



2010 Long-Range
Comprehensive
Plan  Powhatan
County

*-Sustainable and intelligent
planning for the future...*

County of Powhatan
2010 Long-Range Comprehensive Plan

Sustainable and Intelligent Planning for the Future

Adopted July 12, 2010

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Part I: Planning Context

CHAPTER 1: INTRODUCTION

Introduction to the County

Powhatan County is located in the Lower Piedmont area of Virginia. It is bordered by Chesterfield County to the east, Amelia County and the Appomattox River to the south, Goochland County and the James River to the north, and Cumberland County to the west. The eastern tip of the county is approximately fifteen miles directly west of the downtown area of the City of Richmond. The county encompasses 272 square miles.

Europeans first came to Powhatan County in 1608, in an expedition of one-hundred-twenty men led by Christopher Newport. The expedition traveled up the James River to a point as far west as what is now Maidens Bridge, but were forced back by a hostile native population of Monacan Indians. The Monacan Indians were hunters and farmers, with settlements along the banks of the James River. Between 1699 and 1705, five to seven hundred Huguenot refugees fleeing persecution in France settled on the James River in abandoned Monacan villages. The Huguenots later settled throughout the area, building many substantial houses. Some of those houses remain among the county's many historic structures.

Powhatan County was created by the Virginia General Assembly in 1777 from land located in the eastern portion of Cumberland County. In 1850, a small portion of Chesterfield County was annexed, creating what today is the 272 square mile County of Powhatan. The county seat was originally called Scottville, after General Charles Scott. Scott was a Revolutionary War hero and personal aide to General George Washington at Valley Forge. The name of the village was changed to Powhatan in 1836. The present courthouse building was erected in 1848.

Throughout its history the county's economy has been based on farming, including the cultivation of crops, timbering and livestock production. The economy was traditionally linked to river traffic, especially along the James River. Bateau boats were used on the river and the Kanawha Canal to transport goods to and from the area. During the

nineteenth and twentieth centuries, highways and railroads became the primary means of transportation. The county's population grew along with the agricultural economy. Small rural hamlets and villages served as focal points for community and commerce throughout Powhatan County. In 1852, the county's population was 8,171, and remained relatively stable until it declined significantly and was only about 5,500 by 1950. The population increased slightly through the 1970's when the modern growth cycle began.¹

For several decades the county grew steadily and by the 1990's dramatic growth and development had occurred. The county's population grew from just over 15,000 to over 22,000 by 2000. The last eight years have shown continued and remarkable growth with an annual average of 300 new homes approved. Most of the new development since 2000 has occurred in large-lot (5-acre) subdivision in pockets throughout the county. With more dense residential development occurring in Scottville near the Courthouse Village, and in Founder's Bridge east of Route 288 in the 711 Village. The majority of recent commercial growth has occurred along the U.S. Route 60 Corridor, and in the 711 Corridor Overlay District east of Route 288. Additional growth has been accommodated through lot splits throughout the county. Agricultural activities have decreased and most agriculture is limited to smaller family farms with some emerging niches like vineyards, green houses, or equestrian related facilities. Silviculture is still practiced within the county but the strongest contribution to the economy is government employment.

¹ Source: Brief History of Powhatan County, Powhatan County, Virginia Comprehensive Plan 1998-2008. 1998

Powhatan County Demographic Fact Sheet

Table 1: Population

Year	Population	Change	% of Change
1980	13,062		
1990	15,328	2,266	17.30%
2000	22,377	7,049	46%
2008 (est.)	28,006	5,629	25.20%

Source: US Census Bureau and the Memorandum of Existing Conditions created by URS dated 10-31-2007

Table 2: Population by Race (2008 Estimate)

White	23,172
Black / African American	4,161
Hispanic or Latino	356
Asian	77
American Indian & Alaska Native	51
Native Hawaiian & Other Pacific Islander	5
Two or More Races	184
Total	28,006

Source: US Census Bureau

Table 3: Housing Units

Year	Owner	Renter	Vacant	Total
2000	6,448	810	251	7,509
2008 (est)	8,444	1,151	297	9,892

Source: US Census Bureau and the Memorandum of Existing Conditions created by URS dated 10-31-2007

Table 4: Population by Gender and Age (2008 Estimate)

Gender	Age Category	Population
Male	Under 18	3,190
Female	Under 18	2,868
Male	18-64	10,516
Female	18-64	8,407
Male	65 +	1,447
Female	65+	1,578

Source: U.S. Census Bureau

Table 5: Housing Data

Median Home Value	\$287,400
Median Household Income	\$68,900
Average Household Size	2.7 people

Source: city-data.com (2007 Estimates)

Table 6: 2008 Estimated Employment

Work Force	Employed	Unemployed	Unemployment Rate
14,273	13,461	812	3.3 %

Source: Virginia Workforce Commission (www.vawv.virginia.gov)

Table 7: Top Five Employers in Powhatan County

1. Powhatan County School Board
2. Powhatan Correctional Center
3. Virginia Department of Juvenile Justice
4. Deep Meadow Correctional Center
5. County of Powhatan

Source: Powhatan Community Profile from the Virginia Employment Commission. Last updated 6/17/2009

Overview of the Plan

This comprehensive plan is an update to the county’s previously adopted plan from 1998 and the amendments made in 2003. A comprehensive plan provides a vision for how a community should grow in the future. A comprehensive plan is typically long-range and looks twenty to thirty years in the future and incorporates a wide range of issues and questions relating to land use, including transportation, land use mix, parks and open space, community facilities, community character and identity, housing and neighborhoods, and economic development.

Once adopted, elected and appointed officials of the county will use the plan as a guide for their land use and public investment decisions.

Role and Purpose of the Plan

The plan is intended as a guide to assist the elected and appointed officials in decisions related to development, growth, and provision of public services. The comprehensive plan, however, is not the only planning document that the county will maintain, and is not intended to be an exhaustive list of unattainable future needs; rather the comprehensive plan should be a broad depiction of the best possible and realistic future. These recommendations should focus on issues that the county has the ability to control to attain that future vision.

The various agencies, authorities and departments of the county’s government will maintain planning documents that relate back to the overall vision from the comprehensive plan but provide more in-depth and strategic data and policy for a specific area of interest. Capital improvement plans, annual budgets, facility operation and expansion plans, and special area land use plans are all examples of additional documents the county may employ to expand on and implement the vision of the comprehensive plan.

Implementation is a key element in the success of a comprehensive plan. The plan is a non-regulatory tool. It provides recommendations, but in order to enact these recommendations the county must utilize other tools consistent with the vision of the comprehensive plan. The recommendations contained herein are

provided for consideration and will be developed further through regulatory tools like the **Subdivision and Zoning Ordinances** proffer programs, economic development efforts, and management of public facilities including fees and taxation in the county, which are also regulatory.

Legal Basis for the Comprehensive Plan

The State of Virginia mandates that Powhatan County prepare and adopt a comprehensive plan for the physical development of the land within its jurisdiction under **Section 15.2-2223** of the **Code of Virginia (COV)**. The plan must include assessments of existing conditions, trends of growth, and the future needs for the order, convenience, prosperity, and general welfare of the inhabitants. The State code also requires the plan to include transportation and land use components. The land use component is encouraged to provide policies for: the location of future public facilities such as parks, schools, waterworks, and sewage disposal, historical areas, areas for redevelopment, and areas of environmental significance. Although having zoning districts match the recommendations in the land use component of the plan, the **COV** does not require them to conform. However, improvements not included in the plan must be found by the Planning Commission to be substantially in accord with the comprehensive plan prior to approval and construction of capital facilities, except as otherwise provided in the state code. By law, the plan must also address affordable housing within the county.

Since the last update of the county’s comprehensive plan completed in 2003, the State has mandated additional elements for the comprehensive plan, including:

- Secondary street connectivity requirements for VDOT acceptance, and
- Urban Development Areas

Through **Section 33.1-4.1**, the State connects funding for maintenance of roadways to a set of design standards maintained by the

Virginia Department of Transportation (VDOT). In 2009, VDOT updated requirements to address connectivity. The State bases the requirements on the level of development in an area and they are intended to increase connectivity of road and pedestrian networks, minimize stormwater runoff and reduce impervious surface area through reduced street widths, and address performance bonding and cost recovery. These new regulations require communities to evaluate transportation and land use planning in a potentially different light than what we have used as guidelines in the past, and place requirements that are more specific on the approval of private development.

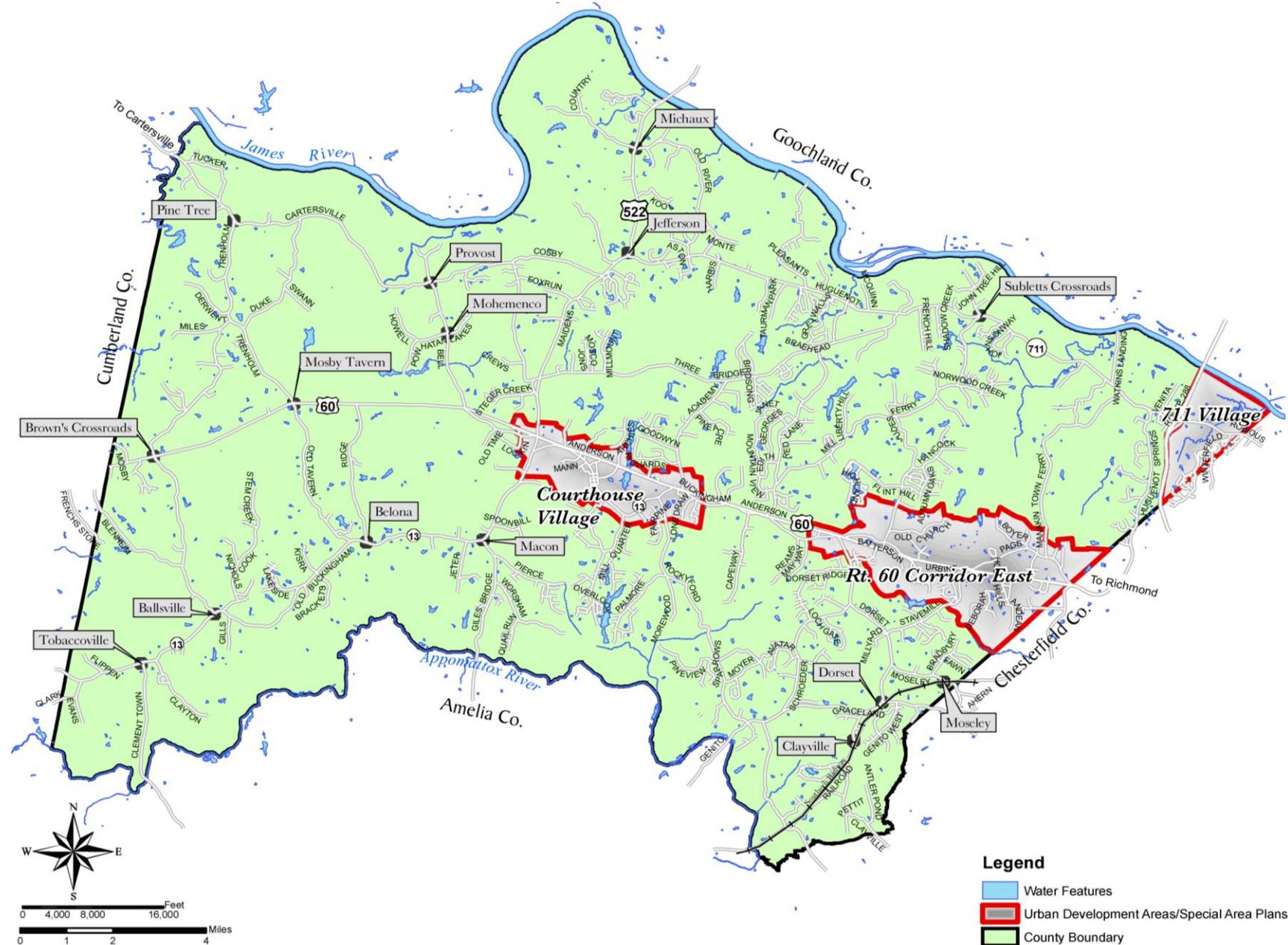
Section 15.2-2223.1 now requires comprehensive plans to include urban development areas and principles of new urbanism. All localities in Virginia with a decennial (from 1990 Census to 2000 Census) growth rate of fifteen percent or a decennial growth rate of five percent and a population of at least 20,000 are required to designate an urban development area in the comprehensive plan by 2011. According to the U.S. Census Bureau, the county's population grew from 15,328 in 1990 to 22,377 in 2000, for a decennial growth rate of nearly forty-six percent.

The urban development area or areas are required to accommodate at least ten years but not more than twenty years of growth. The plan must also incorporate principles of new urbanism and traditional neighborhood development including: pedestrian-friendly road design, interconnection of new local streets, connectivity of road and

pedestrian networks, preservation of natural areas, satisfaction of requirements for stormwater management, mixed-use neighborhoods, including mixed housing types, reduction of front and side yard building setbacks, and reduction of subdivision street widths and turning radii at subdivision street intersections. The plan must also include any incentives (financial or otherwise) which the community will employ to encourage development in the urban development areas.

This plan addresses the statutory requirements in several ways. The county designates three key locations as urban development areas, and addresses them in this plan with special area plans in **Chapter 8: Land Use & Community Character**. These locations will accommodate the majority of future growth in a compact development pattern based on New Urbanist principles, while still maintaining the rural community character of Powhatan County. Transportation recommendations have been coordinated with the land use to provide for improved connectivity standards and a road network that meets the requirements of these statutes as well as the local needs of the community. Additional information on the actions the county will have to carry out to implement the recommendations of this plan relevant to the urban development areas is included in **Chapter 11: Implementation Tools**. Map 1 on the following page shows the designated urban development areas for Powhatan County.

Map 1: Designated Urban Development Areas



Plan Development Process

The comprehensive plan is the result of a lengthy and detailed planning process, which took place from 2004 to the present in essentially two phases. In August of 2004, the Planning Commission began the process by establishing a comprehensive plan Subcommittee consisting of two Commission members. Over the next several months, the subcommittee worked with planning staff to develop a scope of work for a consultant to update the county's comprehensive plan. In June of 2005, the Planning Commission endorsed the scope and forwarded it to the Board of Supervisors. The Board of Supervisors reviewed the scope but deferred consideration of it until they met with the Comprehensive Plan Subcommittee.

When the Board of Supervisors and Comprehensive Plan Steering Committee met in August of 2005, they agreed to establish Citizens Working Groups (CWGs) to work on specific aspects of the comprehensive plan. The meeting also resulted in a decision to hold a joint meeting of the Planning Commission and Board of Supervisors to discuss the advantages and disadvantages of a full update of the comprehensive plan.

At this point, the county delayed hiring a consultant as the first of the CWGs—The U.S. Route 60 Overlay CWG—began working on the geographic issues along the corridor in March of 2006. Over the next several months, the Comprehensive Plan Subcommittee and staff began to organize the other three CWGs: Economic Development, Infrastructure, and Land Use and Preservation. All three of the CWGs held kick-off meetings in early August 2006. Later that month, the Board of Supervisors approved the issuance of a Request for Proposal to hire a consultant for the review/update of the comprehensive plan.

In May of 2007, URS Corporation began working on Phase I of the comprehensive plan. Phase I consisted of fact-finding, focused study of

specific planning issues, and active public input. URS facilitated public outreach meetings throughout the county and conducted demographic assessment and forecasting. In Phase II, the Board of Supervisors also appointed committees to address the various issues along the Huguenot Trail (Route 711) Corridor and transportation.

The substantial work completed by the CWGs and Advisory Committee proved to be invaluable in Phase I. The information, data collection and insight provided by the CWGs was integral in informing the Board of Supervisors and Planning Commission and assisted in moving the process along after a challenging start. Phase I concluded in February of 2008.

The county selected the planning team of McBride Dale Clarion, Clarion Associates, and Martin/Alexiou/Bryson, PLLC to assist in the completion of Phase II of the planning process, which involved review of existing conditions and trends, visioning and goal setting, and development of the various plan elements. The CWGs presented their final reports to the Board of Supervisors, Planning Commission, and consultants in July of 2008.

The consultants conducted an assessment and diagnosis of the various planning policies of the county and worked with the Planning Commission to revise and refine the county's vision, goals, and objectives. Building on the work of the CWGs the consultants worked with the various groups and Planning Commission to create a **Countywide Land Use Plan** and **Major Thoroughfare Plan**. The consultants drafted the plan chapters, which the Planning Commission reviewed in July of 2009 and sent out for public review in fall of 2009. The consultants made modifications and revisions and prepared the full plan for adoption in early 2010.

How to Use the Plan

The plan is a guide for public decision-making. Specifically, the county’s elected and appointed officials will use the plan to evaluate future proposals or policy changes to ensure consistent decisions are made. Furthermore, the plan provides guidance to landowners and developers on what is appropriate in the county.

This plan uses the following terms to describe the various policy recommendations:

Vision: the comprehensive, overarching statement of the desired future of the county. The vision is the ultimate set of ideals to which the county should aspire.

Goal: a statement of desired end-state or target. They relate to the vision statement and focus on a specific element of the plan. A goal provides particular guidance for where the county should be in the future, and sets the tone for individual objectives for each element.

Objective: a recommended course of action or task the county or its designated agency could undertake in pursuit of a goal and the vision. An objective provides focused and achievable guidance on specific topics under the plan element headings. The objectives tie the implementation of the plan to the goals and vision.

The comprehensive plan is non-regulatory in nature, but it does express the critical policies of the county. The plan does not stand alone and can only be effective when supported by the various implementation measures included in **Chapter 11: Implementation Tools**. The plan acts as a guide to modify regulations like the *Subdivision and Zoning Ordinances*. Amendments to the ordinances should be consistent with the comprehensive plan.

Where do I find information?

The plan is comprised of four parts.

Part I: Introduction

The first part of the plan provides a background on planning, the planning process, how to use the plan, and the trends and information influencing the plan.

Part II: Plan Elements

The second part of the plan includes the future recommendations for each element of the plan. Background, key issues, and the goals, objectives and strategies for each of the following elements:

- Economic Development
- Affordable Housing
- Infrastructure & Facilities
- Natural & Cultural Resources
- Land Use & Community Character
- Transportation

Part III: Implementation

The third part of the plan details the approach the county can take to implement the recommendations in Part II. A prioritized list of actions is also included in this section.

Part IV: Additional Planning Resources & References

The fourth part is a technical appendix to the plan and includes references to the CWG reports and other documents and materials, which informed the planning process. A glossary of terms is also included in this section.

How is the plan updated?

This document is a proactive policy guide for the future development of the county, based on sound technical analysis and extensive public participation. The county should not view lightly amendments to the plan. The Planning Commission and Board of Supervisors should hold any amendment to the plan to the same high standard and comprehensiveness as the creation of this plan update. Because of the coordinated intent of the elements of the plan, the county should weigh deviation from one element against potential impacts on the achievement of other goals, objectives, and implementation measures. Each amendment should be evaluated comprehensively to ensure that proposed changes are consistent with the spirit of this plan, can be supported by public facilities, services, and transportation network, and are supported by all elements of the plan—amendments should not be considered solely as an amendment to **Map 7: Countywide Land Use Map**, or **Map 11: Major Thoroughfare Plan**. The overarching vision and goals of the plan are the “spirit” of the plan.

Plan maintenance, amendments, and updates are covered in more detail in Part IV, and a list of circumstances that warrant amendments is provided.

CHAPTER 2: PLANNING BACKGROUND

Overview

Several existing conditions documents were prepared during the planning process that detailed historic and current trends, and analyze the major influences for the future. These documents include:

- **Memorandum of Existing Conditions**
- **The Population and Employment Forecasts Memorandum from URS**
- **The Economic Development Citizens Working Group Summary Report**
- **The Infrastructure Citizens Working Group Summary Report**
- **The Land Use & Land Preservation Citizens Working Group Summary Report**
- **The U.S. Route 60 Overlay Citizens Working Group Summary Report**
- **The Transportation Study Group Final Report**
- **The Huguenot Trail Advisory Group Final Report**
- **The Powhatan Comprehensive Plan Update Diagnosis and Assessment**

The plan incorporates these documents by reference and the full documents are on record with the Planning Department. This chapter details the key information from the research and analysis conducted during Phase I of the planning process.

Key Themes of the Plan

It is useful to keep the big picture in mind during review and implementation of this comprehensive plan. The following key themes summarize the intent of this plan:

- **Maintain Character:** Powhatan County is defined, to a large extent, by its distinctive and remarkable rural landscape with development located in several focused areas. This is the dominant land form, and maintaining the important visual character of the county is central to this plan. Powhatan is not to become universally suburban or metropolitan in character. Part of accomplishing this maintenance of character involves preservation of the “signature” areas of the county: the Courthouse Village Area, the rural segments of Huguenot Trail, the riverfront areas, and broad expanses of wooded and rural areas. Protecting cultural and environmentally sensitive resources is a fundamental goal.

Pressures for development have existed and will continue to exist because of Powhatan’s attractive character. Our intent is to manage that development in a responsible and purposeful way such that we do not destroy the very character that defines us.
- **Provide Services to Current and Future Residents:** As Powhatan County moves into the future, it is paramount to plan for provision of the services that residents will need: public safety, education, recreation, sewer, water, and transportation. The comprehensive plan will project the services and facilities needed to assure adequate levels-of-service for these basic community necessities.
- **Maintain Fiscal Sustainability:** Fiscal planning is critical to Powhatan’s future. This comprehensive plan provides essential information about demand for services and options for funding those services, so that decisions about growth and development in the county and decisions about expanding public services and facilities are aligned in a fiscally responsible way.

- **Acknowledge and Accommodate Reasonable Pressures for Growth:** This plan acknowledges that there is pressure for growth and seeks to accommodate reasonable levels of development, while maintaining character as depicted in this plan, providing services, and maintaining fiscal sustainability. This cannot be overstated. The overall goal of this plan is to position Powhatan County such that purposeful, planned growth can be accommodated without compromising other aspects of county life that are most valued. The plan describes areas, in which growth can best be accommodated, and areas where growth should be minimized, taking into account a broad range of goals and objectives.

These core ideas are reflected in the vision statement that follows, and addressed in each of the components of this comprehensive plan.

Influencing Trends

Regional Growth Influences

Two primary regional influences have had and will continue to have a major influence on Powhatan County. First, the completion of Route 288 is providing greatly improved regional access to Powhatan County. The impacts of Route 288 can already be seen in the development pressures occurring in the northeast corner of the county.

The second major regional influence is the potential growth pressure created because of extraordinary levels of development in northwestern Chesterfield County. According to the Chesterfield County planning staff, as of 2008 there were approximately 7,000 existing housing units within three miles of the boundary between Chesterfield and Powhatan counties. That number is projected to grow to over 28,000 dwelling units in Chesterfield County based on Chesterfield's "build-out" analysis. This accounts for all vacant land zoned at the beginning of 2008 and any land that was not zoned, but designated in the comprehensive plan for residential use. Approximately 6,000 of those new units can be

accounted for by several major development proposals, including West Chester, Halsley, Roseland, and part of Magnolia Green.

Current commercial and industrial projects in the same area of Chesterfield County account for almost 1.5 million square feet. At build-out, that amount is projected to be almost 18 million square feet of commercial and industrial development. Much of that new development (5.5 million square feet) can be accounted for by the Watkins Center. Chesterfield County has been engaged in extensive and ongoing debate over development in this area, and in particular over the impact of that development on the Upper Swift Creek Watershed, the upper end of which reaches into Powhatan County.

However the planning for this area in Chesterfield County turns out, Powhatan County should assume that regional growth pressures will continue to be pushing against and into Powhatan County. While the current downturn in the residential market creates uncertainty about growth, it is prudent to assume for planning purposes that growth pressures will remain. The challenge, of course, is for Powhatan County to decide how it is going to respond to and manage those growth pressures.

The plan addresses growth management by indicating targeted growth areas in the county, adjacent to the Chesterfield County line where utilities and services can be most efficiently provided, and creating policy for the improvements to the transportation network to accommodate reasonable growth. The recommendations in Part III all, to variable extent, address the concerns of growth management.

Powhatan Land Use and Growth Trends

One important question in planning for the future is “how much are we planning for?” In other words, given historic growth trends, what are reasonable forecasts of future growth?

As part of the first phase of this planning effort, the county’s consultant prepared growth forecasts to the Year 2030. Using data and forecasts from the Richmond Regional Planning District Commission and the Virginia Employment Commission, population is forecasted to grow from slightly over 27,000 as of 2006 to almost 46,000 in 2030. This represents a seventy percent increase. When average household sizes and vacancy rates are applied, this population growth will require 6,500 – 7,000 new housing units. Similarly, employment forecasts were also prepared. Employment within Powhatan County is forecasted to grow from almost 6,500 as of 2006 to almost 11,500 in 2030. This represents over a seventy-five percent increase. This plan must be able to accommodate the demand for growth in a manner consistent with the requirements for the urban development areas.

Several things should be kept in mind about these forecasts. First, they are not predictions. They are based upon assumptions about how historic growth trends may or may not continue into the future. The recent downturn in the housing market illustrates how external events can affect growth. These forecasts should be considered as planning reference points, subject to periodic reassessment. Second, they do not reflect a value judgment. In other words, they are not represented as being either desirable or undesirable – they are simply points of reference for planning. Finally, as a portion of regional forecasts, they do not reflect a detailed analysis of local land use conditions. For example, they do not involve an assessment of the ability of the community to absorb the growth or provide public services and facilities to new population or employment. Nonetheless, these forecasts provide a valuable benchmark in thinking about the future, particularly when compared to the local land use trends. The comprehensive plan is the first line in the policy to manage this growth.

Local Planning Challenges and Opportunities

Overview

The planning process revealed that there were three interlocking primary driving concerns shaping the plan:

- 1) The concerns over the economic development opportunities and positioning the county in a way that allows a strategic capture of balanced economic growth.
- 2) The need to identify a strategy to promote fiscal sustainability for operations and provision of public services.
- 3) The need to create a land use plan that maintains and creates quality community character appropriate to the rural setting in the county.

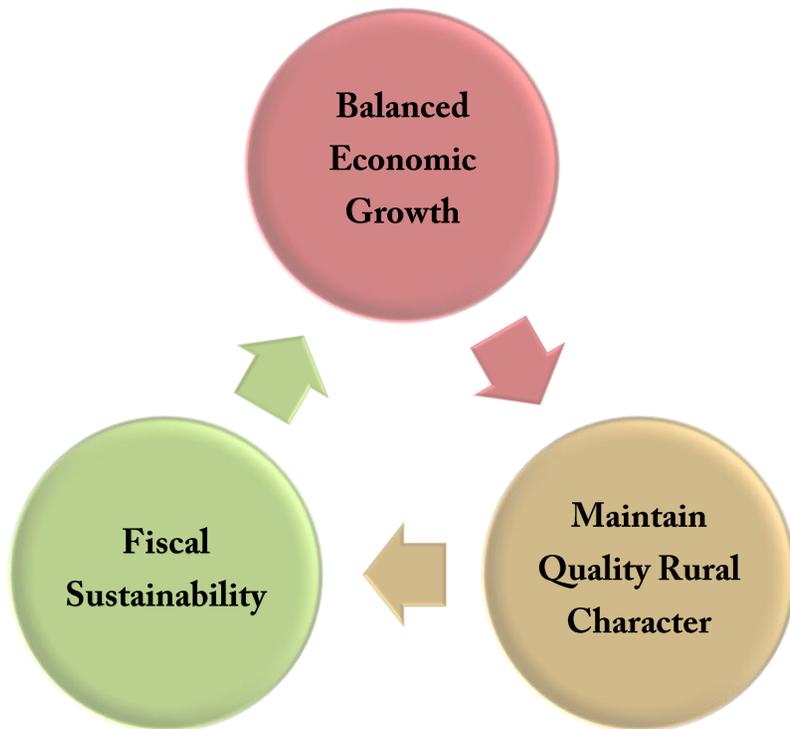
The following section summarizes the relationship between the economy, land use, and public infrastructure. The subsequent Key Challenges identify the primary targets for the plan. And the plan recommendations in the various chapters attempt to provide guidance to meet the Vision and Goals for the plan in a way that creates a smart growth option for the county, which coordinates all of these concerns and challenges.

Economy and Land Use

Almost all communities strive to have a balanced economy and to have a fiscally healthy local government able to provide public services and facilities in a sustainable manner. These two desires are interrelated – a healthy local economy typically generates tax revenues that allow for more responsible local governmental spending.

In the case of Powhatan County, the economic development issues are closely related to land use and community character issues, in that there are two geographic areas that offer the most opportunity for economic development: the Route 60 Corridor and the Route 288 / Huguenot Trail interchange. The various input gathered from the Citizen’s Working Groups has made it clear that the county desires to increase non-agricultural economic development opportunities, but also finds it important to protect the local rural-based community character and quality of life.

The planning process revealed several issues associated with the economic health of the community and county government. These include the need to identify the best economic development niche and mix for the county, and relating this to future land use: the need to identify the proportional relationship of business and residential uses; and identifying the manner this translates into long-term sustainable fiscal health for county government.



What is the best economic development niche and mix?

The planning process revealed consensus that a more balanced, well planned and diverse economy is needed. A strong economy is needed both to provide economic opportunities for existing businesses and residents as well as to create the basis for sustainable public services and facilities. Providing employment opportunities for local residents is desirable to minimize regional commuting and to help retain young and talented people who might otherwise move elsewhere. Likewise, a strong and diverse local economy will create an economic engine that in part enables county government to be responsive to the needs of business and residents in the provision of local services and facilities.

The challenge is to identify the kinds of businesses that can reasonably be attracted to Powhatan County and to put a plan of action into place to implement a strategy for doing so. This must go beyond the idea of attracting clean industries with high paying jobs in high-tech service sectors – virtually all communities desire such uses. What is needed is a comprehensive economic development plan.

The economic development plan addresses this by identifying ways the county can take a proactive role in economic development activities. Additional study will likely be necessary to evaluate the markets that can be drawn to the county. The plan also includes recommendations to create targeted marketing strategies to draw various sectors to the county.

Location Issues

The Route 60 Corridor has been identified as the most logical and desirable place to focus new economic development efforts in high-quality, mixed-use, compact districts. The county has recently implemented utility improvements to enable this to occur, and continues improving the potential utility service to this area through the strategic planning processes for the various departments.

