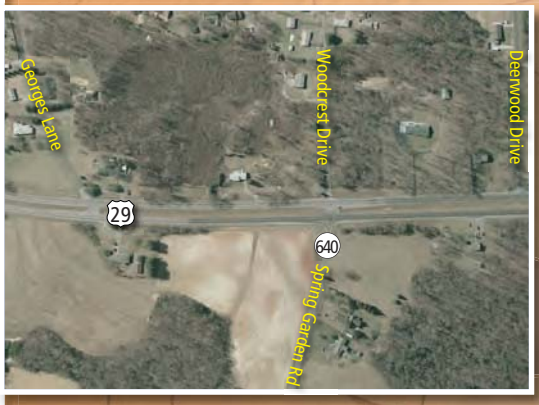
U.S. Route 29
Access Management Plan - *Blairs*



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Acknowledgements

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Final Report Participants

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- Pittsylvania County
- Virginia Department of Transportation (VDOT), Lynchburg District
- Vanasse Hangen Brustlin, Inc. (VHB)

The contents of this report reflect the views of the author(s) who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration (FHWA) or the Virginia Department of Transportation. This report does not constitute a standard, specification or regulation. FHWA acceptance of this report as evidence of fulfillment of the objectives of this planning study does not constitute endorsement/approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessment and/or studies of alternatives may be necessary.

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Executive Summary

U.S. Route 29 is a critical transportation corridor that has experienced significant land development and vehicular growth throughout its distance in Virginia and North Carolina. In addition to being a significant regional facility, in Virginia Route 29 links urban, suburban, and rural localities within Pittsylvania County. The corridor between Routes 726 and 718 was identified by the County for a detailed Access Management Plan that will help maintain an efficient flow of traffic and improve safety for all users.

The Route 29 Access Management Plan was developed to be a "living" document that the County can begin to implement immediately. Physical roadway recommendations need to be supported by zoning and ordinance amendments. The Plan also includes administrative guidance such as levels of access based on vehicle classification, traffic impact study components, access application, variances, appeals, and maintenance.

There are several existing and anticipated development projects fronting the Route 29 study corridor that will have a direct impact on safety and traffic circulation. Pittsylvania County can use the Plan to proactively address the linkage between land use planning and transportation infrastructure improvements along the study area corridor.

The County has specifically expressed the goal of effectively coordinating land use and transportation planning, which in turn enhances the quality of life in the community, improves livability, and provides multi-modal solutions for transportation needs.

1

Introduction

The Route 29 Access Management Plan – Blairs (the Plan) presents strategies for improving transportation infrastructure along U.S. Route 29 in Pittsylvania County, Virginia. More specifically, the strategies improve access to commercial and residential properties along U.S. Route 29 between State Routes 718 and 726. **Figure 1** depicts the study area, which extends approximately five (5) miles between Dry Fork and Blairs. As Route 29 represents a primary corridor for economic development in the County, and as adjacent property owners convert agricultural land to commercial uses, the County seeks to coordinate land use planning with transportation infrastructure improvements. In this way, the County can promote safer, managed growth along the corridor that stimulates economic development.

The project's Technical Committee that developed the Plan included representatives from the Danville Metropolitan Planning Organization (MPO), Pittsylvania County Planning Department, Virginia Department of Transportation (VDOT), and Vanasse Hangen Brustlin, Inc. (VHB). Contact information for the primary points of contact on the Technical Committee is provided below. VHB's transportation planning consultant team included T3 Design, P.C. and The Clay Christenson Group.

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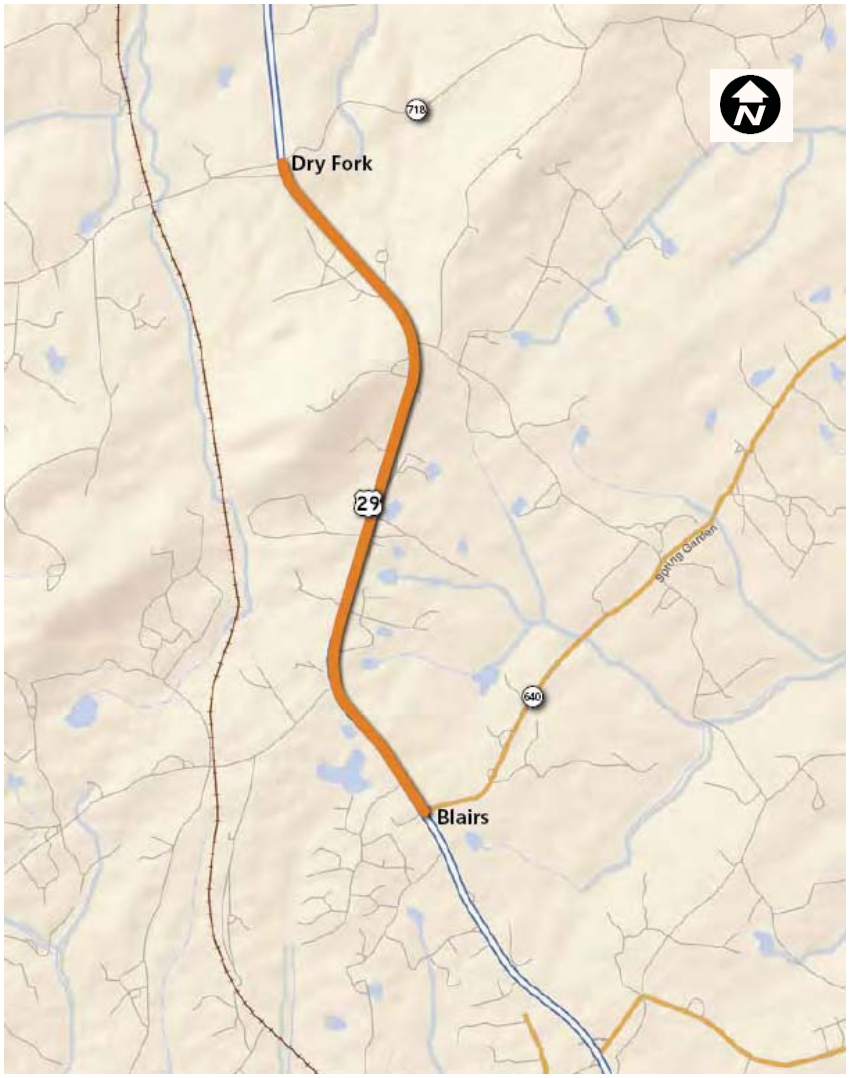
The following sections of this chapter further define the project's purpose and need, and the Project Team's technical approach in developing the Plan. Following the project introduction, Chapter 2 defines access management and summarizes nationwide practices. Concerning the study area, *Chapter 3* describes existing conditions and *Chapter 4* presents a corridor management plan, which details access management strategies and recommendations for updating the County's zoning ordinance. To this end, *Chapter 5* details provisions for a Highway Corridor Overlay District (HCOD) covering the study area. *Chapter 6* presents an implementation and maintenance plan, while *Chapter 7* details costs for implementing access management strategies and identifies funding sources. To better accommodate development throughout Pittsylvania County, *Chapter 8*provides information of VDOT's application of their new Standard Operating Procedures for Integrating Elements of NEPA into the Transportation Planning Process to this study effort, *Chapter 9* presents access management strategies that can be applied outside of this particular study area. To conclude the Plan, *Chapter 10* presents next steps and action items for project proponents.

