Madison County Comprehensive Plan

Date of Adoption: February 7, 2018

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Developed and Drafted by

The Madison County Planning Commission

Finalized and Adopted by

The Madison County Board of Supervisors

Introduction

The Virginia Code, Section 15.2-2223, requires that each Virginia county adopt a Comprehensive Plan and regularly update it on a five-year cycle. The Plan is to be a general statement of policy and intent about the future direction of the county. Its function is to guide the county's development and growth in light of its present and future needs, desires, and resources. In short, the Comprehensive Plan is a compass for the county's future.

As a general statement of policy, the Comprehensive Plan is to be distinguished from the variety of tools available to a county to implement its Plan, such as zoning, subdivision, and site plan ordinances and economic development, infrastructure, and financing plans. The Comprehensive Plan serves as a link between a county's aspirations and its realization of those aspirations through the use of these various tools.

Madison County last updated its Comprehensive Plan in 2012. Now, five years later, it is time to update the Plan again. In developing the County's 2017 Comprehensive Plan, the Madison County Planning Commission sought and obtained input from County residents through a widely circulated questionnaire, numerous interviews with public and private sector leaders, and two public hearings. The Planning Commission then presented the draft Plan to the Board of Supervisors, and the Board subsequently finalized and adopted it.

The 2017 Madison County Comprehensive Plan is stated in terms of Goals and Implementation Strategies. The eight Goals constituting the Plan, and the Implementation Strategies associated with these Goals, are presented in the last section of this document. The intervening pages contain updated facts concerning Madison County which have informed the 2017 Goals and Implementation Strategies.

Vision Statement

As residents of Madison County, we value and wish to preserve the County's scenic beauty, rural environment, farms and forests, friendly atmosphere, balanced economy, and good schools. We also recognize the need for economic growth, improved internet service and public utilities, modest population growth, and expanded sources of public revenues. The Goals and Implementation Strategies presented in this Comprehensive Plan are designed to enable the County to realize this vision.

Factual Considerations

Factual considerations which have informed Madison County's 2017 Comprehensive Plan fall into the following six categories: (A) Background Facts; (B) the Physical Environment; (C) Land Uses; (D) Demographics; (E) Economic Factors; and (F) Community Facilities and Resources.

A. Background Facts

Madison County, named for the family of James Madison, was formed in 1792 from Culpeper County. It was originally settled in 1725, and its background is primarily agricultural.

Located just north of Virginia's geographic center, the County displays the best of the Piedmont's character along with the spectacular backdrop of the Blue Ridge Mountains. Madison County lies approximately 30 miles north of Charlottesville, 80 miles northwest of Richmond, 90 miles southwest of Washington, D.C., and 28 miles east of Harrisonburg.

With an area of 327 square miles (209,280 acres), the County ranges in elevation from 298 feet in the east to over 4,000 feet in the mountains at the western border. Its economy is largely devoted to agriculture, forestry, and related industries, with recreation and tourism becoming increasingly important. These economic activities provide strong incentive to preserve and protect the County's environment and natural beauty and its rural way of life.

Unusually rapid population growth in Madison County during the late 1960s, and pressure to develop the U.S. Route 29 corridor, gave rise to a recognition of the need for a water and sewer study to identify sources, impoundment sites, flows, and tentative system service areas. Such a study was published in October 1967, and it resulted in the 1969 establishment by Madison County, and adjoining Orange and Greene Counties, of the Rapidan Service Authority (RSA). In the ensuing years, RSA has installed a water intake, storage, filtration, and distribution facility on the Madison-Greene line at the Rapidan River. This facility serves Stanardsville, Ruckersville and Madison County from Route 621 to the Greene County line. The White Oak Lake water treatment system serves the Town of Madison and contiguous areas.

Also in the late 1960s and early 1970s, Madison County adopted its first subdivision and zoning ordinances. Problems arose under these initial ordinances, however, prompting the institution of a moratorium on subdivision development, and leading to the issuance of revised subdivision and zoning ordinances and a site plan control ordinance and ultimately, in 1977, to the adoption of Madison County's first Comprehensive Plan.

In the mid-1970s, Madison County joined the newly formed Rappahannock-Rapidan Planning District Commission (Planning District 9), which also included Culpeper, Fauquier, Orange and Rappahannock Counties and the Towns of Culpeper and Warrenton. The purpose of the Commission is to provide regional planning services in the areas of criminal justice, aging, water quality management, solid waste management, and other problems of regional scope or impact. In 1980, the Commission issued an initial Route 29 Corridor Study analyzing physical characteristics along Route 29. This Study has been updated over the years, with the most recent version having been adopted by Madison County in 2014. (See Appendix A hereto.)

B. The Physical Environment

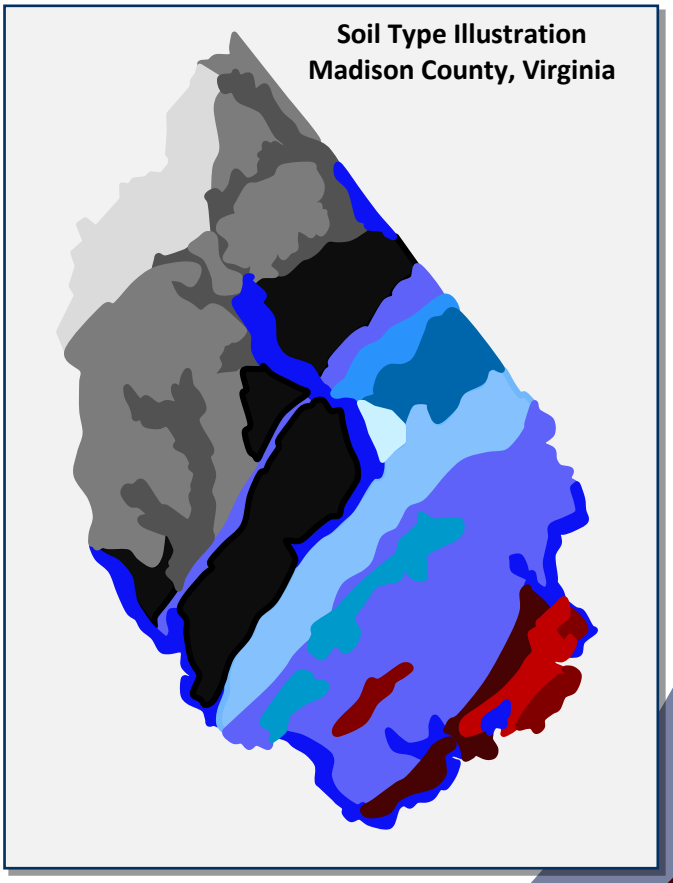
Madison County lies within the Virginia Piedmont and Blue Ridge physiographic provinces. The Piedmont province makes up about 70 percent of the County. It is well dissected by many small streams and rivers that flow in narrow, meandering valleys. The Blue Ridge province makes up most of the western part of the County and about 30 percent of the County's total land area. It is strongly dissected by many intermittent and permanent streams that have cut deep, narrow valleys bordered by steep rocky slopes and narrow ridges.

1. Soils

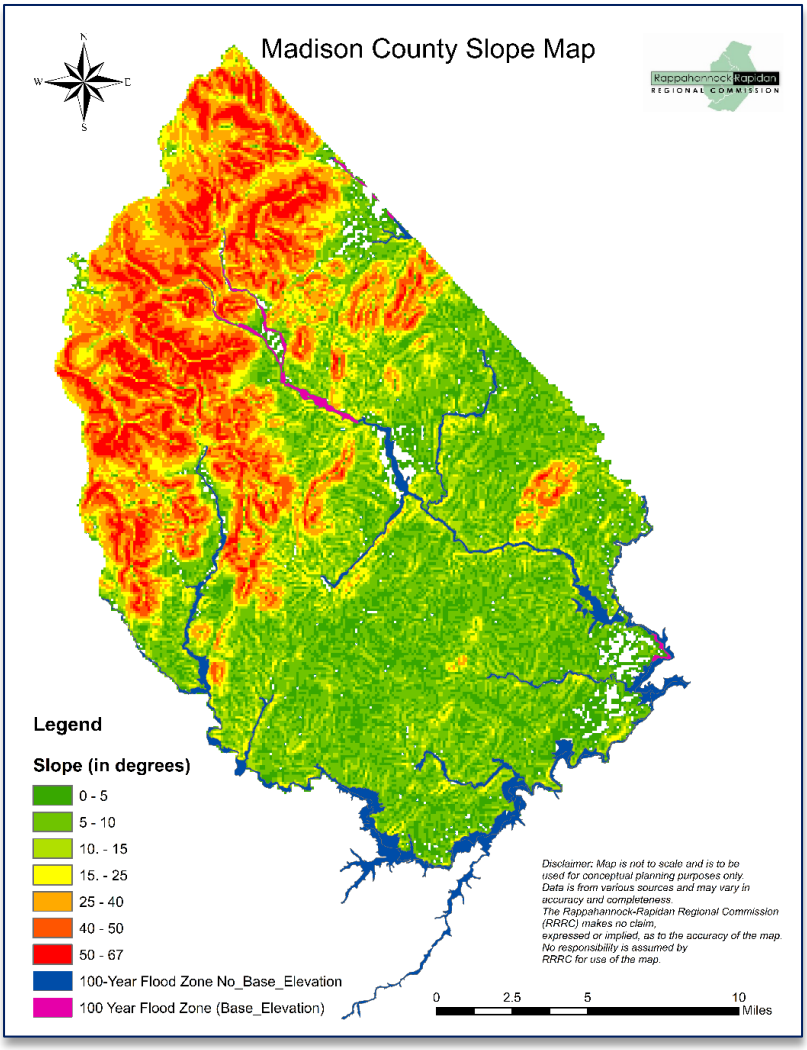
The many soils of Madison County have been grouped for analysis into 14 soil associations. While the individual soils within an association may differ greatly, the characteristics of each association are relatively constant. Individual soils have been analyzed and mapped, and that information is available through the Madison County Extension Office. The soil associations have been rated and mapped according to their suitability for different uses. Soil suitability is an important guide to optimum land use.

The chart and map below show the soil type by location of each major category of soil, as well as the general suitability of each soil type for various activities.

	Building	Farming	Forest
Rock land/Myersville/Catoctin	FAIR	POOR	FAIR
Porters/Rock land	FAIR	POOR	FAIR
Tusquitee/Colluvial/Unison	FAIR	FAIR	GOOD
Brandywine/Eubanks/Lloyd	GOOD	FAIR	GOOD
Elioak/Hazel/Meadowville	GOOD	FAIR	GOOD
Brandywine/Eubanks	FAIR	FAIR	GOOD
Brandywine/Chester/Meadowville	GOOD	GOOD	GOOD
Hiwasee/Wickham/Roanoke	FAIR	GOOD	GOOD
Chewacla/Congaree/Codorus	POOR	GOOD	GOOD
Cecil/Lloyd/Louisburg	FAIR	FAIR	POOR
Lloyd/Hazel/Elioak	GOOD	GOOD	GOOD
Fauquier/Catoctin	GOOD	GOOD	GOOD
Davidson/Bremo/Zion	FAIR	GOOD	GOOD
Rapidan/Penn/Bucks	GOOD	GOOD	GOOD



2. Slopes



Slopes in Madison County can generally be grouped into three categories. Slopes of less than 15 percent are intrinsically best suited for most development, whether agricultural or urban. Slopes in the 15-25 percent range will support low-density residential development with careful attention to erosion problems. Slopes greater than 25 percent are best suited to passive recreation or permanent woodland cover, in order to avoid severe erosion problems.

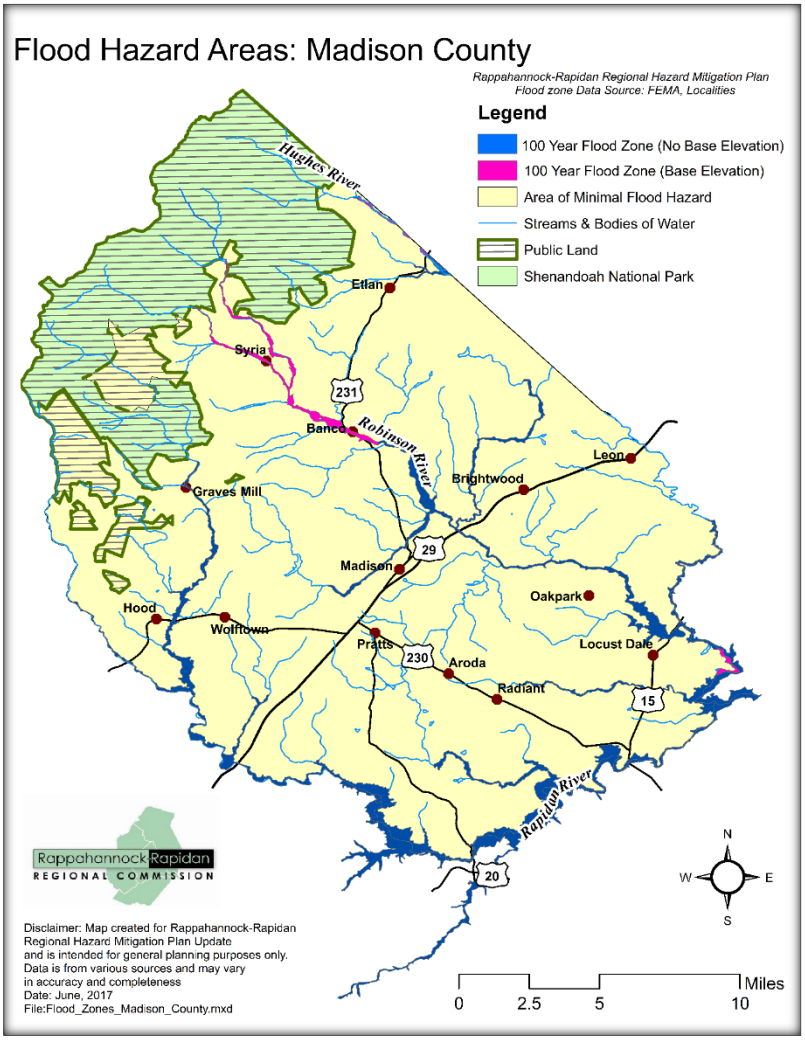
The adjoining slope map shows most of the western portion of the County to have high slopes. Most of this area is public land within the Shenandoah National Park and Rapidan Wildlife Management Area. The central and eastern portions of the County have slopes of mostly 15 percent or less. The flood zones in the county fall around the Rappahannock, Rapidan, and Hughes rivers.

In the Piedmont, slopes are generally less than 15 percent, with some 15-24 percent slopes adjacent to streams and rivers. There is a concentration of 25 percent and greater slopes along the fault ridge on which the Town of Madison stands and around the smaller mountains in the Piedmont. Most of these steep slopes are presently in forest cover, their most appropriate use. There is a delicate balance between soil, forest cover, and weather on the 25 percent slopes such that the removal of any large amount of tree cover could cause serious erosion and landslides.

3. Floodplains

A map showing the major floodplains in Madison County, according to the Federal Emergency Management Agency (FEMA), is displayed on the next page. The map details locations of the 100-year floodplains, which means that in any one given year there is a 1 percent chance that a flood covering those areas will occur. Floods are natural events and they deposit fine soils that enrich the soil fertility of floodplain land. Since the 100-year floodplain refers to probability, it is also statistically possible, though not likely, that there could be more than one 100-year flood in any given year. The Town of Madison is not within a flood plain area according to FEMA.

The flood that stands out in the minds of most County residents is the 2000-year Flood of June 1995. On June 27, 1995 a severe storm affected an area of about fifty square miles in Madison



County. Extreme landslides occurred in Graves Mill and Criglersville. Over a period of sixteen hours, thirty inches of rain fell. Some areas experienced twenty-five inches of rain over just five hours. This rainfall resulted in soil slides and slumps and rock slides over massive areas of hillsides, with debris flows that took out entire forests. As these materials came to rest in stream valleys, flash floods resulted, destroying houses, roads, utilities, livestock, and crops.

Following this great storm the U.S. Department of Interior and the U.S. Geological Survey mapped debris flow hazard areas, and this map is available at the Madison County Zoning Office. Madison County does restrict some development on steep slopes through its Conservation zoning, but as yet there has been no local analysis through mapping to compare the areas in Conservation zoning to the mapped debris flow hazard areas. The county currently has a floodplain ordinance that restricts development in floodplain areas to structures that are flood-proofed.

4. Water Resources

Groundwater is the primary source of water in Madison County. According to the Virginia Department of Environmental Quality's water source overview, approximately 12,925 people in the County use groundwater wells for residential water supply. A few subdivisions and residential institutions are served by community water systems (CWS). Also, public water systems (PWS) serve commercial and other uses. The State Water Resources Plan developed by the Department of Environmental Quality offers a snapshot of Madison County water resources on the following page.

Madison County and the Town of Madison

Water Source Overview

Major sources include White Oak Lake and groundwater wells.

***Table 1**: Reported (2010) and projected (2040) water use by system type for Madison County in MGD

Type	Reported Use 2010 MGD	Projected Use 2040 MGD
Small Self-Supplied Users (under 300,000 gal/month)	1.620	2.298
Community Water System	0.124	0.157

Water Use by System Type

Approximately 12,925 people use private groundwater wells for residential water supply. All tables and graphs represent reported water use including Sales to other localities, if applicable.

***Figure 1**: Percentage of reported water use by system type in 2010 (No use data shown on graph if less than .01 MGD: Refer to Table 1)

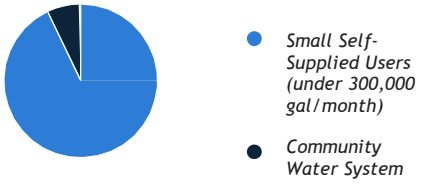


***Figure 2:** Disaggregated water use percentages for Community Water Systems in 2010 *(No graph shown if no disaggregated use data reported)*

***Table 2:** Reported (2010) and projected (2040) groundwater and surface water use for Madison County in MGD

Reported 2010 Groundwater Use (MGD)	Reported 2010 Surface Water Use (MGD)	Projected 2040 Groundwater Use (MGD)	Projected 2040 Surface Water Use (MGD)
1.67	0.08	2.34	0.11

***Figure 3**: Madison County highlighted in the Commonwealth of Virginia

Projected Water Demand

Population and demand are projected to increase through the planning period. Existing water sources are expected to meet projected demands.

***Table 3**: Madison County population projections by decade from 2010 to 2040 (**See note below)

2010	2020	2030	2040	% Change (2010-2040)
13,308	12,889	13,182	13,288	-0.2%

***Figure 4**; Madison County population projections by decade for 2010, 2020, 2030, & 2040

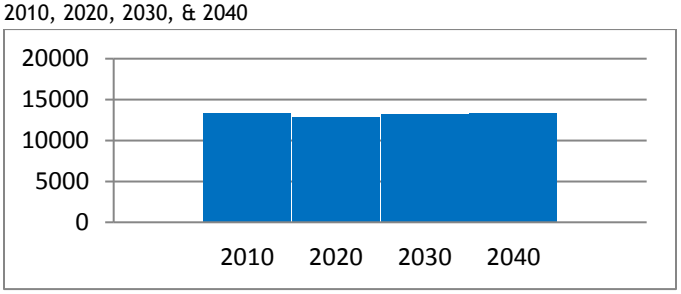


***Table 4 & Figure 5**: Madison County water demand trends by decade for 2010, 2020, 2030, & 2040 in MGB

Reported Use 2010 MGD	Projected Use 2020 MGD	Projected Use 2030 MGD	Projected Use 2040 MGD	% Change (2010-2040)
1.74	1.98	2.22	2.45	40.8%

Drought Management Practices

The County will adopt an emergency ordinance to enforce the Drought Response and Contingency Plan in the event of a drought. The Town intends to follow the County's lead on drought declaration. (Madison County and Town Regional WSP)

**Note: Graphic adapted from Virginia State Water Supply Plan *Snapshots of Water Resources by Locality*, available through the Virginia Department of Environmental Quality. Population projection data shown above differs from the original DEQ snapshot and was updated to the most recently published projections by the Weldon Cooper Center.

5. Climate

Madison County has warm summers, moderate winters and generally adequate rainfall. At the higher elevations in and near Shenandoah National Park, winters are considerably colder, summers are cooler, and precipitation is somewhat more plentiful. The County is well inland from the ocean, but is in the path of warm, moist air currents moving northward, and cold, dry air currents moving southeastward. These alternating air currents frequently bring sharp changes in the weather and add to the variations in climate from one season to another.

The growing season, defined as the period between the average dates of the last freezing temperature in the spring and the first of the fall, is 184 days. It is long enough to allow proper maturation of a large variety of crops. Freezing temperatures ordinarily occur later in the spring and earlier in the fall at the higher elevations than at the lower elevations. Annual precipitation ranges from about 42 inches in the southeastern part of the County to more than 51 inches atop the Blue Ridge Mountains; however, actual amounts vary greatly from one year to the next. Monthly precipitation ranges from more than 4 inches in summer to about 3 inches in fall.

C. Land Uses

Madison is a scenic, rural county. It is dominated by agricultural and forest uses. The gently rolling fields of Madison County's Piedmont produce livestock and dairy products, cash grains, and forage. The Blue Ridge Mountains and Shenandoah National Park, with their natural beauty and recreational opportunities, exert a strong influence on life in the County, as well as attracting tourists and visitors.

1. Farmland

The great majority of Madison County's land has historically been used for agriculture. The 2012 U.S. Census of Agriculture indicated that 106,991 acres in the County, not including forests or Conservation lands, consisted of farmland. While the number of farms has declined somewhat since 2007, the total acreage in farms has steadily increased during each Agriculture Census between 1992 and 2012, growing from 48.1 percent of County land in 1992 to 51.1 percent in 2012.

Approximately 28 percent of Madison County's farmland is used to harvest crops. The remaining agricultural lands are comprised of non-harvested crop areas which include land in pasture (open and woodland grazing areas), cover crops, apples, peaches, grapes and specialty crops.

2. Forests

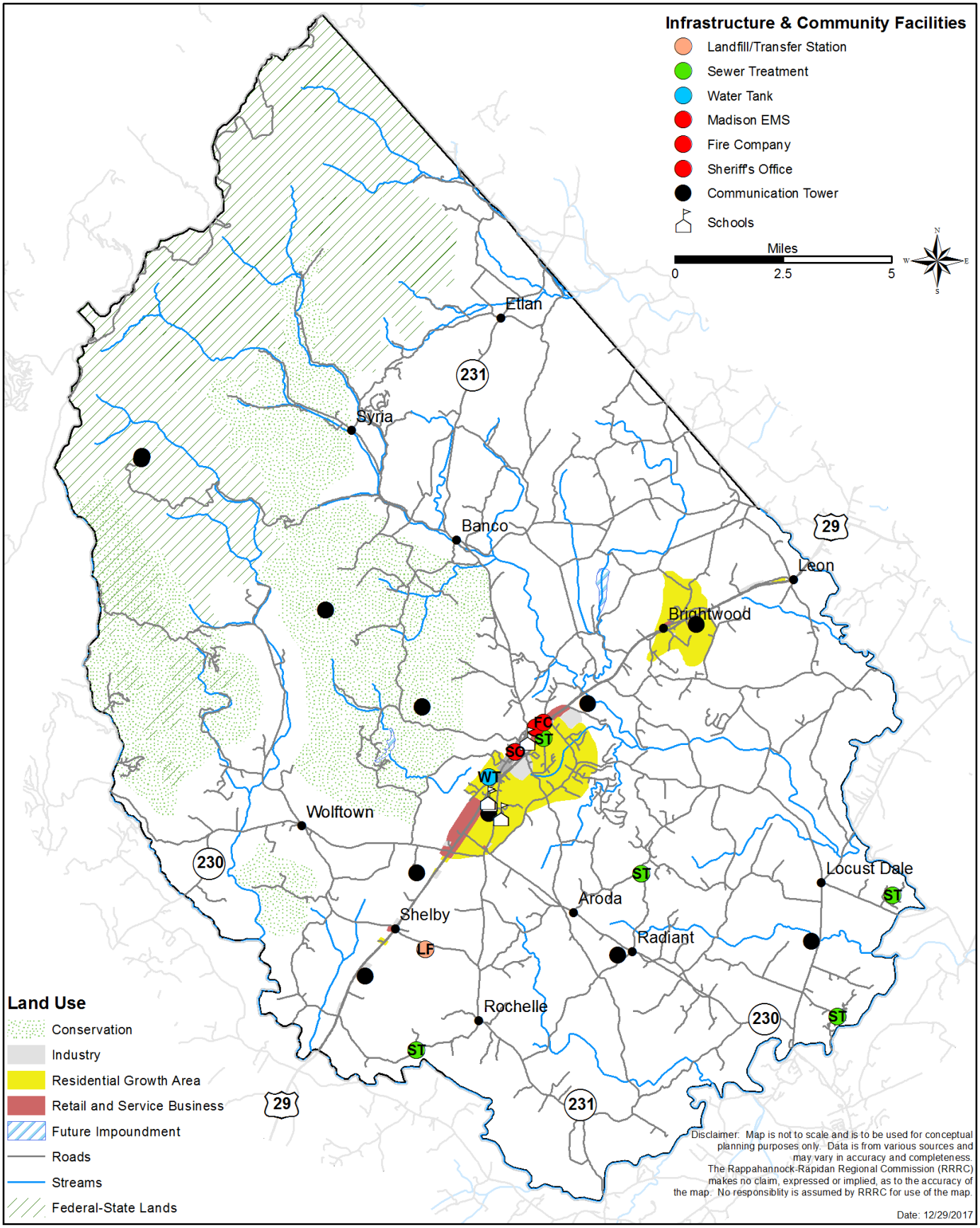
The total acreage of forestland in Madison County has remained consistent from 2000 to the present. Forested land made up approximately 94,015 acres in the County in 2014 according to the U.S. Forest Service, and it predominantly features Oak/Hickory, Oak/Pine, and Loblolly/Shortleaf Pine forest types. Forested land in the County represents just less than half of the County's total acreage.

Forestland is important to Madison County from an economic perspective, but it also helps to protect watersheds from erosion and sedimentation and provides long-term carbon sequestration through forest management, which contributes to clean air and enhances our quality of life. Finally, forests provide important social benefits, including attractive sites for homes, scenic beauty, wildlife habitat, and a draw for visitors and potential new residents.

3. Commercial and Industrial Development

Commercial and industrial developments in Madison County are of three basic types: highway commercial and industrial development primarily along U.S. Route 29; commercial development in the Town of Madison, and village and neighborhood development serving localized needs.

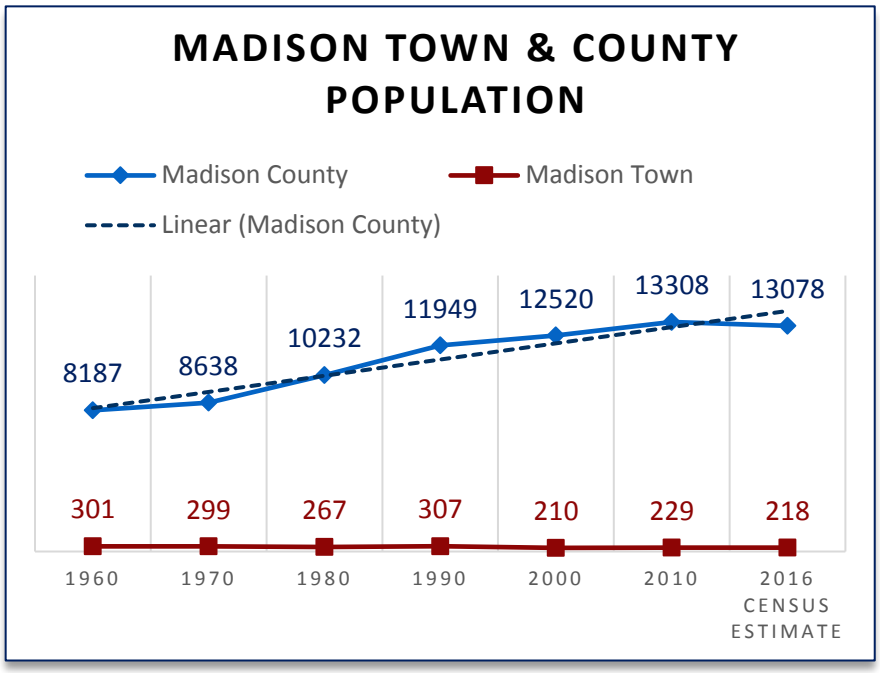
Madison County Land Use Plan



D. Demographics

1. Population

The population of Madison County has grown from 8,187 in 1960 to an estimated 13,078 in 2016 – although the 13,078 figure represents a slight dip from 2010. In the same 1960-2016 period, the population of the Town of Madison has decreased from 301 in 1960 to an estimated 218 in 2016.



