

# TRANSPORTATION

**GOAL: To improve the efficiency of the roadway network, provide road improvements, expand the pedestrian and bicycle path networks, and improve the potential for intercepting commuters through expanded transit options.**

## INTRODUCTION

The Damascus Master Plan area lies at the northern tip of Montgomery County. Due to this location, travelers from Frederick County, Howard County, and Carroll County substantially affect transportation conditions. Currently, the area features a network of two-lane roads that serve linear development patterns. The transportation recommendations for the Damascus Master Plan area include four primary components:

- **Roadway Recommendations** focus on improving the efficiency of the two-lane roadway network through operational, design, and classification recommendations.
- **Pedestrian System Recommendations** that provide a dense network of sidewalks within the Town Center, with extensions to key civic destinations elsewhere in the Plan area.
- **Bikeway System Features** a network of shared-use pathways oriented toward the Town Center and Magruder Branch Trail, connection to area parks and the County trail systems, and recommendations to improve on-road cyclist accommodations along the arterial roadway network.
- **Transit Recommendations** addressed by including an additional park-and-ride lot to be located north of the Town Center to intercept longer distance commuters, and support further study and implementation of transit operations.

Approximately 60 percent of the traffic entering or leaving the Damascus Policy Area is through traffic, and about 40 percent is generated by local land uses. Based on the land use recommendations of this Plan, the Damascus Master Plan area is estimated to have a realistic long-range development potential for up to approximately 7,300 total households and 3,700 jobs. The additional growth is primarily located within the central Master Plan area.

## ROADWAY NETWORK AND CLASSIFICATIONS

Primary access routes to Damascus are on three state highways, MD 124, MD 108, and MD 27. The need to manage through commuter traffic is the most significant transportation issue facing area residents. The need to balance the needs of vehicular travel versus pedestrian and bicycle travel is the next most significant issue.

This Plan modifies the 1982 and 1993 Master Plan in several ways, although maintaining the basic policy direction. It removes two unbuilt primary residential roadways that would have required new stream valley crossings, and includes a classification of several previously unclassified roadways as either primary residential streets or country roads, reflecting their current function in the roadway network. Reflecting the concern of Damascus residents, specific design and operational treatments are suggested for further study and implementation including traffic signal warrant analyses, investigation of auxiliary turning lanes at intersections, and context-based design.

Context-based street design techniques will encourage slower speeds and added awareness of the presence of pedestrians in the Town Center and entry street segments of Ridge Road, Woodfield Road and Damascus Road. These emerging road design techniques promote road design that reflects intended traffic speeds, instinctively slowing vehicle speed. Drivers instinctively know from the visual cues such as narrower vehicle travel lanes, street trees, sidewalks, on-street parking, and curb extensions (or “bumpouts”) that they must be more careful and drive more slowly.

