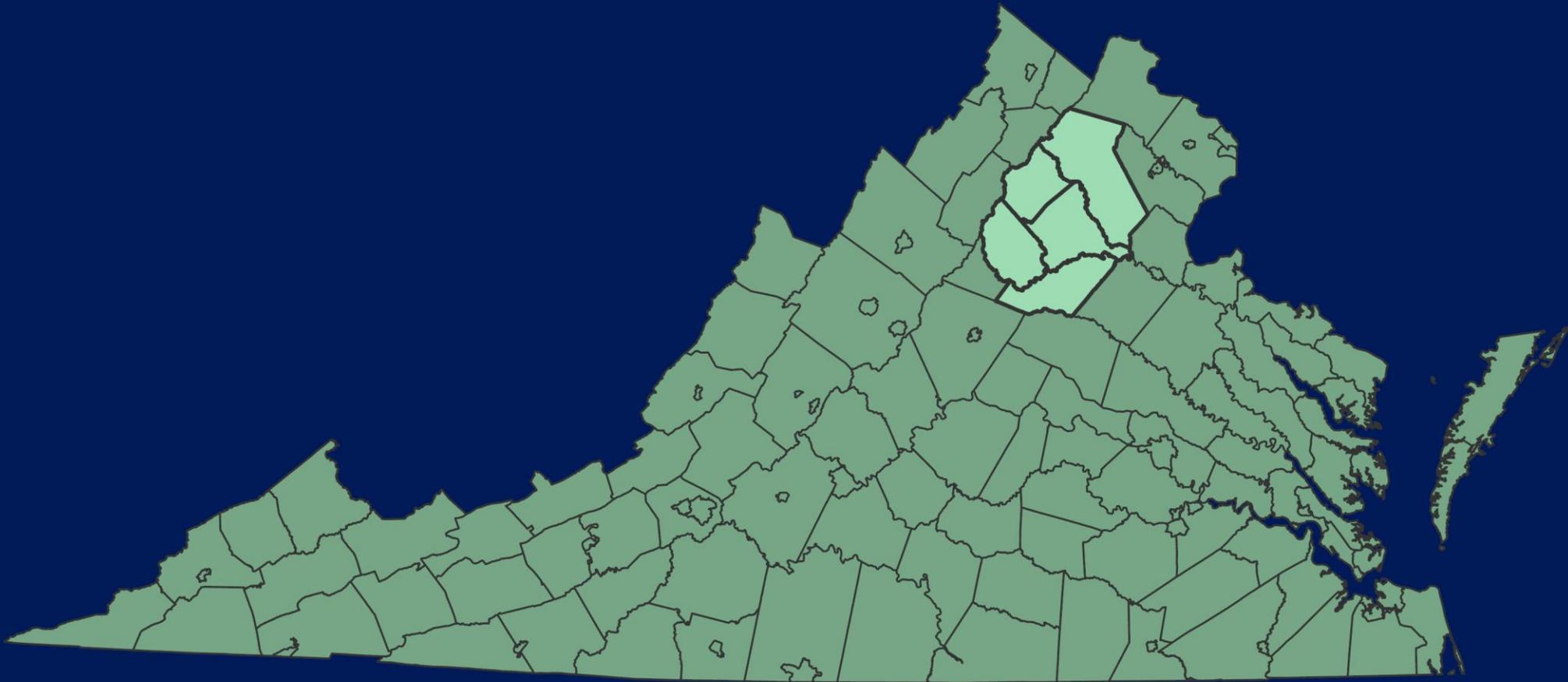


RAPPAHANNOCK-RAPIDAN REGIONAL COMMISSION  
2045 REGIONAL LONG RANGE TRANSPORTATION PLAN

# Rappahannock-Rapidan Regional Commission



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# Introduction and Purpose

The Transportation and Mobility Planning Division (TMPD) of the Virginia Department of Transportation (VDOT) has worked with other modal agencies to develop VTrans, the Commonwealth's multi-modal long range plan. This statewide multimodal plan lays out the overarching vision and goals for transportation in Virginia. It identifies transportation investment priorities and provides direction to transportation agencies on strategies and programs to be incorporated into their plans and programs. VDOT, Virginia's Planning District Commissions (PDCs) and the local governments they represent, are partners in the development of this new initiative to create regional transportation plans in rural areas that complement those in Virginia's metropolitan and small urban areas.

The transportation system within the rural areas for each region was evaluated, and a range of transportation improvements (roadway, rail, transit, air, bicycle, and pedestrian) are recommended that can best satisfy existing and future needs. Some of the PDCs contain urbanized areas whose transportation needs are coordinated by an MPO. In the case of the Rappahannock-Rapidan region, there is no MPO and the entire transportation network within the Rappahannock-Rapidan Regional Commission (RRRC) was analyzed and addressed in this report.

This rural regional plan has a horizon year of 2045 and addresses the anticipated impacts of population and employment growth upon the transportation system. This plan will be reviewed and updated as needed.



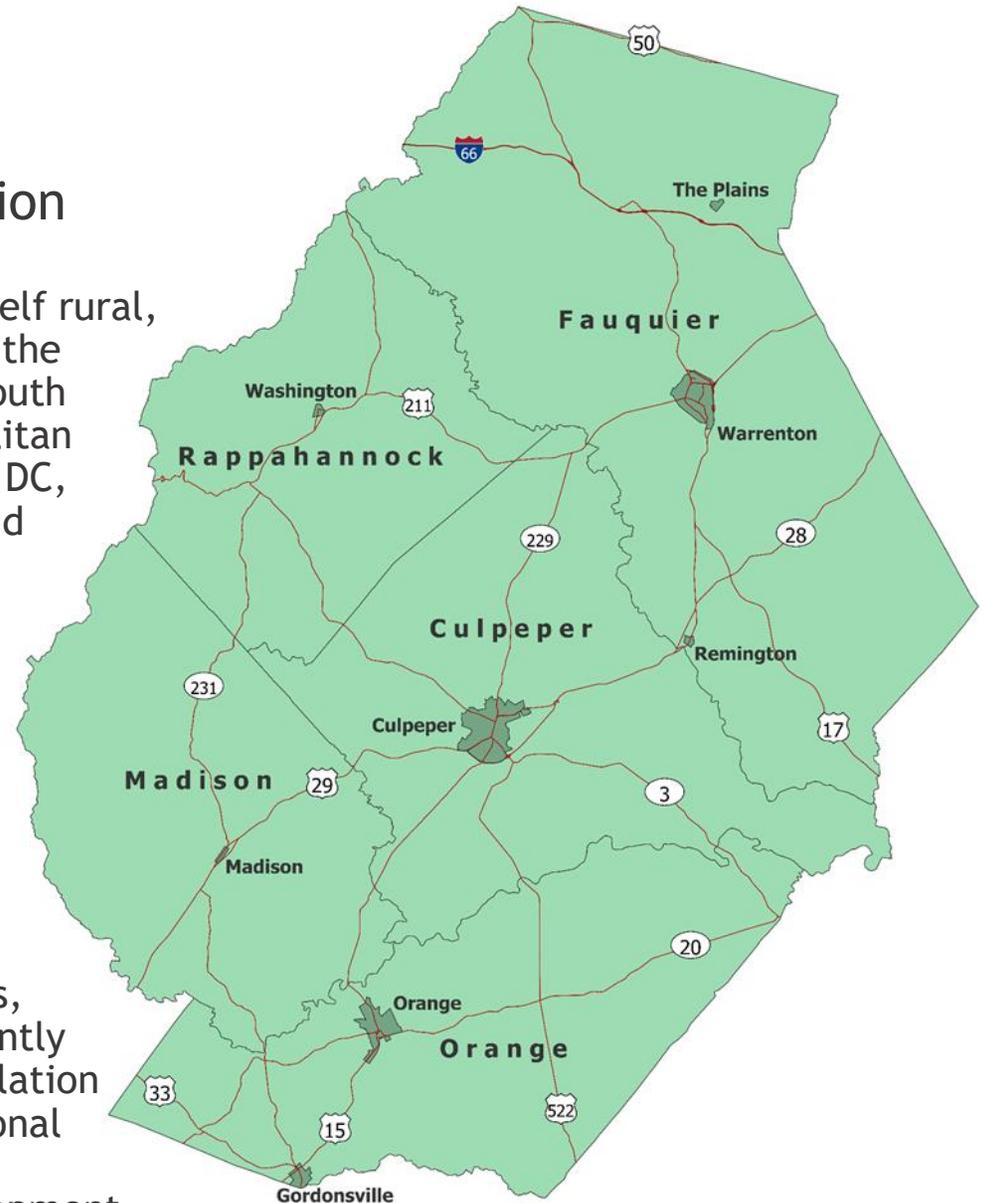
This rural plan was developed as a vision plan, addressing all needs of the transportation system studied regardless of anticipated funding availability. It is envisioned that this regional plan will be used to identify transportation funding priorities. The needs were identified based on reviews of roadway mobility performance, safety and crash information, bridge sufficiency data, and roadway geometrics such as narrow lanes, inadequate sight distance, or availability of turn lanes.

# Overview of Region

## Description and Function of the Rappahannock-Rapidan Regional Commission

The RRRC serves the counties of Culpeper, Fauquier, Madison, Orange, and Rappahannock and the towns of Culpeper, Gordonsville, Madison, Orange, Remington, Warrenton, and Washington. Located in the northern portion of Virginia's Piedmont region, the Rappahannock-Rapidan region is an area of approximately 1,965 square miles, with a current estimated population of over 175,000 people (ACS, 2018). The region is defined by the Rappahannock and Rapidan rivers, which form the borders between several of the counties. The geographic setting is characterized by compact, historic towns, surrounded by rolling topography and scenic rural landscapes.

The region is in itself rural, but surrounded to the north, east, and south by larger metropolitan areas: Washington DC, Fredericksburg, and Charlottesville. Fauquier County is part of the Washington, DC-Maryland-Virginia-West Virginia Metropolitan Statistical Area. Due largely to its proximity to these metropolitan areas, the region is currently experiencing population growth and additional residential and commercial development.



## Goals and Objectives

Needs for this regional plan were developed based on regional and statewide goals and objectives. A basic goal for all transportation programs in Virginia is the provision for the effective, safe, and efficient movement of people and goods. The plan for the RRRRC was developed with this primary goal in mind, along with other goals including consideration for environmental issues and local travel desires. These goals include:

**Goal 1** Promote land use patterns that maximize the efficiency of the transportation network.

**Goal 2** Establish regional transportation priorities based on consensus and consistency throughout the region, while recognizing the autonomy of each jurisdiction's planned growth and/or economic development efforts.

**Goal 3** Provide for the effective, safe, and efficient movement of people and goods.

**Goal 4** Develop an efficient regional transportation network, that provides for the efficient movement of goods and people, and improves upon the existing system to serve both local and through traffic.

**Goal 5** Develop a safe regional transportation network

**Goal 6** Promote transportation improvements that enhance quality of life.

**Goal 7** Encourage development of multi-modal transportation such as bicycle, pedestrian, carpooling and ridesharing, public transit, air, and rail to reduce congestion, complement existing transportation facilities, and improve air quality.

## Common Rural Long Range Plan Goals

In addition, a number of goals have been developed to address rural transportation planning across the Commonwealth. These were developed using input from each of the 20 PDCs in Virginia that include rural areas within their boundaries. These goals are consistent with those of VTrans and are listed below:

- Goal 1** Enhance the connectivity of the existing transportation network within and between regions across all modes for both people and freight.
- Goal 2** Provide a safe and secure transportation system.
- Goal 3** Support and improve the economic vitality of the individual regions by providing access to economic opportunities, such as industrial access or recreational travel and tourism, as well as enhancing intermodal connectivity.

- Goal 4** Ensure continued quality of life during project development and implementation by considering natural, historic, and community environments, including special populations.
- Goal 5** Preserve the existing transportation network and promote efficient system management in order to promote access and mobility for both people and freight.
- Goal 6** Encourage land use and transportation coordination, including but not limited to, development of procedures or mechanisms to incorporate all modes, while engaging the private sector.

# Demographic and Land Use Trends

## Relationship of Land use and Development to transportation

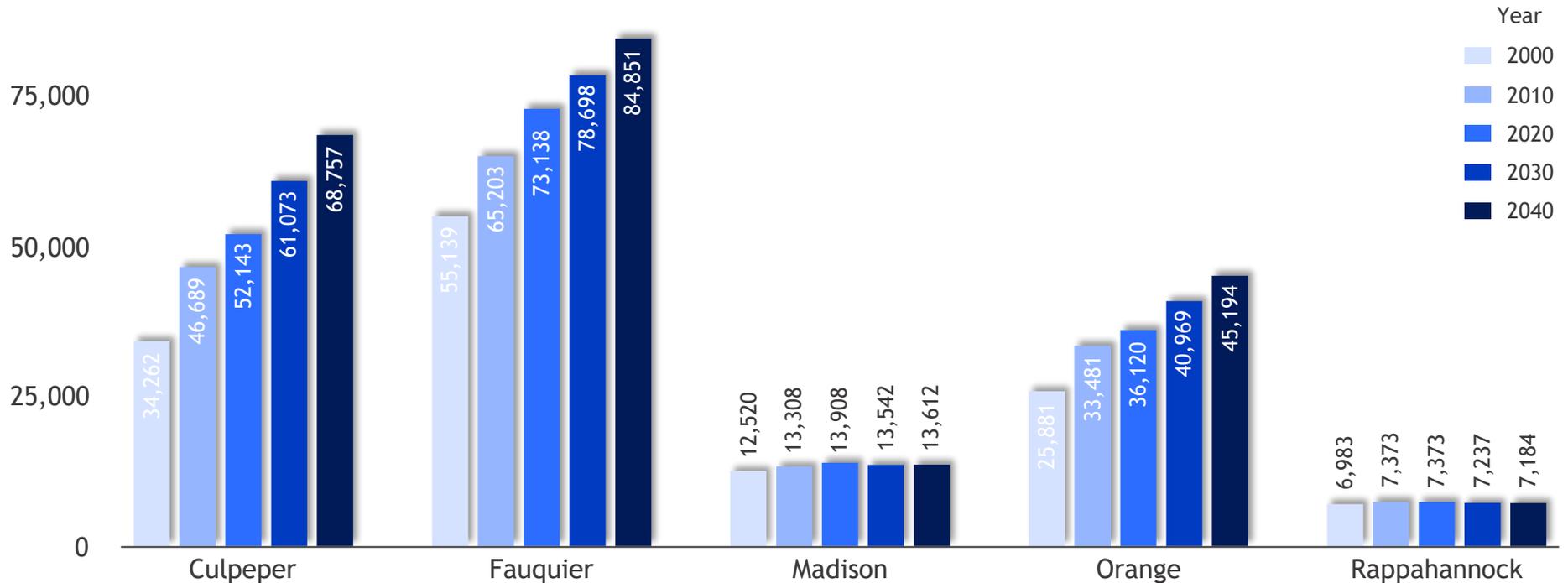
Rural counties throughout the Commonwealth and the Rappahannock-Rapidan region are working to balance growth seeking new economic growth and diversification, while striving to preserve the rural character of the landscape. Most of the land in these counties is in agricultural or forested use, with more intensive land use in the towns and village centers, typically at the intersection of two roadways. There is a broad spectrum of the amount of growth and land use changes occurring throughout the Commonwealth and the Rappahannock-Rapidan region, based particularly on proximity to urban areas.

Many of the rural counties are trying to direct any new growth towards existing towns, village centers, or service districts in order to provide services and to continue to address the needs of residents as well as maintain a general agricultural setting. As the population fluctuates, either through in- or out-migration or shifting within the region, the needs of the communities (including education, health care, social services, employment, and transportation) shift and fluctuate as well.

Land use and development changes that particularly affect transportation in rural areas include, but are not limited to, school consolidation, loss or gain of a new major employer, movement of younger sectors of the population to more urban areas, retirement community development, and growth of bedroom-community type developments for nearby urban areas. Even though the Rappahannock-Rapidan region has its roots in agriculture with the associated rural landscapes and traditional small, historic towns, it is experiencing considerable growth because of its proximity to large metropolitan areas and, in particular, because people and businesses are seeking less expensive housing and land, second homes, and retirement opportunities.

## Population Trends

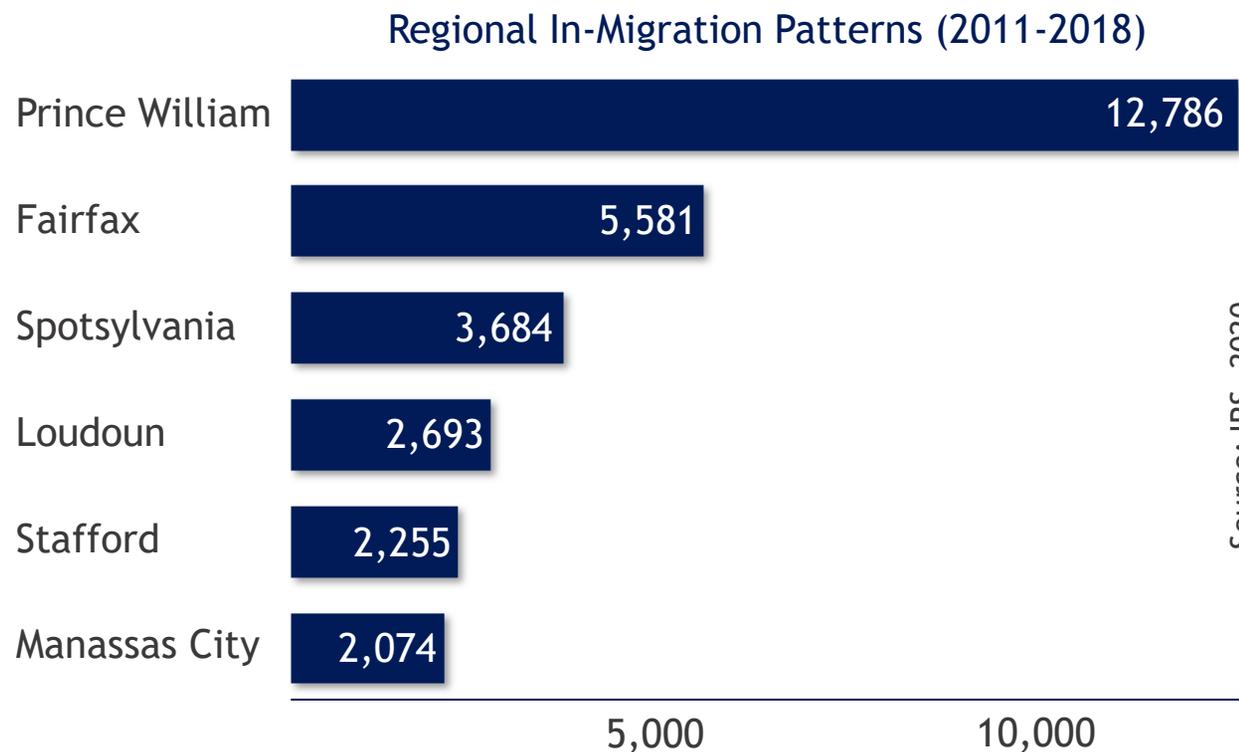
Regional population increased by 6.8% between 2010 and 2018. While this is a significant decline from the population increase of 24.8% from 2000 to 2008, it shows that the region is still steadily growing, through both natural births and migration. This growth has contributed to increased traffic congestion and related issues that pose challenges for county and town leaders and planners to address through their planning processes. However, the rate of growth was not distributed evenly throughout the region. The counties of Culpeper, Fauquier, and Orange, which border the Northern Virginia/Washington DC metropolitan area, Fredericksburg, and Charlottesville, experienced the vast majority of the growth. Population projections for the region exhibit these trends as well. The populations in Culpeper, Fauquier, and Orange counties are expected to increase more than 20% by 2040; while in Madison and Rappahannock counties, the populations are projected to remain the same.