The more difficult comprehensive plan challenge is associated with the opportunities created at the Route 288 and Huguenot Trail interchange. Interchanges between regional limited access highways and state route arterials are natural magnets for growth and development and

opportunities for economically productive uses. On the other hand, this particular interchange provides access to one of the more scenic and sensitive corridors in the county. This plan balances the opportunity for economic development at the interchange with the densities and character recommendations to protect the environmental and historic integrity of the corridor.

The land use, and public facilities and infrastructure elements address the treatment of these key economic development locations through recommendations focused on coordinating development intensity, land uses, and available infrastructure.

Fiscal

The county is preparing itself for the long-range ability to provide public services and facilities in a fiscally responsible manner. The county currently has a five-year capital improvement plan and is in the process of developing a twenty-year financial plan that will look at long-term capital facility needs and how to fund those needs. In addition, an ad valorem tax study is being prepared by the Utilities Department to identify ways to fund additional sewer and water infrastructure along Route 60.

The county has estimated on a preliminary basis a potential five-year capital improvement need (funded and not funded) in excess of 145 million dollars and an estimated longer-term need of over 300 million dollars. While this is only a general estimate subject to refinement as part of the financial planning, it is clear that current revenue sources will not be adequate to cover those costs. The cash proffer system that the county utilizes, while helpful, will also not generate nearly enough revenue to fund those needed capital improvements, nor does it create a predictable flow of revenue that allows the county to plan adequately in the future.

At the beginning of the planning process it was challenging to project fiscal stability and needs because the basis for the assumptions were outdated. Now the new recommendations of the plan provide guidance with which the county can move forward and prepare fiscal assessments based on the growth and demand for services indicated in this plan.

The plan supports the concept that a strong diverse economy is needed for the long-term health of the county, and a long-term fiscal plan is needed to plan for funding the true needs for public services and facilities. The county is working to address these issues, but there is much to do even following the adoption of this comprehensive plan.

Public Infrastructure

Powhatan County provides or funds several types of infrastructure. These include sewer and water, schools, and public safety services. The provision of adequate and fiscally sustainable infrastructure is critical to the long-term economic health of the county. The county is undertaking a facilities needs study that will be addressing many of these issues, as described more fully in **Chapter 6: Infrastructure & Facilities**. The following are key infrastructure issues this plan addresses:

- Sewer and water is provided, or planned to be provided according to a **Sewer and Water Master Plan** that reaffirms the commitment to provide services in certain targeted areas.
- A primary planning issue is the need for additional long-term water supply. The county is considering several options, requiring continued long-term planning.
- Sewer and water planning is closely related to land use planning. There must be close coordination to ensure that the county and developers provide infrastructure in the most targeted manner possible in order to be fiscally responsible and promote desired land use patterns as set out in this plan.

The county should continue to focus sewer and water services in designated geographic areas, both to target economic development opportunities as well as avoid sewer and water from encouraging sprawled development patterns in rural areas.

- The school system has a five-year capital improvement plan, and a facilities master plan. The facilities master plan covers needs over a ten-year period, and considers operating capacity and enrollment projections. The schools update this plan annually. Like other public facilities, school planning should occur in concert with this comprehensive plan.

The current fire protection system should continue to serve the county well, as long as the rural pattern and density of land uses proposed in this plan continue.

Key Planning Challenges

The plan addresses the following challenges, which emerged through the planning process:

1. Powhatan County is truly at a planning crossroads. While it has a long history of planning and fairly well established planning values, regional growth pressures are knocking at its borders. If it truly wishes to maintain its planning values, it will need to move to the next level of planning sophistication.
2. There are several well-defined land use challenges:
 - a. What is the best policy mix of geography, density, and quality that balances rural preservation with private property expectations?
 - b. How can the county best restructure the planning policies and zoning configurations along Route 60 to serve as an economic engine for the county with a series of well-defined mixed-use developments?
 - c. What are the land use pattern, mix, and design around the 288 / 711 interchange that best balances the economic development and scenic corridor interests?
3. There are serious challenges with the related issues of economic development and fiscal sustainability in county services and facilities. While all recognize the need for a strong economy, there is not a comprehensive and systematic program in place. Similarly, while the county is taking the steps it needs to plan for the long-term funding of public services and facilities, there needs to be a linkage between land use planning and fiscal impact.
4. Powhatan County, like any jurisdiction, has limited resources – both financial and personnel. The CWG reports, while all thorough, highlight the need for the county to focus strategically on priorities. County staff and leadership are already pursuing many initiatives, and the CWG reports recommend the need for many more, all of which are important. This, of course, is one of the reasons for going through a comprehensive planning process.
5. Finally, the challenge here is more than just agreeing to a community vision. It is to use the plan not as an end of a process, but as a stage setter for action. Given the issue of limited resources contrasted with a long list of needs, the Powhatan County planning process needs to try to put the policy issues to rest sooner rather than later, and focus on the next action steps. As an example, reconcile applicable county ordinances so that the comprehensive plan’s strategies can be implemented.

The vision and goals created through this process are presented in the following chapter and represent the bridge between the existing conditions and needs of the community and the recommendations in Part II: Plan Elements.

CHAPTER 3: VISION & GOALS

Introduction

The vision and goals for the plan are presented here to show how they are interrelated and form the basic framework for the elements of the plan. The individual goals are reiterated in their respective elements of the plan in Part II: Plan Elements, and are supported by the recommendations in the form of objectives.

Vision

Powhatan County will be a place where people can see the stars at night, be in touch with the land, and yet be able to work, live, play, shop, and learn without leaving the county.

Powhatan County will be a friendly, safe, and healthy place for people to live and work. It will have a good balance between growth and preservation. It will be primarily rural in character with a preserved natural environment and ample open spaces. The dominant rural character will be supplemented by mixed residential and business uses situated at defined locations primarily along the Route 60 Corridor and along Route 711 east of the Route 288 interchange.

These mixed-use clusters will provide sustainable and clean economic development opportunities. They will provide employment opportunities for local residents to keep them from having to travel out of the county for jobs, and they will attract residents from outside the county to further help fund fiscally responsible county services, including infrastructure and community facilities. They will also provide diverse housing options to complement the single-family uses that will continue to be prevalent in the rural areas.

Goals

Land Use Goal

Powhatan County will have a land use pattern dominated by preserved rural character, with high-quality and economically productive mixed-use development at clearly defined locations served or planned to be served by utilities and adjacent to transportation facilities.

Economy Goal

Powhatan will have a diverse and balanced economy that supports sustained business and employment opportunities for its citizens and attracts people from outside the county to generate further revenues to fund high-quality county government services.

Housing Goal

Powhatan will have a diverse range of housing that provides living opportunities for Powhatan County residents at all stages of their life.

Transportation Goal

Powhatan County will have a transportation system that is coordinated with land use patterns and community character, with an acceptable level-of-service that supports economic development and maintains a high-quality of life.

Infrastructure and Community Facilities Goal

Powhatan County will provide infrastructure and community facilities in a fiscally responsible manner with adequate levels-of-service, consistent with the proposed future land use.

Natural Resources and Open Spaces Goal

Powhatan County will preserve and protect natural resources and open spaces such as rivers, streams, creeks, forested and wooded areas, wildlife habitat, wetlands, floodplains, and soil resources.

Historic Resources Goal

Powhatan County historic resources will be preserved and protected.



Part II: Plan Elements

CHAPTER 4: ECONOMIC DEVELOPMENT

Overview

Economic development was a high priority for the CWGs and one of the driving forces behind the update of the comprehensive plan. The county's position as a rural county on the western edge of the Richmond Metro Region creates unique challenges and opportunities for the community regarding economic development. Because of the rural nature of the county, the county will need to work with private development to make sure infrastructure can be provided in advance of development. However, because of the rural nature of the county, it has the advantage of agri-business and tourism opportunities that are not present in nearby urban counties like Henrico and Chesterfield.

Economic development is an important component to the comprehensive plan because a sustainable local economy is tightly associated with the other goals and objectives of this plan, and is a pivotal

element of the county's vision for the future. The physical components of economic development, such as identifying appropriate locations for business development, are addressed in **Chapter 8: Land Use & Community Character**, while the infrastructure improvements needed for effective economic development are addressed in **Chapter 6: Infrastructure & Facilities**. Furthermore, the recommendations for natural and cultural preservation must be balanced with the need to create a sustainable economy. The economic development priorities and the other elements of the plan must be integrated to achieve the plan's vision. The following background and needs assessment addresses the context and key issues regarding economic development. The recommendations address the direction the county will take to achieve the economic development goals and objectives.

Background

The top employment sectors, those with the greatest number of employees, are government services, construction, and retail trade. The Virginia Employment Commission reports approximately 6,170 jobs in the county, as of the fourth quarter of 2008, with the largest employers being, the Powhatan County School Board, Powhatan Correctional Center, Virginia Department of Juvenile Justice, Deep Meadow Correctional Center, and the county. The largest manufacturing employer is Mid Atlantic Steel Erecto Inc.

Based on commuter data, about 2,400 residents of the county also work in the county. The additional 8,000 workers are commuting to other locations to work, with the majority going to Chesterfield County, City of Richmond, and Henrico County. Conversely, about 1,900 people are in-commuting to work in Powhatan. Most of these workers are coming from Chesterfield County, City of Richmond, Cumberland County, and Amelia County. Farm employment data for 2008 was unavailable; however, a comparison of the 1991, 1993, and 2008 data is provided below on all reported non-farm employment.

Service sector employment has shown the most dramatic increase, a trend consistent with the general U.S. economy. Construction is also up reflective of the significant growth the county has experienced since the early 1990s. It is an interesting change that the county has increased employment in manufacturing sectors. Government employment formerly and currently contributes the most jobs to the Powhatan economy.

Employment trends in Powhatan County show unemployment rates that typically are below those of Virginia as a whole and the U.S. statistics. In 2008, Powhatan County had a 3.3 percent unemployment rate, the highest in the last ten years; however, this rate was still below the 3.9 percent for Virginia and 5.8 percent for the U.S.

In recent years, the county has experienced growth of small commercial establishments along with the residential growth. Service sector employment has shown the most marked increase in the last fifteen years but the county has also experienced economic growth in the construction, manufacturing, wholesale trade, and government sectors. The recent recession has made predicting growth pressures more difficult, and indicates a period of slowed growth with a time of recovery.

When the Economic Development CWG began their work in 2006, the county and country were in a different situation than is presented today. However, direction and assessment completed by the CWG provides good guidance for goals and a solid foundation of assumptions on which to build.

Table 8: Non-farm Employment	1993	2008	Change	% change
Agricultural Services, Forestry and Fishing	174	32	(142)	-82%
Mining*	16	na	na	na
Construction	886	1,222	336	38%
Manufacturing	132	200	68	52%
Transportation and Public Utilities	143	97	(46)	-32%
Wholesale Trade	108	156	48	44%
Retail Trade	517	429	(88)	-17%
Finance, Insurance, Real Estate	193	192	(1)	-1%
Services	868	1,494	626	72%
Government	1,760	2,320	560	32%
Total	4,797	6,142	1,345	28%

*Nondisclosable data.

Sources: Virginia's Local Economics: An Economic Profile for the Richmond Regional Planning District. Weldon Cooper Center for Public Services, 1993

Virginia's Local Economies-Statistical Update 1996 Weldon Cooper Center for Public Services, 1996

Powhatan Community Profile Virginia Employment Commission, 2009.

The growth scenario addressed in **Chapter 6: Land Use & Community Character** involves capturing residential and economic growth as it moves outward from the core of the Richmond Metro region in key locations along Route 60, at the 288/711 interchange and in the Courthouse Village. The need to balance residential growth with economic development, rural character preservation, and facility provision is at the core of the vision for this plan. The county recognizes the importance of businesses that provide local services but also the need to increase the county's industries that export goods, to move away from the typical financial pitfalls of a bedroom community.

The CWG evaluated the county's economic strengths, opportunities, weaknesses, and threats (SWOT). Many of the assessments are universal, going beyond economic development to affect the other elements of this plan. They are addressed through the action of updating the plan and the recommendations contained within. The full **Economic Development Citizens Working Group Final Report** is included by reference into the comprehensive plan and can be found in the Reference Documents Appendix. The following key themes draw from the SWOT analysis to produce a series of topics to be addressed in the future economic development policies and recommendations. This assessment is valuable to incorporate into the comprehensive plan because it identifies the existing conditions for economic development in the county and provides insight into the recommendations for the future.

Key Issues

The county's assets which influence the economic development future are numerous. The strengths the county has are countered by challenges. The intent of this comprehensive plan is to focus the limited resources of the county down a path that will be sustainable in the short- and long-term. Based on the work of the CWG, the influencing factors can be condensed down to four key topics:

- Heritage
- Regional Proximity
- Infrastructure
- Population & Growth

Heritage

Powhatan County is rich in natural, historic, cultural, and rural heritage. The local resources, expanded on in other chapters of the plan, are an asset to the community and provide opportunities for economic development provided they are carefully managed and remain viable resources into the future.

Rural heritage is a combination of the rural/agrarian landscape character of open spaces, the lifestyle associated with a rural community, farm production, and the potential for agri-tourism, and recreation related to rural options such as equestrian, boutique agriculture, country retreats or conference centers, and bed and breakfast hotels. Much of the existing and visual identity of the community is wrapped up with rural heritage. The protection and continued presence of a rural character and the activities associated with rural character provide economic development opportunities for the community.

Similar to rural heritage is the natural and historic heritage of the county. The natural landscape of hardwood and evergreen forests on rolling topography interspersed with farms and fields, and the historic landmarks, corridors, and sites throughout the community contribute to the quality of life in the community making it an attractive place to live,

which is important in economic development, and providing opportunities for tourism and recreation. Access to the James and Appomattox Rivers are examples where natural conservation and economic development can work hand-in-hand. Likewise, historic preservation contributes to the identity of the county, and creates a draw for tourism.

Regional Proximity

Powhatan County is located outside of the economic core of the Richmond Metropolitan Region and lacks direct access to an interstate highway, reducing the county's ability to lure some businesses away from the regional competition. However, the county's proximity to the Watkins Center as well as Route 288 along and just east of the county line in Chesterfield may open up opportunities to capture economic development growth as it moves further west. Because the county is immediately adjacent to the growth areas in the Richmond region, there is potential to capture regional growth. Also, proximity to the State Capitol and other employment centers makes the county an attractive place for residential growth, which will in turn spur economic development. Other regional resources include airports, colleges and universities.

Infrastructure

The county has made efforts to provide utilities and services in key areas of the Route 60 Corridor. Utilities including sewer, water, and broadband or communication technologies will be essential to economic development success. Strategically coordinating utility availability and land use recommendations will be important. Additionally, the relatively good highway access from Routes 60, 288, and 522 connects the various

areas of the county to the east and west allowing for pass through and transportation of goods. Challenges facing the county's infrastructure include the lack of funding to provide infrastructure improvements and utilities in advance of development and needing the development to fund infrastructure expansion. Also, the currently rural character of the road network will need to be improved to accommodate growth located in strategic compact districts in the county.

The location of the Norfolk & Southern Railroad offers an economic development opportunity in the Moseley area in the southeast part of the county to create an industrial and distribution district with access to the railroad.

Population & Growth

The county has experienced significant growth over the last twenty years. From 1990 to 2000, the county's population increased by almost forty-six percent, and growth remained strong through 2007. The population growth brought a more diverse economic population, and increased the market demand for local businesses. As the population continues to grow, it will be important to maintain socioeconomic diversity and ensure that affordable housing is available to various income groups. A balance of employment opportunities will also be important to keep pace with the growing population and changing skill sets. The county should strive to attract employment that is compatible with the population to decrease commuting to other counties.

Recommendations

Economy Goal

Powhatan will have a diverse and balanced economy that supports sustained business and employment opportunities for its citizens and attracts people from outside the county to generate further revenues to fund high-quality county government services.

Economy Objectives

- 1) **Work with other agencies in a cooperative manner to develop a comprehensive economic development plan for the county that identifies potential opportunities and strategies along with the role that the county should play in furthering the economic development vision, goals, and objectives of this plan.**
 - a. Empower a county designated representative to organize and mobilize the Powhatan Chamber of Commerce, Retail Merchants Association, Economic Development Authority, Economic Development Department, community organizations and service clubs as a “sales force and customer service department.”
 - b. Establish a work program to carry out short-, intermediate, and long-term objectives in pursuit of the county’s goals.
 - c. Capitalize on the mechanisms in place for an effective marketing and public relations campaign.
 - d. Continue to build on the county’s strong collaboration between public and private sector economic development and business sector organizations.
 - e. Promote collaboration and consensus among the entire business community both in the public and in the private sectors.
- f. Encourage alliances between the county’s Economic Development Office, the Powhatan Economic Development Authority, Powhatan Chamber of Commerce, and Retail Merchants Association as part of the county’s Economic Development Program.
- 2) **Establish targeted geographic areas for economic development along the Route 60 Corridor and along Route 711 east of the Route 288 interchange that call for targeted infrastructure and take advantage of close proximity of workforce housing both inside and outside the county.**
 - a. Identify mixed-use and nonresidential land uses in the Countywide and Special Area Land Use Plans.
 - b. Continue aggressive development of utilities along the Route 60 Corridor in targeted areas.
- 3) **Increase the number and variety of jobs in the county through the retention and attraction of clean, small, and medium sized industrial, office, and commercial enterprises.**
 - a. Develop an aggressive marketing campaign targeting these enterprises.
 - b. Provide support services, utilities, and high-tech infrastructure to facilitate growth of businesses in this sector.
 - c. Adopt a performance-based incentive program with specific employment, income, and tax revenue goals.
 - d. Adopt a fast track program for the county economic development function addressing rezoning, utility connections, site review, and state and local government department reviews. If local government staff limitations prohibit fast track action, private sector contract assistance should be used.

4) Encourage and support initiatives to target economic sectors that capitalize on local and regional strengths through a systematic approach based on an economic development plan.

- a. Build a diverse economic base in terms of business sectors targeted and required skill levels.
- b. Seek business opportunities that generate export of goods and services beyond the local economy and bring outside income and wealth into the county, creating benefit from the cumulative effect of basic employment activities.
- c. Capitalize on the few remaining options of utilizing the county's limited Norfolk-Southern Railway access in the Moseley area.
- d. Empower the Economic Development Authority to take part in a comprehensive plan oversight committee to ensure action and implementation of the plan recommendations.
- e. Encourage the development of niche farming activities, agricultural support businesses, and an organizational conduit to supply goods to the local consumer market.

5) Strive to move closer to a commercial/residential tax base valuation of at least 30% / 70%² in order to be able to fund infrastructure and community facilities in a fiscally sustainable manner.

- a. Assess the county's current tax base valuation and monitor it annually to identify development needed to achieve this target.
- b. Identify adequate land for economic development.

² The county selected the 30% / 70% tax base valuation as a target for a balanced tax base to increase the ratio of contributing businesses in the county. The 30% / 70% split refers to the actual valuation of the land and not the land area itself. Therefore, 30 percent of the county's land area need not be dedicated to commercial enterprises to attain a 30% / 70% tax base valuation. While this is a desirable target, any increase in the commercial contribution to the tax base will be an improvement. The need here is to encourage business growth in balance with residential growth.

- c. Manage residential growth through implementation of the land use plan and revision to land development regulations.
- d. Promote land use patterns that create population densities that demand additional employment uses.
- e. Adopt a performance-based incentive program with specific employment, income, and tax revenue goals.

6) Allocate the costs of growth fairly between the county and the development community. New development should be generally expected to pay its own way and the county should provide clear guidance as to the appropriate level of public improvements and facilities needed to meet new growth demands.

- a. Complete a fiscal impact analysis based on the updated comprehensive plan and growth projections to determine the cost of forecasted growth.
- b. Reevaluate the county's proffer system and make adjustments if necessary.
- c. Continue to monitor opportunities created by the Virginia General Assembly to use impact fees or other tools to fund infrastructure.

7) Promote environmentally sensitive tourism that attracts visitors from outside the county.

- a. Create a program or network for alliances between local agri-businesses, and tourism based businesses to create an array of attractive destinations in the county.
- b. Protect sensitive and important agricultural uses and natural environments that attract visitors to the county through modified land use regulations.
- c. Support the creation of unique eco-tourism businesses.

8) Implement development regulations that balance the desire to attract new investment in the county with the desire to promote high-quality development and long-term sustainability of new investment.

- a. Create development standards that promote a high-quality aesthetic in architecture, site planning, and landscaping.
- b. Identify resources the county has which could be used to create incentives for high-quality development.
- c. Conduct an economically focused study of the implications of using floor area thresholds as a means to plan for commercial and industrial development. Include in development regulations if appropriate for county.
- d. Encourage the use of sustainable construction methods and “green” or LEED development practices.

9) Retaining existing businesses is of high priority and present employers and job opportunities should be maintained and enhanced.

- a. Strive to retain existing businesses and industries in the county and encourage their viability and growth.
- b. Encourage continued participation by local business owners in economic development activities.

- c. Provide local opportunities to network and link local businesses to local produce, materials, and products to shorten the supply chain and act locally.
- d. Continue to attract new businesses that can supply or work in concert with existing businesses, rather than create overwhelming competition.
- e. Consider implications on existing businesses where considering costs and benefits of providing incentives to new or competing business growth.
- f. Identify existing local businesses that can be used in marketing the county as tourist draws.
- g. Identify existing local businesses that could participate in a farm to table program with regional restaurants, groceries, and farmers markets.
- h. Allow the continued operation of non-conforming industrial and commercial uses, but do not encourage expansion at these sites, unless adequate public facilities or mitigation efforts can be made to ensure minimal impacts on the surrounding streets, communities, and infrastructure.

CHAPTER 5: HOUSING

Overview

As the county has grown over the last two decades feeling growth pressures coming mostly from the east, the county has seen a trend in rising home prices and a concern that it has become less affordable to live in the county. As growth continues into the future, the challenge of maintaining affordable housing, particularly in the rural areas, also grows. Development demand and inflation have driven the prices of land and the cost of new construction higher than they have in the past.

A majority of the county does not have infrastructure and utilities to support smaller lot residential subdivisions. Therefore, a new home must generally be built on a minimum of two acres. Smaller lot housing that may be more affordable is not feasible without public sewer and water utilities to support it. As an alternative, this new plan and eventual revisions to the **Subdivision and Zoning Ordinances** are opening up opportunities to create more dense residential development in key villages in areas where services can be made available.

Background

Traditionally, the Commonwealth characterizes affordable housing as that which residents with incomes at or below the area median income can afford, provided they pay no more than thirty percent of their gross income for gross housing costs, including utilities. City-data.com reports a 2007 estimated median income for the county of \$68,900. Based on the determination, affordable housing is valued at approximately \$160,000 to \$200,000 per household depending on down payment, taxes, and interest rates. City-data.com also reports that the 2007 median home value was \$287,000. Currently, there is little supply of alternative housing types besides single-family homes. However, as the price of housing goes up both locally and regionally, the demand for affordable housing will rise accordingly. Planning theories related to affordable housing indicate smaller lots, attached housing, multi-family

housing, and rental options in more compact development forms may increase the supply of affordable homes.

Recommendations

Housing Goal

Powhatan will have a diverse range of housing that provides living opportunities for Powhatan County residents at all stages of their life.

Housing Objectives

- 1) **Foster the development of an adequate supply and variety of housing that will meet the needs of all of the county's population in a manner that is consistent with the land use vision, goals and objectives.**
 - a. Revise the **Zoning Ordinance** to allow for the development of "accessory units" in locations designated for single-family homes to provide options for extended family or rental units within these neighborhoods, without dramatically increasing density.
 - b. Work with non-profit organizations to help in the assistance of constructing affordable housing, and be pro-active in promoting affordable housing through incentives such as density bonuses to offset inclusion of affordable units, expedited permitting for affordable units, reduction or waiver of impact fees for affordable units, or allowing less costly or alternative building methods or materials.

2) Pursue diverse housing types within the framework of mixed-use compact districts located along the Route 60 Corridor and along Route 711 east of the Route 288 interchange.

- a. Services including sewer and water should be made available for residential development (for a fee) in the focused growth areas indicated in the special area plans, to allow for higher density of residential development.
- b. The county should target mixed-use developments consisting of a commercial space on the ground floor and apartments or condominiums above the first floor.

3) Forecast and plan for a population growth rate, and monitor growth relative to that forecast.

- a. Designate adequate land area in the land use plan to accommodate twenty years of residential growth.
- b. Conduct regular audits of residential development and growth and reevaluate the need for various housing types on a five-year schedule to monitor affordability of housing.

CHAPTER 6: INFRASTRUCTURE & FACILITIES

Overview

As Powhatan County approaches growth management issues, the status of and plans for public infrastructure and community facilities are tightly linked to every other consideration. It is incumbent upon the county to provide necessary public services to residents and property owners, and the county has a strong record of successful service delivery. This comprehensive plan focuses on the physical and geographic components of providing public services: the infrastructure and facilities issues. As the county continues to experience significant growth, purposeful attention to facilities needs is critical to long-term sustainability.

The components of Powhatan County’s array of public facilities fall into the following categories:

- Sewer and Water
- Schools
- Emergency Services
- County Facilities (Parks and Recreation, Administration)
- Solid Waste Management
- Technology

An appendix to this plan contains details about all current facilities. This chapter focuses on the overall goal for infrastructure and facilities, followed by a series of objectives and directions for action.

Key Issues

Following are key issues needing attention:

- **Land Use:** The locations and intensities of future land use in Powhatan County will have a major impact on the county’s ability to provide adequate services in a fiscally responsible manner. Much of the context for **Chapter 8: Land Use & Community Character** is related to infrastructure considerations.
- **Fiscal pressures on the county to provide services are significant:** Meeting the needs of a growing population while simultaneously accommodating demands for new and expanded service areas highlights the need for attention to funding sources for the construction of public infrastructure and facilities.
- **Regarding sewer and water:** Most new residential development in the county relies on private wells and on-site septic fields for water use and wastewater treatment. As densities of new housing increase and as the commercial and industrial uses increases, public utilities become a major policy issue. Public sewer and water present the county with both advantages and disadvantages that must be balanced.
- **Level-of-Services:** It is important to purposefully plan for what levels-of-services are to be provided for the county’s growing population.

Recommendations

Infrastructure and Community Facilities Goal

Powhatan County will provide infrastructure and community facilities in a fiscally responsible manner with adequate levels-of-service, consistent with the proposed future land use plan.

This goal is addressed in this plan by identification of objectives that have been developed by a CWG along with a set of recommendations to guide future decision-making.

Infrastructure and Community Facilities Objectives

In pursuit of addressing this goal, the following set of thirteen infrastructure and community facilities objectives has been developed to guide action and decisions related to the physical components of providing public services in Powhatan County.

- 1) **Achieve a balance between the quality and cost of infrastructure and community facilities.**
- 2) **Create a stronger link between land use planning and infrastructure/community facilities through a Capital Improvement Plan that identifies capital improvement needs in relation to anticipated growth.**
- 3) **Concurrently link land use planning and development decisions so that infrastructure and community facilities have capacity for expected growth and are in place when needed.**
- 4) **Plan for rural densities in areas not intended to be provided with infrastructure.**
- 5) **Promote the public expectation that rural areas will receive only rural levels of infrastructure.**
- 6) **Plan for compatible higher density mixes of uses in areas where infrastructure is planned.**
- 7) **Establish and maintain adequate level-of-service standards for infrastructure and community facilities and services, consistent with other county goals.**
- 8) **Develop a system for benchmarking level-of-service of facilities to monitor substantial accord with the comprehensive plan and use this to assist in land use decisions.**
- 9) **Locate new infrastructure and community facilities and services to promote a compact development pattern at focused locations along Route 60 and along Route 711 east of the Route 288 interchange.**
- 10) **Focus infrastructure in the three planned service areas with the Route 60 Corridor East Special Area and Courthouse Village urban development areas being targeted for infrastructure services in the near term future (i.e. five years).**
- 11) **Consider a service area at the western end of the county along Route 60, but only as a very long-term (i.e. at least ten years) possible growth area.**
- 12) **Coordinate land use planning with other county sewer and water planning efforts, recognizing that separate utility planning efforts will be ongoing.**
- 13) **Coordinate land use planning and growth forecasts with school facility planning that is conducted by the school district, recognizing that the school district is responsible for actual facility planning.**

These objectives apply to the general topic of planning for facilities. Specific strategies and directions for action appear further below under each facility topic. A main mechanism for action to achieve infrastructure and community facilities objectives is the county's capital

improvement program (CIP). The county adopts a CIP annually to manage and coordinate the planning, funding, and construction of new public facilities that will be needed to serve the expanding population. Another main mechanism for action on these objectives will be implementation of recommendations that are highlighted in **Chapter 8: Land Use & Community Character**.

Sewer and Water Utilities

Sewer and water is provided, or planned to be provided, in three service areas, including the Courthouse Village Area, the eastern portion of the Route 60 Corridor, and the middle portion of the Route 60 Corridor. The county completed a **Sewer and Water Master Plan** in 2005 that reaffirms the commitment to provide services in these three areas.

The Flat Rock Area Water System has a 572,000 gallon per day (gpd) capacity through an interjurisdictional water contract with Chesterfield County. The water system extends from the Chesterfield County line to Judes Ferry Road. A water booster station provides additional water pressure in this area with needed. The system also has a 500,000 gallon elevated water storage tank and service is provided to the high school complex and the South Creek Commercial Center.

In the Courthouse Village a private water company manages the wells for public water; this system has a current permitted capacity of 117,600 gpd.

Sewer services for the village area are provided at the Fighting Creek Wastewater Treatment Plan which has a 100,000 gpd treatment capacity and in 2009 was experiencing an average daily flow of 30,000 to 40,000 gpd.

Sewer service for the eastern portion of the Route 60 corridor is provided using the Dutoy Creek treatment plant, which is treating approximately 30,000 gpd in a facility with capacity for 250,000 gpd.

The middle service area is not currently provided with sewer or water services and there are no short-term plans to do so; however, the long-term water plan of the county addresses this through the capital improvement plan.

There appears to be adequate service in the eastern Route 60 area to accommodate growth and development for the near future. The Courthouse Village Area has limited capacity for long-term growth; new storage and main lines will be needed to serve growth in this area.