Source: U.S. Census

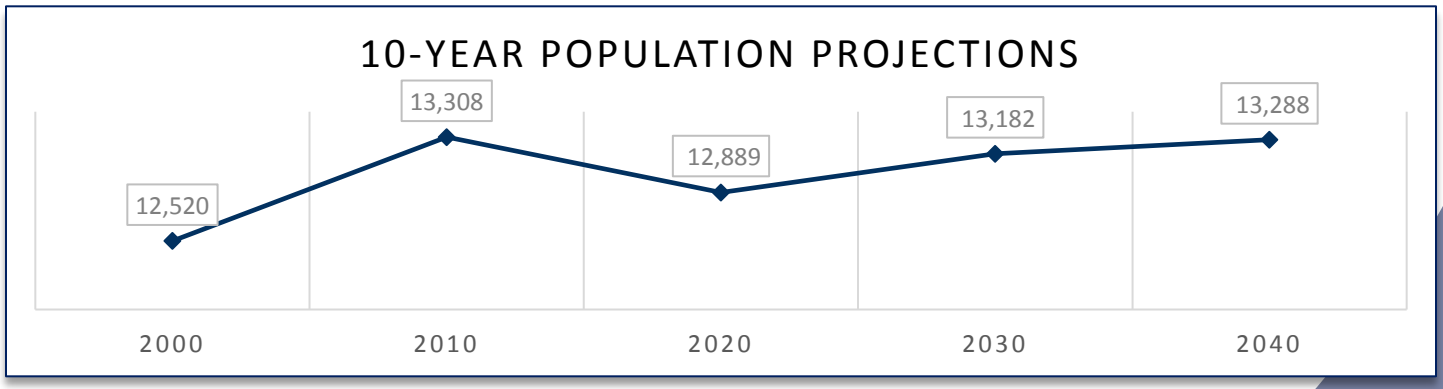
The linear illustration demonstrates the county population growth rate over the last fifty years.

2. Migration

The demographic trend of "in-migration" has played a significant role in the County's population data. Many new residents are professionals who commute to the metropolitan areas near the County due to the increasing number of new jobs created in central Virginia. Also contributing to the population are retirees, largely from the Washington D.C. and Northern Virginia areas.

3. Population Projections

Current population projections estimate that the County's population will decrease through 2020 and then grow modestly through 2040.



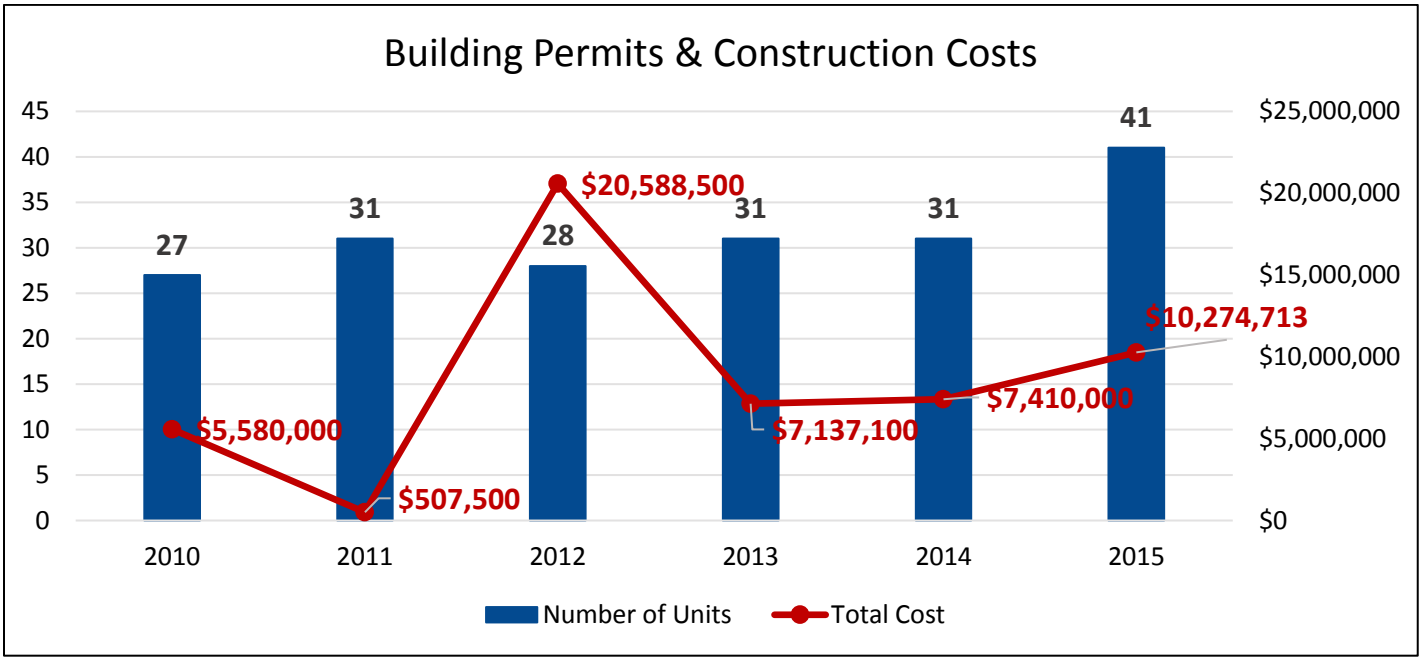
Source: Weldon Cooper Center

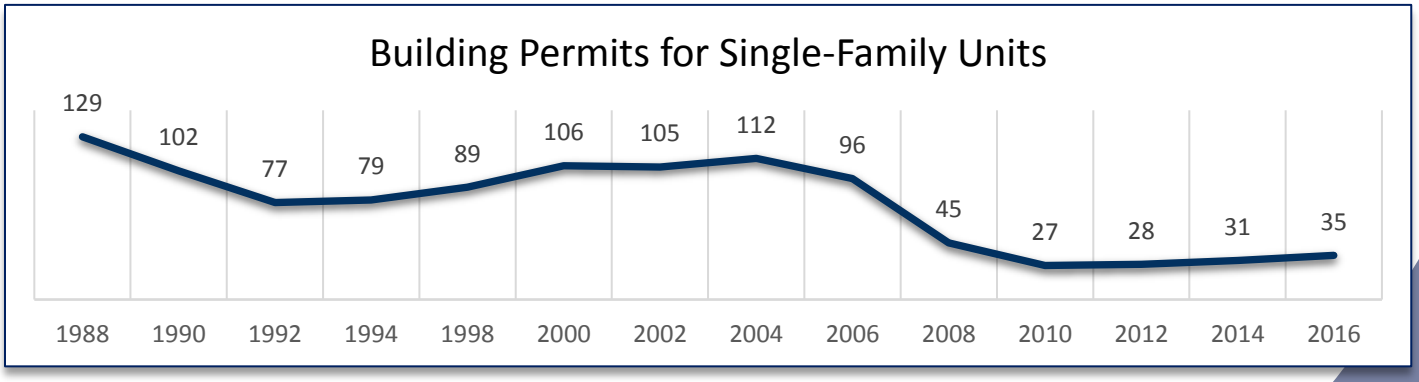
4. Housing

In 2015 there were an estimated 5,983 total housing units in the County. Of the total housing units, 5,003 were considered "occupied" homes (as distinguished from second homes, vacation homes, guest cottages, and vacant homes), with 3,635 of these units being occupied by owners and 1,368 being occupied by renters. This estimate of occupied housing units in 2015 represents a decrease of 1.5 percent from the number of occupied housing units in 2010.

The currently estimated average household size of owner-occupied housing units is 2.61 people, and the average household size of renter-occupied units is 2.52 people.

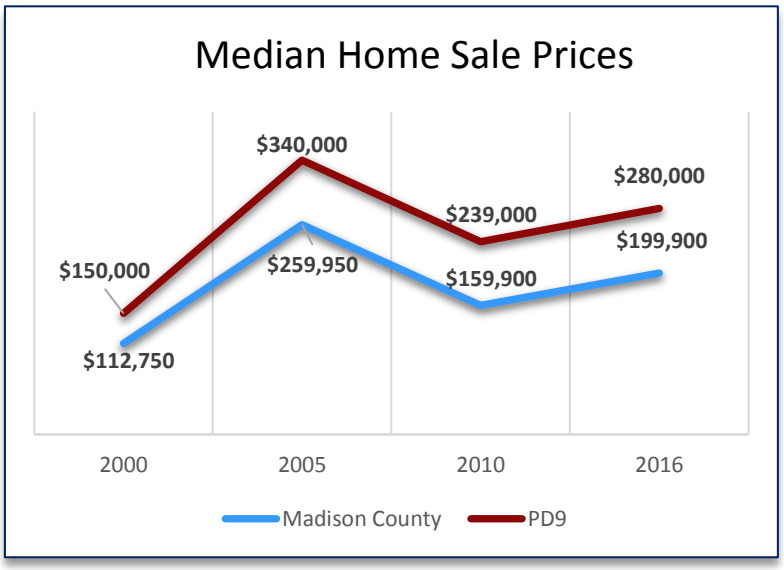
Single-family dwellings remain by far the largest segment of the Madison County housing market. In fact, no building permits for multi-family housing were issued in the County between 2010 and 2015. This situation may change in the future, as Madison's population continues to age, and the millennial population faces increasing difficulties in becoming owners of single family homes due to student debt, stricter lending practices, and lack of affordable housing stock.





Source: U.S. Census, Madison County

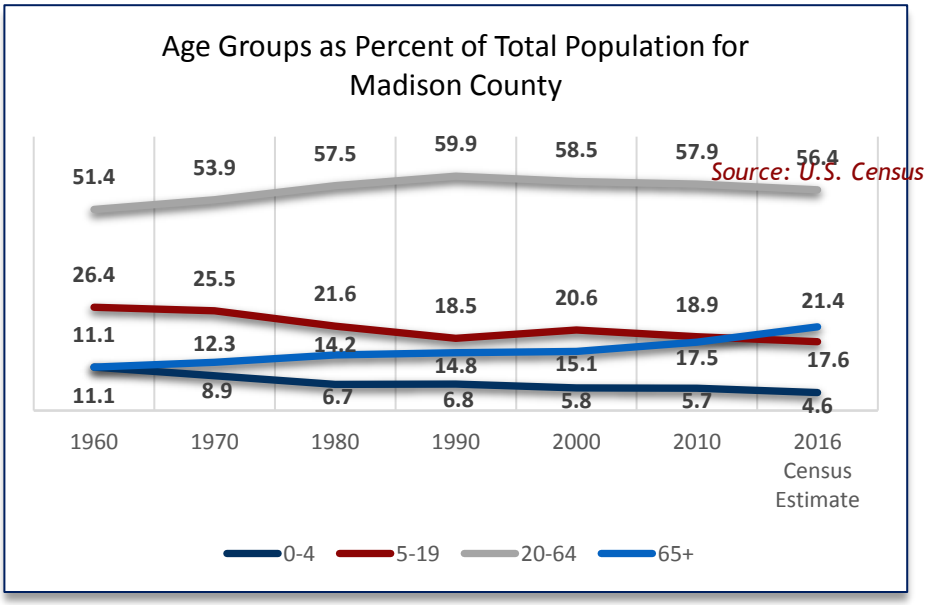
Median home sale prices for residential real estate in Madison County are reflected in the table below and compared to other counties in Planning District 9. Trends in Madison County generally track those in the Planning District overall, but median sales prices are lower than those in the Planning District.



Source: MRIS

According to the Virginia Housing Development Authority, the single most influential factor in housing trends over the next decade will be the age of an area's population. Housing demand results from both new household formation and shifts in residence that occur as households age through stages of life in which housing needs and available resources change. These life stages can be categorized into four broad age groups, each with different housing needs:

- Young households (under age 35). Most of this age group has moderate income and are predominately renters or first-time homebuyers in need of affordable starter homes.
- Middle-age households (ages 35-54). This age group is mainly made up of larger households that need more space. Many have gained sufficient income to trade up to larger homes.
- Empty-nesters and early retirees (ages 55-74). This age group is predominately homeowners who mostly choose to age in place, in their current homes.
- Older seniors (age 75 and older). For this age group, maintaining their existing homes may become burdensome and, if so, they may seek alternative senior housing options.



Source: U.S. Census

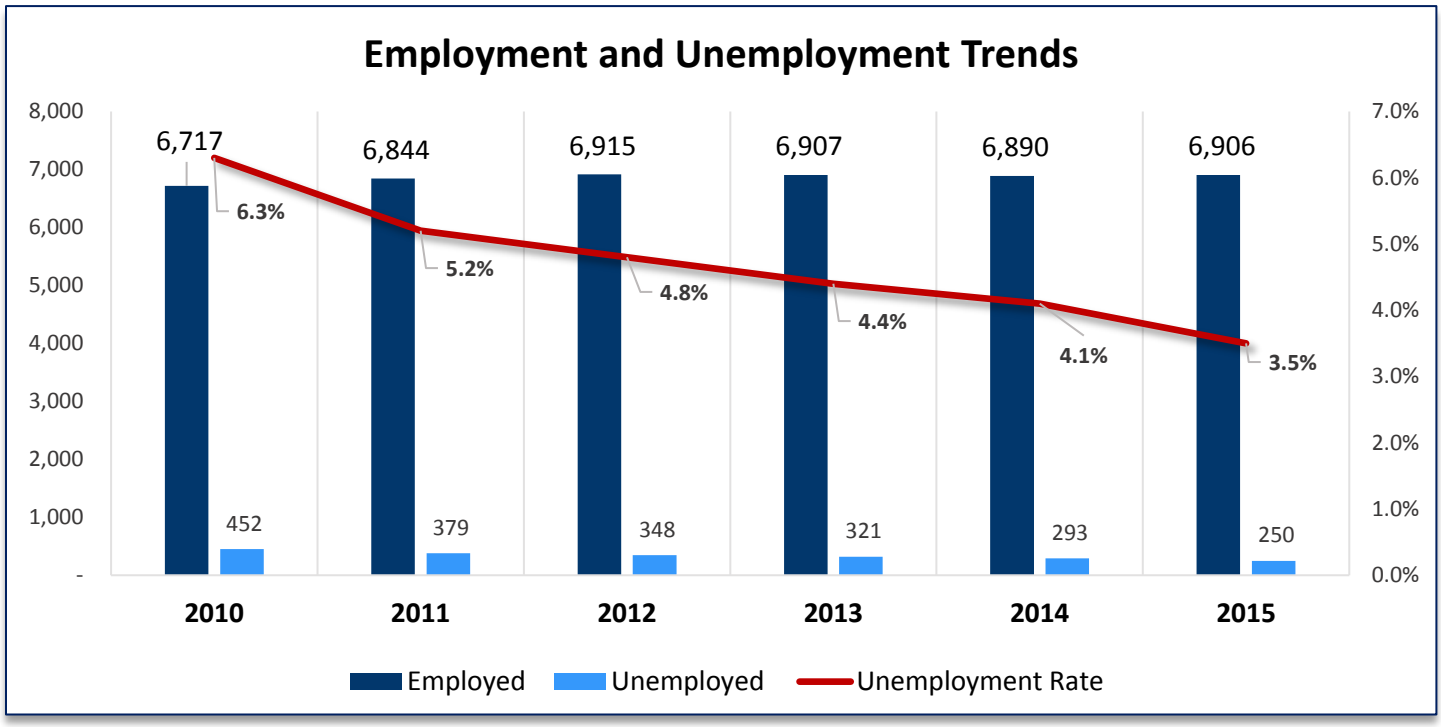
The aside table shows the current age group distribution of the County's population (2016) and trends for the past several decades. The 2016 median age of the County's population was 44.9 years, indicating that over the next ten years it is likely that the housing trends in our community will continue to be driven by the housing needs of middle-age and retirement-age persons. In 2016 about 49 percent of the population was over age 45, about 21 percent were ages 25-44 and about 6 percent were ages 20-24 (2016).

E. Economic Factors

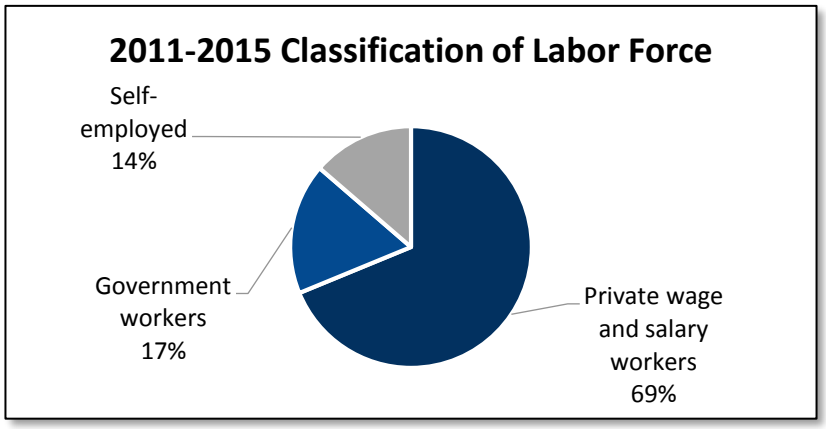
Madison County's economy continues to maintain its agriculture/forestry base, but it has important non-farm/forestry business sectors as well, including services, trade, manufacturing, and construction.

1. Labor Force

Following the Great Recession of the late 2000's, Madison County has seen positive improvement in labor trends. The unemployment rate has decreased from 6.3 percent in 2010 to 3.5 percent in 2015, and overall employment numbers have risen gradually during the same period.



Source: Virginia Employment Commission



Source: U.S. Census Bureau

Nearly 70 percent of the Madison County labor force is employed in the private sector, with an additional 17 percent of the force classified as government workers and 14 percent as self-employed. Education, health care, social assistance, retail trade, and scientific and professional services are the largest employment sectors.

2. Employers

According to the Virginia Employment Commission, the largest five employers in Madison County in 2017 are:

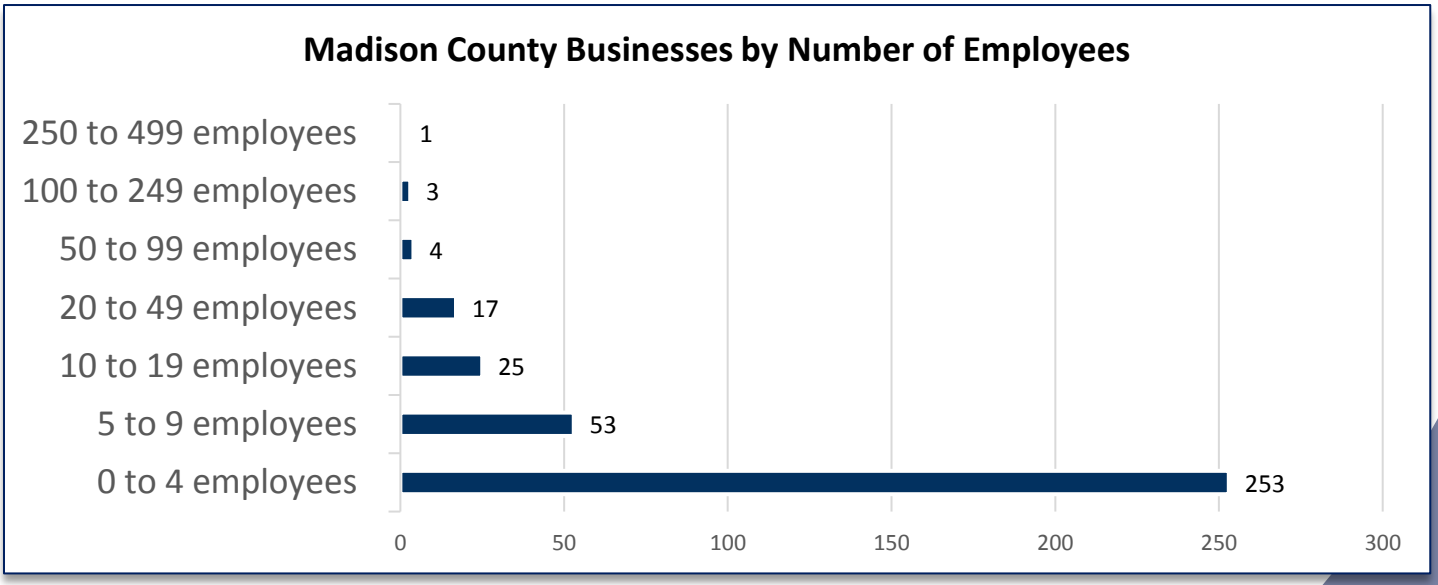
- The Madison County School Board
- Plow and Hearth
- Woodberry Forest School
- Autumn Corporation
- Madison County Government

Other substantial employers in the County include retailers, health care providers, food service providers, and forest-related industries. Overall, however, the great majority of employers in Madison County are relatively small, having fewer than 10 employees each.

3. Businesses

Based on an informal inventory taken in 2011, approximately 700 businesses operated within Madison County in 2009-2010. The majority of these businesses provided some type of service:

- 35 percent provided a non-automotive service (personal, food, financial and managerial consulting, cleaning, beauty, landscaping, etc.)
- 25 percent were engaged in a trade (general contractors, electricians, plumbers, etc.)
- 18 percent were engaged in a non-automotive sales activity (retail or wholesale)
- 6 percent were engaged in automotive activities (sales and/or service)
- 6 percent were engaged agriculture-related operations
- 5 percent provided some form of lodging (transient accommodations)
- 2 percent were restaurants
- 2 percent were engaged in "traditional" manufacturing

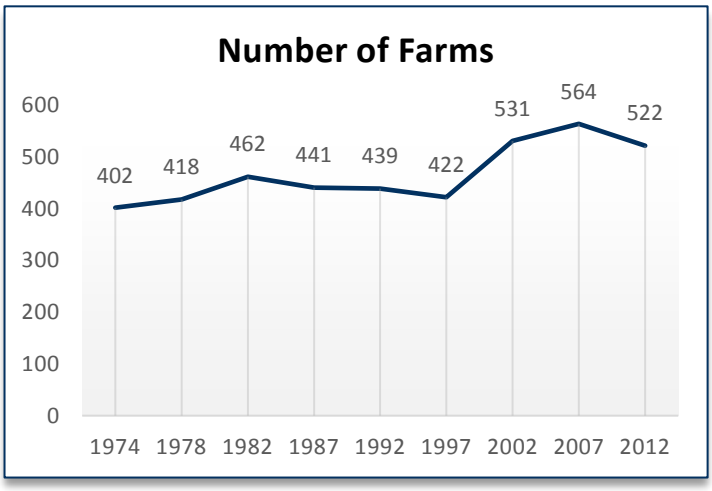


Source: Virginia Employment Commission

4. Agriculture

a. Agriculture and Forestry

As noted in the Physical Environment section, a large portion of Madison County's economic base has traditionally been related to agriculture and forestry. Farms and forests are and will remain a vital part of both the County's economy and its rural identity. The 2012 U.S. Census of Agriculture listed 522 farms in the County, with 106,991 acres in being utilized for farming. Forests account for an additional 94,015 acres.



Source: U.S. Census of Agriculture

While the number of farms has declined since 2007, the total acreage devoted to farming has increased. Average farm size County-wide is 205 acres (up from 182 acres in 207), but there are some very large farms in the foothills of the Blue Ridge. Family farms represent the vast majority of all farms in the County, accounting for 89 percent in the 2012 Census of Agriculture.

Madison County agriculture property, real estate, and non-real estate taxes for 2012 reached $1,478,000.

b. Viniculture

Viniculture is a subset of agriculture which is experiencing significant growth in Madison County. The County is located in the Central Virginia Wine Region. The eastern slope of the Blue Ridge and the rolling countryside to the east offer excellent topography, fertile granite-based clay soil, and a growing season of over 200 days. This combination yields grapes with a rich and multilayered old world flavor.

There are now a number of acclaimed wineries located in Madison County that produce fine wines for state-wide, national, and international markets.

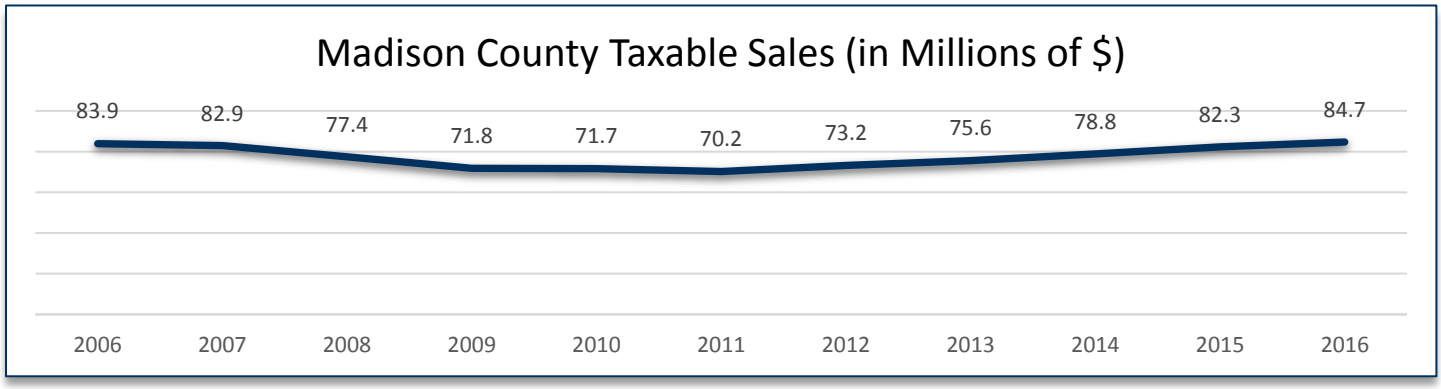
Additionally, Madison County welcomed its first craft brewery in 2016. There are several hops variety trial plantings underway in the County designed to provide locally-grown ingredients for the craft brewing industry in the County and the State.

5. Financial Data

a. Retail Sales

During the period 2012 to 2016, the dollar value of taxable retail sales (excluding livestock and crop sales which are not subject to sales taxes) in Madison County grew by 16 percent. Growth

during this period was higher than the growth experienced statewide. The automotive, food and furniture sectors all contributed to this expansion.