## Population Trends

Increase in county populations is not only due to natural increase (more births than deaths) but also due to greater in-migration to the region than out-migration from the region. Migration into the region from 2011 to 2018 primarily came from localities to the north and east of the Rappahannock-Rapidan region, with migration from the Washington, D.C. and Fredericksburg areas exceeding 29,000. This population growth and increased development have created changes in transportation patterns and traffic congestion.

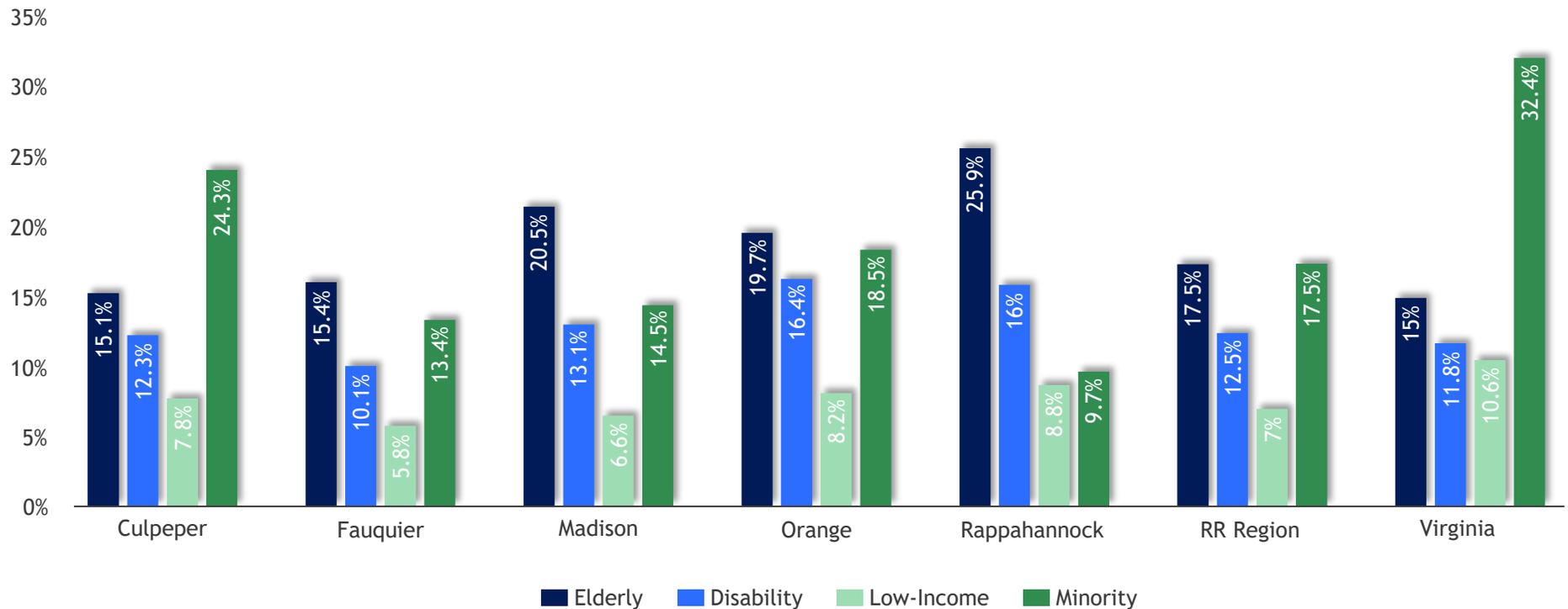
Population trends have implications for the transportation network of any geographic area. As the population and traffic increases, mobility and safety can suffer. In the case of the Rappahannock-Rapidan region, increasing pressure on the network has already resulted in changes to the network such as additional capacity demands on the roadways and additional demand for public transportation and travel demand management services. The region has experienced growth in through traffic between Northern Virginia and Charlottesville. US 17, US 29, US 15, and VA 20 have become alternatives to the heavily traveled interstates located east and west of the Rappahannock-Rapidan region.



Source: IRS, 2020.

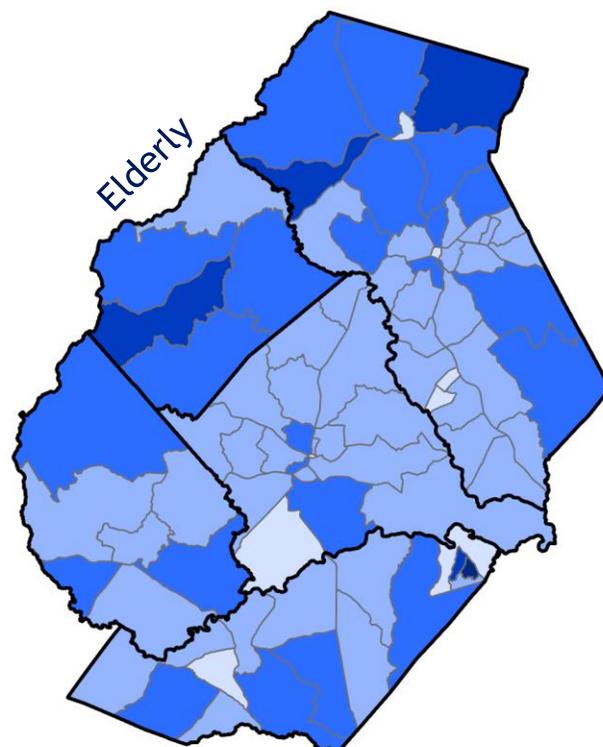
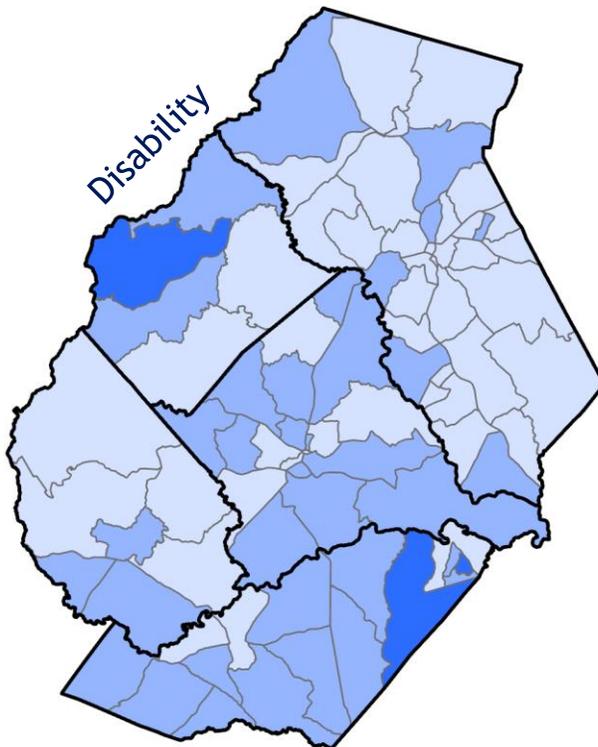
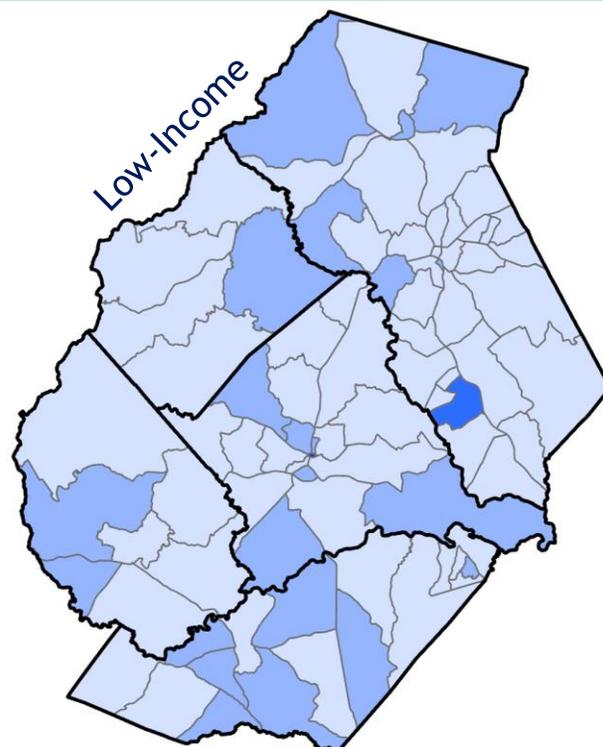
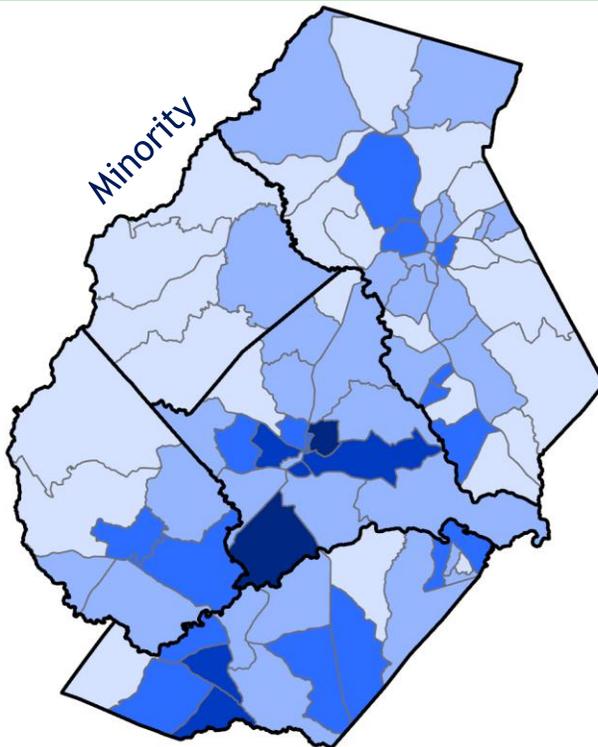
## Demographic Trends

Disadvantaged population groups were studied in order to determine if there are any gaps or deficiencies in the transportation network that could affect these groups. Disadvantaged groups studied include low-income, minority, elderly, and people with disabilities, as defined by the US Census. Currently, the counties within the region have minority populations and low-income populations below the state percentages of 32.4% and 10.6%, respectively. However, the portion of the population with disabilities in Culpeper, Madison, Orange, and Rappahannock counties are above the state percentage of 11.8%. All the counties have elderly populations 65 years or older in a higher proportion compared to the state average of 15%.



Source: ACS, 2020.

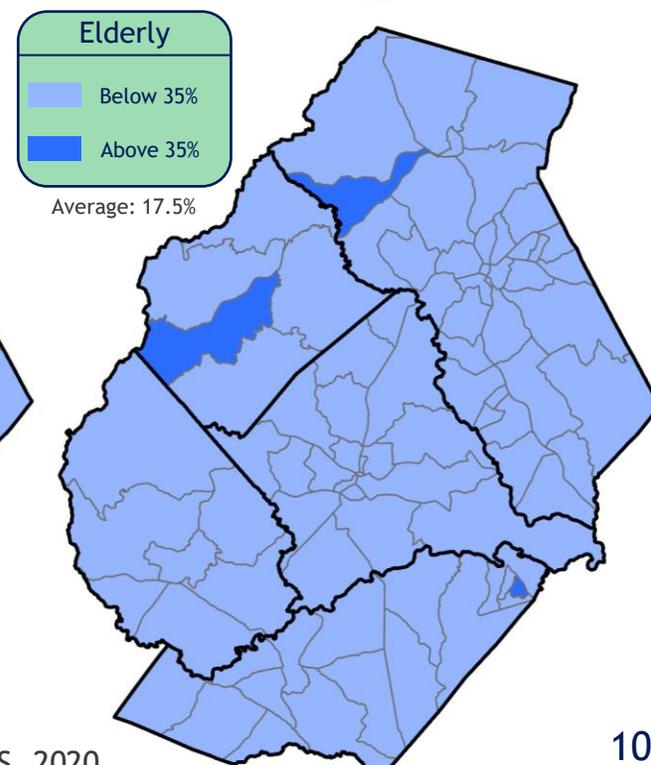
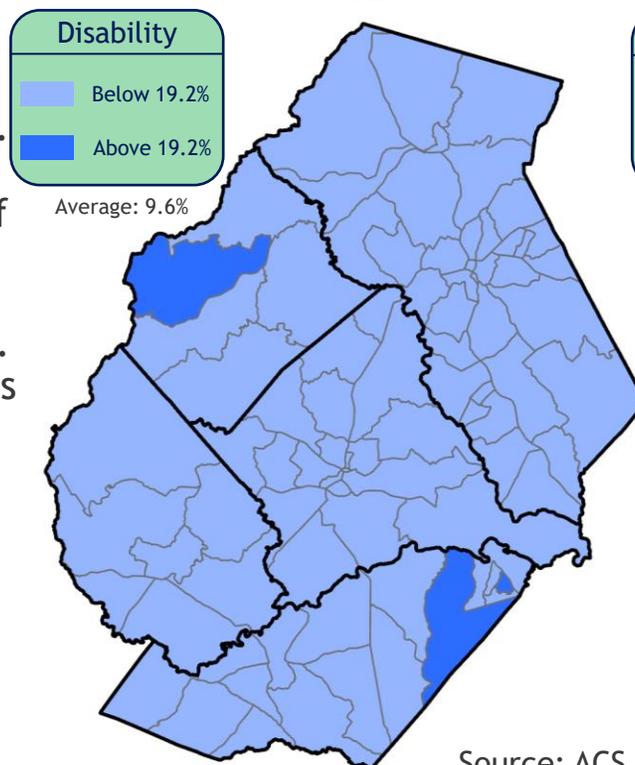
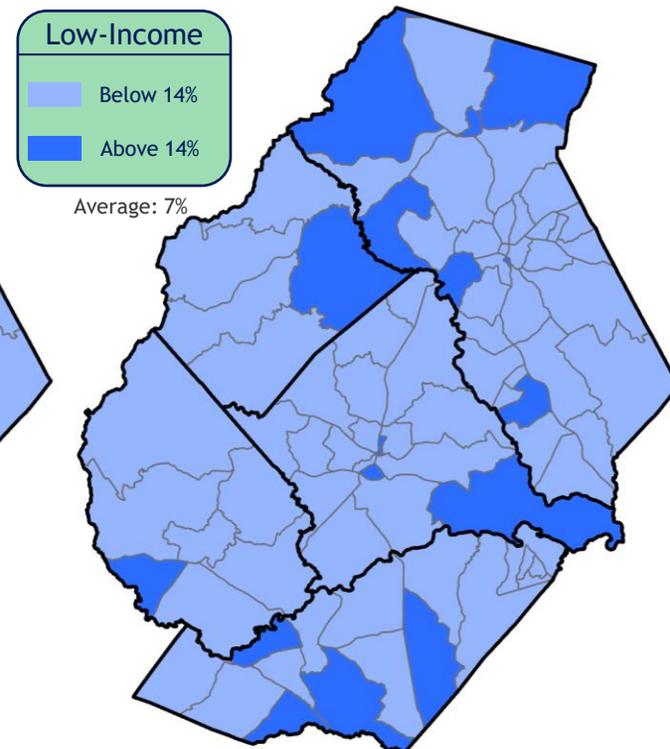
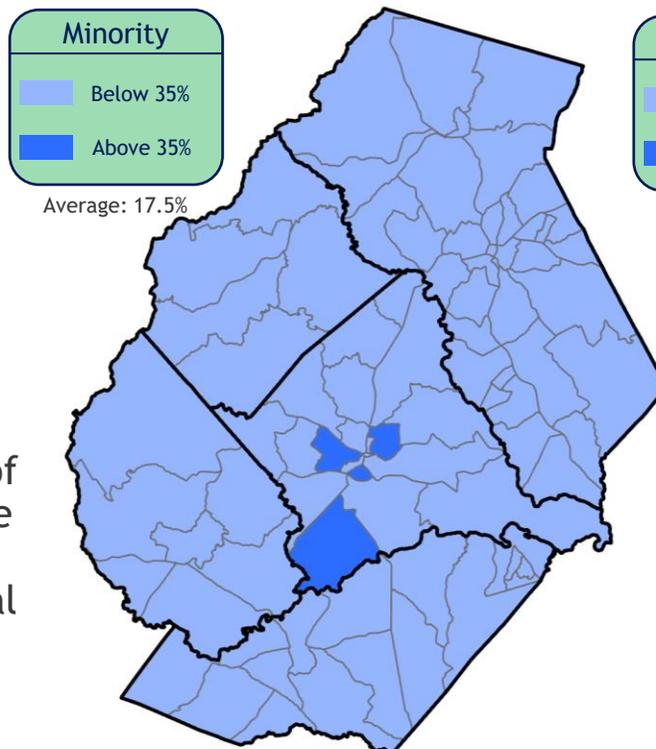
# Demographics by Block Group



## Equity Analysis

It is important to identify and address disproportionately high and adverse human health or environmental effects of programs, policies and activities on these disadvantaged population groups. Identifying these populations has the goal of bringing them into the project development process.