1.1 Purpose and Need

The Plan serves three (3) key purposes: promote practices to improve safety, provide efficient traffic operations, and preserve roadway functionality. The Plan fulfills a desire by the County to coordinate land use planning with transportation infrastructure improvements within the project study area (**Figure 1**).

Figure 1 Study Area



1.1.1 Safety

Promoting the safety of the traveling public is the most important feature of the project. From 2004 to 2006, VDOT recorded 81 crashes within the study area (**Figures 2 through 6**). While 41 crashes involved property damage only, 38 crashes included injuries, and two crashes included fatalities. Many of the crashes occurred at unsignalized intersections and median crossover locations. To reduce the potential for future crashes within the study area, it is important to separate and limit the number of these facilities.

1.1.2 Traffic Operations and Roadway Functionality

Access management improvements in Pittsylvania County will improve traffic operations on Route 29, particularly through traffic. The strategies developed in the Plan include the potential consolidation of redundant entrances along Route 29 and the provision of adequate right- and left-turn lanes at median crossovers. These measures would reduce motorists' confusion about entrance and exit points (which reduces the potential for future crashes) and preserve the corridor's function as a principal arterial.

1.1.3 Land Use – Transportation Coordination

As commercial and residential growth continues within the study area, a prime concern becomes reducing the potential for leapfrog development patterns. Such developments use land inefficiently and outpace investments in transportation infrastructure. Thus, traffic congestion increases as these developments place more drivers on fewer roads. To counter this scenario, the County seeks to coordinate land use planning with transportation infrastructure improvements. In this way, the County can improve access to goods and services within the study area and accommodate and encourage economic development.

1.2 Technical Approach

The Project Team's approach included the following tasks:

- Collecting property, zoning, traffic, and crash data;
- Launching a public involvement program;
- Developing a Corridor Management Plan;
- Developing a Highway Corridor Overlay District (HCOD);
- Developing an Implementation and Maintenance Plan;
- Estimating costs for access management strategies and investigating funding sources; and
- Discussing the applications of access management strategies beyond the study area.
- Develop Environmental Overview, collection and evaluation of environmental and historical resources

1.2.1 Data Collection

The VHB Team began collecting data prior to the Project Kickoff Meeting in January 2008. The Team collected traffic and transportation infrastructure data from VDOT staff and current subdivision and zoning ordinances from County planning staff. Additionally, the Team collected Geographic Information System (GIS) data from County staff to help map existing land uses, property lines, and crash data within the study area.

VDOT conducted a high-level environmental overview of the study area, as required by FHWA. The results are attached to this report in the Appendix and titled as the Environmental Overview – Route 29 Access Management Study – Blairs Area. The effort entailed conducting a Reconnaissance Level Survey of properties along the study corridor.

1.2.2 Public Involvement

The VHB Team launched a public involvement program to solicit input from key stakeholders within the study area as well as the general public. The Team addressed concerns among stakeholders and concerned citizens, and inspired the public's sense of ownership of the Plan. Throughout the project's lifecycle, the public was actively engaged to gain community support and trust.

1.2.3 Corridor Management Plan

Having reviewed existing conditions within the study area, the Team developed a Corridor Management Plan. The management plan applied access management strategies established by VDOT Access Management Regulations (July 2008) to address site-specific conditions through short- and long-term recommended improvements. One recommendation of the management plan was a Highway Corridor Overlay District (HCOD) to enforce development standards. Additionally, the plan reviewed opportunities for multi-modal access in conjunction with roadway improvements. During the study process, no bicycle or pedestrian activity was observed in the corridor. This Plan does not specifically recommend bike/ped treatments, but wide shoulders on Route 29 provide the ability to walk if needed.

1.2.4 Highway Corridor Overlay District

VDOT's Access Management Regulations are enforceable through state code. However, to facilitate implementation in Pittsylvania, the County's zoning ordinance may be amended to establish requirements for access points, minimum corner clearances and sight distances, outparcels, new residential subdivisions, median openings, shared access and reverse frontage, pedestrian access, setbacks, site development regulations for signs, lighting, landscaping, and redevelopment. These requirements are in addition to existing zoning provisions within the study area.

A Highway Corridor Overlay District (HCOD) coordinates good land use and transportation planning, and increases the County's potential for implementing more restrictive regulations in support of their quality of life goals.

1.2.5 Implementation and Maintenance Plan

Implementing and maintaining the Plan requires close coordination among project proponents and stakeholders. It is important to define clear roles and responsibilities for County, MPO, and VDOT staff. To implement the Plan, County officials would need to address outstanding public concerns and VDOT comments, revise the Plan if necessary, and recommend that the County Board of Supervisors adopt the Plan. Implementing and maintaining the Plan would also include

a process for addressing landowner requests for breaks in right-of-way and modifying existing median breaks that meet the regulations of VDOT and the County.

1.2.6 Estimated Costs and Potential Funding Sources

The VHB Team estimated costs for implementing the access management strategies and investigated potential funding sources. Traffic engineering analyses produced likely costs for consolidating entrance points and installing adequate right and left turn lanes in key locations within the study area. Funding sources may include the State and Community Highway Safety Program, the Highway Planning and Construction Program, and the Transportation Enhancement Program.

1.2.7 Application to Other Locations

Access management principles that were used to develop strategies for the Blairs study area may benefit other segments of Route 29 in Pittsylvania County, such as opportunities along the segment between Dry Fork and the Pittsylvania County-Campbell County line.

3.2 Transportation Infrastructure

Transportation infrastructure includes Route 29's functional classification, speed limit, and roadway configuration. The portion of Route 29 addressed in this Plan is classified as a rural principal arterial roadway. The speed limit within the study area is generally 60 mph. Concerning roadway configuration, Route 29 is a four-lane, divided highway with many entrances, intersections, and median openings. Figures 2-6 illustrate these features.