Source: Weldon Cooper Center

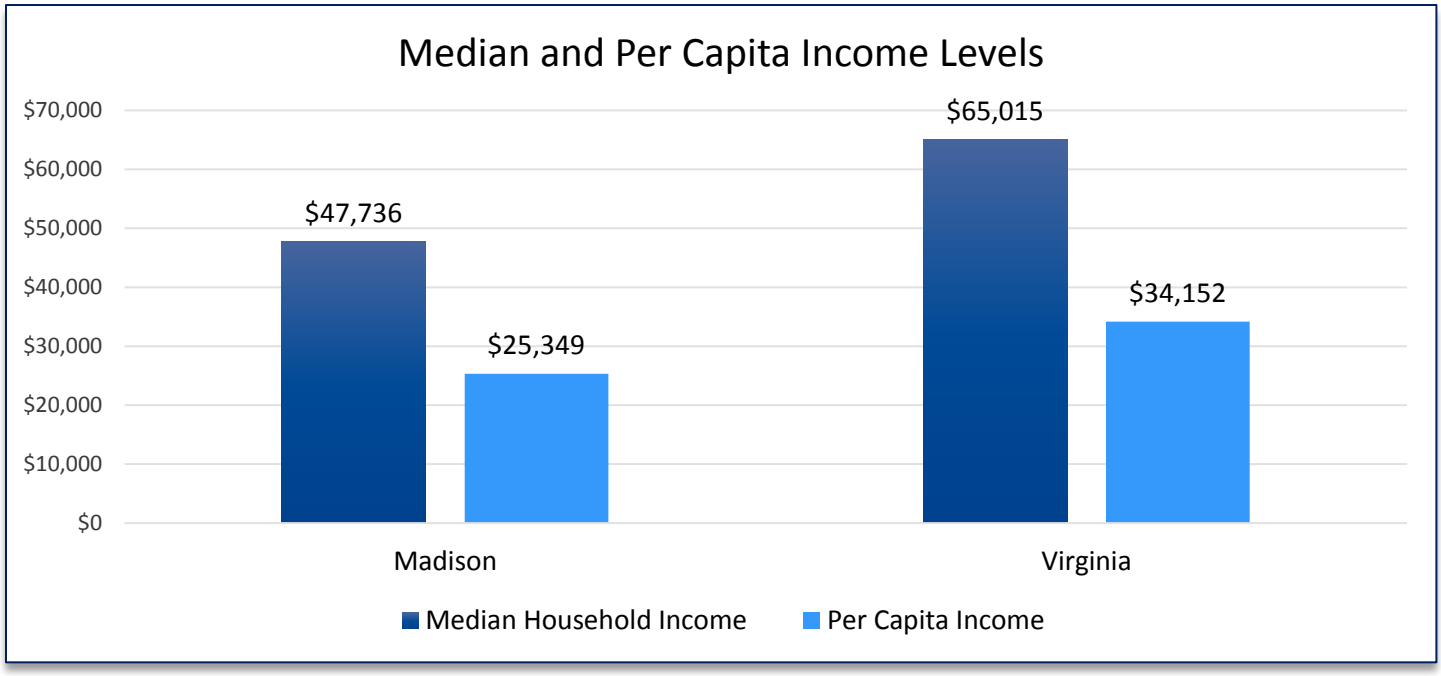
b. Deposits

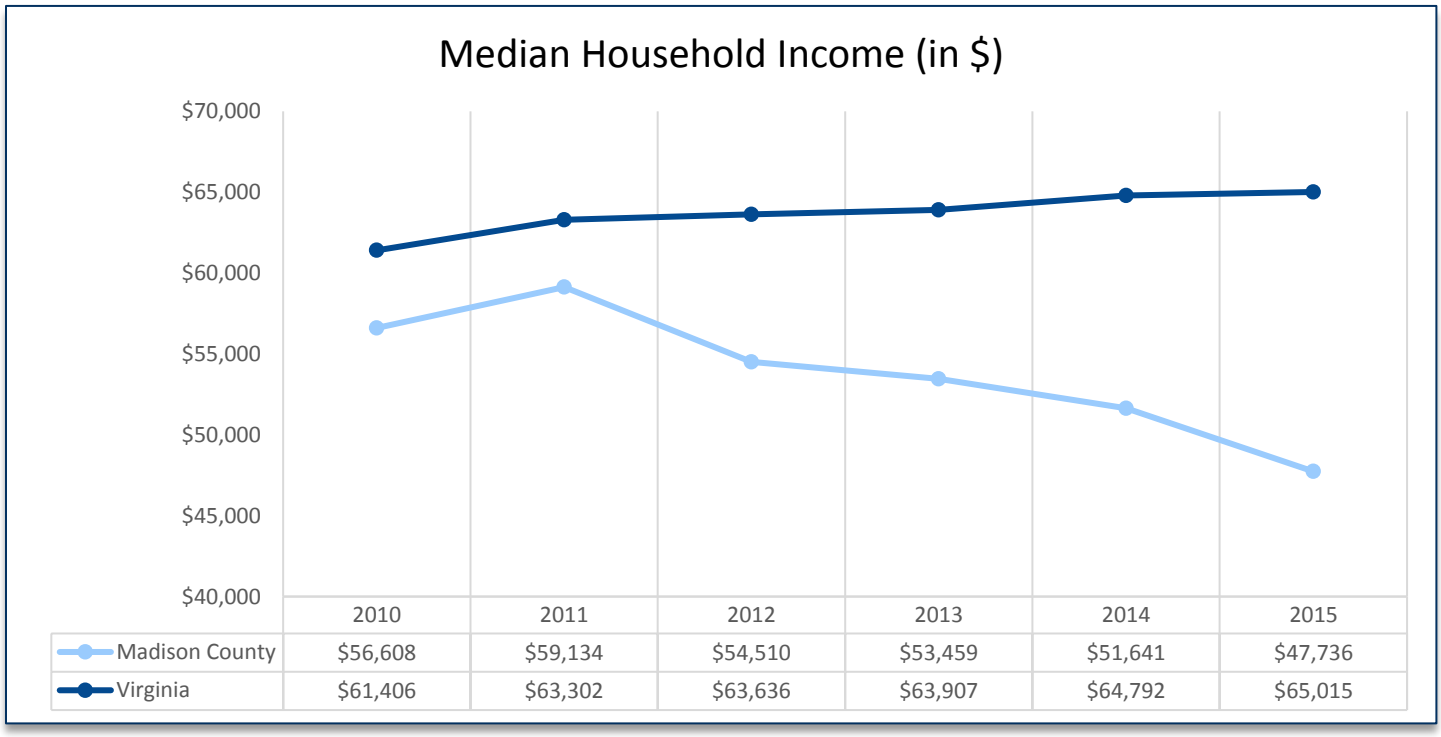
Total deposits held by financial institutions within Madison County have remained stable over the past two decades with slight increases and decreases year over year. At the conclusion of fiscal year 2016, banks in the County held $135,530,000 according to the Federal Deposit Insurance Corporation.

c. Income

Madison County's per-capita and median income levels tend to be lower than per-capita income levels statewide.

Source: U.S. Census Bureau American Community Survey



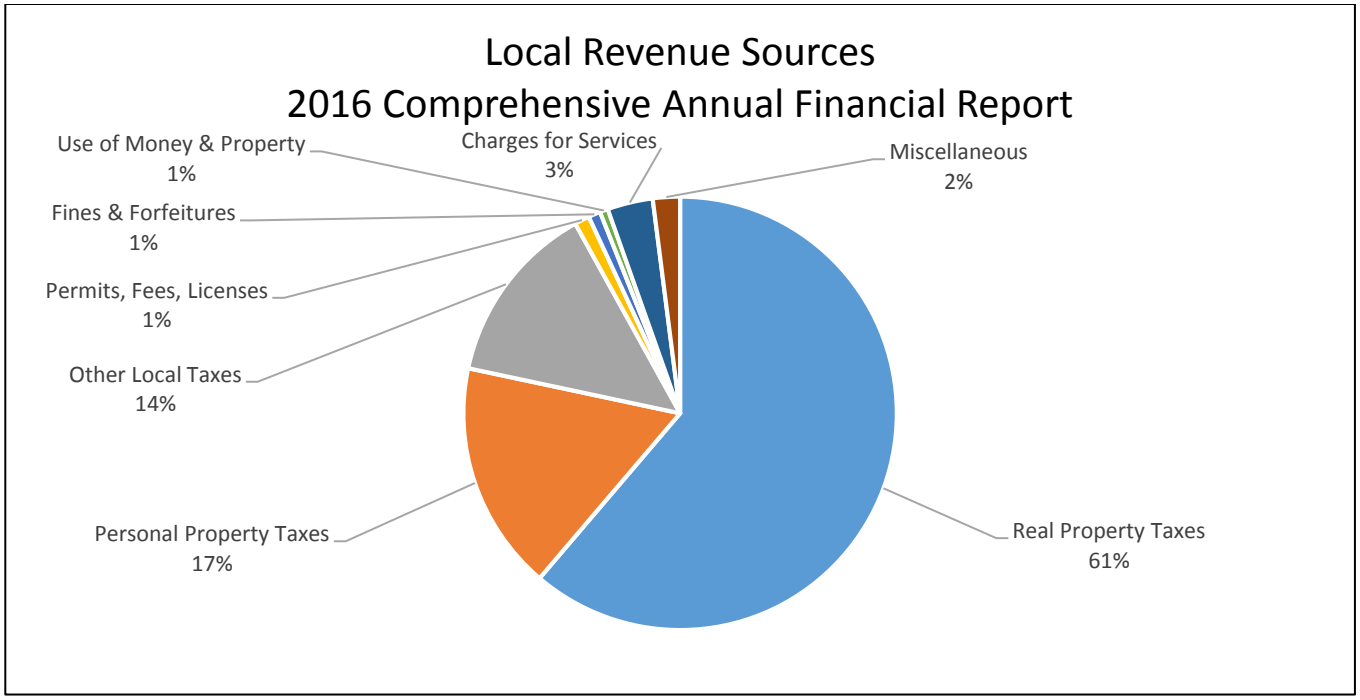


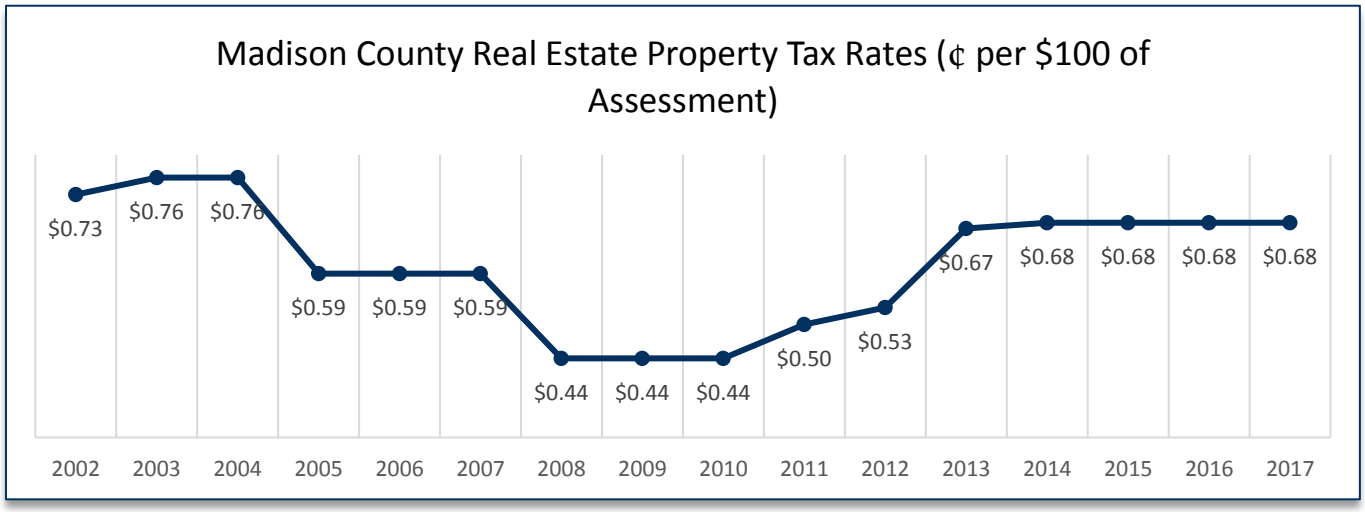
	2010	2011	2012	2013	2014	2015
Madison County	$56,608	$59,134	$54,510	$53,459	$51,641	$47,736
Virginia	$61,406	$63,302	$63,636	$63,907	$64,792	$65,015

Source: U.S. Census American Community Survey

d. Local Revenues

Real property taxes are the predominant source of revenue in Madison County, followed by personal property taxes, including Personal Property Tax Relief Act (PPTRA) reimbursements received from the Commonwealth each year. The two components of real property taxes are (1) the assessment and (2) the tax rate per $100 of assessment.



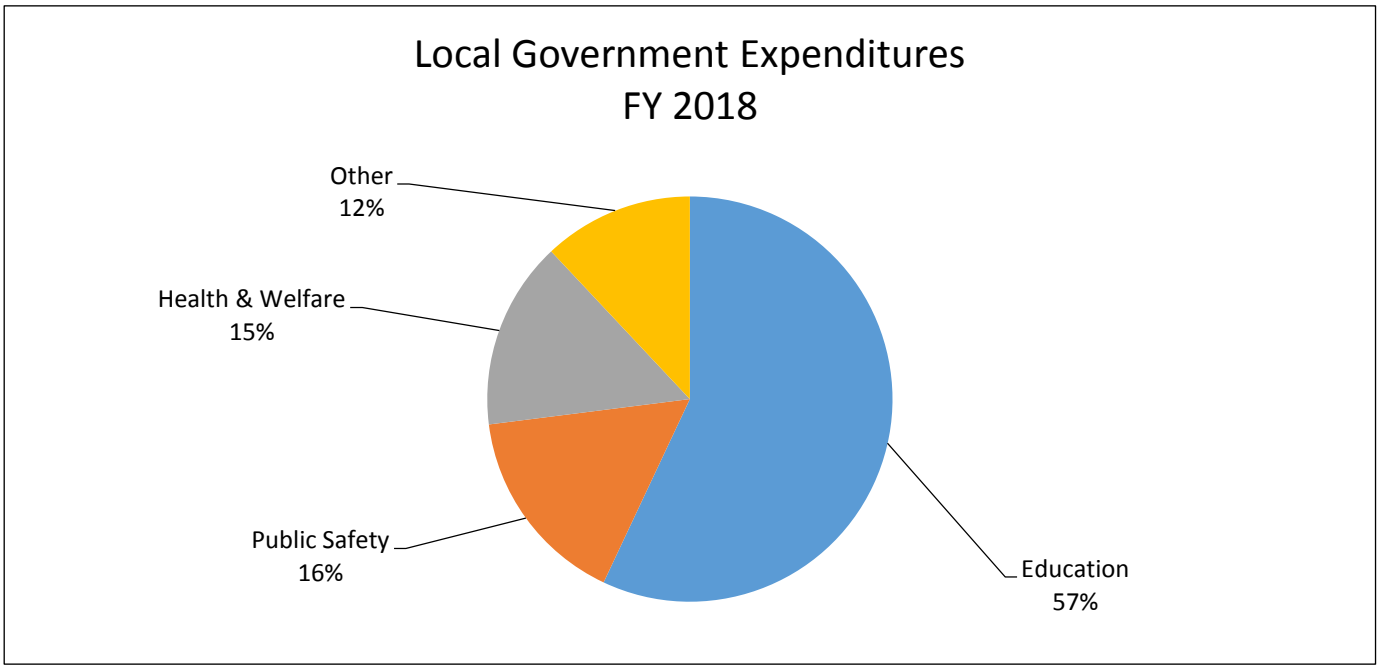


e. Local Government Expenditures

Source: Madison County

The County's budget for Fiscal Year 2018 provides for local government expenditures as follows:

- 57 percent for education (including allocable debt)
- 16 percent for public safety
- 15 percent for health and welfare (including Social Services and Children's Services Act expenditures)
- 12 percent allocable to all other local governmental functions



Other local governmental functions include general and judicial administration, public works, parks and recreation, and community development.

The balance between revenue and expenditures is of critical importance to the future of any locality. In making decisions about its growth and development, Madison County must weigh the potential for generated revenue against the need for additional County expenditures now and in the future.

Growth in the educational, public safety, and health and welfare service requirements of Madison County has driven the need for additional governmental revenues. While the County has been able to maintain a relatively low tax rate compared to most other Virginia jurisdictions, it has also relied on state and federal sources to provide significant revenue support. The original budget for Fiscal Year 2018 includes total budgeted receipts of $39,345,237 of which 41 percent is derived from state revenues and 7 percent is derived from federal revenues.

Source: Madison County

Levels of funding received from the state and federal resources can fluctuate over time, and the County must be prepared for the challenges it may face in funding its services if revenue from non-local sources were to be reduced in the future.

f. Economic Impact of Tourism

Annual Economic Impact of Tourism				
Year	Expenditures	Payroll	Employment	Local Tax Receipts

2012	$32,029,913	$5,169,835	265	$894,311
2013	$32,491,078	$5,369,762	269	$920,403
2014	$33,350,015	$5,488,594	271	$927,665
2015	$33,734,431	$5,687,096	275	$969,253
2016	$34,166,366	$5,880,671	277	$1,000,832

As noted in other sections of this Plan, tourism opportunities are plentiful in Madison County. These opportunities include outdoor recreation, historic and cultural heritage sites, special events, agri-tourism, and wineries and craft breweries. Tourism has an important role in the County's economy, providing revenue from County residents and visitors, as well as jobs within the community.

The aside table reflects the Virginia Tourism Corporation's estimates of the direct impact that tourism-related businesses had on Madison County's economy over the past five years.

Source: Virginia Tourism Corporation

F. Community Facilities & Resources

1. Schools

a. Public Schools

Madison County operates four public schools: Madison Primary School (pre-kindergarten through grade 2); Waverly Yowell Elementary School (grades 3-5); William Wetsel Middle School (grades 6-8); and Madison County High School (grades 9-12). Additionally, the County operates an Alternative Education program serving approximately 30 students annually in a facility near Waverly Yowell Elementary School.

Madison Primary School was built in 1977 and expanded in 1981. Waverly Yowell Elementary School was built in 1938, expanded in 1947 and 1968, and renovated in 2000. William Wetsel Middle School was built in 1968 as the high school annex and renovated and expanded in 1992 into a middle school. Madison County High School was built in 1955, expanded in 1959 and 1968, and partially renovated in 1992. Both the Middle School and the High School were renovated again between 2014 and 2015.

Madison County High School's on-time graduation rate was 96.5 percent in 2016 compared to 95.2 percent in 2015, and 85.2 percent in 2011. Compared with other high schools across the state, Madison County rated 10th out of 131 school divisions for highest on-time graduation rate. Not only did Madison County High School surpass the 2016 state average in graduation rates, but the percentage of Madison's students earning either a Standard or Advanced Studies diploma exceeds the state's percentage, 92.3 percent vs. 87.7 percent. In 2016, Madison County ranked 17th out of 131 school divisions in the state for standard and advanced diplomas, and ranked 19th in the state for percentage of students earning the Advanced Studies diploma, Virginia's most rigorous diploma.

Only 1.4 percent of the Madison class of 2016 dropped out of school compared to 5.3 percent across Virginia. The 2016 drop-out rate represents a dramatic improvement since 2011, when the drop-out rate was 12 percent. Just six school divisions in Virginia have lower dropout rates than Madison.

End of year student enrollment in Madison schools has fluctuated from 1,783 in 2010-11 to 1,831 in 2013-14 to 1,728 in 2015-16. Student-teacher ratios have remained below the state average in recent years.

b. Private Schools

There are two private schools in Madison County: Woodberry Forest School and Oak Grove Mennonite School. Woodberry Forest is a nationally-known boarding school for approximately 400 boys in grades nine through twelve. Founded in 1889 on a farm originally owned by the family of President James Madison, the 1,200 acre campus attracts students from all over the nation and around the world. Academic and athletic facilities rival those at many small colleges.

Oak Grove Mennonite School teaches approximately 50 children in grades kindergarten through twelve.

2. Library

The Madison County Library is an independent library, with its own volunteer Board of Directors. Funding comes from fundraising efforts by the active Friends of the Library organization and donations from the Madison County government and the Library of Virginia. Located in the Town of Madison adjacent to the Kemper House and County offices, the Library currently has available space of about 6,000 square feet. Its collection consists of more than 30,000 books, magazines, video tapes, etc., it offers free Wi-Fi service, and it receives on average about 875 visits per week.

3. Parks, Recreation, and Cultural Resources

There are approximately 46,315 acres of parks and recreation land in Madison County. The bulk of these acres are in Shenandoah National Park, while others comprise the Rapidan Wildlife Management Area, and Hoover Ridge Park.

a. Shenandoah National Park

Shenandoah National Park is far and away the most important and popular tourist destination in Madison County. It annually attracts hundreds of thousands of visitors to the County, offering countless miles of hiking trails, the iconic Skyline Drive and its picturesque overlooks, campgrounds, picnic areas, historic structures, and tourist accommodations at Skyland, Big Meadows, and Lewis Mountain.

b. Rapidan Wildlife Management Area

The state-owned Rapidan Wildlife Management Area is a major hunting and fishing attraction as well as a popular horseback riding and hiking area.

c. Hoover Ridge Park

Madison County's own Hoover Ridge Park is a 182 acre tract purchased in 2002. Shortly after the purchase a committee comprised of County residents, local government officials and school representatives met with Virginia Tech's School of Architecture to develop a Master Plan for the site. Construction began in 2007, and the Park now offers a wide variety of recreational facilities, including:

- multiple sports playing fields that accommodate soccer, football, basketball, baseball, softball, and frisbee golf;
- walking and running trails and circuits;
- fitness stations;
- a golf driving range;
- a children's playground;
- a pond accommodating fishing and water safety programs;
- picnic areas and campgrounds; and
- a farmers' market

Besides these three location-specific recreational resources, Madison County is home to various youth development and enrichment organizations, including the Boys & Girls Club of Madison, the Boys Scouts and Girl Scouts of America, and the 4-H Club.

4. Public Safety and Law Enforcement Services

Emergency medical services in Madison County are provided by the Madison Volunteer Rescue Squad and Madison County Emergency Medical Services (MEMS). Firefighting services are provided by an all-volunteer Fire Company. Law enforcement services and emergency communication services are provided through an enhanced-911 system by the County Sheriff's Office, supplemented by Virginia State Police who are stationed in Madison County and focus on highway control, and Department of Game and Inland Fisheries law enforcement officers. Madison County shares jail facilities with neighboring counties at the Central Virginia Regional Jail in Orange County.

5. Transportation Facilities

There are four primary highways – two federal and two state - traversing Madison County. U.S. Route 29 is a four-lane divided highway running roughly north-south through the County. It is a major arterial for vehicles traveling between Charlottesville and the Washington, D.C. metropolitan area. U.S. Route 15 is a north-south route crossing the eastern tip of the County that provides access to Culpeper and Orange. State Route 230 runs from Route 15 across the County south of the Town of Madison to U.S. Route 33 in Stanardsville. State Route 231 connects Madison County with Gordonsville to the south and Rappahannock County to the north.

In 2012, Madison County representatives worked with VDOT's Culpeper District staff to develop the Route 29 Corridor Study. The study envisions Route 29 as the main transportation and economic corridor in the County, and it adheres to four principles:

- Safety is paramount
- Maintain capacity
- Optimize access
- Balance function and aesthetics

In 2014, the Route 29 Corridor Study was adopted as an official addendum to Madison County's 2012 Comprehensive Plan. It is incorporated in this 2017 Comprehensive Plan as Appendix A.

The Code of Virginia §15.2-2223(B) requires localities to develop a transportation plan as part of the Comprehensive Plan and to submit such plan to the Virginia Department of Transportation for review. Appendix D of the Comprehensive Plan contains the transportation information required by the Code of Virginia.

6. Public Utilities

a. Public Water and Sewage

As discussed in the Background Facts section, the Rapidan Service Authority (RSA) is a regional public water and sewer utility serving Madison, Greene and Orange Counties. Madison County does not have its own water or sewer system. Rather, RSA owns a water supply and sewage system that serves the Town of Madison and some adjacent areas of the County. In 2010, the water system had 248 users using an aggregate average of 80,000 gallons per day (GPD). The water treatment plant, which withdraws water from White Oak Run, has a capacity of 250,000 GPD. A storage tank for the system on Courthouse Mountain has a capacity of 500,000 gallons.

The RSA-operated sewage treatment plant in Madison County, located east of Route 29 and north of the Town of Madison, has 149 connections that use an average of 50,000 GPD and is operating at 62 percent of its capacity of 80,000 GPD. Also within Madison County, RSA serves the old lace factory near Shelby, and provides water service to the Plow and Hearth facility at Oak Hill. Madison County has no plans to undertake the provision of public water and sewer services. Any future water and sewerage facilities in Madison County would be operated and maintained by RSA.

In 2015, the Madison County Board of Supervisors adopted a Public Utilities Amendment to the County's 2012 Comprehensive Plan. (See Appendix B hereto.)

b. Solid Waste Disposal

Madison County currently operates a solid waste transfer station on Route 662 east of Shelby which encompasses a single-stream recycling program. The site was originally opened in 1986 as an unlined trench-type landfill which the County closed in 1999.

c. Telecommunications & Internet Services

Telecommunications and internet (broadband) services within Madison County are provided by a variety of private-sector companies. These companies are beginning to expand throughout the County. A number of County residents also use satellite-based services for internet access. Private wireless (cell phone) and internet providers have, for years, focused their development efforts along the Route 29 corridor, and these services remain limited. More effort is needed to ensure the availability of accessible and affordable cell phone and internet service throughout the County.

7. Public Health

Madison County is part of the Rappahannock-Rapidan Health District which provides public health services to County residents, as does the Madison County Health Department. Mental health, mental retardation, substance abuse, and aging services are provided by the Rappahannock-Rapidan Community Services Board which operates an active Senior Center in Madison. Currently, there are three family medical practices, three dental practices, and a physical therapy practice in Madison, as well as a non-profit Free Clinic which offers screenings and referrals to participating doctors and pharmacies for income-eligible persons. There also are two nursing homes and two assisted living facilities in the County.

8. Historic Resources

History is important to many residents of our County and is increasingly of interest to tourists and visitors. The County's many notable historic resources are described in Appendix C.

Goals & Implementation Strategies

Goal 1

Preserve, protect, and enhance the natural beauty, rural character, and air and water quality of Madison County, and sustain agriculture/forestry as the County's primary land use.

Implementation Strategies:

1. Increase the County's capacity for professional planning. A professional planner on the County's staff, or a planning consultant, would serve, *inter alia*, as a facilitator and implementer of the Comprehensive Plan, an organizer of ad hoc citizens' committees to address specific planning issues, and an advisor to the Planning Commission and Board of Supervisors.

2. Continue to support the economic viability of agriculture, forestry, and related industries through tax and zoning policies, including land use taxation, and significantly upgrade vocational education opportunities in the agriculture and forestry areas.

3. Continue the current phased zoning practice of allowing no more than four subdivisions of any lot, tract or parcel of land zoned Agriculture A-1 and Conservation C-1 within any ten-year period (the "4-in-10 Rule").

4. Continue to utilize Conservation Zones to protect steep slopes, erosive soils, and mountaintops from environmentally damaging development.

5. Continue enforcing the provision that a private road may serve no more than four lots which use the private road for access to a public road.

6. Continue to discourage the proliferation of permanent and temporary advertising signs.

7. Continue the current policy of authorizing the Planning Commission and/or the Board of Supervisors to require developers to finance and assist in the preparation of studies on the impact of proposed developments on the County, its residents, and its environment.

8. Consider analyzing the appropriate lot size requirements to establish optimum future land use.

9. Review and revise as necessary the County's Zoning Ordinance as it relates to special use permits so as to make clear when such permits are, and are not, required.

10. Support the donation of permanent conservation easements in rural areas of the County where such easements are appropriate.

11. Identify and use best management practices to promote the protection of air and water quality, improve tree and vegetative cover, and reduce emissions.

Goal 2

Promote tourism and tourist/visitor-related enterprises, attractions and events, and aggressively market Madison County as an attractive place to visit.

Implementation Strategies:

1. Continue enhancing and aggressively marketing a Madison County brand aimed at attracting tourists and visitors.

2. Continue partnering with neighboring counties (i.e., Rappahannock, Orange, Greene, and Culpeper) and exploring new opportunities to achieve greater marketing impact and realize economies of scale in marketing efforts.

3. In pursuing the marketing effort, continue maximizing the use of digital technology to highlight for the target tourist/visitor market all of the many attractions this area has to offer, including hiking, biking, horseback riding, fishing, history tours, wine and beer tasting, quality dining, etc.

4. Capitalize on the fact that Madison County is a premier Shenandoah National Park (SNP) Gateway Community featuring the two best hiking trails in the Park (Old Rag and Whiteoak Canyon which alone attract 100,000 visitors/year) and the reputedly single best hiking trail on the East Coast (Old Rag).