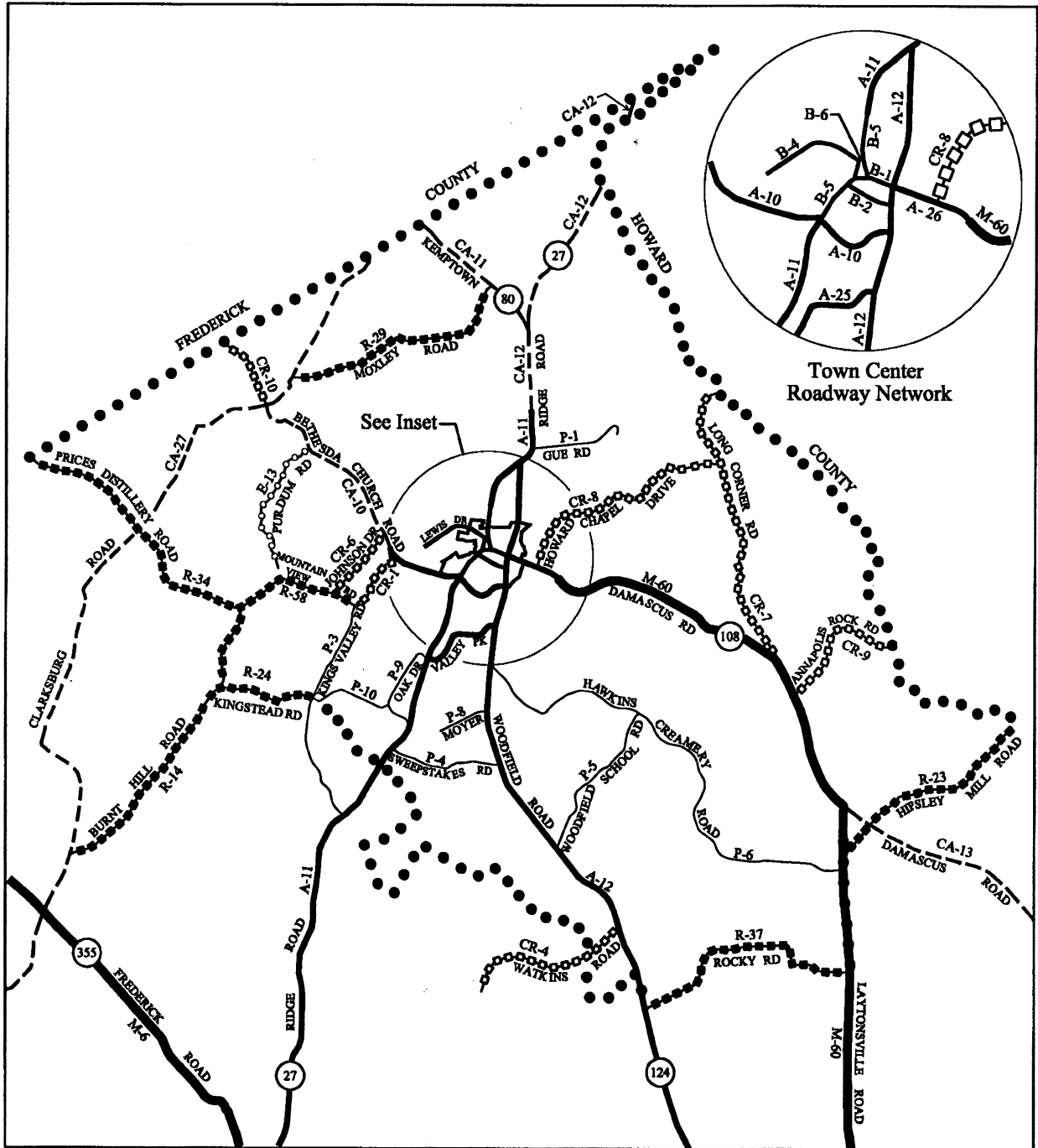
On local streets traffic-calming tools (such as speed humps and roundabouts) slow traffic at strategic locations and make the streets safer for pedestrians and bicyclists. These tools impede traffic flow only to slow its speed.

### **Town Center Streets**

This Plan recommends two initiatives in the Town Center to improve connectivity and access:

- **New Business Street** - This Plan recommends a business street connection (B-2) parallel to and south of Main Street connecting Ridge Road (MD 27) to Woodfield Road (MD 124). This street will provide access to the underutilized areas behind the buildings on the south side of Main Street. This street, envisioned as a small access lane, not a thoroughfare, replaces the proposed “Damascus Boulevard” discussed in prior Master Plans. It will also provide access to a planned trailhead within the Magruder Branch Stream Valley Park. This street should integrate a bikeway and sidewalks, and should be designed to be as narrow as possible due to environmental and grade constraints and be perceived as a “lane” rather than a boulevard. The recommended right-of-way for B-2 is 60 feet, but vehicle travel lanes should reflect the intended use and be narrow enough to ensure slow travel speeds.
- **Town Center Street Design** - This Plan supports development of a road design template for the following road segments in the Town Center to apply context-based design methodologies that give visual cues to entering motorists that they are entering a town area where slower traffic speeds are both posted and logical. They include:
  - Ridge Road from Oak Drive to the High School
  - Ridge Road from High Street to the A-12 Intersection
  - Woodfield Road from Valley Park/Oak Drive to Bethesda Church Road
  - Damascus Road from Howard Chapel Drive to the Woodfield Road Intersection