The primary planning issue associated with water is the need for additional long-term supply. There are several options being considered, including purchase from Henrico County, partnering with other communities to create a common water impound, tapping in to the James River, or some mix of each of these. While supply is a long-term challenge, the opinion of the Utilities Department is that with advance planning, which is currently under way, the problem can be solved and should not deter long-term economic development.

A related issue is the future mix of uses along the Route 60 corridor. As discussed previously, there is considerable interest in promoting a mix of residential and business uses along Route 60. However, there are currently no residential water customers – the policy in the past has been to reserve capacity for business uses. This policy will change as the county moves in the direction of promoting housing opportunities along the corridor in the updated land use plan. Provision of sewer and water are also related to the context of the economic development needs discussed in the previous section.

The county should continue to focus sewer and water services in these geographic areas, both to target economic development opportunities as well as avoid sewer and water from encouraging sprawled development patterns in rural areas. Specifically, there is no recommendation to provide sewer and water in the rural areas. A **Sewer and Water Phasing Plan** is provided to help identify targeted areas for future sewer and water utilities; this phasing should be tied directly to the urban development areas and the land use plan to help manage growth and maintain rural character in the county while accommodating growth.

The following recommendations offer specific directions to help achieve the stated objectives:

- Control sprawl by limiting/controlling service area. (See also **Chapter 8: Land Use & Community Character.**)
- Provide and promote economic opportunities within the service area in an effort to establish a 30% / 70% (commercial and industrial/residential) revenue base. While it is important to limit sprawl, the county has made a substantial investment in sewer and water utilities with the hope of reducing the tax burden on its citizens. Thus, the utilities service area boundary should be clearly defined in a utilities master plan. **Map 2: Sewer and Water Phasing Plan** shows the recommended phasing and service areas.
- Acquire utility easements through proffers to connect treatment and withdraw points to designated service areas in the urban development areas.
- Align economic development and service area expansion without dependence on general fund resources.
- Secure a long-term source(s) of water with a decreased reliance on groundwater. Investigate the availability of off stream storage such as quarries. Investigate wholesale purchase of sewer and water service with surrounding counties.
- Develop a supply system based on withdrawal from the James River to provide water to the Courthouse Village Area.
- Continue pursuing cooperative efforts with surrounding counties (e.g. reservoir). Investigate opportunities for a long-term surface water supply.
- Develop utilities into a self-reliant enterprise fund. Move toward a “user fee” revenue based utility. Development should fund future utility line extensions.
- Recognize the need for ongoing upgrades and expansion of the water and sewer infrastructure over a twenty- to thirty-year timeframe.
- Conduct a rate study for sewer and water fees and implement.
- Investigate alternative funding sources such as Water Quality Improvement Funds.
- Develop a program to secure “nutrient credits” for future wastewater plant expansions (e.g. offsets and credits).
- Investigate and secure alternative wastewater discharge points (larger Tier I waters).
- Explore water reuse opportunities.
- The following recommendations should be considered for the location of sewer and water facilities and infrastructure:
 - Gravity sewer lines are preferable but pumping stations may be needed.
 - Sewer lines should correspond to the natural and altered slope of the land.
 - When possible, water and sewer lines should follow public rights-of-way.
 - A water treatment plant should be located close to the urban development areas so that treated water is not running through rural areas.

Service Phasing

A key growth management tool the county has is the provision of sewer and water services. By specifically targeting when and where utilities will be available, the county can support the land use recommendations made in the comprehensive plan and add a timing element further strengthening the growth management aspects of the urban development areas.

The geographic service areas are currently operating on separate systems. The long-term objective is to connect the systems by laying lines along the Route 60 corridor and in other locations through the rural areas of the county. The purpose of these lines is to connect systems and service areas to supply locations, not to directly serve the land along this line.

The existing water and sewer service district extends along Route 60 from the Chesterfield County line westward past 522 to terminate at the intersection of Bell Road. Portions of the service district are currently not served, for example the county recently approved construction of a water and sewer extension from Judes Ferry Road to Rocky Oak Road at Flat Rock. This expansion will leave the area from Rocky Oak Road west to Academy Road as the remaining portion of the service area that is unserved by water and sewer.

Map 2 on page 44 illustrates the location of the recommended phasing for service areas. The phasing plan includes four phasing classifications to help guide growth within the urban development areas. The intent is to direct growth into locations where the county has planned for utility services. Utility services are needed to support more intense development in these areas to conform to the requirements of the urban development areas. Because this comprehensive plan is a long-range document with short-term implications, the phasing illustrates both immediate options and options the county may explore in the future.

Phase 1: Existing includes locations in immediate proximity to existing main service lines. These locations can be provided with sewer and water through tap-ins to the existing facilities.

Phase 2: Short-Term are locations in which the county should target providing services in the next two to five years to encourage growth to locate in these areas. The county may do this through partnership with private development.

Phase 3: Mid-Term are locations within the urban development areas where development pressure is less intense and should only occur when services are available. Based on development capacity calculations (see Appendix A) this plan anticipates these areas will not be needed to accommodate short-term growth. However, if growth rates accelerate these areas may come into demand. The county should target services in this area in five to ten years and should discourage development in these locations before services are available. In the Route 711 Village, services would be contingent on extension of lines from Chesterfield County services.

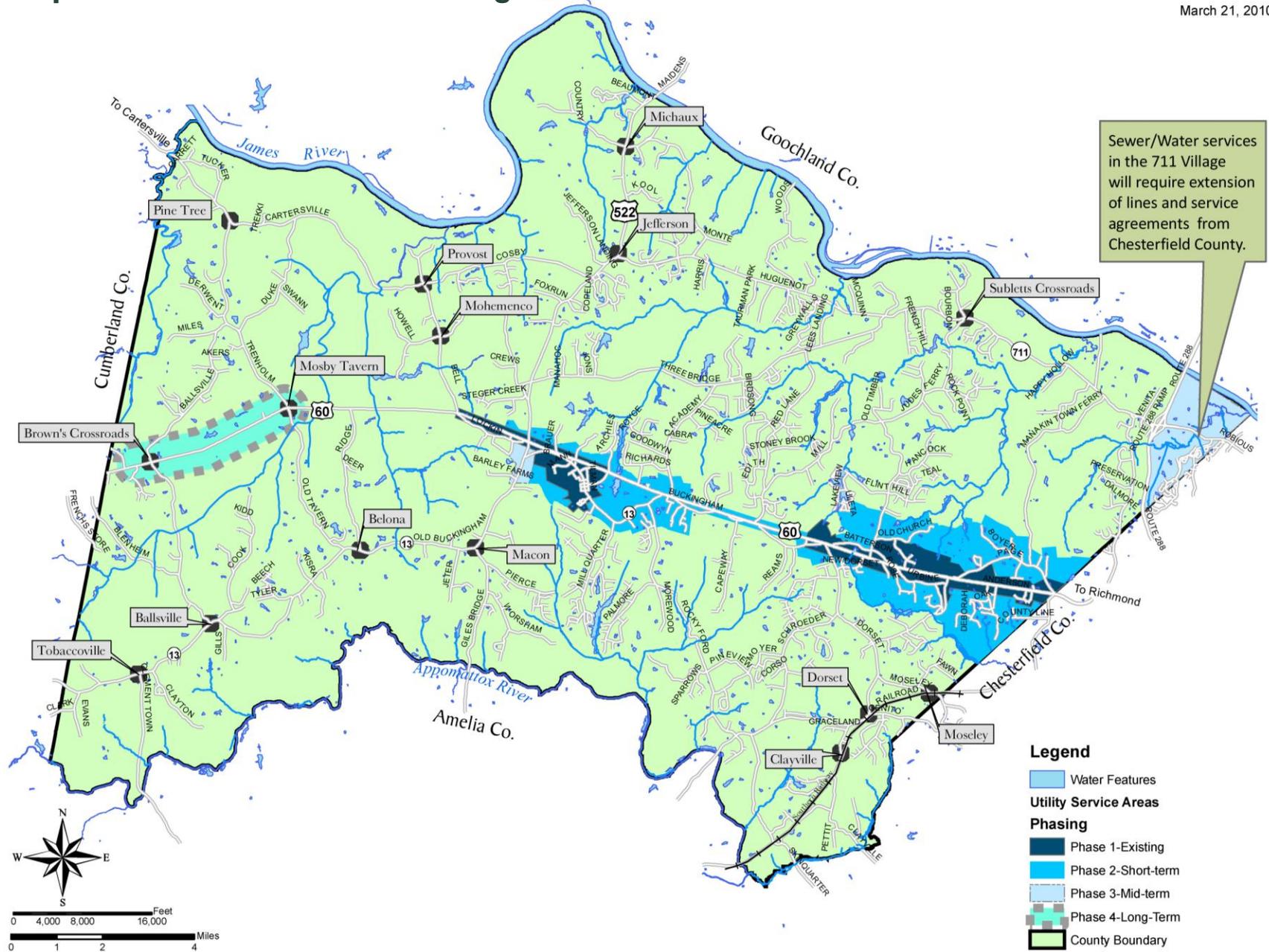
Phase 4: Long-Term are locations where the county has envisioned possible future growth areas that would not likely occur by 2030 but may be revisited in future updates to the plan based on growth trends and future projected growth.

To implement the service phasing, the Capital Improvements Program (CIP) should contain utility projects that connect the phase 1 and phase 2 areas. This would allow for a more robust system that ultimately will link to a long-term water source, such as a surface water source. This will provide for an adequate water supply for growth while providing this valuable resource for both domestic demand and fire protection. The following are additional considerations for the implementation of the phasing plan:

- Water systems, new and existing, should be of a size for adequate flow and pressure during fire events, including installation of any necessary above ground storage towers. Storage towers are typically located at higher elevations.
- A 20 year utility financial plan should be created and evaluated and updated to reflect the need for ongoing upgrades and expansion of the existing water and sewer system. This financial plan should be used as a tool for financing utility infrastructure.
- Identify a surface water source for the Courthouse area, which now relies on limited groundwater supplies.
- When land is rezoned, the adequacy of water supply for domestic use and fire protection shall be evaluated.
- When land is rezoned, the adequacy of sewer capacity within the collection system and at the treatment plants shall be evaluated.
- The CIP shall contain projects that allow for expansion of the wastewater treatment plants and provide adequate outfall for their effluent, in order to support growth within the service phasing areas.

Map 2: Sewer and Water Phasing Plan

March 21, 2010



Sewer/Water services in the 711 Village will require extension of lines and service agreements from Chesterfield County.

Schools

Schools represent the largest share of the county's capital budget. Thus, while the county has no direct role in school planning, the way in which capital facilities are addressed is of direct interest to the county and is directly related to other components of this comprehensive plan.

The school system has a five-year capital improvement plan, and conducts an annual review to revise the needs assessment, capacities, and new locations for additional school facilities. Major projects include a new elementary school, which came on-line in 2008, a new junior high and middle school expansion or renovation, and related school facilities.

One planning issue associated with this comprehensive plan involves school forecasts, and specifically with the assumptions that are made in terms of student generation. Given the recommendations for a more diverse housing mix (as discussed in the **Chapter 8: Land Use & Community Character**, there are implications for future school planning, highlighting the need to continued coordination between the schools and the county.

The following recommendations offer specific directions to help achieve the stated objectives:

- Develop a needs assessment to identify needed capacity and new locations for additional school facilities based on projected population growth.
- Develop a school “level-of-service”³ analysis utilizing long-range impact analyses.
- Plan for renovation/addition for Powhatan Junior High School.
- Plan for addition to Powhatan High School.
- Plan for renovation/addition to Pocahontas Middle School.

- Plan for renovations, maintenance, and major capital improvements to existing school buildings and operating facilities such as reroofing, expansions, or replacement of HVAC equipment.
- Plan for addition of transportation vehicles, bus garage and maintenance facility.
- Evaluate and procure land for future schools.
- Identify sites for schools based on the following locational standards:
 - School sites should have adequate acreage to accommodate the type of school and the programmed facility. Sites in rural areas may be on the larger end of the scale, while sites within the Special Planning Areas should be smaller and more compact.
 - Elementary School-15-20 acres
 - Middle School-20-40 acres
 - High Schools-40-60 acres
 - The acreage required for each school depends upon a number of variables including program design, enrollment, and specific site issues.
 - Sites should be selected to provide recreational opportunities appropriate for school-aged children, including playgrounds, athletic fields, and open space.
 - Sites should be located within residential areas and away from major roadways to increase safety for students. High schools may be located on or closer to higher volume roadways than elementary schools.

³ Using the schools standards for facility capacities a level-of-service target should be established and used against the long-range population forecasts and land use plan to determine long-term demand for new school facilities to be coordinated with the growth and development in the county so that land may be acquired for additional facilities in advance of the need.

Emergency Services

Fire protection in Powhatan County is provided through five volunteer fire stations and Powhatan Volunteer Rescue Squad utilizing three locations. These companies operate under the direction of a career Fire/EMS Chief. There are over 130 volunteers working out of five firehouses. Two stations are owned by the county, the remaining three and the volunteer rescue squad stations are owned by volunteer companies.

The county provides the firefighting apparatus and some equipment. One replacement station is currently being designed and a sixth fire station is planned.

The current fire protection system has been challenged to keep up with growth. The department's self-assessment indicates that dispatch facilities are operating at capacity and that there will be need for additional space as the population grows. The Fire Department is working from a **Year 2000 Service Study** conducted by the Virginia Fire Service Board. However, with the adoption of an updated land use plan and modified growth patterns related to the plan, additional fire/EMS service facilities may be needed in the areas of concentrated development.

EMS is provided on a volunteer basis in conjunction with a private contractor staffing two units during the daytime hours on weekdays. Requests for service are routed through dispatch. As with fire services, EMS will need to increase to keep up with demands as the population grows. The county sheriff is currently based in the courthouse. Emergency management provides planning and preparation for large-scale and/or long-term emergencies to minimize the impact on the citizens.

The following recommendations offer specific directions to help achieve the stated objectives:

- Prepare an emergency services master plan that would address the following components: (1) Establish growth plans for police, fire and EMS services that will provide a long-range level-of-service⁴ impact analysis on all emergency services throughout the county; (2) Include the phased introduction/expansion of career (paid) fire and rescue staff including the consideration of a pay-for-use system of rescue response; (3) Identify upgrade, replacement, and acquisition schedule for vehicles and equipment; and (4) Identify additional locations for new communication towers.
- Identify where and when existing emergency response times are habitually the longest and evaluate ways to lower (a) response times, (b) number of calls responded by mutual-aid and (c) number of unanswered calls resulting in 'self response'. (Related to **Chapter 8: Land Use & Community Character** with respect to locations and densities of future growth.)
- Investigate proffers for land acquisition for future police/fire/EMS stations against long-term growth trends, land use/development, and future estimated response times.
- Identify sites for additional public safety facilities based on the following criteria:
 - Locate fire/EMS stations with good access to major arterial routes or at an intersection of two major routes to gain both east-west, and north-south access.

⁴ The various safety-service providers should consider establishing level-of-service standards that include number of needed personnel per 1,000 persons in population, response times, and necessary space to accommodate operations. By establishing level-of-service targets the county can better plan for needed land to accommodate new facilities as the population grows.

- Locate fire/EMS facilities on five-acre sites to allow for future expansion capacity. Sites may be smaller when included in a special area; however, sites must be large enough to accommodate the maneuvering of the fire apparatus.
- Co-locate fire fighting facilities and emergency medical services for maximum efficiency. Multi-use structures that can house satellite police facilities should be considered as the population of the county grows.
- Select and design sites to minimize the adverse impact of sirens and other noise on residential areas.
- Build a public safety headquarters to house the sheriff, fire and rescue administration and a possible centralized dispatch call center.

County Facilities

County offices are centered within the main complex of buildings in the Courthouse Village Area. Offices for the county sheriff are in the county courthouse. Additional space and facilities are needed as demand for services increases related to fire, sheriff, recreational, and library facilities. The county library is housed in a relatively new facility located in the county park near the Courthouse Village. Details about existing facilities and their use, and projected need for additional county facilities, are included in the **October 31, 2007 Memorandum of Existing Conditions**. The following recommendations offer specific directions to help achieve the stated objectives:

- Complete the second phase of the Powhatan County Facilities Study and implement its recommendations as funding becomes available.
- Undertake the development of a master community facilities plan (Phase II) to include county and school administration, fire, sheriff, recreational and library facilities.

- Plan for financing to maintain existing facilities and construction of new public facilities per the second phase of the County Facilities Study.
- Group County Administrative functions near one another for maximum efficiency and locate in the Courthouse area to support the commercial base in this growth area.
- Provide for a new County Administrative Building with adequate size and optimum efficiency to serve citizens and customers. Continue dialogue with the School Board about the efficiencies to be realized by a joint Administration Building.
- Improve security at the Courthouse by implementing recommendations of the second phase of the Powhatan County Facilities Study.
- Address overcrowding in the 911 Dispatch Center. Build a separate Public Safety Building to consolidate the Sheriff Department, the Fire/Rescue Administration, and Emergency Management. This building will also include an emergency operations center.
- Maintain and repair the existing County facilities in an ongoing basis in order to provide a safe environment and upright appearance.

Parks

There are two major park and recreational facilities in the county. Fighting Creek Park is a 220-acre facility at 2200 Mann Road. The park provides playing fields, playgrounds, picnic shelters, and trails. The YMCA and library are located on-site. Powhatan County maintains this park. The second major facility is the 4,462 acre Powhatan Wildlife Management Area, located three miles west of the county seat. The area is open to hunting and fishing activities and is maintained by the Virginia Department of Game and Inland Fisheries.

Powhatan State park is an undeveloped state park of 1,564 acres and two miles of frontage on the James River. A master plan has been completed for the park development, and when improvements are

completed it will offer the full range of recreational opportunities typical at Virginia State Parks. A local concern related to the development of this park is the ability of the local street network to handle safely increased traffic to the site.

The following recommendation offers specific directions to help achieve the stated objectives:

- Support efforts to open the State Park provided the necessary improvements to the roads can be made to facilitate safe traffic management in the affected areas of the county.
- Utilize existing parkland by completing planned phases of existing master plans; and acquire and develop additional sites as locations and funding become available.
- Fully utilize Fighting Creek Park by implementing Phase 3 of the master plan, including construction of additional ball fields, as well as expansion of walking trails and other recreational amenities.
- Fully utilize the proffered land at Appomattox Trace for recreational opportunities.

Solid Waste

Powhatan County currently operates a solid waste convenience center and recycling center north of Route 60 near the courthouse. There is no landfill operation currently in Powhatan. A contractor hauls the household refuse collected at the convenience center to a landfill outside the county. Powhatan is a participating member of the Central Virginia Waste Management Authority, which promotes the recycling of solid waste.

The following recommendations offer specific directions to help achieve the stated objectives:

- Provide facilities for the use of citizens for the disposal of household waste.

- Determine the level-of-service of existing convenience center operated by the county as a member of the Central Virginia Waste Management Authority (CVWMA).
- Establish additional convenience center locations as determined by current users and population growth patterns.
- Monitor current recycling records provided by CVWMA and establish goals to increase levels.
- Investigate placement of additional recycling bins in county or commercial locations.
- Investigate means, such as appropriate regulations and enforcement protocols, of remediating properties containing illegal dumps, either by reclamation or refuse removal.
- Pursue alternative funding sources for abandoned trash sites.

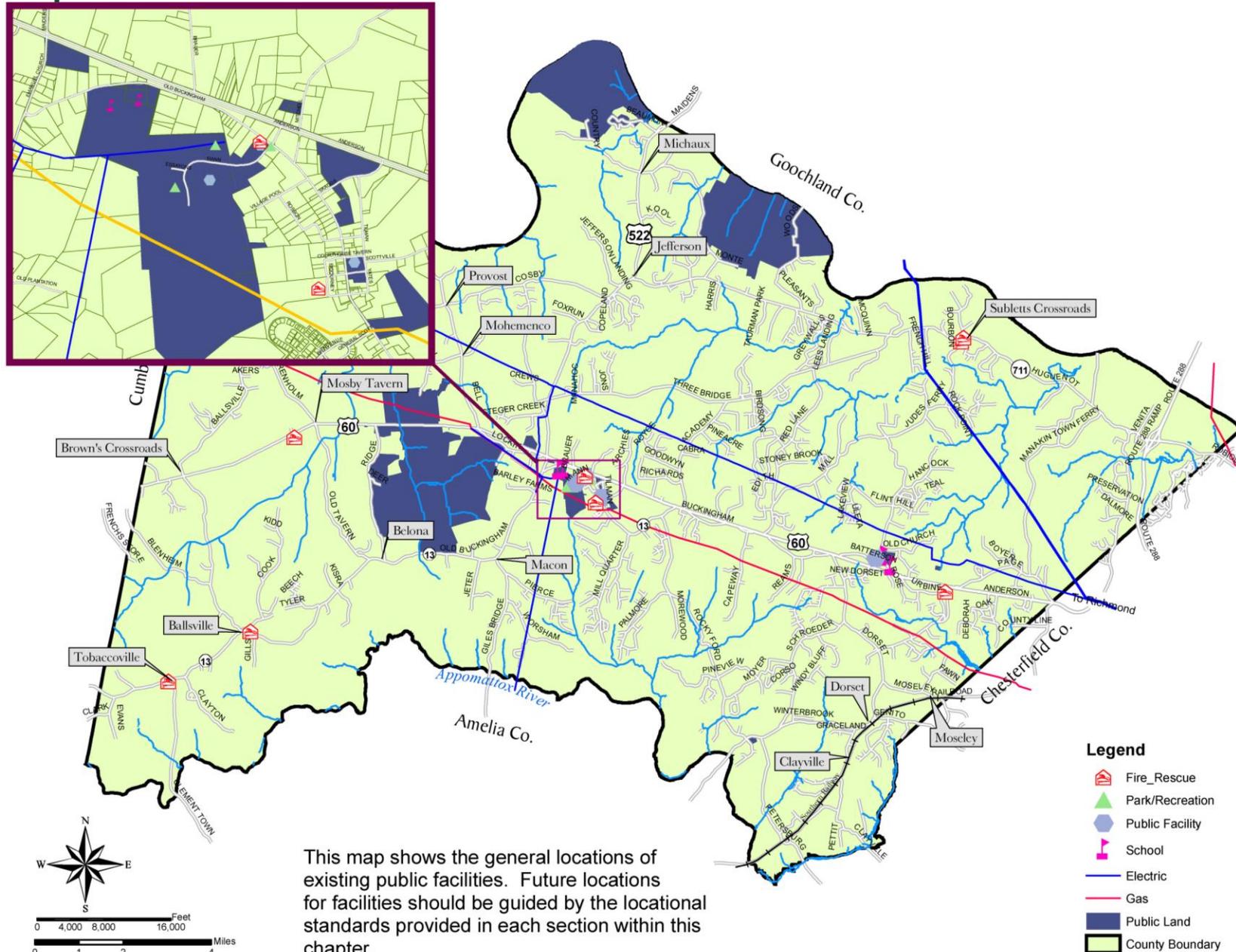
Technology

Powhatan County currently provides information technology services in support of county operations, and regulates telecommunications infrastructure. The following recommendations offer specific directions to help achieve the stated objectives:

- Develop a “needs assessment” in conjunction with individual telecommunications providers and staff.
- Develop a “telecommunication tower plan” with an emphasis on minimizing the need for new towers by encouraging new telecommunications antennas to be located on existing buildings, towers, poles, water tanks, and other tall structures wherever possible.
- Ensure that co-location opportunities are fully met before permitting new wireless communications towers.
- Centralize and maintain a countywide telecommunication tower inventory and users process, utilizing the GIS system.
- Maintain a uniform and comprehensive set of standards for development and installation of telecommunications towers and related facilities.

- Coordinate co-location opportunities with existing cellular carriers to obtain tower antenna access to remove ‘holes’ of radio communication where they exist and where cellular towers are either presently available or planned construction.
- Develop a “technology master plan” integrating county agencies with appropriate access to information. Plan should recognize and incorporate all overlapping departmental tasks and interests.
- Develop “technology zones” throughout the county for business use. Develop specific areas in the county where new or current businesses can utilize high-speed internet broadband or wireless communications.
- Develop a “high-speed communication strategy” to introduce a system of broadband and high-speed wireless technology to the county, with key emphasis on service areas for business and schools.

Map 3: Public Facilities



This map shows the general locations of existing public facilities. Future locations for facilities should be guided by the locational standards provided in each section within this chapter.

CHAPTER 7: NATURAL & CULTURAL RESOURCES

Overview

Powhatan County intends for growth and development to happen by choice, not by chance, the result of intelligent planning and collaboration. A major component of that approach is attention to preservation of natural and cultural resources.

Powhatan County will experience significant residential and commercial growth over the upcoming twenty years. The County will retain its rural character and quality of life. Through effective growth management strategies and land use planning tools, Powhatan County anticipates and plans for the growth that will take place. By guiding growth and development for the next two decades, Powhatan County will establish itself as a model for other rural communities facing strong development pressure. Most suburban and rural residential developments in Powhatan County will be clustered for maximum open space preservation and natural resource protection. The County's efforts will protect and preserve our valued wetland areas and broad forested buffers to filter runoff and enhance Powhatan's natural biodiversity.

The county has used the Agricultural Forestal District (AFD) to protect natural and rural character on a voluntary basis throughout the county. The AFD designation is a temporary and voluntary restriction to development placed on the properties by consent of the property owner and the county. This program temporarily reduces the tax valuation for the land in exchange for the temporary relinquishment of development rights. There is a ten-year time limit on this designation and many of the properties' designations will expire in the next two to three years. The intent of the purpose of this plan is that the AFD would revert to the underlying land use recommendations indicated on **Map 7: Countywide Land Use Plan**; however, continued use of the AFD as an implementation measure for the preservation of agricultural and forested land is encouraged.

The focus on preserving natural areas includes both environmentally sensitive land and wildlife habitats. Key natural

resources to be protected include river protection corridors and riparian buffers, wetlands, large forested areas, major creeks, and corridors connecting habitats.

The cultural history of Powhatan County is rich, and preservation of historical assets is another important goal. The locations of key historical assets have been documented, and an objective of this comprehensive plan is to pursue mechanisms that will help assure that land use in areas encompassing or adjacent to recognized historical assets is appropriate.

The Natural and Cultural Resources Goals of this Comprehensive Plan:

Powhatan County will preserve natural resources and open spaces such as rivers, streams, creeks, forested and wooded areas, wildlife habitat, wetlands, floodplains, and soil resources.

Powhatan County historic resources will be preserved and protected.

These goals are addressed in this comprehensive plan by identification of objectives that have been developed by a CWG along with a set of recommendations that follow.

Key Issues

Following are key issues needing attention:

- Preservation of open land, green space and rural character
- Efficient use of land
- Sustainable agriculture
- Outdoor recreation
- Environmental quality
- Wildlife habitats
- Historic resources

Recommendations

In pursuit of addressing these issues, the following nine natural and cultural resources objectives have been developed to guide action and decisions related to preservation work in Powhatan County. Strategies and actions are recommended to accomplish these objectives. Detailed data and compilations of environmental and cultural resources appear in an appendix including maps showing resource locations.

Natural Resources Objectives and Recommendations

- 1) **Continue the Agricultural Forestal District program to allow voluntary protection of agricultural and forested land.**
- 2) **Protect the function, quality, and integrity of ground water resources.**
 - a. Increase the minimum lot size in “by-right” subdivisions to ten acres.
 - b. Promote a village concept for new development in areas where sewer and water is available or will be available in the future.
- 3) **Preserve open land and green space with special emphasis on the protection of lands that are essential to the maintenance of the county’s biodiversity and overall economic health including the following: environmentally sensitive lands; prime farmland; inland game and fishery lands; wildlife management land; natural corridors such as rivers, streams, and creeks that provide habitat linkages throughout the county; and timberland.**
 - a. Manage growth so that it happens in an orderly, focused, and predictable development pattern.
 - b. Establish growth boundaries for village, suburban and rural development areas and plan for transition zones between each area.
 - c. Require connectivity between open spaces of adjoining communities.
 - d. Explore the use of residential mixed-use developments.
 - e. Decrease fragmentation of green space and viewshed.
 - f. Encourage conservation easements.
 - g. Encourage next generation transfer of land strategies.
 - h. Adopt zoning setback standards to require buffers and setbacks along roads between developed parcels.
 - i. Continue to require minimum non-disturbance buffers from the edge of all wetlands and streams.
 - j. Provide for acceptance of wetlands mitigation transfer into the county.
 - k. Require impact studies for transportation, environment, and public educational facilities.
 - l. Require impact studies on availability of productive soil types for future agriculture use.

4) Incorporate open space in individual developments through conservation subdivision design pursuant to quality design standards. Promote linkage of open space between developments where feasible in an effort to establish larger greenways.

- a. Provide cluster development options for landowners and developers, allowing homes to be clustered together on smaller lots leaving a percentage of the remaining land available for open space or other appropriate uses. Develop a density bonus program to reward developers for choosing a cluster option.