5. Encourage the improvement of parking facilities, visitors' amenities, and shuttle services at SNP trailheads, and, where practical, participate and partner with SNP in such SNP initiatives as the Celebrate Shenandoah and PRISM (invasive species control) Committees, and the unobstructed scenic viewsheds, clean air and water, and invasive species eradication programs.

6. Encourage private landowners and the Virginia Department of Game and Inland Fisheries to identify and develop public access areas along appropriate streams.

7. Promote and, to the extent lawful and feasible, incentivize the development of tourist/visitor-friendly businesses, including, for example, overnight accommodations (hotels/motels/B&Bs/Airbnb franchises), restaurants, agribusinesses (*e.g.*, wineries/breweries/distilleries), outdoor recreation outfitters, and farmers' markets.

8. Work with the Madison Town Council to develop a vibrant, historically authentic, tourist/visitor-friendly Madison downtown.

9. Continue to leverage and expand the recreational facilities and farmers' market at Hoover Ridge Park to attract tourists and visitors, and sponsor/promote new tourist/visitor-attractive events in addition to existing events such as Taste of the Mountains, Tour de Madison, Graves Mountain Lodge Heritage Day, and the County Fair.

10. Continue enhancing Madison County's main Visitors' Center, and consider encouraging support groups to establish a peak season satellite Visitors' Center or kiosk near popular SNP trailheads.

Goal 3

Promote sensible, orderly business/industry growth and expanded employment opportunities.

Implementation Strategies:

1. Establish an Economic Development Committee to work in cooperation with the County's Economic Development and Tourism Director and the recommended County planning official (see Implementation Strategy 1.1 above), to engage in economic planning.

2. Develop and cultivate a Madison County government reputation for being welcoming and accommodating of appropriate businesses/industries, and make necessary changes in the County's ordinances so as to enable the County's economic development, planning, and zoning officials to effectively attract desirable businesses.

3. Support the 2014 Route 29 Corridor Study (see Appendix A) and its identified Enterprise Zones as the primary focus of concentrated business/industry development in Madison County.

4. Identify and promote the types of clean businesses/industries (including, for example, a brand-name hotel or motel and a business park) that would be appropriate for the Route 29 Enterprise Zones, would provide local employment opportunities for Madison County residents, and would expand the County's revenue base.

5. Prevent undesirable commercial strip development along Route 29 by establishing/maintaining criteria for development, including safe highway access points and access roads, attractive architecture, signage, and plantings, and water and sewer service.

6. Consider requiring Madison County businesses/industries, following a public hearing, to obtain licenses at a nominal fee (or "tax"), e.g., $5.00, so that business/industry activity in Madison County can be adequately recognized, tracked, and promoted.

Goal 4

Promote County-wide availability of affordable and accessible high-speed internet service and cell phone service through private providers.

Implementation Strategies

1. Actively pursue becoming a leader in providing, through private providers, affordable and accessible internet service to homes and businesses throughout Madison County and achieving gigabit performance levels within no more than five years.

2. Also through private providers, promptly promote the availability of accessible cell phone service throughout the County.

Goal 5

Promote the availability, where appropriate, of adequate water, sewer, and electric transmission utilities for Madison County homes and businesses, while minimizing negative effects of these utilities on the County's natural and human environment.

Implementation Strategies:

1. Analyze current and future sewage treatment needs and approaches and related financial issues, considering both public and private closed loop systems, and prepare to take advantage of opportunities to increase sewage treatment capacity that will support sensible business and residential growth in designated areas of Madison County.

2. Establish, maintain, and enhance relationships with the providers of electric transmission utilities in order to achieve effective coordination/cooperation in the planning, design development, and provisions of these facilities and services and to minimize the adverse impact of electric transmission utility facilities on the natural and human environment of Madison County. (See Appendix B.)

(Note: Goal 5 was amended on August 7, 2019)

Goal 6

Support public schools, vocational and continuing education opportunities, recreation facilities, and cultural opportunities for Madison County residents.

Implementation Strategies:

1. Support the Madison County School Board in its efforts to strengthen public schools and school programs, and support pre-kindergarten education.

2. Support the expansion of vocational training for existing and future jobs in the Madison County environs, and explore partnering with neighboring counties and with Germanna Community College to provide such training.

3. Explore the financial feasibility of providing additional recreation facilities at Hoover Ridge Park or other appropriate locations, and continue support for the Madison Parks & Recreation Authority.

4. Encourage and support cultural opportunities for Madison County residents and visitors.

5. Encourage the development of private recreation enterprises consistent with environmental constraints and surrounding land uses.

6. To the extent practical, continue and expand support for non-profit organizations serving Madison County youth and other residents such as, for example, the Boys & Girls Club of Madison, 4H Clubs, Skyline CAP's Head Start program, the Madison County Library, the Madison County Educational Foundation, and the Literacy Council.

Goal 7

Work with VDOT to ensure that Madison County residents and businesses/industries have a safe, efficient highway transportation system.

Implementation Strategies:

1. Support the recommendations for highway improvements identified in the 2014 Route 29 Corridor Study. (See Appendix A.)

2. Continue to solicit and obtain citizens' input on VDOT's rolling six-year plan.

3. Support the development of commuter park-and-ride parks in appropriate locations.

4. Ensure proper maintenance of County roads, both paved and unpaved.

5. Encourage and help facilitate, as appropriate, fish-friendly crossings on designated trout streams.

Goal 8

Support the availability of adequate, affordable housing and social services for Madison County residents.

Implementation Strategies:

1. Establish a Madison County Housing Committee comprised of representatives from non-profit housing organizations and social services organizations, and charge the Committee with responsibility for (a) identifying and making recommendations to satisfy current and future housing needs in the County, particularly for low income and elderly residents, and (b) working with private sector developers and housing organizations to construct, rehabilitate, and maintain housing to satisfy these needs.

2. Work with the Rappahannock-Rapidan Community Services Board to expand the availability of mental health and substance abuse services within the County.

Appendix A: Route 29 Corridor Study (2012)

MADISON COUNTY PLANNING COMMISSION

2014 ROUTE 29 CORRIDOR STUDY

Date

March 2014

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Introduction

Background

The 2012 Comprehensive Plan (The Plan) for Madison County refers to the Route 29 Corridor as "the most appropriate location in Madison County for non-agricultural economic development." It further recommends that the County "reflect this fact in its policies and plans which should be designed to encourage and direct development in the Route 29 Corridor…"

The goal statement specifically pertaining to the Route 29 corridor recommends that the County:

"Plan for the orderly development of the Route 29 Corridor, allowing business, commercial, industrial, institutional, recreational and residential development in appropriate areas, while preserving areas of open space for agriculture and protecting scenic vistas."

Objective 1 within this goal is to: "Promote industrial and commercial development in the Route 29 Corridor." The final strategy under this objective recommends that the County "Commission a contemporary local Route 29 Corridor Study." This document represents the Planning Commission's response to this objective.

While the County recognizes the significance and potential economic value of the corridor, the "Rural Economy" discussion in The Plan acknowledges the delicate balance of encouraging business expansion "without succumbing to incremental strip development along Route 29…" As the Corridor Study Committee addressed the above goal statement, it did so while adhering to the following guiding principles:

1. Safety is paramount – changes to the corridor should seek to improve and never negatively impact safety of the users or neighbors of US 29
2. Maintain capacity – changes should maintain or increase volume and speed on the mainline lanes of US 29
3. Optimize access – minimize inefficient and redundant entrances while ensuring easy access to local businesses, homes, schools, and other facilities.
4. Balance function and aesthetics – be sensitive to "scenic vistas" and discourage "incremental strip development" while being receptive to ideas that expand opportunities for desired development

State and National Significance

U.S. Route 29 is part of the National Highway System[1], which reflects its importance to the nation's economy, defense, and mobility. It extends 1,036 miles from Mt. Hebron, MD to Pensacola, FL[2]. It enters Virginia in Rosslyn and exits in Danville. It is a prominent feature in one of the twelve Corridors of Statewide Significance (CoSS) as identified by the Commonwealth Transportation Board. [3] CoSS are

[1] National Highway System, http://www.fhwa.dot.gov/planning/national_highway_system/, accessed January 26, 2014.
[2] US Highways from US 1 to (US 830), http://www.us-highways.com/us1830.htm#us029, accessed January 26, 2014.
[3] Corridors of Statewide Significance, http://vtrans.org/significant_corridors.asp, Virginia Office of Intermodal Planning and Investment, accessed January 26, 2014.

truly multimodal and deemed critical to the overall economic well-being of the Commonwealth. As such, the Virginia Department of Transportation (VDOT) is charged with protecting and improving the capacity carrying characteristics and operational efficiency of this route. Route 29 is part of the Seminole Corridor, which also includes US 50 and 28, Washington Metro system's Orange Line, Virginia Railway Express, numerous Local Transit Services, Norfolk Southern Crescent Corridor, Amtrak, Washington Dulles International Airport, Charlottesville Albemarle Airport, and the Lynchburg Regional Airport.

Study Area

More locally, U.S. 29 is a four-lane arterial highway that runs from the Rapidan River at the Greene County Line (central southwest) to Crooked Run at the Culpeper County Line (central northeast). Many more people pass through Madison on a daily basis using Route 29 than actually live in the County. It is easily the most significant transportation facility in the county and, at least economically speaking, one of the most prominent characteristics in general.

For the benefit of this study, the Route 29 Corridor is defined by the right-of-way of the highway and the adjoining land located within 1-mile on either side of the road. This study area has been defined to include the majority of easily accessible land with reasonable development potential. The 1-mile buffer also encompasses related "spurs" to the corridor that are formed by Route 230 near Oak Hill and Pratts, Business 29 to include the Town of Madison, Oak Park Road and significant residential and mixed use development near Brightwood.

The entire County covers approximately 327 square miles of land. The Corridor as represented in this 2013 inventory represents approximately 10% of the County at 32.9 square miles. As was done for the 1980 study, the study area is broken up into six segments of approximately 2.75 miles in length each (see Figure 1). They are numerically identified as segments one through six. Segment one starts at the Greene County line and segment six ends at the Culpeper County line.

Population Density

The 2010 census estimates the county population at 13,308 people. The countywide population density is therefore now just over 40 people per square mile. The census further estimates that approximately 2.6 people live in each *household* in Madison County. While the County does not track *households*, it does maintain a database of addresses. There are a total of 6,790 addresses in the County. At 2.6 persons per household, that means that only about 75% of these addresses can be for households (75% x 6,790 x 2.6 = 13,240). Table 1 reports the total address per segment in the Corridor. Assuming the same proportion (75%) of these addresses are households, then approximately 3,470 people live in the Corridor. The population density within the Corridor is approximately 105 people per square mile. The population density outside of the Corridor is therefore about 33 people per square mile. That is, the population density within the Corridor is at least 3 times that of the rest of the County.

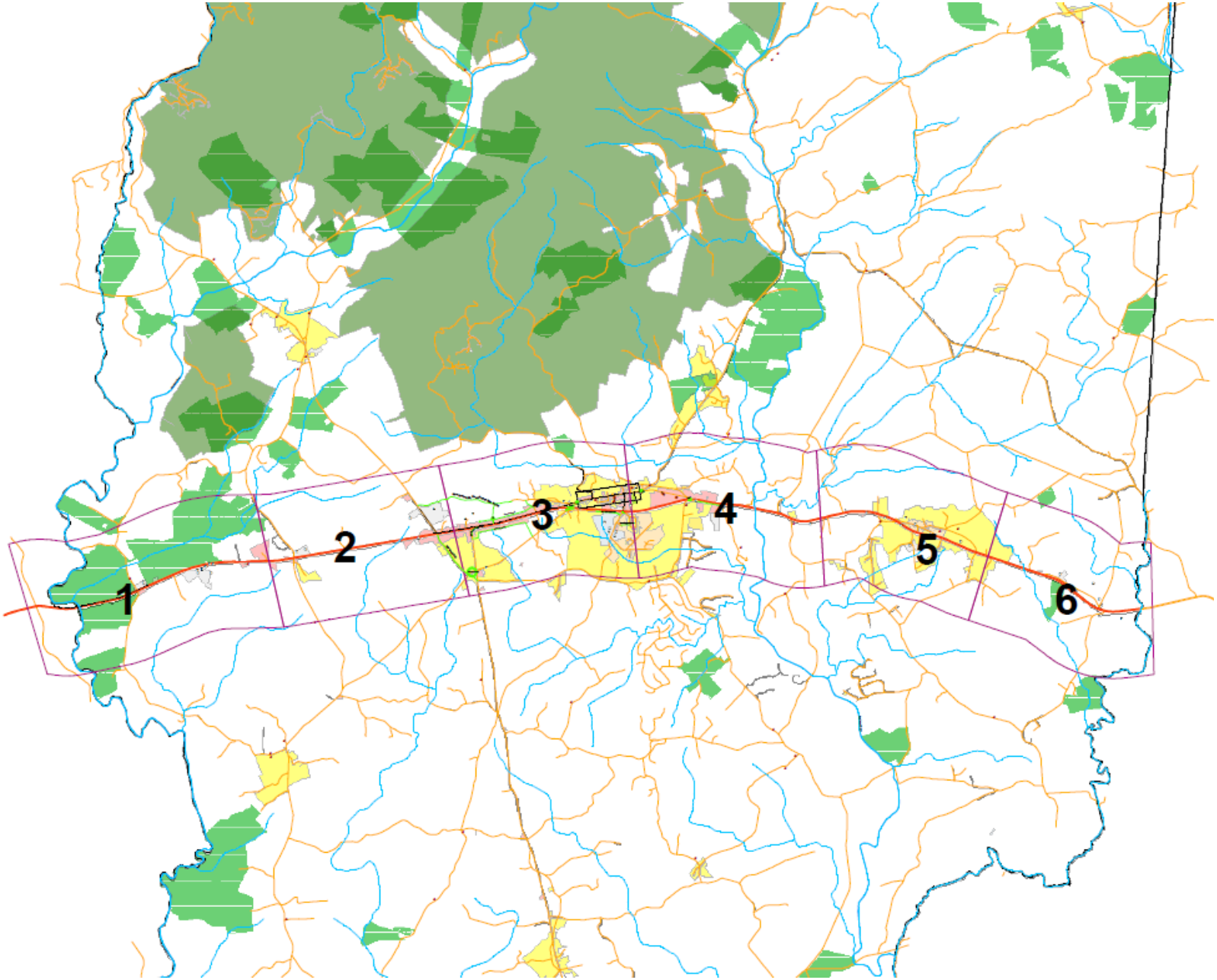

Figure 1. Route 29 Study Area.

Table 1. Address Count by Segment

Section	Total Address Count
Segment 1	108
Segment 2	185
Segment 3	597
Segment 4	367
Segment 5	375
Segment 6	148
Total	**1,780**

Employment and Commuter Patterns

Employer statistics are difficult to find from within-County sources partly because the County does not license businesses. There are, however, useful statistics available from the Virginia Employment Commission (VEC), which recently published a "Community Profile"[4] for Madison County. As of 2013 approximately 80% of county employers have addresses that put them within The Corridor. Consequently, it is likely that most residents who live and work within the County (1,361 people) also work within The Corridor. It is interesting to note that this accounts for less than 23% of County workers.

The VEC's Community Profile also discusses commuting patterns for Madison County workers. Of the approximately 5,950 total workers who live in the County, about 4,590 (77%) of them commute out of the county for work. Of those workers commuting out, 2,500 are commuting to places that likely require them to use some portion of The Corridor (Albemarle, Greene, Fauquier, etc.).

Existing Land Use

Figure 2 is a graphical depiction of the proportion of existing land use in each of the 6 segments that make up the Corridor. Figures 4 through 9 show the same information through maps of existing zoning districts. For the purposes of this summary, land use is assumed to correspond with the existing zoning. For a complete description of each of the relevant zoning districts within the Corridor, please refer to Appendix A - Basic Zoning Districts.

The majority of the Corridor continues to be zoned for Agricultural use – 83%. Segments 2, 3 and 4 collectively contain 90% of the business zoned property in the corridor. Segments 3, 4, and 5 are where the most of the residences are located, as those segments have 94% of the residentially zoned property in the corridor. Segment 3, the only segment for which less than 75% is zoned for agricultural use, is clearly the segment with the most businesses.

[4] Madison County – Community Profile, Virginia Employment Commission, Richmond, VA August 2013.

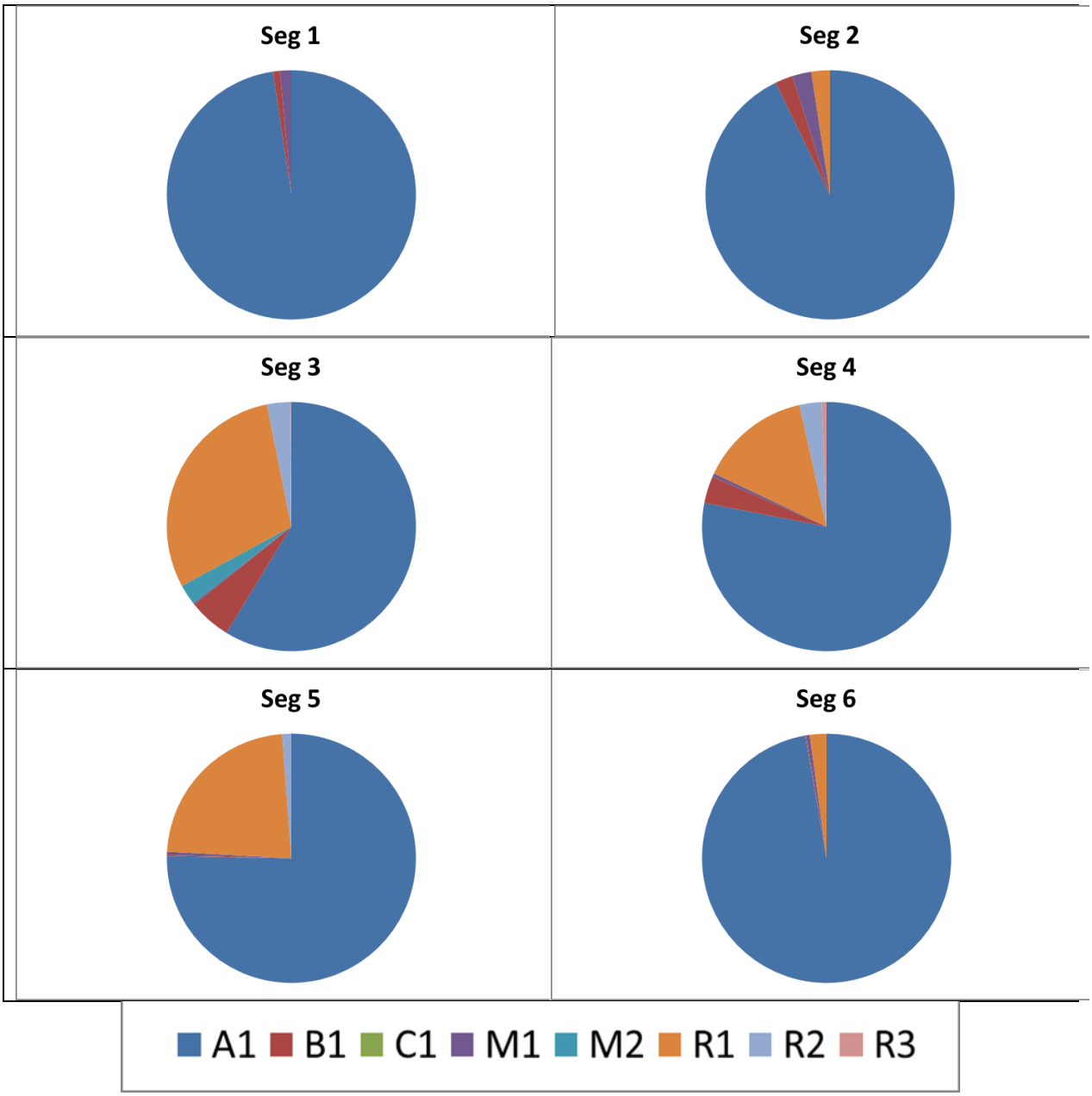

Figure 2. Zoning Distribution by Segment.

Residential

The highest concentrations of residentially zoned property are areas around Pratts along Route 230 to the east and south of US29, property that is adjacent to the Town of Madison, land along Oak Park Road east of the Town, and considerable area surrounding the village of Brightwood. Nearly all of the residential property in the corridor is zoned for lower-density (R1) housing. Corridor wide, approximately 12% is zoned R1, 1.2% is zoned for slightly higher R2 density and only 0.1% permits the highest density residential R3 development.

Commercial

The Town of Madison and points just to the northern and southern termini of Business 29 are the areas of densest commercial activity. There are other "satellite" areas of commercial activity at Shelby and Oak Hill, as well as some very isolated activity in Brightwood. Beyond the property that neighbors The Town, current business zoned land in the corridor appears to have "happened" with little rationality.

Industrial

Industrial use of land in The Corridor has changed little since the last study in 1980, but there are now nearly 300 acres of M1 and M2 zoned property. Larger areas of property that have historically been industrially-zoned include the old Jim Carpenter Company property in Segment 1, a small lot near the substation in Pratts, the property on which the Madison Wood Preservers and formerly Mountain Lumber sits off Route 634 east of 29 (Segment 3) and nominal areas averaging around 15 acres per segment in segments 4, 5, and 6. Newer areas of industrial properties include the "lace factory" property off Jacks Shop Road (rezoned from B-1), and the self-storage and trailer sales properties near Shelby. As was noted in the earlier study, there remains "no clear pattern of industrial location or direction of industrial growth" (RRPDC, 1980).

Public/Semi-Public

The predominant public facilities in the Corridor are the public school buildings, which include the Madison Primary School, Wetsel Middle School, Madison High School, and Waverly Yowell Elementary School. The first three are located within very close proximity in Segment 3. The School Board (the old Elementary school) is also located along the corridor and north of the High School in Segment 3. Waverly Yowell is located on the northern end of the Town of Madison in Segment 4. With the Waverly Yowell facility as an exception, there does appear to be "order" to the development of property for use by the public school system.

Neighboring the Madison Primary School and some shared athletic fields that are used by the Middle and High School is Hoover Ridge Park. This 182 acre property was purchased by the County in 2002 and is now managed by the Parks and Recreation Authority. The park includes walking/running trails, a camp, a pond and various playing fields. A board of local volunteers is actively pursuing a "master plan" for the park that will provide the amenities similar to those shown in Figure 3.

The Parks and Recreation Authority also manages about 4 acres of property on the southern end of the Town of Madison adjoining the American Legion Post Home. This property includes a picnic shelter and a hockey court.

Figure 3. Hoover Ridge Park

A relatively recent addition to the town is a building that was constructed to house a modern daycare center. It sits at the southern end of town just off US 29 Business. Unfortunately, after operating for several years that facility now sits empty.

The Town remains the location for almost all of the County administrative buildings. The old School Board Office on Thrift Road is now the office for the Board of Supervisors. The County extension office is in the center of town in the War Memorial Building. Across Church Street from the Extension office is The Sheriff's Office and Emergency Dispatch Center in the old fire house. Across Business 29 from both of these offices is the Court House and County Clerk's Office. Further north on Business 29 near Kemper's Mansion are the Library and the remaining county administrative offices. This also includes the county Health Department. Continuing north on Business 29 beyond the Waverly Yowell school are the Madison Rescue Squad and, next to the Orange Madison Co-op at the northern-most end of town, is the Volunteer Fire Company.

Open Space

The portion of the corridor that remains primarily devoted (via zoning) to agricultural use is one indication of the amount of open space that remains along the corridor. Although there is no Conservation

(C1) zoning in The Corridor, there are conservation easements that make up 8% of the acreage in the corridor. The majority of this "protected" open space is the Laneway and Lightburn farms on the very southern end of The Corridor (Segment 1). The easements in these two properties make up all but about 100 acres of the 1,696 acres of easement in the entire corridor.

The Town of Madison

The Planning Commission proposes that the Board of Supervisors contact the town of Madison for its input on aspects of the Rt 29 Corridor that concern the town.

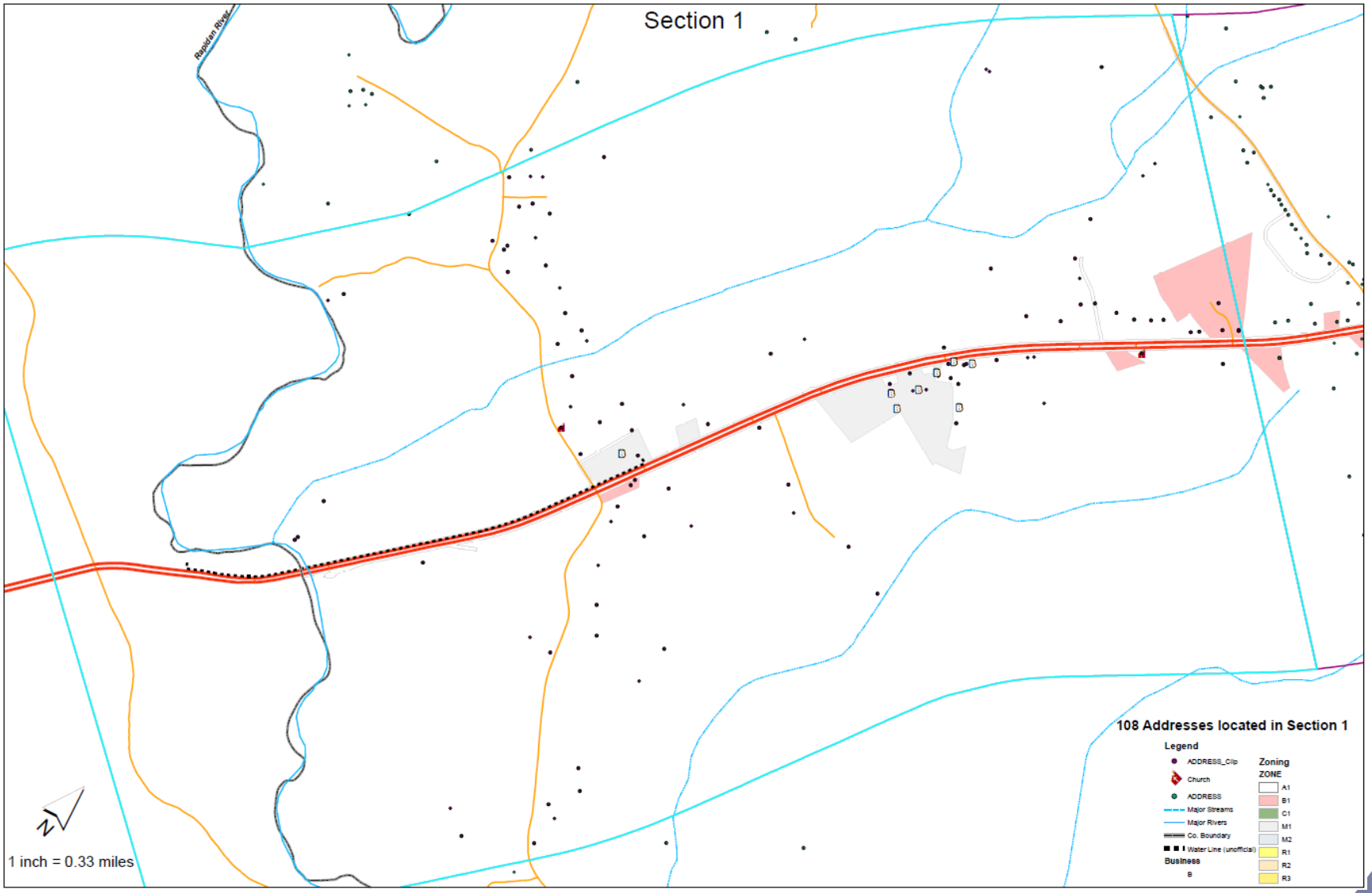

Figure 4. Segment 1 - Existing Zoning and Addresses.