# Roadway Network Classifications



- Master Plan Area Boundary
- Major Highway (M-x)
- Arterial (A-x)
- Business Street (B-x)
- Primary Residential Road (P-x)
- Town Center
- Country Arterial (CA-x)
- Country Road (CR-x)
- ■ ■ ■ Rustic Road (R-x)
- ○ ○ ○ Exceptional Rustic Road (E-x)

## Street and Highway Classifications

Roadway		Limits	Minimum ROW (ft)	Travel Lanes **
<b>Major Highways</b>				
M-60	Damascus Road (MD 108)	2800' east of Woodfield Road (MD 124) to Laytonsville Road (MD 108)	120	2
M-60	Laytonsville Road (MD 108)	Damascus Road (MD 108/MD 650) to Rocky Road	120	2
<b>Arterials</b>				
A-10	Bethesda Church Road	Kings Valley Road to Woodfield Road (MD 124)	80	2
A-11	Ridge Road (MD 27)	Southern Plan Area boundary to Bethesda Church Road	100	2
A-11	Ridge Road (MD 27)	Bellison Road to a point 450' north of High Corner Street	100	2
A-12	Woodfield Road (MD 124) plus northern extension	Southern Plan Area boundary to Ridge Road (MD 27)	80	2
A-25	Valley Park Drive	Ridge Road (MD 27) to Woodfield Road (MD 124)	80 – 120	2
A-26	Damascus Road (MD 108)	Woodfield Road (MD 124) to 2,800' Eastward	80	2
<b>Primary Residential Roads</b>				
P-1	Gue Road	Ridge Road (MD 27) to 5,000 feet east of Howard Chapel Drive	70	2
P-3	Kings Valley Road	Southern Plan area boundary to Mountain View Road	70	2
P-4	Sweepstakes Road	Ridge Road (MD 27) to Woodfield Road (MD 124)	70	2
P-5	Woodfield School Road	Woodfield Road (MD 124) to Hawkins Creamery Road	70	2
P-6	Hawkins Creamery Road	Woodfield Road (MD 124) to Laytonsville Road (MD 108)	70	2
P-8	Moyer Road	Moyer Road Park to Woodfield Road (MD 124)	70	2
P-9	Oak Drive	Ridge Road (MD 27) to Ridge Road (MD 27)	70	2
P-10	Kingstead Road	Kings Valley Road to Oak Drive	70	2

Roadway		Limits	Minimum ROW (ft)	Travel Lanes **
<b>Rustic Roads</b>				
R-14	Burnt Hill Road	Southern Plan Area boundary to Prices Distillery Road	70	2
R-23	Hipsley Mill Road	Laytonsville Road (MD 108) to Howard County Line	70	2
R-24	Kingstead Road	Southern Plan Area boundary to Kings Valley Road	70	2
R-29	Moxley Road	Clarksburg Road to Kemptown Road (MD 80)	70	2
R-34	Prices Distillery Road	Frederick County Line to Mountain View/Purdum Road	70	2
R-37	Rocky Road	Woodfield Road (MD 124) to Laytonsville Road (MD 108)	70	2
R-58	Mountain View Road	Purdum/Prices Distillery Road to Kings Valley Road	70	2
<b>Exceptional Rustic Road</b>				
E-13	Purdum Road	Prices Distillery/Mt. View Road to Bethesda Church Road	80	2
<b>Country Arterials</b>				
CA-10	Bethesda Church Road	Clarksburg Road to Kings Valley Road	80	2
CA-11	Kemptown Road (MD 80)/MD 27	Frederick County Line to Ridge Road (MD 27)	80	2
CA-12	Ridge Road (MD 27)	Bellison Road to Howard County Line	100	2
CA-12	Ridge Road (MD 27)	Howard County Line to Frederick County Line	100	2
CA-13	Damascus Road (MD 650)	Laytonsville Road (MD 108) to Eastern Plan boundary	80	2
CA-27	Clarksburg Road	Southern Plan area boundary to Frederick County Line	80	2
<b>Country Roads</b>				
CR-1	Kings Valley Road	Mountain View Road to Bethesda Church Road	70	2
CR-4	Watkins Road	Southern Plan area Boundary to Woodfield Road (MD 124)	70	2
CR-6	Johnson Drive	Mountain View Road to Bethesda Church Road	70	2
CR-7	Long Corner Road	Damascus Road (MD 108) to Howard County Line	70	2