It is critical that the projects do not have disproportionately high or adverse effects on these protected groups and that these groups are benefiting from these projects. In order to determine where these populations are located in the localities of the Rappahannock-Rapidan region, the overall average percentage was found for each population group living in the region. Once the average was found, the total was multiplied by two so that the threshold would be twice the regional average. Individual block groups that have a higher percentage of the regional threshold are identified on the adjacent maps here:

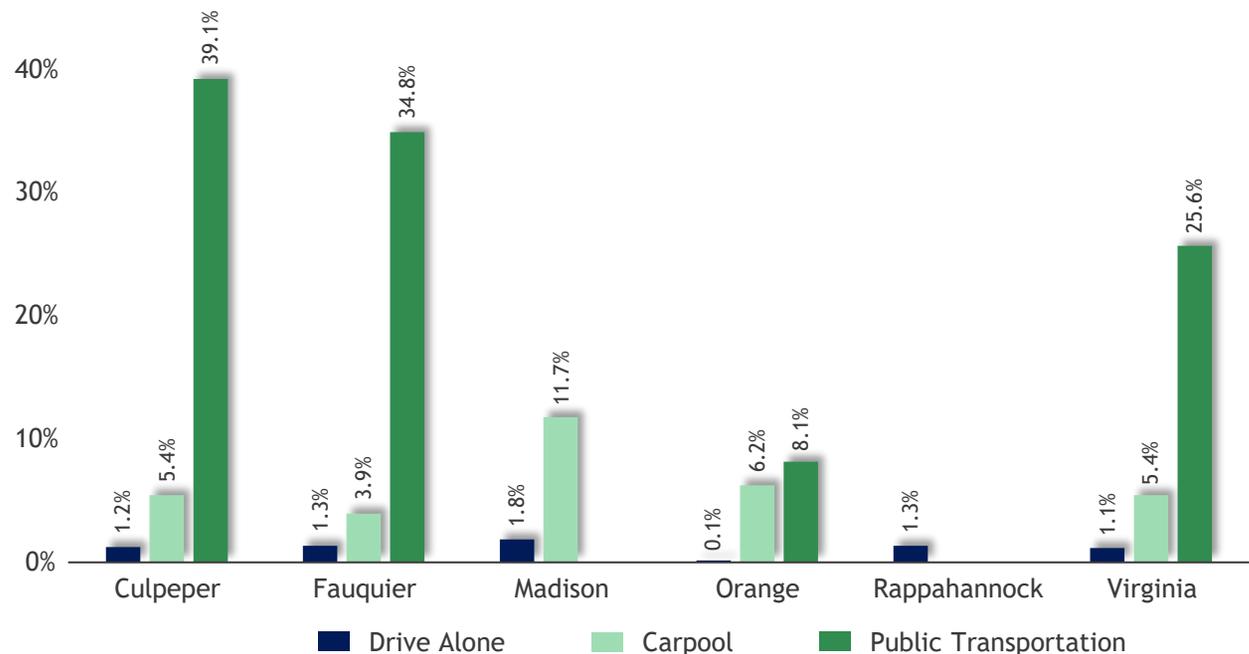


## Transportation Implications

US Census data from 2018 were reviewed at the block group level in order to provide enough detail to assess possible areas of service expansion for fixed route and demand responsive transit. Any segment of the population without a vehicle available, which can include elderly, people with disabilities, and low-income groups, are more dependent on demand responsive transit in a rural area than in urban areas. This is due to the smaller network of fixed transit routes in rural areas when compared to urban areas. All the counties within the region are either at or below the state average of workers without a vehicle for commuting. The percent of commuters throughout the region utilizing public transportation is well below the state average as well. While in the counties of Culpeper, Madison and Orange, carpooling to work is above the state average. This data helps assess the mobility needs of these previously mentioned target populations. Additional demand responsive transit or in some cases, determining a single point of contact for providers, is a need that is being identified throughout the Commonwealth.

	Number of Workers	Drive Alone	Carpool	Use Public Transportation	No Vehicle Available
Culpeper	17,055	80%	10.3%	0.5%	2.6%
Fauquier	23,801	77.3%	8.8%	0.4%	2%
Madison	4,167	72.7%	12.3%	0.8%	2.8%
Orange	10,190	76.6%	12.8%	0.4%	0.9%
Rappahannock	2,027	71.9%	8.4%	0.3%	2.1%
Virginia	4,057,957	78.8%	9%	2.9%	2.8%

Commuter Options Utilized by Workers Without a Personal Vehicle



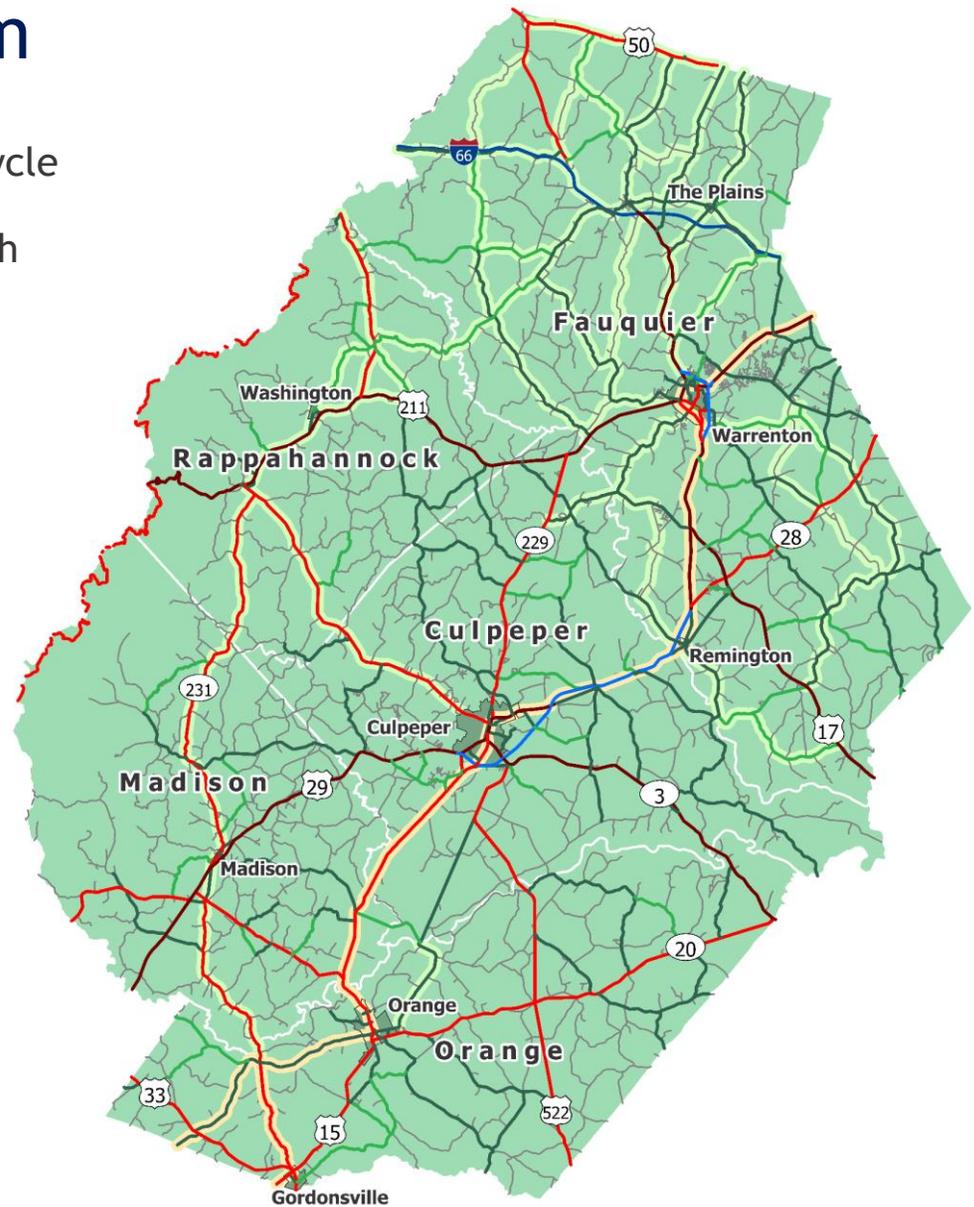
Source: ACS, 2018.

# Regional Transportation System

Each mode of travel - roadways, human services transportation (public transportation), freight, rail, bicycle and pedestrian facilities, airports, and travel demand management - has been independently analyzed for both current and forecasted conditions.

## Roadways

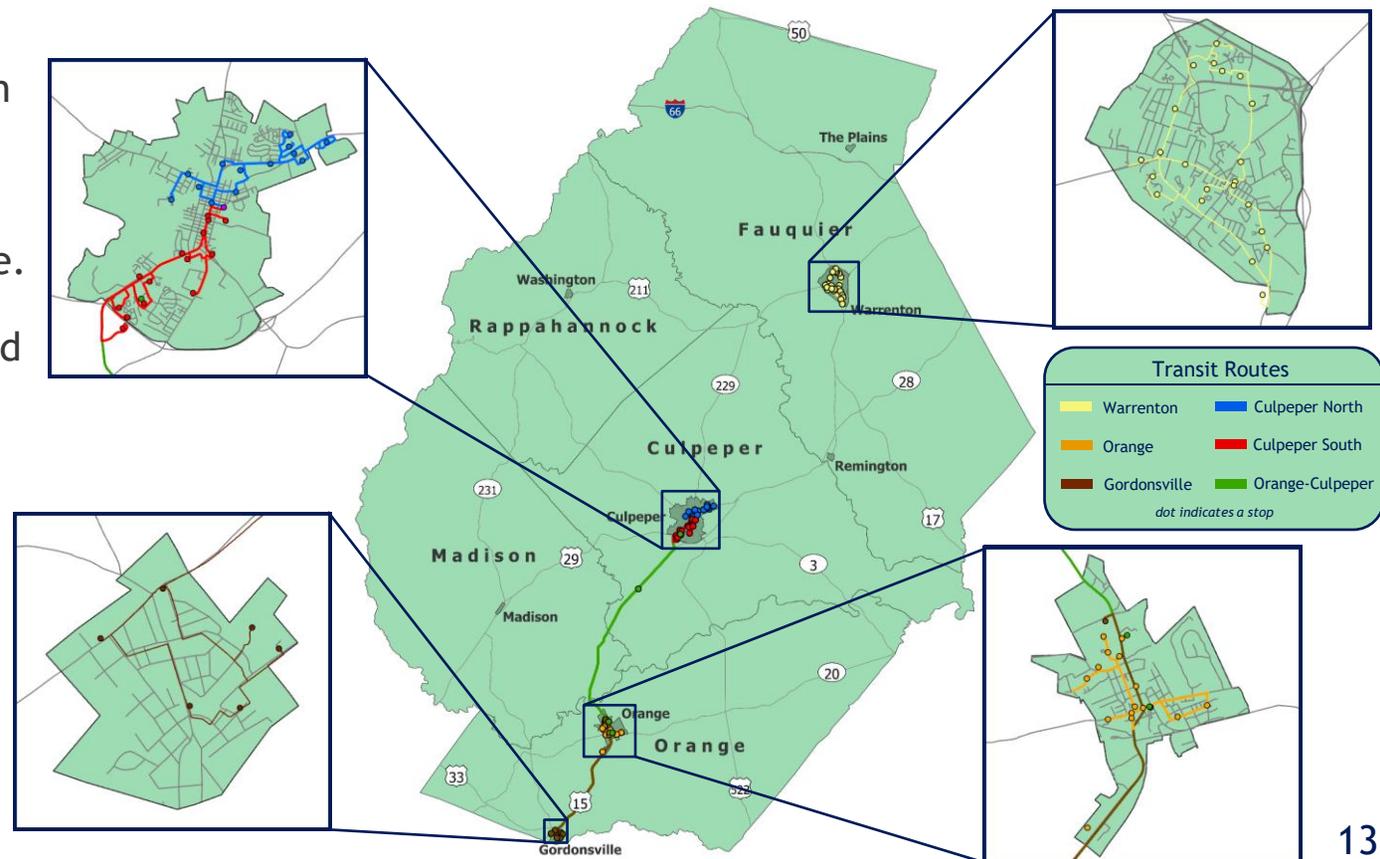
Primary east-west corridors include: I-66, US 211, VA 3, VA 28, and VA 20; north-south corridors are US 15, US 17, US 29, US 522, and VA 231. Scenic Byways, identified by both the U.S. Department of Transportation and VDOT, are an important part of the transportation system in the region. The Journey Through Hallowed Ground National Scenic Byway, follows parts of VA 20, VA 231 and US 15, and there are more than 30 State Scenic Byways identified by VDOT in the region.



## Human Services Transportation

Human services transportation encompasses multiple programs that serve individuals who, for various reasons, cannot or choose not to operate their own vehicles. This category of transportation includes public transit, both fixed-route and demand response, specialized demand response service, volunteer transportation, and private providers, including taxi and medical transport companies. Most public transportation programs are designed to meet the needs of elderly and low-income residents, and residents with disabilities; however, some of these services also serve the objectives of travel demand management. Human services transportation planning in the Rappahannock-Rapidan Region is coordinated by the Foothills Area Mobility System (FAMS).

All fixed-route public transportation in the region is provided by Virginia Regional Transit (VRT), which operates in the Towns of Culpeper, Warrenton, Orange and Gordonsville. VRT also provides demand response service along these fixed routes, and in the Counties of Fauquier and Culpeper. The Orange-Culpeper Connector allows for inter-county public transit. The Rappahannock-Rapidan Community Services Board and Area Agency on Aging (RRCSB/AAA) is the largest specialized demand response provider in the region. It also operates the largest volunteer transportation program.

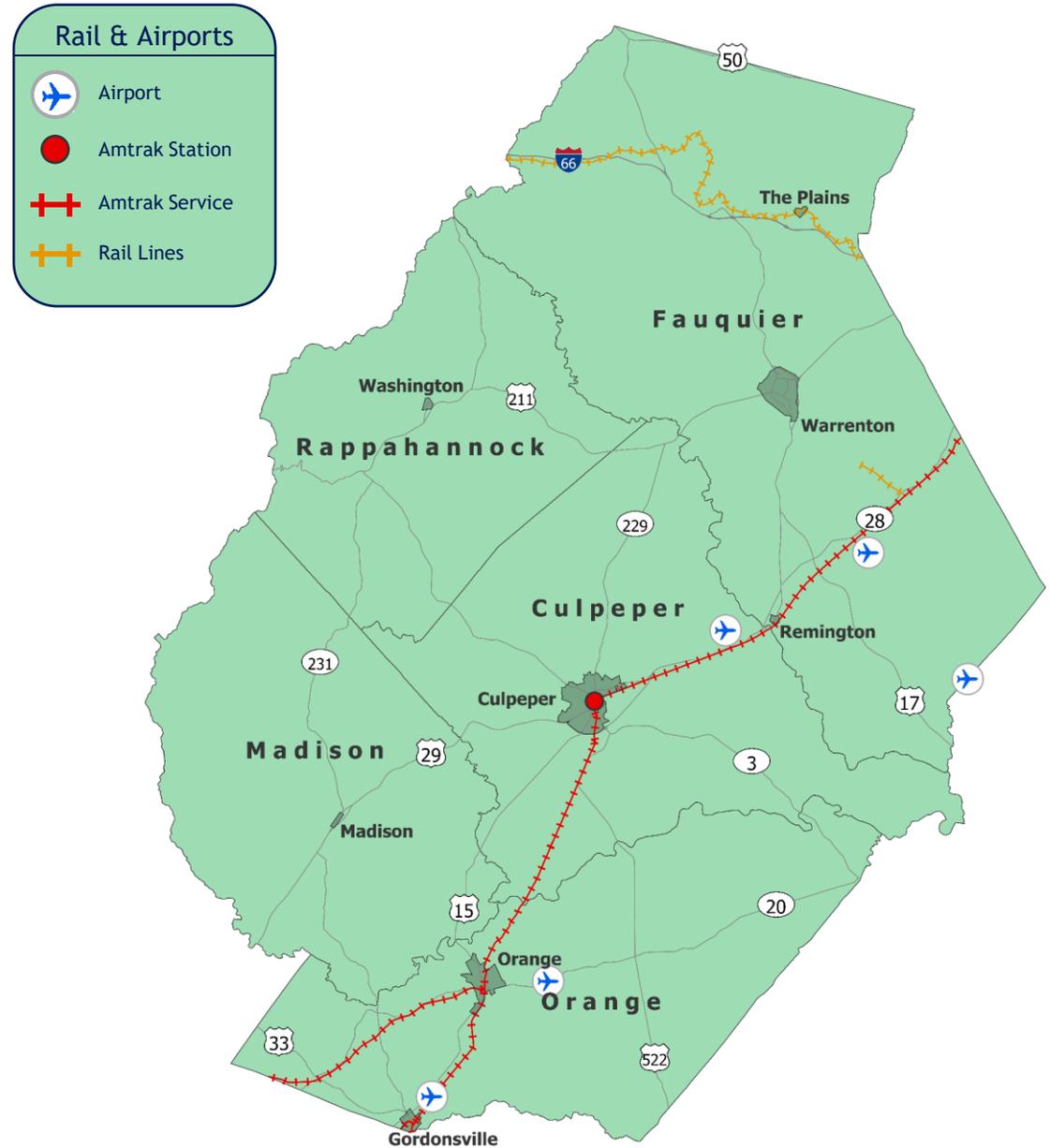


## Rails and Airports

Norfolk Southern owns the freight rail lines in the region. Twelve freight trains operate daily through the region, providing service to businesses and industries. There are five general aviation facilities located in the Rappahannock-Rapidan region: in Elkwood (Culpeper Regional); Gordonsville; Midland (Warrenton-Fauquier); Orange; and Somerville. The nearest commercial airports are in Dulles, Charlottesville, and Richmond.

The Virginia Air Transportation System Plan Update (2016) contains future forecasts (2037) of operations and aircraft based at the airports ranging from growth of 4% of based aircraft at Culpeper Regional to no growth at Orange County.

One Amtrak station, in the Town of Culpeper, serves three routes: the Crescent, which runs from New York to New Orleans, and the Cardinal/ Hoosier State, which operates between New York and Chicago three days per week. An additional daily Amtrak route originating in Lynchburg with destinations as far north as Boston began service in October 2009.

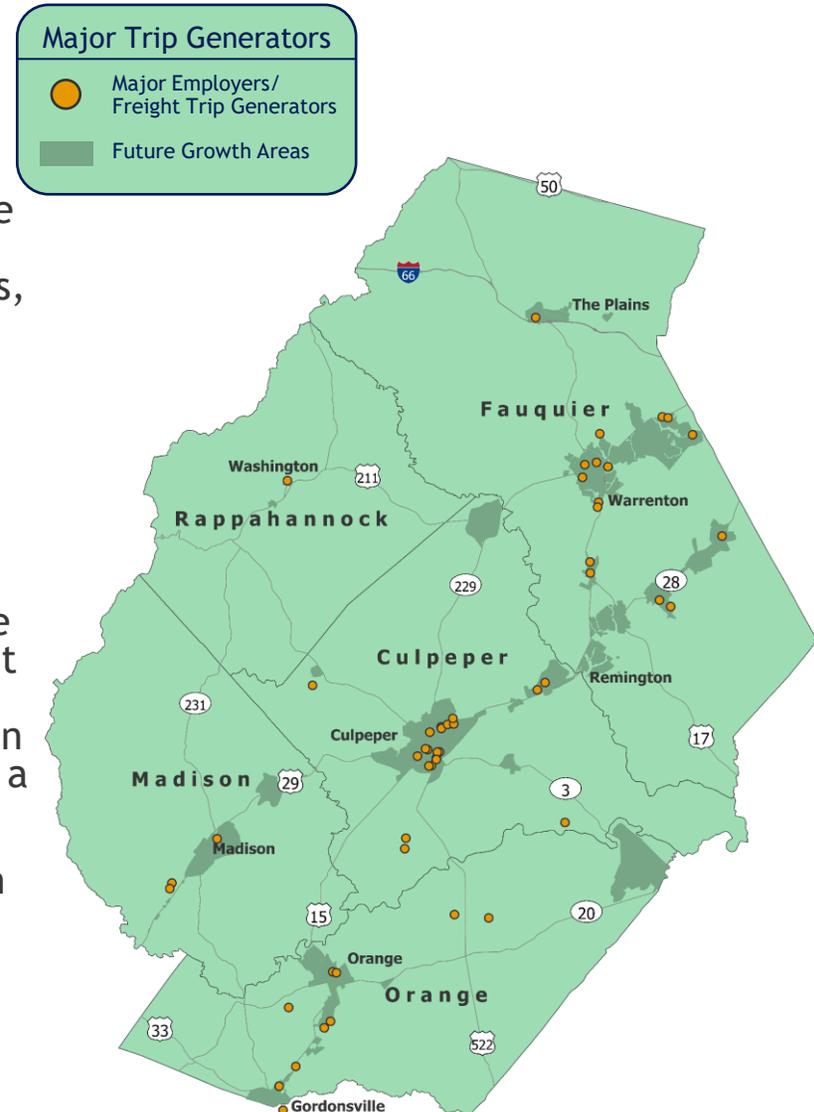


## Freight, Land Use and Future Growth Areas

A review of the jurisdictions' comprehensive plans, zoning, and proposed future land use determined where future growth areas could be. These locations are where the individual jurisdictions wish to direct future growth based on the presence of existing transportation infrastructure, water and sewer existing and future capacity, existing retail locations, and major employers. By directing development, and in particular businesses and industries, that moves freight towards these growth areas, there is the potential to maximize the future performance of the region's transportation system and protect and enhance the region's existing agricultural landscape and setting.

