

BOARD OF SUPERVISORS  
COUNTY OF STAFFORD  
STAFFORD, VIRGINIA

RESOLUTION

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, Stafford County Administration Center, Stafford, Virginia, on the 16th day of April, 1996:

<u>MEMBERS:</u>	<u>VOTE:</u>
Linda V. Musselman, Chairman	Yes
Kenneth T. Mitchell, Vice Chairman	Yes
Alvin Y. Bandy	Absent
Ferris M. Belman, Sr.	Yes
Lindbergh A. Fritter	Yes
Robert C. Gibbons	Yes
Lyle Ray Smith	Yes

On motion of Mr. Gibbons, seconded by Mr. Smith, which carried by a vote of 6 to 0, the following was adopted:

A RESOLUTION WHICH ADOPTS THE BICYCLE/PEDESTRIAN FACILITIES PLAN AS A PART OF THE TRANSPORTATION PLAN COMPONENT OF THE COMPREHENSIVE PLAN

WHEREAS, the Board has determined that establishment of a bicycle/pedestrian trail program is desirable; and

WHEREAS, a Bicycle/Pedestrian Transportation System Committee was established to develop a Bicycle/Pedestrian Facilities Plan; and

WHEREAS, the Bicycle/Pedestrian Transportation System Committee developed a Bicycle/Pedestrian Facilities Plan which was referred to the Planning Commission for a recommendation by the Board; and

WHEREAS, the Comprehensive Plan Committee reviewed the Bicycle/Pedestrian Facilities Plan and forwarded it to the Planning Commission for its approval; and

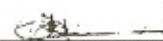
WHEREAS, the Planning Commission carefully considered the recommendations of the Committee and the testimony received at the public hearing; and

WHEREAS, the Planning Commission unanimously recommended the Bicycle/Pedestrian Facilities Plan for adoption by the Board; and

WHEREAS, the Board has carefully considered the recommendations of the Planning Commission, staff and the testimony received at the public hearing;

NOW, THEREFORE, BE IT RESOLVED by the Stafford County Board of Supervisors on this the 16th day of April, 1996, that the Bicycle/Pedestrian Facilities Plan be and it hereby is adopted as a part of the Transportation Plan component of the Stafford County Comprehensive Plan.

A Copy, teste:

  
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C. M. Williams, Jr.  
County Administrator

CMWJr:WCS:ek

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## 1. Introduction

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Cycling and walking are not currently perceived as major transportation alternatives in the County. The traditional suburban development pattern which separates residential uses, commercial uses and public facilities has inhibited the development of a bicycle and pedestrian transportation system in two ways. First, large areas of single uses, as opposed to larger areas of mixed use, tend to lengthen the distance between potential origins and destinations. Second, the relatively low density of residential development which is predominant in the County lengthens the distance between many potential origins and destinations. In either of these cases, the separation of uses discourages the use of bicycle and pedestrian facilities and encourages the use of automobiles.

However, overall development density has increased, and destination points such as schools and shopping centers have appeared on the landscape with greater frequency. As a result, County residents are able to perform at least some of their routine tasks, such as getting to school and shopping, within shorter distances of their homes.

Another factor in the under-utilization of walking and cycling as a mode of travel is the lack of bicycle and pedestrian facilities. A majority of the roads within the County do not provide adequate sight distance or pavement width for safe and enjoyable walking and cycling. Sidewalks have only been constructed in very limited areas, such as the Courthouse area, Falmouth, and new higher density subdivisions; however, even these facilities do not provide real access between uses. Outside of the County parks, walking and cycling are also not a safe option for recreational activity. This Plan provides recommendations intended to provide for the construction of bicycle and pedestrian facilities as a mode of transportation and recreation in a manner and place that is safely and practically integrated with the transportation network, thereby giving individuals an alternative to using their automobiles to reach their destinations.

This Plan is intended to design multi-use bicycle and pedestrian facilities in an effort to maximize the use of limited funds available. Most of the proposed facilities are designed to accommodate those individuals who desire an alternative transportation mode and those who seek recreational activity. Since bicycle and pedestrian activity is also regional by nature, the County intends to integrate the recommendations of this Plan with the planning efforts of the Fredericksburg Area Metropolitan Planning Organization (FAMPO).

In the context of fiscally responsible planning for public facilities, the recommendations of this Plan are offered as a starting point for further detailed study. Prior to implementation of any route, a feasibility study should be performed to determine the exact location and design of the proposed bicycle and pedestrian facilities based on physical and fiscal constraints.

## 2. Planning Process

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In February, 1993, the Board of Supervisors established the Pedestrian/Bicycle Transportation System Committee to establish the basic needs and objectives for a pedestrian/bicycle trail program. The Committee met several times over a number of months. Initial meetings included representatives from the Virginia Pedestrian/Bicycle Safety Team to inventory existing safety problems in the County and to propose improvements which address these problem areas. The Committee also developed goals and objectives and identified the existing bicycle/pedestrian opportunities and constraints in the County. Map A, "Opportunities for Bicycle and Pedestrian Facilities," depicts six general categories of sites identified by the Committee as points of interest. These include commuter parking lots, schools, public buildings, shopping centers, parks, and commuter rail stations. A majority of the specific sites are located within the County's designated Growth Area. The intent is to interconnect these places to each other and the surrounding community.

Although the Committee identified several potential areas for the establishment of bicycle and pedestrian facilities, field inspection revealed that many of the sites located in areas of existing development actually provide very limited opportunities for the development of pedestrian or bicycle facilities. Retrofitting some existing subdivisions, for example, would in many instances require the acquisition of strips of land from many individual property owners. Under these circumstances, the benefit of such actions might not outweigh the costs to property owners. The Committee has adopted a scaled down Plan which includes those facilities for which an opportunity exists to construct them. The Plan includes proposed cross sections for various bicycle and pedestrian facilities as an appendix.

### 3. Definitions and Standards

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#### *a. Definitions*

The Guide for Bicycle Routes (American Association of State Highway and Transportation Officials - AASHTO, 1974) identifies three types of bicycle trips:

1. **Commuting:** These are trips to work, or to schools outside of the immediate neighborhood. They may or may not be in conjunction with some other transportation mode. They are concentrated along desired lines between well-defined termini;
2. **Recreation:** These are trips for recreation outside of a neighborhood. Often, they are trips performed in conjunction with an automobile or other mode of transportation. In this case, the bicycle is transported to a separate bicycle facility where a relatively long recreation trip is continued by bicycle;
3. **Neighborhood:** These are short trips within the same neighborhood, often made by children for pleasure. They may be for travel to a neighborhood school, park or store but generally follow no particular route pattern. These trips do not occur in large numbers within a locality and they are not concentrated within a well-defined corridor.

The AASHTO Guide specifies that commuting trips generally do not exceed five miles, whereas recreational trips are generally not less than five miles, with a variety of vistas and riding experiences. Neighborhood trips have variable lengths, usually within a short distance of the point of origin, with pedestrian use also possible.

This Plan also provides for a fourth type of trip, defined as follows:

4. **Touring:** These are long trips which typically traverse the County. Touring routes are generally less constrained by terrain and topography than other types of routes, since the user tends to be the more serious cyclist. The development of touring routes should be coordinated with other jurisdictions as regional facilities.

Another important distinction to establish among bicycle/pedestrian routes is the type of facility being proposed. The AASHTO Guide describes the following facilities:

1. Bicycle Trails are located within the right-of-way of a roadway, but 20'-30' beyond the edge of pavement, preferably separated by some kind of protective, natural barrier;

2. Bicycle Lanes are dedicated for the exclusive use of bicyclists, delineated within the pavement area by striping or curbs;
3. Shared Roadways provide no separate area for bicycle traffic. Routes may be marked by posted signs or symbols.

This Plan will refer to the above facilities generally as bicycle routes.

### *b. Standards*

The Virginia Outdoors Plan sets forth the following standards for bicycle and hiking trails:

Bicycle trail:	1 mile / 1000 population
Hiking trail:	2 miles / 1000 population

Because bicycle trails are suitable for hiking use, the County should provide 1 mile per 1000 population hiking trail and an additional 1 mile per 1000 population bicycle trail.

Utilizing this standard and the 1990 Census (61,236 - population), Stafford County should provide a total of 124 miles of trails, consisting of 62 miles of hiking trails and an additional 62 miles of bicycle trails. In new development, one mile of trail should be constructed for every 330 residences, either provided internally, or as part of the nearest designated trail system under construction.

## 4. Existing Facilities

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### *a. Pedestrian Facilities*

Very limited sidewalk facilities are available in the County. Sidewalks are located next to roadways and connect adjoining uses in the Courthouse vicinity, in Chatham and in Falmouth. The Falmouth and Chatham Bridges have sidewalks on both sides. The single family detached residential subdivisions of Arbor Glen, Austin Ridge, Autumn Ridge, Brentwood Estates, Cardinal Forest, Devon Green, Elizabeth Park, England Run, Glenwood Forest, Hampton Oaks, Hunter Trail, Liberty Place, Oakridge Pointe, Oakbrooke, St. George's Estates, Spring Lake Farm, Stafford Lakes Village, Stonehill Estates, Stratford Place, and Whitson Ridge have some internal sidewalk areas. The Park Ridge subdivision has a trail system throughout. The other single family residential developments near Park Ridge do not have substantial sidewalk facilities. Most pedestrian activity occurs along roadways.

For new development, the Subdivision Ordinance requires sidewalks in townhouse, cluster subdivisions, and subdivisions with lots less than 10,000 square feet in size. Almost all existing townhouse developments have some sidewalks. Commercial and industrial developments, apartments, and public facilities typically have sidewalks separating building entrances and parking areas, although there is no County requirement for sidewalks with these uses.

Limited walking trails for recreational use are available at some of the parks in the County. The Fredericksburg-Stafford Park Authority has developed numerous trails through the woods it owns between Butler Road and River Road, near St. Clair Brooks and Pratt Parks. Similar trails exist at Curtis Park.

### *b. Bicycle facilities*

No bicycle trails or lanes currently exist in the County. A regional bicycle route (Route 1) traverses the County, although the signs are not continuous, and the route is not sufficiently safe.

## 5. Goals, Objectives and Strategies

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### *a. Goals*

Goal Six of the Stafford County Land Use Plan (1988) is to “Provide land for the future public and private recreational and open space needs of the community.” This can be accomplished through a combination of public and private investment.

Goal Eight of the Land Use Plan is to “Provide transportation systems which will meet the needs of the expanding industrial, commercial, and residential areas in the County.” In planning for clean air and congestion mitigation, the County must develop alternatives to the single occupant vehicle for basic transportation needs.

Together, these goals point to the development of pedestrian and bicycle paths for recreational and practical use. Therefore, the overall goal of this Plan is as follows:

*GOAL: Provide a network of bicycle and pedestrian paths to facilitate safe and enjoyable cycling and walking experiences for the purposes of both transportation and recreation.*

This goal can be achieved through an array of objectives and strategies for implementation.

### *b. Objectives and Strategies*

1. Provide bicycle and pedestrian facilities through major residential areas as an alternative transportation mode for connection to other nearby uses.
  - a. Identify major residential areas which lack bicycle and pedestrian facilities.
  - b. Identify adjacent uses, such as public facilities, parks, and commercial areas utilized by the general public to be connected by bicycle and pedestrian facilities to residential areas.
  - c. Design a bicycle and pedestrian transportation system to connect these areas, including the interconnection of bicycle and pedestrian facilities already in existence or planned to be constructed.

- d. Strengthen provisions in the Subdivision and Zoning Ordinances to require the construction of sidewalks and bicycle and pedestrian routes in residential and non-residential projects, including intersection crossings.
  - e. Encourage routes where trails and pathways are located to be included in an easement specifically designated for such purpose and legally established in perpetuity.
2. Provide bicycle and pedestrian facilities for recreational use.
    - a. Identify opportunities, such as existing utilities easements and abandoned rail lines, for establishment of bicycle and pedestrian facilities.
    - b. Identify existing natural corridors which could appropriately accommodate bicycle and pedestrian facilities.
    - c. Determine whether such segments can be connected to provide extended routes.
    - d. Coordinate with the regional bicycle planning efforts of the Fredericksburg Area Metropolitan Planning Organization.
3. Establish an implementation strategy for bicycle and pedestrian facilities.
    - a. Adopt an official map of desired bicycle and pedestrian facilities. This map should be used when planning for roadway improvements and when rezoning or subdividing property.
    - b. Coordinate with other agencies currently planning bicycle and pedestrian routes in the County.
    - c. Develop design standards for bicycle and pedestrian facilities, including encouraging the design and construction of these facilities in accordance with this Plan and in such a manner that limits the need for maintenance of the facilities.
    - d. Seek State and Federal funding for the construction of new bicycle and pedestrian routes.
    - e. Generate support among local homeowners' groups, businesses, cycling groups, and individuals interested in the expansion of cycling and walking opportunities in the County.
    - f. Encourage the School Board, Parks and Recreation, Homeowners Associations, and local businesses to establish or expand bicycle safety programs. Incorporate bicycle safety awareness into drivers education programs.
    - g. Encourage the construction of bicycle and pedestrian facilities in conjunction with the building of a development.

- h. Encourage bicycle and pedestrian facilities to be located with deference to the physical environment, including limiting construction in areas with major grade differentials or soil types that would discourage the intended use.
  - i. Recommend the development of a maintenance plan for trails, which clearly indicates the parties responsible to maintain the facilities and what maintenance activities should take place in a given time period to keep the facilities in operating order.
  - j. Establish a public information and education program to raise awareness of pedestrian and bicycle facilities and to encourage their use.
4. Design bicycle and pedestrian facilities such that vehicle trips are reduced and thereby roadway congestion and related vehicle emissions are reduced.
- a. Design routes to facilitate safe access between residential areas, public facilities, and parks.
  - b. Design routes to facilitate safe access between residential areas and nearby commercial areas.
  - c. Design routes to facilitate safe access between residential areas and transportation nodes such as commuter parking lots and the commuter rail stations. Provide adequate and safe bicycle storage facilities at these destination points.
  - d. Require sidewalks in areas designated for urban development.
  - e. Require pedestrian crossings at all major intersections.

## 6. Opportunities and Constraints

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### *a. Opportunities*

The natural and built environments in the County provide a variety of opportunities for the development of new pedestrian and bicycle routes.

Map B, "North Stafford Target Area," Map C, "Central Stafford Target Area," and Map D, "South Stafford Target Area" depict the locations of the target origins and destinations for pedestrian and bicycle facilities.