Roadway		Limits	Minimum ROW (ft)	Travel Lanes **
CR-8	Howard Chapel Drive	Damascus Road (MD 108) to Gue Road	70	2
CR-8	Gue Road	Howard Chapel Drive to Long Corner Road	70	2
CR-9	Annapolis Rock Road	Damascus Road (MD 108) to Howard County Line	70	2
CR-10	Bethesda Church Road	Clarksburg Road to Frederick County Line	70	2
<b><i>Business District Roads</i></b>				
B-1	Main Street (MD 108)	Woodfield Road (MD 124) to Ridge Road (MD 27)/Lewis Drive	80	3
B-2	Damascus Lane	Ridge Road (MD 27) to Woodfield Road (MD 124)	66	2
B-4	Lewis Drive	Ridge Road (MD 27) to 900' west of High Corner Street	80	2
B-5	Ridge Road (MD 27)	Bethesda Church Road to 450' north of High Corner Street	80	2
B-6	High Corner Street	Ridge Road (MD 27) to Lewis Drive	80	2

\*\*The number of planned through travel lanes for each segment does not include turning lanes, parking, acceleration, deceleration, or other purposes auxiliary to through travel.

### Road Classifications

Certain roads within the Master Plan are recommended for a change in their classification within the network to meet changed conditions or increased use.

- **Oak Drive** – Classify as a Primary Residential roadway (P-9) and realign to meet Valley Park Drive at Ridge Road. The road provides vehicular and pedestrian access to John T. Baker Middle School and the adjacent Recreation Center (completed 2004). A realignment of the northern intersection of Oak Drive and Ridge Road to meet Valley Park Drive would replace two offset “T” intersections with a single four-leg intersection, improving traffic operations and safety. This Plan recommends a study of this realignment, including evaluation of a pedestrian underpass of Ridge Road.
- **Kingstead Road** – Classify as a Primary Residential roadway (P-10) between Kings Valley Road and Oak Drive. Because this section does not support commercial land uses and is not needed for network connectivity between state highways, arterial classification is not warranted.
- **Woodfield School Road** – Classify as a Primary Residential roadway (P-5) between Woodfield Road (MD 124) and Hawkins Creamery Road. Previously unclassified, this roadway functions as a primary residential roadway and provides access to Woodfield Local Park.

- **P-2 Road** – The proposed Primary Residential roadway connection (P-2) between Woodfield Road Extended and Howard Chapel Drive is no longer viable due to environmental constraints associated with crossing the “Town Spring” tributary stream valley. The transportation network connectivity associated with P-2 is instead provided via Howard Chapel Drive (CR-8).
- **P-5 Road** – The proposed Primary Residential roadway connection (P-5) between Greenel Road and Johnson Farm Road is no longer viable due to topographic and development constraints in the area. This Plan removes the Primary Residential roadway classification from the built portions of these two roadways. The function of the primary roadway connection will be served by the classification of Woodfield School Road as the Primary Residential roadway (P-5) connection as previously described.

**Two Lane Road Policy**

This Master Plan recommends retaining the existing two-lane roadway network outside the Town Center to protect the rural and agricultural character of the Damascus area. The limitation on through travel lanes is not intended to preclude the implementation of spot safety and operational improvements such as turning lanes, acceleration/deceleration lanes or signalization.