The study area includes 12 median openings and 86 entrances to Route 29. However, there are no signalized intersections and few left turn lanes between Routes 718 and 726. This combination of uncontrolled access points and a predominantly free-flow traffic condition can lead to crashes, which can in turn delay north- and southbound through traffic on Route 29.

After the initial data collection effort, the Project Team held two (2) meetings at the Pittsylvania County Chamber of Commerce on March 24, 2008. The Project Team designed the first meeting to solicit input from key stakeholders – particularly property owners. Property owners engaged the Project Team in valuable discussions about safety concerns and development plans within the study area. During the second meeting, the Project Team collected feedback from the general public, to gather additional insights from individuals who regularly travel on Route 29 in Pittsylvania County.

3.3 Environmental Conditions

This U.S. Route 29 Access Management Plan for the Blairs area of Pittsylvania County included examination of the corridor's environmental , cultural, historical features so that during the planning stage, both for now, and in any development/redevelopment stage in the future, the key features are considered appropriately. Chapter 8 highlights VDOT's new Standard Operating Procedures for Integrating Elements of NEPA into the Transportation Planning Process. The Appendix to this document provides VDOT's application of the new procedures to this study effort.

The environmental Overview document presents environmental assets for protection and sites of environmental impacts; for this, it employs aerial photography images with tagging to show petroleum-related facilities, wetlands, sites of past petroleum releases. In respect to archeological and historical resources, the Overview notes some sites using Department of Historic Resources files on sites that are not immediately located in the corridor but that should be considered. The Shields Farm, the Carter Farm, the Pruit Farm, Blairs Feed and Hunting Supplies, and the Gregory Farm are listed as architectural resources and are addressed by means of Reconnaissance Level Survey forms. Two archaeological sites, 44PY0020 and 44PY0050, were identified with some evidence of Native American use – with one from the Early Archaic period and the other from the Prehistoric period.

The table of Environmental Impacts Summary, provided in the Chapter 8, gives the overview of the corridor location/description. It addresses project purposes. There is information on the existing traffic conditions including qualification. It notes pertinent environmental concerns, the alternatives that were considered, and addressed – background on the project, history, and regulations of interest.

4

Corridor Management Plan

A Corridor Management Plan (CMP) provides a comprehensive solution to access management concerns within a defined area. The CMP incorporates VDOT practices and policy and presents access management standards and site-specific strategies that improve safety and preserve access for land development. The CMP also suggests transportation infrastructure improvements as an outgrowth of the strategies. The CMP concludes with an overview of the implementation process (see Chapters 5, 6, and 7).

4.1 Background

The CMP meets the project's purpose and need as it improves safety, preserves access to property, and forms a better relationship between land use planning and transportation infrastructure improvements. More specifically, the management plan consolidates median openings, reduces the number of conflict points, and clearly defines commercial and public entrances and exit points along Route 29 as covered by statutory language. It also provides access to land development fronting or near the corridor. Where right-of-way and/or easement concerns present challenges for property access, VDOT and the County will work with property owners on a case-by-case basis to ensure reasonable access is provided to properties. The CMP does not intend to address individual private entrances.

It is important to note that in Virginia, "reasonable" access does not equal "most convenient" access. Pittsylvania County will most likely implement this Plan as development activity occurs. Existing entrances and median breaks are unlikely to be recommended for closure by the County unless the access is associated with a new development project that requires a new ingress/egress design.

By forwarding the CMP, project proponents are responding to the challenges that new development, and more traffic, bring to Route 29. The County's proactive role leads to transportation infrastructure improvements keeping pace with the steady march of land development. In this way, public funds and public infrastructure are utilized more efficiently and more effectively.

4.2 Policies and Assumptions

The Team based standards on key VDOT policies and made assumptions concerning Route 29. In general, VDOT policies inform recommendations for access management standards within the study area. VDOT's newly adopted access management policy for principal arterial roadways helps guide spacing recommendations for entrances, median openings, and traffic signals in Pittsylvania County. Additionally, VDOT's Road Design Manual – Appendix C includes policies for intersection sight distance, entrance grades, and left/right turn storage and taper lengths.

For this project, it was assumed that each property owner with land abutting Route 29 would have access to the roadway, either by direct access or inter-parcel access.

4.3 Access Management Standards

Each of the standards described in sections 4.3.1 through 4.3.5 was considered to serve the project's purpose and need and to reflect VDOT regulations and standards. However, physical conditions in certain locations limited the ability for proposed access management strategies to adhere to strict requirements. In these instances, the Team recommended the most appropriate solutions based on feasibility and best professional engineering judgment.

4.3.1 Safety and Traffic Operations

Key principles of access management include separating conflict areas, providing adequate left and right turn lanes, and limiting the number of conflict points. All of these principles improve safety and operations for vehicular, pedestrian, and bicycle traffic within the study area. Separating conflict areas can reduce the strain on drivers and providing turn lanes can reduce the potential for crashes. It is important to note that left turns into and out of entrances contribute to almost 75 percent of all crashes at intersections. Thus, it is critical to determine the most appropriate locations for these entrances. The Team investigated the need to accommodate left-turning and u-turning traffic at median openings on a case-by-case basis.

VDOT turn lane warrants will drive the need for future right-turn lanes at new commercial entrances. Because the study area features a high percentage of heavy vehicle traffic, the need for bulb-outs for u-turning trucks at key locations should be investigated. These features have not been identified within the study area as part of this Plan. To limit the number of conflict points, commercial entrances within the study area should be examined closer for relocating, sharing, and/or removing redundant entrances.

4.3.2 Adequate Spacing

Another important principle of access management applies different spacing and design standards to different types of roadways. Principal arterial roadways, minor arterial roadways, collector streets, and local streets each have different functions. A principal arterial roadway enables traffic to move at higher speeds between large activity centers. To preserve this function on Route 29 and to reduce traffic conflicts, principal arterial roadways should feature driveways, median openings, and traffic signals that are spaced farther apart than those on minor arterial roadways. **Table 2** presents VDOT's current spacing standards according to functional classification.