- a. **Commuter parking facilities.** More than half of the County's labor force commutes north for work on a daily basis. Riders of van pools, car pools, and commuter rail can park their vehicles at one of the five commuter parking lots in the County. The availability of pedestrian and bicycle routes may encourage people to reach their primary mode of commuting without using their automobiles. The five commuter lots are Warrenton Road (#1), Courthouse Road (#2), Staffordboro Boulevard (#3), Leeland Road Commuter Rail Station (#26), and Brooke Commuter Rail Station (#27).
- b. **Residential subdivisions.** Many areas of the County are characterized by suburban residential development, in which little or no cut-through traffic or competing uses are present. In these areas, many people already walk or ride bicycles in the roadway, even though they may not be able to travel significant distances. Residential subdivisions provide major points of origin. Target areas include the Eustace Road, Ferry Farm, and Brafferton Boulevard areas.
- c. **Schools and other public buildings.** Schools provide another major destination for pedestrians and cyclists. Some students attending one of the County's four middle schools or three secondary schools could cycle or walk to school on a daily basis. Students of elementary age are not generally considered old enough to safely ride or walk to school by themselves. Schools include North Stafford High School (#4), Stafford Senior High School (#5), Stafford Middle School (#6), Brooke Point High School (#7), Park Ridge Elementary School (#8), and Poole Middle School (#9). Other destination points include the Porter Library (#10) and the Courthouse (#28).

- d. **Concentrated nonresidential development.** Shopping and other commercial centers are frequently located within a reasonable walking or cycling distance of residential areas, but lack of inter-parcel connection inhibits the use of either of these modes to reach these destination points. Target areas include Chatham Square (#11), Woodlawn (#12), Ferry Farm (#13), Brafferton (#14), North Stafford Plaza (#15), and Bumgardner (#16).
- e. **Recreational areas.** The County's parks and tourist attractions provide logical points of destination for recreational cyclists and pedestrians. Target nodes include Woodlands Park (#17), Former Stafford Middle School (#18), Curtis Park (#19), Aquia Landing (#20), Willowmere District Park (#21), Cool Springs Park (#22), Fritter Park (#23), the proposed facility at Smith Lake (#24), and the Fredericksburg-Stafford Park Authority Parks (#25).
- f. **Natural and other corridors.** Many creeks and perennial streams traverse the County. In addition, Virginia Power, Commonwealth Gas, and the Department of Utilities hold utility easements. In some cases, these corridors could be improved for pedestrian or bicycle use. No abandoned railway segments are currently available for conversion to trails.

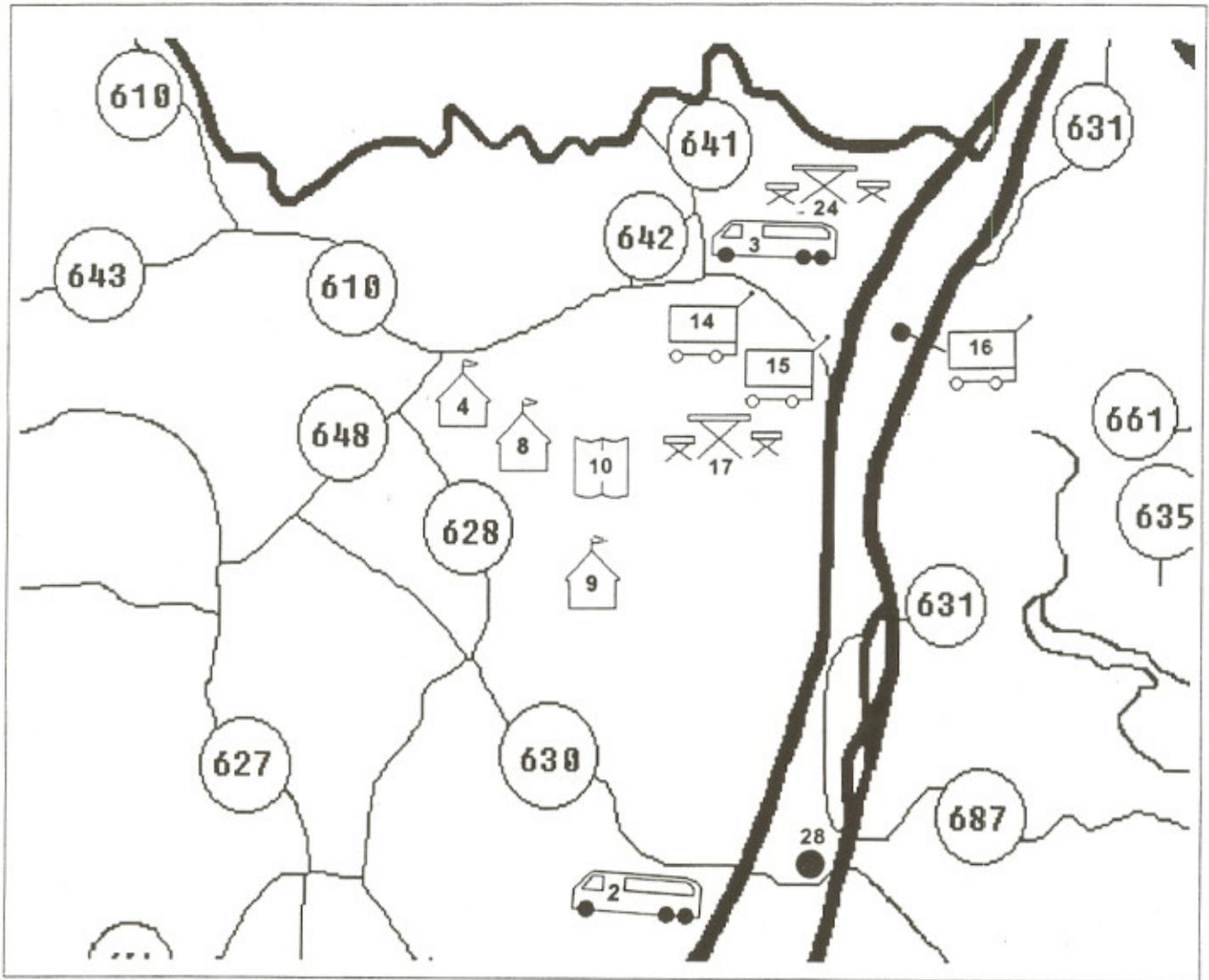
### ***b. Constraints***

The most obvious constraints to the development of pedestrian and bicycle routes relate to existing development and fiscal limitations. Retrofitting areas of existing development for routes would probably require some public investment, and in some instances may require the acquisition of easements or title to private property. The other way to implement new routes is to require new development to incorporate them into their development plans.

Natural features, such as topography, water, and wetlands may provide a constraint. Substantial portions of the County have grades in excess of 25 percent, which may be difficult for pedestrians or cyclists to negotiate. In addition, the County has numerous waterways and tidal and nontidal wetlands.

Existing ownership patterns also provide a constraint, especially in areas of residential development. Provision of new facilities in many instances would require the agreement of numerous individual property owners.

MAP B: North Stafford Target Area



COMMUTER PARKING LOT

- 2 Courthouse Road
- 3 Staffordboro Boulevard



SCHOOLS

- 4 North Stafford High School
- 8 Park Ridge Elementary School
- 9 Poole Middle School



LIBRARY

- 10 Porter Library



SHOPPING CENTERS

- 14 Brafferton
- 15 North Stafford Plaza
- 16 Bumgardner



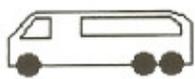
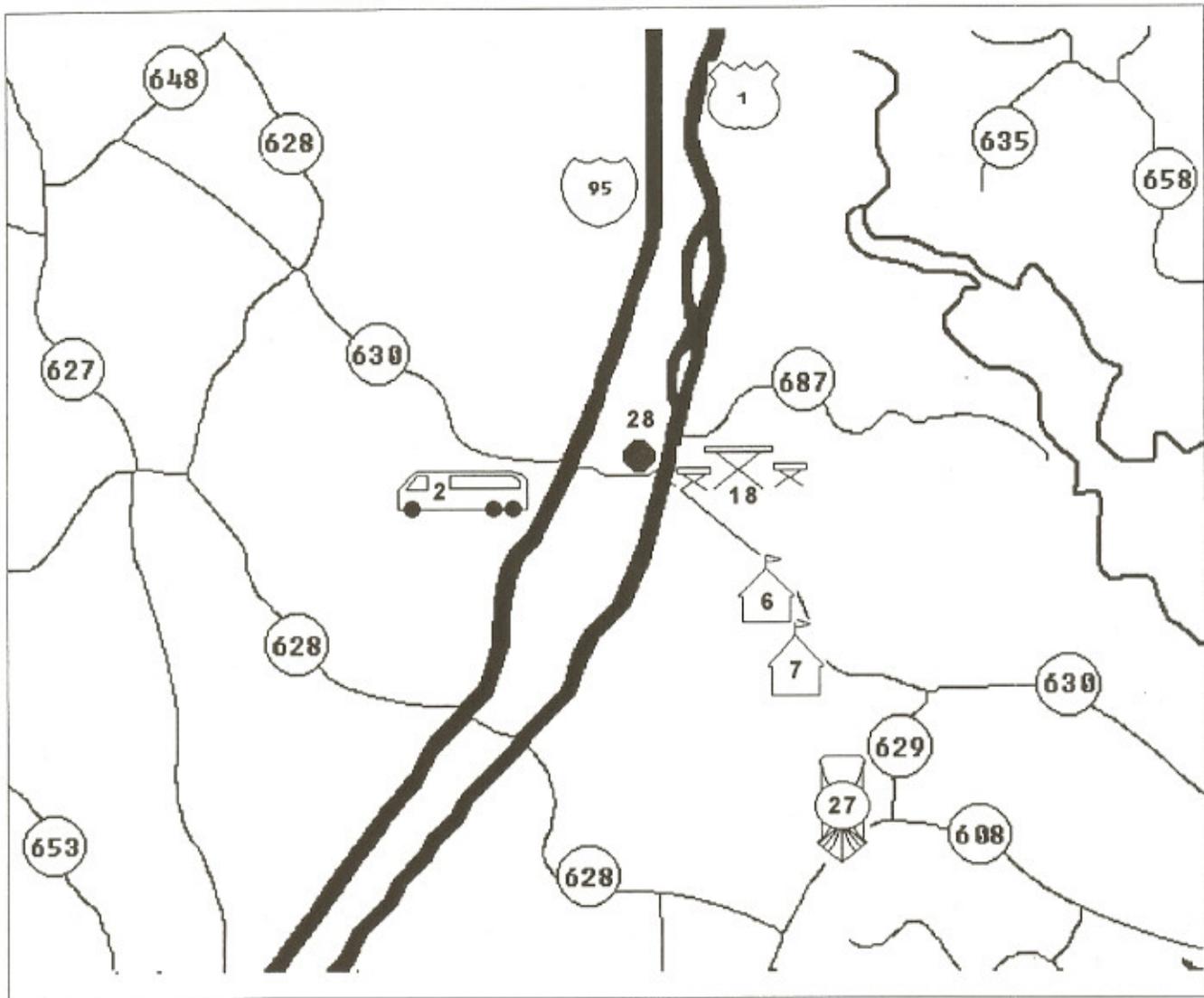
PARKS

- 17 Woodlands
- 24 SmithLake



- 28 Courthouse

MAP C: Central Stafford Target Area



COMMUTER  
PARKING LOT

2 Courthouse Road



PARKS

18 Former Stafford Middle School



SCHOOLS

6 Stafford Middle  
7 Brooke Point High School



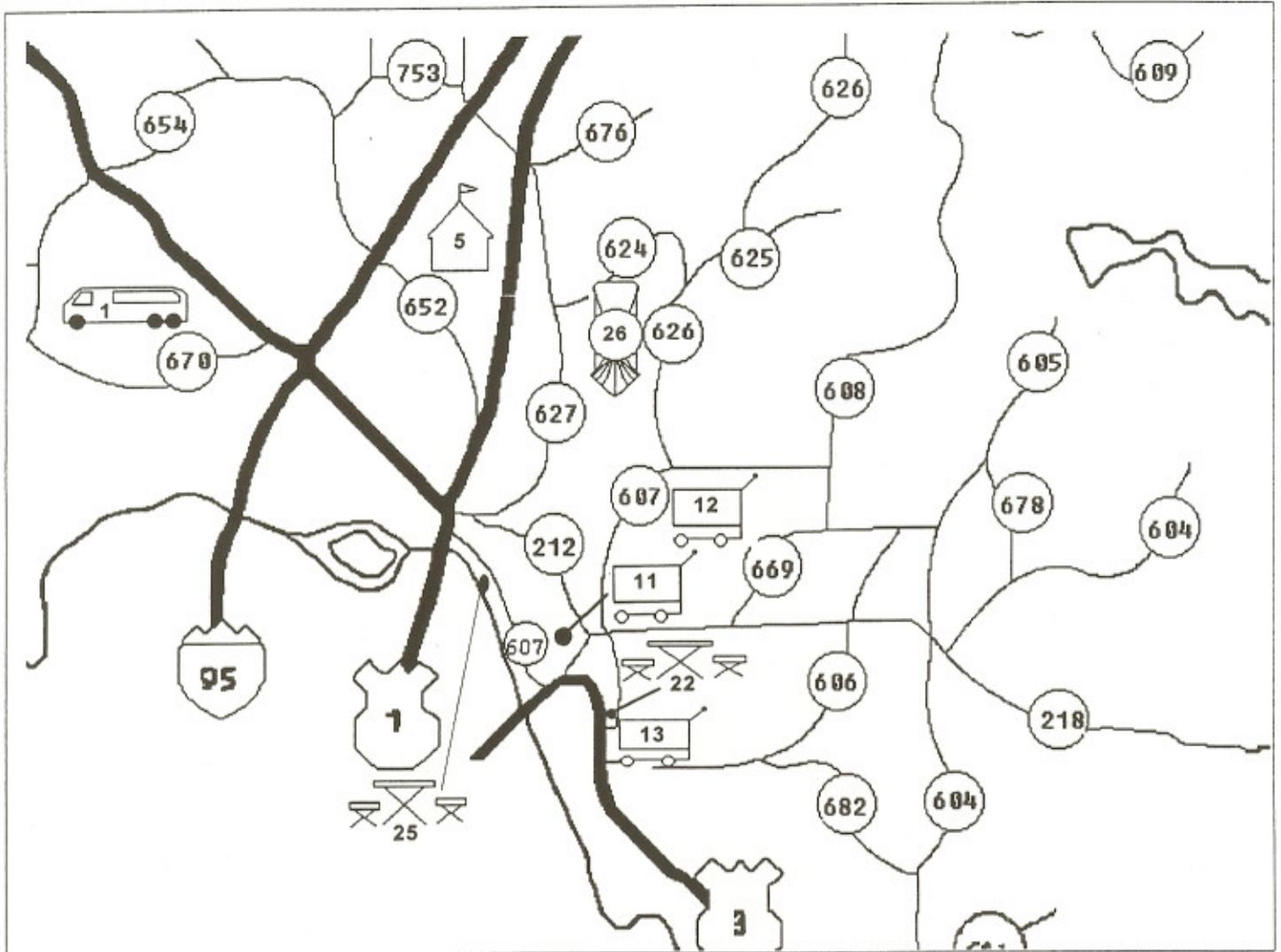
COMMUTER RAIL

27 Brooke



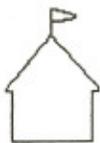
28 Courthouse

Map D: South Stafford Target Area



COMMUTER PARKING LOT

- 1 Warrenton Road



SCHOOLS

- 5 Stafford Senior High School



SHOPPING CENTERS

- 11 Chatham Square
- 12 Woodlawn
- 13 Ferry Farm



PARKS

- 22 Cool Springs Park
- 25 Fredericksburg - Stafford Park Authority Parks



COMMUTER RAIL

- 26 Leeland Road

## 7. Alternatives

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Two types of physical improvements will be necessary to provide adequate pedestrian and bicycle access. First, areas of substantial residential development in reasonable proximity to destination points must be retrofitted to encourage bicycle and pedestrian use. These projects typically require relatively small scale improvements to address specific access problems.