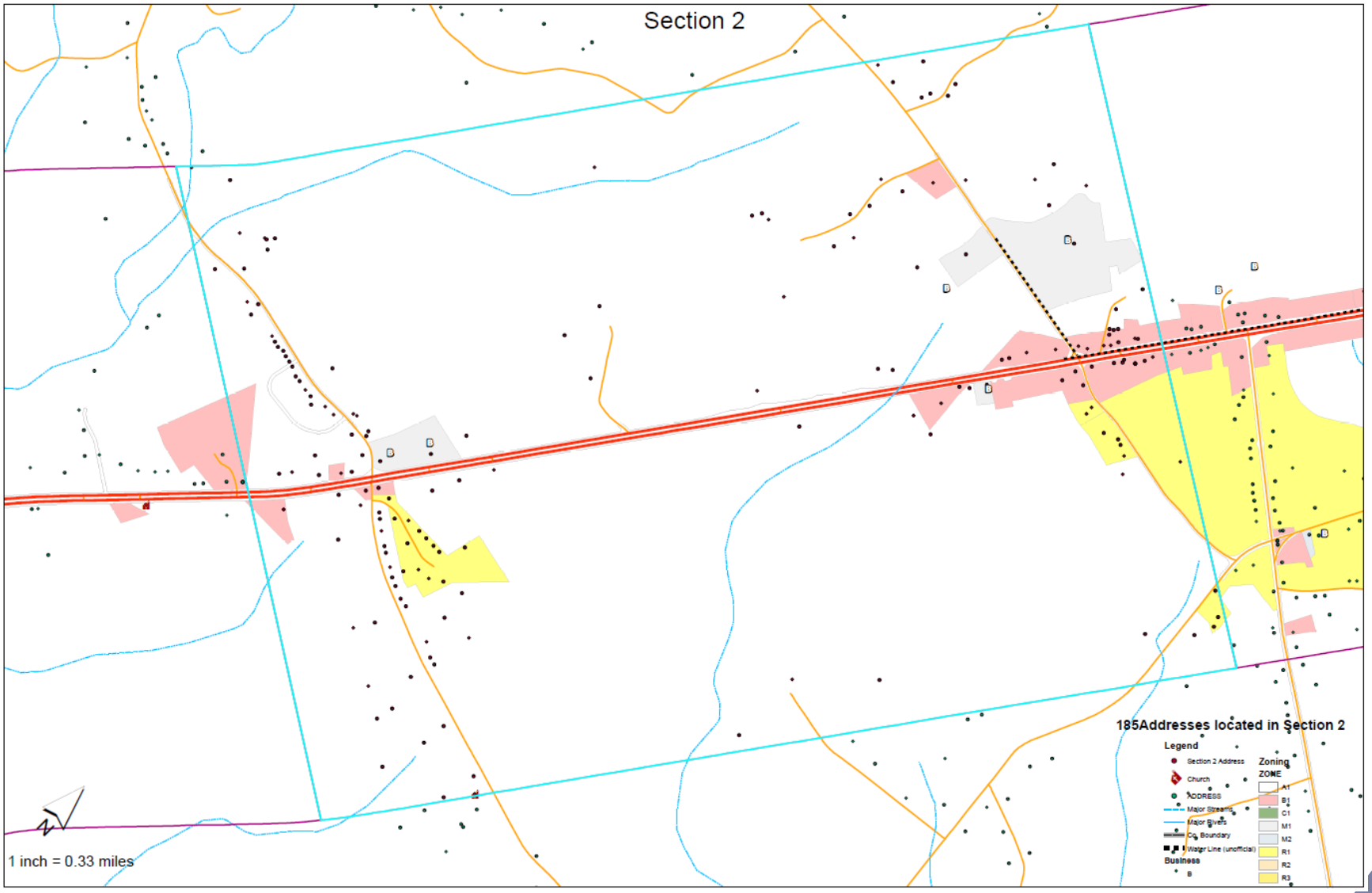

Figure 5. Segment 2 - Existing Zoning and Addresses.

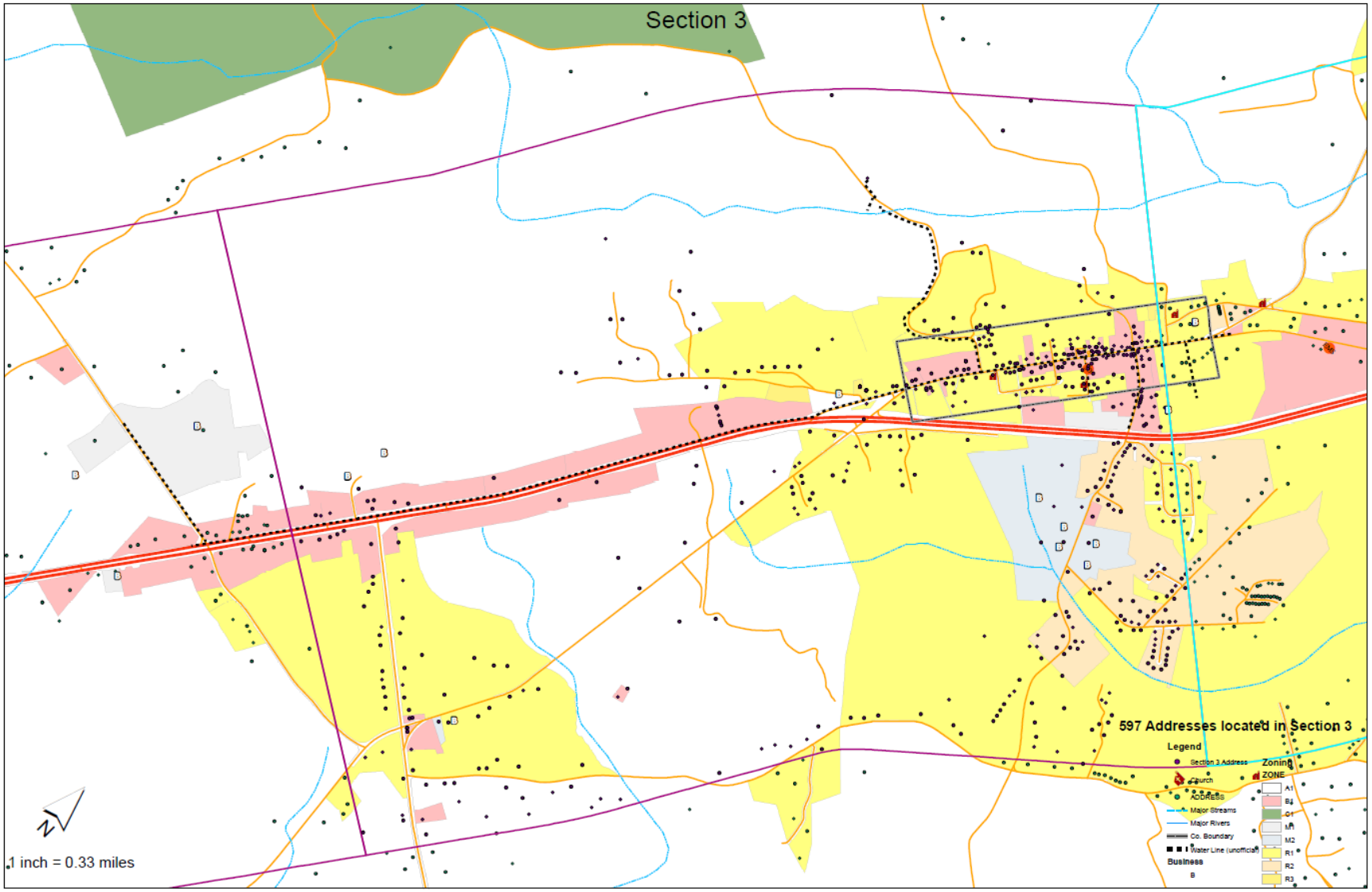

Figure 6. Segment 3 - Existing zoning and addresses.

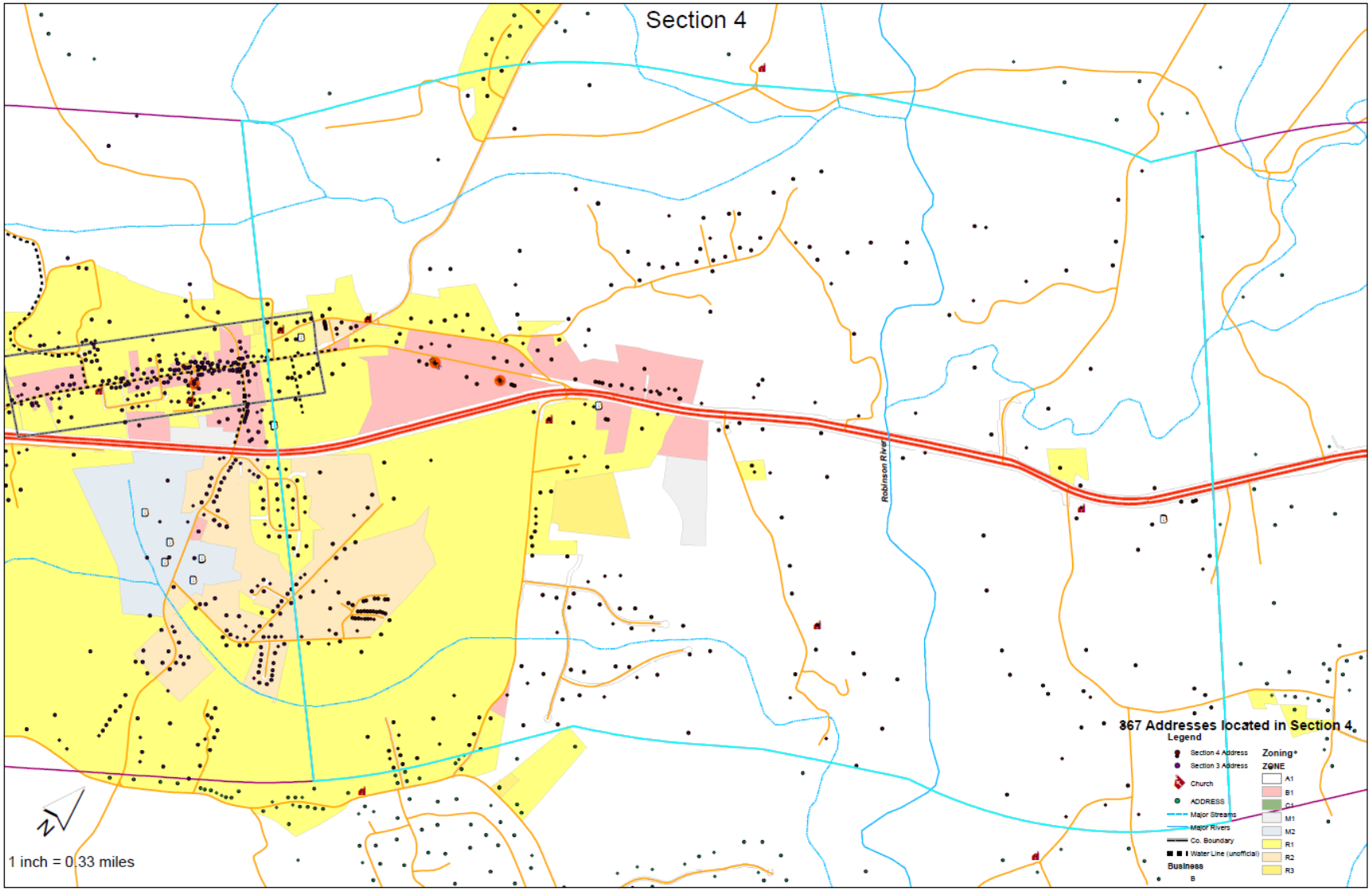

Figure 7. Segment 4 - Existing zoning and addresses.

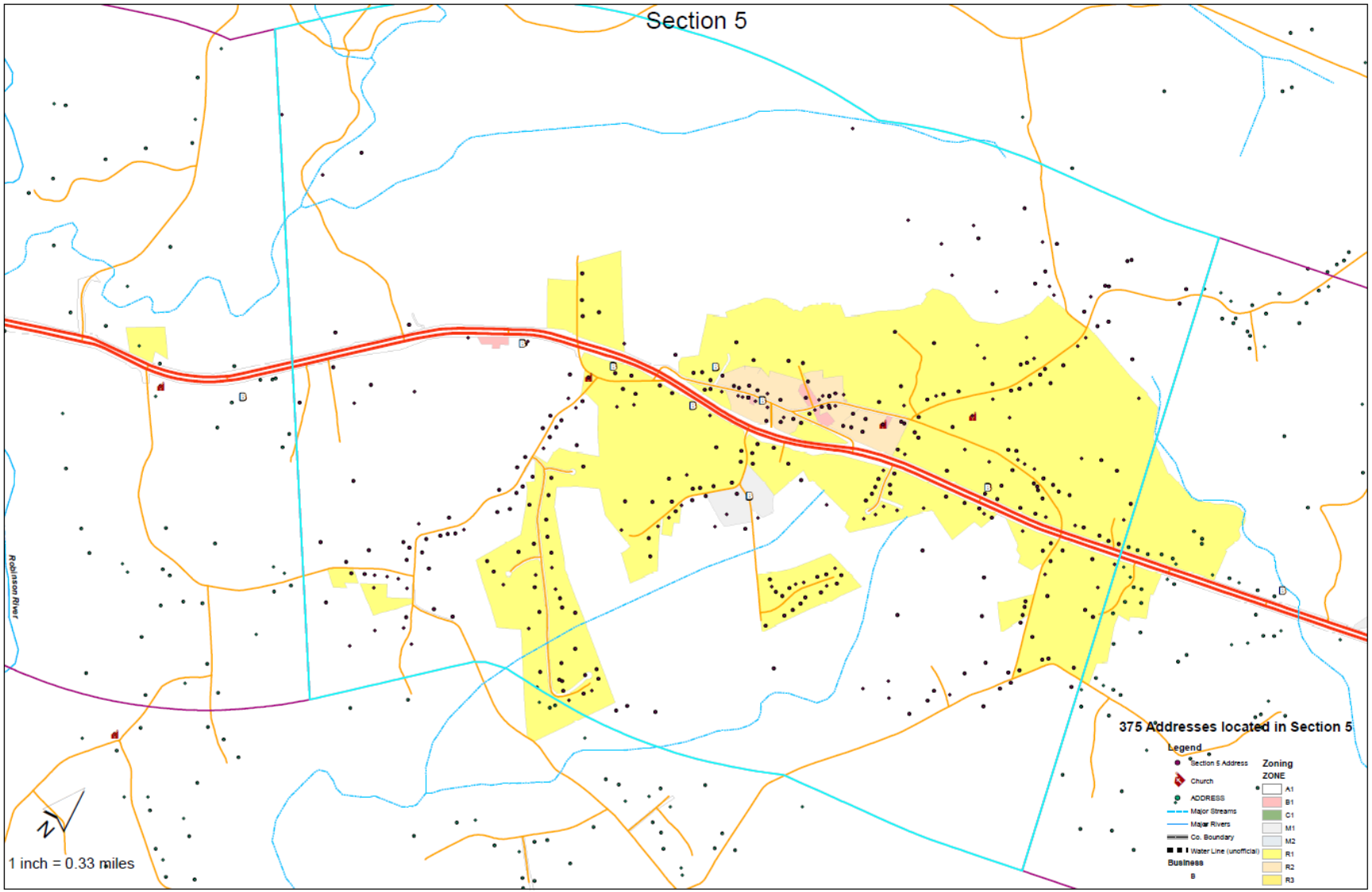

Figure 8. Segment 5 - Existing zoning and addresses.

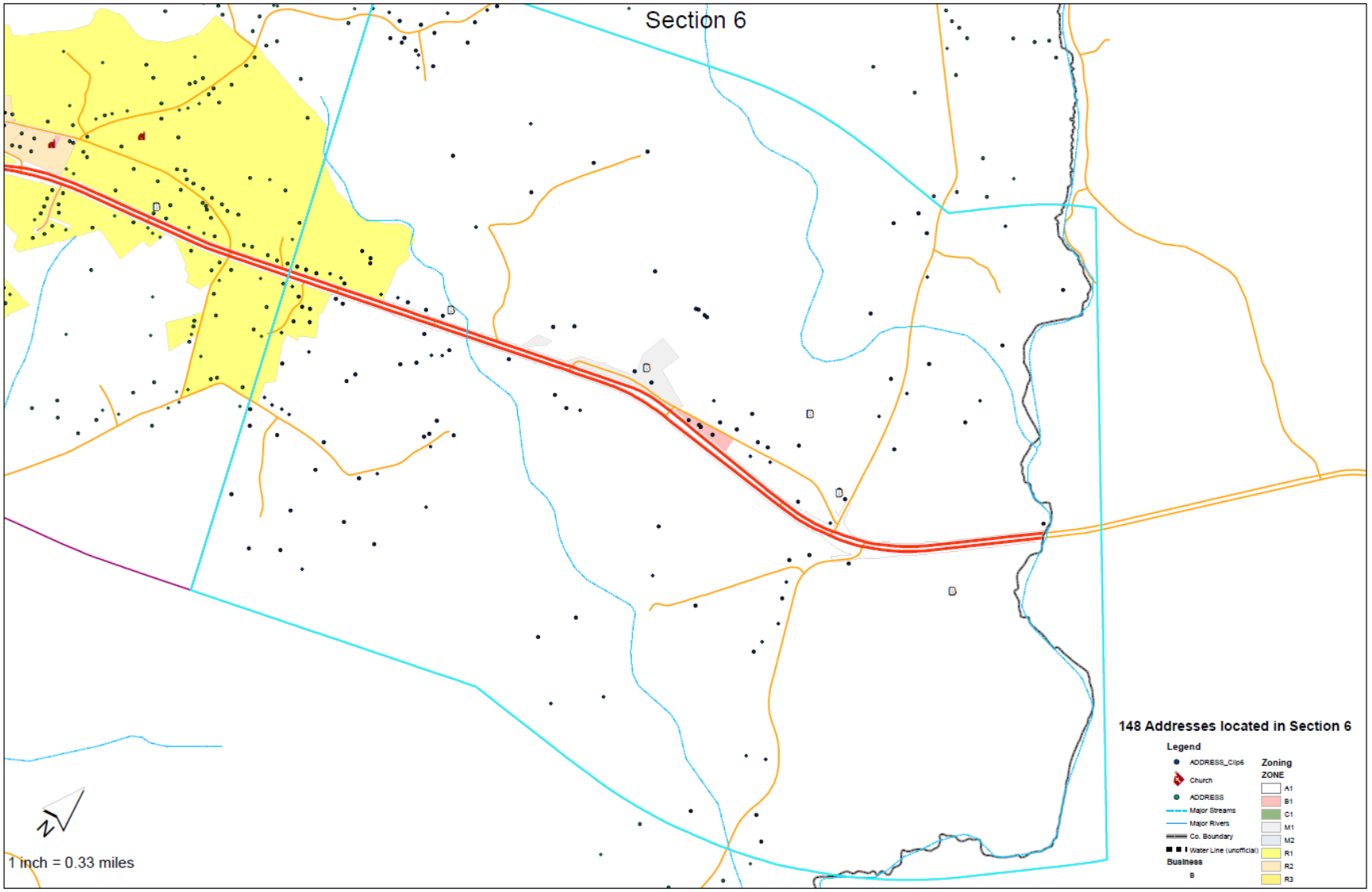

Figure 9. Segment 6 - Existing zoning and addresses.

Utilities

Public Water and Sewage

The 2012 Comprehensive Plan summarizes the County's public water supply and waste water treatment resources. Although intended to represent the entire County, the facilities as described in the Comprehensive Plan are representative of The Corridor and excerpted here for ready reference:

> "The Rapidan Service Authority (RSA) is a regional public water and sewer utility serving Madison, Greene, and Orange counties. Madison County does not own or operate a public water or sewer system. The RSA owns a water supply and sewage system that serves the Town of Madison and some adjacent areas of the county. In 2010 the water system had 248 users that use an average of 80,000 gallons per day (GPD). The water treatment plant, which withdraws water from White Oak Run, has a capacity of 250,000 GPD. A storage tank for the system on Courthouse Mountain has a capacity of 500,000 gallons.
>
> The sewage treatment plant at Madison, located east of Route 29 and north of Town, has 149 connections that use an average of 50,000 GPD and is operated at 62 percent of its capacity of 80,000 GPD. The plant could be expanded on the present site if necessary.
>
> Also within Madison County, RSA serves the old lace factory near Shelby, and to the Plow and Hearth facility at Oak Hill. Madison County has no plans to expand the provision of public water and sewer service. Any future water and sewerage facilities in Madison County would be operated and maintained by RSA."

The significant changes since the 1980 study relate primarily to who owns and operates the facilities that have existed since the mid 1970's. The public water supply and distribution system that serves the Town, a system constructed in 1967, was still exclusively the Town's facility when the last Corridor Study was completed. In 1980 the Town's supply system included a 75,000 gallon elevated storage tank at the corner of Thrift Road and Main Street (The Water Tower). The RSA has since replaced that tank with the half-million gallon tank on Courthouse Mountain. The capacity for treating waste water has not changed since 1980 – 80,000 GPD capacity. The lone addition to water supply and treatment is the service from the RSA Rapidan River plant that reaches the old lace factory property and is shown in segment 1 (Figure 3).

The Route 29 Corridor Committee reached out to the RSA (Mr. Dudley Pattie) during preparation of this study. The RSA has no plans to expand or extend public sewer and water service in Madison County. As a matter of policy, the RSA may upgrade existing services, but will only pursue expansion at the County's request.

Telecommunications and Internet Services

Telecommunications have assumed a primary significance in modern commercial (and residential) planning. In addition to the traditional cable and telephone lines that share the Route 29 right-of-way, The Corridor now includes a major trunk line of fiber optic cable. More information about traditional and newer telecommunications services was provided in the 2012 Comprehensive Plan:

> "Verizon and other private wireless telecommunications providers have, for years, focused their development efforts along the route 29 corridor. Cable television and internet services, through

Comcast, are available primarily within the Town of Madison and areas of the county adjacent to Town; however, some expansion of cable services into additional areas of the county has occurred within the past five years.

In 2010, FiberLight, LLC completed a 130-mile diversely routed network system, which provides underground capacity between Culpeper and Ashburn, Virginia, and Washington DC….in January 2011 the company announced the establishment of its newest high capacity fiber optic network, a 46-mile direct connection from Culpeper, VA to Charlottesville, VA. The new high-count, underground network will use enhanced fiber for lower latency and will provide a direct connection to Culpeper and Washington, DC…Solutions are provided to telecom carriers, government, enterprise, content providers and web-centric businesses. FiberLight's wholly-owned network has been installed along the Route 29 right-of-way, and there are access points located approximately every 1,000 linear feet."

There was also a "feasibility study" conducted by the Virginia Department of Housing and Community Development for the County in 2009. It's available at the BOS office.

The infrastructure required to support cellular wireless systems is better developed in The Corridor than anywhere else in the county (Figure 10). With the addition of the tower near Zeus (Segment 4), coverage along Route 29 should be very reliable for users of most major carriers.

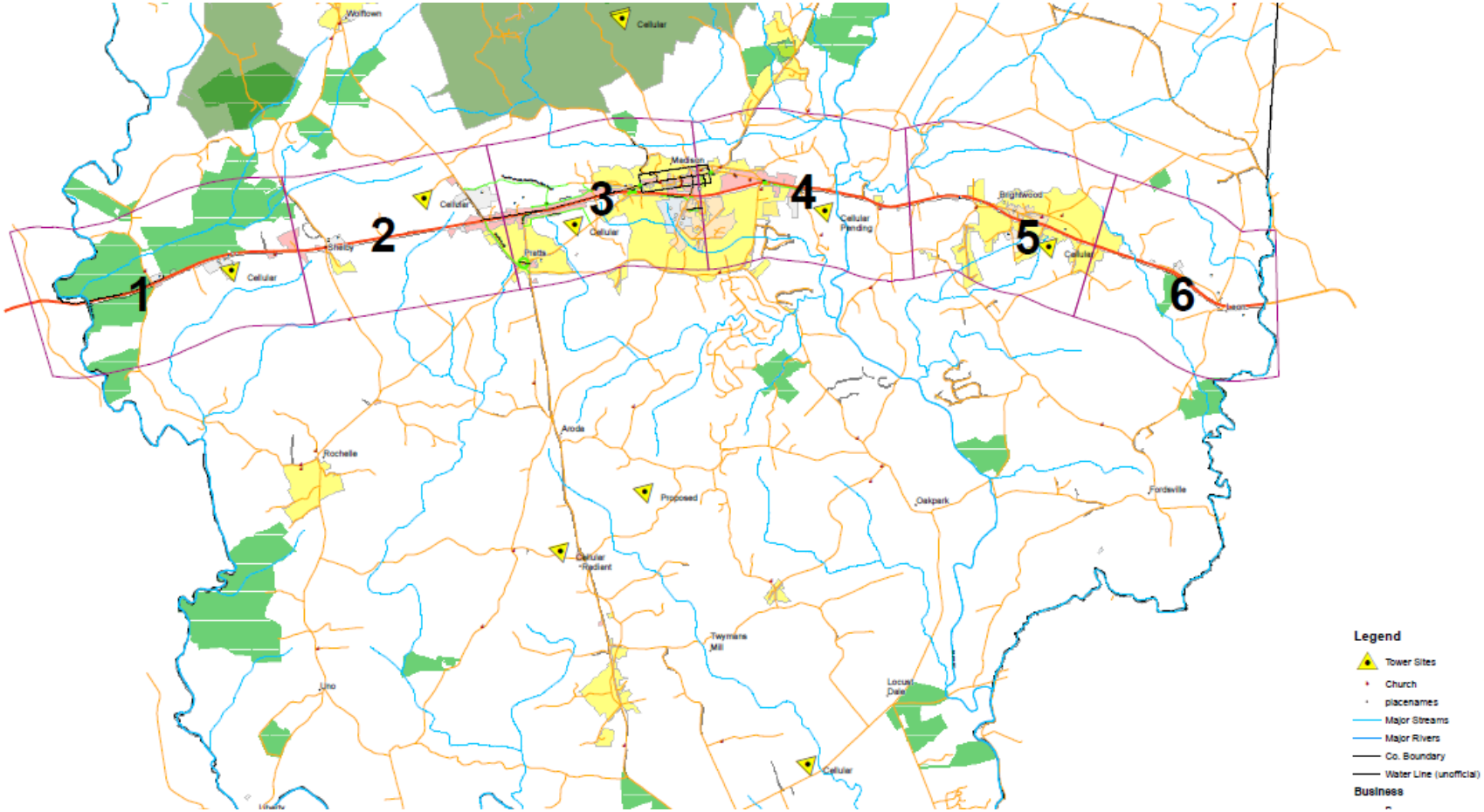

Figure 10. Cellular Wireless Facilities in the Corridor.

Transportation

U.S. 29 is easily the most significant transportation feature in Madison County. The only other US highway is Route 15, but it has no direct interaction with Route 29 within the county. State Route 230, a Virginia primary highway, runs from US 15 to US 33 in Stanardsville in Greene County. SR 230 very much interacts with The Corridor, forming two at-grade intersections near Oak Hill south of the Town of Madison. State Route 231 connects Madison with Gordonsville to the south and Sperryville to the north. It crosses Route 230 at Pratts and runs coincident with US 29 Business through the Town of Madison.

