

**CLARKE COUNTY PLANNING COMMISSION  
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August 29, 2023 Work Session Packet**

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# Clarke County Planning Commission

AGENDA – Work Session

Tuesday, August 29, 2023 – 3:00PM

Berryville/Clarke County Government Center – Main Meeting Room

1. **Approval of Agenda**
2. **Review of September 1 Business Meeting Agenda Items**
  - A. Agenda Review
  - B. Status of Deferred Applications
3. **Old Business**

~None scheduled
4. **New Business**
  - A. Discuss Text Amendment Request from Board of Supervisors – Solar Power Plant Use and Regulations (TA-23-04)
  - B. 2023 Transportation Plan Update – Review Draft from Policy & Transportation Committee

**Adjourn**



## Clarke County Planning Department

101 Chalmers Court, Suite B

Berryville, Virginia 22611

(540) 955-5132

[www.clarkecounty.gov](http://www.clarkecounty.gov)

**TO: Planning Commission members**

**FROM: Brandon Stidham, Planning Director**

**RE: Discuss Text Amendment Request from Board of Supervisors – Solar Power Plant Use and Regulations (TA-23-04)**

**DATE: August 24, 2023**

New Business Item #4A is a discussion of a text amendment request initiated by the Board of Supervisors regarding the current solar power plant use and regulations. The Board initiated this text amendment by resolution at their July 18 meeting (see enclosed resolution and excerpt from meeting minutes) which directs the Planning Commission to develop the text amendment to accomplish the following:

1. Prohibit the development of any new solar power plants in the County.
2. Preserve solar power plants in existence or with zoning approval as conforming uses with the ability to expand within one mile of the pre-existing electrical substation which originally qualified the facility for development.
3. Protect the ability of County landowners to use “behind-the-meter” solar power primarily for their own onsite consumption and with incidental resale of excess power to service providers.

The resolution further directs the Commission to hold a public hearing on the text amendment and forward a formal recommendation on it to the Board. Chair David Weiss has provided a letter which further explains the Board’s reasoning for initiating the text amendment – a copy is enclosed for your review.

The current zoning regulations (see attached) define a solar power plant as “A utility-scale commercial facility with a rated nameplate capacity greater than 100kW (DC), which uses solar energy specifically for the conversion of sunlight into electricity by photovoltaics (a technology that converts light directly into electricity).” Solar power plants require approval of a special use permit and site development plan and must be located “adjacent to and all facilities located within one mile of a pre-existing electrical substation of 138kV or higher voltage.” This location requirement restricts development to two locations – adjacent to the Double Tollgate substation where Hecate Energy has developed 10MW of a 20MW facility, and adjacent to the REC substation located adjacent to Chet Hobert Park. Horus Virginia I LLC has a pending application for a new 50MW solar power plant at this location.

Despite these locational restrictions, numerous solar companies have contacted County staff, officials, and landowners in recent years about developing new solar power plants throughout the County. Some companies have inquired about requesting text amendments to relax the locational restrictions. Others have considered constructing substations in order to qualify for solar power plant development in new areas. In regards to this approach, Staff has determined that a developer would first be required to obtain special use permit and site development plan approval for the substation, then build the substation and put it into operation before Staff would accept a special use permit application for a solar power plant. There is concern that solar companies will continue to pressure the County to relax the regulations and that they will give landowners false hope that they can develop solar power plants on their property.

One item to note about our current regulations is that “behind-the-meter” solar is not regulated by special use permit – this is solar power generated primarily for onsite use and accessory resale to the power grid. Homeowners, landowners, and business owners that want to install solar panels primarily for their own needs are only required to obtain zoning and building permits – with building-mounted solar, a zoning permit typically is not required at all if the panels do not increase the building height or footprint.

The Board’s resolution specifically states that the new regulations should protect “behind-the-meter” solar options for County landowners so there could be some new approaches to evaluate. One is the concept of community-scale solar in which multiple property owners install solar panel arrays on their property at a larger scale to provide onsite power but also to sell back to the grid. Such projects are typically 250kW – 5MW in size and as a rule of thumb, it typically takes 5-10 acres to accommodate 1MW of solar power generation. This would allow a 5MW facility that would take up about 50 acres to be distributed among multiple properties instead of consuming 50 acres of land in a single location. There currently are regulatory limitations to this concept and further study is necessary to determine whether it is appropriate for Clarke County. At a minimum, the Commission can evaluate regulations to provide further clarity and protections for landowners using solar for their own onsite purposes.

From a process standpoint, the Commission has 100 days from receipt of any text amendment request to develop the text amendment, hold a public hearing, and forward a recommendation to the Board. The Board does have the authority to extend this 100 day period. Staff recommends that the Commission as a whole work on this topic over the next 1-2 work sessions to develop a vision for the text amendment. Once the text amendment is conceptualized, the Commission can request a joint work session with the Board to discuss it. This would allow both the Commission and Board to try to achieve a general consensus on proposed changes before finalizing and presenting the text amendment to the public for comment. For the August 29 work session, Staff recommends that the Commission have a general discussion about the text amendment request which could include each commissioner voicing their thoughts and concerns about the Board’s request and about the future of solar development in the County. Staff will use the content of these discussions for a more focused work session in October.

If you have questions in advance of the meeting, please do not hesitate to contact me.