Second, bicycle and pedestrian facilities must be identified and standards developed to ensure the design and construction of new bicycle and pedestrian facilities in undeveloped areas of the County in an integrated manner. This Plan identifies trail standards which should be considered as a minimum when designing the appropriate trail. In addition, target areas for substantial new facilities must be identified, including locating facilities which provide recreational opportunities, primarily in connecting areas of development to the major recreational facilities in the County, such as Curtis Park and Aquia Landing.

Described below are facilities recommendations for both pedestrian and bicycle access. In general, pedestrian and bicycle uses are not highly compatible. The proposed commuting / recreational facilities are mainly intended for cyclists, while the proposed neighborhood facilities are mainly intended for pedestrians. However, some shared use of facilities is likely. For instance, joggers may wish to use the longer recreational facilities, while children on bicycles may wish to use neighborhood facilities. Neither walking nor cycling should be prohibited from either type of facility.

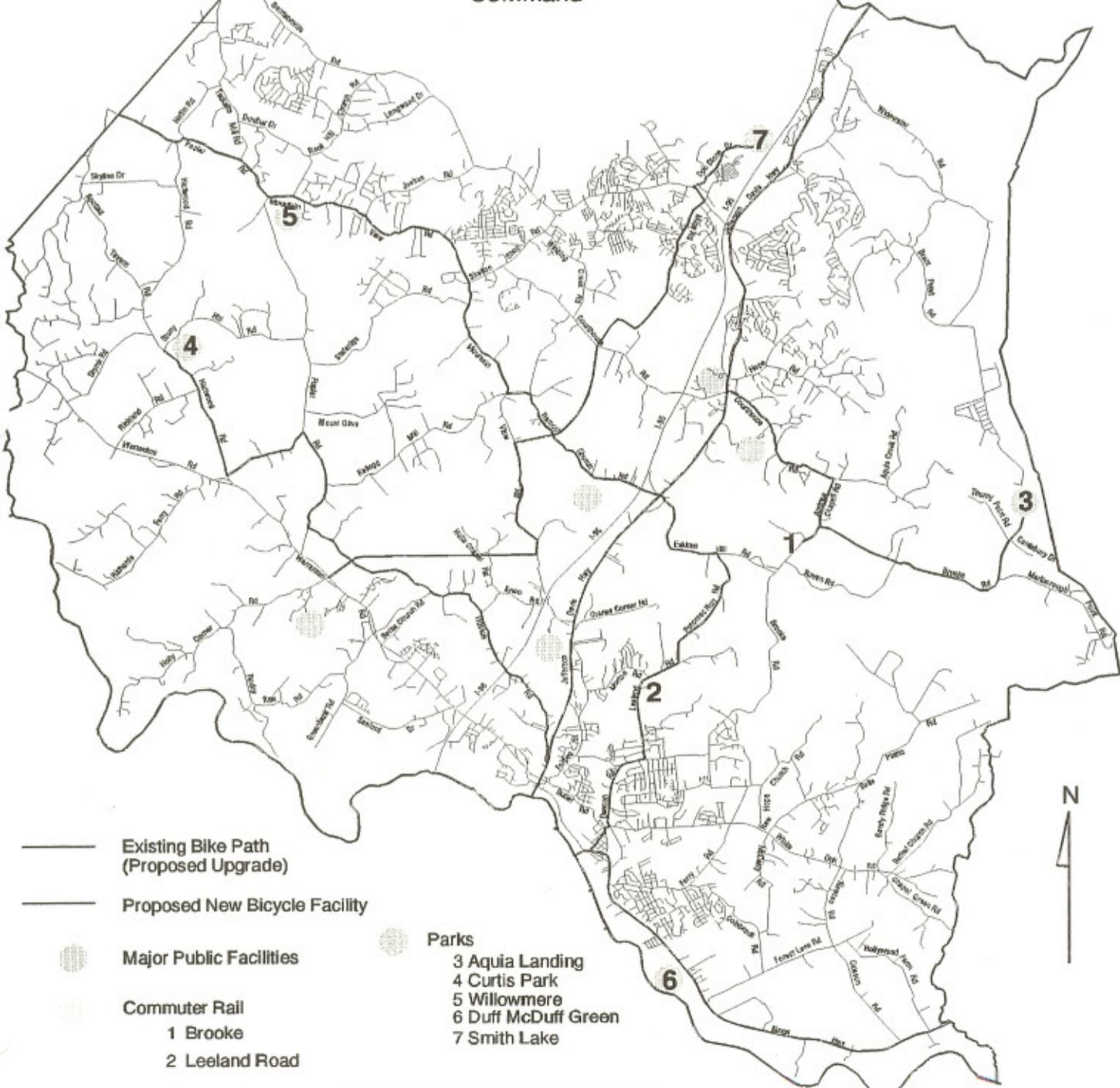
Although commuting / recreational and neighborhood facilities are discussed separately, they should not be considered mutually exclusive. Commuting / recreational and neighborhood facilities should tie in together to the greatest extent feasible, in order to provide a maximum variety of walking and cycling opportunities for potential users.

Regarding the design of bicycle facilities, the primary issue is whether to construct lanes within the road right of way or a trail outside of the right of way. The decision depends on many factors, including roadway characteristics (such as grade, pavement width, and traffic volumes), adjacent land uses, and overall safety. Experts disagree as to whether trails or lanes are safer. For some, "Cyclists fare best when they act and are treated as drivers of vehicles." Only about one-sixth of all cycling accidents involve a collision with a vehicle; by contrast, approximately one-half of all cycling accidents involve a fall off of one's bicycle when no vehicles are present. Others "see bike paths as a rider's best friend." (*Bicycling*, March, 1993, p. 75-78). It is beyond the scope of this Plan to determine whether all proposed facilities should be lanes or trails. In general, the design of new facilities should simultaneously minimize points of conflict, such as driveways and intersections with pedestrian and vehicle routes, and be appropriate to existing and proposed adjacent land uses.

The Virginia Department of Transportation (VDOT) has guidelines for bicycle lanes and trail facilities. In general, VDOT will construct and maintain a bicycle lane as part of a roadway improvement project when that facility appears on a bicycle or transportation plan for that locality. Bicycle trails, on the other hand, must be located in a separate right of way, and owned and maintained by the locality, property owners' association, or other appropriate organization. Appendix A describes VDOT standards and guidelines relating to the construction and maintenance of bicycle facilities. All projects proposed by this Plan should conform to these or the most current version of these standards and guidelines.

# Map E: Bicycle Trails

## Quantico Marine Corps Combat Development Command



- Existing Bike Path (Proposed Upgrade)
- Proposed New Bicycle Facility
- Major Public Facilities
- Parks
  - 3 Aquia Landing
  - 4 Curtis Park
  - 5 Willowmere
  - 6 Duff McDuff Green
  - 7 Smith Lake
- Commuter Rail
  - 1 Brooke
  - 2 Leeland Road

### ***a. Commuting/Recreational Facilities***

The major commuting destinations in the County at the present time are the Courthouse area, and the commercial areas along Warrenton Road and Garrisonville Road. Section b, "Neighborhood Facilities" (below) includes additional recommendations related to these areas. As residential and non-residential development in the County becomes more dense and more centralized, bicycle facilities between nodes will become more viable.

Recreational destinations include the major park facilities within the County. Recreational facilities should also connect to other jurisdictions, both to provide access to other recreational facilities, and to provide for longer rides.

The implementation of commuting and recreational facilities recommendations will rely to a great extent on the development process. The rezoning process should include identification of desired facility alignments through proposed project areas.

The alternatives depicted on the attached map indicate desired levels of access, not specific facility alignments. Developers of land in these general areas should explore including bicycle lanes or trails along new roadway segments as an alternative to constructing facilities on existing roadways, especially when the new alignment would keep bicyclists out of high volume traffic areas.

Map E, "Bicycle Trails," depicts the key destinations and the trails designed to provide access to them.

#### ***i. Bike Route 1***

*Existing Conditions:* Bike Route 1, a State planned facility, is the only existing bicycle route in the County. It traverses the County between the Chatham Bridge and the Fauquier County line at Poplar Road. The alignment is as follows:

From the Chatham Bridge, west on Kings Highway to its intersection with White Oak Road; then north along White Oak Road to its intersection with Deacon Road; then north and east along Deacon Road to its intersection with Leeland Road; then north and east along Leeland Road to its intersection with Potomac Run Road; then north along Potomac Run Road to its intersection with Eskimo Hill Road; then northwest along Eskimo Hill Road / American Legion Road / Ramoth Church Road to its intersection with Kellogg Mill Road; then west along Kellogg Mill Road to its intersection with Mountain View Road; then north and west along Mountain View Road to its intersection with Poplar Road; then west along Poplar Road to the Fauquier County line.

No roadway improvements facilitate bicycle travel along this route. Existing markers are not sufficient to travel this route without a map or previous knowledge of the alignment.

*Performance Standard:* Transform the existing Bike Route 1 into a well-marked, usable facility.

*Recommendations:*

1. Identify the alignment of this Route on the Transportation Plan.
2. Explore realigning this facility to roadways with fewer topographical, sight distance and pavement width constraints.
3. Ensure that the Route is adequately marked.
4. Seek improvements to the roadways on this Route to provide either a trail or lane, as feasible.

**ii. Cambridge Street / Jefferson Davis Highway**

*Existing Conditions:* Cambridge Street and Jefferson Davis Highway are the main north-south alternative to Interstate 95. The entire corridor is within the Growth Area, recommended for mainly residential and commercial uses in the northern and southern parts of the County, and light industrial uses south of the Courthouse.

The roadway is four-lane undivided throughout the County, except in the Stafford Wayside vicinity, north of the Courthouse. Where available, shoulder widths vary. Some curb and sidewalk segments exist in the Falmouth and Courthouse areas. The speed limit varies between 35 and 55 miles per hour. The roadway is mainly straight, but some steep topography may inhibit some cyclists from attempting to travel in this area. No bicycle facilities currently exist.

*Performance Standard:* Provide a primary north-south, inter-jurisdictional bicycle route.

*Recommendation:*

Incorporate the construction of bicycle lanes into planned roadway improvements in this corridor.

**iii. Garrisonville to Hartwood**

*Existing Conditions:* South of Garrisonville Road is primarily existing and planned single family residential subdivisions, with the primary roadway being Mine Road (a four-lane divided road), proposed to extend to Courthouse Road. South of Courthouse Road, the Augustine development is planned and will provide a roadway connection to the airport area. The Stafford Regional Airport will be located between Eskimo Hill Road and Mountain View Road. Further south, additional residential and commercial areas are planned, in addition to a satellite campus of Mary Washington College and a proposed branch of the Central Rappahannock Regional Library.

Several roadways provide north-south vehicular access west of Interstate 95, but many roadway segments are not currently considered safe for bicycle travel. Limited sight distance, narrow or missing shoulder areas, and steep topography restrict safe bicycle use. No bicycle facilities currently exist in this area.

*Performance Standard:* Provide an alternative north-south bicycle connection west of Interstate 95 to take advantage of current and proposed roadway projects, and to connect population centers in the north and south, the proposed airport, Mary Washington Graduate Campus, and recreational areas.

*Recommendations:*

1. The proposed alignment is as follows:

From the intersection of Garrisonville Road and Mine Road, south along existing and proposed Mine Road to its intersection with the proposed east-west road generally parallel to Courthouse Road; then west along the proposed road to its intersection with the proposed Augustine Parkway; then south along the Augustine Parkway to its intersection with Mountain View Road; then south along Mountain View Road to its intersection with the proposed Outer Connector or Truslow Road; then west along the Outer Connector or Truslow Road to its intersection with Warrenton Road.

This route should provide access to the proposed airport, the proposed Mary Washington College Campus, and the proposed branch of the Central Rappahannock Regional Library.

Include a spur off of this route to continue along Mountain View Road to its intersection with Jefferson Davis Highway, thereby providing access to Stafford High School and the proposed route along Jefferson Davis Highway.

2. Adjust the alignment of this route as necessary to take advantage of proposed additional roadway segments and new development proposals.

*iv. Falmouth / Hartwood: Cambridge Street to Curtis Park*

*Existing Conditions:* The Falmouth / Hartwood area, north of Warrenton Road, is primarily in residential and agricultural uses. As described above, several large residential and non-residential projects are proposed in this vicinity.

Several roadways provide east-west vehicular access west of Interstate 95 and north of Warrenton Road, but many roadway segments are not currently considered safe for bicycle travel. Limited sight distance, and narrow or missing shoulder areas restrict safe bicycle use. In addition, steep topography may inhibit some cyclists from attempting to travel in this area. No bicycle facilities currently exist in this area.

*Performance Standard:* Provide access from the north-south routes described above (#2 - Cambridge Street / Jefferson Davis Highway, #3 - Garrisonville to Hartwood) and the Hartwood / Falmouth vicinity to Curtis Park.

*Recommendations:*

1. The proposed alignment is as follows:

From the intersection of Truslow Road and Cambridge Street, west along Truslow Road to its intersection with Poplar Road; then north along Poplar Road to its intersection with Shackelford Well Road; then west along Shackelford Well Road to its intersection with Hartwood Road; then north along Hartwood Road to Curtis Park.

2. Adjust the alignment of this route as necessary to take advantage of proposed additional roadway segments and new development proposals.

*v. Courthouse to Brooke and Aquia Landing*

*Existing Conditions:* Existing development is not very intense, although the area closest to the Courthouse is designated for Urban Commercial and Suburban Residential use. Two new schools are located just off of Courthouse Road; these are Stafford Middle School and Brooke Point High School.

Brooke Road is primarily a narrow and winding road, with almost no shoulders in some areas; vehicles are directed to reduce travel speed through numerous curves. Andrew Chapel Road is mostly straight, but also narrow. Access to the commuter rail station is inhibited by the narrowness of the railway underpass and Brooke Road, as well as poor sight distance in both directions on Brooke Road.

The Virginia Department of Transportation (VDOT) is currently designing improvements to Courthouse Road.

*Performance Standard:* Provide safe bicycle access from the Courthouse area to Stafford Middle School and Brooke Point High School, the Brooke Commuter Rail Station, and Aquia Landing.