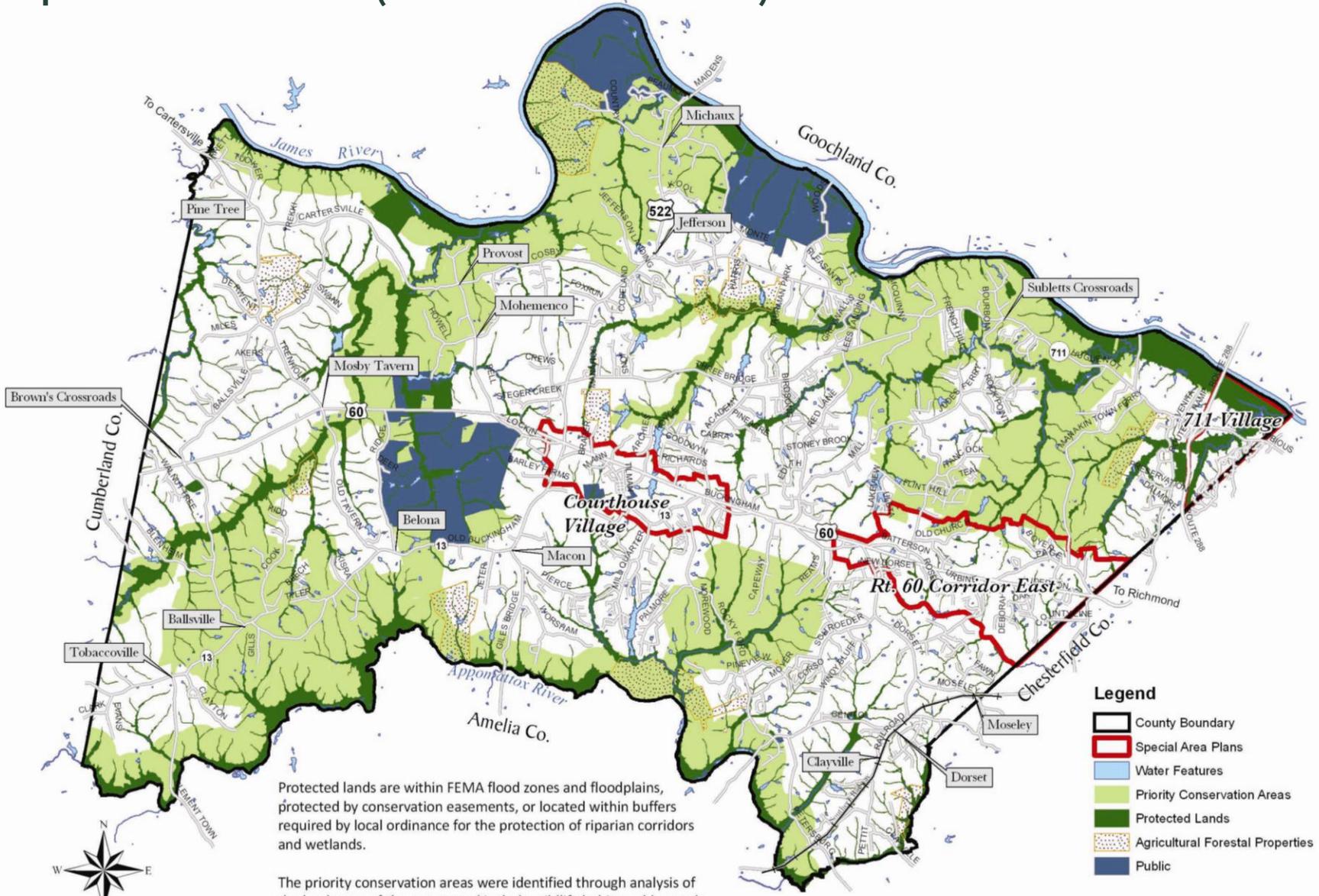
5) Monitor and track open space and greenways in order to promote systematic linkages and connections.

- a. Expand scenic byway system to include additional significant corridors.
- b. Work with the Richmond Regional Planning District Commission (RRPDC) and user groups to create a comprehensive walking/biking usability plan for the county (related to development of a greenspace master plan) and seek out State and Federal grants to aid in the creation and implementation of the plan.
- c. Mandate that all new subdivisions have walking/biking trails that connect with trails in neighboring subdivisions and thoroughfares.
- d. Mandate that whenever any new thoroughfare roads are built or when existing thoroughfares are widened, either bike lanes or sidewalks must be installed in accordance with a master plan. Promote options for pedestrian and bicycle movements along scenic roads. (See also **Chapter 9: Transportation.**)

6) Promote sustainable development practices such as Leadership in Environmental and Energy Design (LEED), including but not limited to stormwater management, maintenance of vegetative cover and agricultural uses, maintenance of non-disturbance zones in critical areas, conservation set-asides in development plans, low impact development methods, transfer of development rights, purchase of development rights, and others.

- a. Take advantage of the land use concepts and **Zoning Ordinance** already being successfully used by other Virginia counties.
- b. Establish a TDR system (transfer of development rights) and consider a PDR program (purchase of development rights) within the county as authorized by recent state legislation.
- c. Require inter-parcel transportation connectivity to reduce the volume of unnecessary local traffic on primary and secondary roads.
- d. Decrease access points on primary and secondary roads by adopting access management standards that redirect local traffic to inter-parcel connectors.
- e. Establish carpool/commuter parking lot on Route 60. Investigate commuter bus service through RRPDC.

Map 4: Natural Resources (Prime Conservation Areas)

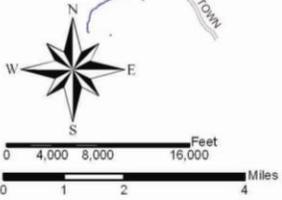


Protected lands are within FEMA flood zones and floodplains, protected by conservation easements, or located within buffers required by local ordinance for the protection of riparian corridors and wetlands.

The priority conservation areas were identified through analysis of the landscape of the county and include wildlife habitat, old growth woodlands, wetlands, sensitive soils and other features which contribute to the ecological health and beauty of the county, and are recommended for preservation and conservation efforts to maintain these features.

The Agricultural Forestal Districts are voluntarily designated by the County and the property owners to be maintained in agricultural or forestal use and are protected by a special tax clause from development.

- Legend**
- County Boundary
 - Special Area Plans
 - Water Features
 - Priority Conservation Areas
 - Protected Lands
 - Agricultural Forestal Properties
 - Public



Historic and Cultural Landmarks Objectives and Recommendations

1) Conserve the county's historically significant sites and structures for the cultural and educational benefits they provide to county residents.

- a. Designate historic property areas and develop historic zoning overlay districts and corridor master plans to manage infill and redevelopment compatibility, and the form and architectural character of buildings in historic areas. Investigate real estate tax credits for historic preservation and/or rehabilitation projects.
- b. Create additional county parks, with hiking, biking, and equestrian trails and interpretive nature stations within those parks, to allow the public to enjoy the county's natural resources and provide educational opportunities for county schools.
- c. Include places in parks for observing and learning about the natural and physical environments, including ecology, wildlife, plants, geology, hydrology, and landforms.
- d. Continue to support the Recreation Advisory Committee and consider the establishment of a committee to manage greenways and open spaces.
- e. Build a greenway network of trails and paths, which enables people to move about Powhatan County by means other than motorized transport: Require walk/bike pathways in county transportation system connecting community parks and Civil War historic sites in conjunction with a walk/bike pathway plan.
- f. Actively pursue expansion of county park system interconnected with bike/hiking trails, green space, and blue space.

- g. Provide and maintain enhanced public access to both the James and Appomattox Rivers. Such access should support the establishment of canoe and kayak trails along both rivers.
- h. Promote and facilitate the establishment of the recently authorized Powhatan State Park, contingent upon provision of improved transportation facilities to allow access to the site.
- i. Establish funding mechanisms for Powhatan County parks or various aspects of them such as county general fund support, state matching funds, foundation grants, maintenance endowments, and user fees.
- j. Encourage cooperation, coordination, and funding of selected park, recreation, and open space resources facilities, and programs among local jurisdictions and governmental units as well as with non-profit organizations.

2) Maintain a database of historic resources, and consider the adoption of historic preservation provisions to the *Zoning Ordinance* in order to assure that new development is compatible with historic resources.

- a. Use GIS mapping resources in the formation of a countywide preservation district.
- b. Distribute an updated list of the county's historical assets developed by the county's historical society.

3) Protect historic landscapes from development that may be out of character with their inherent rural attributes.

- a. Protect historical resources from incompatible development through adoption of a set of form-based codes and/or architectural standards developed and incorporated in the county's **Subdivision and Zoning Ordinances**.
- b. Establish entrance corridor overlay districts encompassing the principal entrance points into the county and develop standards for those districts that emphasize the importance the county places on green space preservation. Such overlay districts should be developed for the north and south entrances on Route 288, the east and west entrances on Route 60, the east entrance on Route 711, and the north entrance on Route 522. Take care in planning development of Route 288/711 interchange to preserve the viewshed seen when approaching from the north.
- c. In order to preserve our rural character and heritage, the county should evaluate tax structure and permitting processes to remove hindrances to and provide incentives for citizens engaged in agri-enterprises.
- d. Continue land use taxation and Agricultural Forestal Districts (AFD) consistent with State Land Evaluation and Advisory Council (SLEAC) provisions.
- e. Direct Office of Economic Development to coordinate with Virginia Tech extension and Chamber of Commerce to enhance traditional emerging sustainable agriculture-based enterprises.
- f. Allow new agricultural activity anywhere within the community unless a specific health or safety hazard can be documented.
- g. Recognizing agriculture as a valuable part of the community's culture, landscape, history and economy, and providing notice that while farming can cause noise, dust, or odors, these are not nuisances if best management practices are being applied.
- h. Ensure all new non-agricultural development is buffered from existing or potential farm locations to prevent or minimize negative interactions. Require developers of properties adjacent to actively farmed land to establish buffers.
- i. Ask the county's Economic Development Office and the Cooperative Extension Office to collaborate to establish a farmers market in a commercially attractive location to help create new markets for locally grown agricultural products.
- j. Permit and encourage the continued use of land for agriculture, farming, dairying, pasturage, apiculture, horticulture, floriculture, and animal and poultry husbandry, in areas currently under such use.
- k. Give agriculture priority over other uses in suitable areas, like prime agricultural soils and in the rural preservation areas on **Map 7: Countywide Land Use Plan**.
- l. Support existing and potential agricultural uses. Review current and forthcoming regulations and evaluate them to ensure they are not an obstacle to agricultural uses.
- m. Encourage modification of existing sub-standard lighting designs to reduce light pollution.

Map 5: Historic Landmarks

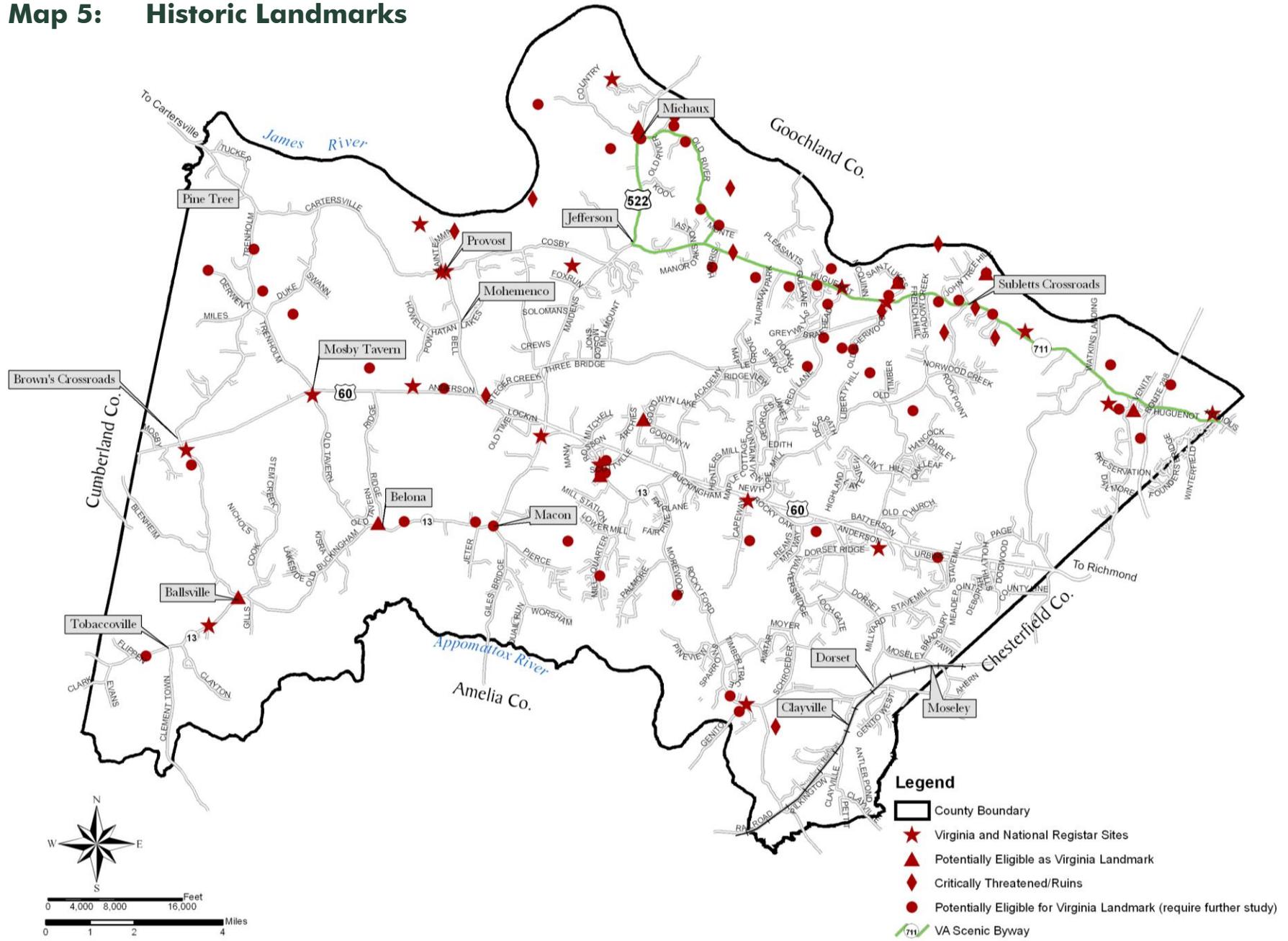


Table 9: Index of Historic Landmarks

Virginia and National Registrar Sites *Sites/Features Potentially Eligible as Virginia Landmarks*

Beaumont	Birdland
Belmead	Ballsville
Belnemus	Goodwyn Farm
Blenheim	Huguenot Springs (hotel site)
Elmington	Hunter’s Fare
Emmanuel Church	Bienvenue
Fine Creek Mills Historic District	Calais
French's Tavern	Center Hill
Huguenot Memorial Chapel (orig Manakin Church)	<i>Sites/Features Critically Threatened or in Ruins</i>
Keswick	Cherry Row
Mosby's Tavern	Elioch
Norwood	Jefferson Landing
Paxton	Jude's Ferry Crossing
Powhatan Courthouse District	New Castle Farm
Provost	Peterville Cemetery
Red Lane (Hill) Tavern	St Francis de Sales High School for Colored Girls- Chapel
St. Luke’s Church	Sherwood
Somerset	Woodberry Mill
Rosemont	Woodlawn
	Cherry Row
	Elioch

Sites/Features Requiring Further Study

Bienvenue	Michaux Grant Cemetery
Calais	Midway
Center Hill	Mill Quarter
Courthope	Millwood
Derwent	Millview
Dispatch	Monacan
Edgemont	Moorewood
Erin Hill	Mulberry Hill
Fighting Creek	Pleasant Creek
Genito Ordinary	Poland
Glebe	Red Hill
Grace Episcopal Church	Roseneath
Hickory Hill	Rudd House
Hobson's Memorial Chapel	Rural Shade
Holly Hill	St Helens
Homestead	St. James Chapel
Hughes Creek	Shady Oaks
Kelona	Shiloh Baptist Church
Laurel Springs	Spring Valley
Macon Tavern	Stratton
Malvern	Sublett's Tavern
Massinacack	Terre Haute
Michaux Grant	Whitewood
	Windsor

Source: Virginia Landmarks. National Registrar of Historic Places. Land Use and Natural Resources Citizens Working Group.

CHAPTER 8: LAND USE & COMMUNITY CHARACTER

Overview

This chapter addresses the primary physical component for the future of the county. This chapter includes the recommendations for where growth should happen, how dense that growth should be, and where there are important natural resources that should be protected. The chapter also relates back to various other components of the plan such as economic development by stating where commercial and employment related uses should be located. The land use plan ties the location of these growth villages and towns to the provision of utilities and different county facilities in conjunction with the infrastructure and facility planning done in the other chapters. Likewise, the land use plan also indicates where residential growth should occur. This ties this chapter to **Chapter 5: Housing**.

Policies for the physical protection and development of the land are provided in this chapter and supported by the specific recommendations in each of the previous topical elements.

Background

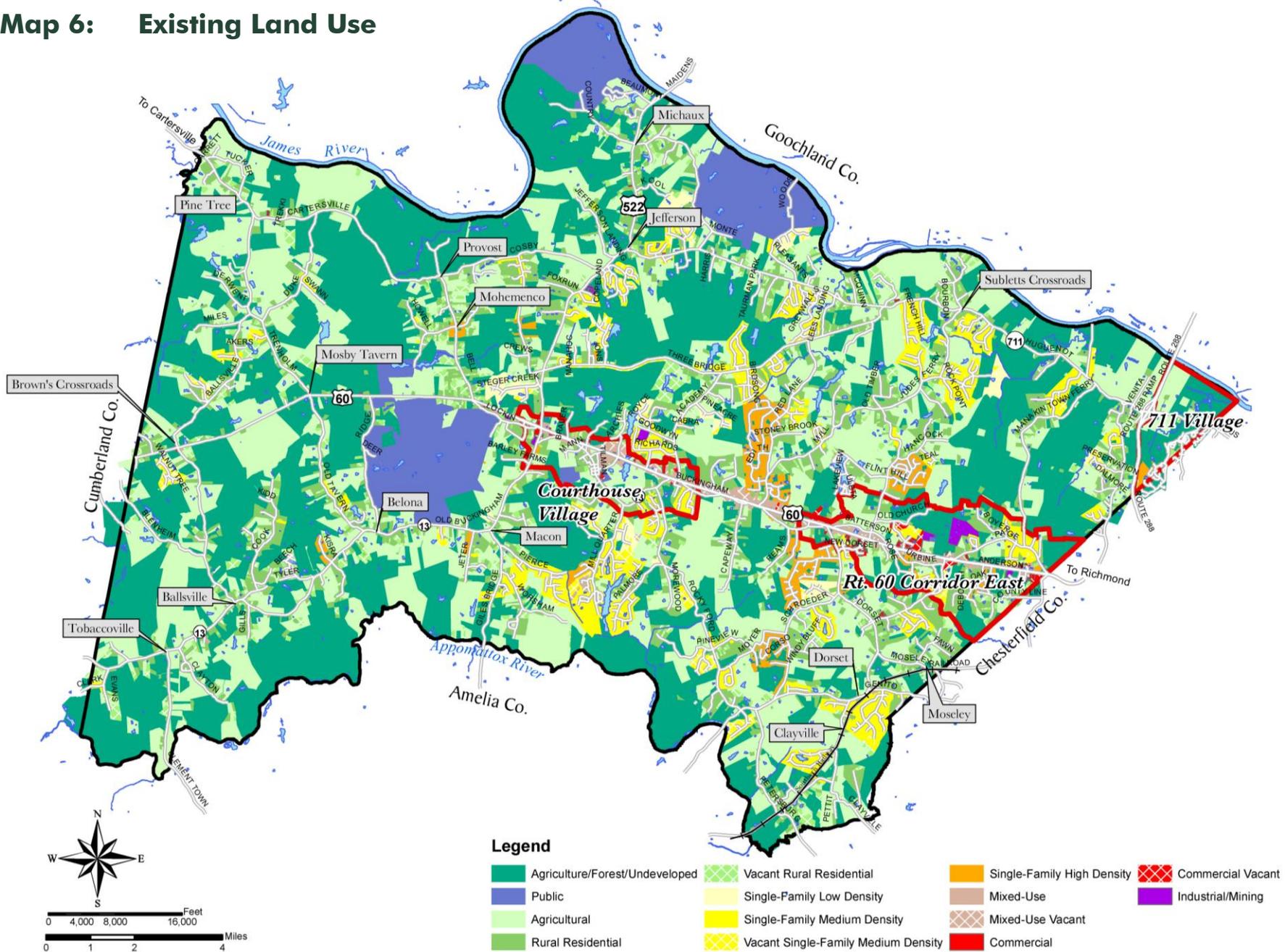
The existing character and land use pattern of Powhatan County is one of a semi-rural community that has developed over two centuries, with the majority of growth occurring in the last few decades. The county's rolling landscape is interspersed with small farms, hardwood

forests, pine forests, and residential development. Over the last few decades, the county has experienced mostly suburban style growth with large-lot single-family residential communities located in the east central portion of the county.

The majority of commercial development in the county has taken place along the U.S. Route 60 corridor. Remnants of the county's historic development pattern remain in places like the Courthouse Village and Moseley community. In the western portions of the county, large family farms and estates have occasionally been subdivided into smaller lots to provide additional single-family development in this part of the county. **Map 6: Existing Land Use** on the following page illustrates the development and land use pattern as it was in 2008.

The rural character of the community has been protected through conservation efforts, with focus in areas such as the Powhatan Wildlife Management Area in the west central part of the county and along both the Appomattox and the James Rivers. The Huguenot Trail/Route 711 Corridor is also one of the community's historic scenic viewsheds, and is recognized as such by both Powhatan and the Commonwealth. Additional planning will be done in some of these areas to ensure that the character and land use patterns that are associated with these areas are protected in the future.

Map 6: Existing Land Use



Key Issues

The future land use plan is structured around the land use goal and objectives, which emphasize the importance of four key themes.

- Protect Rural Character
- Acknowledge and Accommodate Pressures for Growth
- Maintain Fiscal Sustainability
- Provide Services to Current and Future Residents

1) Protect Rural Character

The land use and community character component must take a key role in the protection of the county's rural character. By designating appropriate areas for growth accommodation and other areas for the preservation of rural and rural residential patterns of growth, the plan provides for posterity for rural character. Policies for sensitive development and preservation in the rural areas are also provided.

2) Acknowledge and Accommodate Pressures for Growth

The county has experienced unprecedented growth over the last several decades. And, although the country is currently in a

period of recession, it is essential the county's land use plan recognize that future growth is likely and find proactive ways to successfully manage that growth. The response in this chapter is the designation of Villages within the special area plans.

3) Maintain Fiscal Sustainability

This chapter recommends growth in areas that can most responsibly be provided with infrastructure. While the land use plan cannot maintain fiscal sustainability on its own, the coordinated recommendations of a balance of residential and business uses along with recommendations in the other chapters of this plan are intended to plan for fiscally sustainable growth.

4) Provide Services to Current and Future Residents

The focused nature of the recommended growth areas provides for realistic service goals and expectations. The plan also strongly coordinates the land use, transportation, and service demand during the planning process to provide benchmarks for service provision to current and future residents of the county.

How to Use the Chapter

This chapter is divided into two sections that describe the recommendations for the future land use pattern and character of the county. The first section is the countywide land use, which includes **Map 7: Countywide Land Use Plan** and categories with a description, vision, and policies to guide the quality, character, and quantity of development appropriate in each location. The countywide land use categories include the following:

- Public
- Natural Conservation
- Rural Preservation
- Rural Residential
- Low-Density Residential
- Crossroads
- Village Residential
- Village Center
- Commerce Centers

The second section provides more detail and specific recommendations for three targeted growth areas that correspond to the urban development areas. These special areas are indicated on **Map 7: Countywide Land Use Plan** and use the same land use categories; however, because of the more “dense” development patterns recommended in these areas and the unique qualities, a more detailed map and narrative are provided for each area. Special area plans are provided for the eastern portion of the Route 60 Corridor, the Courthouse Village, and the 711 Village.

The recommendations in this chapter are not intended to be parcel-specific. Rather they are intended to provide general direction in the quality, character, and general appearance of mixes of land uses that are appropriate in various areas of the county. For instance, within any of

the given villages, there are multiple appropriate locations for single-family homes, apartments or multi-family homes, townhouses, commercial uses, and, even in some cases, industrial uses.

Map 7: Countywide Land Use Plan is a general depiction of the land use mix for various areas of the county and is not intended to be a hard-line, parcel-specific map. This approach allows flexibility to respond to unknown conditions, or changing trends. Additionally, **Map 7: Countywide Land Use Plan** cannot regulate the phasing of growth, only the quality and quantity. Phasing of growth should be coordinated with land use using the **Sewer and Water Phasing Plan** on page 39.

To the users of this plan, it is best to first identify your property on **Map 7: Countywide Land Use Plan**. Then in the narrative for that countywide land use, you will find the general policies and a series of specific land uses that are appropriate in that location. These policies provide general densities of development and indicate whether or not you are limited to single-family and agricultural type uses or whether commercial or industrial uses would be appropriate in your location. If your property is in one of the special area plans, you can refer to the detail map and narrative for that area for more specifics.

If the property is located in the natural conservation, rural preservation, or rural residential areas, uses should be fairly agricultural or rural in character and are limited to single-family, agriculture, equestrian related activities and natural preservation. However, in the crossroads and locations with special area plans, other types of land uses are also appropriate. The special area plans will then tell you whether your property is designated for residential type use, a commercial use, preservation uses, or whether it is part of an industrial or other use.

General Land Use Recommendations

Land Use Goal

Powhatan County will have a land use pattern dominated by preserved rural character, with high-quality and economically productive mixed-use development at clearly defined locations served or planned to be served by utilities and adjacent to transportation facilities.

Land Use Objectives

- 1) Maintain the rural character of the county as defined by existing features such as the feeling of personal safety and privacy, quiet, natural habitats, forested land, rivers, streams and creeks, and un-crowded conditions.
- 2) When development occurs in rural areas, the preferred form of development is conservation subdivisions, with smaller lots and preserved open space at an overall low-density consistent with a rural character.
- 3) Use conservation subdivisions to protect environmental features, agricultural land, and minimize the visual impact of residential development along public roads. Establish and maintain a compact pattern of mixed-uses, including residential and business development, at specific focal points along the Route 60 Corridor and along Route 711 east of the Route 288 interchange.
- 4) Accommodate new and diverse residential growth in a compact and mixed-use pattern along the Route 60 Corridor and along Route 711 east of the Route 288 interchange on large parcels in rural areas, or in a conservation subdivision format that preserves open space and rural character.
- 5) Implement improved rural and mixed-use design standards that further enhance the quality of development.
- 6) Preserve and respect existing historic village patterns in rural areas as new development occurs.
- 7) Identify crossroads as areas that can accommodate small amounts of residential, commercial, and institutional uses in a manner compatible with the surrounding rural area.
- 8) Protect the rural character of the area around existing wildlife management areas, the county park, and the new state park in order to discourage incompatible land uses that would conflict with the park.
- 9) Coordinate land use planning with the provision of transportation facilities, infrastructure and community facilities, and economic development goals.
- 10) Promote sustainable growth that promotes “green” practices and the conservation of energy.
- 11) Work with the various state agencies/facilities, especially correctional centers, to ensure cooperation and compatibility.

Countywide Land Use

Countywide land use describes the desired future character of large areas of the county, and designates areas to capture growth and areas that should remain in natural or agricultural character. The countywide land use categories describe the level of development that is appropriate, and the other natural and built features of the landscape. Each category includes a description of existing conditions, intent for the future, and a series of policies that should guide growth and development in each area. Following these policies is a series of appropriate and specific land uses. The countywide land use categories in Powhatan County include the following:

Table 10: Countywide Land Use Reference Table

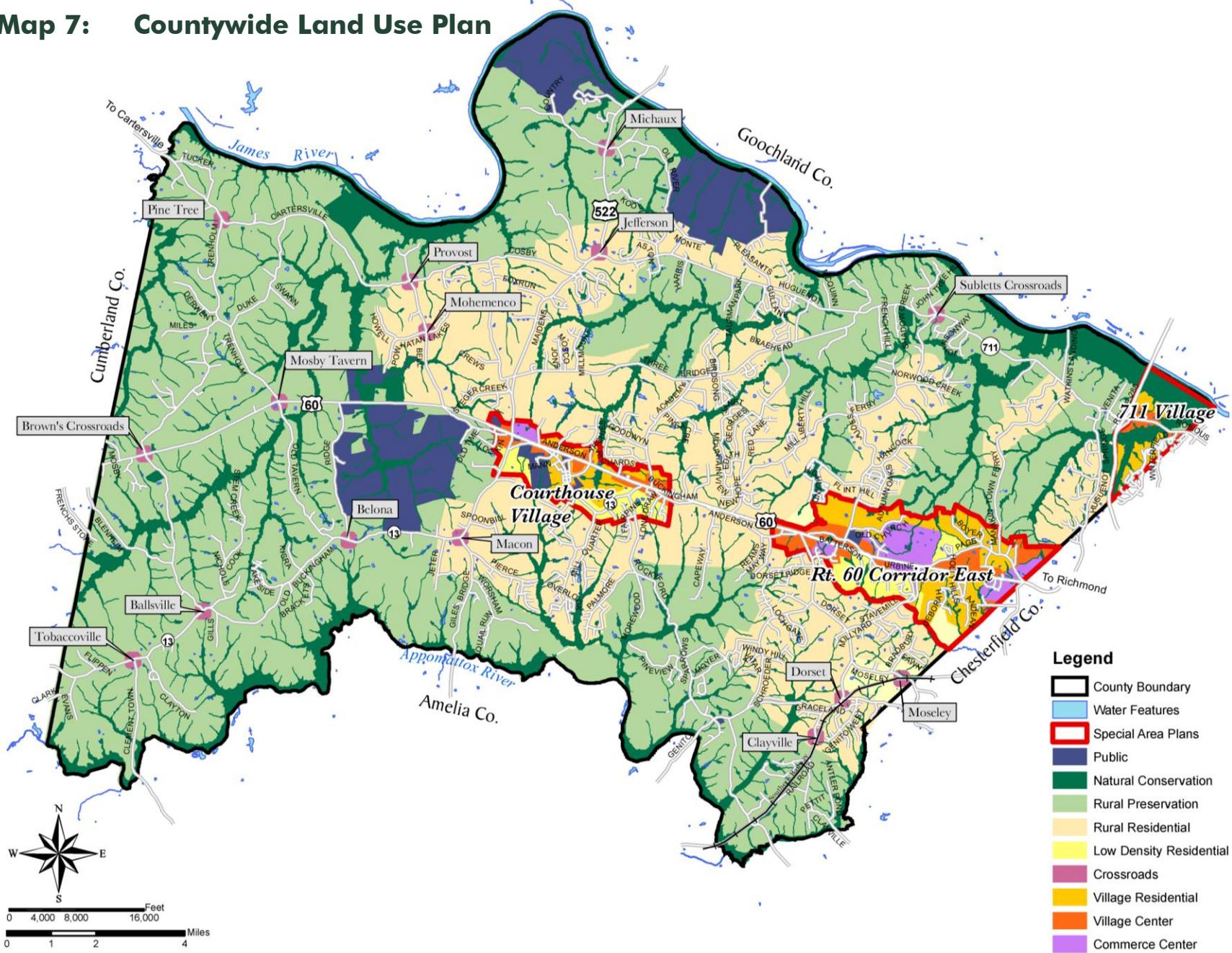
Countywide Use Category	Pg.	Recommended Residential Density Range	
		Low	High
Public	62	Not Applicable	Not Applicable
Natural Conservation	63	Not Applicable	Not Applicable
Rural Preservation	64	0.10 units/acre (1 unit/10 acres)	0.12 units/acre (1 unit/8 acres) ¹
Rural Residential	68	0.10 units/acre (1 unit/10 acres)	0.20 units/acre (1 unit/5 acres) ¹
Low-Density Residential	71	0.20 units/acre (1 unit/5 acres)	0.50 units/acre (1 unit/2 acres)
Crossroads	73	Varies	Varies
Village Residential	75	0.5 units/acre (1 unit/2 acres)	4 units/acre ²
Village Center	78	4 units/acre	8 units/acre ²
Commerce Centers	81	Not Applicable	Not Applicable

NOTES:

- Highest density recommended for use with conservation subdivisions.*
- Higher densities may be achieved in individual projects with special accommodations for amenities, open spaces, or if a transfer of developments program is established.*

The urban development areas of the county are the locations with more detailed land use patterns and are addressed in the special area plans. The plan directs most of the growth towards these areas. The **Sewer and Water Phasing Plan** on page 39 indicates these locations for service provision. The timing and phasing of development should be coordinated with this phasing plan. Therefore, the **Countywide Land Use Plan Map** shows where and what kind of growth should occur and the utilities phasing plan indicates when the growth should occur. Additionally, the special areas provide the opportunity to build on the existing network and pattern of a village or community with a historic character.