Table 2 Spacing Standards for Commercial Entrances, Intersections, and Median Openings

Highway Functional Classification	Legal Speed Limit (mph)[1]	Centerline-to-Centerline Spacing (feet) Signalized Intersections[2]	Unsignalized Intersections and Full Access Entrances[3]	Partial Access Two-way Entrance[4]
Urban[5] Principal Arterial	≤ 30 mph	1,760	1,050	270
	35 to 45 mph	2,640	1,320	325
	≥ 50 mph	2,640	1,320	510
Rural[6] Principal Arterial	≤ 30 mph	2,640	1,320	270
	35 to 45 mph	2,640	1,320	440
	≥ 50 mph	2,640	1,760	585

a Legal Speed Limit – Use legal speed limit unless the design speed is available and approved for use by VDOT.

b Signalized Intersection Spacing – Allocated in fractions of a mile: (1/2 mile – 2,640 feet); (1/3 mile – 1,760 feet); (1/4 mile – 1,320 feet); (1/5 mile – 1,050 feet); (1/8 mile – 660 feet); and (1/16 mile – 330 feet). Based on Transportation and Land Development by Vergil Stover and Frank Koepke, Institute of Transportation Engineers, pages 4-23 to 4-32 and Figure 4-16 "Relationship Between Progression Speed, Cycle Length, and Signal Spacing." Page 4-23: "Traffic signal control applied in a sequential pattern according to specific spacing criteria optimize traffic efficiency"… "to reduce fuel consumption, reduce delay, reduce vehicular emissions and improve safety."

c Unsignalized Intersections and Full Access Entrances – These operate in a similar manner such that spacing standards can apply to both equally. Because some intersections and entrances can eventually become signalized, spacing should relate to signalized intersection spacing. Therefore, the spacing standards are generally one-half those for signalized intersections.

d Partial Access Two Way Entrances: Arterials – Left turn movements are limited. Spacing for this type of entrance, e.g. right in/right out with/without left in movement, on arterials is based on the length of a right auxiliary turn lane (entering taper, deceleration length, storage length) needed for a safe deceleration from the full design speed of the highway for turning into an entrance. *A Policy on Geometric Design of Highways and Streets* 2004, AASHTO, pages 713 to 716. Calculations: 30 mph, 270 feet; 35 mph, 325 feet; 40 mph, 375 feet; 45 mph, 440 feet; 50 mph, 510 feet; and 55 mph, 585 feet.

e Minor Arterials – "Urban" is an abbreviation of "urban area". Spacing for new entrances and intersections may be allowed by the District Administrator or designee where existing entrances and intersections did not meet the above spacing standards for highways classified as urban arterial or urban collector. Spacing should be consistent with the established spacing along the highway. Reasonable efforts shall be made to comply with the access management requirements, which include restricting entrances within the functional areas of intersections; sharing entrances with and providing vehicular and pedestrian connections between adjacent properties; and physically restricting entrances to right-in or right-out movements, or both.

Since rural land dominates the study area, many large tracts of land are available for development and that trend is likely to continue. Potential right-in/right-out entrance locations were identified, in addition to median openings that satisfy the VDOT minimum spacing requirements. It is important to note that a few median openings could not be shifted to meet the minimum spacing requirements. In these instances, the maximum allowable distance was recommended, based on physical constraints. The Team recommended new full-access commercial entrances in locations that met spacing requirements.

4.3.3 Corner Clearance

VDOT's *Road Design Manual, Appendix F – Access Management Design Standards for Entrances and Intersections: Principal Arterials* defines corner clearance as "the distance between an entrance and the nearest cross road intersection and is aimed at preventing the location of entrances within the functional area of an intersection." Within the study area, the minimum corner clearance between entrances and intersecting streets should be 225 feet. In locations where existing commercial entrances did not meet the corner clearance recommendations, shifting entrances as far away from the minor street approach as possible was recommended. In some locations,

property frontage is open for a large percentage of its length along Route 29. Thus, the Team recommended that frontage or other small entrances be consolidated to help reduce motorists' confusion about where to enter and exit properties.

4.3.4 Inter-parcel Access

Future inter-parcel access should be expected and prepared for by the County as a measure to reduce the number of conflict points along Route 29. For land-locked parcels – those with no direct access to a minor side street or an existing or proposed entrance –providing alternative access to a minor street, using inter-parcel access was investigated. However, if inter-parcel access cannot be achieved, right-in/right-out entrances were recommended.

4.3.5 Interchange Ramps

In addition to spacing commercial entrances, median openings, unsignalized intersections, and traffic signals, the Team investigated the impact of adjacent interchange ramps. **Table 3** and **Figures 13** and **14** present spacing standards that vary depending on the type of adjacent interchange and the corresponding traffic control at the end of the exit ramp. The study area for this project focused on at-grade intersections; however, interchange spacing guidelines are included for the County's reference.

Table 3 Spacing Standards for Commercial Entrances and Intersections near Interchange Areas on Multi-lane and Two-lane Principal Arterial Crossroads

	Spacing Dimensions (Fee)					
	Multi Lane	Two Lane				
Type of Area	X	Y	Z	M	X or Z	Y
Urban	750	2,640	900	990	750	1,320
Rural	1,320	2,640	1,320	1,320	1,320	1,320

Figure 13 Access Control on Multi-lane Principal Arterial Roadways at Interchanges