## *Stafford County*

### *Recommendations:*

1. Recommend VDOT incorporate a pedestrian and bicycle trail into the design for improvements to Courthouse Road between the Courthouse, Stafford Middle School, and Brooke Point High School.
2. Recommend VDOT incorporate a bicycle facility, as feasible, into the design for improvements to Courthouse Road east of Brooke Point High School to its intersection with Andrew Chapel Road to Brooke.
3. Recommend VDOT incorporate a bicycle facility, as feasible, into the design for improvements to Brooke Road between Brooke and Aquia Landing.
4. Develop standards for pedestrian and bicycle facilities to connect future residential development in this corridor to these facilities.

### *vi. Southeastern County*

*Existing conditions:* The existing population density east and south of Falmouth is relatively low. The Kings Highway corridor is planned for suburban residential, light industrial, and agricultural use. A majority of the White Oak Road corridor is planned for agricultural use. However, White Oak Road has some sight distance limitations and more variable topography than Kings Highway.

*Performance Standard:* Provide continuous, safe access from the Chatham Bridge to the King George County line.

### *Recommendation:*

1. The proposed alignment is as follows:  
  
From Ferry Farm, east along Kings Highway to the King George County line.
2. Provide additional connections as appropriate.
3. Encourage the continuation of the route into King George County.

## ***b. Neighborhood Facilities***

Opportunities exist to provide "neighborhood" facilities which improve access on a small scale. These facilities primarily perform two functions. First, they facilitate local bicycle and pedestrian trips. Second, in some instances, they provide local connections to the larger scale commuting / recreational facilities. The aim of these facilities is to reduce vehicle trips by providing a viable non-vehicular alternative.

### ***i. Garrisonville - North***

*Existing Conditions:* Several complementary uses exist on the north side of Garrisonville Road in the vicinity of Staffordboro Boulevard and Doc Stone Road. These uses include the Anne E. Moncure Elementary School, the commuter parking lot, several residential subdivisions, and a proposed park facility at Smith Lake. No pedestrian or bicycle facilities connect these uses. Much of the land along Doc Stone Road is undeveloped

*Performance Standard:* Provide both pedestrian and bicycle facilities among the school, commuter parking lot, residential subdivisions, and the proposed park facility at Smith Lake.

#### *Recommendations:*

1. Construct a pedestrian and bicycle facility on the west side of Staffordboro Boulevard from the residential subdivisions, through the commuter parking lot, to the Anne E. Moncure Elementary School.
2. Continue the pedestrian and bicycle facility from the school along Doc Stone Road to the proposed park facility at Smith Lake. Adjust the alignment as necessary to take advantage of proposed additional roadway segments and new development proposals.
3. Coordinate with the developers of the Stafford Perry Farm project to connect the proposed internal trail system to this route.

### ***ii. Garrisonville - South***

*Existing Conditions:* Almost no pedestrian or bicycle facilities are available at any point in the Garrisonville Road corridor. Most existing uses on Garrisonville Road are non-residential. Garrisonville Road and intersecting roadways provide access to many residential subdivisions.

*Performance Standard:* Design and implement small scale improvements to provide pedestrian and bicycle access between residential areas and nearby non-residential uses in order to eliminate the need for vehicular travel for some short distance trips and to limit bicycle and pedestrian on Garrisonville Road.

*Recommendations:*

1. Install a path along the east side of Brafferton Boulevard in order to provide access between Patriot's Landing and the Brafferton Shopping Center.
2. Improve the existing trail between Park Ridge Elementary School and North Stafford High School. Needed improvements include limited clearing and grading, and installation of trail markers.
3. Install a system of signs to identify a bicycle route through the residential subdivisions and adjoining areas which provides an alternative to Garrisonville Road for east-west travel. The route should extend generally from Park Ridge through Hampton Oaks, to the south of Garrisonville Road.
4. Install crosswalks (striping and signals) at strategic locations along Garrisonville Road.
5. Encourage all new commercial and residential uses in this area to incorporate pedestrian/bicycle facilities into their development designs.
6. On the west side of Eustace Road and Northampton Boulevard, construct a sidewalk to connect to existing sidewalks and trails in Park Ridge, Whitson Ridge, Hunter Trail. Also provide a connection to the Woodlands Pool.
7. Incorporate a trail or sidewalk into the design for improvements and extension of Mine Road.
8. Incorporate a trail along Eustace Road between Park Ridge and Poole Middle School.

**iii. Courthouse**

*Existing Conditions:* North of Courthouse Road, unbuffered sidewalks exist on the west side of Jefferson Davis Highway only in front of the Government Administration Complex, and on the east side, from the intersection of Jefferson Davis Highway and Courthouse Road, to an abrupt end in front of the Former Stafford Middle School, opposite Patriot Bank. Pedestrians tend to cross Jefferson Davis Highway between intersections, since the intersection at Hope Road is further north than most destination points, and the intersection at Courthouse Road does not allow for safe pedestrian crossing. On the west side of Jefferson Davis Highway, some pedestrians from the Stafford County Government Center walk through parking lots and vehicle travel ways to reach commercial uses on the same side of the street.

South of Courthouse Road, no substantial sidewalk facilities exist. Limited pedestrian activity occurs through parking areas and vehicle travel ways.

*Performance Standard:* Provide pedestrian access between the Stafford County Government Center and other existing and planned offices and nearby commercial uses on Jefferson Davis Highway and Courthouse Road.

*Recommendations:*

1. Provide a buffered sidewalk along the south side of Courthouse Road from Wyche Road to a point opposite the entrance driveway for the Courthouse. Reduce the speed limit to 35 m.p.h., and install signs to alert drivers that pedestrians are present. Paint a crosswalk to facilitate access from the Stafford County Government Center to the sidewalk facility. Coordinate with Courthouse Road improvements and commercial development.
2. Install pedestrian signals and striping for crosswalks in all four directions at the intersection of Courthouse Road and Jefferson Davis Highway.
3. Install the missing unbuffered sidewalk segment in front of the Former Stafford Middle School on Jefferson Davis Highway and on Hope Road between its intersection with Jefferson Davis Highway and the school entrance. Install pedestrian signals and striping for crosswalks in all four directions at the intersection of Jefferson Davis Highway and Hope Road.
4. On the west side of Jefferson Davis Highway, north of Courthouse Road, establish a pedestrian facility to connect the Stafford County Government Center with the intersection of Jefferson Davis Highway and Hope Road.
5. South of Courthouse Road, install sidewalk facilities on the west side of Jefferson Davis Highway from its intersection with Courthouse Road to Paradise Court, which serves as the entrance to Paradise Estates. (Beyond this point to the south, the speed limit is 55 m.p.h., and not considered safe for pedestrian access).

*iv. Courthouse to Stafford Middle School and Brooke Point High School*

*Existing Conditions:* Unbuffered sidewalk exists on the north side of Courthouse Road from its intersection with Jefferson Davis Highway to Stafford Elementary School. Existing development is not very intense, although the area closest to the Courthouse is designated for Urban Commercial and Suburban Residential use. Two new schools are located just off of Courthouse Road; these are Stafford Middle School and Brooke Point High School.

The Virginia Department of Transportation is currently designing improvements to Courthouse Road.

## *Stafford County*

*Performance Standard:* Provide safe pedestrian and bicycle access from the Courthouse area to Stafford Middle School and Brooke Point High School.

### *Recommendations:*

1. Recommend VDOT incorporate a pedestrian and bicycle trail into the design for improvements to Courthouse Road between the Courthouse, Stafford Middle School, and Brooke Point High School.
2. Develop standards for pedestrian and bicycle facilities to connect future residential development in this corridor to these facilities.
3. Improve pedestrian crossings with signals and striping, as appropriate.

### *v. Brooke*

*Existing Conditions:* Brooke is a sparsely developed, crossroads community. The Virginia Railway Express opened a commuter rail station at Brooke in July, 1992. Almost no development activity has accompanied the commencement of commuter rail service.

The County, in cooperation with the Potomac and Rappahannock Transportation Commission (PRTC) and the Virginia Department of Rail and Public Transportation (VDR&PT), undertook a study of the Brooke area to determine the opportunities and constraints associated with development of the community, and to make some general land use recommendations. The draft final report points to the development of a pedestrian oriented, mixed-use community center.

*Performance Standard:* Provide pedestrian facilities in the Brooke area to serve commuter rail riders, to encourage economic development in the community, and to develop a sense of place around the rail station.

### *Recommendation:*

Once finalized, incorporate the findings of the Brooke study, relative to pedestrian access, into this Plan.

### *vi. Warrenton Road Corridor - Interstate 95 to GEICO/Stafford Lakes*

*Existing Conditions:* This corridor is designated for Urban Commercial and Light Industrial uses. Existing uses near Interstate 95 include mainly lodging and eating facilities. Very poor pedestrian access is available between uses; in some instances, pedestrian access is inhibited by ditches and fences. Several tracts of land are undeveloped.

*Performance Standard:* Facilitate pedestrian access between adjacent compatible uses, such as lodging facilities, offices, restaurants, and the commuter parking lot.

*Recommendations:*

1. Establish a bicycle lane along Warrenton Road, outside of the existing edge of pavement.
2. Design and construct inter-parcel connections in areas of existing development.
3. Develop standards which require new development to extend sidewalk facilities (or other pedestrian access) for new inter-parcel connections.
4. Improve pedestrian crossings with signals and striping, as appropriate.

**vii. Falmouth**

*Existing Facilities:* Limited sidewalk facilities exist in the lower Falmouth area, providing some connection between uses. These segments are located on Washington Street, West Cambridge Street, Cambridge Street, Carter Street, and Butler Road. Many segments are in poor condition. No sidewalks exist on King Street or Gordon Street.

*Performance Standard:* Provide continuous pedestrian access throughout Falmouth, connecting existing non-residential uses, and complementing the parking facility proposals of the draft Falmouth Plan.

*Recommendations:*

1. On the north side of Washington Street, correct the alignment of the existing sidewalk at the bridge over Falls Run and widen the existing sidewalk at its intersection with West Cambridge Street. On the south side of Washington Street, construct a new sidewalk facility from its intersection with Ingleside Drive to the entrance of Belmont.
2. Extend the existing sidewalk on the west side of West Cambridge Street (north of Washington Street) to the entrance of the Simpson Realty office. Construct a new sidewalk facility on the east side of West Cambridge Street between Cambridge Street and King Street. Install safety striping and lighting, and make other improvements as necessary on the stairs between Cambridge Street and West Cambridge Street.

3. Install a pedestrian crosswalk across West Cambridge Street at its intersection with King Street. Provide a pedestrian facility on at least one side of King Street from its intersection with West Cambridge Street to its intersection with Gordon Street.
4. Coordinate with the Fredericksburg-Stafford Park Authority to connect with the trail system planned for the river corridor.
5. Install a pedestrian crosswalk across Cambridge Street at its intersections with Carter Street and Butler Road.
6. Construct a sidewalk along the south and east side of the length of Carter Street, ensuring access to the Hobbie School and Union Church.
7. Extend the existing sidewalk on the north side of Butler Road east from Jefferson National Bank to Colonial Avenue.
8. Construct a sidewalk along the length of one side of Colonial Avenue.
9. Construct a sidewalk along the length of one side of Forbes Street between Carter Street and Cambridge Street.

**viii. Chatham**

*Existing Conditions:* Existing development in the Chatham area includes both residential and non-residential uses. Sidewalks exist on both sides of White Oak Road.

*Performance Standard:* Provide a connection from Fredericksburg and the proposed Park Authority trail system to Ferry Farm. Recommend all new commercial and residential uses incorporate bicycle / pedestrian access alternatives.

*Recommendations:*

1. Recommend VDOT incorporate a pedestrian and bicycle trail into the design for any future improvements to the Chatham Bridge.
2. Construct a path on the south and west side of Kings Highway from Chatham Bridge to its intersection with Naomi Road. Continue the path or lane along the south side of Naomi Road to its southern intersection with Kings Highway. Continue a path along the west side of Kings Highway to Ferry Farm.

3. Encourage all new commercial and residential uses to incorporate pedestrian/bicycle facilities into their development designs.
4. Support the proposed Fredericksburg-Stafford Park Authority trail system.

***ix. River Road***

*Existing Conditions:* Several destination points are located along River Road, southeast of Falmouth. These include St. Clair Brooks Memorial Park, John Lee Pratt Memorial Park, Falmouth Waterfront Park, and Chatham Manor. In addition, the YMCA property is directly adjacent to Pratt Park, on Butler Road. None of these facilities is operated directly by the County. Some walking trails exist, and access between adjacent park properties is generally uninhibited. The Fredericksburg-Stafford Park Authority has planned and is pursuing implementation of a trail in this corridor. (A subsequent phase of this project completes a loop crossing both bridges, meeting at Old Mill Park in the City of Fredericksburg.)

*Performance Standard:* Enhance access between the parks and open space areas in the River Road corridor.

*Recommendation:*

Support the establishment of a trail system through the parks and open space areas along River Road, as proposed by the Fredericksburg-Stafford Park Authority.

## 8. Recommended Amendments to the Subdivision and Zoning Ordinances

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Standards must be developed to ensure that the design and construction of new bicycle and pedestrian facilities in undeveloped areas of the County take place in an integrated manner. In addition, implementation of many of the routes described above will rely on the cooperation of developers of currently vacant land.

### *a. Subdivision Ordinance*

#### DIVISION 5. CURB, GUTTER AND SIDEWALKS

##### Sec. 22-221. Where required.

(d) Where the Comprehensive Plan indicates a bicycle/pedestrian way is proposed for the area to be subdivided, the subdivider shall provide a permanent easement at least ten (10) feet in width. Location and width of the easement shall be approved by the agent and shown on all required subdivision plans.

##### Sec. 22-223. Pedestrian and bicycle way.

The agent may approve the location of a pedestrian and bicycle way other than in a street right-of-way in a subdivision where such pedestrian and bicycle way shall be maintained by a homeowners association. The pedestrian and bicycle way shall be located in a permanent easement at least ~~eight (8)~~ ten (10) feet in width and all parts of such pedestrian and bicycle way shall be visible from streets or other public areas, and shall be constructed to VDOT and/or County standards.

***b. Zoning Ordinance***

**ARTICLE XIV. SITE PLANS**

**Sec. 28-249. Contents of site development plans.**

*(c) Final site development plans.*

(18) Location of all pedestrian access facilities to the structure(s).

(19) A through pedestrian way to adjoining residential and non-residential parcels to provide continuous access.

## 9. Implementation Strategies

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1. Prioritize the implementation of this Plan based on the following criteria:
  - a. Safety concerns
  - b. Minimum disruption to existing development
  - c. Cost benefit analysis
  - d. Demand

Implementation should occur in phases.

2. Develop standards for the Zoning and Subdivision Ordinances which require appropriate facilities. Standards should require facilities by roadway type and/or category, as well as connections between specified types of uses.
3. Continue to convene the Pedestrian/Bicycle Transportation System Committee to advise the Board of Supervisors on matters related to pedestrian and bicycle facilities in the County.
4. Explore the feasibility of more creative implementation strategies, such as user fees, a trust fund for tax-deductible contributions, and fund-raising events.
5. Coordinate with the School Board to provide safe bicycle and pedestrian access to new facilities.
6. Inventory and map open space available throughout the County in order to better visualize opportunities associated with these areas.
7. Coordinate with developers and other private interests to implement this Plan.
8. Seek State funding for the highest priority projects. Explore the feasibility of applying for funding through VDOT's Recreational Access Program (see Appendix B), as well as the Revenue Sharing program.
9. Monitor VDOT road design and construction priorities and request the incorporation of pedestrian and bicycle facilities whenever feasible.
10. Seek Federal funding for the highest priority projects through the Enhancement category of the Surface Transportation Program (STP).