Freight generators within the RRRC were identified, and their proximity to nearby major roadway and rail corridors noted. The RRRC, working with VDOT, determined the location of freight generators along with major employers and trip generators. These sites were mapped along with future growth areas in the region; it is clear that freight generators are generally located in and near areas identified as growth areas within the region. In collaboration with the Office of Intermodal Investment, the RRRC has prepared a detailed Regional Freight Study, which was released in 2010.

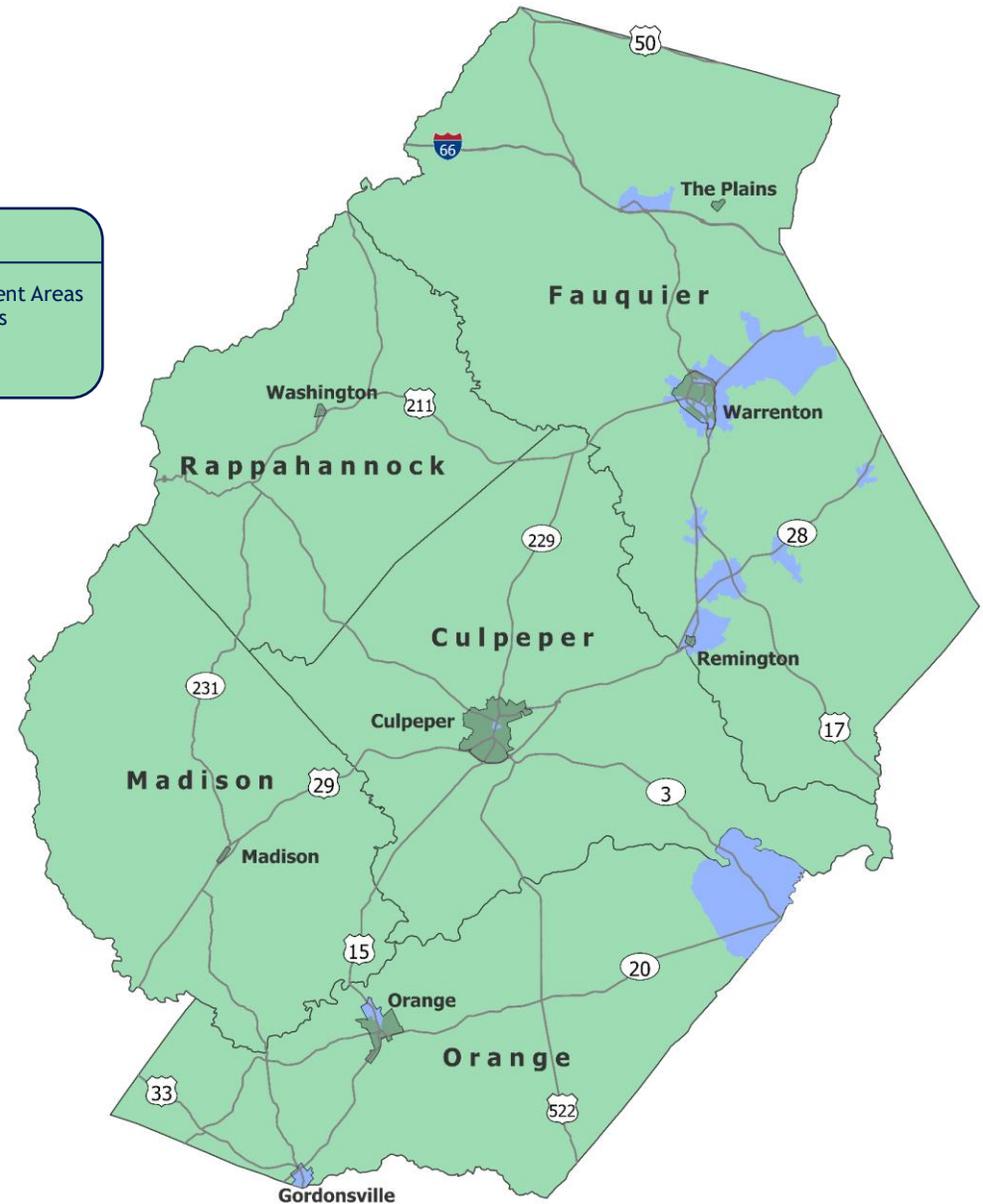
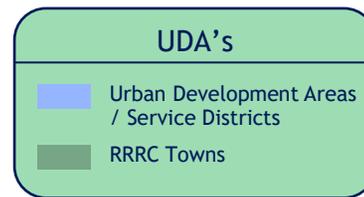
The analysis of current and future freight movement in the region explores the relationships between land use, transportation, and investments. It discusses the importance of making strategic policies and investments that will improve the goods movement capabilities of local employers, the economic competitiveness of the region, and overall quality of life of its residents



## Urban Development Areas (UDA)

Urban Development Areas (UDAs) are areas designated by a locality that may be sufficient to meet projected residential and commercial growth in the locality for an ensuing period of at least 10 but not more than 20 years. These areas are identified and implemented for the following benefits:

- Minimize infrastructure expenditures
- Preserve undeveloped farm, forest and natural features
- Present development patterns that respond to demographic shifts
- Provide pedestrian-friendly transportation options



## Bicycle and Pedestrian Facilities

Designated bicycle routes and pedestrian facilities are currently located in the Towns of Culpeper, Remington, and Warrenton. In addition, the Appalachian Trail runs across the entire northwest portion of the region. Plans to expand the bicycle network are underway in parts of the region. Several local plans and the RRRC Active Transportation Plan (2019) detail the existing and potential future facilities for the region and the individual member jurisdictions.

**Bicycle and Pedestrian Facilities**

- US Bicycle Route 1
- Appalachian Trail
- Existing Trails
- Shared Road Bike Routes
- Public River Access
- Parks
- Shenandoah National Park
- Montpelier
- Sky Meadows State Park
- Wildlife Management Areas
- Battlefields

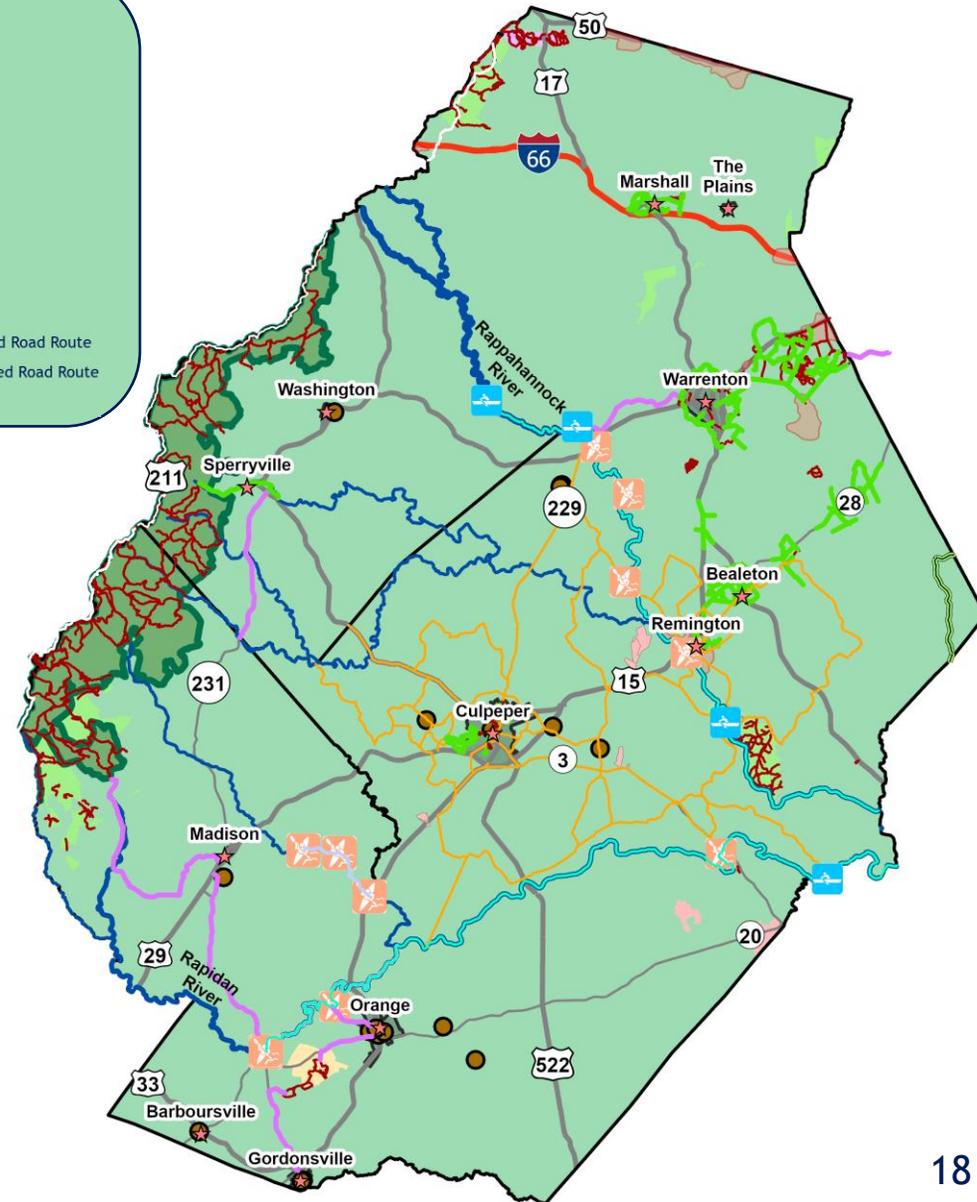


## Bicycle and Pedestrian Facilities

RRRC has prepared an Active Transportation Plan (2019) that details the existing and potential future facilities for the region and the individual jurisdictions.

Regional recommendations include:

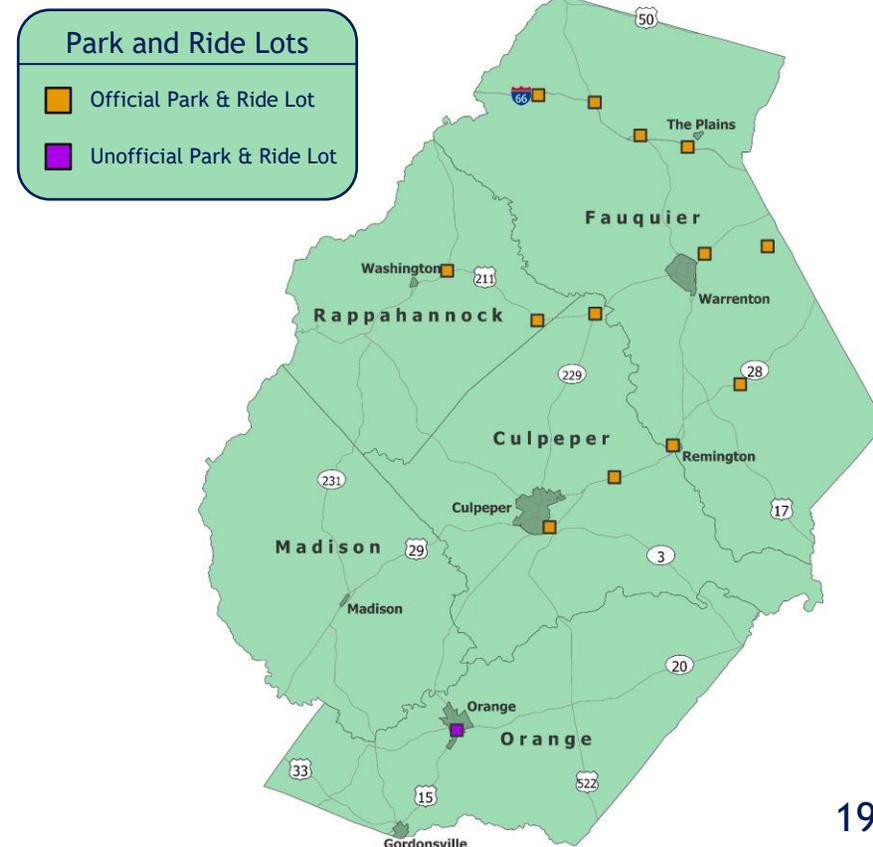
- Establish blueways and public river access along the Rappahannock, Rapidan and Robinson Rivers.
- Address pedestrian and bicyclist safety needs by providing a safe and connected alternative transportation network.
- Create greenways and shared road bike network connecting population centers and recreation destinations such as local, state and National Parks.
- Connect towns to historic, commercial and agritourism sites as possible.
- Install infrastructure that enables in-town residents of all ages to walk or bike safely to common destinations such as schools, grocery stores, pharmacies and libraries.



## Travel Demand Management

Travel demand management (TDM) holds potential for enhancing many elements of the transportation network, and with other improvements, has been shown to greatly aid in reducing single-occupant vehicle trips. TDM measures include carpooling and vanpooling programs, expanded peak hour public transit, commuter buses, park and ride lots, as well as better coordination between modes to facilitate intermodal transfers. While low population densities in rural areas are not always conducive to major shifts to mass transit, some gains can be realized. There are concentrated areas to which commuters in the RRRC are currently traveling for employment, primarily, Northern VA/Washington, DC/ Northern Virginia, Fredericksburg, and Charlottesville

RRRC Commuter Services, made possible through funding from DRPT, provides rideshare/vanpool matching services for residents of the region, in addition to other TDM-related assistance. In addition, Commuter Services currently partnered with Scenic America, Inc. to provide and market daily commuter bus service from Culpeper and Fauquier counties to Northern Virginia and Washington, DC. The service was started in January 2009 through a demonstration grant awarded to RRRC by DRPT. There are presently 14 official and unofficial park-and-ride lots throughout the region, with over half of these in Fauquier County. Lots in the northern half of the Rappahannock-Rapidan region serve, in general, commuters to Northern Virginia, while those in the southern half serve commuters to Fredericksburg and Charlottesville. There is no commuter rail service in the region, but the current western terminus of the Manassas line of Virginia Railway Express (VRE) is seven miles east of Fauquier County at Broad Run/ Airport Station in Prince William County.

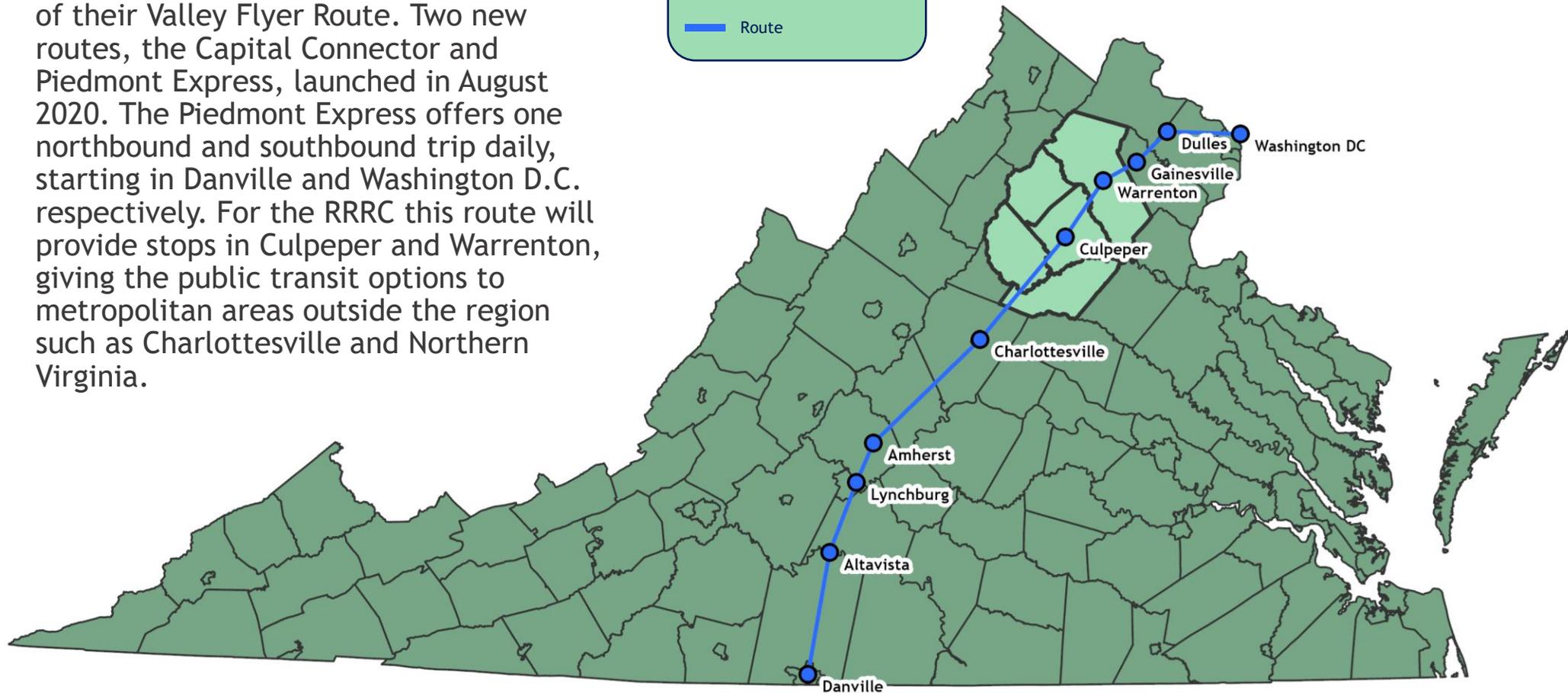


# Travel Demand Management

Virginia Breeze Bus Lines currently provides commuting connections from Washington D.C. to Blacksburg as a part of their Valley Flyer Route. Two new routes, the Capital Connector and Piedmont Express, launched in August 2020. The Piedmont Express offers one northbound and southbound trip daily, starting in Danville and Washington D.C. respectively. For the RRRC this route will provide stops in Culpeper and Warrenton, giving the public transit options to metropolitan areas outside the region such as Charlottesville and Northern Virginia.