Map 7: Countywide Land Use Plan



Legend

- County Boundary
- Water Features
- Special Area Plans
- Public
- Natural Conservation
- Rural Preservation
- Rural Residential
- Low Density Residential
- Crossroads
- Village Residential
- Village Center
- Commerce Center

Public

Description

Public land is designated for institutional, governmental uses and publicly owned lands including but not limited to schools, administrative offices, parks, prisons, and other quasi-governmental uses. The pattern or development design of a public area varies from one location to another, but they often have a “campus” like feel with moderate to large scale buildings located on large pieces of land. Public areas like parks or cemeteries may have few or no buildings but instead may be a large landscaped area with open spaces and trees.

Intent

Public land should provide services and facilities for the operation of government and public operations in an efficient and sustainable manner.

Public Land Use Policies

- 1) Public land for governmental services should be located in the county to provide for equitable service to the community.
- 2) New public facilities should include sustainable and “green” design including alternative building practices, energy conservation, and stormwater management.

- 3) When possible open space, natural resources, landmarks, and historic resources should be protected and incorporated into site plans for public facilities.
- 4) New public facilities should be located, designed, and developed in accordance with an approved master plan.
- 5) Observe locational standards for each facility type to determine substantial accordance with the recommendations of the land use plan. (See **Chapter 6: Infrastructure & Facilities.**)
- 6) Work with the various state agencies/facilities, especially correctional centers, to ensure cooperation and compatibility.

Appropriate Specific Uses

- Government Offices
- Public Utilities and Facilities
- Public Safety Facilities
- Governmental Institutions
- Public Parks and Open Spaces

Natural Conservation

Description

Natural conservation indicates land with intrinsic natural features such as perennial stream corridors, floodplains, floodways, wetlands, or steep slopes (over fifteen percent). As a secondary benefit, these same areas provide greenways for wildlife corridors. These areas are designated as “unbuildable” and should be maintained in a naturalized undisturbed state. Local, state, and federal regulations apply to the conservation of these areas.

Intent

Natural conservation areas should be left in an undisturbed state, and protected to promote environmental stewardship in the county and provide a greenspace network as corridors for wildlife.

Natural Conservation Land Use Policies

- 1) No disturbance or development should occur within the natural conservation areas except activities that mitigate or repair damage done by development activities in adjacent areas.
- 2) Simple lot splits of family land are still appropriate.
- 3) The designation of natural conservation areas on the land use plan are intended as a general guide. Site-specific inventories of these resources should be conducted as part of the development review process for any activity near or adjacent to identified areas.
- 4) The county should continue to enforce stream and wetland buffers in pursuit of preservation of these areas.
- 5) Land adjacent to these areas should be targeted for open space preservation through conservation easements or donation as park land, independently or as part of subdivision and development approval.

- 6) Areas should not be sprayed or treated with herbicides, pesticides, or other chemicals in amounts harmful to natural systems and wildlife as determined by the regulating federal agency guidelines or regulations.
- 7) Agricultural and silvicultural land in or in close proximity to the natural conservation areas should be managed in accordance with the Department of Forest and Agriculture standards for croplands in close proximity to environmentally sensitive features.
- 8) Deforestation of these areas is strongly discouraged.
- 9) The Belmead Property located north of Cartersville Road along the James River is currently partially in a conservation easement. It has been placed in the natural conservation category to imply that the primary use of the land will be preservation of natural landscapes and features. However, this location could accommodate a rural retreat or camp type facility if designed in an environmentally sensitive manner.

Appropriate Specific Uses

- Woodlands, forest
- Undisturbed naturalized meadows and fields
- Wetlands
- Nature Trails
- Camps or Retreats

Rural Preservation

Description

Rural preservation indicates land areas where active agriculture, agri-business, silviculture, or animal husbandry is the primary recommended use. These areas exhibit low-density rural and agrarian development patterns of lots (parcels) in excess of ten acres with pastureland, cropland, specialized agri-businesses, and forested areas with limited human structures. These areas strongly contribute to the appearance of the scenic Virginia countryside in Powhatan County. The primary future use for these areas is agricultural, agri-business, silviculture or animal husbandry with very low-density single-family residential and estates on lots no more dense than one unit per ten acres.

The rural preservation areas are served primarily by rural level infrastructure meaning no sanitary sewer or public water service. All sewer and water needs must be met on-site. Public roads are typically paved roads without curb and gutters, sidewalks, or pedestrian amenities. The local road network is designed to support very low-density residential development and agricultural activities.

The county recognizes preservation of open spaces through the development review process alone will not achieve the long-term goals of substantial permanent open space preservation, and initiatives are needed that go beyond the zoning and subdivision process. This approach is discussed in the implementation strategies portion of this plan.

Rural preservation areas have a substantial number of the county's historic, cultural, and environmental resources. There are many historic homes and sites in these areas as well as scenic road corridors. The Huguenot Trail scenic corridor is located in the rural preservation areas and boasts a winding roadway with views of hardwood forests and bucolic countryside. Numerous environmentally sensitive resources such as slopes, flood plains, wetlands, and hardwood and evergreen forests are also located in or adjacent to the rural preservation areas.

Conservation style subdivisions are recommended for the rural preservation areas as a by-right development option to allow for sensitive development that maintains the rural character. A base density of one

unit per ten acres is recommended to preserve the rural character, however with a conservation style subdivision and clustering to preserve open spaces a density bonus may be considered to provide incentives for open space preservation. The concept is described in more detail in the land use policies that follow and in **Chapter 11: Implementation Tools**. (See SAMPLE RURAL SUBDIVISION CHANGES on page 105.)

Intent

The rural preservation areas will be rural in character, with preserved natural, cultural, and historic resources, including farms, agri-business and tourism, permanently preserved open spaces, permanent easement properties, hillsides, hilltops, floodplains, wooded and forested areas, historic landscapes, landmarks and corridors. These areas will include active agricultural, silviculture, agri-business, equestrian operations and tourism, with new residential development designed in such a way as to be balanced with the natural and existing man made environment in order to minimize the degradation of the rural, natural, cultural, and historic environment.

Rural Preservation Land Use Policies

The following development policies will be used when addressing development and land use issues in the rural preservation areas:

- 1) Agricultural and agri-business uses are recognized as economically desirable businesses, not “vacant” land. Agricultural uses are encouraged to remain. Agricultural preservation is an important goal but this goal should be balanced with respect for the property rights of landowners to allow some residential development options. However, new development should be sensitive to its context in an active agricultural area.
- 2) The open spaces and forested areas provided by current agriculture and agri-business are enjoyed by many, and strongly contribute to the character of Powhatan’s rural landscape. While continued operation as functional cropland or boutique agriculture is strongly encouraged, their existence for perpetuity cannot be guaranteed solely by this land use plan. Thus, while the wooded or open nature of these areas is enjoyed by many, and open space is a valued community amenity, agriculture should not be viewed as permanent open space. And people purchasing residential properties in these areas should be aware that open space preservation will require initiative and resources, as more fully described elsewhere in this plan.
- 3) Agri-business and tourism uses that are compatible with rural character should be encouraged in the rural preservation areas with a demonstration that proposed uses will not negatively affect existing rural or residential uses. Examples of such uses are equestrian centers and boarding facilities, nurseries, boutique or unique agri-business, conference centers, retreat and training facilities, camps, heritage and rural tourism destinations, farmers markets, and bed and breakfasts. Residents in rural preservation areas should not expect urban services. Rural levels-of-service will not include public water, sanitary sewer, and stormwater drainage facilities other than ditches, or sidewalks. The rural road network will remain basic to serve low-density development and agricultural traffic.
- 4) In conjunction with the recommendations for the natural conservation areas, the environmental integrity of stream corridors should be preserved and protected. On-site development practices and land management in the rural preservation areas should create minimal impact to the environmental quality of surrounding uses.
- 5) New residential development will be accommodated on lots of ten acres or more or on smaller lots in conservation subdivisions, which permanently protect a significant percentage of land (a minimum of fifty percent) in an undeveloped state. Flexible design that maximizes the functionality or resources preserved in the open space should be promoted by separating the issue of density from minimum lot size. This approach would permit a wide range of lot dimensions including lot area, frontage widths, and setbacks. A detailed explanation of the conservation subdivision approach and density bonuses is provided in **Chapter 11: Implementation Tools**. (See SAMPLE RURAL SUBDIVISION CHANGES on page 105.)
- 6) Dedication of open space should be encouraged through incentives (density bonuses) based upon net density/yield rather than minimum lot size/widths.
- 7) Any applied density bonuses should be allowed for additional resources protected. An example scale is provided in **Chapter 11: Implementation Tools**. (See SAMPLE RURAL SUBDIVISION CHANGES on page 105.)
- 8) Conservation design as the by-right subdivision option is strongly encouraged. The approach for a conservation subdivision is included in **Chapter 11: Implementation Tools**.
- 9) The following guidelines apply to the rural preservation areas but will be particularly important in the design of conservation subdivisions.

- a. When possible, open spaces should be preserved through conservation easements, conservation subdivisions and easements, or donation of land to the county. The goal of open space preservation is to create an open space network. Therefore, when possible, land adjacent to the natural conservation areas should be of high priority for preservation followed closely by locations where links between existing open spaces can be established.
 - b. Stream corridors, woodlands, landmarks, historic sites, notable viewsheds, and other valuable natural or cultural resources should be maintained as part of the dedicated open space.
 - c. Homesteads, historic sites, landmarks and other historic resources should be protected through the design and development process.
 - d. Roadways and house lots should be located to respect natural features and to maximize exposure of lots to open space (directly abutting or across the street). “Single-loaded” streets (with homes on one side only) can be used to maximize open space visibility, thus increasing real estate values and sales, while costing no more than streets in conventional subdivisions (due to savings from narrower lot frontages). Reversed frontage should be required.
 - e. Open space should be used as part of an integrated stormwater management approach to maintain natural drainage patterns, attenuate water quality impacts, replenish groundwater (e.g., through bio-retention facilities such as infiltration trenches and “rain gardens”) and incorporate detention facilities as visual and environmental amenities such as ponds.
 - f. Common drainage fields for on-site sanitary waste can be accommodated in the open spaces to allow smaller private lots.
 - g. The open space can be either common or dedicated for compatible agricultural and horticultural uses (e.g., pastureland for horses, greenhouses, pick-your-own operations, community-supported agriculture, etc.).
 - h. Open space should be carefully located between housing lots, particularly those adjacent to working farms, and other sensitive uses to provide buffers.
 - i. Open space should be located to maintain the visual character of scenic roads (e.g., “foreground meadows” or preserved agricultural fields adjacent to roads).
 - j. Roadways should be designed to standards appropriate to the rural context (narrower widths, drainage swales, shade trees, gravel footpaths, etc.).
 - k. Open space management should promote rehabilitation of degraded habitats. These rehabilitation activities need to pay close attention to impacts on surrounding properties, particularly when those activities involve potential alterations to drainage patterns.
- 10) Residential subdivisions that modify or impair the view corridor along Route 711/ Huguenot Trail from Route 288 west to Route 522 are discouraged. A minimum setback of 200 feet should be employed for buildings in new subdivisions to maintain a rural appearance.
 - 11) Conservation subdivisions should be designed to maintain the rural appearance by screening building lots in wooded areas and maintaining as much natural tree cover as possible.
 - 12) A portion of the Belmead Property located north of Cartersville Road along the James River is currently in a conservation easement. It has been placed in the natural conservation category to imply that the primary use of the land will be preservation of natural landscapes and features. However, this location could accommodate a rural retreat, camp type facility, or other use if designed in an environmentally sensitive manner.

13) Many agricultural and rural industrial and commercial operations are scattered throughout the rural preservation areas. The county recognizes these as important businesses compatible with rural character and contributing to the local economy. They should be encouraged to remain; however, in the case of expansion, intensification, or new uses the county will need to evaluate the impact on the surrounding properties and local road networks before determining compatibility with the comprehensive plan.

Appropriate Land Uses in Rural Preservation

- Agri-business and boutique agriculture
- Agricultural/rural tourism related businesses including bed and breakfasts, camps, and retreats
- Agriculture, silviculture, and animal husbandry
- Single-family uses, primarily in the form of conservation subdivision design or large-lot (e.g. ten acres lot size or greater) subdivisions
- Institutional uses, such as schools, churches, public safety facilities, and similar uses
- Parks and recreation uses

Rural Residential

Description

Rural residential indicates land areas dominated by five to seven acre residential lots. These areas exhibit moderately low-density rural/suburban development patterns of local roads and small estates. There is some retention of rural character; however, the development pattern is more suburban in character than in the rural preservation areas. The development in these areas is the result of the residential “R-5” zoning which allows subdivision of land for single-family residential use with an average lot size of five acres. This is the prevalent residential pattern in the central portions of the county. Conservation subdivisions and the uses recommended for the rural preservation area are also appropriate in the rural residential areas.

The county recognizes that the preservation of open spaces through the development review process alone will not achieve the long-term goals of substantial permanent open space preservation, and that initiatives are needed that go beyond the zoning and subdivision process. This approach is discussed in the implementation strategies portion of this plan.

Intent

The rural residential areas should be a semi-rural community of single-family homes and small estate type development. Subdivisions should be designed to respect natural features of the landscape and accommodate new residential growth. All future development in the rural residential areas should follow the guidelines for conservation subdivision to cluster lots on the most buildable land and preserve large areas of open space and natural features to help maintain a country or rural character while allowing for residential growth.

Rural Residential Policies

The following policies will be used when addressing development and land use issues in the rural residential areas:

- 1) Residents in rural residential areas should not expect urban services. Rural levels-of-service will not include public water, sanitary sewer, and stormwater drainage facilities other than ditches, or sidewalks.
- 2) The road network in rural residential areas will require some improvements to serve the increased population. When possible, new roads should connect from one existing public road to another to improve the frequency of connections as the rural residential areas become more populated and to provide multiple routes in and out of a subdivision. Adjacent subdivisions should have connected streets to promote this concept. Stub streets should be provided to allow future connections.
- 3) In conjunction with the recommendations for the natural conservation areas, the environmental integrity of stream corridors should be preserved and protected. On-site development practices and land management in the rural residential areas should create minimal impact to the environmental quality of surrounding uses.
- 4) Boutique agriculture and agri-businesses, which are compatible with residential uses, are encouraged in the rural residential areas including equestrian facilities.
- 5) New residential development will be accommodated on lots of five acres or more or on smaller lots in conservation subdivisions, which permanently protect a significant portion of the land in an undeveloped state. An example of how a conservation subdivision can be used is provided in **Chapter 11: Implementation Tools**. (See SAMPLE RURAL SUBDIVISION CHANGES on page 105.)

- 6) Flexible subdivision design that maximizes the functionality of resources preserved in the open space should be promoted by separating the issue of density from minimum lot size. This approach would permit a wide range of lot dimensions (area, frontage, setbacks, etc.).
- 7) Dedication of open space should be encouraged through incentives (density bonuses) based upon net density/yield rather than minimum lot size/widths. And consideration for using conservation design as the by-right subdivision option is strongly encouraged. The following guidelines apply to the rural residential areas but will be particularly important in the design of conservation subdivisions.
- a. When possible open spaces should be preserved through conservation easements, conservation subdivisions and easements, or donation of land to the county. The goal of open space preservation is to create an open space network. Therefore, when possible, land adjacent to the natural conservation areas should be of high priority for preservation followed closely by locations where links between existing open spaces can be established.
 - b. Stream corridors, woodlands, landmarks, historic sites, notable viewsheds, and other valuable natural or cultural resources should be maintained as part of the dedicated open space.
 - c. Homesteads, historic sites, landmarks and other historic resources should be protected through the design and development process.
 - d. Roadways and house lots should be located to respect natural features and to maximize exposure of lots to open space (directly abutting or across the street). “Single-loaded” streets (with homes on one side only) can be used to maximize open space visibility, thus increasing real estate values and sales, while costing no more than streets in conventional subdivisions (due to savings from narrower lot frontages).
- e. Open space should be used as part of an integrated stormwater management approach to maintain natural drainage patterns, attenuate water quality impacts, replenish groundwater (e.g., through bio-retention facilities such as infiltration trenches and “rain gardens”) and incorporate detention facilities as visual and environmental amenities such as ponds.
 - f. The open space either can be common recreation areas or dedicated for compatible agricultural and horticultural uses (e.g., pastureland for horses, vineyards, orchards, greenhouses, pick-your-own operations, community-supported agriculture, etc.).
 - g. Open space should be carefully located between housing lots, particularly those adjacent to working farms, and other sensitive uses to provide buffers.
 - h. Open space should be located to maintain the visual character of scenic roads (e.g., “foreground meadows” or preserved agricultural fields adjacent to roads).
 - i. Roadways should be designed to standards appropriate to the rural context (narrower widths, drainage swales, shade trees, gravel footpaths, etc.).
 - j. Open space management should promote rehabilitation of degraded habitats. These rehabilitation activities need to pay close attention to impacts on surrounding properties, particularly when those activities involve potential alterations to drainage patterns.

- 8) Pedestrian/bike and equestrian trail systems are encouraged in rural residential areas to provide recreation and mobility options.
- 9) The county should establish standards to require entrance signs and other subdivision elements to conform to a rural character.
- 10) Many agricultural and rural industrial and commercial operations are scattered throughout the rural residential areas. The county recognizes these as important businesses compatible with rural character and contributing to the local economy. They should be encouraged to remain; however, in the case of expansion, intensification, or new uses the county will need to evaluate the impact on the surrounding properties and local road networks before determining compatibility with the comprehensive plan.

Appropriate Land Uses in Rural Residential

- Residentially compatible agri-business, silviculture, and boutique agriculture and animal husbandry (no feed lots), examples include non-commercial equine facilities, llamas/alpacas, vineyards, orchards and other specialty crops
- Agricultural/rural tourism including bed and breakfasts, camps, retreats
- Single-family uses, primarily in the form of conservation subdivision design or medium lot (e.g. five acres lot size or greater) subdivisions
- Institutional uses, such as schools, churches, public safety facilities, and similar uses
- Parks and recreation uses

Low-Density Residential

Description

Low-density residential is based on a suburban residential subdivision pattern. This development design describes an irregular configuration of lots and streets to accommodate small single-family residential properties in a semi-rural setting. Low-density residential is a single-use pattern and does not include businesses, institutional or other uses. The pattern is established by local roads branching off state routes to accommodate the subdivision for residential development. New roads are often curvilinear and cul-de-sacs or stub streets are used to end roads at the edge of the subdivision. This development pattern is the most common style for new residential development in the past few years. The general density in low-density residential should be between one unit per two acres and one unit per five acres.

Intent

Low-density residential may be permitted at the edges of the village to allow a transition from the more intense village residential areas and the surrounding rural area. Low-density residential should be permitted in limited areas of the county and used as transitional areas only. Isolated pockets of low-density residential are not appropriate.

Low-Density Residential Policies

- 1) Residents in low-density residential areas should not expect urban services. Rural levels-of-service will not include public water, sanitary sewer, and stormwater drainage facilities other than ditches, or sidewalks.
- 2) The road network in low-density areas will require improvements to serve the increased population. New roads must connect from one existing public road to another to improve the frequency of connections as the low-density residential areas become more populated and to provide multiple routes in and out of a subdivision. Adjacent subdivisions should have connected streets to promote this concept. Stub streets should be provided to allow future connections.
- 3) The desired character for this area is low-density semi-suburban. New residential development will be accommodated on lots of two or more acres.
- 4) When possible open spaces should be preserved through conservation easements, conservation subdivisions and easements, or donation of land to the county. The goal of open space preservation is to create an open space network. Therefore, when possible, land adjacent to the natural conservation areas should be of high priority for preservation followed closely by locations where links between existing open spaces can be established.
- 5) Stream corridors, woodlands, landmarks, historic sites, notable viewsheds, and other valuable natural or cultural resources should be maintained as part of the dedicated open space.
- 6) Homesteads, historic sites, landmarks and other historic resources should be protected through the design and development process.
- 7) Roadways and house lots should be located to respect natural features and to maximize exposure of lots to open space (directly abutting or across the street). “Single-loaded” streets (with homes on one side only) can be used to maximize open space visibility, thus increasing real estate values and sales, while costing no more than streets in conventional subdivisions (due to savings from narrower lot frontages).

- 8) Open space should be used as part of an integrated stormwater management approach to maintain natural drainage patterns, attenuate water quality impacts, replenish groundwater (e.g., through bio-retention facilities such as infiltration trenches and “rain gardens”) and incorporate detention facilities as visual and environmental amenities such as ponds.
- 9) Open space should be carefully located between housing lots, particularly those adjacent to working farms, and other sensitive uses to provide buffers.
- 10) Roadways should be designed to standards appropriate to the rural context (narrower widths, drainage swales, shade trees, gravel footpaths, etc.).

- 11) Pedestrian/bike and equestrian trail systems are encouraged in low-density residential areas to provide recreation and mobility options.

Appropriate Land Uses in Low-Density Residential

- Single-family uses, and accessory dwellings
- Institutional uses, such as schools, churches, public safety facilities, and similar uses
- Parks and recreation uses

Crossroads

Description

Small concentrations of rural businesses located at key intersections or crossroads throughout the county have served as the primary service areas for rural residents and farmers in Powhatan County. These crossroads serve an important role in the community and are compatible with the general rural character. Crossroads are typically collections of service, institutional, or commercial uses with a small (if any) residential population and housing stock that was typically built in the early part of the 20th Century. Crossroads usually evolved at the intersections of either two roads or a road and a rail line. There are approximately a dozen crossroad communities interspersed throughout the rural preservation areas in Powhatan County.

These locations typically have a historic place name and often included small businesses such as small grocery stores, feed stores, and institutions such as churches, post offices, lodges, elementary schools or community centers. The classic crossroad in Powhatan County is (or was) home to a small grouping of residences, one or two small businesses, and one or two institutional uses.

Crossroads provide small but historic focal points within a rural landscape. As such, they contribute to a sense of rural community character that goes beyond the actual magnitude of their land uses and geographic area. For this reason, the preservation of the historic character and function of the crossroad is an important goal of this plan. Further, crossroads offer the ability to accommodate some, but not a great deal of new growth in the county. Small amounts of new business and institutional uses could be accommodated in and around existing crossroads. However, the scale and magnitude of new growth and development at these locations should continue the scale and magnitude of the crossroad. Too much new development centered around them will overwhelm their historic character and role in overall county development.

Crossroads can also be an important element in the heritage tourism aspects of county economic development by providing small-scale restaurants, bed and breakfasts, shops, and gas stations for visitors. For the purpose of this plan, **Map 7: Countywide Land Use Plan** illustrates the following crossroads:

- Tobaccoville
- Ballsville
- Belona
- Macon
- Provost
- Mohemenco
- Jefferson
- Moseley
- Subletts Crossroads
- Brown's Crossroads
- Mosby Tavern
- Pine Tree
- Clayville
- Michaux
- Dorset

Intent

The vision of Powhatan's crossroads is to "preserve and enhance" them. The character of crossroads should be semi-rural in nature and include uses that serve the local and tourist community. A collection of five to eight buildings or uses will maintain an appropriate scale in each location. The crossroads development should have a clear edge and transition into the surrounding rural character. Any new development should also be architecturally compatible.

Crossroad Land Use Policies

- 1) Crossroads are a desirable development pattern that complements the rural preservation and rural residential areas. They can be expected to accommodate a minor share of commercial and service demand in the rural areas.
- 2) Development intensity at a crossroad should maintain a modest scale (five to eight uses or buildings) that are loosely clustered at the intersection of major roadways. The expansion of a crossroad to include development that is more residential would elevate it to a village status and village center policies would apply.
- 3) The boundaries between crossroads and surrounding rural areas should be clear and distinct. Crossroads should continue to be a definable focal point of minor activity. Crossroads should accomplish this without dominating the rural landscape.
- 4) New development in a crossroad should be compatible with existing agriculture businesses. No local streets should be provided with crossroads, all lots should have frontage along an existing major thoroughfare. However, good access management practices should be observed in the design of all crossroads.
- 5) Rural oriented commercial uses, services, and institutions are encouraged to locate at crossroads.
- 6) Any existing historic character of crossroads should be respected and preserved in new development. New development can be designed with modern amenities and features; however, it should respect the scale, configuration, building orientation, density, pattern, materials, building relationship to street and general character of the existing development.
- 7) Most crossroads will not be close enough to service areas for public sewer and water services. Sewer treatment will need to be provided on-site, and wells will be necessary for water. Lot sizes should be adequate to provide both for any proposed uses.
- 8) New crossroads may be established in the future in locations not shown on **Map 7: Countywide Land Use Plan** at intersections in the rural preservation and rural residential areas.
- 9) The Provost crossroad serves as a gateway to the historically significant Belmead Property. Any development activity in this area should respect this connection through design and mix of uses.

Appropriate Land Uses in Crossroads

- Detached single-family residential
- Institutional uses including: post offices, schools, and fire stations
- Small scale services uses including: gas stations, restaurants, bed and breakfasts, and inns
- Small scale rural oriented commercial businesses including markets, convenience stores, feed and seed, and agricultural supply stores

Village Residential

Description

Village residential generally applies to large areas of land that could be developed under a unified planned development. Village residential recommends thoughtful design to provide a variety of housing options in a layout that respects the low intensity single-family character of adjacent rural areas while providing slightly more intense development. The gross density in these areas may vary by special area between one-half and four units per acre and could include single-family detached, single-family attached, and three- to four-unit multi-family buildings. The average lot size would range between one-fourth acre and two acres.

The primary location for village residential in Powhatan is near the courthouse in the central portion of the county, at the 711/288 interchange, and along the eastern portions of the Route 60 Corridor. Village residential is part of a complete community that occurs at a larger scale than a crossroad. A complete village includes residential neighborhoods, and village centers, with parks and open spaces and places for institutional uses like churches and schools. The village residential represents the residential only neighborhood component of a village.

Intent

Village residential should include walkable neighborhoods with diverse housing options and integrated parks, and public uses, which are compatible with the residential qualities of the neighborhoods.

Village Residential Land Use Policies

- 1) New village residential development should occur only pursuant to the special area plan and land use, development, and design standards or guidelines adopted by the county.
- 2) A master plan or planned unit development process should be used to ensure a coordinated plan is prepared for the village residential development.

- 3) Open spaces and riparian corridors should be included as design considerations in the subdivision of land for village residential.
- 4) Public sewer and water should be available to support the increased density of development in village residential areas.
- 5) A subdivision or master plan for village residential areas should provide for a minimum of thirty percent of the site in open spaces or parks.
- 6) The boundary between village residential and rural areas should be clearly defined. When the line becomes blurred and unclear, villages will begin to lose their sense of identity and community character, and the growth will be perceived as sprawling and losing its quaint character.
- 7) Transitions from village residential to low-density residential or rural areas should be accomplished through heavily landscaped buffers or location of similarly sized lots of single-family homes at the perimeter of the site.
- 8) The cross section of new streets in village residential should include sidewalks or paths and moderately narrow street widths that allow parking on at least one side.
- 9) The street system should allow for multiple opportunities for people to walk to local destinations by a variety of routes. Streets should be designed for lower speeds to allow for mixing of vehicular and pedestrian traffic.
- 10) Village residential should include semi-regular blocks based on a grid or modified grid street network, with variation in front yard setbacks within a block to provide green space and avoid monotony.
- 11) A consistent pattern of streets should be established between phases of projects in the various special areas. (See Route 60 Corridor East on page 84, Courthouse Village on page 86, and 711 Village on page 88.)