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American Association of State Highway and Transportation Officials. Guide for Bicycle Routes. Washington, D.C.: American Association of State Highway and Transportation Officials, 1974.

Drake, Geoff. "The Guru of Gridlock." Bicycling, March, 1993, pp. 75-78.

Virginia Department of Conservation and Recreation. Virginia Outdoors Plan. Richmond, Virginia: Virginia Department of Conservation and Recreation, 1989.

Appendix A:

**VDOT Standards and Guidelines  
for the Construction and Maintenance  
of Bicycle Facilities**

## VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

*LOCATION & DESIGN DIVISION*

## INSTRUCTIONAL &amp; INFORMATION MEMORANDUM

GENERAL SUBJECT: Bicycle Facilities		NUMBER: LD-83(D)148
SPECIFIC SUBJECT: General Guide Lines for Bicycle Lanes and Paths		DATE: August 15, 1983
DIRECTED TO:		SUPERSEDES:
		SIGNATURE: <i>J. M. Shearer Jr.</i>

## POLICY AND PROCEDURE

The Department Policy Memorandum, "Control and Use of Right of Way and Adjacent Lands-Bicycle Facilities", Number DPM 4-33, dated July 23, 1981, established guidelines for bicycle facilities.

Local governments are encouraged to develop bicycle facilities on a local and regional basis in order to satisfy the demands within each geographic area. The Department's participation in bicycle facilities is principally oriented toward facilities that may be constructed with the roadway improvement as incidental features of highway construction projects.

Bicycle facilities constructed for recreational purposes will be considered by the Department only when jointly developed by the Department and the Commission of Outdoor Recreation as a recreational access facility. The Department will participate in comprehensive bicycle facility planning in urban areas over 50,000 population as a part of the 3-C process. In urban areas under 50,000 population, the Department will assist a local government in developing a comprehensive bikeway plan when requested.

The Department may financially participate in the construction of a bicycle facility where the following conditions are satisfied:

- (a) The facility will not impair the safety of the motorist, bicyclist, or pedestrian.
- (b) The facility will be accessible to users and will form a segment located and designed pursuant to an overall plan.
- (c) It is reasonably expected that the facility will have sufficient use in relation to cost to justify expenditure of public funds in its construction and maintenance.

- (d) Facility plans must be approved by the affected local governments prior to any official implementation by the Department.
- (e) The Department will initiate bicycle facility construction only at the request of local governmental agencies. This request must satisfy the governing criteria.

The Department may construct bicycle facilities concurrently with highway construction projects on new locations and/or improvements to existing facilities when officially requested and in accordance with the general guidelines under the following conditions:

- (a) The facility is part of an overall plan recognized by the requesting local government.
- (b) It is reasonably expected that the facility will have sufficient use in relation to cost to justify its construction and maintenance.
- (c) In urban areas, the cities and towns will be required to financially participate in the same amount as they do for urban highway or street projects.
- (d) In counties or towns where the Department maintains the streets and highways, participation in the cost of construction of bicycle facilities, including right of way, will be in the same amount as for sidewalks.
- (e) Highway construction projects may include bicycle access to recreational areas if jointly developed in accordance with policy adopted by the Department and the Commission of Outdoor Recreation.

In some instances, bicycle facilities may be routed over existing facilities which are not planned for expansion. In these cases, these facilities are an operational feature and usually result in the identification of a bike lane, restriction of parking, or some other physical modification to accommodate bicycle travel. It is necessary to coordinate with the District Traffic Engineer, the District Engineer, the Transportation Planning Engineer, and appropriate Divisions within the Central Office to assure agreement on the method of treatment for a bikeway over an existing route.

When bicycle facilities are considered as a part of the total development of a large tract of property and the local government requires bikeways in new developments, the following conditions must be satisfied:

- (a) The entire plan for the development must be reviewed and approved by the local government prior to final approval by the Department. Appropriate analyses must be made, and communication regarding the resolution of bicycle facility systems must be carried on between the Resident Engineer, District Traffic Engineer, and the Transportation Planning Engineer.

- (b) On major arterials identified in the site plan, which are usually divided facilities with four or more lanes, a bike trail (path) may be incorporated into the development parallel to but off of the right of way dedicated for street purposes. The maintenance and the responsibility for operating the bike trail (path) would fall on the owners which would be either the county, the developer, or a corporation with the responsibility of maintenance of the common land of the development and not the responsibility of the Department. The right of way will be exclusive of the road right of way; thus, future changes and/or modifications in the bike trail (path) would not be the responsibility of the Department.

When bicycle facilities are constructed as highway construction projects or derived from an existing road, the maintenance of such facilities will be the responsibility of the Department, as a part of the adjacent road, except for snow and ice removal.

#### LOCATION AND DESIGN

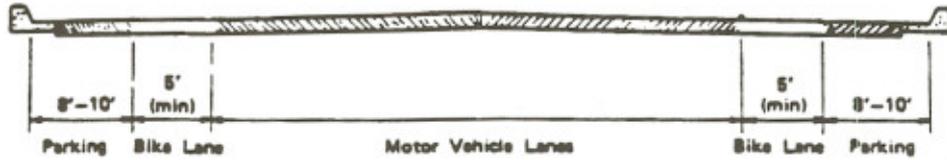
The controlling feature in the design of every bicycle facility is its location, whether it is on the roadway or on an independent alignment. Roadway improvements such as bicycle lanes depend on roadway's design. Bicycle paths located on independent alignment depend on many factors, including the performance capabilities of the bicyclist and the bicycle. Guidelines to assist in the development of plans for the design of bicycle lanes and bicycle paths with roadway improvements and separate paths have been taken from, "Guide For Development of New Bicycle Facilities", dated 1981, published by AASHTO.

#### Bicycle Lanes:

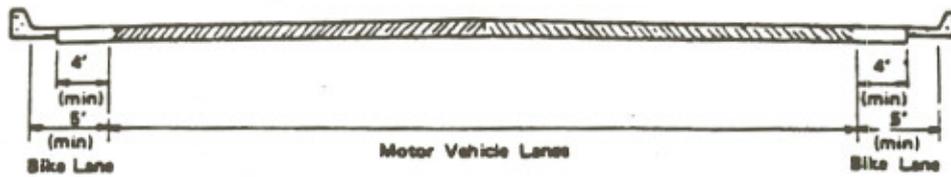
When bicycle lanes are proposed the roadway conditions should be examined and, where necessary, safe drainage grates and railroad crossings, smooth pavements, and signals responsive to bicycles should be provided where warranted. Drainage grate inlets and utility covers are potential problems to bicyclists. When a new roadway is designed an effort should be made to keep all such grates and covers out of bicyclists' expected path. Bicycle lanes should always be one-way facilities and carry traffic in the same direction as adjacent motor vehicle traffic. Two-way bicycle lanes on one side of the roadway is unacceptable.

Figure 1 shows three recommended locations for bicycle lanes in relation to the roadway on urban curbed streets and streets without curb and gutter. Bicycle lanes may have a minimum width of 4 feet where the shoulder provides additional maneuvering width. A width of 5 feet or greater is recommended where substantial truck traffic is present, where prevailing winds are a factor, on grades steeper than 5 per cent, or where motor vehicle speeds exceed 35 m.p.h.

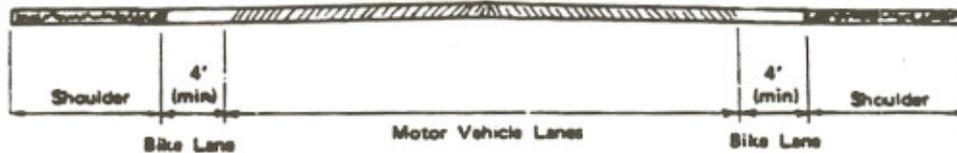
(a) CURBED STREET WITH PARKING



(b) CURBED STREET WITHOUT PARKING



(c) STREET OR HIGHWAY WITHOUT CURB OR GUTTER



(Not to Scale)

(Metric Conversion: 1 Ft. = 0.3m.)

Figure 1. Typical Bicycle Lane Cross Sections

### Bicycle Paths:

As previously mentioned, bicycle paths are located on independent alignments; consequently, their design depends on many factors. Bicycle paths are facilities on exclusive right of way and with minimal cross flow by motor vehicles. Figure 2 depicts a bicycle path on a separate right of way. The minimum width of a one directional bicycle path is 5 feet. It should be recognized, however, that one-way bicycle paths often will be used as two-way facilities unless effective measures are taken to assure one-way operation. Without such enforcement, it should be assumed that bicycle paths will be used as two-way facilities and designed accordingly.

A wide separation between a bicycle path and an adjacent highway is desirable to confirm to both the bicyclist and the motorist that the bicycle path functions as an independent highway for bicycles. When this is not possible and the distance between the edge of roadway and the bicycle path is less than 5 feet, a suitable physical divider, such as a fence, dense shrubs or other barrier may be considered.

When it is required that the bicycle path be carried across a bridge it is best accommodated by continuing the approach roadway width across the structure. The proposed shoulder width on the bridge may provide the space needed to satisfy the design width selected for the approaches. Where the posted speed limit is more than 35 MPH, a positive barrier should be used between the bicycle path and the travelled way. (See Figure 7.)

In general, a minimum design speed of 20 M.P.H. should be used; however, when the grade exceeds 4 per cent, or where strong prevailing tailwinds exist, a design speed of 30 M.P.H. is recommended.

A minimum superelevation rate of 2 per cent will be adequate for most conditions and will simplify construction. A maximum rate of approximately 5 per cent should not be exceeded, if possible.

Figure 3 indicates the minimum stopping sight distance for various design speeds and grades. For two-way bicycle paths, the sight distance in the descending direction where "G" is negative, will control the design.

Figure 4 is used to select the minimum length of vertical curve necessary to provide minimum stopping sight distance at various speeds on crests.

Figure 5 indicates the minimum clearance that should be used to line-of-sight obstructions for horizontal curves. The desired lateral clearance is obtained by entering Figure 5 with the stopping sight distance from Figure 3 and the proposed horizontal radius of curvature.

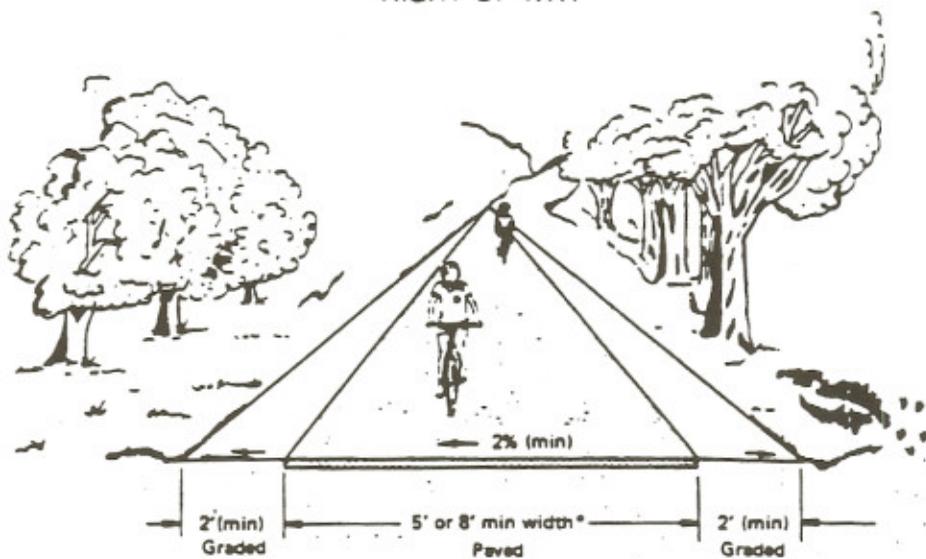
Figure 6, "Geometric Design Standards For Bicycle Facilities", has been developed setting up the minimum design criteria for bicycle lanes and bicycle paths.

The "Guide For Development Of New Bicycle Facilities", dated 1981, published by AASHTO and MUTCD will provide additional information to be used in the design of bicycle facilities. It should be understood that this IIM is not all conclusive.

### Multi-Use:

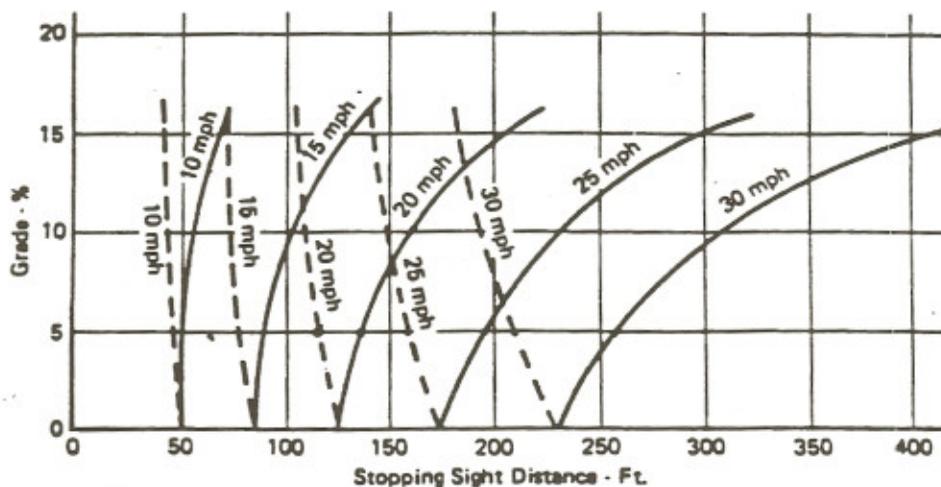
In general, multi-use paths are undesirable; bicycles and pedestrians do not mix well. Whenever possible, separate bicycle and pedestrian paths should be provided. If this is not feasible, additional width, signing and striping should be used to minimize conflicts.