Virginia Breeze  
Piedmont Express

- Stops
- Route

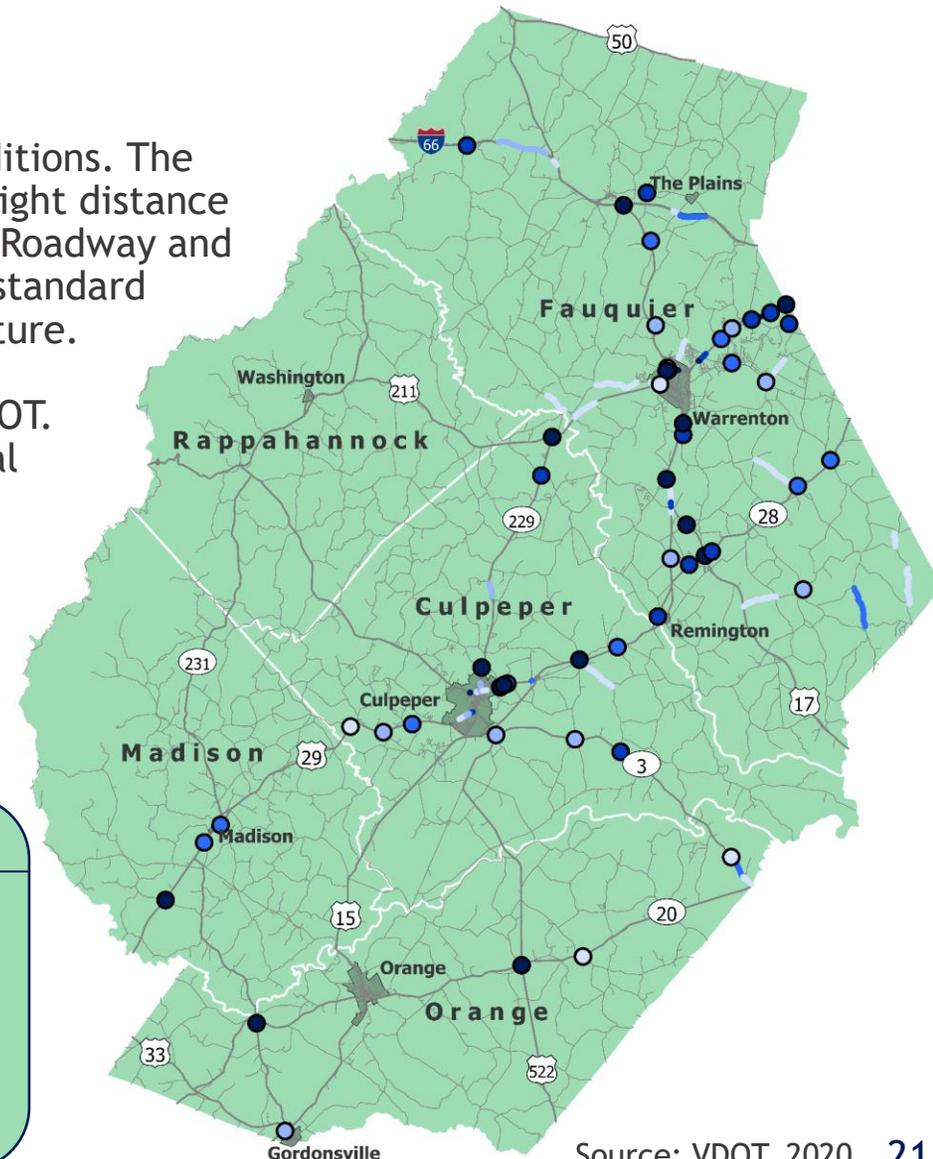
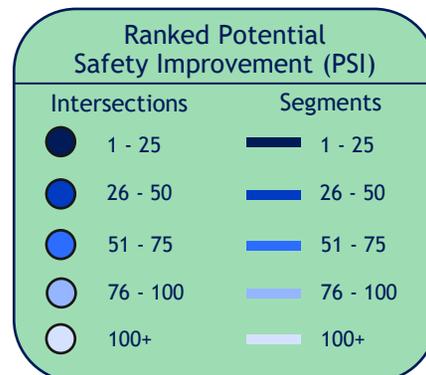


# Transportation System Performance and Conditions

## Roadway Safety

Roadway analysis first focused on safety and geometric conditions. The roadway safety assessments identified deficiencies such as sight distance and visibility, access management, and inadequate signage. Roadway and intersection geometric condition assessments identified substandard lane width, shoulder width, or horizontal and vertical curvature. Both of these factors were identified by Potential for Safety Improvement (PSI) intersections and segments data from VDOT. Higher priorities were given to those roadways with potential geometric concerns that also carried higher levels of traffic.

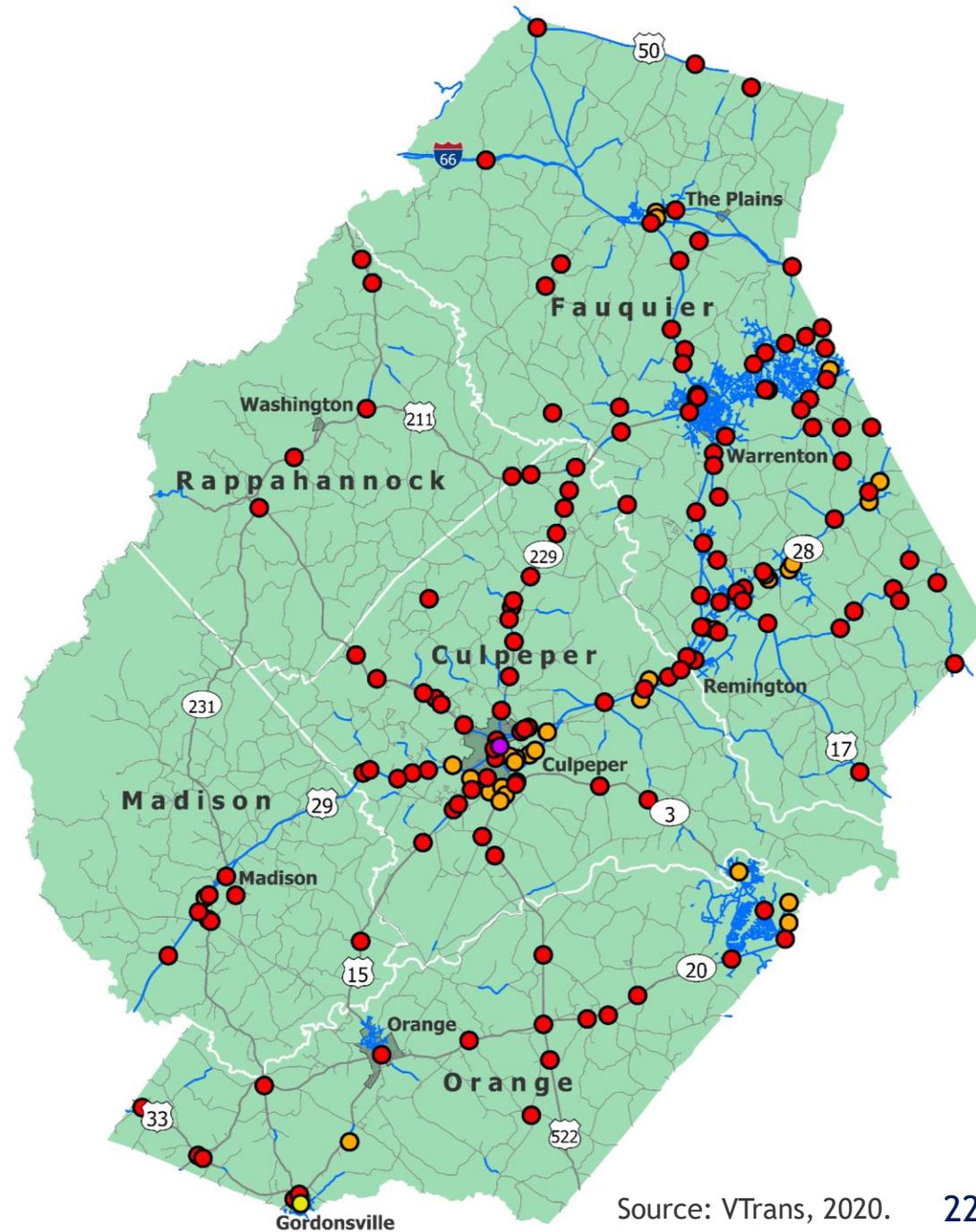
Potential for Safety Improvement (PSI) intersections and segments were identified by VDOT as “hot spots” in need of improvement. These locations were found after conducting a roadway network screening process utilizing the latest Highway Safety Manual methods. The analysis results shown are for the years 2013 through 2017. These Target Safety Need (TSN) locations shown indicate intersections or segments that have had a positive PSI value in three or more years of the five year period, indicating recurring safety issues. All locations with a PSI greater than zero are ranked for each VDOT district.



## 2019 VTrans Mid-Term Needs

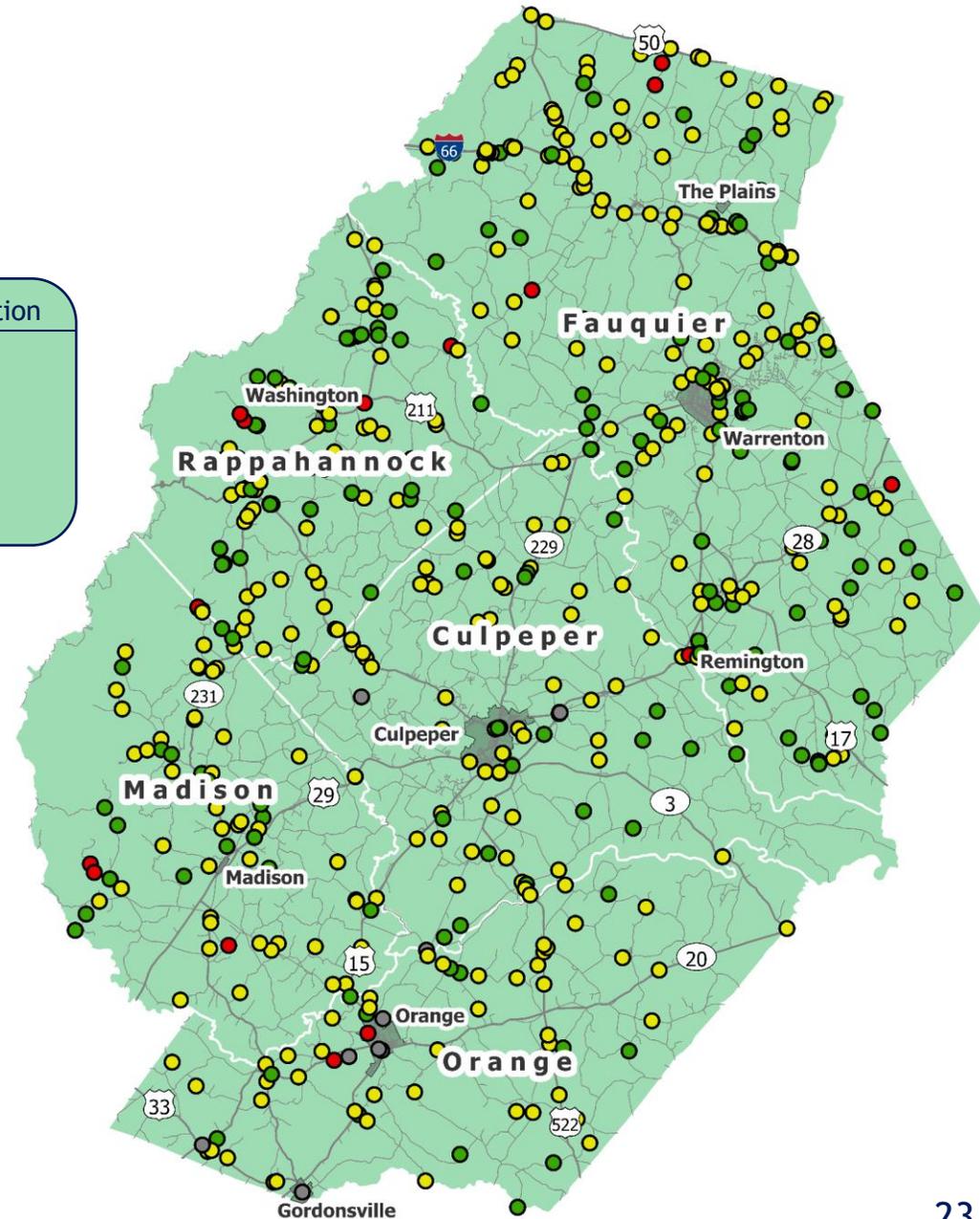
VTrans is Virginia's multimodal transportation plan and the Commonwealth Transportation Board's (CTB) vision for transportation in the Commonwealth. The CTB, with assistance from the Office of Intermodal Planning and Investment (OIPI), conducts a comprehensive review of statewide transportation needs as part of the development of VTrans.

The Mid-term Needs identify some of the most pressing transportation issues that need to be addressed over the next 10 years. The Needs are identified so that they can inform or guide transportation policies, strategies, and infrastructure improvements that VDOT, DRPT, and agency partners develop, utilizing funding from federal, state, and local sources. Organized around the VTrans Goals and Objectives, the Mid-term Needs have been identified based on data-driven methods that rely on performance measures and feedback from stakeholders on local and regional transportation conditions and emerging issues.



# Bridge Conditions

Roadway analysis then focused on bridge conditions. Current bridge sufficiency ratings were reviewed and those structures with a rating of less than 50 were considered deficient and in need of structural upgrade or replacement. Sufficiency evaluates factors such as load, visual structural deficiencies (cracks, concrete visibly missing), adequacy of the foundation, and the remaining life of the superstructure including pavement condition.

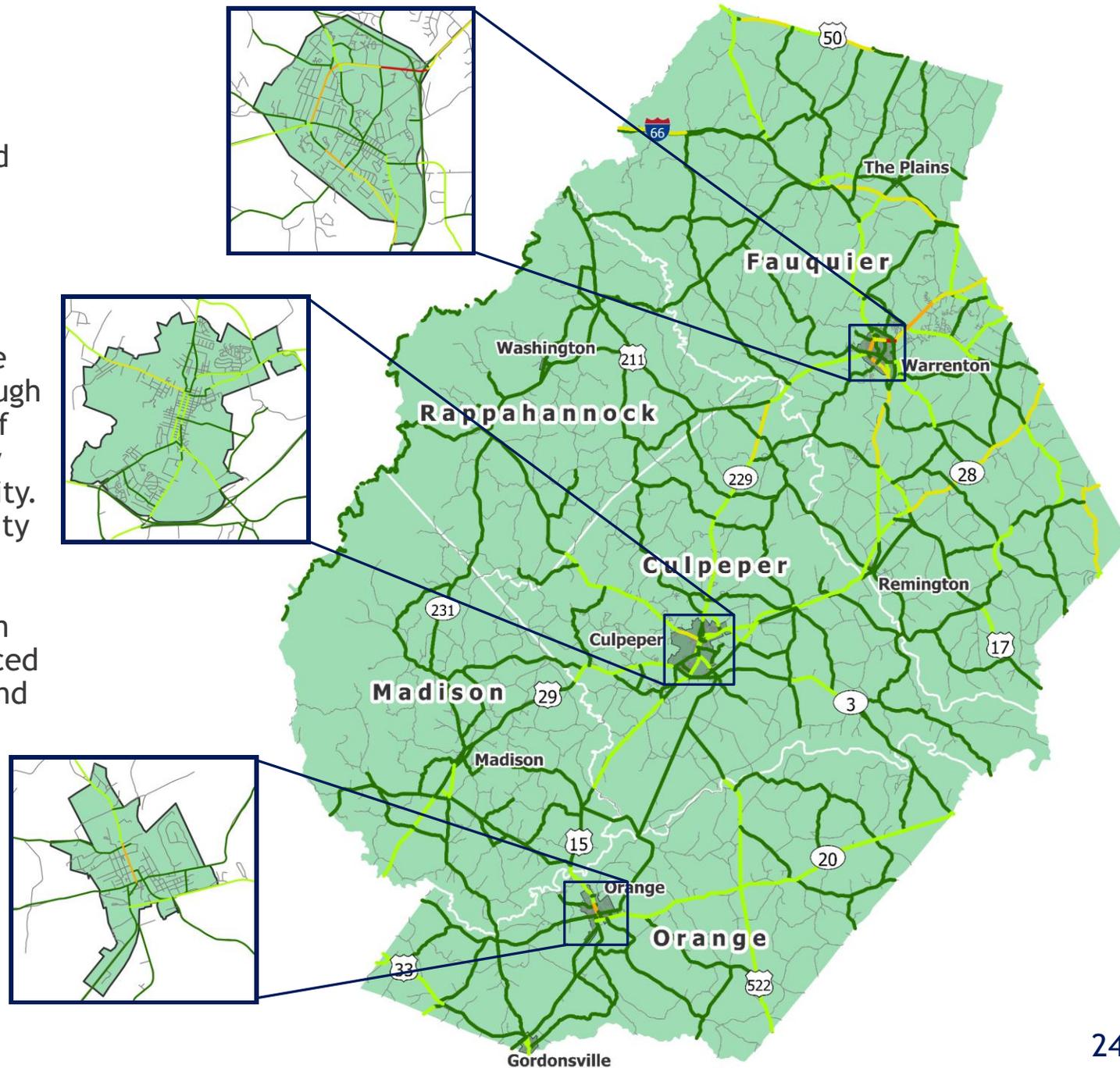
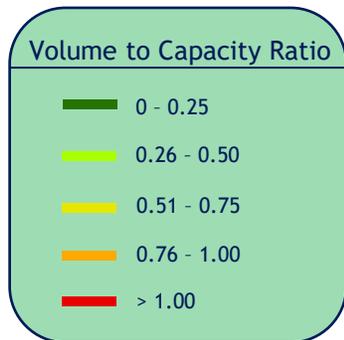


	Functionally Obsolete	Structurally Deficient	Total Number of Bridges	Percent Impaired
Culpeper	21	1	86	25.58%
Fauquier	58	3	227	26.78%
Madison	12	6	74	24.32%
Orange	5	3	64	12.5%
Rappahannock	26	4	98	30.61%
RRRC	122	17	549	25.32%

Source: VDOT, 2020.