**Rustic Roads**

Montgomery County's Rustic Roads Program preserves historic and scenic roads that reflect the County's agricultural character. The Program defines categories for rustic roads - Rustic, and Exceptional Rustic; and two Country Road classifications - Country Road, and Country Arterial. Rustic Roads generally carry local traffic and are designated based on surrounding land uses and natural features, historic value, and road characteristics. Country road and country arterial are used to classify roadways that have unique rural features but are not intended primarily for local use. The Rustic Roads Functional Master Plan included the following roads in the Damascus Master Plan area:

- **Rustic Roads:** Prices Distillery Road, Kingstead Road (segment), Moxley Road, Rocky Road, and Hipsley Mill Road
- **Interim Rustic Roads:** Mountain View Road, Johnson Drive, Purdum Road, and Long Corner Road
- **Country Roads:** Kings Valley Road
- **Country Arterial Roads:** Clarksburg Road, Kemptown Road, Ridge Road (north of Damascus), and Damascus Road (east of Damascus to Long Corner Road).

In February 2004, the County Council approved an amendment to the Rustic Roads Master Plan with the following designations for the Interim Rustic Roads in Damascus:

<i>Rustic Road:</i>	Mountain View Road
<i>Exceptional Rustic Road:</i>	Purdum Road
<i>Country Road:</i>	Johnson Drive and Long Corner Road

This Plan recommends three additional roads for classification as Country Roads reflecting their current function as traffic-carrying rural roadways connecting Damascus to Howard or Frederick Counties:

- **Howard Chapel Drive** – The full length of Howard Chapel Drive and the portion of Gue Road between Howard Chapel Drive and Long Corner Road are classified as a Country Road (CR-8).

- **Annapolis Rock Road** – Annapolis Rock Road is classified as a Country Road (CR-9) between Damascus Road (MD 108) and Howard County, at which point the roadway is designated a State Highway (MD 94).
- **Bethesda Church Road** – The segment of Bethesda Church Road between Clarksburg Road and Frederick County is classified as a Country Road (CR-10). Bethesda Church Road east of Clarksburg Road is classified as a Country Arterial.

### **Operational Improvements**

While specific operational recommendations are not often included in master plans, the centrality of traffic management issues to the Damascus community warrant their specific notice. The recommended improvements will almost certainly be warranted within the life of this Plan.

- Support turn lanes as needed in intersections to improve traffic flow
- Evaluate the design of subdivision entry/exit lanes to avoid unintended negative safety impacts to pedestrians or bicyclists
- Evaluate and support traffic signals when warranted throughout the Plan area. Expedite warrant analyses at the following locations when travel demand suggests warrants are likely to be met:
  - Ridge Road (MD 27) at Kemptown Road (MD 80)
  - Woodfield Road (MD 124) at Bethesda Church Road
  - Woodfield Road (MD 124) at Valley Park Drive
  - Ridge Road (MD 27) at Valley Park Drive

### **Safety Modifications**

Three roadway modifications are proposed to address safety concerns:

- Realign the northern end of Kings Valley Road (CR-1) (at Bethesda Church Road) to remove the existing reverse, or “dogleg” curve to improve traffic safety. Realignment design should be consistent with the Country Road classification.
- Evaluate the best design and routing for realigning the intersection of Ridge Road with Oak Drive and Valley Park Drive to eliminate the offset intersection.
- Realign the offset intersection of Kings Valley Road and Kingstead Road in conjunction with any proposed development of the Kingstead Farm. Intersection design should be consistent with the Rustic Road classification of Kingstead Road, including preservation of existing tree stands.

### **Through Commuter Traffic**

Community disruption related to heavy commuter traffic from Frederick, Carroll, and Howard Counties continues to be a major concern. This Plan supports the following two initiatives to address this concern:

- **Alternate Route Study** – This Master Plan recommends that within two years after the completion of Woodfield Road Extended (A-12), the M-NCPPC will begin an evaluation of current traffic conditions and work with the community to determine whether a Master Plan Amendment process is warranted to evaluate the need for a bypass type road.