BICYCLE PATH ON SEPARATED  
 RIGHT-OF-WAY



\*One-Way: 5' Minimum Width  
 Two-Way: 8' Minimum Width  
 Metric Conversion: 1 ft. = 0.3m.  
 (Not to Scale)

Figure 2.



$$S = \frac{V^2}{30(f \pm G)} + 3.87 V$$

Where: S = Stopping Sight Distance, Ft.  
 V = Velocity, mph  
 f = Coefficient of Friction (use 0.25)  
 G = Grade Ft./Ft. (rise/run)

(Metric conversion: 1 ft. = 0.3m, 1 mph = 1.6 km/h)

Decend (-G) ———  
 Ascend (+G) - - -

Figure 3. Stopping Sight Distances

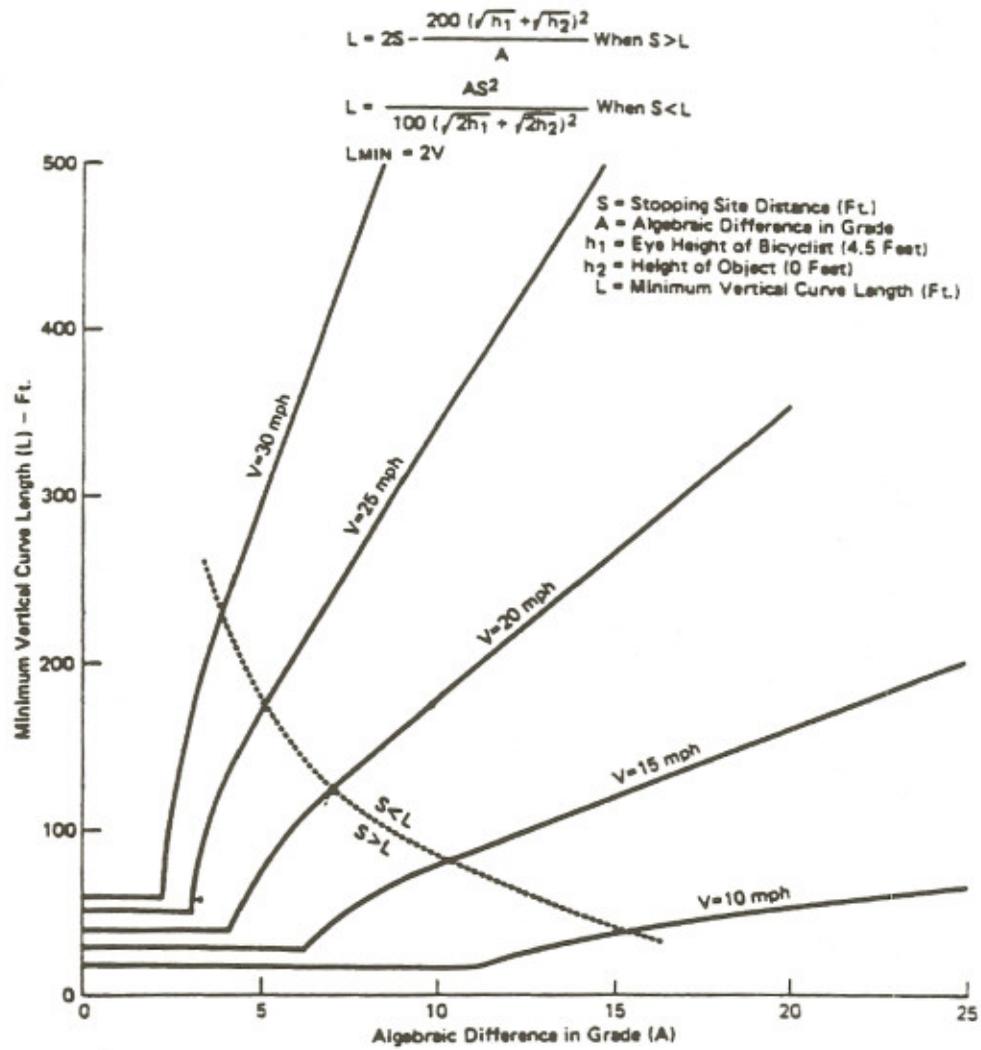
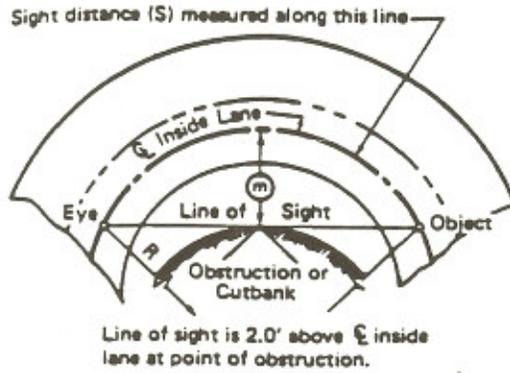


Figure 4. Sight Distances for Crest Vertical Curves



S = Sight distance in feet.  
 R = Radius of  $\mathcal{C}$  inside lane in feet.  
 m = Distance from  $\mathcal{C}$  inside lane in feet.  
 V = Design speed for S in mph.

Angle is expressed in degrees

$$m = R \left[ \text{vers} \left( \frac{28.65S}{R} \right) \right]$$

$$S = \frac{R}{28.65} \left[ \cos^{-1} \left( \frac{R-m}{R} \right) \right]$$

Formula applies only when S is equal to or less than length of curve.

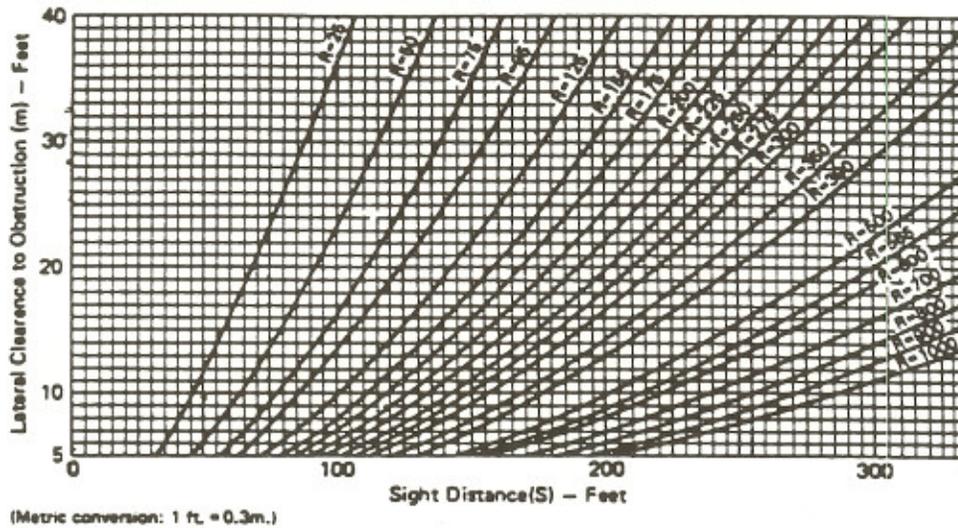


Figure 5. Lateral Clearances on Horizontal Curves



BICYCLE PATHS ON BRIDGES

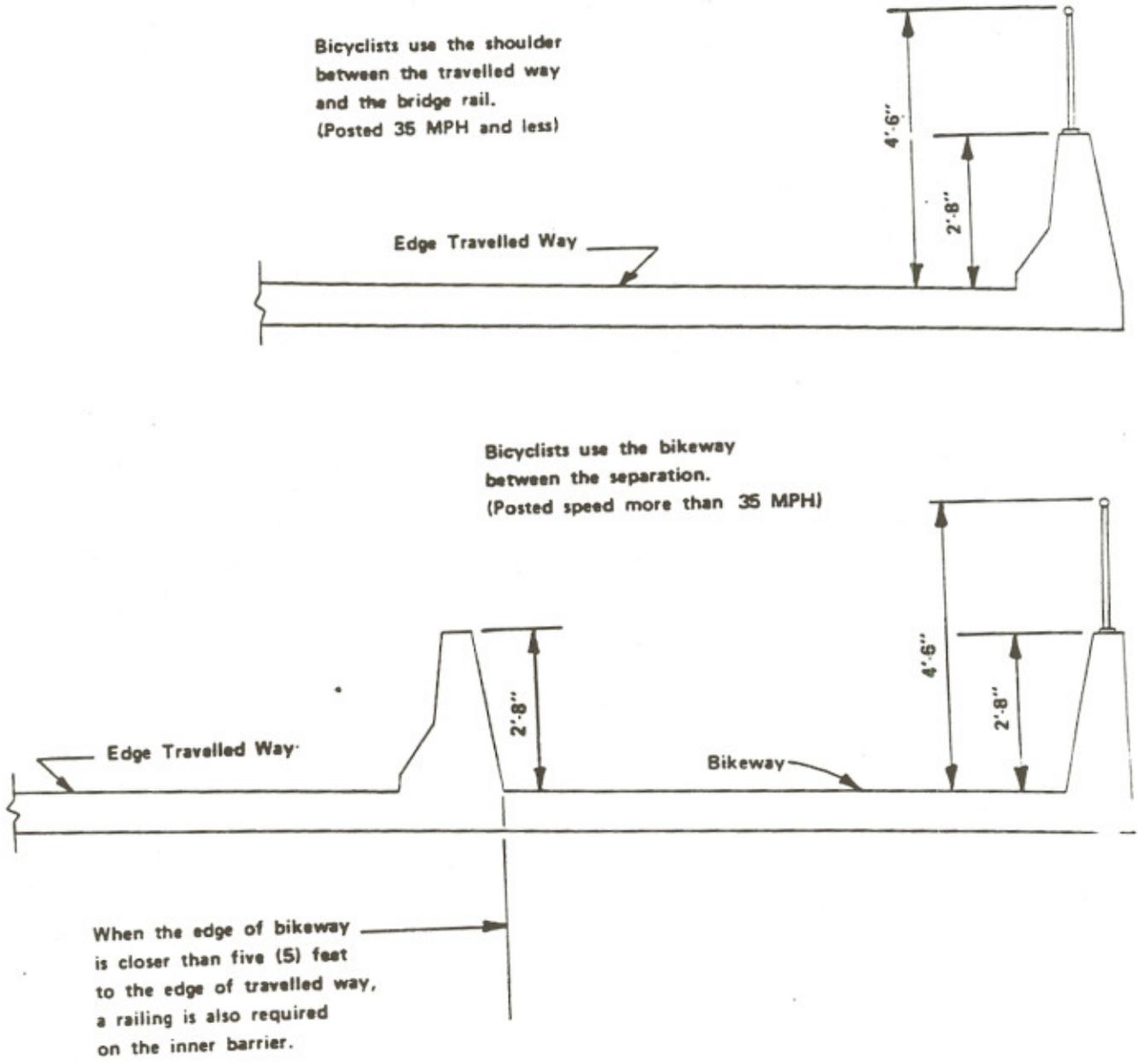


FIGURE 7

Appendix B:

**Guide to the Recreational Access  
Program of the Virginia Department of  
Transportation**

**GUIDE**  
**to the**  
**RECREATIONAL ACCESS PROGRAM**  
**of the**  
**Virginia Department of Transportation**

Secondary Roads Division

Memorandum SR-47-91

Richmond, Virginia

July, 1991

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Virginia Department of Transportation

(See local telephone directory)

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Virginia Department of Transportation  
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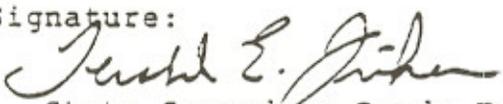
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VIRGINIA DEPARTMENT OF TRANSPORTATION

SECONDARY ROADS DIVISION

MEMORANDUM

Subject: RECREATIONAL ACCESS PROGRAM		Number: SR-47-91
Specific Subject: . GUIDE TO THE RECREATIONAL ACCESS ROADS PROGRAM per Commonwealth Transportation Board Policy Adopted October 25, 1989, and Code of Virginia § 33.1-223, 1990		Date: JULY 1, 1991
		Supersedes: SR-42-86, dated February 20, 1986
Directed To: LOCAL GOVERNMENTS DISTRICT ENGINEERS RESIDENT ENGINEERS	Signature:  State Secondary Roads Engineer	

This revised document was prepared to provide a comprehensive summary of the Recreational Access Program as established by the Code of Virginia and as governed by the policies of the Commonwealth Transportation Board. It is intended to serve as a reference for local jurisdictions and VDOT staff in the preparation and disposition of applications for program funding.

The document defines eligible projects, summarizes funding limitations, and describes the roles of the parties involved in the application and approval process. Appendices contain copies of the program's statutory authority, the Commonwealth Transportation Board's policy, and sample resolutions for local governing bodies.

All previous instructions regarding administrative procedures for recreational access projects are hereby superseded.

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## INTRODUCTION

The purpose of the Recreational Access Program is to provide adequate access to or within publicly developed recreational areas or historic sites operated by the Commonwealth of Virginia, or by a local government or authority.

The program is administered by the Department of Transportation under the authority of Section 33.1-223 of the Code of Virginia, with designation, recommendation and concurrence by the Director of the Department of Conservation and Recreation. An annual appropriation of funds from the highway portion of the Transportation Trust Fund is designated by the Commonwealth Transportation Board for Recreational Access projects, with statutory limitations on the amount authorized per project.

Application for program funding must be made by resolution of the governing body of the jurisdiction in which the access road or bikeway is to be located. Project funding is allocated by resolution of the Commonwealth Transportation Board, and construction may be accomplished by the Department of Transportation or, where appropriate, by the locality under an agreement with the Department.

Roads constructed under this program become part of the primary or secondary state highway system, or of the local road system of the locality in which they are located. They also must be designated as scenic highways or Virginia byways. Bikeways constructed outside the right-of-way limits of access roads become the responsibility of the authority or agency maintaining the site which they serve.

## ELIGIBLE PROJECTS

### General

Construction, reconstruction, maintenance and improvement of roads and bikeways are eligible for Recreational Access funding. A road or bikeway constructed with Recreational Access funds must serve a publicly developed recreational area or historic site operated by a state agency, a locality, or a local authority (not a federal facility). No access road or bikeway may be constructed, reconstructed, maintained or improved on privately owned property.

Development of the site to be served by the road or bikeway must be complete or in progress, or assurance must be provided that such development will occur within a specified period. In addition, the site must be designated as a public recreational or historic area by the Director of the Department of Conservation and Recreation, and the Director must recommend construction of the access facility.

The program may provide, as deemed necessary, access to the site's entrance or to a logical focal point within the site. An access road and bikeway may be combined into a single facility.

It must be shown that the cost of constructing the facility is justified by the anticipated volume and type of traffic to be generated by the recreational or historic attraction. Evidence of sufficient public demand to support construction of the facility must also be provided.

Costs incurred in the development, design or construction of a Recreational Access facility prior to the allocation of funds by the Commonwealth Transportation Board are not eligible for reimbursement through this program. Right of way acquisition and adjustment of utilities costs are not eligible for reimbursement at any time and must be funded by the applicant or from other available sources.

### Recreational Access Roads

Several important considerations should be kept in mind when proposing a Recreational Access road. Among these are:

1. Logical termini and alignment - The road should be located to provide the most direct, cost-effective access to the recreational area or historic site. It should end either at the entrance to the area or at the main focal point within its boundaries (e.g., parking lot, information center, administration building, camping area). The first point at which visitors would leave their automobiles generally defines the focal point.

If the existing road system does not provide adequate access to the park/historic site, the application must separately address the two specific segments involved: the proposed improvement to the existing road leading to the recreational facility and the proposed access facility within the recreational area itself.

A road alignment which would open adjacent land to residential or commercial development should be avoided. If the Recreational Access road must traverse privately owned property, efforts should be made to impose restrictions on such development through appropriate means such as zoning or deed restrictions. Also to be avoided, if possible, are alignments which involve railroad crossings or bridges.