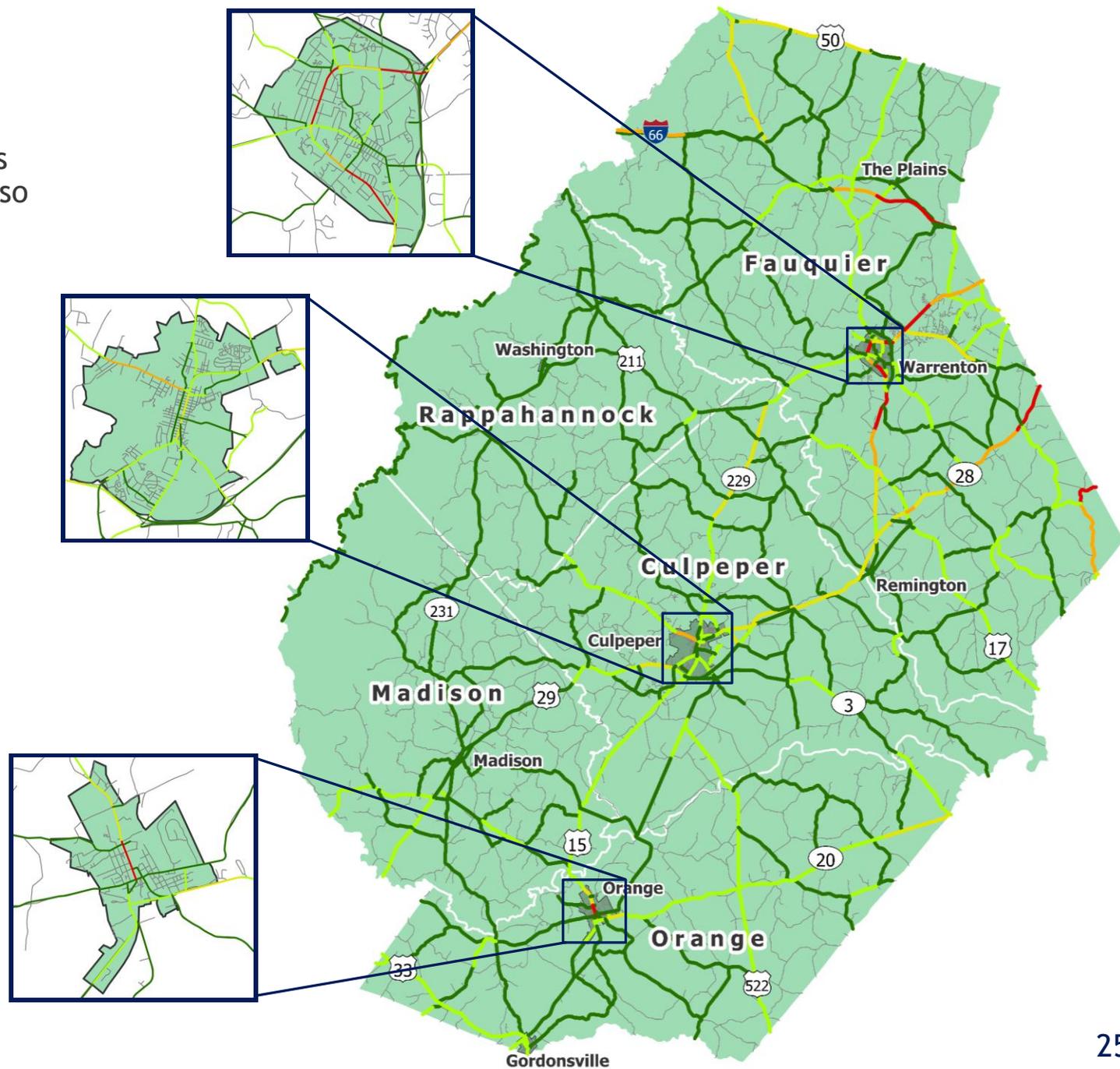
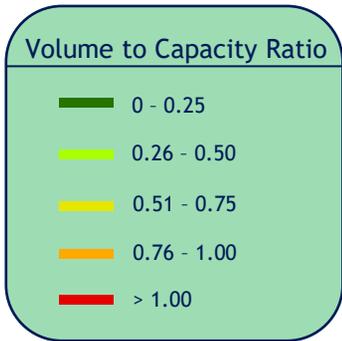
# Congestion

Finally, roadway analysis focused on congestion by reviewing the volume to capacity ratio of roadways in the region. The volume to capacity ratio is a measurement of the operating capacity of a roadway where the number of vehicles passing through is divided by the total number of vehicles that could theoretically pass through when at full capacity. The higher the volume to capacity ratio is in a given roadway segment, the higher the congestion. The data depicted in this map is from 2019, and sourced from the VDOT Transportation and Mobility Planning Division.



# Projected Congestion

The data depicted in this map is projected out to 2045, and is also sourced from the VDOT Transportation and Mobility Planning Division.

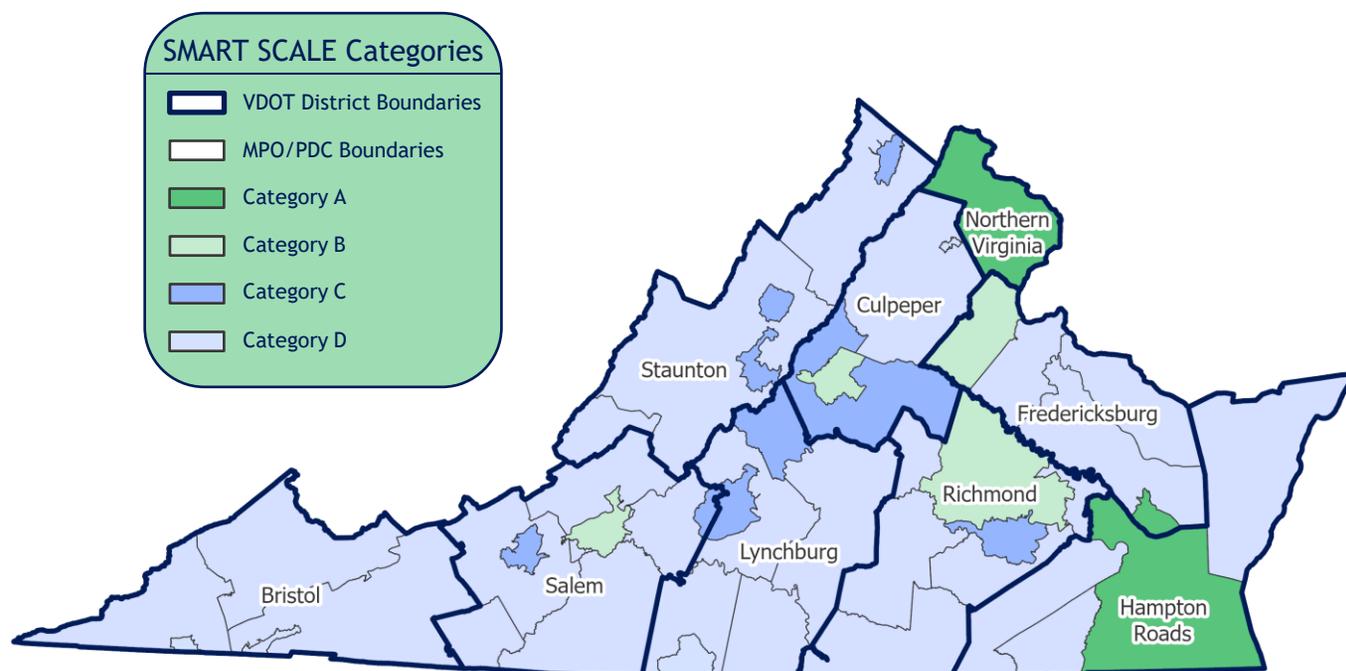


# Future Recommendations

## Overview of SMART SCALE

**SMART SCALE** is a method of selecting and funding the right transportation projects in Virginia. SMART SCALE stands for **S**ystem for the **M**anagement and **A**llocation of **R**esources for **T**ransportation, and the key factors used in evaluating a project's merits: Improvements to **S**afety, **C**ongestion Reduction, **A**ccessibility, **L**and Use, **E**conomic Development and the Environment. Included in SMART SCALE is a scoring system for selecting and prioritizing transportation projects based on the key factors mentioned previously.

Projects applied for within SMART SCALE are scored relative to one another, with the highest scoring projects being selected for future funding and development. Specific regions within Virginia are designated in different weighting typologies such as A, B, C, or D to better reflect the type and scale of needs in those particular regions. All the counties with the RRRC region are designated as Category D, which puts much more emphasis on safety and economic development in its scoring matrix.



# Current and Proposed Projects in the Region

**Roadway Resurfacing**

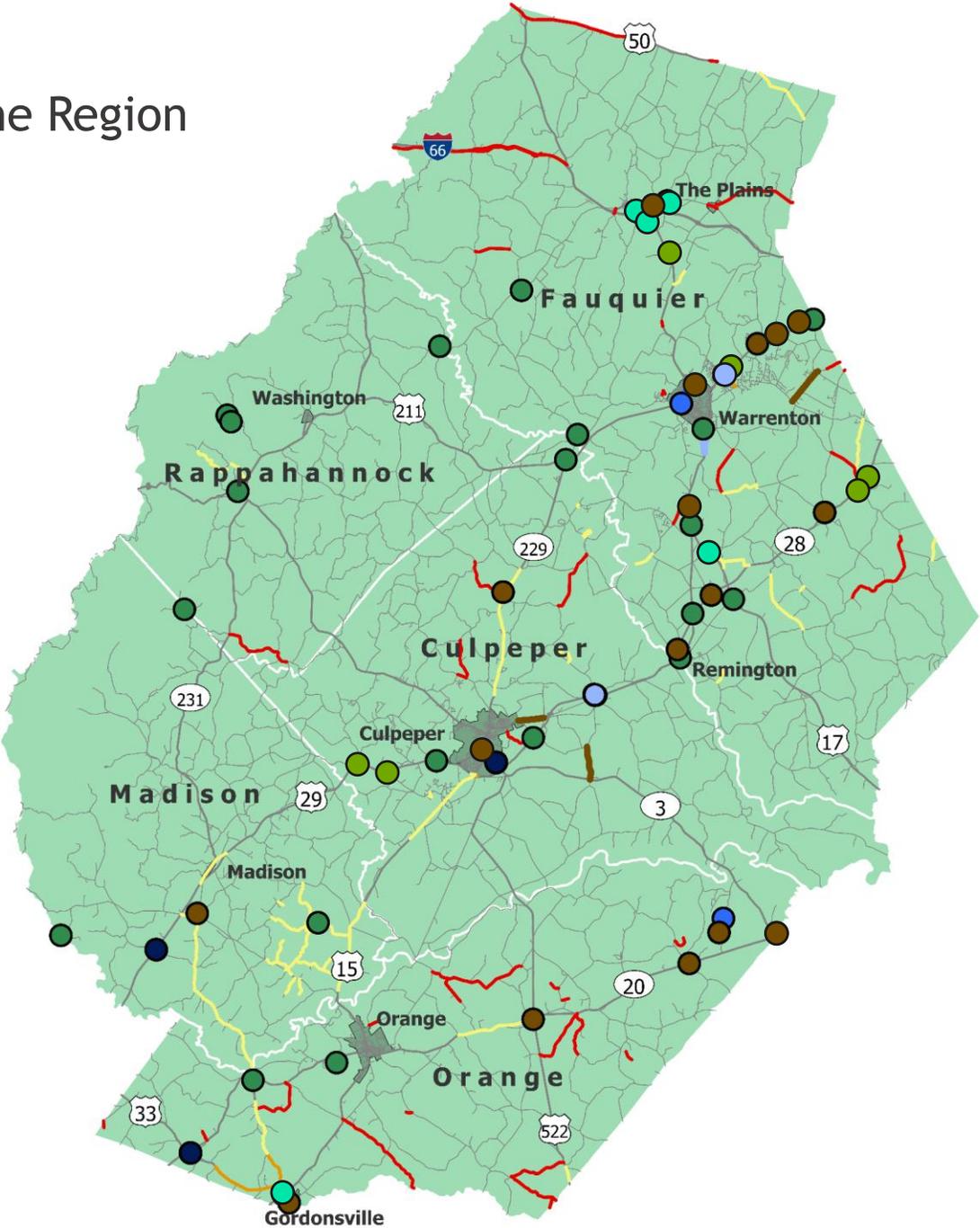
- Scheduled (Red line)
- In Progress (Orange line)
- Completed (Yellow line)

**Location Projects**

- FY17 SMART SCALE (Light Blue circle)
- FY18 SMART SCALE (Blue circle)
- FY20 SMART SCALE (Dark Blue circle)
- FY22 SMART SCALE (Cyan circle)
- Unfunded SMART SCALE (Brown circle)
- Other Funding (Green circle)
- Local Priority Projects (Light Green circle)

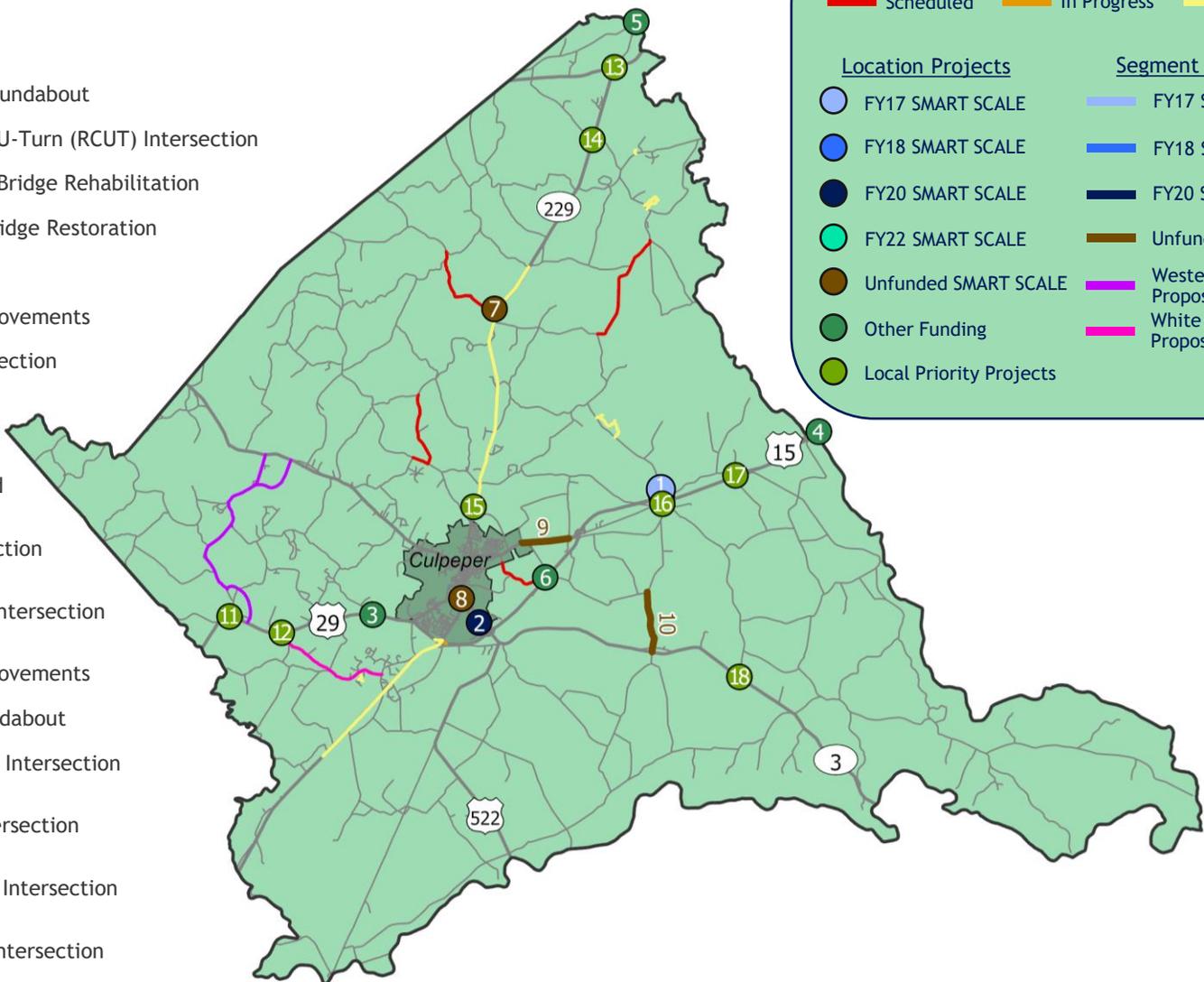
**Segment Projects**

- FY17 SMART SCALE (Light Blue line)
- FY18 SMART SCALE (Blue line)
- FY20 SMART SCALE (Dark Blue line)
- Unfunded SMART SCALE (Brown line)



# Current and Proposed Projects in Culpeper County

- 1 Brandy Station Park & Ride Lot
- 2 Route 3 and McDevitt Drive Intersection Roundabout
- 3 Route 29 at Route 718 Restricted Crossing U-Turn (RCUT) Intersection
- 4 Business Route 15 (Remington Road) Truss Bridge Rehabilitation
- 5 Route 613 (Jeffersonton Road) Waterloo Bridge Restoration
- 6 Interchange at Route 29 and Route 666
- 7 Route 229 and Route 640 Intersection Improvements
- 8 Orange Road at Fredericksburg Road Intersection Improvements
- 9 Route 15 and Route 29 Business Widening Including Pedestrian/Bike Access
- 10 Route 663 (Stevensburg Road) Shoulder and Safety Improvements
- 11 Route 29 at Route 633 (Reva Road) Intersection Improvements
- 12 Route 29 at Route 603 (White Shop Road) Intersection Improvements
- 13 Route 211 and Route 229 Intersection Improvements
- 14 Route 229 at Route 621 (Colvin Road) Roundabout
- 15 Route 229 at Route 694 (Ira Hoffman Lane) Intersection Improvements
- 16 Route 29 at Route 663 (Alanthus Road) Intersection Improvements
- 17 Route 29 at Route 676 (Beverly Ford Road) Intersection Improvements
- 18 Route 3 at Route 669 (Carrico Mills Road) Intersection Improvements