A study of the long-term traffic load implications of growth patterns in the adjoining regional counties that are the major contributing factors in the continuing rise in through traffic in Damascus is needed as a prelude to a future bypass study. To ensure a timely process for the bypass evaluation, this Master Plan recommends that the County Council authorize and direct the Montgomery County Department of Public Works and Transportation to conduct a regional study within two years in conjunction with the M-NCPPC, State of Maryland, Howard County, Frederick County, and Carroll County.

- **Operational Improvements to Improve Through Traffic** - This Plan also recognizes that operational transportation improvements are needed, including auxiliary turning lanes and pedestrian and bicycling amenities, particularly along the portions of Ridge Road north of Woodfield Road Extended and south of Bethesda Church Road. This Plan recommends an increase in the recommended right-of-way on these portions of Ridge Road from 80 feet to 100 feet to improve flexibility in future roadway design treatments.

## **AIR TRANSPORTATION**

The Davis Airport is located in the southwest quadrant of the intersection of Laytonsville Road (MD 108) and Hawkins Creamery Road. This regional airport includes a single runway 2,000 feet in length and is one of Montgomery County's two public-use airports as established by the Maryland Aviation Administration. This Plan recognizes the airport as one element of the County's multi-modal transportation system.

## **BIKEWAY AND PEDESTRIAN IMPROVEMENTS**

Bikeway and pedestrian routes support the goal of increasing opportunities to provide convenient connections and encouraging walking. The bikeway classification table lists the recommended bikeway and sidewalk connections needed to create an interconnected system with the Magruder Branch Trail as the backbone of the trail system. Recommendations to meet these goals include:

### **Bikeways**

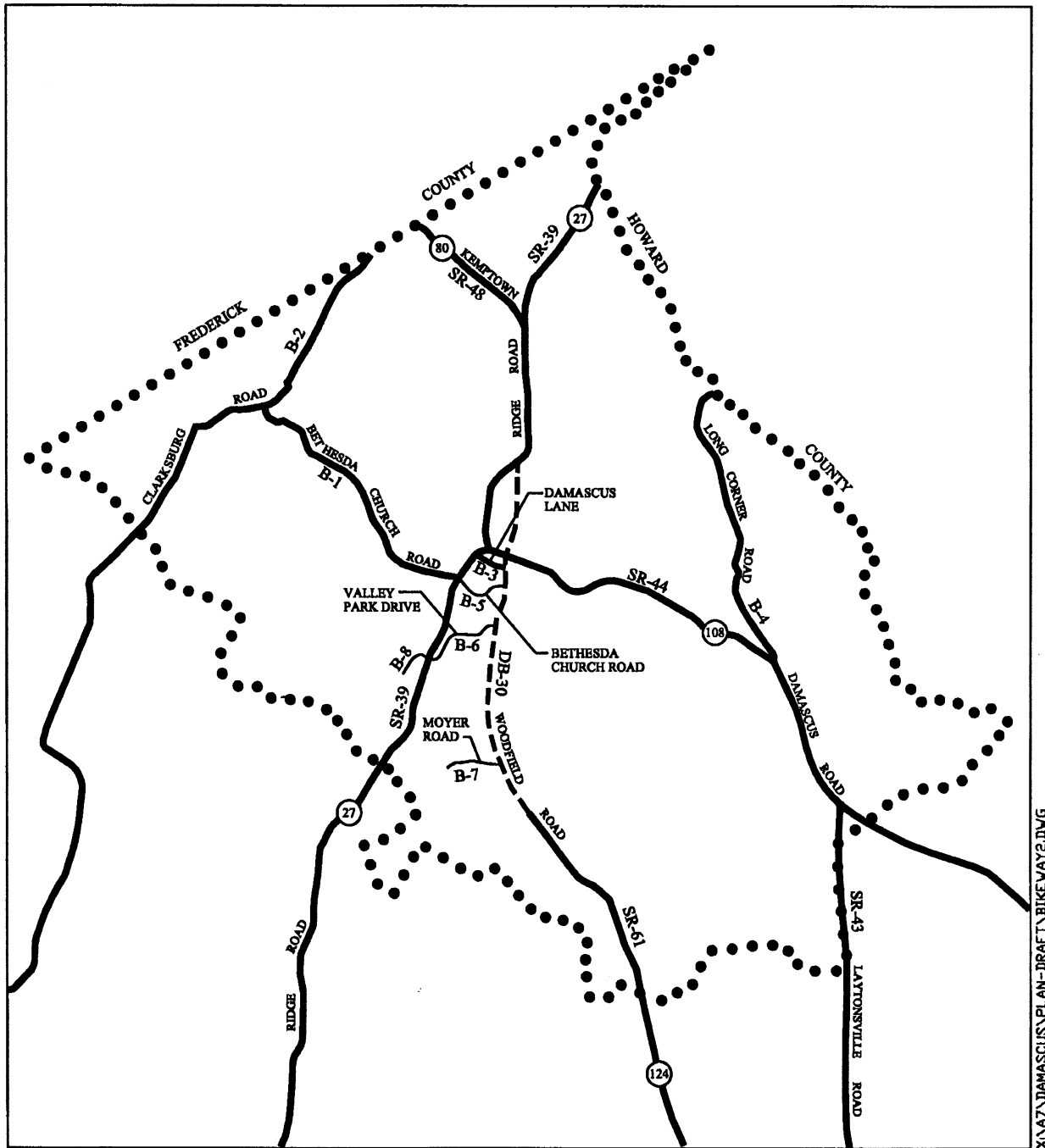
Revise the Montgomery County Road Code to include a roadway classification for Country Road and Country Arterial with and without bikeways and sidewalks.