Basic traffic counts for the major transportation facilities in the county with relevance to The Corridor are included in Tables 2 & 3:

Table 2. Average Annual Daily Traffic – Corridor-related US and State Primaries

Route	Segment		2011 AADT	Trucks & Buses
	Start	End		
US 29	Greene County Line	SR 230 Wolftown-Hood Rd	15000	7%
US 29	SR 230 Wolftown-Hood Rd	SR 230, SR 231 Orange Rd	20000	7%
US 29	SR 230, SR 231 Orange Rd	Bus US 29 South of Madison	19000	7%
US 29	Bus US 29 South of Madison	Bus US 29 North of Madison	17000	7%
US 29	Bus US 29 North of Madison	56-607 Ridgeview Rd; Lillards Ford Rd	16000	7%
US 29	56-607 Ridgeview Rd; Lillards Ford Rd	Culpeper County Line	15000	7%
VA 230	Greene County Line	US 29 S Seminole Trail	3000	3%
VA 230, VA 231	US 29, SR 231, S Seminole Trail	SR 231, S Blue Ridge Tpke	3300	3%
VA 230	SR 231, S Blue Ridge Tpke	56-607 Elly Rd	3100	4%
VA 231	Orange County Line	SR 230 Orange Rd; 56-686 Fairgrounds Rd	1200	3%
VA 230, VA 231	SR 230 Orange Rd; 56-686 Fairgrounds Rd	US 29 S Seminole Trail	3300	3%
US 29, VA 231	SR 230 Orange Rd	Bus US 29 Main St	19000	7%
Bus US 29, VA 231	US 29 S Seminole Trail	SCL Madison	3600	5%
Bus US 29, VA 231	SCL Madison	N Blue Ridge Turnpike	3600	5%
VA 231	Bus US 29 Main St	NCL Madison	3200	10%
VA 231	NCL Madison	56-670 Old Blue Ridge Tpke	3800	3%

Table 3. Average Annual Daily Traffic – Corridor-Related Secondary Roads.

Route	Segment		2011 AADT
	Start	End	
Oak Park Rd	56-616 Carpenters Mill Rd; 56-626 Oneals Rd	US 29 Seminole Trail	2500
Washington St	US 29 Seminole Trail	ECL Madison	3000
Washington St	ECL Madison	Bus US 29 Main St	3000
Fairgrounds Rd Connector	SR 230 Orange Rd; SR 231, S Blue Ridge Tpke	56-687 Fairgrounds Rd	1600
Fishback Rd	56-634 Oak Park Rd	FR-1057 Restoration Lane	1300
Madison High School	Bus US 29 Main St	Madison High School	350
Madison Elementary School	Madison Elementary School	56-687 Fairgrounds Rd	180
Mountaineer Lane	US 29 S Seminole Trail	Madison High School	1300
Mountaineer Lane	William H Wetzel Middle School	56-687 Fairgrounds Rd	740
Primary School Dr	56-687 Fairgrounds Rd	Madison Primary School	850

Table 4 summarizes the latest (2011) traffic accident counts by segment. The specific locations for these accidents are available upon request.

Table 4. 2011 Crash Statistics.

Segment	2005 – 2009		2011 Crashes (most recent)
	Total	Five-Yr. Avg.	
1	73	15	5
2	45	9	8
3	31	6	20
4	48	10	11
5	89	18	7
6	68	14	4
Total	354		55

"Orderly" Development

General Planning Guidelines

The 1980 Corridor Study provides some generic guidance on planning that remains relevant to the current review. Rather than recreate this guidance, pertinent sections are repeated here:

> "In the course of establishing optimum land uses, several tools are available to aid in the analysis. Existing land use patterns and transportation characteristics have been previously discussed. Suitability criteria for difference land use types are described below to illustrate these different needs.

Residential

Soil and subsoil conditions should be such that excavations and utility installations may be performed in an economical manner. Flood prone sites and those with shallow water tables are also to be avoided. Adequate site drainage is essential to a residential site.

A slope of 2% is generally considered the minimum for residential sites where ground frost is probable. Slopes greater than 20 – 30% are very expensive and impractical to build upon. The availability of water supply and sanitary sewage disposal facilities is among the most important factors to be considered. <u>Under no circumstances should any major residential development proceed without first resolving its water and sewer needs.</u>

The site selection process also involves the need to isolate or buffer the potential site from local hazards and nuisances. These may be in the form of noise, smoke, dust, odors or potential accidents.

Proximity to existing or potential employment, schools, churches, and shopping areas, and recreation must also be seriously considered. Along with this, safety, capacity, and proximity to transportation routes are also necessary considerations.

Commercial

The site selection process for commercial areas is in many ways similar to that of residential areas. But there are additional considerations to be made for potential commercial areas. For instance, it must be located on or very near major transportation routes. It must also be located near an existing customer source. Because of the need for large amounts of flat land for parking and general access, slopes greater than 8% are considered economically impractical for commercial development.

Industrial

Industrial site selection involves a more extensive checklist than residential and commercial. First, it is necessary to find a site with suitable soil characteristics and a suitable slope. As slope increases, sites become less desirable as industrial locations. A 3% grade is considered the maximum for uninhibited trucking operation. Small scale industry without a large demand for trucking is possible on slopes up to about 7%.

Another important site consideration is the availability of water and sewer facilities. The amount of water needed is dependent upon the type of industry. However, a sufficient quantity is necessary to meet any cleaning, drinking, heating, or sprinkler system needs. Also dependent

upon the type of industry is the type and quantity of effluent produced. Sewerage facilities must be provided to meet these needs. These facilities may be provided by a public sewer system, or on-site "package" treatment plants.

Proximity to raw materials as well as to the product market place is also a major consideration. In addition, it is necessary for a labor supply to be located nearby, possibly requiring additional commercial and residential development. Incompatibility arises however, when industry locates immediately adjacent to existing residential development. This incompatibility is due to the impact of noise, smoke, dust, etc., produced by the industry, on the residential area. Because of the increase in trucking and automobile traffic in the area, safety problems may also arise. For essentially the same reasons, problems also surface when industry locates near community schools, and major commercial areas.

Finally, industrial sites should be located in such a manner as to provide quick, easy, and safe access to major transportation routes. This may require construction of new roads as well as improvement of existing roads to safely accommodate the increased truck and automobile traffic load.

General Transportation/VDOT Concerns

An initial draft of this Corridor Study was forwarded to planners with VDOT's Culpeper District to communicate the County's general priorities and to receive feedback on the various ideas that are presented. VDOT's review[5] was thorough and provided very constructive feedback. Key concepts and common goals expressed through the feedback are summarized here:

Shared Access: VDOT is very interested in limiting the number of direct accesses from private land onto Route 29 (and all other principal arterial roadways). One means to achieve this goal and also accommodate the needs of new development as well as redeveloping parcels is to require shared accesses. This can be done with neighboring parcels but is also commonly done by allowing a greater depth in the commercial zoning along a highway which encourages commercial development internal to a site and not just strung along the roadway frontage.

VDOT is more likely to permit an access point on a major roadway for a single user if there is a committed plan for additional development that will share that access point in the future. A committed plan could include an approved development plan or a long-range road network included in the comprehensive plan or another official County document that shows the access will be shared in the future.

The County now has five signals in the short distance adjacent to the town and south of town to Route 230. The elimination of some of these signals can be achieved relatively easily and not create major inconveniences for the residents of Madison County or other travelers. Removal of the signals could be achieved by replacing them with bridges and perhaps the extension of some surface streets which would provide new connections in the road network. VDOT generally supports fewer signals, which would reduce through travel time and eliminate locations where

[5] Email correspondence between Dan Painter, VDOT Culpeper and Kevin McGhee, Madison PC, October 2013.

accidents are more likely to occur. VDOT would likewise be supportive of future development along the corridor that does not add new signals to the system in the Madison County area.

VDOT has conducted previous studies of general traffic flow near the Town of Madison and along the corridor and has identified several locations where roundabouts may function very well. The benefits that would be realized from these roundabouts include; the likely reduction in serious accidents, the elimination of the potential for signalizing these intersections in the future, the visual enhancement that can be achieved with these features, and the removal of potentially confusing traffic movements, a factor that becomes a bigger concern as the area residents age.

County Policy/Relevance to 2012 Comprehensive Plan

"Orderly development" of Route 29 should adhere to the philosophy and intent as expressed in the most current Comprehensive Plan, the official planning document of the County. The Goals and Objectives of the 2012 Plan include many direct and not-so-direct references to development of The Corridor. For ready reference and for further clarification, specific excerpts from The Plan are presented by category and corresponding page number in Appendix B. A summary by primary topic area is provided in the next section.

Natural Resources, Agriculture and Forestry

The connection of Natural Resources, Agriculture and Forestry topics to The Corridor has more to do with what the County should avoid than what it should pursue. Protecting open space and working agricultural lands are key goals of these sections of The Plan. Specific strategies with relevance to The Corridor include those that refer to the availability (or lack thereof) of public water and sewer and its use to generally restrain and direct higher density residential development.

Recreation

Recreation is a County-wide concern. The Hoover Ride property is a prominent and tangible example of the County's desire to provide recreation facilities to its citizens. The Plan also mentions improved "pedestrian access" within the Town of Madison. Extending pedestrian and safe bicycle access to the school properties and Hoover Ridge Park is perhaps one secondary benefit of potential transportation improvements within The Corridor.

Retail and Other Businesses, and Economic Development

One very specific (and relevant) objective expressed under these topic areas was the prevention of "commercial strip development" along major roadways within the County. This section is also very deliberate about limiting access points and maintaining minimum spacing between entrances. This section of The Plan also recommends the establishment of a "review committee for future site locations and areas of development", a task that The Route 29 Subcommittee has, at least temporarily, assumed for this more focused study area.

The Economic Development section acknowledges Route 29 as an economic growth area, but also encourages development along other primary roads. It also mentions the County's role in providing for public services and facilities necessary to accommodate this development.

Residential Land Use

The goals and objectives in this section were preoccupied with directing residential development, particularly higher-density housing, away from land well suited for farming and conservation. It again emphasizes provision of public sewer and water services to help direct residential development, and mentions several villages along The Corridor that may be appropriate as residential growth districts.

Transportation – General and the Route 29 Corridor

These two sections of The Plan constitute a comprehensive vision for the County as it pertains to The Corridor and transportation in general. Both emphasize accommodating development along major transportation routes without compromising their safety and efficiency. They likewise include frequent mention of the desire for development to conform to the present character of the roads and the land adjoining them, as well as an emphasis on protecting "scenic vistas".

Specific strategies for meeting the stated objectives include the oft-mentioned provision of public water and sewer to influence development of residential, retail, and industrial land. These sections also discuss access control and spacing, service roads, sign regulations, setback requirements, tree retention, and commuter parking among worthy concerns for development along highways.

The section on the Route 29 Corridor recognizes the desire to promote industrial and commercial development, while ensuring this happens in accordance with relevant ordinances and regulations and in keeping with the character of the County. It likewise acknowledges the imperative to maximize safety and minimize impact on existing traffic flow. Preserving scenic quality to promote tourism and general quality of life are a final objective.

Communication and Energy, Water and Sewer Utilities

The sections of The Plan that address public and communication utilities do not specifically mention The Corridor, but do address infrastructure with highest presence and use near Route 29. The goals discuss coordination with transmission and distribution companies and the desire to minimize intrusion of related facilities on the County landscape. The discussion about public water and sewer once again references its likely value in influencing future residential growth.

Possible Land Use/Zoning Revisions

Residential

There is substantial under-utilized residentially zoned property in The Corridor (see existing zoning maps, Figures 4 through 9). Depending on residential growth that may be prompted by business/industrial development, it may be necessary to up-zone some R-1 zoned districts to higher density R-2 and R-3 districts, but no specific new A-1 zoned land areas are identified for rezoning for residential use.

Business/Industrial

Numerous areas are identified for rezoning or "right-zoning" to either the actual current land use or the use that is consistent with neighboring property use, existing infrastructure, or infrastructure that

could be installed or constructed with relative ease. Specific suggestions are listed by Corridor segment below:

Segment 2/Shelby:

There are several existing properties that are engaged in light industrial /commercial activities that could be rezoned to accommodate more flexibility in future use. Specific locations are found both at Shelby and near Oak Hill. There is also property near the County-owned transfer station that could be rezoned to accommodate industrial use with minimal disturbance to neighboring property owners.

Opportunity also exists to expand business zoning along Route 230 from US29 towards Wolftown. With appropriate coordination in transportation improvements (see next section) additional B1 zoning may work well on both the north and south sides of Route 230, as well as along US29 to the north and, to a lesser extent, the south side of Oak Hill.

Segment 3/Madison South

The most logical commercial growth in this segment risks the sort of "strip development" that the County would prefer to avoid. For this reason, it is essential that business growth along both sides of US29 from Route 230 to Fairgrounds Road be coordinated with necessary infrastructure improvement and/or additions (see Proposed Transportation Improvements). Permitting business-oriented land development through this segment without adversely affecting flow along and interaction with mainline US29 will likely require reverse-frontage roads parallel to and along both sides of the corridor.

Segment 4/Madison North

Expected zoning revisions in the segment should be minimal for the foreseeable future and can likely be limited to an extension of business zoning on the eastern side of US29 from Fishback Road to Gate Road. The proposed transportation improvements to accommodate commercial use here should also seek to improve access to/from the planned Rescue Squad facility.

Section 6/James City

Should business growth pressures require it, the land adjoining the parallel road behind James City Enterprises may accommodate up-zoning to B1. Otherwise, there appears to be very little warranted revision to land use in this segment.

Possible Transportation Additions/Revisions

Figures 11 & 12 are important transportation improvements and alternatives that may be necessary to effectively accommodate commercial development of The Corridor without compromising three of the four "Guiding Principles" (see Introduction) relating to safety, capacity, and accessibility. The proposed changes/additions/extensions are shown in bright green and described below.

South

Figure 11 covers possible changes south of The Town. It includes a roundabout at Pratts that would improve safety at the SR 230/231 interchange and move the main alignment of 230 to eliminate the cross-over on US29 near VDOT's Area Headquarters office. Additional southern options include service roads to accommodate commercial development along The Corridor without adding access points and congestion along the main alignment. Figure 11 also illustrates a proposed grade separated intersection at the southern end of Business 29, which will improve access from the Town to the public school complex and the Hoover Ridge facilities. It will also dramatically improve safe movement of school buses as they move from the primary public school properties to the Waverly Yowell School on the northern end of Town.

North

Figure 12 represents a much more limited menu of possible changes that would improve access and safety in an area north of the first. It includes extending the frontage road east of the Corridor in front of the MWP factory to meet Oak Park Road. Among other things it would provide safe access to the grade separated interchange on the southern end of town and greatly reduce the use of the intersection at Oak Park Road/Washington Street. A complementing change proposed here is an alternative entrance to the Maple Drive neighborhood, the current access point being a perpetual challenge to function and safety of the interchange of Oak Park Road and US 29.

At the northern end of Business 29 is another proposed grade separated interchange, this time with Fishback Road and Business 29. An extension of Restoration Lane is also proposed here as a longer-term improvement to provide safe southbound US 29 access for the future Rescue Squad facility.

General

Should any or all of these suggestions be considered in the future, the County is encouraged to adhere to the 900-feet spacing requirement between access points as recommended in the 2012 Comprehensive Plan. Exceptions may be warranted with VDOT approval. The County should follow VDOT's requirements for principal arterials[6] and always seek the safest alternative.

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6 http://www.virginiadot.org/projects/resources/access_management/12.27.11/Access_M._Principal_Arterial_24VAC30-72_Regulations_1.2012.pdf

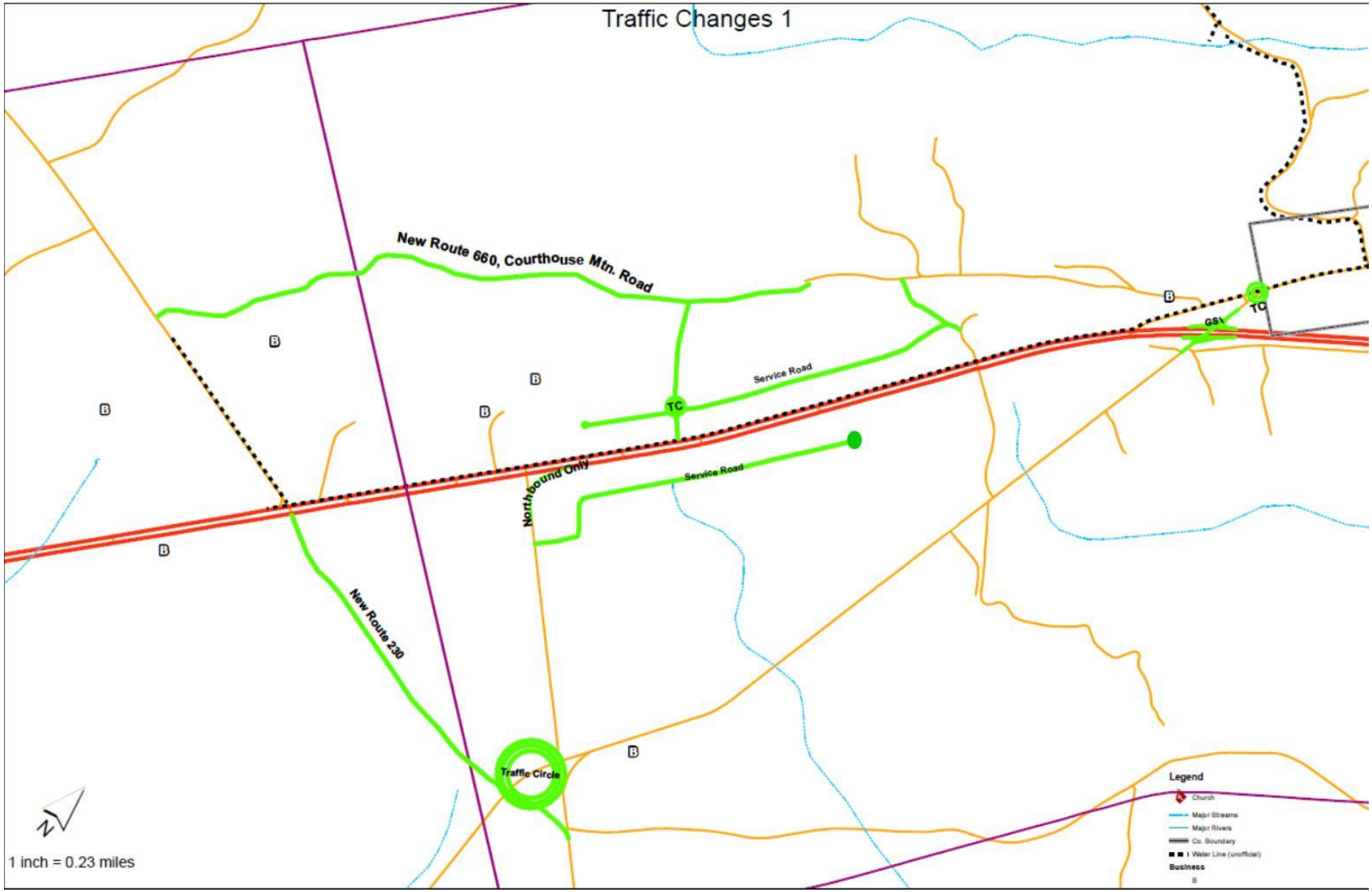


Figure 11. Proposed Transportation Improvements - South.

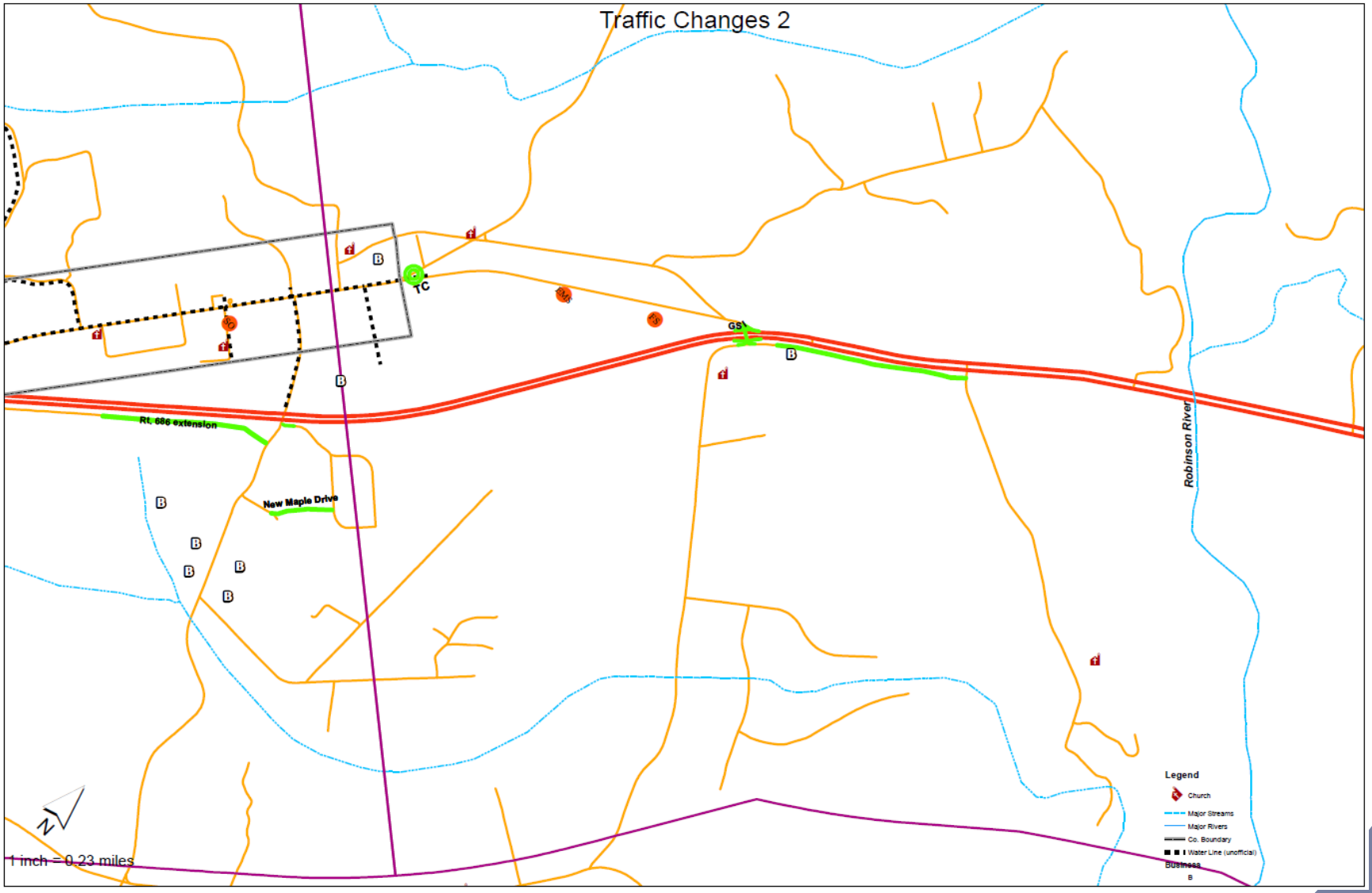


Figure 12. Transportation Improvements - North.

Implementation

The Board of Supervisors adopted this report as an official addendum to the 2012 Comprehensive Plan.

Zoning

When considering the possible revisions to land use like those identified in this study, it is essential to couple zoning changes with a commitment to necessary transportation improvements. The service roads that would run parallel to Route 29 are particularly important.

The County should be particularly aggressive in "marketing" those existing business-zoned properties that are not currently engaged in their highest and best use. Business prospects that propose "adaptive reuse" should receive particular preference. The County should also recognize the inherent burden that existing structures, parking areas, etc., represent to some businesses and take steps to also encourage proposals that might involve entirely new development of property.

Transportation Improvements

There are two types of transportation improvements discussed in this report:

1. Those that would improve traffic flow and safety regardless of whether new development occurred of any type. Examples include the grade separated interchanges at the north and south end of the Town of Madison and the traffic circle at the junction of Rt 230 and 231.
2. Service roads that would run parallel to US 29 which only become relevant (and perhaps essential) with added business and/or light industrial growth.

Incorporate the transportation improvements identified in number 1 above into the Rappahannock Rapidan Regional Commission's Rural Long Range Plan and the VDOT Six-Year Plan.

Appendix A - Basic Zoning Districts

A basic description of each zoning district, taken from the County's Zoning ordinance (October 2012), is provided in the following sections. Note that there remains a district, Conservation (C-1), that is not represented in The Corridor and therefore not described.

Agricultural, A-1

This district is established for the purpose of accommodating all types of rural, open land uses such as agriculture, and forestry, along with kindred rural occupations. The basic aim is to promote farming as a continuing way of life in Madison County. The agricultural area should maintain a low development density allowing farm and local estate residences. Intensive suburban growth is less feasible. The permitted uses are broad enough to allow expanded residential uses in pre-planned and staged locations recognizing future trends of orderly growth, and at the same time discouraging random scattering of such uses throughout the district.

The minimum lot area for permitted uses is 3 acres (per use).

Residential Limited, R-1

This district is established to provide quiet, low density residential areas in the portions of the county where they currently exist and where expansion of such low density areas can reasonably occur. The regulations of this district are designed to promote harmonious residential communities and suitable environments for family life. Permitted uses thus are limited to relatively low concentrations of single family dwellings and complementary uses such as schools, churches, and parks and public facilities that serve the district's residents more intense uses such as commercial and industrial are considered inappropriate.

The minimum lot area for permitted uses is 1.5 acres without public sewer and water and 1.0 acre when public sewer and water are provided.

Residential General, R-2

This district is established for the purpose of accommodating a variety of residential types including single family detached, single family semi-detached, and single family attached units.

The district is designed to create viable rural residential neighborhood environments suitable for a mix of family types especially those with children. The district also is created to provide an alternative to the single family detached housing unit and to encourage the orderly planning and development of residential village communities. Therefore, the district should be located in those portions of Madison County within, adjacent to, or very near to existing villages or settlements where neighborhoods currently exist. All commercial, industrial and agricultural uses are excluded.

Development in this district may utilize individual wells or sewage disposal systems, provided that all applicable State Health Department and State Water Control Board regulations are met.

The minimum lot are for permitted uses shall be 1.5 acres without public water and sewer systems, and 0.75 acre with public water and sewer. The required area may be greater if the Health Official determines necessary to accommodate on-site water and sanitary disposal systems.

Residential Multiple Family, R-3

A new addition since the 1980 study, this district is established to provide a mixture of multi-family dwellings, such as apartments, at a density not to exceed eight dwelling units per acre. This district is designed to be part of a viable residential neighborhood environment which includes households of varying types, including those with children. Because this zone permits the highest residential density in Madison County, development within an R-3 zone must include the

careful design and construction of recreation and pedestrian circulation improvements, parking areas, and the adequate provision of usable open space.

To insure orderly planning and development under this zone in conjunction with other residential neighborhoods, this zone shall be located adjacent to R-2 zones, or within or adjacent to existing towns, villages, or settlements of Madison County. An R-3 zone shall only be established where public water and sewer facilities are available. Further, this zone requires adequate, safe access to protect its residents and the surrounding uses. Therefore, the zone shall be located adjacent to a major transportation route or traffic collector of the County.

The minimum lot area shall be 10,000 square feet plus 2,000 square feet for each additional dwelling unit. The Administrator may require a greater area if considered necessary by the Health Official. No development within this district shall have density greater than 8 dwelling units per gross acre of site area nor shall buildings on any parcel within this district cover more than 35% of the total lot area.

Business, General B-1

This district is established for the purpose of accommodating general commercial and business uses to which the public requires direct and frequent access. Thus, it will normally be located on arterial highways which are adjacent to or in close proximity to population centers. The district is not to be characterized either by constant heavy trucking other than stocking and retailing of retail goods, or by an nuisance factors other than occasioned by incidental light and noise of congregation of people and passenger vehicles.

There are no area requirements, except for permitted uses utilizing an individual sewage disposal system. The required area for any such use shall be approved by the Health Official.

Industrial, Limited M-1

This district is established to permit certain light to median industrial uses near a labor supply for which satisfactory evidence is presented that such uses, either by right or special use permit, will not adversely affect any contiguous district by reason of odor, glare, smoke, dust, vibration, noise, sight, or contamination of water air, and land. Such establishments shall not result in any unusual danger of fire, explosion, drowning, or hazard of life or limb.