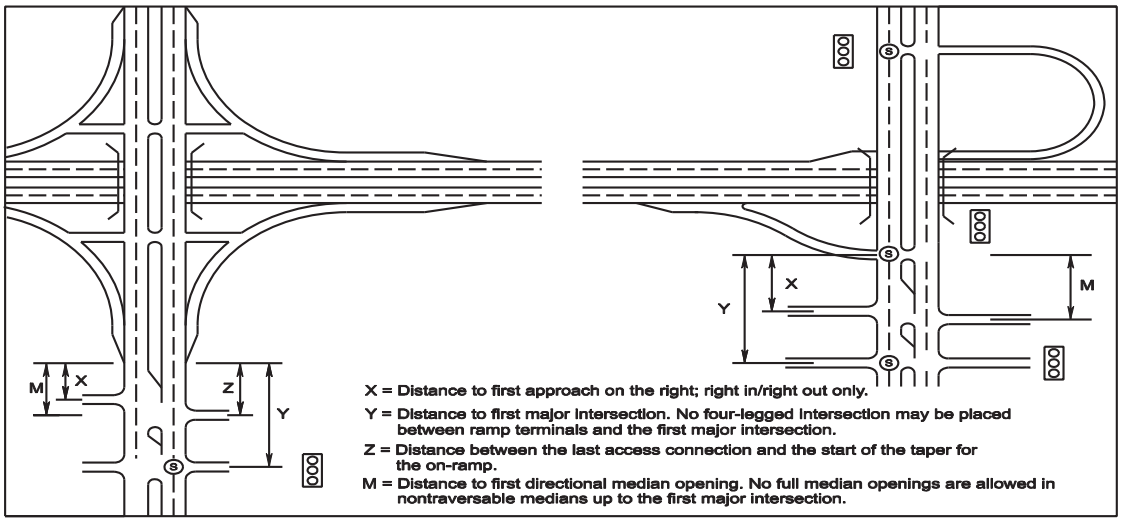
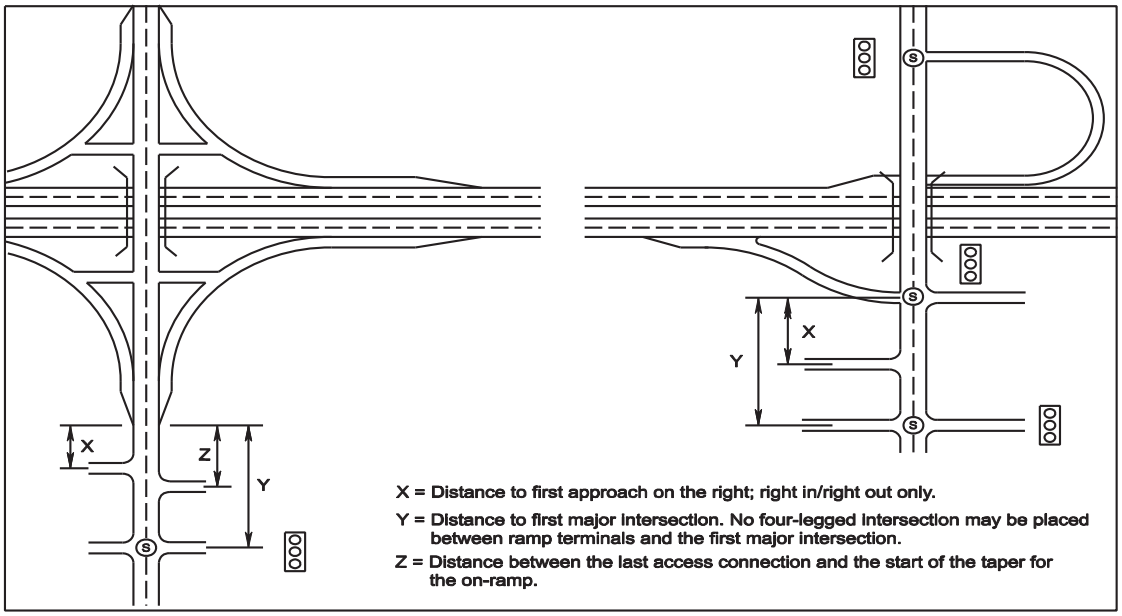


Figure 14 Access Control on Two-lane Principal Arterial Roadways at Interchanges



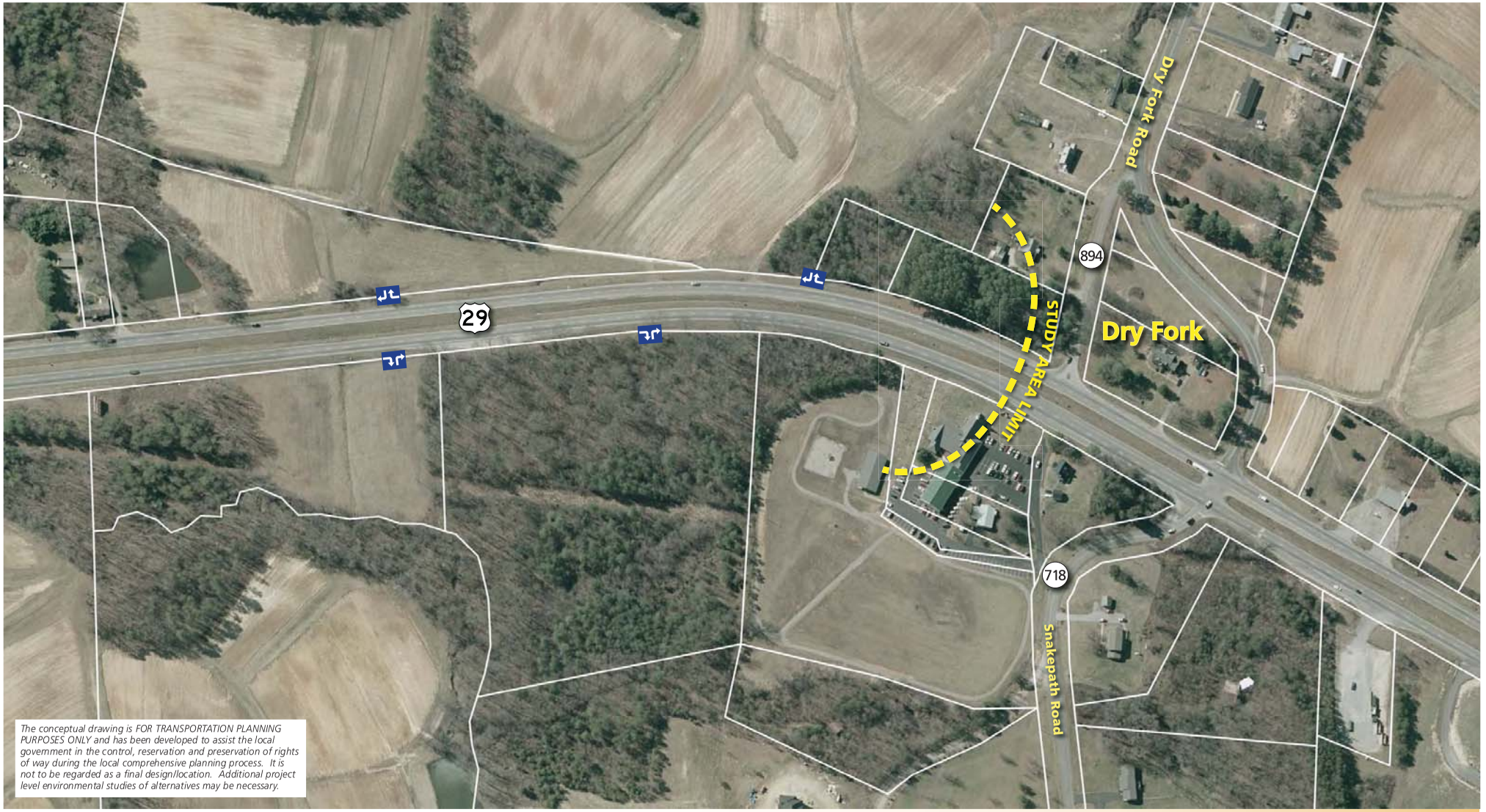
4.4 Access Management Recommendations

After identifying relevant access management standards, the VHB Team developed recommendations to apply the standards at specific locations within the Route 29 study area (Figures 15 – 23). These recommendations were presented in draft form in a citizens' information meeting that was attended by key stakeholders, the general public, and members of the press. Some recommendations at critical locations are described below.