- 12) The streets and pedestrian paths should connect with other village residential districts, village centers, or portions of the commerce centers.
- 13) Appropriate types of attached single-family homes include duplexes or two-family units.
- 14) Multi-family buildings should resemble large single-family homes.
- 15) Homes should be designed to relate to the street. The fronts of buildings should be oriented to the street, and the progression of public to private spaces should be characteristic of traditional neighborhoods—street- sidewalk-front yard-front porch.
- 16) Traditional style homes with detached, side, or rear loading garages are preferred.
- 17) The façade of a garage should be set back from the primary façade of the home, and all detached garages should be located in the side or rear yard only. Front porches are encouraged on homes in village residential areas.
- 18) Village residential areas should be located within short distances to amenities; sites should be designated for parks, schools, churches, and other public gathering places within a five to ten minute walk (approximately ¼ mile).
- 19) Village residential areas should be located within ¼ mile of village centers or services and retail in commerce centers to provide destinations for commercial activity, and create an integrated comprehensive community.
- 20) Residential densities may vary from one village residential area to another. See special area plans for more specific density/intensity recommendations for the village residential areas.
- 21) New development should be coordinated and timed relative to public infrastructure. Infrastructure, particularly sewer and water service, and road improvements should be available concurrently with new development.
- 22) New infrastructure should be planned to be adequate for both the proposed development and any additional planned growth in the village. Level-of-service standards should be developed to ensure that adequate public facilities are provided in both the short- and long-term.
- 23) New development should pay for itself regarding necessary improvements to public infrastructure including but not limited to new roads, sewer and water services, and schools.
- 24) Parks and sidewalks should be provided with each phase of development within the villages to create a pedestrian network that ties the neighborhoods together. Particular attention should be paid to links that connect to a countywide green network and connect residential neighborhoods to schools.
- 25) Villages should have coordinated stormwater management plans. This includes ensuring stormwater impacts of individual developments are properly mitigated, and those local stormwater management efforts are coordinated with countywide efforts.
- 26) When possible village residential should be designed to meet LEED ND standards and include sustainable features like rain gardens and green roof buildings.
- 27) As the county begins creating master plans for the special areas it may become feasible to add village centers in the areas designated for village residential. These modifications are appropriate and support the vision of creating complete neighborhoods that promote walking and provide local business in a close proximity to residential areas in a manner, which is architecturally compatible with the neighborhood.

Appropriate Land Uses in Village Residential

- Single-family detached residential with accessory residential structures
- Two- to four-family residential structures (apartments, condominiums, townhouses)
- Bed and breakfasts
- Public and institutional uses including: schools, churches, and community centers
- Parks and recreation
- Village center uses may be appropriate as part of a master plan.

Village Center

Description

A village center indicates land designated for future moderate to high intensity residential, commercial, office, and institutional growth. These areas are currently characterized by limited commercial and moderate density residential development along the Route 60 Corridor, the Courthouse Village, and the 711 Village. These areas should be intensified to take advantage of available sewer and water services and transportation infrastructure, and to create a center for walkable communities with an identity. The village centers are a primary growth area for economic development that has a local focus but may include office uses serving a larger market. Efforts should be made to encourage appropriate scaled development in these areas.

The primary focus of these areas should include a mixture of retail, office, services, and civic uses such as gathering spaces, recreation centers, and open spaces like plazas or greens. These features should be organized and developed in a coordinated manner to provide a focus for neighborhood activities. The central areas should be designed to be pedestrian-friendly with connections via sidewalks and paths to surrounding village residential neighborhoods.

Village center areas typically have a moderate concentration of nonresidential uses to provide services and activities to the immediate vicinity (service radius of approximately one to three miles) but are still of a scale and intensity that is compatible with surrounding village residential neighborhoods. Individual buildings are typically small with maximum footprints of around 15,000 square feet. Total concentrations of commercial building areas in an individual village center should range between 10,000 and 75,000 square feet total, with the balance of the village center form filled out with residential development.

Intent

Quaint village centers should be established in the targeted growth areas of the county to accommodate local business growth and provide services and employment to the local population of Powhatan County. Village centers will serve as an integral component of complete communities within the county and be within walking distance of many village residential neighborhoods.

Village Center Land Use Policies

- 1) New growth and development in a village center should occur only pursuant to the special area plan and an approved master plan for that development. The plan must establish appropriate development pattern, and land uses, development standards, design guidelines, and adequate public facility requirements.
- 2) New development in a village center should respect the existing context or the context of the planned village residential neighborhoods. It should help maintain the “small town” feel of the community. The special area plans will define the recommended size parameters for each village center.
- 3) The street systems in village centers should have multiple interconnections. This allows multiple opportunities for people to walk to local destinations by a variety of routes. Streets should be designed for slower speeds to allow for mixing of vehicular and pedestrian traffic. The network should extend beyond the village center and connect to adjacent village residential areas. See village residential land use policy # 9.

- 4) Complete streets including on street parking, street trees and sidewalks should be provided with development in village centers.
- 5) Curbs should be provided where on street parking is permitted within village centers; however, in most cases open channel drainage is appropriate.
- 6) There should be a short distance between village centers and village residential areas. See village residential land use policy 19.
- 7) The density of village centers should be relatively high in comparison to what the county has historically supported.
- 8) Villages are recognized as locations for future growth and development in the county.
- 9) A mix of commercial, office, service, public and residential uses should be accommodated in village centers with vertical mixed-use buildings being a preferred form.
- 10) The scale of buildings in village centers should maintain a small town feel, and be limited to buildings with small footprints of 15,000 square feet or less. Buildings should be limited to a maximum height of thirty-five feet or a maximum of three stories for a total area not to exceed 45,000 square feet. Additional study of building scale thresholds should be coordinated with an economic development strategy and study to determine a targeted building size appropriate to achieve the land use and community character goals and vision for this area, and the economic development objectives stated in chapter 4.
- 11) A central focal point, square, or “main street” should be established as the heart of the village center and development intensities should be graduated from most intense in these areas to less intense residential uses further from the center.
- 12) Townhouses and larger apartment buildings (four to twelve units per structure) with an average density of four to eight residential units per acre for the whole village center⁵, can be accommodated. Expansion of the housing types available in the county and higher-density development encouraged in the villages should help increase the supply of affordable housing.
- 13) Buildings should be designed to relate to the street. The fronts of buildings should be oriented to the street, and the progression of public to private spaces should be created based on traditional neighborhood models.
- 14) Village center buildings that are mixed-use or nonresidential should be set to the sidewalk.
- 15) Awnings and covered sidewalks should be encouraged.
- 16) Adequate landscape buffering should be provided adjacent to any residential properties, and building design should be compatible with surrounding residential areas in regard to materials, building scale, massing, and the relationship to the streets.
- 17) The commercial/civic centers are most appropriate near intersections of a collector or arterial street.
- 18) Signage and lighting should be limited to reduce impacts on surrounding residential areas.

⁵ The residential density in a village center is not based on the same basic density assumptions as a purely residential area, because village centers are intended to include a mix of uses with some uses being stacked vertically in mixed-use structures. The recommendation of four units per acre is a gross density recommendation for the whole village center, meaning if a 100 acre site was considered for a village center, the maximum residential unit yield would be 400 residential units. Those units could be developed in a combination of large-lot single-family homes, attached units, and units located above ground floor commercial or office. They would not necessarily all be accommodated on 10,000 square foot lots. An increase of up to eight units per acre gross density could be appropriate in these areas particularly if attained as part of a Transfer of Development Rights program.

- 19) Depending on the size of a property considered for village centers, they may contain varying amounts of attached residential units. A small development of around twenty acres may be almost entirely nonresidential and serve as a center, while larger areas within this category may include phases of residential development in addition to a commercial center.
- 20) A village center should be planned with well-defined character that promotes walkability and includes open and green spaces throughout the area.
- 21) New development should be coordinated and timed relative to public infrastructure. Infrastructure, particularly sewer and water service, and road improvements should be available concurrently with new development.
- 22) New infrastructure should be planned to be adequate for both the proposed development and any additional planned growth in the village proximity. Level-of-service⁶ standards should be developed to ensure adequate public facilities are provided in both the short- and long-term.
- 23) New development should pay for itself in regard to provision of necessary improvements to public infrastructure including but not limited to new roads, sewer and water services, and schools.
- 24) Village centers should have coordinated stormwater management plans. This includes ensuring stormwater impacts of individual developments are properly mitigated, and those local stormwater management efforts are coordinated with countywide efforts.
- 25) When possible, village centers should be designed to meet LEED ND standards and include sustainable features like rain gardens and green roof buildings.
- 26) Village centers should have a coordinated architectural form, and spatial feel to the village residential areas in the immediate proximity.

- 27) Village centers should be designed to include a minimum of twenty percent open space in each development or phase of development. Open spaces should be required in addition to areas required for stormwater management. Open spaces should be usable spaces which contribute pervious surfaces, allow for trees, landscaping, and water features, and/or outdoor activities. They may be naturalized or more formal and include plazas, small parks, squares, or greens.

Appropriate Land Uses in a Village Center

- Attached townhouse residential
- Medium scale multi-family residential in neighborhood pattern
- Small- to medium-scale commercial, retail
- Office
- Services including restaurants
- Vertically mixed-use buildings
- Public institutional including government facilities and offices, fire stations
- Plazas, squares, open space

⁶ See Implementation Tools on page 110 for more information on Level-of-Service Standards.

Commerce Centers

Description

Commerce centers are designed to accommodate large-scale uses like warehouses or manufacturing facilities that need extensive floor areas. The blocks in these areas are typically based on a campus-like design with large green areas, landscaping and water detention areas surrounding large structures with accessory surface parking. The commerce centers are appropriate where nonresidential uses should be somewhat segregated from residential uses due to potential impacts from noise, dust, or heavy traffic. Although larger in scale than other land use classifications, and more accommodating of automobile traffic, pedestrian areas are still an important component in commerce centers.

Commerce centers include a wide range of office, business, light industrial, research and development uses, and ancillary uses such as restaurants that offer services to the employees of the other businesses. These centers can best be described as a business version of a “subdivision.” The term “campus” is used often in that it implies a sense of integration and coordination of uses and a certain quality and character of development. Commerce centers are generally large, unified, and integrated; like a residential subdivision, they are usually developed by a single entity, and as such can be designed in a coordinated way. As a general consideration, a commerce center would typically need to be at least thirty to fifty acres to accommodate several large format businesses.

Commerce centers involve a significant number of vehicle trips, particularly in the morning and evening peak hours. They involve a mixture of passenger vehicle and heavy truck traffic. Access to multi-modal transportation such as rail or water may be an influencing factor on the location of a commerce center. They are typically located near highway access such as along Route 60.

Intent

Commerce centers should be established at targeted locations along the Route 60 Corridor to accommodate business and industrial development in a location conducive to both the local and regional markets. Commerce centers should be well designed to accommodate these uses in a manner that has limited impact on the surrounding development including but not limited to sustainable stormwater management practices, local roads, and open spaces.

Commerce Center Land Use Policies

- 1) Commerce centers should meet quality standards related to site layout; building configuration, materials, massing, shape, and height; landscaping; signage; parking lot aesthetic and functional design; vehicular and pedestrian circulation; trash removal; lighting; stormwater management; environmental protection; and others.
- 2) Commerce centers should accommodate large-scale commercial/retail development in clustered centers located near Route 60. However, these uses should not be stripped along the frontage of the commerce centers for their whole length along Route 60. Visibility to other business uses should be prioritized to promote economic development in sectors other than retail and service.
- 3) Additional study of building scale thresholds should be coordinated with an economic development strategy and study to determine a targeted building size appropriate to achieve the land use and community character goals and vision for this area, and the economic development objectives stated in chapter 4.

- 4) Commerce centers should be approved only upon a demonstration that adequate public facilities exist or will be established by the time of opening.
- 5) Commerce centers should be subject to land use impact review and mitigation through the proffer system for topics such as traffic, stormwater, lighting, fiscal impact, noise, and odors.
- 6) Vehicular access should be designed to maximize efficiency and minimize negative impacts on levels-of-service on adjacent roads.
- 7) Local roadways should be designed to separate retail/commercial passenger traffic flows from delivery and distribution truck traffic generated in mixed retail/industrial areas.
- 8) Local roadways should be designed and built to standards to accommodate heavy truck traffic, including load bearing, and turning radius dimensions.
- 9) Communication technology and utility services should be available in locations indicated for commerce centers.
- 10) On-site amenities such as walking trails and eating areas are encouraged. Local trails should connect to the proposed regional greenways and trails system.
- 11) Commerce centers should be designed to include a minimum of twenty percent open space in each development or phase of development. Open spaces should be required in addition to areas required for stormwater management. Open spaces should be usable spaces which contribute pervious surfaces, allow for trees, landscaping, and water features, and/or outdoor activities. They may be naturalized or more formal and include plazas, small parks, squares, or greens.
- 12) Commerce centers should be encouraged to reuse existing industrial properties and integrate existing mining or industrial operations.
- 13) Site configuration, landscaping, and maintenance of existing tree cover and topography should be used to buffer commerce centers from adjacent development. However, vehicular and pedestrian connections should be provided between various uses to promote better access.
- 14) When possible commerce centers should be designed to meet LEED ND and LEED building standards and include sustainable features like rain gardens and green roof buildings.

Appropriate Land Uses in Commerce Centers

- Offices
- Large Scale Commercial/Retail
- Services
- Clean Manufacturing
- Distribution
- Warehousing
- Existing Mining Facilities
- Institutional uses, such as schools, churches, public safety facilities, and similar uses
- Parks, open space, recreation

Special Area Plans

On **Map 7: Countywide Land Use Plan**, three areas are identified for special area plans as locations to capture the majority of residential and commercial growth in Powhatan County. These areas are in close proximity to services and offer the greatest opportunities for development. Locations in the special area plans are expected to accommodate higher density development than the rural areas, and offer support services and business growth opportunities within the county.

Because of the level of detail in the land use for these areas larger scale “special area plan maps” are provided to illustrate the micro details of the recommendations. These are the same recommendations illustrated on **Map 7: Countywide Land Use Plan** but at a different scale for readability. However, some special recommendations regarding character and density of the various land use categories are included here as part of the special area plan.

Growth in the special area plans should be phased in coordination with the **Sewer and Water Phasing Plan** (page 39) to prevent sprawl and promote efficient development patterns.

The recommendations for these areas build on the countywide land use recommendations presented above and provide additional detail for the physical layout and form appropriate for development in these

areas. Similar land use categories are used in each of the special areas; however, the intent and recommendations vary slightly in each. The following descriptions and maps illustrate a concept for each of the four areas:

- Route 60 Corridor East
- Courthouse Village
- 711 Village

The county should continue planning for these areas in a prioritized manner by preparing a master plan for each area. The master plans should recommend a finer level of detail including the identification of local roads, block sizes, densities, land use mixes, and open space preservation areas. These master plans should generally follow the recommendations of this plan; however, the closer inspection of natural topography, property ownership, utility accessibility and new road construction will influence the eventual design of the master plan in a way which may vary from the specifics of the comprehensive plan.

Route 60 Corridor East Special Area

The Route 60 Corridor East Special Area is located in the eastern portion of the county centered on Route 60, and extends southward along the Chesterfield County border and approximately 5,000 feet north to follow natural changes in topography and the water flow pattern. The depth from the right-of-way is important to accommodate districts or compact patterns of growth, rather than stripping commercial development along the entire U.S. Route 60 Corridor.

The Route 60 Corridor East Special Area provides the best opportunity for key business development locations and residential growth. The concept includes village centers where local business uses can be accommodated in small-scale buildings in a main street setting with areas designated for the highest density residential up to eight units per acre that may include vertically mixed-use structures, small multi-family buildings, and townhouses. The commerce centers are the appropriate locations for offices, higher intensity retail, and industrial development. This location could support suburban density developments with available sewer and water services.

Surrounding the village and commerce centers are locations of village residential and low-density residential. Village residential should include single-family detached residential at the highest densities in the county with up to four units per acre. These areas should be designed as

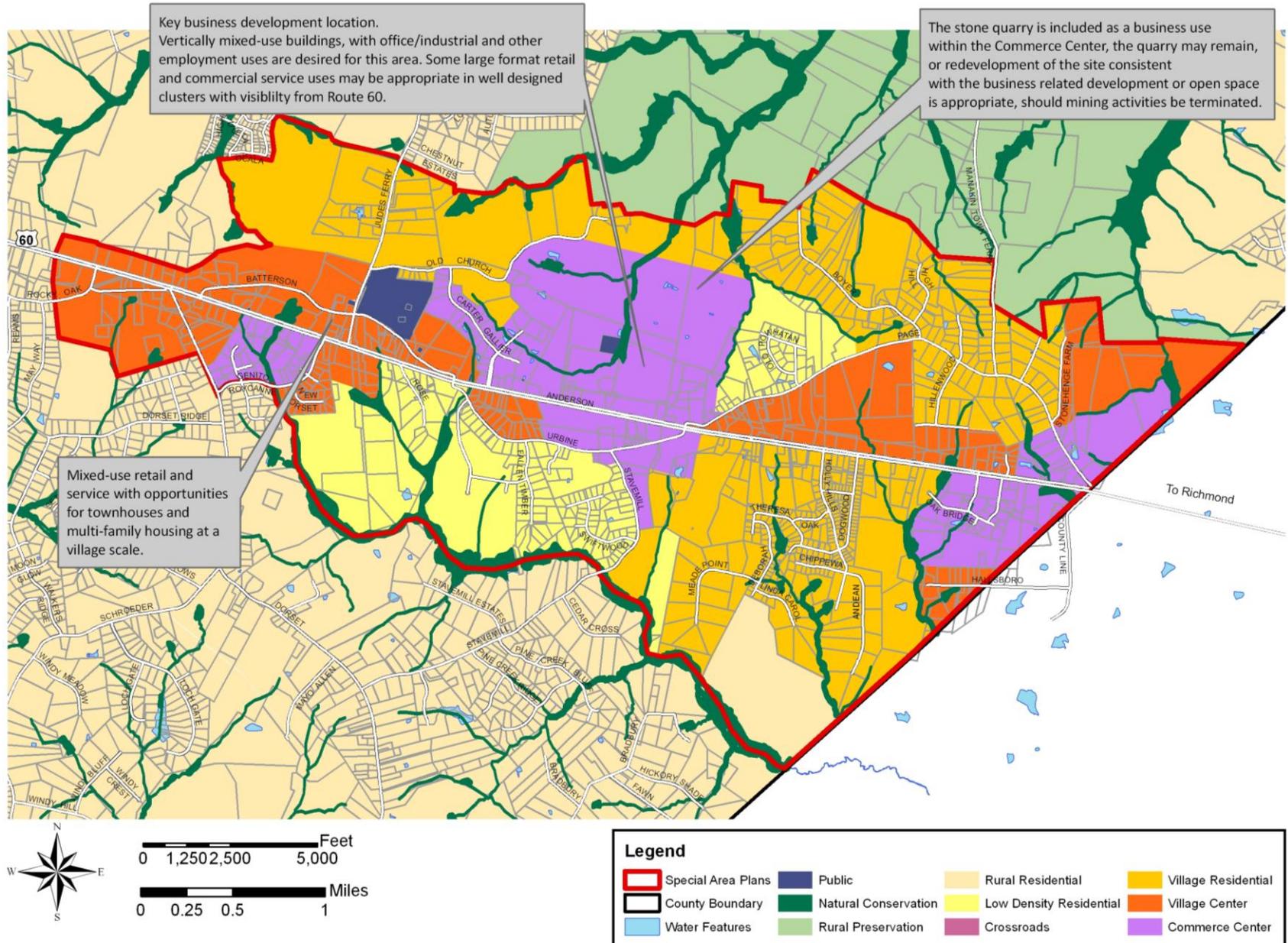
traditional neighborhoods and include transitions from the high intensity mixed-use town centers areas along the corridor to the rural residential areas outside of the corridor.

The corridor also includes areas recommended for commerce centers and includes the Luck Stone stone quarry currently operating in the county. Commerce centers allow for business and industrial development. The industrial uses can be accommodated with future development through site design and buffering, or if the operations are discontinued, redevelopment of this area with compatible uses would be appropriate.

A small portion of the Route 60 Corridor East Special Area is identified for low-density residential that includes established low-density residential development and could include additional subdivisions at densities of one unit per two acres to one unit per five acres.

Roadways will need to be improved to accommodate increased densities. Sewer and water utilities will not be initially available but may be extended in the period beyond that which is addressed by this plan. Phasing of growth in the Route 60 Corridor East Special Area should be moderated by the **Sewer and Water Phasing Plan** included on page 39.

Map 8: Route 60 Corridor East (Special Area Plan)



Courthouse Village

The Courthouse Village is both the historic and government center for the county. This special area is recommended for a mix of village centers, village residential and commerce centers that create a walkable community in close proximity to the government facilities.

Significant effort should be placed on creating a cultural center in the Courthouse Village to generate and support economic development activities and create a draw for tourism within the county.

The existing Courthouse Village Area serves as a natural civically oriented village center for this area with opportunities for new village and commerce centers at major intersections along Route 60.

Village residential with a density of between one-half and four units per acre is appropriate to create walkable neighborhoods and support local services in the Old Buckingham/Route 13 Corridor and new village centers near Brauer Road and Branchway Creek Road.

Townhouses, small multi-family buildings, and small-scale vertically mixed-use structures are appropriate in the village centers along Route 60.

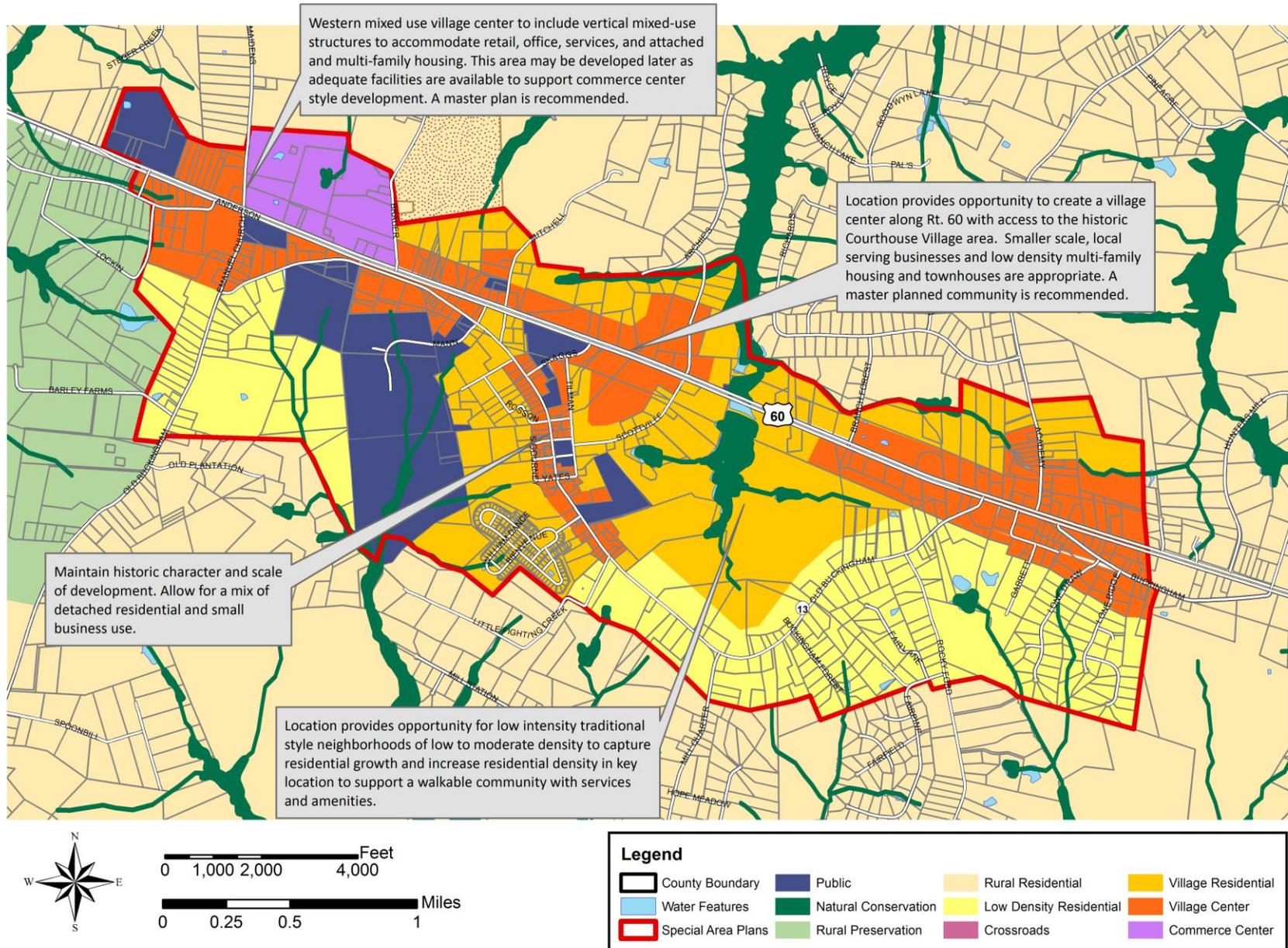
When adequate sewer and water services are made available village and commerce centers are appropriate at the eastern and western edges of the area to provide additional services and business opportunities in the central portion of the county. With the growth projections for the next twenty years, it is likely that development of these centers may be more long-term. The town centers offer opportunity for business development in the central part of the county.

Vehicular and pedestrian connectivity between the various districts is very important in creation of a walkable community, and an interconnected street network of local roads should be established for the whole area to create an integrated village or town.

The intensity of the village residential on the southern side of Route 60 should be sensitive to the historic character and scale of the Courthouse Village Area.

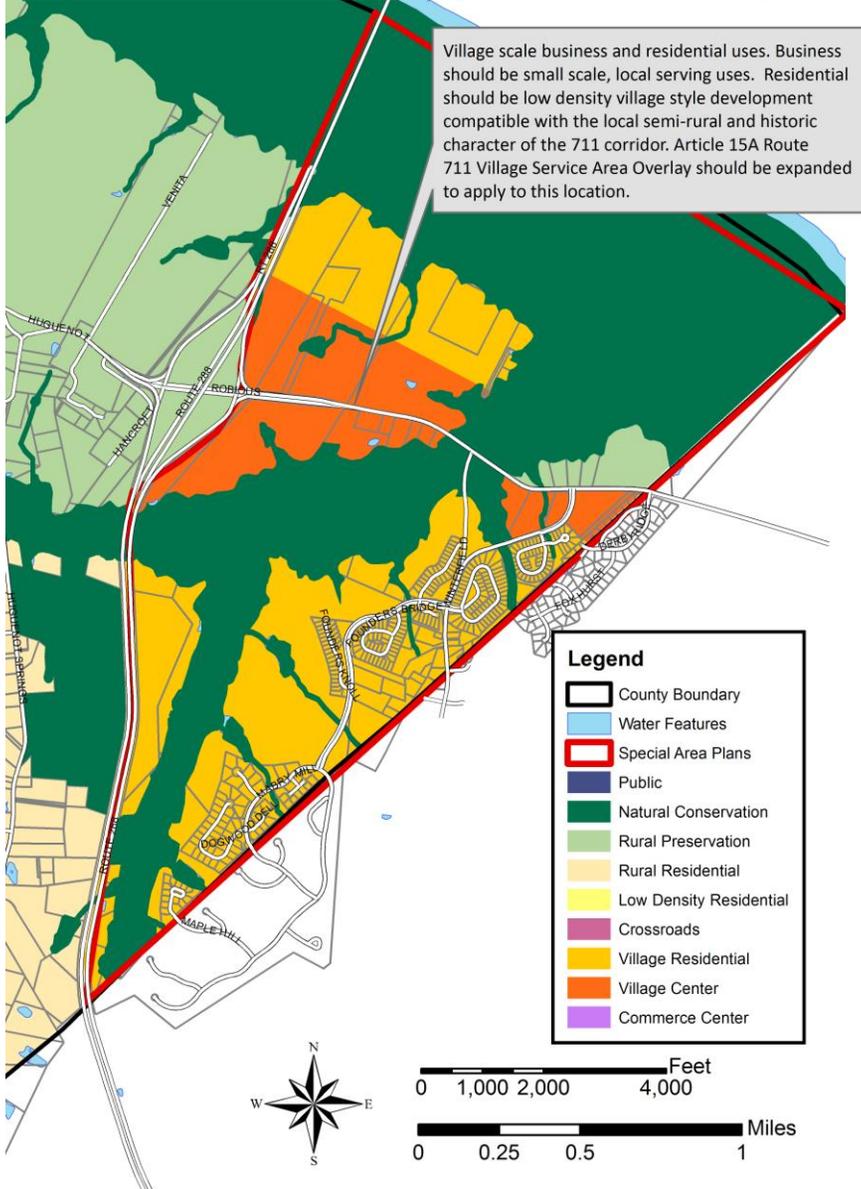
Phasing of growth in the Courthouse Village Area should be moderated by the **Sewer and Water Phasing Plan** included on page 36.

Map 9: Courthouse Village (Special Area Plan)



711 Village

Map 10: 711 Village (Special Area Plan)



The Route 711 Village is located east of the Route 288 and 711 interchange. This location is recommended for low intensity local serving commercial and residential development.

Land adjacent to Route 711 is recommended for village centers, which could include businesses and residential use of a scale appropriate to the rural village character. Commercial buildings should have a residential scale and not exceed two stories; the area should be arranged to have a small town or village character with landscaping and architecture compatible with the semi-rural and historic character of the Huguenot Trail corridor.

Core areas of the village centers could support office, general commercial, and some townhouses up to two units per acre. Surrounding these areas village residential is recommended to accommodate single-family detached residential at densities up to one unit per acre. A traditional neighborhood design is recommended for both the village center and the village residential locations. The Article 15A-Route 711 Village Service Area Overlay District would apply to this special area.

CHAPTER 9: TRANSPORTATION

Overview

Land use and transportation are closely linked. The land use patterns that have evolved in Powhatan County have been connected and served by a system of roads providing for local mobility needs within the county, but also for regional travel. Often the same roadways serve both functions. As the county continues to experience significant growth, purposeful attention to roadway improvements is critical to long-term sustainability.

Powhatan County has a strong rural tradition that has influenced the development of its transportation system. The county's roadway system is dominated by two-lane rural roads that were not designed or intended to carry high volumes of traffic. But as the Richmond Metro Area has grown, Powhatan County, and especially the eastern portion of the county, has felt the pressures of growth on its roadway network. The primary challenge for the future will be finding the appropriate balance between preserving the county's rich rural heritage and quality of life and meeting the travel needs of a growing population.

One of the most effective ways of finding this balance is by recognizing the connections between land use and transportation policies and decision-making. An important component of this comprehensive plan is the development of an updated **Countywide Land Use Plan**, which, in part, identifies future growth areas and establishes new land use categories to guide this growth. Implementation of the land use plan in the development process will have a significant impact on development of new roads and transportation infrastructure.

A **Major Thoroughfare Plan** has been prepared to accompany and coordinate with the **Countywide Land Use Plan** in **Chapter 8**, and is incorporated here as part of the **Powhatan 2010 Long-Range Comprehensive Plan**. The two are connected. The land use plan (**Map 7: Countywide Land Use Plan**, categories, and special area plans) envisions how land will be developed over the next twenty to thirty years; the

Major Thoroughfare Plan identifies roadway improvements that are needed to support that projected growth, and assigns priorities for construction. The **Major Thoroughfare Plan** and transportation strategies recommended here are consistent with the updated land use plan and other comprehensive plan policies.

