branch Stream Valley Park) with a "Proposed Trail Corridor" (which presumes an off-road bike trail). Furthermore, differing right-of-way widths are proposed, and none of them match the actual width which exists today.

4. The land use plan chapter mentions the possibility of forming a Town Center parking district (p. 20). This proposal is dealt with only fleetingly in the transportation chapter by calling for a study. MCDPWT requests deletion of the idea, unless the proposal is more fully examined through an analysis of its feasibility and practicality in the Plan.
5. MCDPWT generally supports the Transit and Travel Demand Management section as being consistent with its Transit Strategic Plan. However, we have two concerns. First, we caution that the park and ride lot called for north of the Town Center would need to be large enough (at least 200 spaces) to generate sufficient demand for the extension of transit services to it. Therefore, a specific site needs to be identified in the plan and on a plan map, so that at time of implementation there will be clarity as to its envisioned location. Second, there is a vague recommendation to "support inter-jurisdictional study of transit and para-transit opportunities" (p. 61). This does not seem like appropriate master plan material. The text needs to be either much more specific about what is being proposed here, or the suggestion should be deleted.
6. There are some instances of **incorrect** information within in the Plan. As one example, the italicized text at the bottom of page 32 is presented as though it were a verbatim quotation. However, numerous words are missing or incorrect in this text, when compared to the original statement from another document. A copy of the actual quoted paragraph is attached to these comments. The quotation in this Plan should be corrected to read properly.
7. Once again this Draft contains language inappropriate for a master plan Transportation Element by seeking to direct operational issues. All such references are requested to be deleted since master plans simply cannot accurately predict all the future technological, financial, safety, or cultural changes which will impact on these issues. Requested deletions are shown in the "Specific Comments."



Map Compiled On 04-29-2003 at 08:39 AM
 Map Scale: 1 inch = 6000 feet or 1:72000



The Maryland-National Capital Park and Planning Commission
 Montgomery County Department of Park and Planning
 Transportation Planning Unit
 8787 Georgia Avenue | Silver Spring, Maryland 20910
 301.495.4525 voice | 301.495.1302 fax | <http://www.mc-mncppc.org>

- Master Plan of Highways Centerline 1
- Traffic/Community Analysis Zones
- Master Plan Boundary
- Municipalities
- Montgomery County

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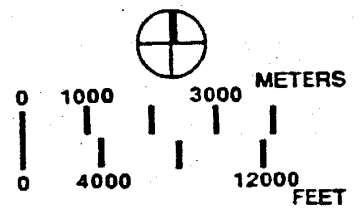
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DAMASCUS
BYPASS
ALTERNATE ALIGNMENTS



----- ALIGNMENTS B (MODIFIED), C, & F

Figure 6

DAMASCUS Master Plan Amendment / Montgomery County, Maryland

HIGHWAY NEEDS INVENTORY

Montgomery County - Secondary

(revised 2005)

Map Ref.	Route-Route Name Limits	Length	Improvement Type	
				Cost (\$000)
1	MD 27 Ridge Road MD 355 to Skylark Road	2.2	Divided highway reconstruct	\$40,300
2	MD 27 Ridge Road Skylark Road to Gue Road	5.5	Divided highway reconstruct	\$78,900
3	MD 28 Veirs Mill Road At MD 586/MD 911	0.5	Interchange construct	\$53,600
4	MD 28 Norbeck Road MD 97 to MD 182	2.6	Divided highway reconstruct	\$58,700
5	MD 97 Georgia Avenue MD 390 to MD 192	0.7	Urban divided highway reconstruct	\$13,600
6	MD 97 Georgia Ave At Randolph Road	0.5	Interchange construct	\$57,600
7	MD 97 Georgia Avenue MD 182 to MD 108	7.1	Divided highway reconstruct (includes busway)	\$108,700
8	MD 97 Georgia Ave At MD 28	0.5	Interchange construct	\$75,250
9	MD 97 Georgia Avenue North of MD 108 to MD 97 Rel. at Gold Mine Rd.	1.4	Divided highway reconstruct	\$56,500
10	MD 97 RE Gold Mine Rd. to N. of Brookeville	0.8	2 lane construct	\$19,700
11	MD 108 Laytonsville Road Muncaster Road to Bowie Mill Road	2.4	Divided highway reconstruct	\$53,300