- **Route 726 (Malmaison Road).** The properties to west of the Route 726 intersection have several redundant commercial entrances that could be closed while still providing clearly defined access to Route 29.
- **George's Lane.** This unsignalized intersection has a median break and was the most cited example of a dangerous intersection by Pittsylvania County residents who participated in the citizens' information meetings. Given its close proximity to Woodcrest Drive, George's Lane does not meet VDOT's current spacing standards so there is an opportunity to close the median opening. Drivers who currently turn left from George's Lane onto northbound Route 29 would instead travel approximately 1,000 feet south on Route 29 and make a u-turn.
- **Route 640 (Spring Garden Road/Woodcrest Drive).** This unsignalized, 4-leg intersection currently has a southbound left-turn lane. This Plan recommends installing northbound left- and right-turn lanes. The Route 640 intersection is the northern endpoint of Blairs – a substantial high-growth area within the County.
- **Toy Lane.** This major intersection at the eToys facility has been analyzed on a few occasions to determine whether or not a traffic signal is warranted based on the volume of traffic. To date, it has not met signal warrants. However, it is recommended that access to future development across Route 29 from eToys be aligned with Toy Lane. There are several large tracts of land that may be sold for development in future years, so the County should prepare in advance to control future traffic turning movements.

4.5 Implementation

As Chapter 5 presents, the County should first amend its zoning ordinance to include an overlay district that covers the study area. The overlay district includes standards that can lead to more efficient land use and better use of public funds for infrastructure. In this way, the County can realize a more predictable, organized pattern of land development within the study area. Chapter 6 then discusses the steps necessary to amend the zoning ordinance via public comments and hearings. It is important to address landowner concerns before adopting the amendment to ensure that all affected parties clearly understand the overlay district's provisions. Chapter 7 presents estimated project costs and potential funding sources.



The conceptual drawing is FOR TRANSPORTATION PLANNING PURPOSES ONLY and has been developed to assist the local government in the control, reservation and preservation of rights of way during the local comprehensive planning process. It is not to be regarded as a final design/location. Additional project level environmental studies of alternatives may be necessary.

0 200 feet

Vanasse Hangen Brustlin, Inc.

The Clay Christensen Group

T3 design

- Study Area Limit
- Below VDOT Spacing Standards
- Existing/Proposed Property Connection
- Proposed Right-In/Right-Out

U.S. Route 29 Access Management Plan
~ Blairs

Figure 15

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Productive Meetings with Real Results

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Figure 16

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Figure 17

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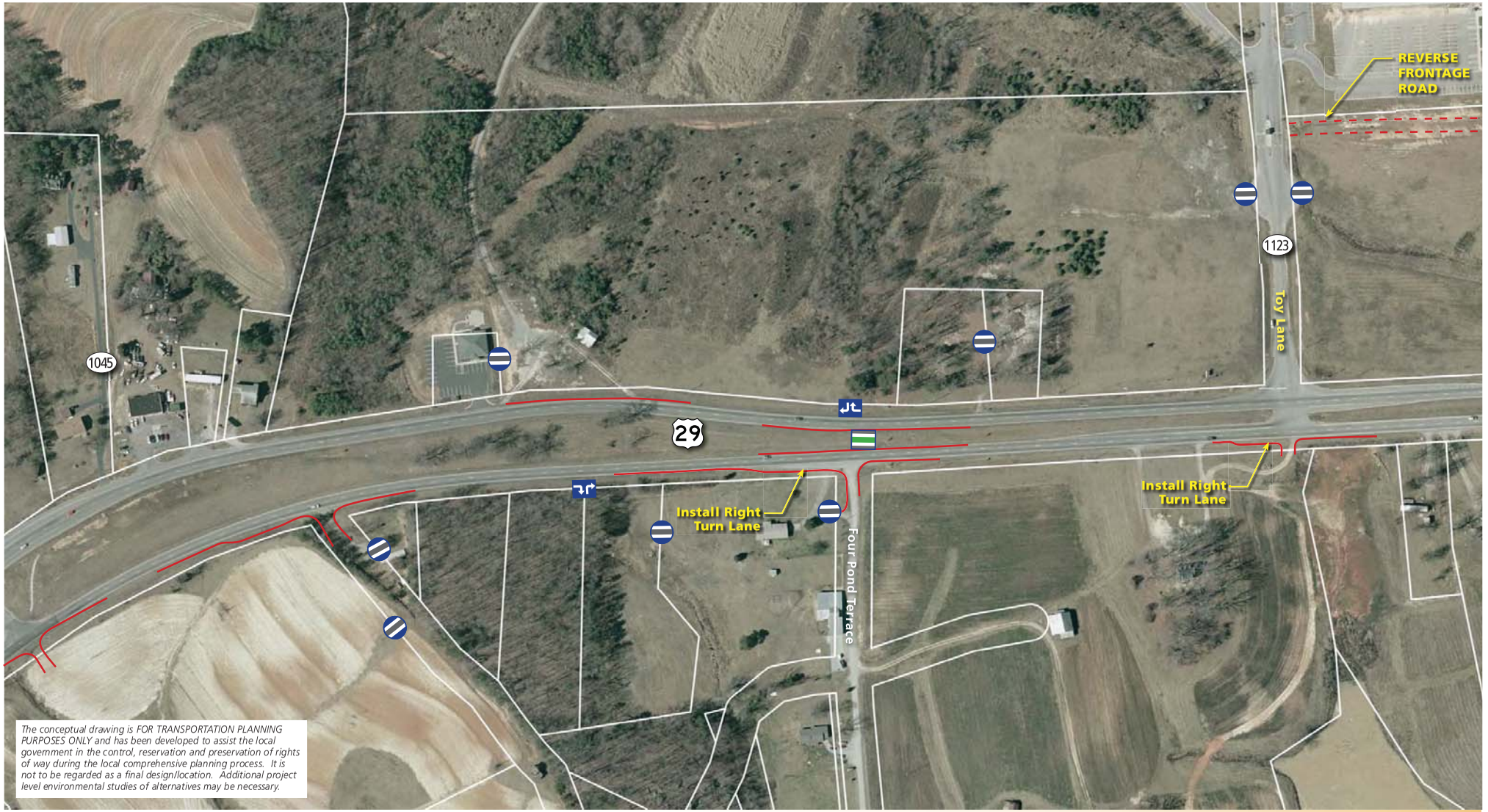
Figure 18



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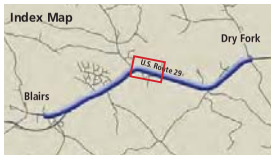

- Study Area Limit
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- Proposed Right-In/Right-Out

U.S. Route 29 Access Management Plan
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Figure 19

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0 200 feet

Vanasse Hangen Brustlin, Inc.