With the exception of meeting the regulation of the State Health Department and the Virginia Department of Transportation, there are no minimum lot area requirements for this district.

Industrial, General M-2

This district is established to permit certain general industrial uses which may create some nuisance, and which are not properly associated with, nor particularly compatible with, residential, institutional, and neighborhood commercial service establishments. It is specifically the intent of this district to encourage the construction of and the continued use of land for heavy commercial and industrial purposes, and to prohibit residential and neighborhood commercial uses and to prohibit any other use which would substantially interfere with the development, continuation, or expansion of commercial and industrial uses in the district.

To insure that the district has a minimal impact on Madison County's existing environment and character, it must be carefully planned and developed. The location of the district must have s close proximity to public water and public sewer and major highways. Further, gentle to moderate topography and suitable soils should be present.

With the exception of meeting the regulation of the State Health Department and the Virginia Department of Transportation, there are no minimum lot area requirements for this district.

Appendix B – Relevance to 2012 Comprehensive Plan

Natural Resources (Page 66)

Goal 1: Protect and enhance the forest, open spaces, and working lands that support the county's quality of life and economic base.

Objective 2 – Conserve significant natural resources and working lands through a combination of voluntary economic and regulatory programs.

Strategy 5 – Continue to limit municipal water and sewer expansion to areas planned for residential growth.
Strategy 8 – Ensure that new construction adapt to existing topography and setting and that land disturbances are kept to a minimum.
Strategy 9 – Discourage development that may cause environmental damage to sensitive areas.

Goal 2: Promote and sustain agriculture and forestry as the highest priority industries in the county.

Objective 1 – Limit residential development in Agriculture and Conservation Zones.

Strategy 2 – Do not permit extension of water and sewer service other than to areas of the County planned for higher density residential development.

Recreation (Page 71)

Goal 1: Provide adequate and appropriate recreational opportunities to meet the current and future needs of Madison County citizens

Objective 1 – Provide recreational facilities, lands and programs commensurate with citizens' identified recreation preferences

Strategy 5 - Encourage walking for healthy and leisure needs and facilitate pedestrian access to businesses by extending sidewalks downtown in cooperation with the Town of Madison and the Madison Main Street Project.

Objective 2 – Ensure Madison County's subdivision and zoning ordinances make provision for recreational facilities in conjunction with new development and private recreation ventures.

Strategy 3 – Encourage new development to dedicate right-of-way and construct sidewalks, bikeways and greenway trails for transportation and recreation purposes and construct such facilities concurrent with road improvements.

Agriculture and Forestry (Page 74)

Goal 2: Maintain agriculture and forestry as the primary land uses in the county.

Objective 1 – Develop a plan for providing land owners options for the voluntary preservation of farm and forest lands.

Strategy 7 – Continue to limit municipal water and sewer expansion to areas planned for residential growth.

Retail and Other Businesses (Page 76)

Goal 1: Encourage retail and service business development that serves the need of county residents and visitors and is compatible and consistent with the rural, open and scenic character of the County.

Objective 3 – Prevent unplanned commercial strip development along arterial and collector highways

Strategy 1 - Highway access points should be spaced not less than 600 feet on primary roadways (SR 230 and 231). Spacing on entrances on Route 29 and Route 15 should be a minimum of 900 feet and should correspond with median crossover points approved by VDOT. (Note that VDOT regulations prohibit the construction of private access points on the bypass sections of Route 29).

Strategy 2 – Prohibit incremental commercial and service rezoning at locations no in conformity with the Comprehensive Plan

Strategy 4 – Establish a review committee for future site locations and areas for development

Economic Development (Pages 78 – 80)

Goal 1: Plan for a substantial increase in economic development activities in the County, with attention directed to attracting firms that will expand employment opportunities, regional efforts with surrounding counties, current forestry and agricultural business and tourism-based businesses.

Objective 2 – Promote light industrial and commercial development that can, through substantial tax revenues, assist the county in meeting needs for public services and facilities.

Strategy 1 – Designate through zoning specific areas of the County intended for industrial and commercial use. Although Route 29 is the primary designated economic growth area for the County, other primary roads should be considered for comprehensive growth in specific designated areas.

Residential Land Use and Development (Pages 81 – 83)

Goal 1: Maintain agriculture and forestry as the primary land uses in the county, and preserve agricultural and conservation land use where such use is most sustainable. Promote a hierarchical use structure in those areas that favors farming and forestry to residential development.

Objective – In reviewing residential development plans proposed in Agriculture and Conservation zones, work with the applicants to maintain farmlands that are large enough to permit continued farming and to provide adequate separation between farming and residential activities.

Strategy 9 – Discourage extension of public water and sewer service to areas that are more appropriate for agricultural and conservation use.

Goal 3: Provide for moderate growth in the county's housing stock and encourage such growth to occur in areas that will accommodate public water and sewer service.

Objective – Channel intense residential development to areas served by public water and sewer systems or where such service would be appropriate.

Strategy 1 – Develop criteria that will pre-qualify land as appropriate for residential development. Areas in the vicinity of the Town of Madison and other village areas are candidates for designation as residential growth districts.

Strategy 2 - Encourage that all future residential land divisions resulting in lots of less than three acres be located in areas where public water and sewer service either exists or can be reasonably accommodated.

Transportation – Route 29 Corridor (Pages 85 – 87)

Goal 1: Plan for the orderly development of the Route 29 Corridor, allowing business, commercial, industrial, institutional, recreational and residential development in appropriate areas, while preserving areas of open space for agriculture and protecting scenic vistas.

Objective 1 – Promote industrial and commercial development in the Route 29 Corridor.

Strategy 1 - Designate along both sides of Route 29, a Highway Corridor Overlay District for commercial, industrial, institutional, recreational, open space, agricultural and residential development with appropriate design standards and performance criteria for development within each area of the corridor.

Strategy 2 – Plan for the provision of public water and sewer in appropriate areas of the Route 29 Corridor.

Strategy 3 – Develop a marketing program to attract appropriate industries and businesses to the corridor.

Strategy 4 – Establish within the corridor sites with approved utilities and other infrastructure elements needed and desirable for industrial development

Strategy 5 – Commission a contemporary local Route 29 corridor study

Objective 2 – Assure that industrial and business/commercial development in the Route 29 Corridor is carried out in accordance with relevant County ordinances and regulations, with careful review of proposed site development plans.

Strategy 1 – Develop and adopt performance criteria to be used in approving sites for industrial development….

Strategy 2 – Maintain a cautious and sensible approach regarding zoning and rezoning for commercial and industrial development in the Route 29 Corridor.

Objective 3- Require that access to activities along Route 29 be designed for maximum safety and minimum adverse effects on traffic flow.

Strategy 1 – Continue a minimum of 900 feet between entrances on Route 29. Exceptions could be made for parcels only if no other means….

Strategy 2 – Explore opportunities to encourage the construction of service roads and shared access points for existing and future development.

Strategy 3 – Encourage the safe use of existing intersection for future development.

Objective 4 – Control future development along route 29 Corridor. Protect the scenic quality of Route 29 and recognize the value of the view from the road. The County's concern with preserving the quality of life of its residents, as well as its desire to promote tourism, are major reasons for protecting the scenic quality of route 29.

Strategy 1 – Encourage all new development to have increased setback distances, as practical, from the right-of-way line of Route 29.

Strategy 2 - Develop and adopt regulations for signs of all types; discourage the use of freestanding advertising signs in the Corridor.

Strategy 3 – Identify scenic vistas and develop a program for protecting their character

Strategy 4 – Encourage the retention of trees within the Corridor and promote the planting of new trees to protect and enhance the visual quality of the Corridor.

Transportation – Generally (Pages 97 – 90)

Goal 1: Plan for and encourage the development of a more efficient transportation system designed to facilitate the safe and convenient movement of people and goods within the county as well as between the county and other localities.

Objective 2 – Develop and implement a land use plan that makes optimum use of existing transportation facilities and avoids overloading those facilities, in order to prevent congestion, safety hazards, and unnecessary expenditures to increase capacity.

Strategy 1 – Utilize the access guidelines associated with the various DPT road classification in the review and approval of development proposals

Strategy 2 - Require the use of service roads and shared access to arterial and high-volume collector roads to increase the distance between entranced in order to sustain a reasonable level of traffic flow and prevent accidents.

Strategy 4 – Continue a minimum of 600 feet between entrances….; increase Rt 15 requirements to 900 feet and maintain 900 feet requirements on Route 29.

Objective 3 – Promote ridesharing, vanpooling, bikeways, and public transportation as options to reduce traffic volumes and expand the transportation alternatives available to local and regional commuters.

Strategy 1 – Support VDOT efforts to develop commuter park-and-ride lots in the vicinity of Route 29, Route 230, Route 662, Leon, Oak Hill, and Shelby areas and town vicinity.

Strategy 2 – participate in regional programs to encourage ride sharing.

Objective 4 – Develop, with the cooperation of landowners, a program to promote a quality of development that preserves or enhances the view from the road to establish a positive image for the county and undergird tourism; such a program may include:

Strategy 1 – Encourage the retention of trees and wooded areas along roads and highways and the planting of trees and shrubs.

Strategy 2 – Encourage efforts to maintain the scenic qualities of Route 231, now officially designated a Virginia Byway, including anti-litter drives, the voluntary placement of properties under scenic easements, and other efforts to maintain the scenic qualities of the Byway.

Strategy 3 – Prepare and adopt development standards for the scenic view areas along the roads and highways, as identified on the Comprehensive Plan Map. The intent of these standards would be to permit development in accordance with guidelines that protect against construction of the type, size, or character that would not be in harmony with the existing landscape.

Goal 2: Recognize and plan for the correlation between new land use development and the existing highway systems that will support them.

Objective– Require new land uses to improve existing highway systems in relation to the added impact of new development.

Strategy 1 – With the assistance of VDOT staff, require any new development to provide traffic studies detailing specific impacts to the public access system.

Strategy 2 – Design impact thresholds where road improvements will be required to be added by the private sector.

Communication and Energy Utilities (Pages 90-91)

Goal 1: Assure that the actions of publicly regulated energy, gas transmission and distribution companies and communication companies, including cable TV and wireless communications companies, are consistent with and supportive of the County's Comprehensive Plan.

Objective 2 – To minimize the intrusion of utility facilities and equipment on the scenic qualities of Madison County.

Strategy 1 - Establish effective, continuing relationships with utility management in order to achieve coordination in planning, design, and development of utility facilities that will have an impact on Madison County.

Strategy3 – Support the development and implementation of high speed communication services to all county residents. A glance at a map…..(see CP). Note this strategy proposes that the Commission draft and maintain a "Technology Plan."

Water and Sewer Utilities (Pages 91 & 92)

Goal: Assure the provision of adequate, safe water supply and sewage collection, treatment and disposal for new development.

Objective 1 – Plan for the majority of new, high-density development to occur in a pattern that is capable of being served by central water and sewer systems at the lowest possible cost consistent with other County goals and objectives.

Strategy 1 – Designate areas where residential development will be encouraged, and coordinate with RSA concerning the provision of public water and sewer service in these areas.

APPENDIX C – VDOT's REVIEW

October 18, 2013

Mr. Kevin McGhee:

I want to "Thank You" for the opportunity to review the draft of the Madison County Route 29 Corridor – 2013 "Pre-Study" report that the Madison County Transportation Committee has developed over the past year. The "Pre-Study" is well written and contains many good ideas for improving the operation of Route 29 and the local road network adjacent to Route 29 in Madison County. Many of these ideas were discussed in the meetings I attended with the committee earlier in the year so I was glad to see they made it through your vetting process. The comments below are intended to be constructive as the review of the report moves forward. I have added a couple of additional ideas/concepts that I would like to suggest that may benefit the document if they are included. In addition to offering comments on the content of the draft report, I couldn't help myself and added some suggested grammar and spelling changes.

The Commonwealth of Virginia has designated some key roadways as Corridors of Statewide Significance (CoSS). The importance of this designation is that these routes are view as being critical to the economic wellbeing of the commonwealth. They serve as major corridors for both interstate and intrastate commerce as well as serving both regional and local mobility needs. Route 29 is designated as a CoSS. VDOT is charged with protecting and improving the capacity carrying characteristics and operational efficiency of this route. The report already contains potential improvements that will aid VDOT in achieving its goal so it might be beneficial to include a brief mention of the Corridor of Statewide Significance concept and description.

VDOT is very interested in limiting the number of direct accesses from private land onto Route 29 (and all other principal arterial roadways). One means to achieve this goal and also accommodate the needs of new development as well as redeveloping parcels is to require shared accesses. This can be done with neighboring parcels but is also commonly done by allowing a greater depth in the commercial zoning along a highway which encourages commercial development internal to a site and not just strung along the roadway frontage.

In some instances, VDOT is willing to permit an access point on a major roadway for a single user if there is a committed plan for additional development that will share that access point in the future. A committed plan could include an approved development plan or a long-range road network included in the comprehensive plan or another official County document that shows the access will be shared ion the future.

The draft plan discusses that elimination of two signals in Madison County on Route 29. The fact that Madison County has five signals in the short distance adjacent to the town and down to Route 230 has not gone unnoticed by many in the traveling public. The elimination of some of these signals came be achieved relatively easily and not create major inconveniences for the residents of Madison County or other travelers. Removal of the signals could be achieved by replacing them with bridges and perhaps the extension of some surface streets which would provide new connections in the road network. This discussion is already contained in the draft report but it is valuable to point out that such a removal would reduce travel time for vehicles on Route 29 and eliminate locations where accidents are likely to occur. Since VDOT is interested in the removal of some signals it should also be mentioned that it would be counter-productive to add any new signals to the system in the Madison County area.

The draft plan contains a discussion about potentially constructing two roundabouts on Route 231, one at both ends of the Town of Madison. It appears that both of these could functions very well. The benefits that would be realized from these roundabouts include; the reduction of the possibility of accidents at the two three legged intersections, the

elimination of the potential for ever having to signalize these intersections, the visual enhancement that would be made to the town, and the removal of potentially confusing traffic movements which will become a bigger concern as the area residents age.

It would be helpful if the proposed projects were added to comprehensive plan. This will allow them to remain visible to all people as future developments are proposed along the Route 29 corridor. It also will help to get the projects added to the Rappahannock Rapidan Regional Commission's Rural Long Range Plan and the VDOT Six-Year Plan. The County may want to consider investigating the use of "revenue sharing" as a means to accomplish some of the improvements. This would allow for some of the projects to move forward much sooner than waiting for VDOT to fund a 100 percent.

Other potential projects that have been included in the draft report such as creating new access into the Maple Drive area and the extension of Restoration Lane all make sense and can be achieved over time as the opportunities become available. VDOT number one concern is providing a safe road system to the citizens of Virginia and the improvement projects contained within the draft report all would contribute to increasing safety on our road network.

I hope the above comments will be helpful in making the report a stronger and more useful document. As the draft report moves through the County's review process I will make myself available to attend any meetings that you may feel that my presence would be a help. As a resident of Madison County as well as a VDOT employee, I am concern with how development occurs along Route 29 and how such development will impact the safety and operational efficiency of that highway.

Sincerely,

Dan Painter

Appendix B: 2015 Public Utility Amendment to the 2012 Comprehensive Plan

Public Utilities

Communication and Energy Utilities

From time to time, public utilities such as electric power companies, communications companies, and natural gas suppliers undertake the construction or expansion of their services or facilities. The County needs to be made aware of any such projects that affect land use and public services within the county, so that constructive efforts can be made to offset adverse impacts.

> Goal: Assure that the actions of electric transmission and distribution companies, gas transmission and distribution companies and communication companies, including cable TV and wireless communications companies, are consistent with and supportive of the County's Comprehensive Plan.

Objective: To prevent disruption of land use activities and scenic qualities of Madison County and to ensure public safety and welfare by utility transmission and distribution lines, equipment, buildings and facilities.

Major Strategies:

1. Madison County seeks to establish effective, continuing relationships with utility management in order to achieve coordination in planning, design, and development of utility services and facilities that will have an impact on Madison County.

2. Require any utility to provide evidence that is satisfactory to the Planning Commission and the Board of Supervisors that demonstrates the need for expansion.

3. Require utilities to conduct public information hearings in the county at times and places convenient for the Planning Commission, Board of Supervisors and county residents on all proposed facility construction or expansion projects affecting land use and scenic qualities within the County.

4. Where possible, co-locate utilities to mitigate potential negative impacts on the quality of life and safety and welfare of the citizens in the County.

5. Whenever possible, upgrade existing infrastructure before building new to minimize land disturbance by reducing the total number of corridors, thereby reducing land acquisition and rights-of-way cost. Maximizing the use of existing infrastructure may also produce fewer conflicts with nearby land uses, environmental factors and existing structures and improvements.

6. Require utilities to seek minimal adverse aesthetic impact in their expansion considerations in order to better integrate the project in an area and gain community acceptance.

7. Minimize conflicts with developing uses, taking care to preserve prime real estate needed for local community development.

8. Site selection must allow for operations and maintenance access.

9. Minimize encroachment upon residential neighborhoods, established communities, villages, schools, parks and conservation areas when siting expansion.

10. Locate near, but avoid bisecting, development centers or areas planned for future economic development (business, commercial, industrial or residential). When possible any utility sited on the periphery of a development center should be placed underground.

11. In accordance with Virginia Code 56-46.1, any expansion plans must minimize adverse impact on scenic assets. Viewsheds are an essential element of Madison County's community character, scenery, and economic sustainability. Use of topography is encouraged to lessen visibility. Height and design of poles must also be part of this consideration.

12. Where possible, critical wildlife habitat, river and stream corridors should be avoided. Sites with potential for environmental issues should be evaluated for impacts and possible mitigation measures.

13. Encourage utilities to avoid areas with flood, landslide potential, and earth movement potential that may damage their infrastructure.

14. In accordance with Virginia Code 15.2-2223 (C)(8), require the placement of electric transmission lines of 150kv or more to use current rights-of-way within the corridor. The designated utility corridor, as defined herein and shown on the attachment labeled "Proposed Power Line Corridor", follows the current rights-of-way coming into Madison from the Gordonsville substation to the Pratts substation to the Decapolis substation towards the Hazel switching station in Culpeper County. Deviations from this corridor would require approval of the governing body in accordance with Virginia Code 15.2-2232.

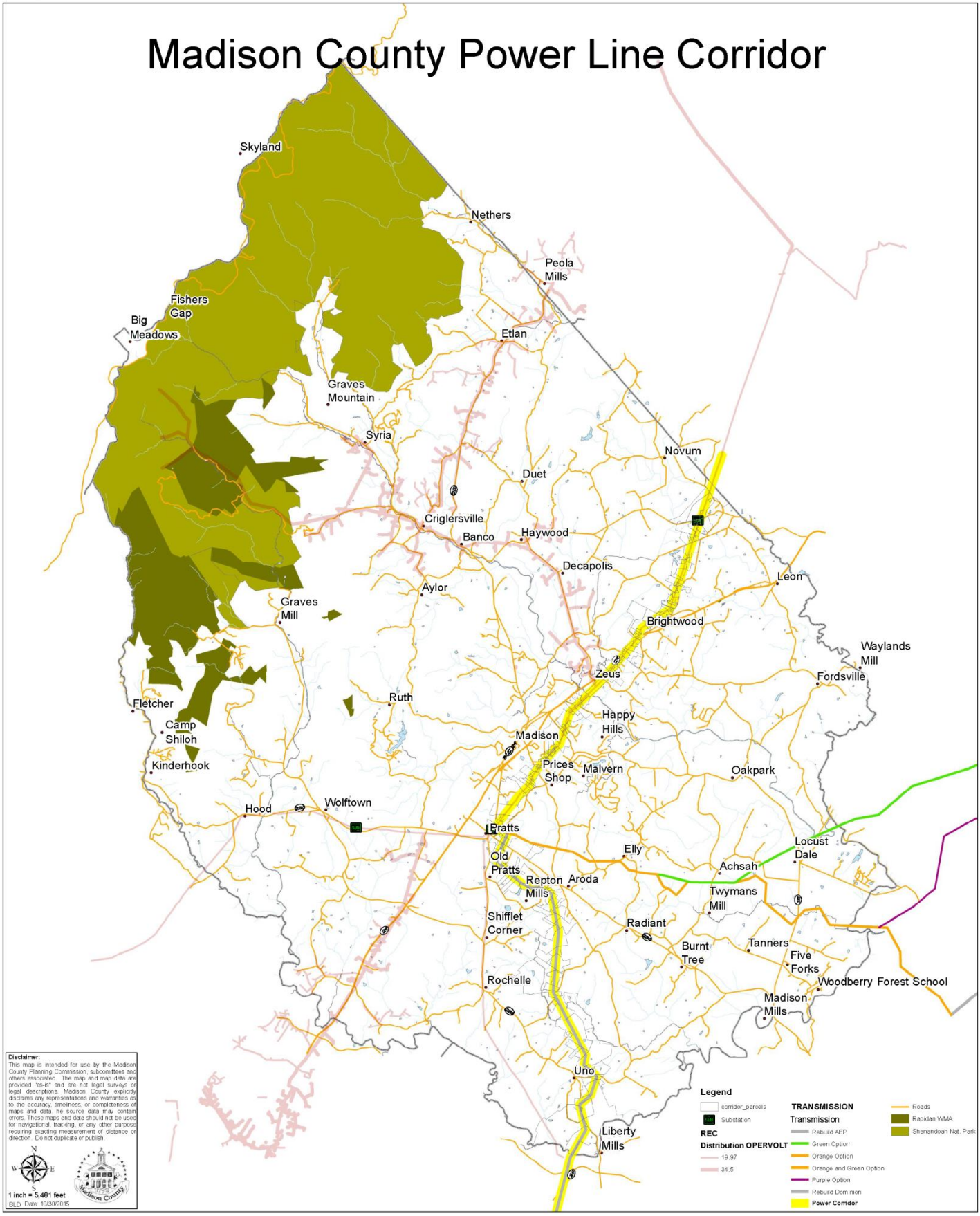
15. Support the development and implementation of high speed communication services to all county residents. A glance at a map of existing communications towers shows that the majority of such facilities serve only a fraction of Madison County. The current distribution of these facilities demonstrates an absence of regard for the needs of the entire population of Madison County. It is urged that a strategy be adopted to address these needs. This should be the result of a process designed by the Board of Supervisors to draft and maintain a Technology Plan, which would contain the following sections:

    1. Current environment assessment within the County
    2. Vision for the future
    3. Strategy for reaching that vision
    4. Government business process
    5. County infrastructure
    6. Organizational accountability
    7. Key department functions

    This Technology Plan would have as its purpose identification of the most efficient and effective manner of serving the entire county for the present and foreseeable future.

16. Explore possibilities of having more communication tax returned to the County in lieu of recent legislation.

Madison County Power Line Corridor



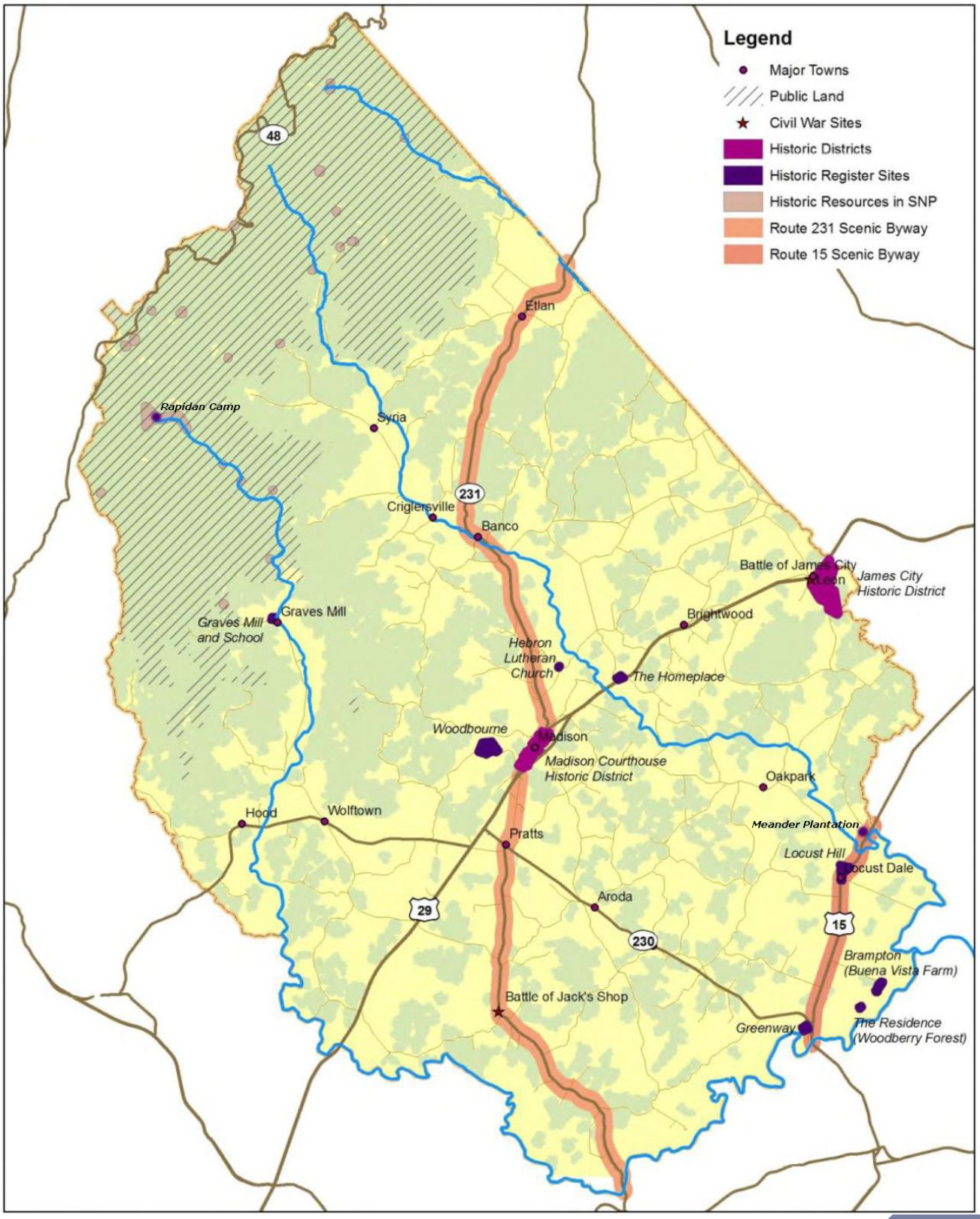
Appendix C: Madison County Historic Resources

History is important to the residents of Madison County and, increasingly, to visitors. The County was created in 1792 and was named, in 1793, for the family of James Madison, then a member of Congress and ultimately the Father of the U.S. Constitution, Architect of the Bill of Rights, and fourth President of the United States. There are numerous historically significant resources within the County, including two National Register Historic Districts, a National Historic Landmark, and seventeen properties listed on the National Register of Historic Places. Among these historical resources, shown on the accompanying map (next page), are the following:

Historic Districts

Madison Courthouse Historic District – With the creation of Madison County, a log structure was built in the center of the County to serve as a courthouse. It remained the County's courthouse until 1829, when it was replaced by a brick structure that continues to operate as the County's principal court to this day, anchoring a public square. A village grew up around the original log courthouse, and, in 1800, the Virginia General Assembly formally established it as the Town of Madison consisting of 50 acres. The General Assembly appointed seven men to serve as the Town's trustees and empowered them to issue rules and orders for building houses and establishing borders. In 1818, the General Assembly extended the Town's boundaries on both sides of Main Street and authorized the popular election of Town trustees empowered to pass laws and impose taxes.

Madison County Historic & Scenic Resources Map



In 1983, the Virginia Historic Landmarks Commission performed a detailed inventory of properties within the Town of Madison and nominated the Town as a Historic District for inclusion in the National Register of Historic Places. Accompanying the nomination was a detailed architectural analysis of historic structures and a description of the Town's historical significance.