The Transportation Goal of this Comprehensive Plan:

Powhatan County will have a transportation system that is coordinated with land use patterns and community character, with an acceptable level-of-service that supports economic development and maintains a high-quality of life.

This goal is addressed in this comprehensive plan by identification of objectives that have been developed by a CWG along with a set of transportation recommendations, and by articulation of a **Major Thoroughfare Plan**. Both follow.

Key Issues

A Transportation Study Group (TSG) was convened to review transportation conditions and prospects in Powhatan County. Following are key transportation issues needing attention:

- Route 60: This is the main transportation corridor in Powhatan County. It carries the most traffic, and contributes to the visual identity of the county because of heavy volumes of traffic and its distinctive character with wide tree-lined medians. Access to properties along Route 60 is a key issue, along with needs to expand capacity of the roadway. There is a need to improve access, especially in and around new villages that will be developed (see discussion in **Chapter 8: Land Use & Community Character**). New streets in and around the villages should be considered as loop roads integrated into the development rather than parallel frontage roads. Configurations will need to be explored further in small area planning discussions.
- Route 711: This is a key, historic, and highly attractive corridor. It should always remain a two-lane roadway. Safety improvements are needed along the corridor. If signals are warranted in the future, alternative approaches such as roundabouts should be considered.
- There is a need to consider and plan for opportunities for minor connectors between Route 60 and Route 711.
- There are major concerns about funding for roadway improvements. Prioritization of projects is important and necessary.

General Recommendations

In pursuit of addressing those issues, the following set of eight transportation objectives has been developed to guide action and decisions related to transportation, mobility, and access in Powhatan County. The objectives include a focus on existing regional and local transportation partnerships and maximizing limited funding resources for major transportation improvements. The objectives also recognize the

importance of developing viable alternatives to driving, to both relieve congestion and provide valuable recreation and health benefits to the community. Specific strategies appear under each objective. A main mechanism for action on these objectives is implementation of the **Major Thoroughfare Plan**, which follows. Another key component of implementation is pursuit of land use recommendations that are highlighted in **Chapter 8: Land Use & Community Character**.

Transportation Objectives:

- 1) **Maintain the long-term safety and capacity of the county's major road corridors to preserve the quality of life and enhance economic well-being. Address this objective by implementing the county's Major Thoroughfare Plan according to the recommended project prioritization and as funds are available. Pursue small area and corridor studies that may overlap jurisdictional boundaries to promote orderly growth, provision of infrastructure and services, and coordinated planning.**
- 2) **Foster an interconnected road network that provides all citizens with safe and convenient access and mobility. Identify opportunities for future regional transit service into the county. Work with regional partners to enhance Travel Demand Management (TDM) programs targeted at commuters to reduce single occupant vehicle trips during peak travel times. Promote connectivity of secondary roadways as shown on the Major Thoroughfare Plan to reduce the traffic load on major arterials throughout the county.**
- 3) **Achieve a functional road network with a context sensitive design that reinforces the county's rural character and helps to preserve natural and historic resources. Address this objective by employing context-sensitive roadway design solutions for all Major Thoroughfare Plan projects to preserve rural character and protect valuable environmental, historic, and cultural resources.**

- 4) **Promote improved safety and capacity along travel corridors and areas. Address this objective by considering local financing of lower cost transportation improvements (e.g., access management, intersection improvements, targeted safety improvements, and similar projects) through the county’s capital improvement program or other local initiatives.**
- 5) **Promote “complete street” designs that promote pedestrian and bicycle friendly facilities with design that is compatible with land use quality objectives, including distinctions between rural characters and strategically located mixed-use districts. Address this objective by promoting pedestrian and bike improvements, especially in new developments, to enhance walkability and provide valuable recreation and health benefits. Where appropriate, “complete street” designs should be implemented on new roads and improvements to existing roads. Work with VDOT to include bike and pedestrian facilities on major roadway improvement projects. Create multi-modal connections (transit/bike/pedestrians) at strategic transportation hubs throughout the county.**
- 6) **Develop a system for prioritizing needed transportation improvement projects to make best use of limited transportation funding. Address this objective by working with neighboring counties, municipalities, and other regional transportation partners to improve coordination and communication on transportation improvements and initiatives of county and regional significance. Continue to pursue alternative funding sources for transportation projects of countywide significance. Require developers to fund transportation improvements and mitigations related to development of their projects.**
- 7) **Preserve Route 711 as a scenic corridor. In general, Route 711 should be a two-lane road with safety and circulation improvements along the corridor. Any future improvements to Route 711 should be sensitive to its rural and historic character. Other improvements should be investigated, and implemented as appropriate. Where appropriate, consider alternative methods of intersection control (e.g., roundabouts) that can mitigate congestion and potentially serve as community gateways.**
- 8) **Continue to develop Route 60 as the county’s primary commercial and economic development corridor, and provide transportation improvements to meet future travel demands for various types of trips and users. Require comprehensive traffic impact analyses for new development. Continue to implement the county’s access management standards.**

Major Thoroughfare Plan

The recommended **Major Thoroughfare Plan** for Powhatan County is shown in **Map 11: Major Thoroughfare Plan** and the recommended projects are detailed in Table 10. The **Major Thoroughfare Plan** is a system plan – it is intended to improve roadway conditions across the county and across different levels of roads. This plan was developed through an iterative process that involved: analysis of existing and projected traffic volumes and roadway capacities; examination of the functional classification system; analysis of environmental issues and other constraints; discussions with the development community; and detailed participation by the TSG and other stakeholders.

Map 11: Major Thoroughfare Plan

A **Virginia Byway** is a designation given by Virginia's Commonwealth Transportation Board to a roadway, which is of historic significance and/or scenic interest or links areas of historic significance and/or scenic interest.

- Major Arterial, Existing
 - - - Major Arterial, Proposed
 - Minor Arterial, Existing
 - - - Minor Arterial, Proposed
 - Rural Collector, Existing
 - - - Rural Collector, Proposed
- Byways**
- Virginia Byway

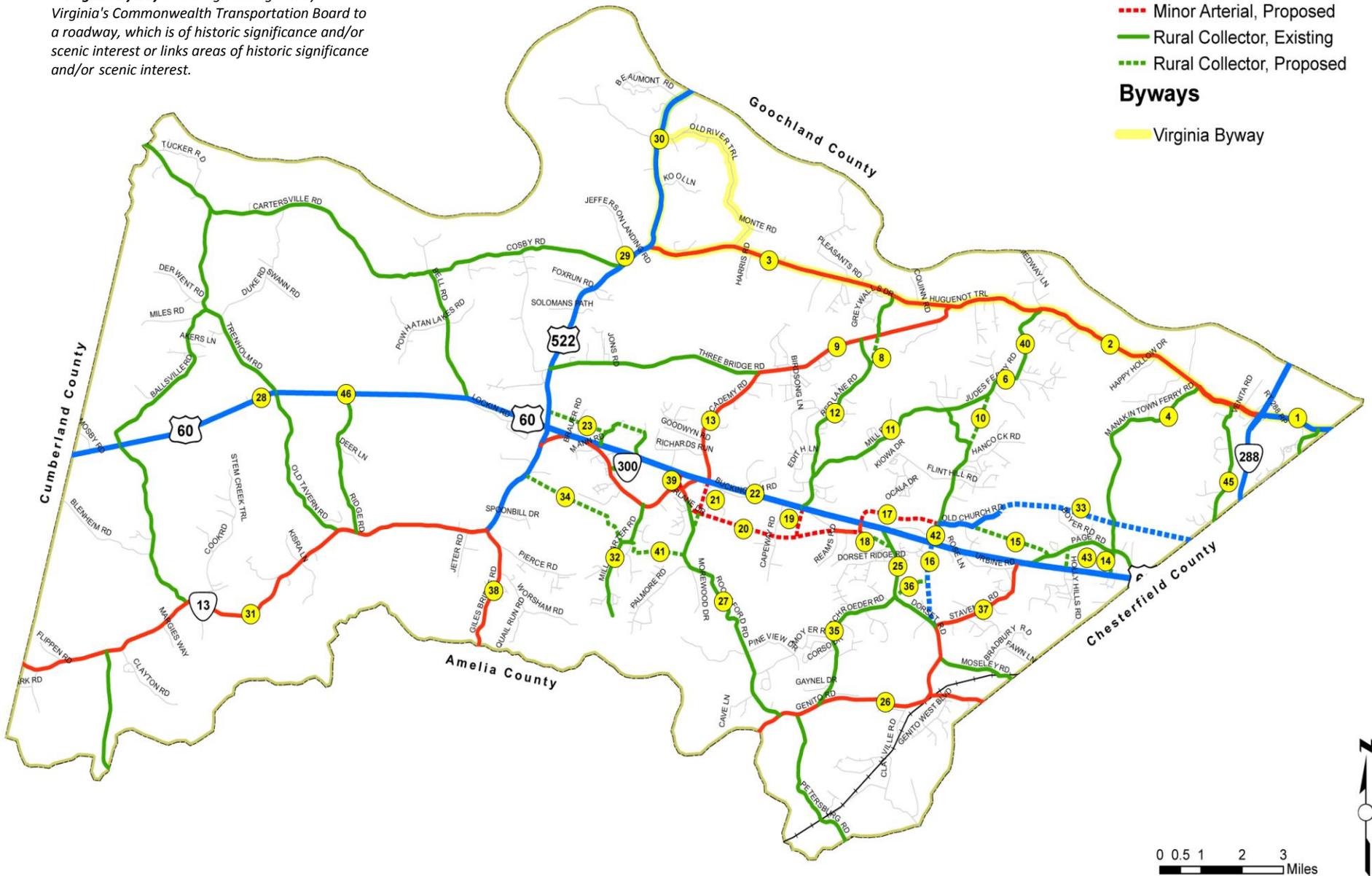


Table 11: Major Thoroughfare Plan Project List

Map ID	Rt #	Road Name	From	To	Length (mi)	Description	Plan Reference	Priority ^f	Cost ^h
1	VA 711	Huguenot Tr	VA 288 interchange	Chesterfield Co Line	1.9	Widen road (4+L) and replace bridge	STIP, SYIP	M	\$ 18,208,433
2	VA 711	Huguenot Tr	VA 288	Three Bridge Rd	6.9	Widen pavement, straighten, realign intersections and add turn lanes as necessary ^a	L RTP *, SYIP	S	\$ 34,931,250
3	VA 711	Huguenot Tr	Three Bridge Rd	US 522	6.1	Widen pavement, straighten, realign intersections and add turn lanes as necessary ^a	L RTP *, SYIP	S	\$ 30,881,250
4 ^d	VA 635	Manakin Town Ferry Rd	Huguenot Tr	1.7 mi S of VA 711	1.7	Widen pavement, straighten, realign intersections and add turn lanes as necessary		M	\$ 10,922,500
6	VA 615	Judes Ferry Rd	Norwood Creek Rd	0.25 mi S of Federal Hill Farms Rd	0.8	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 4,050,000
8	VA 628	Red Lane Rd	Three Bridge Rd	0.6 mi S of Three Bridge Rd	0.7	Reconfigure intersection with Three Bridge Rd to align with Lees Landing Rd		L	\$ 6,037,500
9	VA 615	Three Bridge Rd	Huguenot Tr	Academy Rd	4.2	Widen pavement, shoulders, realign intersections and add turn lanes as necessary		S	\$ 21,262,500
10	VA 613	Judes Ferry Rd Ext	0.4 mi N of Hancock Rd	0.25 mi S of Federal Hill Farms Rd	1.2	Extend as 2L collector on new alignment		L	\$ 10,350,000
11	VA 614	Mill Rd	Red Lane Rd	Judes Ferry Rd	3.4	Widen pavement, straighten, realign intersections and add turn lanes as necessary	L RTP *, SYIP	S	\$ 17,212,500
12	VA 628	Red Lane Rd	US 60	0.6 mi S of Three Bridge Rd	3.8	Widen pavement, straighten, realign intersections and add turn lanes as necessary		M	\$ 24,415,000
13	VA 603	Academy Rd	US 60	Three Bridge Rd	2.9	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 14,681,250
14	VA 635	Manakin Town Ferry Rd Ext	Page Rd	US 60	0.6	Extend as 2L collector on new alignment		M	\$ 4,626,000
15	VA 612	Old Church Rd Ext	Old Church Rd	Page Rd	1.6	Construct 2L collector on new alignment		M	\$ 12,336,000
16	VA 613	Judes Ferry Rd Ext	US 60	Dorset Rd	1.8	Extend as 2-4L (possibly divided) major arterial on new alignment		M	\$ 30,321,000

Map ID	Rt #	Road Name	From	To	Length (mi)	Description	Plan Reference	Priority ^f	Cost ^h
17	VA 612	Old Church Rd Ext	Judes Ferry Rd	US 60	1.7	Extend as 2L minor on new alignment		M	\$ 13,107,000
18	VA 678	Rocky Oak Rd	US 60	Dorset Rd	1	Extend and realign road as 2L minor arterial		M	\$ 7,710,000
19	VA 628	Red Lane Rd Ext	US 60	New Minor Arterial 1	0.7	Extend as 2L minor arterial on new alignment		M	\$ 5,397,000
20	--	New Minor Arterial 1	Old Buckingham Rd	Rocky Oak Rd	3.6	Construct 2L minor arterial on new alignment		L	\$ 81,540,000
21	VA 603	Academy Rd	US 60	New Minor Arterial 1	1.2	Extend as 2L minor arterial on new alignment	PNL*	L	\$ 27,180,000
22	US 60	Anderson Hwy	US 522	Chesterfield Co Line	12	Widen to 6L, realign intersections and add turn lanes, as necessary	STIP*/LRTP*/SHP	L	\$ 225,180,000
23	--	New Collector 2	US 522	Branchway Creek Dr	2.1	Construct 2L collector on new alignment		M	\$ 13,492,500
25	VA 622	Dorset Rd	Genito Rd	US 60	4.2	Widen pavement, straighten, realign intersections and add turn lanes as necessary; may include closure of intersection with US 60 in conjunction with #17 & #18		M	\$ 32,382,000
26	VA 604	Genito Rd	Amelia Co Line	Chesterfield Co Line	4.7	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 23,793,750
27	VA 603	Rocky Ford Rd	Old Buckingham Rd	Genito Rd	6.2	Widen pavement, straighten, realign intersections and add turn lanes as necessary	LRTP*	S	\$ 1,244,000
28	US 60	Anderson Hwy	US 522	Cumberland Co Line	8.9	Widen to 4L with grassy median, realign intersection and add turn lanes, as necessary	SHP	M	\$ 98,233,750
29	US 522	Maidens Rd	Goochland Co Line	US 60	8.8	Widen to 4L with grassy median, realign intersection and add turn lanes, as necessary	SHP	M	\$ 97,130,000
30	US 522	Maidens Rd	1/4 mi S of Old River Trl	1/4 mi N of Old River Trl	0.5	Add turn lanes, shoulders and realign intersection to accommodate state park traffic	STIP ^e	S	\$ 2,750,000
31	VA 13	Old Buckingham Rd	Cumberland Co Line	US 60	16.9	Widen pavement, straighten, realign intersections and add turn lanes as necessary	SHP	M	\$ 108,582,500
32	VA 620	Mill Quarter Rd	Old Buckingham	Dead end	2.8	Widen pavement, straighten, realign intersections and add turn	STIP*, SYIP	S	\$ 986,884

Map ID	Rt #	Road Name	From	To	Length (mi)	Description	Plan Reference	Priority ^f	Cost ^h
			Rd			lanes as necessary			
33	--	New Minor Arterial 3	Chesterfield Co Line	Judes Ferry Rd	4.0+/1.3	Construct 4L divided arterial on new alignment. Extend to Huguenot Springs Rd; upgrade existing road to 4L divided.		M	\$ 89,278,500
34	--	New Collector 3	Mill Quarter Rd	Old Buckingham Rd	2.4	Construct 2L collector on new alignment		M	\$ 15,420,000
35	VA 610	Schroeder Rd	Genito Rd	Dorset Rd	3.3	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 16,706,250
36	VA 610	Schroeder Rd Ext	Dorset Rd	Judes Ferry Rd Ext	0.8	Extend as 2L collector on new alignment		M	\$ 6,168,000
37	VA 634	Stavemill Rd	Dorset Rd	Urbine Rd	2.3	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 11,643,750
38	VA 609	Giles Bridge Rd	Amelia Co Line	Old Buckingham Rd	2.8	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 14,175,000
39	VA 603	Rocky Ford Rd Ext	Old Buckingham Rd	US 60	0.4	Extend as 2L minor arterial on new alignment and align with existing median break; includes closure of adjacent intersection of Old Buckingham Rd at US 60		M	\$ 3,084,000
40	VA 613	Judes Ferry Rd	Huguenot Tr	Norwood Creek Rd	1.9	Widen pavement, straighten, realign intersections and add turn lanes as necessary		S	\$ 9,618,750
41	--	New Collector 4	Mill Quarter Rd	Rocky Ford Rd	1.3	Construct 2L collector on new alignment		M	\$ 8,352,500
42	VA 613	Judes Ferry Rd	US 60	Old Church Rd	0.5	Widen to 4L divided in conjunction with #15, #16, #17 and/or #33.		M	\$ 6,622,500
43	--	New Collector 5	US 60	Page Rd	0.5	Construct 2L collector on new alignment		S	\$ 3,037,500
45	VA 607	Huguenot Springs Rd	Huguenot Tr	Chesterfield Co Line	2.8	Widen pavement, straighten, realign intersections and add turn lanes as necessary		M	\$ 17,990,000
46	VA 627	Ridge Rd	Ridge Rd	US 60, Anderson Hwy	0.5	Intersection improvement; add turn lanes and improve sight distance as necessary	SYIP	S	\$ 868,750

Map ID	Rt #	Road Name	From	To	Length (mi)	Description	Plan Reference	Priority ^f	Cost ^h
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Table 10: Thoroughfare Project Table Notes

* One or more projects are planned and/or programmed along this corridor but additional improvements are warranted. Please refer to the indicated plan(s) for additional details on existing projects.

^a To remain consistent with the Virginia Byway designation, it is anticipated that the road will remain with two travel lanes with improvements focusing on safety and spot intersection capacity improvements.

^b Project alignment is subject to change based on future land use designations; this project may conflict with the Agricultural Forest Designation and rural preservation land use designations.

^c Project may conflict with the rural preservation land use designation.

^d Projects #5, #7, #24, #44, from drafts were removed.

^e Project is contingent upon creation of Powhatan State Park with access via Old River Trail.

^f S = Short-term (0-6 years); M = Medium-term (7-15 years); L = Long-term (>15 years)

^g STIP = State Transportation Improvement Program; SYIP = Six-Year Improvement Program; LRTP = Richmond Area MPO 2026 Long-Range Transportation Plan; PNL = Regional Priority Needs List; SHP = VDOT 2025 State Highway Plan

^h Cost estimates are planning level cost estimates. Costs are inflated to estimated construction year based on short-, medium-, and long-term designations. Where available, actual VDOT cost estimates are used.

- New location projects are generally assumed to be developer-driven, particularly in the special area plans.

- Unless otherwise indicated, pavement widening is for safety purposes only. Widening could include: gravel or paved shoulders; shoulder wedge projects; or widened travel lanes.

- Projects in Table 10 include projects on paved roads only. As part of the Six-Year Improvement Program process, unpaved roads in need of paving and/or improvement are identified. Paving projects currently identified (FY 2009-2014) include: Tucker Rd (Route 717), Garret Rd (Route 649), Harris Dr (Route 719), Moore Rd (Route 608), and Kool Ln (Route 655). Projects should continue to be identified through this process as needs are identified and funds are available.

Purpose

The purpose of the county's **Major Thoroughfare Plan** is to promote the development of the most appropriate major roadway system to meet existing and future travel needs in the county. A thoroughfare plan is a long-range plan that provides a functional hierarchy of major roads that permits travel between origins and destinations with directness and safety. Although all of the recommended improvements in the plan are anticipated to be needed in the future, it is recognized that not all of these improvements can be built in the short-term and that projects will need to be better defined as they approach implementation. The **Major Thoroughfare Plan** defines needs and lays the groundwork for future, more detailed, studies that more precisely delineate corridor alignments, evaluate environmental and other impacts, and identify appropriate funding sources.

There are a number of objectives of Powhatan County's **Major Thoroughfare Plan**, including:

- 1) **Ensuring consistency with the Countywide Land Use Plan;**
- 2) **Providing for the orderly development of an adequate major roadway system as land development occurs or as traffic increases;**
- 3) **Preserving the county's quality of life and rural heritage while reducing impacts on the environment, historic sites, parks, neighborhoods, and other valuable assets; and**
- 4) **Creating common expectations among county officials, the development community, and residents and property owners.**

Functional Classifications

Different roads in the overall system are designed to perform specific functions with the goal of minimizing traffic and land use conflicts, improving safety, and enhancing mobility. The road classifications described below are based on the definitions used by the Virginia Department of Transportation (VDOT). The existing and proposed roadways shown on **Map 11: Major Thoroughfare Plan** each fall within one of the following functional classification categories for rural areas:

Rural Principal (Major) Arterial: Serve corridor movements of substantial statewide or interstate travel and provide an integrated network without stub connections. Within Powhatan County, Route 60 and Route 288 are classified as rural principal arterials.

Rural Minor Arterial: Link cities, large towns, and other major traffic generators and provide service to corridors with trip lengths and travel density greater than those served by rural collectors or local systems. Design should provide for relatively high overall speeds with little interference to through movements. Within Powhatan County, Route 13, Academy Road, Three Bridge Road, and Route 711 are examples of rural minor arterials.

Rural Major and Minor Collectors: Provide service to any county seat not on an arterial system, to larger towns not directly served by higher systems, and to the remaining small communities, linking local traffic generators with their rural surroundings. Link to routes of higher classification and serve the more important intra-county travel corridors. Within Powhatan County, Judes Ferry Road, Schroeder Road, Manakin Town Ferry Road, and Cartersville Road are examples of rural collectors.

Rural Local: Serve primarily to provide direct access to adjacent land and provide service to travel over relatively short distances as compared to collectors or other higher systems. Classification includes all facilities that are not one of the higher systems. These are illustrated as thin gray lines on **Map 11: Major Thoroughfare Plan** and no improvements to these roads are part of the **Major Thoroughfare Plan** recommendations.

Street Design in Urban Development Areas

Urban development areas, by definition, have a different character from the more rural parts of the county, and the design and development of the transportation systems within these areas is a critical factor in determining that character. Because of their proximity to transportation facilities, mix of land uses, and higher density development, urban development areas should incorporate transportation elements that enhance walkability and promote connectivity between modes of travel. These street design elements are in harmony with the “complete streets” concepts discussed in this chapter (Transportation Objective #5). The following strategies should be considered:

- *Pedestrian-friendly street design* – include facilities and amenities for pedestrians, including sidewalks, crosswalks, pedestrian signal heads, pedestrian refuge islands and bulbouts at major intersections, and pedestrian paths through parking lots.
- *Interconnection of new local streets with existing local streets* – new streets should tie into the existing fabric of the street network in a way that promotes safe and efficient movement between urban development areas and the areas adjacent.
- *Connectivity of street and pedestrian networks* – new streets should connect to new and existing sidewalks and off-street pedestrian or multi-use paths in a way that promotes safe crossing for pedestrians and improves opportunities for using multiple modes of travel seamlessly.
- *Reduction of typical street dimensions* – typical street widths and turning radii at subdivision street intersections should be reduced to promote walkability, provide traffic calming, and enhance the streetscape character.

Scenic Byways

In addition to defining functional classifications, the **Major Thoroughfare Plan** also highlights scenic byways, as designated by VDOT. Virginia has nearly 3,000 miles of roads designated as scenic byways that lead to sites of natural, historical or social significance. The scenic byway designation is not related to functional classification or roadway capacity, but serves as an important reminder of roads and corridors that have important significance and value for the county. In Powhatan County, Route 711 (Huguenot Trail), Old River Trail, and Route 522 between the county line and Route 711 are designated as scenic byways.

Key Elements of the Major Thoroughfare Plan

The recommended improvements that are part of the **Major Thoroughfare Plan** provide system-wide improvements to the county’s roadway network. The following are key elements of the plan:

- *Focus on major routes:* The county’s major transportation corridors (Route 60, Route 522, and other key major and minor arterials) will absorb much of the new traffic growth, including new through traffic and local traffic generated by new development. The prioritization plan provides a reasonable implementation strategy to address these major concerns.
- *Funding for new projects:* The plan assumes that proposed new roadways (shown with dashed lines on the **Major Thoroughfare Plan** by and large will be developer-driven, particularly in the targeted growth areas with special area plans in **Chapter 8: Land Use & Community Character**.
- *Safety and capacity improvements:* The majority of the proposed improvements are projects such as pavement widening, roadway straightening, turn lane additions, and intersection improvements that are aimed at improving safety and enhancing capacity. Many of these are “spot” improvements – a corridor may be defined for improvement but actual improvements would be made at key and targeted locations. Some corridors may require safety improvements along the entire corridor.

- *Intersection improvements:* A number of intersection improvements are proposed to enhance safety and increase capacity. Given limited transportation funding, intersection improvements can be an effective way of addressing immediate needs without the major costs of roadway widening and new construction. Some of these intersection improvement projects are incorporated in the **Major Thoroughfare Plan** as part of other corridor improvements.
- *Route 711:* The **Major Thoroughfare Plan** recommends that Route 711 remain two lanes with improvements focusing on safety and spot intersection capacity improvements. Implementing access management measures will be important to minimize additional degradation of capacity and roadway character. Keeping Route 711 as a two-lane road will require improvements to secondary roads, and potentially construction of a limited number of key new connectors, between Route 711 and Route 60.
- *Route 60:* As the county’s major east-west route, Route 60 will continue to handle the majority of through traffic going in and out of Chesterfield County, as well as a significant number of local trips. The **Major Thoroughfare Plan** recommends widening improvements to Route 60 that are consistent with ongoing regional planning efforts. Future roadway improvements in the proposed growth areas will feed into the Route 60 system and other adjacent roadway networks.

Funding Options

The **Major Thoroughfare Plan** is a long-range plan with a variety of projects, which will be implemented over time through use of various funding options. While some of the large-scale projects **will be constructed** with federal and state funds distributed through the regional transportation planning process, other smaller-scale projects will be built with local funds and through cooperation with the development community. More and more communities are realizing that transportation funding for major infrastructure projects is getting harder and harder to come by. Innovative solutions will be required, and difficult decisions will have to be made, to address the long-term transportation needs of the county. The following are the primary funding options for **Major Thoroughfare Plan** projects:

- *Transportation Improvement Program (TIP):* The statewide TIP is the primary funding source for major transportation improvement projects of regional and local significance.
- *Six-Year Improvement Program (SYIP):* The SYIP is a secondary road master plan that covers, widening, straightening, and other projects and is contingent, in part, on the availability of county funds to contribute to the program.
- *Local Funds:* The county has the ability to locally fund small-scale transportation projects, either through its capital improvement program, issuance of bonds for transportation improvements, or use of local general funds. For small counties like Powhatan, this option is difficult given the limited tax base.
- *Developer Contributions:* Proposed new roadway projects on the **Major Thoroughfare Plan** are anticipated to be financed through developer contributions, which may come in the form of actual roadway construction required as part of new development or collection of cash proffers for transportation improvements.

Project Prioritization

Table 10 details each of the recommended roadway projects that are part of the **Major Thoroughfare Plan** and prioritizes each as either short-, medium-, or long-term projects. It is important for future planning purposes to prioritize projects to maximize limited funding opportunities and ensure that the highest impact projects receive first focus. Project priorities are determined by anticipated need, projected impacts of nearer-term projects, projected impact of the project on the overall county roadway network, and potential funding sources.

- **Short-term projects:** These are projects expected to be completed within seven years, and include projects identified on the Six-Year Improvement Program and other safety improvement projects that could be funded with local or state funds as they become available. Some of these projects are developer-driven projects that are anticipated to be completed within this timeframe.
- **Medium-term projects:** These are projects anticipated to be completed within the seven to fifteen-year time horizon. Most of these projects are developer-driven so their implementation timeframe will be dependent on the timeframe of development (i.e., some projects may be built in the short-term if development happens sooner than expected, and some may be longer term.)
- **Long-term projects:** These are projects projected to be built in the fifteen- to twenty-year (or longer) timeframe, and include major widening projects, such as U.S. Routes 60 and 522. The anticipated need for these projects is long-term and funding sources have not yet been identified.

Bicycling

Bicycling, for both commuting and recreational purposes, is an important component of the county's transportation system. Because most of the county's roadways were developed as rural roads, they typically are not well suited for safe and convenient bicycle travel. Currently, US Bike Route 1 runs through the southeastern portion of the county along Genito Road, and three other roads have "Share the Road" signs. No striped bicycle lanes or formal multi-use or greenway trails exist in the county.

The county has been an active participant in regional bicycle and pedestrian planning efforts. The **2004 Richmond Regional Bicycle and Pedestrian Plan** includes an assessment of existing bicycle and pedestrian conditions in the county and plans for other potential improvements. The county is also participating in the planning of the James River Heritage Trail, a statewide trail network running from the western edge of the state to the coast along the James River. It is anticipated that the James River Heritage Trail will traverse the northern portion of Powhatan County.

Powhatan County should continue to participate in regional bicycle and pedestrian planning efforts. The needs of bicyclists and pedestrians should also be accounted for in new development and in the development of roadway improvements.



Part III: Implementation & Prioritization

CHAPTER 10: ACTION PRIORITIZATION

The updated comprehensive plan builds on the successes of the county and provides guidance for creating a sustainable and unique community. The plan recommends that the county revises and updates the zoning and subdivision regulations to achieve the vision of the county as expressed in the plan. It is inevitable in the face of change that there will be a period of transition from the established regulations to the completion of a full update. The following action prioritization indicates which efforts the county should undertake first and which efforts may be addressed over a longer timeframe.