The Clay Christensen Group

T3 design

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- Study Area Limit
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Figure 20

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The Clay Christensen Group

T3 design

- Study Area Limit
- Below VDOT Spacing Standards
- Existing/Proposed Property Connection
- Proposed Right-In/Right-Out

U.S. Route 29 Access Management Plan
- Blairs

Figure 21

The conceptual drawing is FOR TRANSPORTATION PLANNING PURPOSES ONLY and has been developed to assist the local government in the control, reservation and preservation of rights of way during the local comprehensive planning process. It is not to be regarded as a final design/location. Additional project level environmental studies of alternatives may be necessary.

0 200 feet

Vanasse Hangen Brustlin, Inc.

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Figure 22

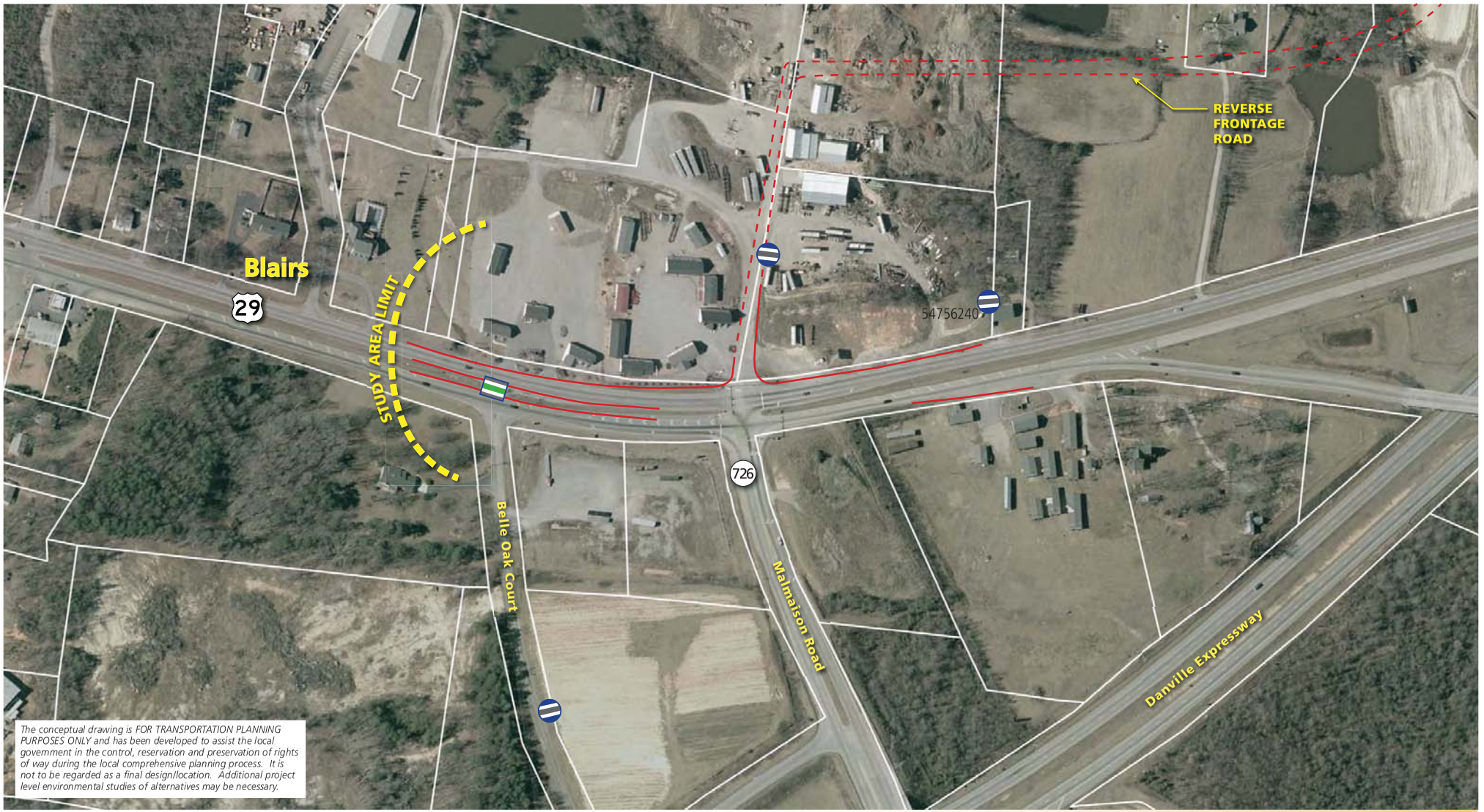

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Figure 23

6

Implementation and Maintenance Plan

This chapter describes the process by which the County can implement the Access Management Plan. The process not only includes the legal steps that need to be taken, but also the manner in which to address individual property owner concerns. To ensure that the Access Management Plan remains a viable policy document, it is important to update the plan to reflect changing conditions within the study area.

6.1 Implementation Process

The County must amend its current zoning ordinance to enforce the provisions detailed above in the HCOD. Pursuant to Section 15.2-2204 of the Code of Virginia, the County Planning Commission and Board of Supervisors must notify the public of the proposed amendment by advertising two public hearing notices in a newspaper with circulation in the local area. The notices should be advertised once a week for two consecutive weeks, with no fewer than six days between advertisements. The notices for both the Commission and the Board may be published concurrently. The Commission and Board may each hold a public hearing, or they may hold one hearing in a joint session. Regardless of the public hearing's format, it shall not occur less than five days or more than 21 days after the second advertisement. Pursuant to Section 15.2-2285 of the Code of Virginia, the Commission shall present its recommendations to the Board, which may make appropriate changes or corrections in the proposed amendment before approving and adopting the HCOD.