**State System (State Maintained & Toll Facilities) Motor Vehicle Accident Rates per 100 Million Vehicle Miles of Travel
By Access Control
3-Year Combined Summary 1998-2000**

Roadway	Type	Fatal Accident/Rate	Injury Accident/Rate	PDO Accident/Rate	Total Accident/Rate
Non-Divided Roadway, Partial Control, 2 Lanes	Rural	2.0	44.8	43.8	90.7
	Urban	1.9	63.1	54.2	119.2
	Combined	2.0	48.8	46.1	96.9
Divided Roadway, Partial Control, 4 or more Lanes	Rural	1.3	33.7	37.2	72.2
	Urban	1.0	69.0	82.1	152.1
	Combined	1.1	56.1	65.7	122.9
Non-Divided Roadway, No Control, 2 Lanes	Rural	1.9	57.0	57.9	116.8
	Urban	1.2	85.8	96.4	183.3
	Combined	1.7	65.4	69.1	136.2
Divided Roadway, No Control, 4 or more Lanes	Rural	1.6	49.3	49.6	100.5
	Urban	1.5	113.8	131.4	246.8
	Combined	1.6	94.6	107.1	203.3
Non-Divided Roadway, No Control, 3 Lanes Center Turn	Rural	0.7	86.2	84.2	171.1
	Urban	0.9	107.5	130.5	238.9
	Combined	0.8	102.1	118.9	221.9
Non-Divided Roadway, No Control, 4 or more Lanes	Rural	1.7	123.1	120.1	244.8
	Urban	1.7	153.8	185.2	340.7
	Combined	1.7	148.2	173.4	323.3
Non-Divided Roadway, No Control, 5 Lanes Center Turn	Rural	1.0	52.6	53.6	107.2
	Urban	1.3	152.9	184.2	338.4
	Combined	1.3	147.4	177.1	325.8

Source: Maryland State Highway Administration, Office of Traffic and Safety, Traffic Safety Analysis Division, July 16, 2001

ROAD NETWORK

The recommendations below address present and future traffic congestion problems in the White Oak Master Plan area. Recommendations consist of road improvements and classification changes to reflect the role each road will play in the future network. The classification changes will also allow improved streetscape character of major roadways when development occurs or road improvements are made. Where possible, improvements will help the movement of pedestrians and bicycles as well as motorized vehicles.

Figure 22 on page 43 identifies the White Oak Master Plan roadways on the Master Plan of Highways and Table 3 on page 51 lists their classifications with minimum rights-of-way. The classification of roadways is a way of indicating the degree to which access to properties is balanced with the ability to handle through traffic. The system ranges from Freeways with an emphasis on through traffic capacity and little or no direct property access down to the Primary Residential Street which emphasizes access functions, which may affect the efficiency of through traffic movement. Secondary residential roads are not shown on the *Master Plan of Highways*. The roadway classes are detailed in the *Transportation Report for the Eastern Montgomery County Master Plan Areas* and in the following list:

Freeways	Provide for movement of vehicles at high speed over significant distances. Access is limited to grade-separated interchanges.
Major Highways	Provide less speed and mobility, but more access at intersections.
Arterial Roads	Connect major highways and provide more access points while moving traffic at lower speeds. Typically, more than half of the traffic on an arterial is "through" traffic.
Commercial Business District Streets	Are restricted to commercial areas, provide on-street parking, more pedestrian space, and more access points to stores and offices.
Primary residential streets	May carry some through traffic but their main purpose is to provide access for 200 or more households and to connect to arterial roads.
Secondary or tertiary residential streets	Provide direct access to homes and allow for the possibility of traffic management measures to discourage through traffic movements and speeding. (These are not listed in master plans.)

The following projects are under way as this Master Plan is being developed.

- The ICC is a planned limited-access transportation facility linking US 1 in Prince George's County with I-370 and the I-270 Corridor in Gaithersburg. Federal permitting processes require a detailed Environmental Impact Statement, consideration of alternative alignments, and the determination of a preferred alignment and design. Seven alternative alignments are being considered for the facility.
- The Maryland State Highway Administration (SHA) and Montgomery County Department of Public Works and Transportation (DPW&T) project to widen New Hampshire Avenue north of Randolph Road will provide a six-lane divided road between Randolph Road and the ICC right-of-way.
- The DPW&T project on East Randolph Road Phase II will provide a five-lane road between Fairland Road and Old Columbia Pike, with a four-lane bridge over Paint Branch.