Action	Department/Agency*	Short-Term (Year 1)	Mid-Term (Years 2-5)	Long-Term (Years 6-10)
Fiscal Impact Analysis	Finance/Economic Development/Planning	Begin Assessment Identify feasibility of impact fees	Implement impact fees or other requirements Monitor and Update Analysis	Monitor and Update
Zoning & Subdivision Ordinances Amendments	Planning/Planning Commission/Board of Supervisors	Begin Zoning Diagnosis Begin Ordinance Updates	Adopt Revised Regulations Implement New Regulations	Monitor and Update
Capital Improvement Plan	Planning/Finance/Planning Commission/County Administrator/Board of Supervisors	Review CIP, update in accordance with recommendations from other efforts	Carry out improvements Monitor and Update	Monitor and Update
Topical & Strategic Plans	Planning/Economic Development/Other Agencies	Route 60 East Master Plan (coordinate with zoning) Route 711 Village Master Plan (coordinate with zoning)	Courthouse Village Master Plan (coordinate with Zoning)	Other strategic plans
Monitor & Update Plan Amendments	Planning/Planning Commission	Ongoing	Ongoing	Ongoing

* The first agency listed is the lead agency for this item.

CHAPTER 11: IMPLEMENTATION TOOLS

Overview

This comprehensive plan contains the goals for the future of the county and an extensive set of recommendations to reach those goals. The recommendations range in their specificity and the level of effort required in achieving them. This chapter provides tools the county may wish to employ in the implementation of the plan recommendations. One or more of these implementation tools may assist in the achievement of many of the recommendations of the plan.

The implementation tools include:

- 1) Updating the Land Development Regulations,
- 2) Urban Development Areas,
- 3) Transfer of Development Rights Program,
- 4) Development and Facility Provision Coordination,
- 5) Capital Improvement Plan,
- 6) Topical and Strategic Plans, and
- 7) Monitoring and Updating the Plan.

This chapter provides guidance or instruction on how the county can use these tools in the implementation of the goals and recommendations of the plan. The tools are not specifically recommended actions, but rather guidance on what the county may want to consider for future work tasks in pursuit of the plan's vision.

Land Development Regulations Updates

Within the various chapters of the plan the recommendations indicate guidelines that can best be implemented through additional standards or regulations included in the county's land development regulations. The **Zoning and Subdivision Ordinances** are the county's primary regulatory tools to implement the comprehensive plan. These

ordinances provide standards that development must meet and therefore are the links between the recommendations of the plan and the resulting development in the county. The county will need to complete a diagnosis of the current regulations to identify which parts of the ordinances need to be updated to fully implement the vision of the plan. The primary topical areas the county will need to focus on related to recommendations in the plan are as follows:

- 1) **Village Residential, Village Center, and Commerce Center**
The county will need to assess the ordinances for their ability to regulate the recommended village, crossroads, and commerce center form recommendations. These development patterns are different from existing development in the county and may require new districts and standards to address growth appropriately. New regulations will need to address traditional and New Urbanist design concepts. The county may be able to draw from some existing regulations like the **Article 15A-Route 711 Village Service Area Overlay District** to address some of the areas of concern.
- 2) **Development Densities**
The county will need to evaluate the permitted lot sizes, densities, and subdivision requirements to ensure densities are compatible with the recommendations of the plan.
- 3) **Conservation Subdivisions & Bonus Densities**
The county will need to devise regulations that allow for the use of conservation subdivisions and bonus densities. Both the rural preservation and rural residential areas include recommendations for the use of conservation subdivisions. As an incentive to protect open spaces, the plan recommends that the county consider bonus densities. An example of how this system could be implemented follows.

SAMPLE RURAL SUBDIVISION CHANGES

The purpose of this chart is to depict possible options for the subdivision of land in the rural areas of the county that could be implemented in accordance with the revised comprehensive plan. The chart provides a comparison of these potential options to the county’s current subdivision options/exceptions. It applies to areas shown on **Map 7: Countywide Land Use Plan** as “rural preservation” and to the “low-density residential/rural preservation” planning area shown in the **2003 Comprehensive Plan**.

This sample chart is one approach that could be taken in an effort to balance the rights of property owners with the need to preserve the character of the rural and environmentally sensitive areas of the county. The chart should be used as a tool by staff and the Planning Commission as the critical issues of rural residential land use policies are discussed.

2003 PLAN (Low-Density Residential/Rural Preservation planning area)	2010 PLAN (Rural Preservation planning area)
<p><u>By-right options:</u></p> <ul style="list-style-type: none"> • 10 acre lots with state road frontage for each lot and/or use of flag lots • 10 acre lots on private road • 2 acre single cut exception • 2 acre family division exception • 2 acre charitable exception 	<p><u>By-right options:</u></p> <ul style="list-style-type: none"> • 10 acre lots, state road frontage for each lot and/or use of flag lots • 10 acre lots on private road • 2 acre single cut exception • 2 acre family division exception • 2 acre charitable exception • One unit/ 10 acre density cluster subdivision, 2 acre minimum lot size^(See option 1 on the following pages) • Conservation subdivision, 1 acre minimum lot size + optional density bonuses^(See option 2 on the following pages)
<p><u>With rezoning consistent with comprehensive plan:</u></p> <ul style="list-style-type: none"> • Subdivision, 5 acre lots on public roads • Subdivision, 2 acre minimum lot size, 5 acre average lot size with proffered conditions 	<p><u>With rezoning consistent with comprehensive plan:</u></p> <p>None^(See option 3 on page 100)</p>

Options

- 1) **Cluster subdivision** – This option would create subdivisions that maintain the gross density of one unit per ten acres but would allow lot sizes to be as small as two acres (e.g., 100-acre parcel could have nine 2-acre lots and one 82-acre lot). Once approved, parcels in a cluster subdivision could not be re-subdivided. Policies pertaining to family divisions would have to be established.
- 2) **Conservation subdivision** – This option would create subdivisions that maintain gross density of one unit per ten acres but would allow lot sizes to be as small as one acre if drainfield/reserve areas are placed in conservation easement space. Subdivision would also include a minimum required percentage of open space in order to make use of this option. The conservation subdivision would differ from the cluster subdivision in that developers could obtain density bonuses by voluntarily providing certain protections or amenities as recommended by the comprehensive plan. Below is a sample density bonus approach for conservation subdivisions.

Additional Buffers	Open Space	Permanent Conservation Easement	Other amenity as approved by Staff	BONUS
X				10% (or +5%)
	X			10% (or +5%)
		X		10% (or +5%)
			X	10% (or +5%)

Using conservation subdivision, choosing one bonus option gains ten percent lot bonus. Cumulative use of options gains five percent per additional option, e.g., use of all four options would be a total twenty-five percent bonus. Here is a sample outcome using a 200-acre parcel:⁷

No Options	One Option	Two Options	Three Options	All Options
20 lots 1 unit/10 acres	22 lots (+10%) 1 unit/9.1 acres	23 lots (+15%) 1 unit/8.7 acres	24 lots (+20%) 1 unit/8.3 acres	25 lots (+25%) 1 unit/8 acres

Possible bonus options are described as follows:

- **Additional buffers** – Provide additional 100-foot natural buffer area from any area designated as natural conservation on the land use maps. This 100-foot buffer would be exclusive of any stream and wetland buffers that would be required.
- **Open Space** – Provide a development layout that preserves environmentally significant or historically significant areas on the subject property. Open space areas must be placed in a permanent conservation easement.
- **Permanent Conservation Easement** – Same as open space but the conservation easement would be established in perpetuity.
- **Affordable Housing** – Providing affordable units within the development could be considered as an asset to allow for a density bonus.
- **Other amenity as approved by Staff (according to established criteria)** – Would include clubhouses, swimming pools, athletic fields, trail systems, horse stables, and the like.

⁷ These density bonus options are presented as an example. However, it is recommended that additional study be completed as part of any Subdivision and Zoning Ordinances revisions. The density bonus system may be different from the numbers presented here.

- 3) Provision of the cluster subdivision and conservation subdivision options could preclude the need to require rezoning in order to obtain higher densities. These subdivisions by design could provide many of the protections and amenities that are currently sought in five-acre lot subdivisions that utilize the lot averaging method. While there would no longer be the opportunity to gain the density of a minimum five-acre lot subdivision, the ability to gain density bonuses and avoid the rezoning process could be an attractive trade-off.

Urban Development Areas

COV Section 15.2-2223.1 now requires local comprehensive plans to include urban development areas and principles of new urbanism. All localities in Virginia with a decennial (from 1990 Census to 2000 Census) growth rate of fifteen percent or a decennial growth rate of five percent and a population of at least 20,000 are required to designate an urban development area in the comprehensive plan by 2011. According to the U.S. Census Bureau, Powhatan County's population grew from 15,328 in 1990 to 22,377 in 2000, for a decennial growth rate of nearly forty-six percent.

The urban development area (UDA) are required to accommodate at least ten years but not more than twenty years of growth. Capacity calculations for the county under the **Countywide Land Use Plan** indicate that there is capacity for 11,990 to 28,000 residential units with 1,700 acres designated for focused business development. Within the UDAs, McBride Dale Clarion estimates there is capacity for between 4,000 to 16,000 residential units, which would accommodate the projected 7,000 units of demand with some flexibility. The use of the phasing plan further tightens the areas to target growth closer to these 7,000 units, which account for the estimated twenty years of demand for growth in the county.

The plan must also incorporate principles of new urbanism and traditional neighborhood development including: pedestrian-friendly road design, interconnection of new local streets, connectivity of road and pedestrian networks, preservation of natural areas, satisfaction of requirements for stormwater management, mixed-use neighborhoods, including mixed housing types, reduction of front and side yard building setbacks, and reduction of subdivision street widths and turning radii at subdivision street intersections. The plan must also include any incentives (financial or otherwise) which the community will employ to encourage development in the urban development areas. This plan addresses the statutory requirements in several ways. The county designates three key locations as urban development areas, and addresses them in this plan with special area plans in **Chapter 8: Land Use & Community Character**. These locations will accommodate the majority of future growth in a

compact development pattern based on New Urbanist principles, while still maintaining the rural community character of Powhatan County. Transportation recommendations have been coordinated with the land use to provide for improved connectivity standard and a road network that meets the requirements of these statutes as well as the local needs of the community. The **Sewer and Water Phasing Plan** also indicates when areas within the urban development areas should be developed to prevent sprawling or leapfrog development patterns.

The county is effectively providing incentives by creating service areas that coordinate with the urban development areas, thereby prioritizing the urban development areas as the target for public investment in services including sewer, water, and high-speed internet. Additionally, the plan recommends exploration of a TDR or PDR program, which would essentially work hand-in-hand with the plan's recommendations to concentrate growth within the special area plans designated as the UDAs, and provide incentives for more intense development in the UDAs.

The county will also be focusing economic development efforts in the UDAs, and examine possible taxing structures, or incentives that can be used to incentivize growth within the UDAs. These recommendations are in line with growth management, smart growth, and sustainable development practices and seek to balance accommodation of residential and economic growth with preservation of natural resources and rural character.

As with the other aspects of this plan, the county will need to adopt regulatory standards related to service provision and development standards, which are consistent with the recommendations of the plan. These standards should be covered through the update and amendment of the **Zoning Ordinance** and other related ordinances.

Transfer of Development Rights

One method of protecting rural and natural areas and providing some incentive for intensified development in the targeted UDAs is to institute a Transfer of Development Rights program, which would allow landowners in designated sending areas to sell or bank development rights that developers with land interest in designated receiving areas can purchase. This type of transfer would permanently protect the sending areas by relocating the development rights to the preferred growth areas within the UDAs. The sending areas gain an increased development intensity and intensify growth in areas where services and infrastructure can be made available in a more economical and efficient manner.

The concept of a countywide TDR program has been around for many decades; however, few counties have fully implemented a successful TDR program. Powhatan County may be in a position to institute a successful program but it will require evaluation of local market conditions, natural resources, and assessment of the land use recommendations and the **Zoning Ordinance** regulations, and balance between the sendable development rights and the ability to accommodate them in the receiving areas.

When designed correctly, TDR programs, which seek to shift permissible development densities from unsuitable development areas to more appropriate sites, can be an effective growth management tool. By creating receiving area markets for the sale of unused development rights, TDR programs encourage the maintenance of low-density land uses, open spaces, historical features, critical environmental resources, and other sensitive features of designated sending areas.

A TDR program offers the county an additional mechanism to protect a variety of sensitive features while providing help offsetting any perceived diminution in land development potential. A successful TDR program incorporates the following three essential elements:

- **Sending Areas: Resources for Protection**
The first step in creating a TDR program is the identification of valued resources and the designation of an area for the protection of such resources. This is the sending area. Where development pressures threaten resources in the sending area, the TDR program enables landowners to transfer development rights to other locations, thus directing growth pressures away from the sending area. Where TDR programs are mandatory, the program restricts the landowners' development rights, allowing landowners to realize land value only through transfers. In voluntary TDR programs (as they would be in Virginia), sending area landowners participate in density transfers at their option; where they do not undertake density transfers, they retain their land development rights. In Powhatan, the principal sending areas would be the rural preservation areas, followed by the rural residential areas.
- **Receiving Areas: Density Incentives**
In a strong market, the developer seeks to maximize the intensity of development projects, and thus possesses an incentive to purchase additional development rights. Capitalizing on this incentive, a TDR program identifies those areas in which development can occur at relatively high densities without threatening valued resources or community character. In these designated receiving areas, the program awards developers with increased density allowances (up to the maximum allowed by local zoning) in exchange for their purchase of TDRs from landowners in sending areas. In Powhatan County, the primary receiving area would be the Route 60 Corridor East Special Area.

- **Allocation of Transferable Rights in Sending Areas and Receiving Areas**

The TDR program must set forth formulas for allocating the amount of development rights that will be available to sending area landowners and receiving areas projects. In order to negotiate a TDR transaction, the sending area landowner must understand how many development rights can be conveyed. Similarly, the receiving area purchaser must understand how much each purchased TDR will increase permissible development densities. Simple ratios setting forth TDRs/acre for sending areas and density bonus/TDR for receiving areas satisfy the basic program requirements. These ratios will be essential to the participants' basic understanding of how TDR transactions will benefit them; without this understanding, all parties will be reluctant to participate in TDR transactions.

The core elements set forth above provide the framework for a basic TDR program. Sending area landowners sell TDRs on the open market to receiving area developers, or to a government administered TDR bank or clearinghouse. Where such transactions occur, the seller records a permanent easement on the property deed, reducing development rights in the amount transferred. Upon application for development approvals, the developer then submits evidence of the TDR transaction to the approving agency, and thereby obtains permission to increase the density of the development accordingly.

The primary challenge in establishing a successful TDR program is achieving a market balance between the TDR available and the demand for those. This balance is a function of land area, resources to be protected, development demand, and market for higher intensity development. If the county can find a way to identify the proper balance then the TDR program has potential for success.

In 2007, the Virginia Assembly enacted **Section 15.2-2316.1** to enable local jurisdictions to provide for the transfer of development rights. The Land Use & Land Preservation Citizens Working Group prepared an extensive report on the use of TDRs in the county, and this information can be used as a basis for the creation of a program in the

county. The group's final report is included via reference as part of the comprehensive plan, and the maps and procedures outlined in the report and its appendix can serve as a basis for further exploration of a program.

After more refinement based on the assessment criteria, the county may amend this plan to incorporate the refined map. Following additional study the county may adopt an ordinance allowing for the transfer of development rights, however, the transfer can only be done on a voluntary basis by both the owner of the sending area and the owner of the receiving area, and may not be required by the county as a condition of development approval. The county can make TDRs attractive by incentivizing higher density development in the urban development areas and tying the receiving areas with planned services areas.

Development and Facility Provision Coordination

A primary and overarching theme throughout the plan is the need to coordinate the provision of facilities, infrastructure, and services with the demand created by new residential and business growth. The primary challenge however, is the lack of resources at a county level to provide infrastructure in advance of growth. This is not a problem unique to Powhatan County, but rather a general problem faced by growing communities across the state and country. The county already employs proffers and can have the developer provide funds or facilities as a condition of a zone change. However, the county may want to conduct a countywide impact assessment to determine demand for new facilities in accordance with the plan based on incremental growth. These impact assessments allow the county to evaluate demand for various services based on estimated growth associated with the plan and calculate a per unit cost for providing infrastructure and services to new development and allocate the cost of those services to the development rather than to the county as a whole.

Impact assessments are tools that can be used on a countywide or project specific basis. An impact assessment is a numeric analysis of the anticipated impact of growth on one or more systems and recommendations for necessary improvements and the cost of those improvements. Impact assessment studies often involve the use of geographic and mathematical models that can run growth or development scenarios to measure their impact on the facility, services, or system of choice. The county could choose to use an impact assessment study for implementation of the plan recommendations in one of two ways.

- 1) The county would initiate scenario one and use land development regulations and growth projections associated with the comprehensive plan to generate demand for various services and systems in the county. The results of this type of assessment offer a comprehensive picture of the improvements the county would need under a list of assumptions. This scenario would yield general results that would provide a long-term picture of the

impacts of growth if development follows the guidance of the plan. The results could serve as a basis for the capital improvement plan. It would also establish a baseline to assess the impacts of individual developments. The first scenario would be beneficial if the county decides to pursue a countywide impact fee.

- 2) Scenario two allows the county to require an impact assessment for services or facilities as part of development approval for a specific development. This alternative provides the county with information on needed improvements for a specific geographic location and can analyze the cost of those improvements to determine how the improvements may be funded. The county could choose to require the developer to submit impact assessments or could require application fees to obtain an expert of the county's choice.

Fiscal impact assessments specifically look at the relationships between costs and revenues associated with new development; however, a service specific assessment could be prepared such as water, sewer, schools, or transportation.

The county conducted an assessment to set the current proffer rates; however, moving forward with a new plan and policies affects the growth pattern and may result in different funds based on the demand and allocations generated in the plan.

Fiscal Impact Assessment

A fiscal impact model will compare county costs against county revenues associated with land use policies and specific development projects, thereby indicating the short- and long-term fiscal sustainability of land use decisions. The county could then weigh land use policy decisions, acceptable levels of public services provided, plans for capital investments, and long-term borrowing needs, in addition to prompting local officials to evaluate current and future revenue sources.

Fiscal Impact Analysis (FIA) can be a beneficial tool. Some of the advantages to the analysis include:

- A FIA can bring a realistic sense of the costs of growth into the public discussion. The county can benefit from the “objective screen” that the analysis provides, which can lead to a better understanding – both for the public and for officials-of the relationships among the various factors contributing to growth and development.
- A FIA encourages the integration of land use and budget decisions.
- A FIA can provide an understanding of the fiscal/service delivery implications of different land use scenarios or specific development projects.
- A FIA encourages “what-if” questions related to acceptable levels-of-service and land use and financial policy.
- From a planning perspective, a FIA directly links proposed zoning and land use with projected population and employment growth related to residential and nonresidential development.

On the other hand, there are some things that a FIA cannot do or where they have shortcomings.

- A FIA has inherent limitations associated with any methodology or approach. Outputs are only as good as the inputs and their specific relevance and application to the county and the analysis. Consequently, a model developed using a methodology inappropriate to the situation, faulty assumptions, or a “black-box” approach, can significantly erode the public’s trust and confidence in the model’s output.
- The county or its designated agent should review the assumptions and data on a regular basis to ensure they continue to reflect current trends.
- A FIA will not provide the answer to policy questions. It can be a useful tool, but it can also be a source of contention if there are substantial tensions regarding the costs of growth, which could lead to the practice of “fiscal zoning,” approving only those development projects that generate a net surplus.

Capital Improvement Plan

A capital improvement plan (CIP) is an annual or five-year schedule of capital projects for public facilities. Types of public facilities in a CIP might include transportation, public water and sewer, parks, stormwater, public safety, public buildings, and school. Many communities prioritize these facilities and develop a CIP for three or four public facilities. Chief among these are transportation, potable water, wastewater, and public safety. The capital improvement plan can be supported by a Fiscal Impact Analysis and the same levels-of-service may be used in both analyses to assess the need for new facilities and the cost of providing them.

To help tie the CIP to the comprehensive plan even more closely the county may consider instituting level-of-service (LOS) standards for some or all services and facilities provided by county funding. Level-of-service is a term used to describe a benchmark or standard against which the provision of a service can be measured. For example, a road LOS may be established by how many cars it is carrying in relation to the number of

cars it is designed to carry, or how much congestion there is. In the case of water, the LOS may be related to the capacity of the pipes carrying the water, or the pressure of water in the home, or the capacity to treat potable water in gallons per day. The important thing with a LOS is that it can be established in many ways but is then used as a way to measure continued performance. If a goal LOS is set it can be used to assess the need for new facilities to maintain the desired level-of-service.

A CIP is most effective when coordinated with assumptions and goals in the comprehensive plan. A CIP is effectively a strategic business plan for the county that addresses both fiscal and physical needs:

- **Fiscal:** A properly funded CIP is a fiscal business plan for meeting the infrastructure needs of the county. It takes stock of where the county is presently with regard to service provision, identifies present deficiencies, and identifies future needs.
- **Physical:** The CIP is also a part of a larger business plan for guiding growth. Infrastructure improvements facilitate development. A CIP that takes the land use and development goals of the county into account can influence the pattern and location of development. A strong CIP directs where development and redevelopment will be supported through public infrastructure investments.

The recommended process for establishing a CIP for a given facility includes the following:

- 1) Establish a level-of-service (LOS) for the facility;
- 2) Identify existing conditions of the facility, based on the established LOS;
- 3) Identify deficiencies (if they exist), and costs to correct the deficiencies;
- 4) Identify and utilize appropriate land use assumptions from the comprehensive plan;
- 5) Estimate demand for the facility over the planning horizon, based on the land use assumptions and the established LOS;

- 6) Estimate capital improvements needed to accommodate new growth and development over the planning horizon to maintain the established LOS;
- 7) Estimate costs over the next five years (Five-Year CIP), to provide the needed improvements;
- 8) Develop a financially feasible program to fund the capital improvements identified in the Five-Year CIP;
- 9) Review and adopt the CIP, (responsibility of Planning Commission and Board of Supervisors); and
- 10) Update annually.

Financial feasibility is the key element in CIP. Once needs and goals are identified, the county must have a feasible financial structure to bring about the infrastructure improvements. If the county hinges approval on the provision of services, it needs to have a service provision plan, which identifies the targeted or required levels-of-service.

Topical and Strategic Plans

One of the more basic approaches the county can take in implementing this plan is to prepare more detailed focus area plans or strategic plans that are able to address finer grain detail than can be accomplished in the comprehensive plan. A development master plan should be completed for the four special areas to identify the preferred subdivision pattern and local road networks to ensure appropriate density, and connectivity between projects within each area. As the land in these locations is held under diverse ownership, a consolidated master plan for each area is recommended to guide private and public development at a very specific level. The priority for development of these plans would be as follows:

- 1) Route 60 Corridor East
- 2) 711 Village
- 3) Courthouse Village

As with the special areas, the county may want to consider more focused plans to address access management, and character for some of the crossroads. No priority has been identified at this time, but the county should monitor these locations and pursue study if needed.

Finally, as time passes and the county monitors the progress towards achievement of the vision and goals of this plan, topical plans may be created to help update and keep the plan on target. Efforts like the recent **2005 Water and Wastewater Capacity Study** or the **Route 60 Corridor Traffic Study** are examples of the types of planning projects the county may undertake to address topical issues. The county will prepare a long-range water supply plan per the state requirements to consider the water demand generated by the growth addressed in the comprehensive plan.

Monitoring and Updating the Plan

Predicting the future is impossible. Planning is the best proactive activity the county can undertake to prepare for the future based on best available data, and trends. The role of the comprehensive plan is to establish a framework for decision-making, but keeping the plan a living flexible document is vitally important to its success. As time progresses and the county achieves the recommendations of the plan, the county should monitor the success of the plan and benchmark its achievements.

This plan is a long-term visionary document that looks at a planning horizon of ten to twenty years. However, the county may achieve recommendations of the plan before that time period is over. Changes in development trends, local economy, or other unforeseen factors may change the way the county wants to vision the future. In these cases, the county should complete an update of the plan to keep the document relevant and applicable to the challenges the county faces.

Once adopted the plan will serve as the official guide for growth management and land development decisions for the county. It is a long-term document and therefore goals and priorities contained within the plan may change as they are achieved or trends change beyond what was foreseen during the creation of the plan.

Amendments

The plan is only as effective as its implementation, so if the vision and goals are to be achieved it is important to enforce the recommendations of the plan in the way they have been written, or to consider the broad impacts of making amendments to one part of the plan on the recommendations of other parts. The plan deliberately integrates land use, transportation, facilities, and natural resource preservation in a coordinated manner, where the recommendations in one part of the plan are interlinked with recommendations in others.

In accordance with the provisions of **Section 15.2-2229. Amendments** of the **Code of Virginia (COV)**:

After the adoption of a comprehensive plan, all amendments to it shall be recommended, and approved and adopted, respectively, as required by § 15.2-2204. If the governing body desires an amendment it may direct the local planning commission to prepare an amendment and submit it to public hearing within sixty days after formal written request by the governing body. In acting on any amendments to the plan, the governing body shall act within ninety days of the local planning commission's recommending resolution. (§15.2-2229)

The **COV** does not specify that amendments to the plan be initiated by an agent of the county but does require that all amendments be approved and adopted with a similar public process involving the Planning Commission and Board of Supervisors as the original adoption of the plan.

Because of the importance of considering the impacts of a plan amendment, the county should consider amendments on an annual or semi-annual basis rather than processing amendment requests at any time. The following criteria should be included and evaluated as part of comprehensive plan amendments.

Possible consideration of amendments for projects of county significance include requested amendments to allow for uses not anticipated in the plan or changes from a rural character to a residential or village character, or expansion of a crossroads to a village. If a project is presented that is not consistent with the currently adopted plan the county may consider amending the plan to address the interrelated issues

associated with a change. Projects of county significance should be considered for land areas in excess of 100 acres. Applications for plan amendments for projects of county significance should include the following.

- 1) A detailed master plan showing the proposed development form, residential density or unit yield, protected or reserved natural areas, local street networks, location of nonresidential uses and estimated building area;
- 2) A historic and archeological resource study identifying location of resources to be protected and to be removed;
- 3) Preservation, mitigation and/or management of significant cultural, historic and archaeological sites, resources and landscapes;
- 4) Information regarding the location, density and intensity of proposed land uses for the first five years of the proposed project and projections for each subsequent five-year time period until buildout;
- 5) An analysis of how the proposed form and character of development is compatible with the recommendations of the desired/proposed **Countywide Land Use Classification**;
- 6) An analysis of how proposed residential land use patterns are coordinated with employment and service opportunities in the area of the proposed development and adjacent areas of the county or other jurisdictions;
- 7) Inclusion of a variety of housing ownership types and affordability;
- 8) Economic development information such as economic feasibility analysis (e.g., estimates of average annual ad valorem tax yields, economic development analysis) of the impact on the local economy and employment market;
- 9) Fiscal impact analysis of the public infrastructure needs;
- 10) List needed and/or required public improvements including but not limited to transportation improvements, educational facilities, public safety services, and government facilities;

- 11) Traffic impact study;
- 12) Interconnected and complete transportation network; and
- 13) Provision of transportation alternatives.

Annual Review

The goals and recommendations in each chapter of this plan create an effective checklist for monitoring the plan. Each year, the county officials should meet to determine which recommendations to work on over the upcoming year. At the same time, the county should look back over the previous year and evaluate what the community accomplished and where there is a need for improvement. This review allows for flexibility in determining the tasks the county will undertake based on budgetary constraints or changing community priority and input.

Five-Year Review

Major changes can occur in a very short time. Boundary adjustments, changes in infrastructure, the transportation system, development methods, and even changes in elected officials, state law, or other regulations can have a significant impact on the recommendations of this plan. The county should periodically review the document for substantive changes. It may not be necessary to go through a long and intensive review process, but the county should take steps to involve the public in this review process to ensure the goals and recommendations are still relevant. The review should also identify major changes in infrastructure, land use, and transportation that may change the recommendations of the plan.

Long-Term Review

This plan sets a vision for a ten- to twenty-year horizon, and although it is currently the intent to provide for village style development in a rural setting, this vision may evolve over time, so while this document should serve the county well for the next decade, it is intended to be a dynamic document. As time progresses, the county should revisit the overall vision and goals of this plan and determine if and how those targets may have changed. For this reason, the county should go through an extensive comprehensive planning process every ten to twenty years, similar to the one that led to this plan and its predecessors.



*Part IV: Additional
Planning Resources & References*

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NOTE: Copies of these documents are available from the Department of Planning and Community Development.

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APPENDIX A: RESIDENTIAL CAPACITY CALCULATIONS

Land Use Category	Developable Acreage	Net Acres	Residential Capacity					
			Percentage	Acreage	Low-Density	Low Capacity	High-Density	High Capacity
	80.7	68.59	0.00	-	0.00	-	0.00	-
Natural Conservation	9,178.0	7,801.26	0.00	-	0.00	-	0.00	-
Public	290.1	246.56	0.00	-	0.00	-	0.00	-
Rural Preservation	67,610.0	57,468.53	1.00	57,469	0.10	5,747	0.12	6,896.22
Rural Residential	26,128.9	22,209.90	1.00	22,210	0.10	2,221	0.20	4,441.92
Low-Density Residential	429.4	365.02	1.00	365	0.20	73	0.50	182.51
Village Residential	3,317.5	2,819.87	1.00	2,820	0.50	1,410	4.00	11,279.47
Village Centers	1,067.2	907.09	0.70	635	4.00	2,540	8.00	5,079.68
Commerce Centers	930.5	790.92	0.00	-	0.00	-	0.00	-
			Total			11,990		27,879
					UDA Total	3,950		16,359

Developable Acreage is the amount of land in each land use category available for development.

Net Acres is equal to eighty-five percent of the Developable Acreage. Net is calculated to account for infrastructure like roads which will be required.

Percentage is the portion of the available land, which is assumed to be available for residential development.

Densities are number of units/acre.

Capacity is calculated by multiplying the Acreage by the densities.

Total Unit Capacity is for buildout of all available land in the county under the plan’s recommended densities. This is theoretical and does not represent rate of growth.

UDA Total is the capacity within the designated urban development areas which are represented in the village residential, low-density residential, and village center categories.

These calculations were adjusted for the changes in the land use designation for the Moseley Area between the November 2009 draft and this version.