2. Design - Pavement width will be only that required for expected traffic, usually 18 to 22 feet. Wider pavement may be included in the design, but the cost of the additional width must be paid by the locality. (NOTE: In cities and towns that maintain their streets, the pavement width must be 30 feet to qualify for maintenance payments). Additional width for turn movements may be included in program funding if fully warranted and documented.

The program will fund a rural typical section, i.e. shoulders with ditches. Curb and gutter, storm sewer, and other amenities may be included in the design, but must also be provided at local expense.

A design speed of 30 mph is normal for park roads, but a higher or lower design speed may be considered if justification is provided.

A minimum right of way of 50 feet must be provided by the locality, at no cost to the Department. (In certain cases involving the improvement of existing roadways maintained by the Department, however, the cost of additional right of way may be funded from the Department's Improvement allocations to the system involved.) Lesser right of way width will be considered in areas of special concern.

3. Acceptance into Primary, Secondary or Local System - New roadways, upon completion, are opened to public use and are accepted into the appropriate system for maintenance. Recreational Access roads are normally designated as part of either the secondary or local road system, according to their location. In all counties except Arlington and Henrico, in towns not maintaining their own road systems, and in the former Nansemond County portion of the City of Suffolk, these roads may be added to the secondary system of state highways. In cities, in towns receiving maintenance payments, and in the Counties of Arlington and Henrico, the roads are taken into the road systems of these localities. In a few exceptional instances, it has been deemed appropriate to designate the new access facility as part of the primary system of state highways.

Recreational Access roads are expected to be open to public use at all times. In certain cases, they may be closed during specified hours for security purposes. If maintained as part of the primary or secondary state highway system, a permit for closure must be issued by the Department of Transportation.

No fee may be charged for the use of a roadway constructed with Recreational Access Funds.

4. Scenic Highway or Virginia Byway Designation - Any Recreational Access road constructed under this program must be designated as a scenic highway or a Virginia byway, and a commitment to such designation must be contained in the resolution from the local governing body. Either designation obligates the locality to employ all reasonable means, such as zoning, to protect the aesthetic and cultural value of the road.

### Bikeways

Recreational Access bikeways, because of their special nature, warrant additional considerations:

1. Purpose - A Recreational Access bikeway is intended to serve the same purpose as an access road. That is, to provide access for cyclists to a recreational or historic site, not to provide a recreational facility in itself. Like the access road, it should end at a logical focal point, normally the first place cyclists could park their bikes.

It follows, then, that a proposed bikeway should either connect to an existing bikeway or, if none is present, it should be located in an area which generates a significant amount of bicycle traffic. Recreational or historic attractions in remote areas are not logical candidates for bikeway projects unless they are located on established bicycle routes.

2. Concept - A bikeway may be combined with a road as a single project, or it may be constructed as a separate facility. If independent bikeway access is deemed appropriate, it will be established on a separate right of way, which must be provided at no cost to the Department.
3. Design - The design of the bikeway facility must be in accordance with the Department's standards for bikeways.
4. Maintenance - A bikeway built within the right of way of an access road will be maintained as part of the road. Independent bikeways constructed outside the right of way limits of an access road must be regulated and maintained by the authority, agency or locality maintaining the site which they serve.
5. Zoning - A zoning ordinance must be in effect and the corridor for the proposed bikeway facility appropriately classified.

## FUNDING LIMITATIONS

The Recreational Access Program is funded through an annual appropriation. Up to \$3 million may be available annually for the program. Except for amounts allocated but not yet spent for approved access projects, funds cannot be carried forward at the end of each fiscal year, so that the total amount available in any year is limited by the appropriation. Applications are considered on a first come, first served basis.

Funding limitations for qualified projects have been established by statute, and they are as follows:

### Roads

State Facility - Not more than \$400,000 may be allocated for an access road in any facility operated by a state agency.

Local Facility - Not more than \$250,000 may be allocated for an access road operated by a locality or authority, with an additional \$100,000 if matched on a dollar-for-dollar basis by the locality or authority from other than highway sources.

### Bikeways

State Facility - Not more than \$75,000 may be allocated to a bikeway operated by a state agency.

Local Facility - Not more than \$60,000 may be allocated to a bikeway operated by a locality or authority, with an additional \$15,000 if matched on a dollar-for-dollar basis by the locality or authority from other than highway sources.

## APPLICATION PROCESS

Application for Recreational Access Funds may be made only by the governing body of the county, city or town in which the access road or bikeway is to be provided or maintained. The following preliminary steps should be observed in developing an application:

1. Develop a plan for the recreational area or historic site to the extent that, if it is not already established, its cost has been estimated and funding for its construction or expansion has been a.) appropriated, b.) included in an approved capital improvement plan, or c.) anticipated for a future year's capital improvement plan. Adequate assurance must be provided that the attraction will be developed and operational at the approximate time the access facility is proposed for completion.
2. Contact the Department of Conservation and Recreation for a preliminary opinion as to whether or not the proposed recreational area or historic site meets its criteria for official designation as such. This designation is a requisite for Recreational Access funding.
3. Contact the Department of Transportation's Resident Engineer. The Resident Engineer is the primary liaison between the Department and the applicant from the preliminary phase through project completion and should be consulted at an early stage for advice and assistance. The locality may request that the Department provide the design for the road. If the locality designs the Recreational Access facility, it must ensure that the road or bikeway design conforms to VDOT standards. Construction of the facility may be administered by the Department of Transportation or by the applicant through a local-state agreement.

Once the plan for development and funding of the recreational area or historic site is established and the preliminary road or bikeway design has been completed, the formal application process may be initiated. The following actions and documentation are required of the applicant:

1. Make an official request for Recreational Access funds by resolution of the local governing body. If a proposed access facility is located within more than one locality, a separate resolution will be required from each locality. Likewise, if the proposed facility is to be located in a town which does not maintain its own streets, the request from the Town Council should be concurred in by a separate resolution of the county Board of Supervisors. Sample resolutions are included in Appendix III.

2. Submit the following information to the Resident Engineer:
  - a. Original or certified copy of resolution from the local governing body requesting Recreational Access funds for the project. The resolution must contain a guarantee to provide right of way and adjustment of utilities, if required, at no cost to the Recreational Access Fund. It must also provide for designation of the Recreational Access road as a "Virginia Byway." (See sample resolution in Appendix III).
  - b. Site plan of park or historical site, showing proposed access road or bikeway.
  - c. Description of existing and/or proposed park or historical site facilities.
  - d. Estimated volume and nature of traffic to be generated by the recreational attraction/historic site.
  - e. Amount and status of funding for construction, development or improvement of the recreational or historic attraction to be served by the proposed access facility (documentation of appropriation in current year, inclusion in capital improvement plan for future year, etc.).
  - f. Description of the proposed access facility (design standards, location).

VDOT's Resident Engineer will determine the cost of constructing the proposed road or bikeway. (Recreational Access funds may not be used for the acquisition of right of way or the adjustment of utilities, and these costs must be funded by the applicant or from other available sources. Likewise, all costs above the maximum Recreational Access allocation and any costs considered ineligible for program funding must be borne by the applicant.)

The Resident Engineer will review the entire assembly and resolve any apparent problems before sending it forward.

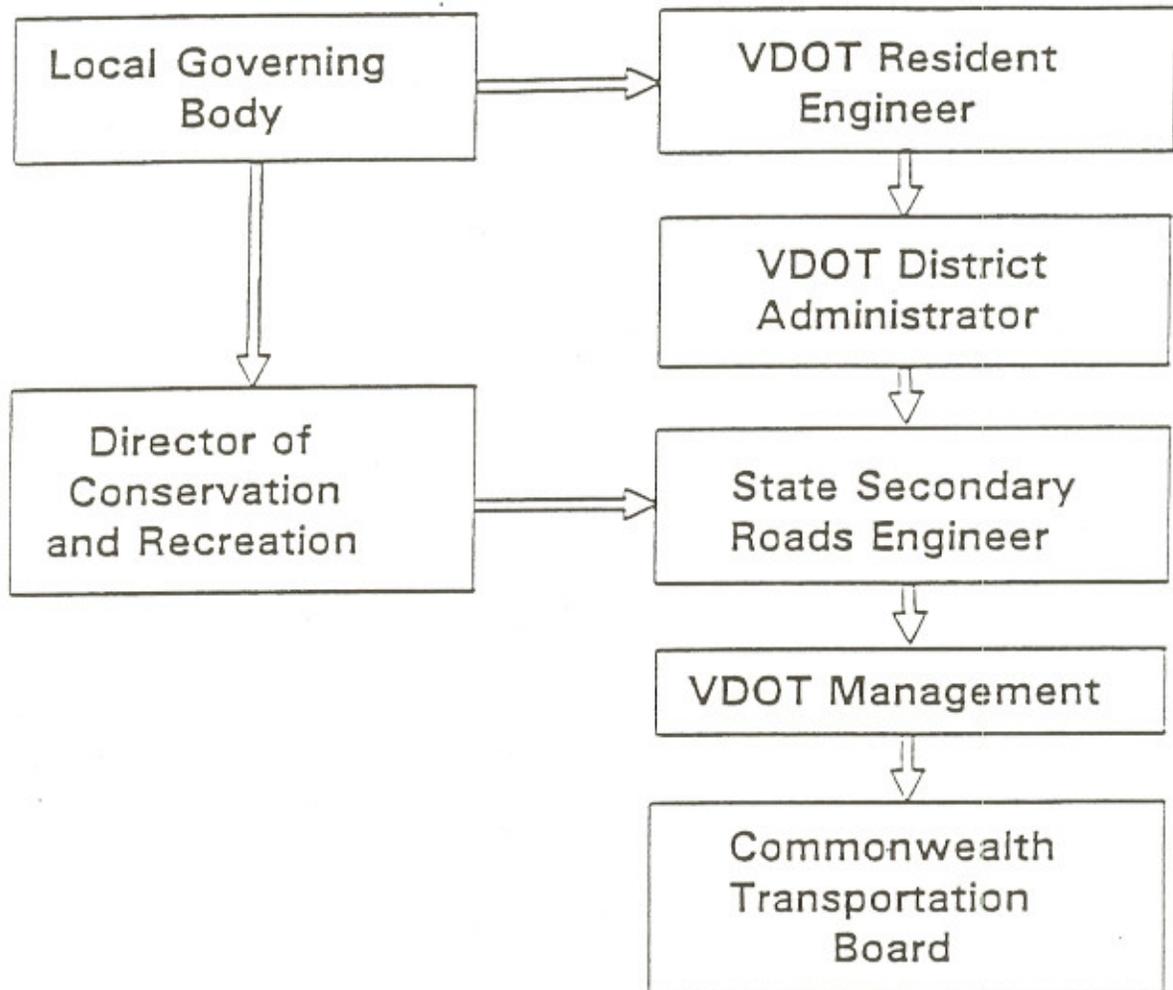
## APPROVAL PROCESS

The Resident Engineer will forward the request for funds through the District Administrator to the State Secondary Roads Engineer.

1. The District Administrator will review the application assembly for completeness, determine whether the proposed facility's location, scope and design are appropriate, and confirm the accuracy of cost estimates. The application will then be forwarded to the State Secondary Roads Engineer with a recommendation from the District Administrator as to whether or not the proposed facility should be provided with Recreational Access funds.
2. The State Secondary Roads Engineer will coordinate review of the application between the Department of Transportation and the Department of Conservation and Recreation. A site visit may be conducted, either jointly or independently, by both agencies. The applicant will be contacted if any details remain unresolved or if the proposed facility requires modification to meet eligibility criteria. If either agency finds that the proposal is not in accordance with the Recreational Access Program's intent or otherwise fails to meet its basic qualifications, the applicant will be notified.
3. If all requirements are met, formal designation and approval of the access project will be requested from the Director of the Department of Conservation and Recreation. Subsequent to this action, a recommendation for funding will be prepared by the State Secondary Roads Engineer for consideration by the Commonwealth Transportation Board. The Board may allocate funds for the project, subject to contingencies that are specified in the Board's resolution. The applicant will be notified of the Transportation Board's official action on the request. Upon allocation, the project is subject to all rules of design, right of way, scheduling for advertisement, bidding and construction of other similar projects administered by the Department of Transportation.
4. If a county, city or town desires to administer a project itself and the Department of Transportation concurs, the Department will prepare an appropriate local/state agreement covering respective responsibilities, schedules and payment of costs. Any cost incurred or contract executed by a local governing body or its agent before a local/state agreement is signed by all parties is the responsibility of the local governing body.
5. Expenditure of funds will be authorized by the Department when all contingencies of the Board's resolution have been satisfied. No program funding will be authorized until assurance is provided that the recreational area or historic site will be open for public use at approximately the same time that the access project is completed.

6. Once an access road or bikeway is completed and undergoes final inspection, it is taken into the appropriate system for maintenance (state primary, state secondary or local). A bikeway constructed on separate right of way is the maintenance responsibility of the locality or authority operating the site which it serves.

## Recreational Access Roads Approval Process



APPENDIX I

STATUTORY AUTHORITY

Code of Virginia

§ 33.1-223. Fund for access roads and bikeways to public recreational areas and historical sites; construction, maintenance, etc., of such facilities.

A. The General Assembly finds and declares that there is an increasing demand by the public for more public recreational areas throughout the Commonwealth, therefore creating a need for more access to these areas. There are also many sites of historical significance to which access is needed.

The General Assembly hereby declares it to be in the public interest that access roads and bikeways for public recreational areas and historical sites be provided by using funds obtained from motor fuel tax collections on motor fuel used for propelling boats and ships and funds contained in the highway portion of the Transportation Trust Fund.

B. In order to provide equal matching of funds hereinafter appropriated, the Commonwealth Transportation Board shall, from funds allocated to the primary system, secondary system, or urban system of state highways, set aside the sum of \$3 million initially. This fund shall be expended by the Board for the construction, reconstruction, maintenance or improvement of access roads and bikeways within counties, cities and towns. At the close of each succeeding fiscal year the Board shall replenish this fund to the extent it deems necessary to carry out the purpose intended, provided the balance in the fund plus the replenishment does not exceed the aforesaid \$3 million.

C. Upon the setting aside of the funds as herein provided, the Commonwealth Transportation Board shall construct, reconstruct, maintain or improve access roads and bikeways to public recreational areas and historical sites upon the following conditions:

1. When the Director of the Department of Conservation and Recreation has designated a public recreational area as such or an historic area as such and recommends to the Commonwealth Transportation Board that an access road or bikeway be provided or maintained to that area;

2. When the Commonwealth Transportation Board pursuant to the recommendation from the Director of the Department of Conservation and Recreation declares by resolution that the access road or bikeway be provided or maintained;

3. When the governing body of the county, city or town in which the access road or bikeway is to be provided or maintained passes a resolution requesting the road; and

4. When the governing body of the county, city or town in which the bikeway is to be provided or maintained adopts an ordinance pursuant to Article 8 (§ 15.1-486 et seq.), Chapter 11, Title 15.1.