James City Historic District – A second Historic District within Madison County is the James City Historic District. Located within an area consisting of approximately 280 acres bordered by Crooked Run (which divides Madison and Culpeper Counties) and State Route 631, the James City Historic District contains a number of commercial and residential buildings on each side of a former farm lane (now Kirtley Road) that originally was a stage coach route and the main artery connecting the Rappahannock River port town of Fredericksburg and the Three Notched Road area of Albemarle County

James City traces its origins to 1796, when Daniel James began acquiring property in Madison County. The James City Post Office (now the Leon Post Office) was established in 1810, and various commercial entities were founded within the District in the ensuing years, including an inn called the Madison Inn, a mercantile store, a boot and shoe factory, a tailor, and a blacksmith shop. Today, the James City Historic District stands as an example of late-18th, 19th, and early 20th century commercial, agricultural, and residential structures.

National and State Registered Historic Landmarks and Places

Rapidan Camp – Located in the Madison County sector of Shenandoah National Park at the headwaters of the Rapidan River, Rapidan Camp (also known as Camp Hoover) is a National Historic Landmark. The Camp was built by President Herbert Hoover and his wife in 1929 to

serve as their retreat during the years of Hoover's presidency (1929-33). It was the precursor of today's presidential retreat at Camp David. Funded largely by President Hoover himself and built by the U.S. Marines as a "military exercise," the 164 acre Camp originally consisted of thirteen buildings, including a lodge, two mess halls, cabins, and a "Town Hall," along with hiking trails and fishing streams. When Hoover lost his re-election bid to Franklin Roosevelt, he donated Rapidan Camp to the federal government to become part of Shenandoah National Park which was then under development. The Camp was designated as a National Historic Landmark in 1988 under the name "Camp Hoover."

After serving variously as a retreat for high-ranking federal officials and a Boy Scout camp, Rapidan Camp was restored by the National Park Service in 2004 to its condition during the Hoover presidency. It now consists of three cabins: the President's cabin known as the "Brown House" (to contrast with the White House), the Prime Minister's Cabin, and the Creel. The Camp is accessible by hiking either from Quaker Run Road near Criglersville, or from the Mill Prong Trail which connects with Skyline Drive. There is also shuttle/van service from Big Meadow to Rapidan Camp.

Other Historic Places in Shenandoah National Park – Besides Rapidan Camp which is a National Historic Landmark, there are various registered National Historic Places located in the Madison County sector of Shenandoah National Park. They include Skyline Drive, Big Meadow Site, Cliff Kill Site, Gentle Site, Robertson Mountain Site, and George T. Corbin Cabin.

Hebron Lutheran Church – Hebron Church, located in the Hebron Valley, is the oldest Lutheran Church in continuous use in the United States. The congregation of Hebron Church was formed in 1725 by German families who had started arriving in Madison County a decade earlier. The church itself was built in 1740 and was enlarged in 1800 to accommodate a pipe

organ. The interior of the church has elaborate frescoed ceilings painted by the Italian-born artist Joseph Oddenino. Hebron Church is listed on the National Register of Historic Places and the Virginia Landmarks Register.

Madison County Courthouse – Discussed above and anchoring the Madison Courthouse Historic District is the Madison County Courthouse, built in 1828.

The Residence at Woodberry Forest School – The Residence was built for James Madison's brother William in 1793, with design assistance from James Madison's close friend, Thomas Jefferson. Madison acknowledged Jefferson's assistance that same year, writing to him that "Your plan is much approved and will be adopted by my brother." Today, the graceful, Palladian-style dwelling is home to Woodberry's Headmaster and serves as the center of many social events on the Woodberry campus.

Meander Plantation – Meander Plantation was first patented in 1726 by Col. Joshua Fry, who named it Meander because it is nestled in a curve of the Robinson River. Following Joshua Fry's death, his son Reverend Henry Fry inherited the property and built the first part of the house which is now the Inn at Meander Plantation. His friend, Thomas Jefferson, visited often, as did George Washington, George Mason, and General Lafayette. William Wirt, a well-known 18th Century lawyer who prosecuted Aaron Burr in 1807, and later served as Attorney General of the United States in the administrations of James Monroe and John Quincy Adams, spent much of his youth at Meander Plantation. Several Civil War battles were fought near the Plantation, including the Battle of Cedar Mountain which began near Meander's front gates. Today, Meander Planation is a well-regarded inn and restaurant known as the Inn at Meander Plantation.

Graves Mill – The Graves Mill complex is situated on a gently terraced parcel of land surrounded by mountains. The mill itself is built into the side of a low hill at the foot of Jones Mountain. It is a rare and outstanding example of an 18th Century gristmill. The mill operated between 1798 and 1921 as a flour and corn mill, and between 1921 and 1940 as a corn mill. Graves Mill also served as the first voting precinct in Madison County, and the original voting booth is preserved within the structure.

Woodbourne – Woodbourne, located west of the Town of Madison on Route 657, was built between 1805 and 1814 by the contractors of Monticello and the Madison County Courthouse. It is a fine example of Federal style architecture and is distinguished by the fine quality of its masonry, the handsome crown molding of its cornice, and the integrity of much of its original architectural design. At one point it was owned by Dr. George Thrift, a physician who became a Confederate general and ultimately the Governor of Virginia.

Brampton – Built in 1846 on land acquired by James Madison's father in 1777, Brampton is an impressive frame structure that represents a rare example in the Virginia Piedmont of a two-tier portico, temple-form Greek Revival residence. It lies on the north side of the Rapidan River off Route 671. During the winter of 1863-64, Brampton served as headquarters for General J.E.B. Stuart, with General Robert E. Lee's headquarters situated just across the Rapidan River. The property was eventually deeded to Woodberry Forest School which adjoins Brampton on the south. It has been a private home since 1952.

Historical Markers

The Virginia Department of Transportation (VDOT) sponsors a highway marker program designed to highlight historical sites of local, state, and national significance. There are a

number of such markers in Madison County, identified, for example, as "F-22." They include, among others:

- Jackson's Crossing, F-22 – marking the spot near Locust Dale where General Stonewall Jackson's army crossed the Robinson River near Meander Plantation in August 1862 and moved north to the Battle of Cedar Mountain.
- Woodberry Forest School, F-24 – marking the well-known boys' prep school that was founded in 1889 by Robert Stringfellow Walker, formerly of Mosby's Rangers.
- Cavalry Engagement at Jack's Shop, G-11, - marking the spot in Rochelle, named for a nearby blacksmith shop, where in 1863, there was a large engagement between Confederate cavalry led by Jeb Stuart and Union cavalry led by General Judson Kilpatrick.
- Joseph Early Home, G-12 – marking the spot of the home of Revolutionary War soldier Joseph Early where General George Washington spent the night of October 2, 1784.

Historical Farms

The Virginia Department of Agriculture and Consumer Services (VDACS) runs a program called "The Virginia Century Farm Program." The program recognizes farms that have been in operation for at least 100 years, as well as the generations of families that have maintained them. To be recognized as a "Century Farm," a farm: (1) must have been owned by the same family for at least 100 consecutive years; (2) must be lived on, or actually farmed by, a descendent of the original owner; (3) must gross over $2,500 annually from the sale of farm products, or must be in use for bona fide silivicultural purposes. Currently, seventeen Madison County farms are certified as Century Farms. They include:

- Brightwood Farms
- Brookside Farm
- Coppedge Farm
- Deale Mountain Farm
- Graves Mountain Farm
- Henshaw Farm
- Hoffman's Farm & Garden
- James Utz Farm
- James Aylor Farm
- Jett Farms, Inc.
- John W. Tatum Farm
- Lohr-Mallory Farm
- Maple Glen Farm
- Mill Valley Farm
- Randolph Aylor Farm
- Stone Ridge Farm
- The Joel Byrd Yowell Farm
- Yowell Farm Enterprises, Inc.

Appendix D: Madison County Transportation Plan

Transportation

Transportation in Madison County is almost exclusively made up of primary and secondary roadways connecting the villages of the County to each other and to other population centers outside the County. Within Madison County and the Commonwealth of Virginia, the transportation network is designed to move people and goods in a safe, effective, and efficient manner. The following transportation section considers the existing transportation network, including multi-modal transportation infrastructure, summarizes data for the primary corridors in the County, outlines the transportation planning process and partner agencies, and identifies ongoing and future transportation projects affecting the County's transportation network.

Existing Transportation Network

The Virginia Department of Transportation (VDOT) and Federal Highway Administration (FHWA) classify roadways according to functional classification. Functional classification groups roadways based on character of service they are intended to provide within the transportation network. As of the most recent review in 2014, the primary categories of functional classification are Principal Arterial, Minor Arterial, Collector, and Local roads. Functional classification impacts road design features, eligibility for federal funds for road improvements and maintenance, frequency of inspections, development and maintenance of local roads ineligible for federal funding, access management, traffic calming eligibility, and data recording such as mileage tables.

There are presently four arterial routes – one principal and three minor - traversing Madison County.

- U.S. 29 is a four-lane divided highway running roughly north-south through the county. It is a principal arterial for vehicles traveling between Charlottesville and the Washington, D.C. metropolitan area.
- U.S. 15 is a north-south route with 5.31 miles in the eastern part of Madison County. Route 15 is a minor arterial that provides access to Culpeper and Orange.
- Route 230 is a two-lane minor arterial that runs from the Greene County line east to Route 15, passing to the south of the Town of Madison.
- Route 231 is a two-lane minor arterial that runs north-south. To the south, Route 231 provides access to Gordonsville and Interstate 64. To the north, Route 231 connects to Sperryville and Shenandoah National Park.

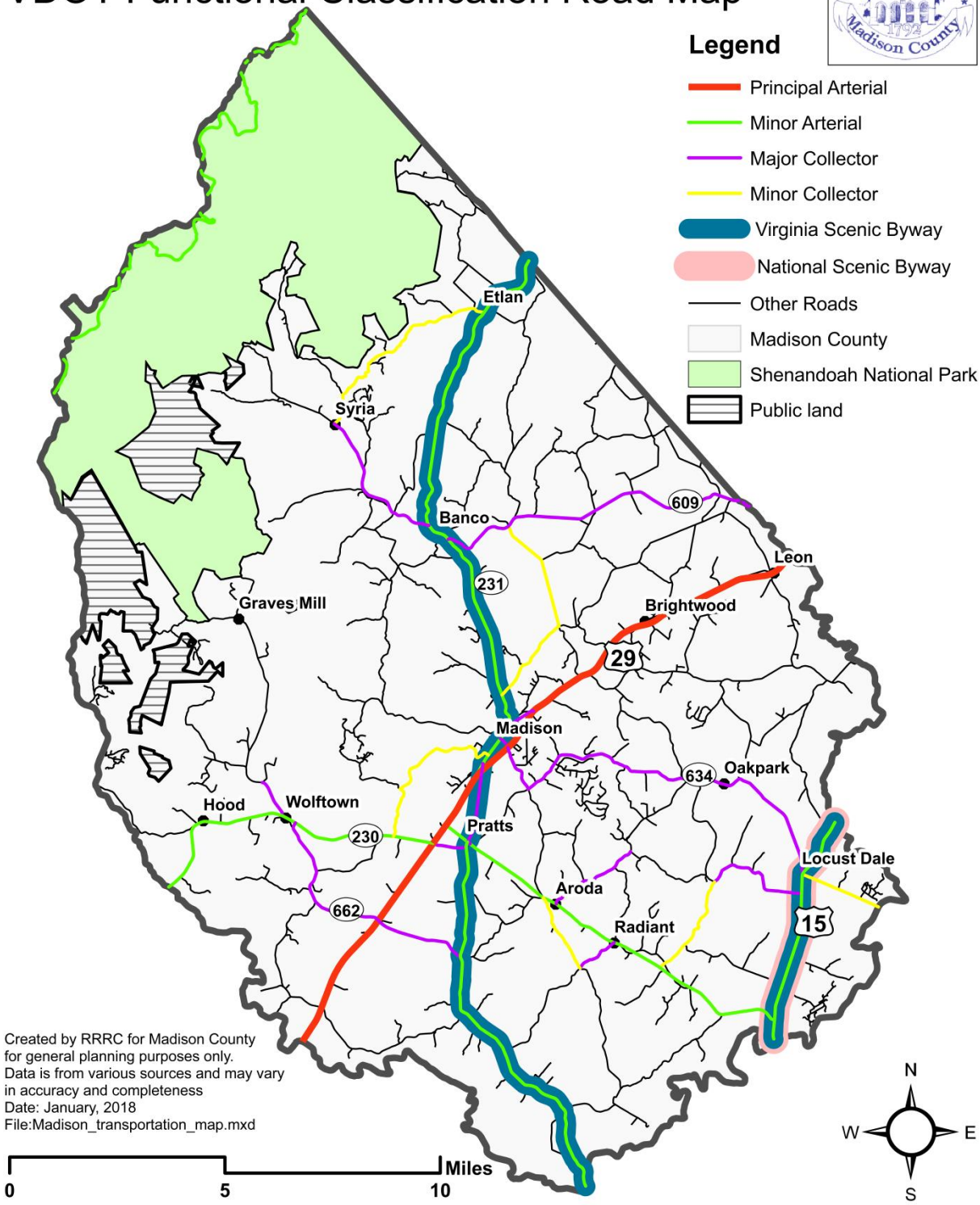
Traffic counts for arterial routes in Madison County are shown below. Route 29 is the most traveled corridor with average daily traffic between 15,000 and 20,000 vehicles. Traffic volumes have increased on most arterials and collectors in the County between 2000 and 2016.

Average Annual Daily Traffic (AADT) for
Principal and Minor Arterials in Madison County
(Source: VDOT)

Route	Segment	Miles	2000	2016	%Change from 2000 to 2016
29	Greene Co. Line to Rt. 230	5.57	13,800	17,000	23%
29	Rt. 230 Wolftown-Hood Rd to Rt. 230/231 Orange Rd	0.52	18,900	21,000	11%
29	Rt. 230/231 Orange Rd to Bus US 29 South of Madison	1.34	17,900	20,000	12%
29 BYP	Bus US 29 South of Madison to Bus US 29 North of Madison	2.02	17,000	18,000	6%
29	Bus US 29 North of Madison to Culpeper Co.	7.19	14,500	15,500	7%
29 Bus.	Madison SCL to NCL	2.04	3,200	3,450	8%
230	Greene Co. Line to US 29 S. Seminole Trail	7.46	3,400	3,200	-6%
230	US 29 S. Seminole Trail to Rt. 231 S. Blue Ridge Turnpike	0.64	3,000	3,600	20%
230	Rt. 231 S Blue Ridge Turnpike to US 15 James Madison Highway	8.55	3,000	3,250	8%
231	Orange Co. Line to Rt. 230 Orange Rd.	9.36	1,200	1,300	8%
231	Bus US 29 Madison NCL to Route 670 Old Blue Ridge Tpke	5.44	3,200	3,700	16%
231	Route 670 Old Blue Ridge Tpke to Rappahannock County	7.19	1,700	1,500	-11%
15	Culpeper Co. Line to Rt. 230 Orange Rd.	4.92	4,300	6,100	42%
15	Rt. 230 Orange Rd to Orange Co.	0.39	7,200	8,100	13%

VDOT also produces level of service ratings for principal and minor arterials for present-day function and forecasted level of service. Level of service is a measure of traffic flow, with "A" being the best and "F" being the worst. The most recent level of service data (base year 2016 with five-year forecasts through 2040) show principal and minor arterial routes in Madison County functioning at present, and through the forecast year, at a level of "C" or better, reflecting a stable flow where freedom to maneuver within the traffic stream is noticeably restricted.

Madison County
VDOT Functional Classification Road Map



While transportation in Madison County is primarily via the VDOT-maintained roadway system, it is important to consider multimodal transportation options as contributing to the overall safe and efficient movement of people and goods.

Bicycle & Pedestrian

Madison County's rural character, scenic landscapes, and topography offer many opportunities for bicycle and pedestrian activity. The Tour de Madison is an annual cycling event that began in 1988 and offers multiple courses and mileage routes for participating riders. Cyclists often make use of the secondary routes throughout the County for recreational cycling.

Pedestrian accommodations in the County are found in the vicinity of the Town of Madison. Sidewalks are found on both sides of Main Street within much of the town's corporate boundary, and also connect to Waverly-Yowell Elementary School outside the town boundary. In addition, sidewalks extend onto sections of Church Street, Washington Street, and Ruth Road from Main Street.

Bus Service

Working with the Rappahannock-Rapidan Regional Commission and Culpeper County, Madison County has provided local matching funds to support the Foothills Express bus service since 2016. The Foothills Express connects Madison to the Town of Culpeper and City of Charlottesville via a 14-passenger handicapped-accessible bus with priority given to senior citizens and disabled persons. Funding for the service is provided by grants from the Federal Transit Administration and Commonwealth of Virginia Department of Rail and Public Transportation, with local match provided by Madison County and Culpeper County. The Rappahannock-Rapidan Regional Commission serves as the grant applicant and administrator and contracts with Virginia Regional Transit to operate the service.

In 2018, the Foothills Express operates three days per week with three round trips each day. The service stops at the Food Lion off of Route 29 in Madison.

Air Service

There are no airports located within Madison County. Within the regional context of Planning District 9, there are general aviation facilities located in Culpeper, Fauquier, and Orange counties. The closest airport with commercial service is the Charlottesville-Albemarle Airport with service offered by American Airlines, Delta, and United.

Rail Service

There are no existing rail lines within Madison County. Rail lines run through the Planning District 9 region, with freight rail and passenger rail service offered on Norfolk Southern-owned lines in Orange, Culpeper, and Fauquier counties. Amtrak offers several routes with dedicated stops in the Town of Culpeper and in the City of Charlottesville, including the Northeast Regional, Cardinal, and Crescent routes.

Transportation Partners

Virginia Department of Transportation

The Virginia Department of Transportation is the County's primary partner for transportation coordination and construction. VDOT maintains all publicly-owned roads in the County, and oversees funding, construction, planning, and engineering for both roadway improvements and new road construction. While VDOT oversees the funding programs, the County can take an active role in coordinating its transportation priorities, and providing local funds to offset costs of certain funding programs outlined below.

Rappahannock-Rapidan Regional Commission

The Rappahannock-Rapidan Regional Commission (Planning District 9) may also be a partner for the County in planning for future multimodal transportation improvements. RRRC convenes a Rural Transportation Committee to discuss regional transportation priorities and initiatives, provide information on statewide policy changes, and assist in coordinating transportation projects across jurisdictional boundaries.

Town of Madison

The Town of Madison may be a transportation partner for future projects, given its location within the County, proximity to infrastructure, and existing pedestrian accommodations.

Route 29 Corridor Study

In 2012, Madison County worked with VDOT Culpeper District staff to develop a Route 29 Corridor Study. The Board of Supervisors adopted the study as an official addendum to the Comprehensive Plan in 2014.

The study adheres to four principles:

- Safety is paramount
- Maintain capacity
- Optimize access
- Balance function and aesthetics

The plan outlines the vision for Route 29 as the main transportation and economic corridor in the County and provides a series of future transportation improvements. The improvements in the Route 29 Corridor Study form the basis for the future improvements listed in the following transportation infrastructure improvements section.

U.S. Route 29 is part of the Seminole Corridor, one of 12 corridors designated as a Corridor of Statewide Significance by the Commonwealth Transportation Board. Corridors of Statewide Significance demonstrate all of the following characteristics:

- Multiple modes and/or an extended freight corridor
- Connection among regions, states, and/or major activity centers
- High volume of travel
- Unique statewide function and/or fulfillment of statewide goal

A primary purpose of identifying a route as a Corridor of Statewide Significance is to provide VDOT with a charge to protect and improve operational efficiency and capacity of the identified corridors. The Commonwealth Transportation Board has also adopted language requiring State Traffic Engineer approval and District Engineer concurrence for signal justification reports justifying new traffic signals on Route 29 in Madison County.

Future Funding Considerations

Construction and maintenance of roadway corridors in Madison County is primarily funded and completed by VDOT. Historically, funding for new road construction was accrued over a long period of time with incremental activity including preliminary engineering, right-of-way acquisition, and construction occurring sequentially. More recently, transportation project funding has changed with the development of Smart Scale to tie transportation infrastructure investments at the local level to correspond with statewide priorities.

Secondary Six-Year Improvement Program

The Board of Supervisors adopts an annual Secondary Six-Year Plan (SSYP) in coordination with the Virginia Department of Transportation. The SSYP outlines planned spending for transportation improvement or construction projects over the following six fiscal years. Projects within the County are prioritized, with funding allocated for the first fiscal year of the Plan, along with estimates of spending for years two through six.

The most recently adopted SSYP includes $1,400,177 in funding from FY 2018 through FY 2023 and identifies six improvement projects:

- Twymans Mill Road: Intersection Improvements at Route 706
- Bootons Lane: Rural Rustic Surface Treatment
- Fletcher Road: Rural Rustic Surface Treatment
- Forest Drive: Rural Rustic Surface Treatment
- Pea Ridge Drive: Rural Rustic Surface Treatment
- Desert Road: Rural Rustic Surface Treatment

Smart Scale

Smart Scale was developed and implemented in 2015 as the preferred method of prioritizing and funding transportation projects. The Smart Scale process scores projects based on six criteria:

- Congestion Mitigation
- Safety
- Accessibility
- Environmental Impact
- Economic Development
- Land Use (*in specific regions only)

Projects submitted for Smart Scale consideration must meet an identified need along a Corridor of Statewide Significance, Regional Network, or Urban Development Area, or address an identified safety need with the respective VDOT construction district.

There are no regional networks or urban development areas within Madison County. As a result, Smart Scale project submissions in Madison County are limited to projects along Route 29 or those addressing intersections with significant safety concerns based on crash history data.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a core federal-aid program, with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. HSIP is a data-driven, strategic approach for infrastructure improvements for all highway travel modes. Virginia's HSIP program is structured to focus on infrastructure safety emphasis areas that may be improved with low cost, minimal environmental impact (no right-of-way) engineering countermeasures, including:

- Intersection geometry and traffic control
- Roadway and roadside improvements
- Bicycle and pedestrian risk reductions

In Madison County, HSIP is the funding source for an ongoing project at Route 29 and Route 662 for intersection improvements.

Revenue Sharing

The Revenue Sharing program is administered by VDOT and provides additional funding for use by Counties, Cities, or Towns to construct or improve the highway systems within such localities. Localities must provide matching funds at a minimum of 1:1 for each dollar requested.

Transportation Alternatives

The Transportation Alternatives Program (TAP) provides federal funding to support local projects that expand non-motorized transportation. TAP funds may be used for ten qualifying activities:

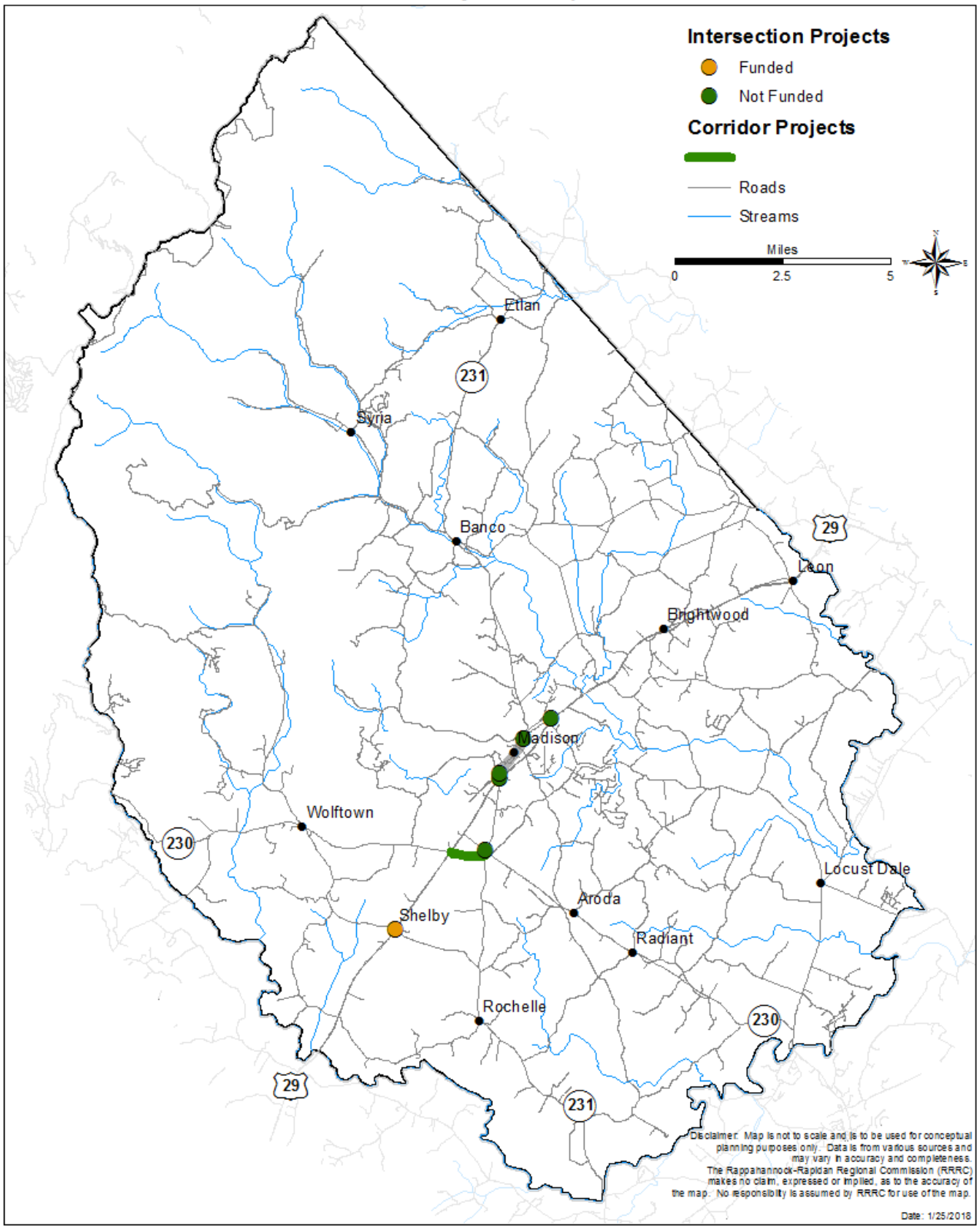
- Construction of on-road and off-road bicycle and pedestrian facilities
- Construction of infrastructure-related projects that will provide safe routes for non-drivers to access daily needs
- Conversion and use of abandoned railroad corridors for bicycle and pedestrian use
- Construction of turnouts, overlooks, and viewing areas
- Inventory, control, or removal of outdoor advertising
- Historic preservation/rehabilitation of historic transportation facilities
- Vegetation management practices in transportation right-of-way
- Archeological activities relating to transportation project implementation
- Environmental mitigation activities to decrease negative impact of road on natural environments
- Wildlife mortality mitigation activities

TAP grants require greater than 20% match from local or other community-based sources.

Transportation Infrastructure Plan

The transportation infrastructure projects identified here are sourced from the FY 2018-2023 Six-Year Improvement Program (SYIP) adopted by the Commonwealth Transportation Board in June 2017 and the Route 29 Corridor Study referenced above. Of these projects, only the projects currently listed in the SYIP have funding allocated and approved.

Madison County Transportation Plan

Project Description	Cost Estimate	Funding Source (if applicable)	Project Source
Route 29/662 J-Turn	$1,770,000	HSIP	FY 2018-2023 SYIP
Route 29/Route 687 (South of Town) Interchange			Route 29 Corridor Study
Route 29 Business/Route 29 (North of Town) Interchange			Route 29 Corridor Study
Route 230/Route 231 (Pratts) Traffic Circle			Route 29 Corridor Study
Relocate Route 230 from Route 231 to Route 29			Route 29 Corridor Study
Route 29 Business/Route 231 Traffic Circle			Route 29 Corridor Study
Route 29 Business/Route 687 Traffic Circle			Route 29 Corridor Study

Madison County Transportation Plan