### **Shared Use Facilities**

Implement sidewalk or shared-use path connections to key activity centers, including:

- Throughout the Town Center
- Along Ridge Road and Woodfield Road between the Town Center and Sweepstakes Road
- Along Bethesda Church Road, Valley Park Drive, and Sweepstakes Road, connecting to Ridge Road, Woodfield Road, and to the Magruder Branch Trail
- 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.

# Bikeway Network



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- ● ● ● Master Plan Area Boundary
- Dual Bikeway ( Class I and II or III )
- On Road Bikeway ( Class II or III )
- Shared Use ( Class I )



## Proposed Bikeway Classifications

Ref. No.	Name	Limits	Class Type	Comments
SR-61	Woodfield Road (MD 124) - Central	Southern Planning Area Boundary to Woodfield Elementary School	On-road bikeway (Class II or III)	Connection between Damascus and Gaithersburg
DB-30	Woodfield Road (MD 124) - North	Woodfield Elementary School to Ridge Road (MD 27)	Dual bikeway – shared use path (Class I) and on-road bikeway (Class II or III)	Shared-use path connects Damascus Town Center to key activity centers and links to Magruder Branch Trail
SR-39	Ridge Road (MD 27)	Southern Planning Area Boundary to Howard County Line	On-road bikeway (Class II or III)	Connection between Damascus and Germantown
SR-43	Laytonsville Road (MD 108)	Damascus Road (MD 650) to Town of Laytonsville	On-road bikeway (Class II or III)	Part of connection between Damascus and Olney/Laytonsville; needs shoulder improvements
SR-44	Damascus Road (MD 108)/(MD 650)	Ridge Road (MD 27) to Hipsley Mill Road	On-road bikeway (Class II or III)	Provides east-west connections in upper part of County, needs shoulder improvements
SR-48	Kemptown Road (MD 80)	Ridge Road (MD 27) to Frederick County Line	On-road bikeway (Class II or III)	Connects to a bike route in Frederick County
B-1	Bethesda Church Road	Ridge Road (MD 27) to Clarksburg Road	On-road bikeway (Class II or III)	Connection to Little Bennett Regional Park
B-2	Clarksburg Road	Frederick County Line to Prices Distillery Road	On-road bikeway (Class II or III)	Connection to Little Bennett Regional Park
B-3	Damascus Lane	Ridge Road (MD 27) to Woodfield Road (MD 124)	On-road bikeway (Class II or III)	Connection between Magruder Branch Trail and Ridge and Woodfield Roads
B-4	Long Corner Road	Howard County Line to Damascus Road (MD 108)	On-road bikeway (Class II or III)	Connection to Howard County
B-5	Bethesda Church Road	Ridge Road (MD 27) to Woodfield Road (MD 124)	Shared use path (Class I)	Connection between Magruder Branch Trail and Ridge and Woodfield Roads
B-6	Valley Park Drive	Ridge Road (MD 27) to Woodfield Road (MD124)	Shared use path (Class I)	Connection between Magruder Branch Trail and Ridge and Woodfield Roads
B-7	Moyer Road	Magruder Branch Trail to Woodfield Road (MD 124)	Shared use path (Class I)	Connection between Magruder Branch Trail and Woodfield Road
B-8	Oak Drive	Ridge Road (MD 27) to Baker Middle School	Shared use path (Class I)	Connection between Magruder Branch Trail and key activity centers on Oak Drive