6.2 Potential Concerns

The Project Team realizes that it may not be feasible to implement the strategies above in every location that needs improvement within the study area. In these situations, the Project Team would strive to implement solutions that provide the highest possible degree of safety and preserve the roadway's function. Additionally, landowners within the study area may present the Project Team with requests for breaks in right-of-way, changes in the location or function of existing breaks, and/or modifications to the Access Management Plan. To process these requests, the County and VDOT would work with the individual landowner to determine the most appropriate course of action.

7

Project Costs and Funding Sources

Identifying project costs and securing funding are critical elements in implementing the access management strategies above. It is important to prioritize improvements based on estimated project costs and the likelihood of securing funding that does not originate from VDOT. Project costs not only include equipment, manpower, and material costs, but administrative costs that County, MPO, and VDOT staff incur. The following discussions describe estimated project costs and various funding sources.

7.1 Project Costs

Several standard access management treatments were assigned a relative cost index value (see Table 4). Construction and maintenance costs may vary due to geographic location, method of construction, contract amount, time of year, and inflation.

The relative cost index values are accepted by FHWA for planning purposes. The purpose of the index is to compare various construction options to each other, as opposed to identifying a specific cost per option. For example, a new turn-lane or driveway closure will likely have different costs five years from now, but the relative cost of a turn lane to a driveway closure should stay the same. An access management treatment that has a relative cost index of 9 ("Close relocate opposing driveways") is estimated to cost 9 times that of cost index value of 1 ("Curbing to regulate maximum driveway width").

Table 4 Relative Costs Of Access Management Treatments

Treatment	Construction Option	Relative Cost Index
Install raised median divider with left-turn deceleration lanes	Basic construction – raised median with openings on existing paved median	195
	Basic construction plus additional pavement widening	738
	Basic construction plus additional pavement widening and right-of-way acquisition	1,180
Install physical barrier to prevent uncontrolled access along property frontages	Barrier curb	144
Offset opposing driveways	Close and relocate driveway	9
Regulate maximum driveway width	Curbing	1
Regulate minimum driveway spacing	Close one driveway	2
	Close and relocate one driveway	8
Regulate minimum corner clearance	Close one driveway	2
	Close and relocate one driveway	8
Regulate minimum property clearance	Close one driveway	2
	Close and relocate one driveway	8
Optimize driveway spacing in the permit authorization stage	Implemented during the permit authorization stage	NA
Regulate maximum number of driveways per property frontage	Close one driveway	2
Consolidate access for adjacent properties	Close two driveways and construct one driveway on property line	11
	Close one driveway and construct one driveway on property line	8
Deny access to small frontage	Basic construction – costs are highly variable and dependent on land value	NA
	Construct connection between properties	2
	Close one driveway and construct one driveway on property line	8
Regulate minimum sight distance	Close and relocate one driveway	8
Construct a local service road	Frontage road	NA
Install right-turn deceleration lane	Deceleration lane	9
Encourage connections between adjacent properties (even when each has highway access)	Connection between properties	2
Require adequate internal design and circulation plan	Basic construction – costs are highly variable and location-dependent	NA

* NA – Not Available

7.2 Funding Sources

It is anticipated that most of the funding sources to implement the access management strategies described above will come through developer financing plans. For example, relocating or installing new median crossovers for access to development will be part of that developer's mitigation plan submitted to the County.

A variety of funding sources are available to safety and congestion issues. The County can apply for Federal transportation grants, which are provided by the U.S. Department of Transportation and administered by VDOT in Virginia. The State and Community Highway Safety Program and the Highway Planning and Construction Program provide funding that directly relate to the recommended improvements.

The State and Community Highway Safety Program seeks to provide a coordinated national highway safety program to reduce traffic crashes, deaths, injuries, and property damage. The safety program provides funding via formula grants and requires applicants to provide a cost summary for the project, a certification statement, and the state's performance plan and highway safety plan. With particular relevance to this project, program funding can be used to provide solutions to problems identified within two of the nine national priority program areas: speed control and roadway safety. At least 40 percent of the Federal funding apportioned to the state for any fiscal year must be spent by a political subdivision of the state, i.e., Pittsylvania County. The deadline for submitting the state plan is September 1.

The Highway Planning and Construction Program seeks to improve transportation on public roads, except those functionally classified as local streets. The program also promotes safe highway design. The planning and construction program provides funding via formula and project grants. Eligible activities and allowable costs are determined in accordance with Title 23 of the Code of Federal Regulations and applicable Office of Management and Budget cost principles. Federal monies fund 90 percent of interstate projects and 80 percent for most other projects. Applicants should contact the Federal agency for deadline information.

In addition to these programs, Transportation Enhancement funding is also available. The enhancement program seeks to provide alternatives to the private automobile. In general, projects that feature bicycle and pedestrian facility improvements are good candidates for funding relative to other enhancement projects.

The program is administered by VDOT in Virginia and requires that the applicant supply at least 20 percent of the project's funding. The maximum funding award per project is $1 million. If VDOT approves the project for funding, it must award the applicant at least 25 percent of the requested funding. The deadline for submitting an application, which includes a project cost estimate, is November 1 of each year.

VDOT's Local Assistance Division (LAD) develops policy and provides guidance for special funding programs and other programs that impact work performed by localities, and serves as a liaison to local government organizations.

The LAD manages special funding programs, urban system changes, provides locally administered project oversight and urban construction coordination, and manages the local assistance payment program. VDOT's LAD should be used as a resource by Pittsylvania County to develop funding strategies for the recommendations included in the Guidebook. The staff contact, Michael Estes, can be reached at (804) 786-2745.

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Application to Other Areas

After adopting the HCOD, Pittsylvania County officials may wish to apply its requirements to other similar 4-lane divided highway locations outside of the study area. In doing so, the County can help improve safety along other sections of Route 29, as well as Route 58 so as to preserve the roadway function, and coordinate land use planning with transportation infrastructure improvements on these other important roadways.

The Route 29 Access Management Plan-Blairs was assembled in such a way that other localities could adopt the access management concepts and use the proposed draft HCOD language as a template.

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Conclusion

The access management strategies described above, along with implementation tools and funding sources, can help County, MPO, and VDOT staff improve safety along Route 29 while preserving the roadway's function and accommodating existing and proposed development. To this end, it is important that the County engage the development community in an open, continuous dialogue that sets the stage for future development within the study area.

To realize the goals of this Access Management Plan, the next steps include reviewing, revising if necessary, and adopting the provisions of the proposed draft HCOD. Once adopted, these zoning provisions can help the County create a predictable pattern of land development that reduces the number conflict points and improves the safety of motorists, bicyclists, and pedestrians. It is important to note that adoption of the HCOD is not required for some improvements to take place, but it helps the implementation process.