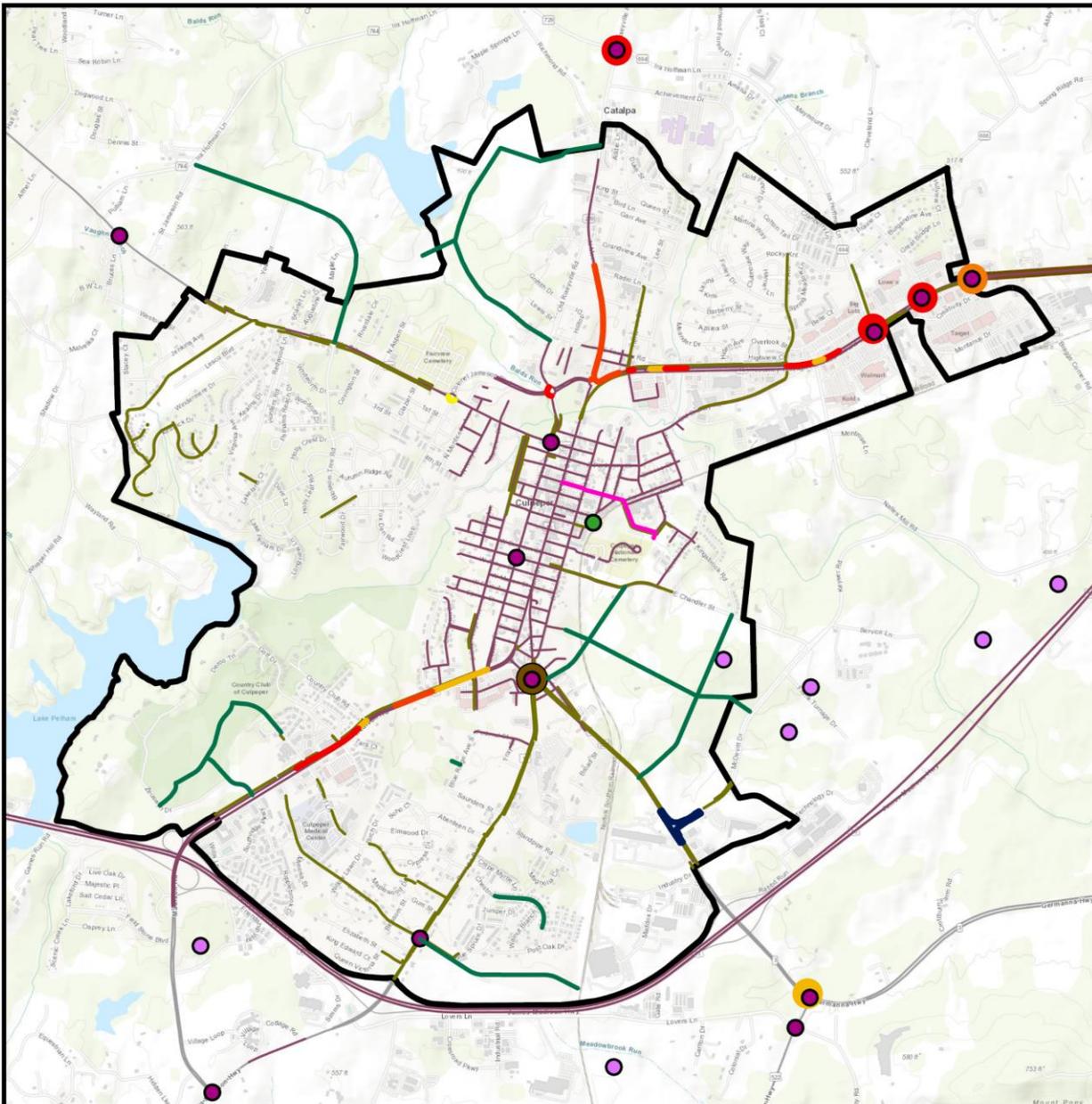
Roadway Resurfacing

— Scheduled   
 — In Progress   
 — Completed

<u>Location Projects</u>	<u>Segment Projects</u>
<span style="color: lightblue;">●</span> FY17 SMART SCALE	<span style="color: lightblue;">—</span> FY17 SMART SCALE
<span style="color: blue;">●</span> FY18 SMART SCALE	<span style="color: blue;">—</span> FY18 SMART SCALE
<span style="color: darkblue;">●</span> FY20 SMART SCALE	<span style="color: darkblue;">—</span> FY20 SMART SCALE
<span style="color: cyan;">●</span> FY22 SMART SCALE	<span style="color: brown;">—</span> Unfunded SMART SCALE
<span style="color: brown;">●</span> Unfunded SMART SCALE	<span style="color: magenta;">—</span> Western Collector Proposal
<span style="color: green;">●</span> Other Funding	<span style="color: magenta;">—</span> White Shop Collector Proposal
<span style="color: yellow;">●</span> Local Priority Projects	

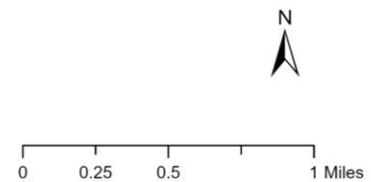
# Town of Culpeper

Current and Proposed Smart Scale Projects  
Potential for Safety Improvement (PSI) Intersections and Segments  
VTrans 2019 Mid-Term Needs Intersections and Segments



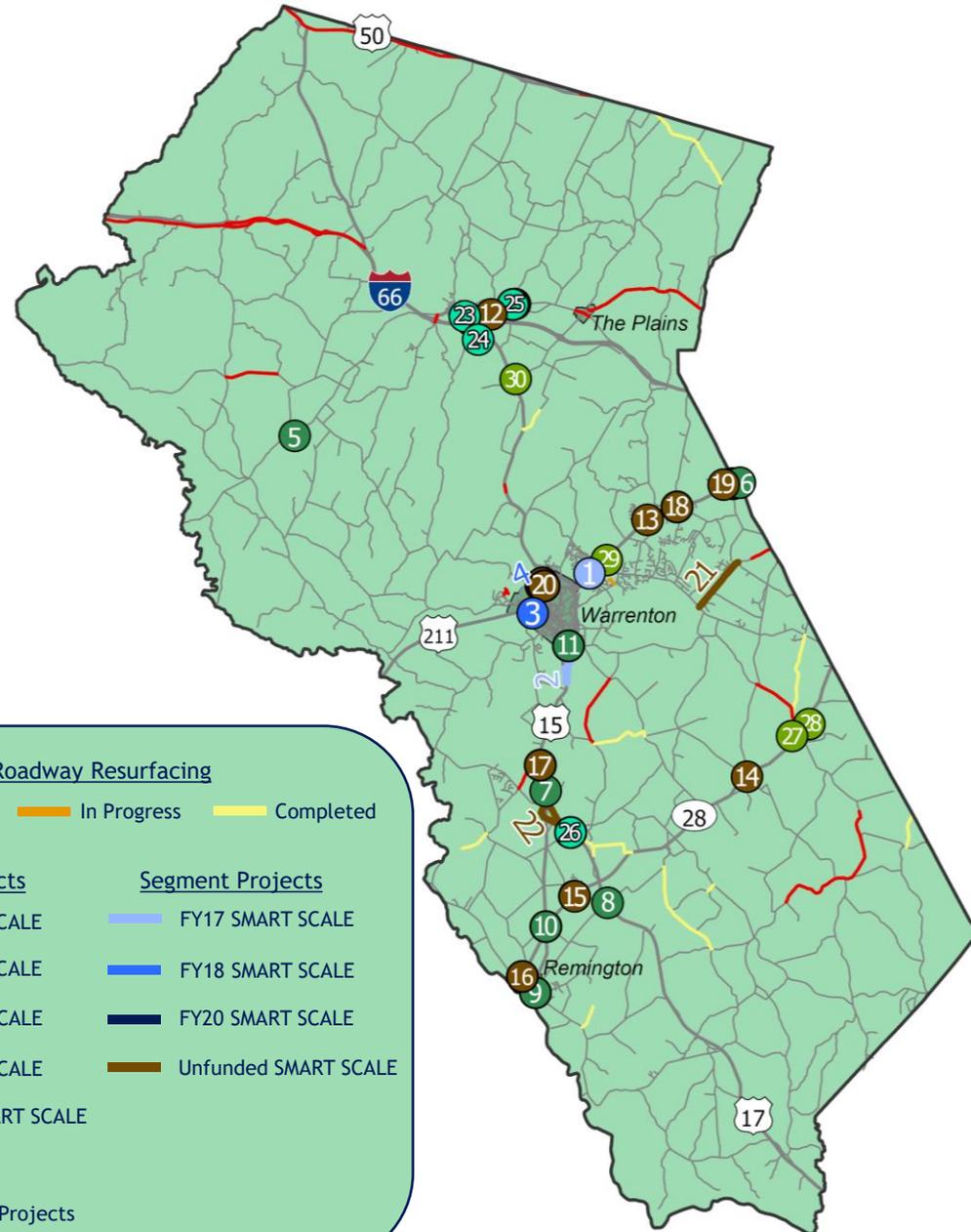
- | Smart Scale/Other Projects  | VTrans Mid-Term Needs   |
|---|---|
| <ul style="list-style-type: none"> <li><span style="color: lightblue;">—</span> FY-17</li> <li><span style="color: blue;">—</span> FY-18</li> <li><span style="color: darkblue;">—</span> FY-20</li> <li><span style="color: cyan;">—</span> FY-22</li> <li><span style="color: brown;">●</span> Unfunded</li> <li><span style="color: green;">—</span> Proposed Minor Collectors</li> <li><span style="color: olive;">—</span> Proposed Sidewalks</li> <li><span style="color: magenta;">—</span> E. Spencer Improvements</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: purple;">●</span> Improved Access</li> <li><span style="color: purple;">●</span> Improved Safety</li> <li><span style="color: lightgreen;">●</span> Improved Transit Access</li> <li><span style="color: green;">●</span> Improved Rail On-Time</li> <li><span style="color: purple;">—</span> Segment with Needs</li> </ul> |
| PSI Intersection Ranking  | PSI Segment Ranking   |
| <ul style="list-style-type: none"> <li><span style="color: red;">●</span> 1 - 25</li> <li><span style="color: orange-red;">●</span> 26 - 50</li> <li><span style="color: orange">●</span> 51 - 75</li> <li><span style="color: yellow-orange">●</span> 76 - 100</li> <li><span style="color: yellow">●</span> 100+</li> </ul>   | <ul style="list-style-type: none"> <li><span style="color: red;">—</span> 1 - 25</li> <li><span style="color: orange-red;">—</span> 26 - 50</li> <li><span style="color: orange">—</span> 51 - 75</li> <li><span style="color: yellow-orange;">—</span> 76 - 100</li> <li><span style="color: yellow;">—</span> 100+</li> </ul>   |

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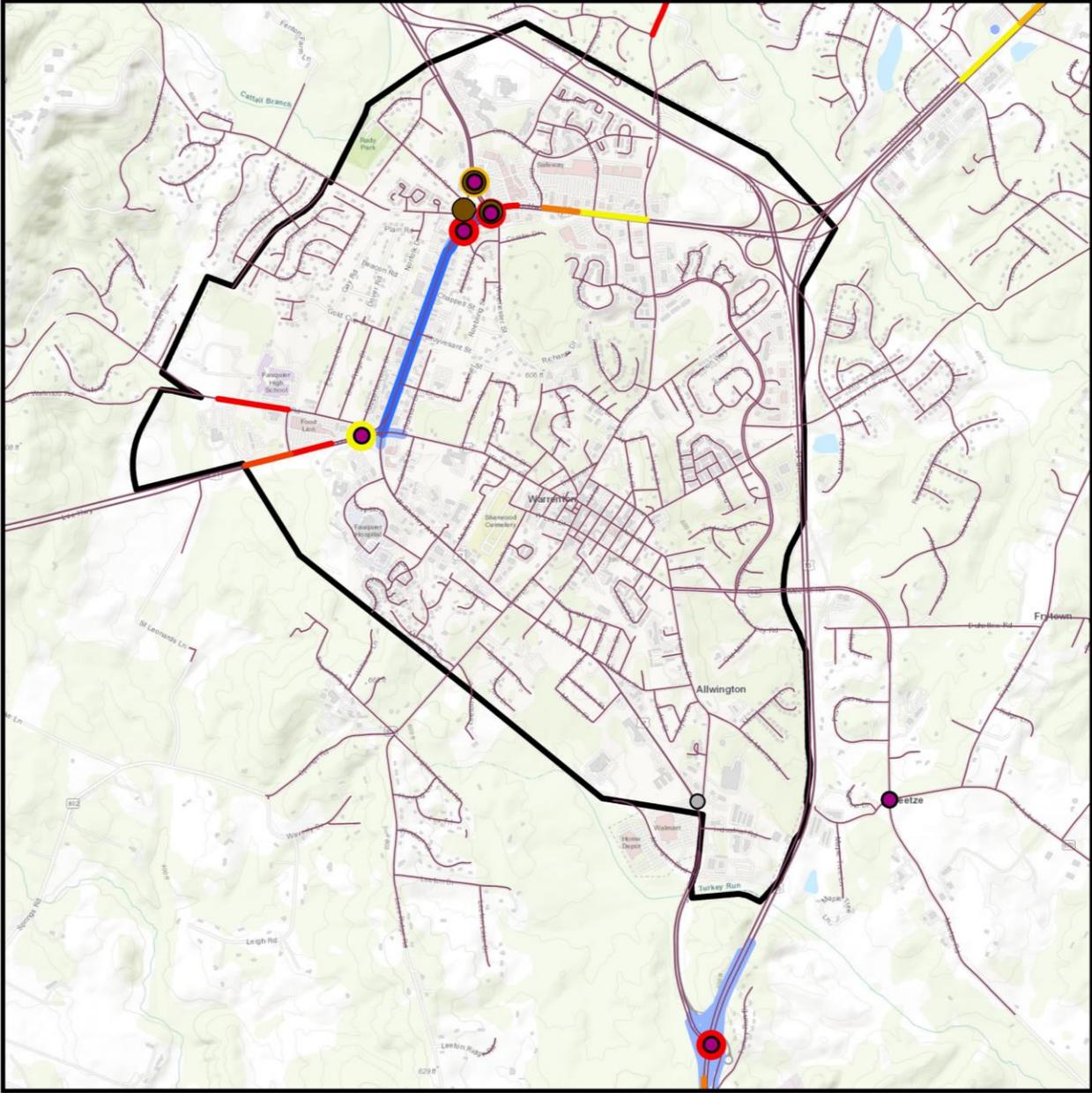
# Current and Proposed Projects in Fauquier County

- 1 Warrenton Park and Ride Lot Expansion
- 2 U.S. Route 15/17/29 Warrenton Interchange
- 3 Improve Intersection of Frost with Broadview-West Shirley Avenues
- 4 Broadview Avenue Access Management Improvements
- 5 Route 647 (Crest Hill Road) Deficient Bridge Replacement
- 6 Route 29 Corridor Safety Improvements
- 7 Route 15/17/29 North of Opal Safety Improvements
- 8 Route 17 (Marsh Road) Bridge Rehabilitation
- 9 Route 15 over Rappahannock River Bridge Rehabilitation
- 10 Route 28/29 Intersection Signal Rebuild
- 11 Route 15 at Falmouth Street Intersection Improvements
- 12 Whiting Road Railroad Crossing
- 13 Route 29/Telephone Road Signalized Alternative Intersection
- 14 Route 28 and Route 603/616 Roundabout
- 15 Route 28 and Route 661 (Schoolhouse Road) Intersection Improvements
- 16 Route 29/Freemans Ford Road Alternative Intersection
- 17 Route 29 at Lees Mill Road Intersection R-CUT
- 18 Route 29 at Broad Run Church Road Intersection Improvements
- 19 Route 29 at Vint Hill Road Intersection Improvements
- 20 US17/Broadview/Roebling Street/Bear Wallow Road Intersections (3 Projects)
- 21 Route 602 (Rouges Road) Reconstruction
- 22 Opal Interchange
- 23 I66 West Bound, Exit 28 Ramps & Route 17 Intersection, Roundabout
- 24 I66 East Bound, Exit 28 Ramps & Route 17 Intersection, RCUT Redesign
- 25 Roundabout at Route 55 and Route 709
- 26 Route 17 and Covington's Corner Road R-CUT
- 27 Route 28 and Old Dumfries Road/Elk Run Road Roundabout
- 28 Route 28 and Gaskins Lane Roundabout
- 29 Route 29 and Dumfries Road/Colonial Road Improvements
- 30 Route 17 & Old Tavern Road Improvements



# Town of Warrenton

Current and Proposed Smart Scale Projects  
 Potential for Safety Improvement (PSI) Intersections and Segments  
 VTrans 2019 Mid-Term Needs Intersections and Segments



- |                                 |                           |                             |               |
|---------------------------------|---------------------------|-----------------------------|---------------|
| <b>VTrans Mid-Term Needs</b>    |                           | <b>Smart Scale Projects</b> |               |
|                                 | Improved Access           |                             | FY-17         |
|                                 | Improved Safety           |                             | FY-18         |
|                                 | Improved Transit Access   |                             | FY-20         |
|                                 | Rail On-Time Improvements |                             | FY-22         |
|                                 | Segment with Needs        |                             | Unfunded      |
|                                 |                           |                             | Other Funding |
| <b>PSI Intersection Ranking</b> |                           | <b>PSI Segment Ranking</b>  |               |
|                                 | 1 - 25                    |                             | 1 - 25        |
|                                 | 26 - 50                   |                             | 26 - 50       |
|                                 | 51 - 75                   |                             | 51 - 75       |
|                                 | 76 - 100                  |                             | 76 - 100      |
|                                 | 100+                      |                             | 100+          |



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# Town of Remington

*Current and Proposed Smart Scale Projects  
Potential for Safety Improvement (PSI) Intersections and Segments  
VTrans 2019 Mid-Term Needs Intersections and Segments*



## VTrans Mid-Term Needs

- Improved Access
- Improved Safety
- Improved Transit Access
- Rail On-Time Improvements
- Segment with Needs