Note: Reference Numbers beginning with SR and DB refer to bikeways in the Countywide Bikeways Functional Master Plan.

## **Pedestrian Access**

Implement the following pedestrian safety and access improvements:

- Consider context-based roadway designs to slow vehicular speeds and make streets safer for pedestrians. Such designs encourage slower speeds and added awareness of the presence of pedestrians. This Plan recommends tools such as visual cues at the gateways into the Town Center, narrower travel lanes, and street trees to enhance the pedestrian and bicycle environment.
- Provide safe and effective pedestrian crossings at current and future traffic signals along MD 27 and MD 124.
- Consider a below-grade pedestrian tunnel under Ridge Road (MD 27) at its intersection with Valley Park Drive/Oak Drive for pedestrian safety.

## **TRANSIT AND TRAVEL DEMAND MANAGEMENT**

Greater emphasis on public transit is necessary to increase the efficient use of roads and help reduce congestion. Since the Damascus Master Plan area is a low density residential area, fixed-guideway transitways are not feasible. This Master Plan supports implementation of the Corridor Cities Transitway such as rail transit or dedicated busways to and through Clarksburg and the Georgia Avenue Busway to Olney. Implementation of these two transit facilities in adjacent master plan areas will increase transit options for Damascus residents who commute downcounty. This Master Plan also recommends an inter-jurisdictional study of transit and para-transit opportunities to consider regional transit needs.

The goal of Transit and Travel Demand Management is to intercept the through traffic in Damascus and to support carpool and transit access for the Damascus residents. Better transit accessibility will help achieve that goal. Recommendations to achieve this goal include:

### **Park and Ride Lot(s)**

- Improve pedestrian access to the existing Park-and-ride lot at MD 108/MD 124.
- Create a new Park-and-ride lot in the vicinity of the MD 27 intersection with MD 80 to intercept external trips via transit service or rideshare.

### **Other Recommendations**

- Support transit and Travel Demand Management (TDM) services and policies:
  - Access to low-density neighborhoods
  - Kids Ride Free program
  - Commuter connections including a carpool matching service and employer policies supporting flex-time and telecommuting
- Support inter-jurisdictional study of transit and para-transit opportunities.
- Support implementation of Corridor Cities Transitway to and through Clarksburg; Georgia Avenue Busway to Olney, as these will be the closest fixed guideway facilities for Damascus area residents.
- Support evaluation and outreach efforts for current transit and Travel Demand Management (TDM) service and policies.
- Evaluate bus services and transit priority projects that enhance bus services. These planning activities should include consideration of bus priority treatments such as auxiliary lanes that may require additional right-of-way beyond that indicated in the Street and Highway Classifications table.
- Support implementation of improved transit facilities and amenities such as concrete pads, shelters, provision of real-time transit information, and transit priority treatments where appropriate.
- Study the creation of a Parking District.