No access road or bikeway shall be constructed, reconstructed, maintained or improved on privately owned property.

D. Any access road constructed, reconstructed, maintained or improved pursuant to the provisions of this section shall become part of the primary system of state highways, the secondary system of state highways or the road system of the locality in which it is located in the manner provided by law and shall be designated as a scenic highway or byway as provided for in Article 5 (§ 33.1-62 et seq.), Chapter 1 of this title, and shall thereafter be constructed, reconstructed, maintained and improved as other roads in such systems. Any bikeway path constructed, reconstructed, maintained or improved pursuant to the provisions of this section which is not situated within the right-of-way limits of an access road which has become, or which is to become, part of the primary system of state highways, the secondary system of state highways, or the road system of the locality, shall, upon completion, become part of and be regulated and maintained by the authority or agency maintaining the public recreational area or historical site. It shall be the responsibility of the authority, agency, or locality requesting that a bicycle path be provided for a public recreational or historical site to provide the right-of-way needed for the construction, reconstruction, maintenance or improvement of the bicycle path if such is to be situated outside the right-of-way limits of an access road.

To maximize the impact of the Fund, not more than \$400,000 of recreational access funds may be allocated for an access road in any facility operated by a state agency and not more than \$250,000 for an access road for a facility operated by a locality or an authority with an additional \$100,000 if supplemented on a dollar-for-dollar basis by the locality or authority from other than highway sources. Not more than \$75,000 of recreational access funds may be allocated to any specific bikeway operated by a state agency and not more than \$60,000 to a bikeway operated by a locality or an authority with an additional \$15,000 if supplemented on a dollar-for-dollar basis by a locality or authority from other than highway sources.

The Commonwealth Transportation Board, with the concurrence of the Director of the Department of Conservation and Recreation, is hereby authorized to make regulations to carry out the provisions of this section. (Code 1950, § 33-136.3; 1966, c. 484; 1968, c. 221; 1970, c. 322; 1975, c. 362; 1982, c. 643; 1984, c. 739; 1989, cc. 305,656; 1990, c. 689.)

APPENDIX II  
RECREATIONAL ACCESS POLICY  
of the  
COMMONWEALTH TRANSPORTATION BOARD

Moved by Mr. Musselwhite, seconded by Dr. Thomas, that

WHEREAS, Section 33.1-223 of the Code of Virginia providing for access roads to public recreational areas and historical sites was amended and reenacted by the 1989 session of the General Assembly; and

WHEREAS, the Commonwealth Transportation Board, with the concurrence of the Director of Conservation and Historic Resources, is authorized by this section of the Code to make certain regulations to carry out the provisions of the law; and

WHEREAS, it is deemed necessary by both agencies to amend the previously adopted policy on the use of such funds.

NOW, THEREFORE, BE IT RESOLVED that the Commonwealth Transportation Board hereby rescinds its previous policy adopted on February 20, 1986, and adopts the following policy governing the use of recreational access funds, which new policy has been concurred in by the Director of Conservation and Historic Resources pursuant to Section 33.1-223 of the Code of Virginia, as amended:

The Commonwealth Transportation Board adopts this policy to govern the use of recreational access funds pursuant to Section 33.1-223, of the Code of Virginia, as amended. The statute provides that the concept of access be applicable to facilities for motor vehicles and bicycles, whether in separate physical facilities or combined in a single facility. In the event independent bikeway access is deemed appropriate and justified, the access will be established on a separate right of way independent of motor vehicle traffic and specifically designated to provide for bicycle access to the recreational area or historical site as a connecting link between an existing bikeway or otherwise recognized bicycle route.

The following items are incorporated in this policy:

1. The use of recreational access funds shall be limited to the purpose of providing proper access to or within publicly developed recreational areas or historical sites where the full provisions of Section 33.1-223 have been complied with.
2. Recreational access funds shall not be used for the acquisition of right of way or

adjustment of utilities. These funds are to be used only for the actual engineering and construction of a road or bikeway facility adequate to serve traffic generated by the public recreational area or historical site.

3. For each project, the identified need or demand for the access facilities will be analyzed and mutually agreed upon between the Commonwealth Transportation Board and the Director of Conservation and Recreation. The decision to construct or improve an access facility to a public recreational area or historical site will be based upon the following parameters:
  - A. The cost of construction in relation to the volume and nature of traffic to be generated as a result of the attraction.
  - B. Identification of sufficient public demand to support the construction of the access facilities.
  - C. In the consideration of any bikeway request as described herein, one of these features should be applicable:
    - (1) The bikeway should serve a connecting route of established bikeway usage in the recreational area or historical site.
    - (2) The recreational area or historical site is located within an area of substantial bicycle traffic generation.
  - D. Type of protective zoning in effect (applicable only when the request involves a bikeway facility).

For each project, the identified need or demand for the access facilities will be analyzed and mutually agreed upon between the Commonwealth Transportation Board and the Director of Conservation and Historic Resources.

4. Recreational access funds will not be considered for the construction, reconstruction, maintenance, or improvement of recreational access roads or bikeways until such time as adequate assurance has been given that the recreational facility is already in operation or will be developed and operational at the approximate time of the completion of the road or bikeway.
5. Motor vehicle access and/or bikeway access may be considered as either combined facilities or separate entities. Funding limitations have been established by statute, for qualified projects, as follows:

Not more than \$400,000 of recreational access funds may be allocated for an access road in any facility operated by a state agency and not more than \$250,000

for an access road for a facility operated by a locality or an authority with an additional \$100,000 if supplemented on a dollar-for-dollar basis by the locality or authority from other than highway sources. Not more than \$75,000 of recreational access funds may be allocated to any specific bikeway operated by a state agency and not more than \$60,000 to a bikeway operated by a locality or an authority with an additional \$15,000 if supplemented on a dollar-for-dollar basis by a locality or authority from other than highway sources.

6. Prior to the formal request for the use of recreational access funds to provide access to public recreational areas or historical sites, the location of the access road or bikeway shall be submitted for approval by the engineers of the Department of Transportation and to the staff of the Director of Conservation and Recreation. In making recommendations, personnel of the Department of Transportation and the Department of Conservation and Recreation shall take into consideration the cost of the access road or bikeway as it relates to the location, the possibility of any future extension to serve other public recreational areas or historical sites, and the anticipated future development of the area traversed.
7. The use of recreational access funds shall be limited to the construction or reconstruction of motor vehicle access roads or bikeway access to publicly owned recreational areas or historical sites or to officially designated major development units within such areas or sites.

The beginning and termination of the recreational access facility shall be at logical locations. Termination of the access shall be the park or historical site entrance or may be within. If within, the main focal point of interest shall be construed as the termination at which "adequate access" is judged to be provided for the facility. This may be an administration building, information center, auditorium, stadium, parking lot, picnic area, camping area, etc., depending upon the character of the recreational area. Generally, it would be interpreted as the first point at or within the recreational area or historical site that visitors would leave their automobiles or bikes and commence to utilize some feature of the facility.

8. It is the intent of the Commonwealth Transportation Board and the Director of Conservation and Recreation that recreational access funds not be anticipated from year to year.

MOTION CARRIED

October 25, 1989

APPENDIX III  
SAMPLE RECREATIONAL ACCESS RESOLUTIONS

1. Recreational Access Road
2. Combined Recreational Access Road/Bikeway
3. Separate Bikeway

SAMPLE RESOLUTION

(RECREATIONAL ACCESS ROAD)

BOARD OF SUPERVISORS/  
CITY OR TOWN COUNCIL

Date \_\_\_\_\_

WHEREAS, the \_\_\_\_\_ (Park or Historical Site) is owned and is to be developed by the (County/City/Town) of \_\_\_\_\_ as a recreational facility serving the residents of \_\_\_\_\_ (County/City/Town) and adjoining localities; and

WHEREAS, the facility is in need of adequate access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access roads to publicly-owned recreational areas or historical sites; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the \_\_\_\_\_ Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed access road is provided by the County/City/Town of \_\_\_\_\_ at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this road shall be designated a "Virginia Byway" and recommends the Commonwealth Transportation Board, in cooperation with the Director of the Department of Conservation and Recreation, take the appropriate action to implement this designation. Further, the (Board/Council) agrees, in keeping with the intent of Section 33.1-63 of the Code of Virginia, to use its good offices to reasonably protect the aesthetic or cultural value of this road.

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of \_\_\_\_\_ hereby requests the Director of the Department of Conservation and Recreation to designate the \_\_\_\_\_ Park as a public (recreational

area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for an access road to serve said park; and

BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable access road as hereinbefore described.

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County Administrator/  
City/Town Manager

SAMPLE RESOLUTION

(COMBINED RECREATIONAL ACCESS ROAD/BIKEWAY)

BOARD OF SUPERVISORS/  
CITY OR TOWN COUNCIL

Date \_\_\_\_\_

WHEREAS, the \_\_\_\_\_ (Park or Historical Site) is owned and is to be developed by the (County/City/Town) of \_\_\_\_\_ as a recreational facility serving the residents of \_\_\_\_\_ (County/City/Town) and adjoining localities; and

WHEREAS, the facility is in need of adequate vehicular and bicycle access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access facilities to publicly-owned recreational areas or historical sites; and

WHEREAS, the (Board/Council) has duly adopted a zoning ordinance pursuant to Article 8 (Section 15.1-486 et seq), Chapter 11, Title 15.1 of the Code of Virginia; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the \_\_\_\_\_ Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed access road and bikeway is provided by the (County/City/Town) of \_\_\_\_\_ at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this road and bikeway shall be designated a "Virginia Byway" and recommends the Commonwealth Transportation Board, in cooperation with the Director of the Department of Conservation and Recreation, take the appropriate action to implement this designation. Further, the (Board/Council) agrees, in keeping with the intent of Section 33.1-63 of the Code of Virginia, to use its good offices to reasonably protect the aesthetic or cultural value of this road and bikeway.

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of \_\_\_\_\_ hereby requests the Director of the Department of Conservation and Recreation to designate the \_\_\_\_\_ Park as a public (recreational area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for an access road and bikeway to serve said park; and

BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable access road and bikeway as hereinbefore described.

\_\_\_\_\_  
County Administrator/  
City/Town Manager

SAMPLE RESOLUTION

(SEPARATE BIKEWAY)

BOARD OF SUPERVISORS/  
CITY OR TOWN COUNCIL

Date \_\_\_\_\_

WHEREAS, the \_\_\_\_\_ (Park or Historical Site) is owned and is to be developed by the (County/City/Town) of \_\_\_\_\_ as a recreational facility serving the residents of \_\_\_\_\_ (County/City/Town) and adjoining localities; and

WHEREAS, the facility is in need of adequate bicycle access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access facilities to publicly-owned recreational areas or historical sites; and

WHEREAS, the (Board/Council) has duly adopted a zoning ordinance pursuant to Article 8 (Section 15.1-486 et seq), Chapter 11, Title 15.1 of the Code of Virginia; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the \_\_\_\_\_ Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed bicycle access is provided by the (County/City/Town) of \_\_\_\_\_ at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this bikeway, once constructed, shall be regulated and maintained by the (County/City/Town/Operating Authority) [if bikeway constructed as separate facility].

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of \_\_\_\_\_ hereby requests the Director of the Department of Conservation

and Recreation to designate the \_\_\_\_\_ Park as a public (recreational area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for a bikeway to serve said park; and

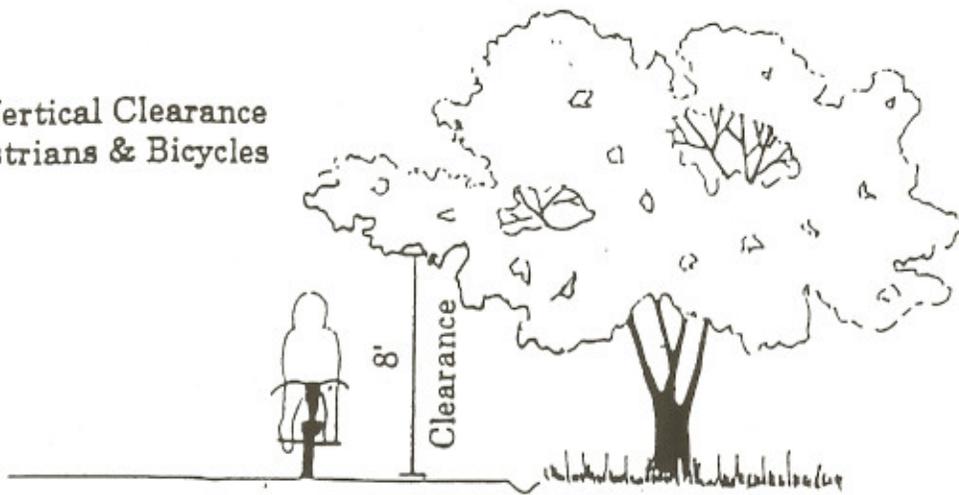
BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable bikeway as hereinbefore described.

\_\_\_\_\_  
County Administrator/  
City/Town Manager

Appendix C:

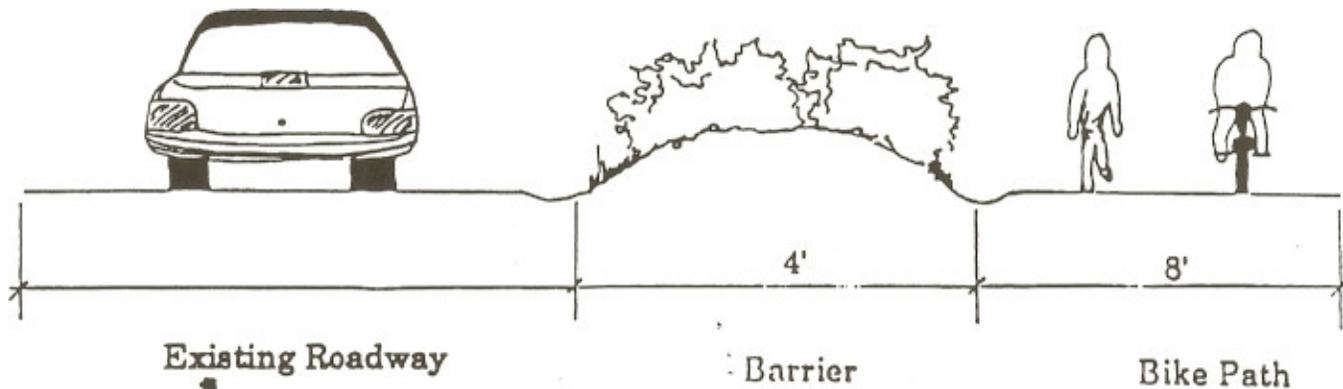
**Typical Facility Cross Sections**

8' Min. Vertical Clearance  
for Pedestrians & Bicycles



## DESIGNATED RIGHTS OF WAY

4' Buffer/Barrier Between  
Existing Road & Bike or  
Pedestrian Path



## SHARED RIGHTS OF WAY



Pavement Delineation of Bike Path