## Smart Scale Projects

- FY-17
- FY-18
- FY-20
- FY-22
- Unfunded
- Other Funding

## PSI Intersection Ranking

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 100+

## PSI Segment Ranking

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 100+

0 0.05 0.1 0.2 Miles



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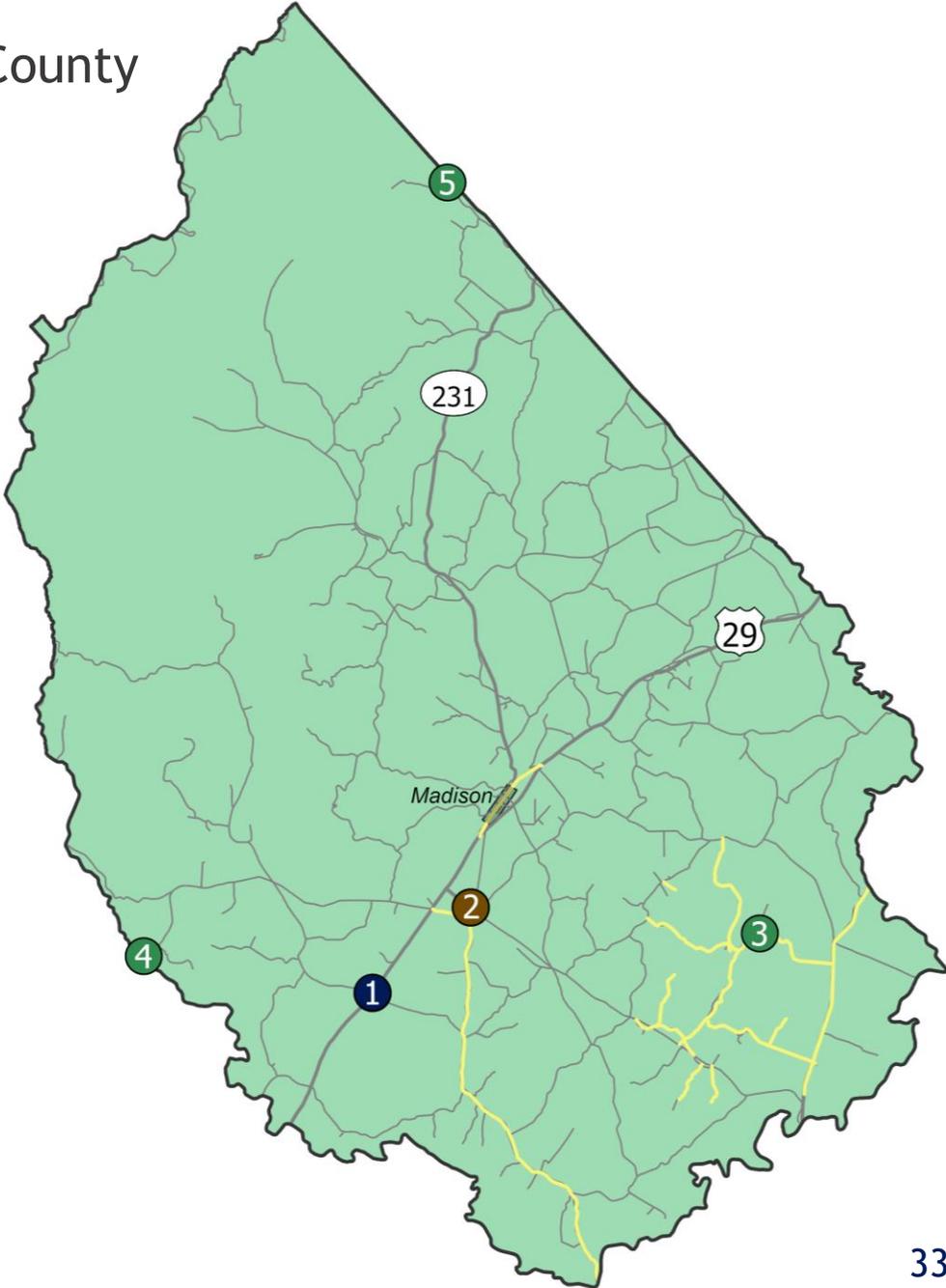
# Current and Proposed Projects in Madison County

- 1 Route 29 and Route 662 (Shelby Road) R-Cut Intersection Improvements
- 2 Route 230 and Route 687 Intersection Improvements
- 3 Route 614 and Route 706 Intersection Improvements
- 4 Route 230 over Conway River Bridge Rehabilitation
- 5 Route 707 Bridge Replacement

Roadway Resurfacing	
<span style="color: red;">█</span> Scheduled	<span style="color: orange;">█</span> In Progress <span style="color: yellow;">█</span> Completed

Location Projects	Segment Projects
<span style="border: 1px solid lightblue; border-radius: 50%; padding: 2px;"> </span> FY17 SMART SCALE	<span style="border-bottom: 1px solid lightblue; width: 20px; display: inline-block;"></span> FY17 SMART SCALE
<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;"> </span> FY18 SMART SCALE	<span style="border-bottom: 1px solid blue; width: 20px; display: inline-block;"></span> FY18 SMART SCALE
<span style="border: 1px solid darkblue; border-radius: 50%; padding: 2px;"> </span> FY20 SMART SCALE	<span style="border-bottom: 1px solid darkblue; width: 20px; display: inline-block;"></span> FY20 SMART SCALE
<span style="border: 1px solid cyan; border-radius: 50%; padding: 2px;"> </span> FY22 SMART SCALE	<span style="border-bottom: 1px solid brown; width: 20px; display: inline-block;"></span> Unfunded SMART SCALE
<span style="border: 1px solid brown; border-radius: 50%; padding: 2px;"> </span> Unfunded SMART SCALE	
<span style="border: 1px solid green; border-radius: 50%; padding: 2px;"> </span> Other Funding	



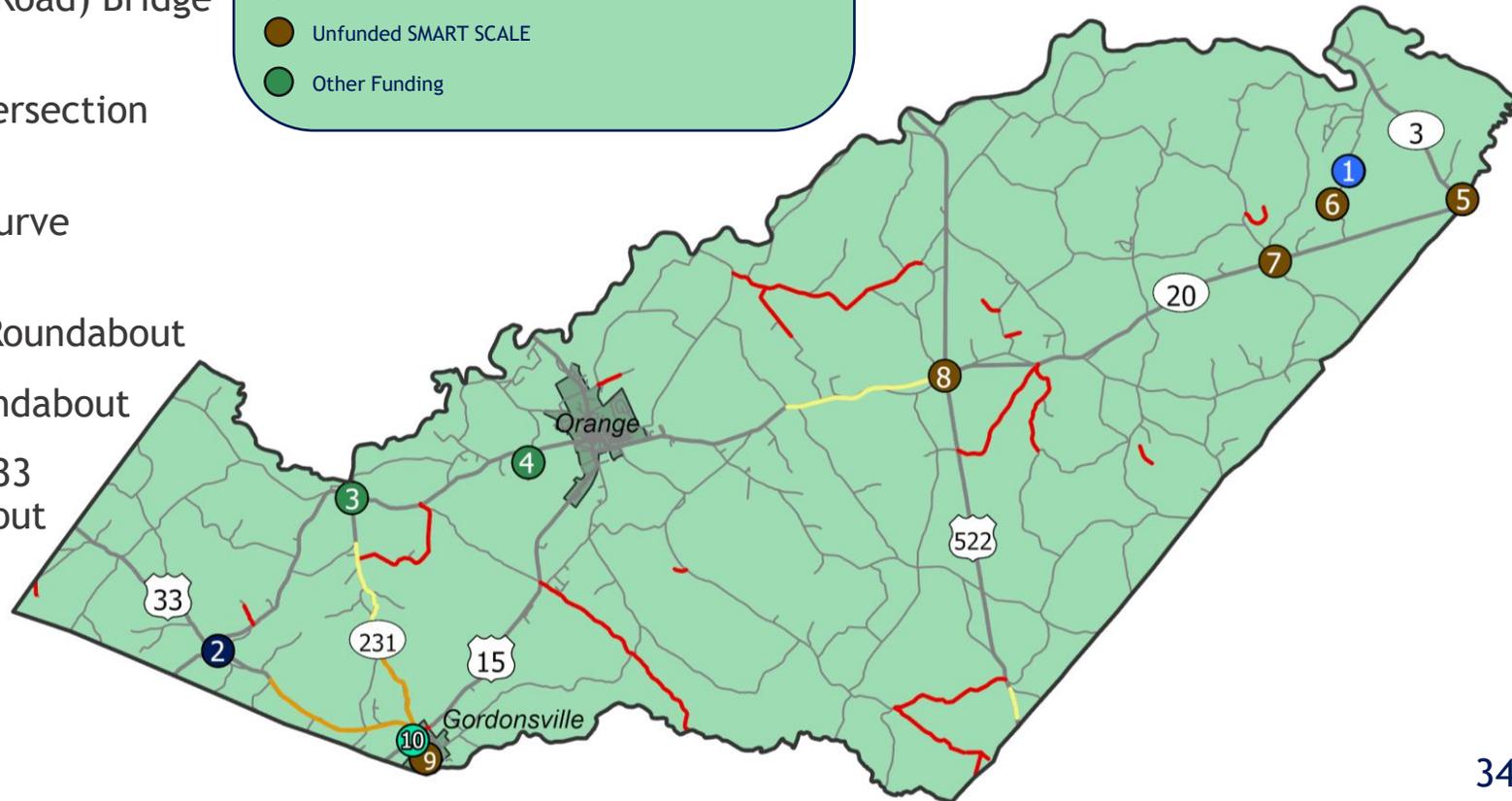
# Current and Proposed Projects in Orange County

- 1 Route 601 Low-Speed Curve Realignment #2
- 2 US 33 at Route 20 East Roundabout
- 3 Route 20 at Route 231 Single-Lane Roundabout
- 4 Route 635 (Greenwood Road) Bridge Replacement
- 5 Route 3 at Route 20 Intersection Improvements
- 6 Route 601 Low-Speed Curve Realignment #1
- 7 Route 20 at Route 611 Roundabout
- 8 US 522 at Route 20 Roundabout
- 9 Gordonsville US 15, US 33 at High Street Roundabout
- 10 Gordonsville Route 231 at High Street Roundabout

Roadway Resurfacing

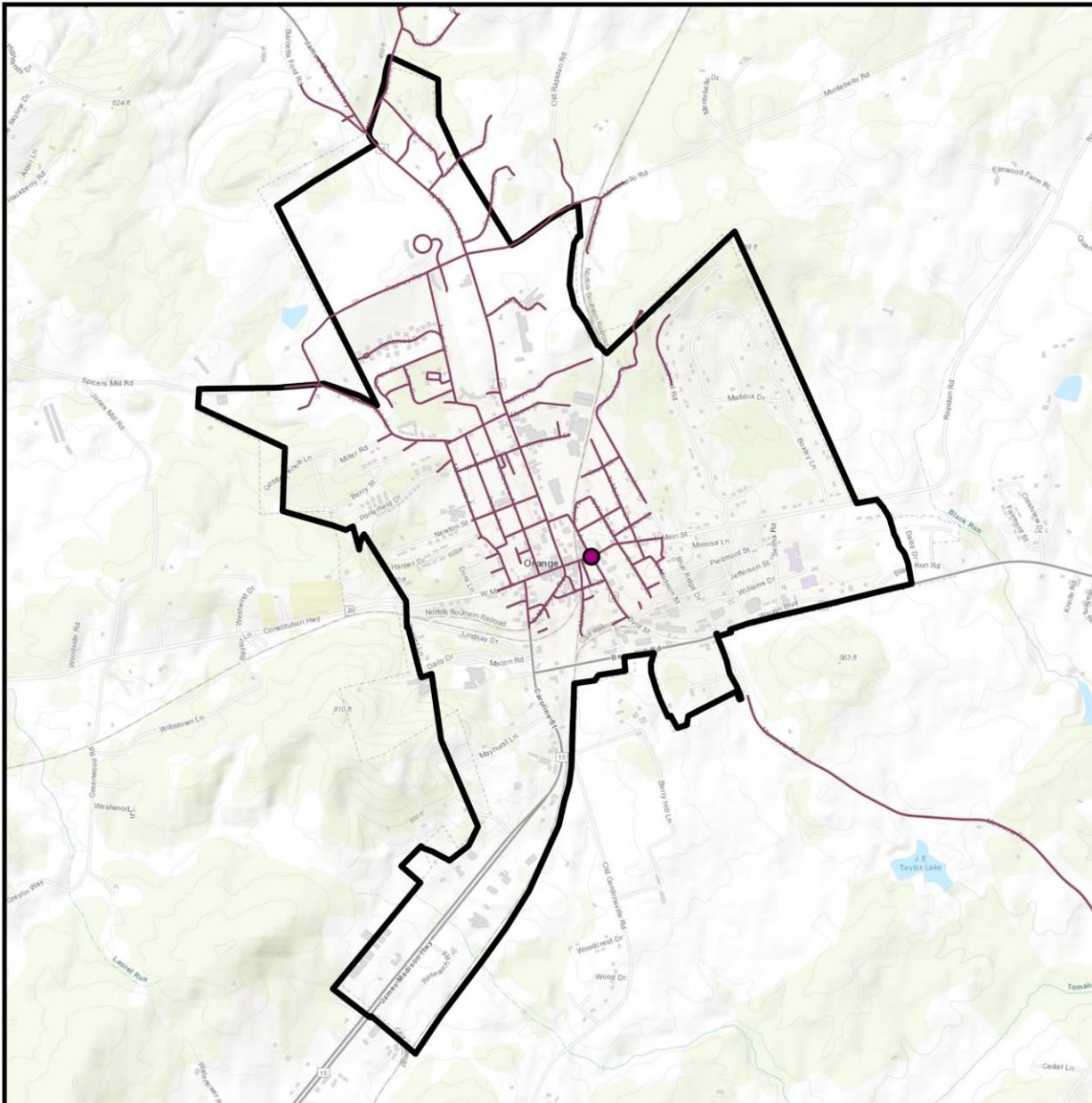
— Scheduled   
 — In Progress   
 — Completed

<u>Location Projects</u>	<u>Segment Projects</u>
<span style="color: lightblue;">●</span> FY17 SMART SCALE	<span style="color: lightblue;">—</span> FY17 SMART SCALE
<span style="color: blue;">●</span> FY18 SMART SCALE	<span style="color: blue;">—</span> FY18 SMART SCALE
<span style="color: darkblue;">●</span> FY20 SMART SCALE	<span style="color: darkblue;">—</span> FY20 SMART SCALE
<span style="color: cyan;">●</span> FY22 SMART SCALE	<span style="color: brown;">—</span> Unfunded SMART SCALE
<span style="color: brown;">●</span> Unfunded SMART SCALE	
<span style="color: green;">●</span> Other Funding	



# Town of Orange

Current and Proposed Smart Scale Projects  
 Potential for Safety Improvement (PSI) Intersections and Segments  
 VTrans 2019 Mid-Term Needs Intersections and Segments



## VTrans Mid-Term Needs

- Improved Access
- Improved Safety
- Improved Transit Access
- Rail On-Time Improvements
- Segment with Needs

## Smart Scale Projects

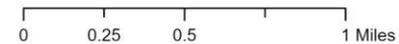
- FY-17
- FY-18
- FY-20
- FY-22
- Unfunded

## PSI Intersection Ranking

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 100+

## PSI Segment Ranking

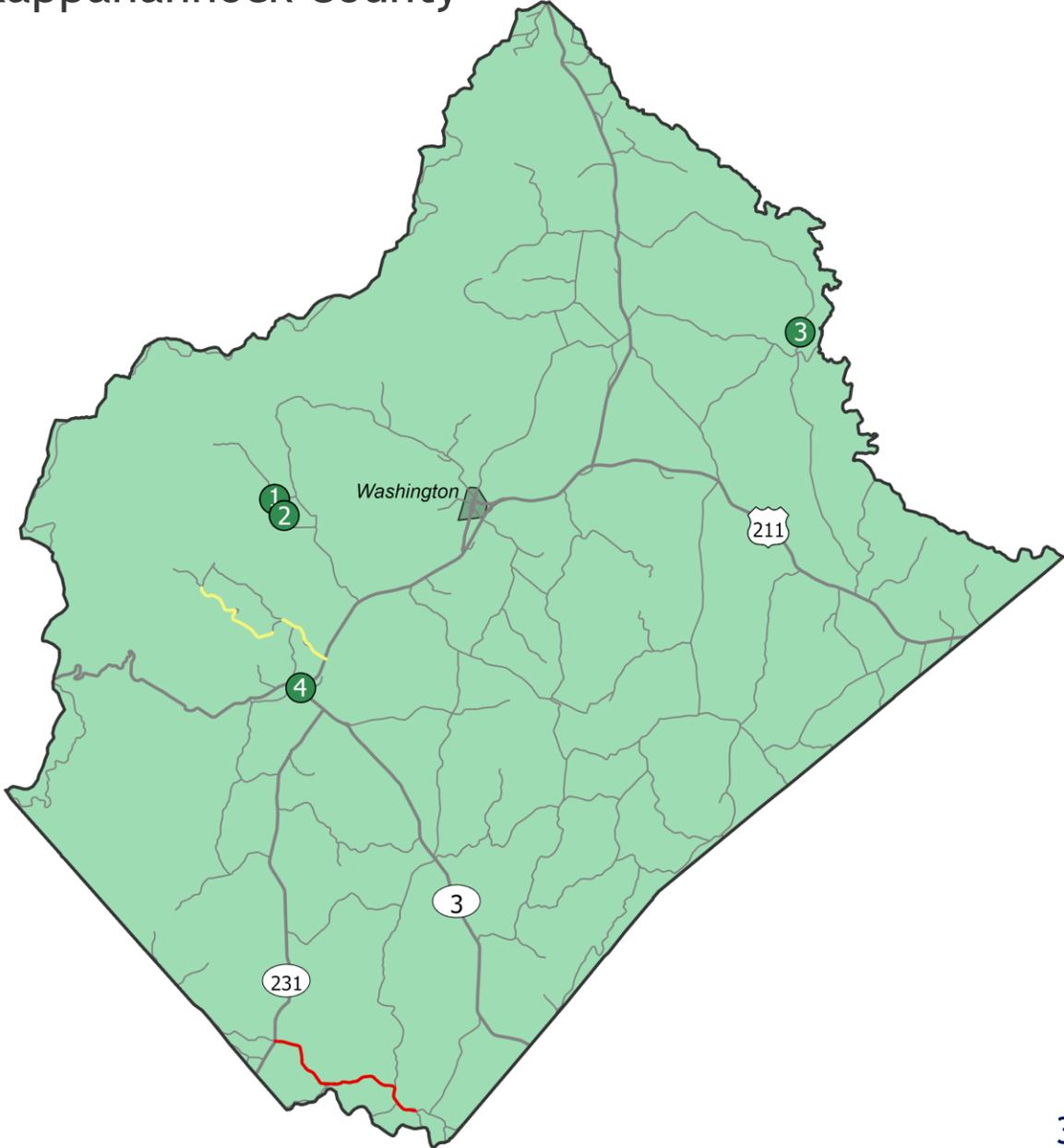
- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 100+



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# Current and Proposed Projects in Rappahannock County

- 1 Route 623 (Pullens Bluff Road) over Keyser Run Bridge Rehabilitation
- 2 Route 614 (Keyser Run Road) over Keyser Run Structure Rehabilitation
- 3 Route 637 (North Poes Road) Bridge Replacement
- 4 Route 211 at Route 522 over Thornton River Bridge Replacement



Roadway Resurfacing	
<span style="color: red;">█</span> Scheduled	<span style="color: orange;">█</span> In Progress <span style="color: yellow;">█</span> Completed

Location Projects	Segment Projects
<span style="border: 1px solid lightblue; border-radius: 50%; padding: 2px;"> </span> FY17 SMART SCALE	<span style="border-bottom: 1px solid lightblue; width: 20px; display: inline-block;"></span> FY17 SMART SCALE
<span style="background-color: lightblue; border-radius: 50%; padding: 2px;"> </span> FY18 SMART SCALE	<span style="border-bottom: 1px solid blue; width: 20px; display: inline-block;"></span> FY18 SMART SCALE
<span style="background-color: darkblue; border-radius: 50%; padding: 2px;"> </span> FY20 SMART SCALE	<span style="border-bottom: 1px solid darkblue; width: 20px; display: inline-block;"></span> FY20 SMART SCALE
<span style="background-color: cyan; border-radius: 50%; padding: 2px;"> </span> FY22 SMART SCALE	<span style="border-bottom: 1px solid brown; width: 20px; display: inline-block;"></span> Unfunded SMART SCALE
<span style="background-color: brown; border-radius: 50%; padding: 2px;"> </span> Unfunded SMART SCALE	
<span style="background-color: green; border-radius: 50%; padding: 2px;"> </span> Other Funding	