# Clarke County Board of Supervisors



**Berryville Voting District**  
Matthew E. Bass  
(540) 955-5175

**Millwood Voting District**  
Terri T. Catlett – Vice Chair  
(540) 837-2328

**Russell Voting District**  
Doug Lawrence  
(540) 955-2144

**Buckmarsh Voting District**  
David S. Weiss – Chair  
(540) 955-2151

**White Post Voting District**  
Bev B. McKay  
(540) 837-1331

**County Administrator**  
Chris Boies  
(540) 955-5175

## Resolution to Initiate Zoning Ordinance Text Amendment 2023-16R

**WHEREAS**, the Board of Supervisors is concerned with the conversion of farmland and open space into other land uses including those uses which may be temporary; and

**WHEREAS**, solar power plants were added as an allowable use in 2010, resulting in the approval of a 20MW facility on 235 acres and the pending application of a 50MW facility on 406 acres; and

**WHEREAS**, while current zoning regulations limit the development of solar power plants to lots that are “adjacent to and all facilities located within one mile of a pre-existing electrical substation of 138kV or higher voltage”, there has been pressure from solar power plant developers and some county property owners to relax these regulations to allow more areas for these plants to be developed; and

**WHEREAS**, developers continue to solicit county property owners to develop solar power plants on their properties likely due to the County’s previous approval of a solar power plant and a misconception that the County is open to expanded development of these plants in other areas; and

**WHEREAS**, the immense area coverage required for solar power plants makes Agricultural-Open Space-Conversion (AOC) zoned lands the best area for development at the expense of county farmland.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Supervisors of Clarke County, Virginia, initiates the development of a text amendment to the Zoning Ordinance that would accomplish the following purposes:

1. Prohibit the development of any new solar power plants in the County.
2. Preserve solar power plants in existence or with zoning approval as conforming uses with the ability to expand within one mile of the pre-existing electrical substation which originally qualified the facility for development.
3. Protect the ability of County landowners to use “behind-the-meter” solar power primarily for their own onsite consumption and with incidental resale of excess power to service providers.

**BE IT FURTHER RESOLVED** that the Planning Commission and Department of Planning staff be directed to develop this text amendment, conduct required public hearings, and forward the text amendment to the Board of Supervisors for consideration.

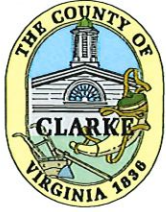
**APPROVED AND ORDERED ENTERED** in the official records by the unanimous vote of the Clarke County Board of Supervisors' members assembled on the 18<sup>th</sup> day of July, 2023.

ATTEST 2023-16R

  
\_\_\_\_\_  
David S. Weiss, Chair

# Clarke County Board of Supervisors

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**Berryville Voting District**  
**Matthew E. Bass**  
**(540) 955-5175**

**Millwood Voting District**  
**Terri T. Catlett-Vice Chair**  
**(540) 837-2328**

**Russell Voting District**  
**Doug Lawrence**  
**(540) 955-2144**

**Buckmarsh Voting District**  
**David S. Weiss – Chair**  
**(540) 955-2151**

**White Post Voting District**  
**Bev B. McKay**  
**(540) 837-1331**

**County Administrator**  
**Chris Boies**  
**(540) 955-5175**

August 23, 2023

Dear Planning Commissioners,

I thought it would be helpful for the Commission to better understand the motive for the Board of Supervisors in sending you this resolution about utility-scale solar.

The Board understands and agrees that solar energy is an important component of our nation's electric grid. We believe that the solar power plant that has been approved and the proposed plant currently under review show our commitment to do our share to promote alternative energy. In fact, this is one of the reasons that we believe no more utility-scale solar projects are needed. The Board does not believe that it is Clarke County's responsibility to provide energy for distant demands in other parts of the state.

Clarke is a small county and we are greatly affected by the loss of any farmland. Loss of farmland is obviously detrimental to current and future farmers but more importantly it undermines the viability of our agricultural system as a whole. Utility-scale solar obviously requires a tremendous amount of acreage and cannot be fully accommodated on soils that are poorly suited for farming. Additionally, future utility-scale solar projects will be subject to more stringent storm water management regulations which will require even more land area to accommodate their development.

The Board requests that you consider this resolution carefully and with your normal due diligence to all aspects and consequences. We believe this is a critical issue for the future of our County and we look forward to a thorough and open discussion with the Commission.

Sincerely,

David Weiss  
Chair, Board of Supervisors

9) *Resolution to Initiate Zoning Ordinance Text Amendment (2023-16R)*

Director of Planning and Zoning, Brandon Stidham, presented the following:

- This resolution would initiate a zoning ordinance text amendment regarding solar power plants.
- If the Board adopts this resolution today it will be forwarded to the Planning Commission for development. The Planning Commission would most likely then take it up at their work session in September. Once they draft a text amendment, they would schedule a public hearing, receive comments, make a recommendation, and return it to the Board of Supervisors sometime in the fall for further action.

Chairman Weiss read the proposed resolution aloud.

Vice Chair Catlett

Solar power is an important part of the energy grid. Our county has supported solar facilities, but the full extent may not be evident because the Hecate facilities are only half-complete. Those facilities are also located on land that is not as suitable for farming and is already close to the substation. Also, this does not limit citizen's ability to install solar arrays at their homes, behind the meter.

Supervisor Bass

This is a tough one, as I do support alternative energy and think it is necessary to ensure long-term infrastructure sustainability. Philosophically, I believe that localities should bear the responsibility to develop alternative energy equally. My understanding is that once the approved solar facilities are up and running, Clarke County will have met its responsibility in comparison to surrounding localities. In addition to these practical regulations, I would like to see these surrounding localities step up and make use of some of the large roof space available on their office buildings and data centers by putting solar panels up there rather than taking up our agricultural land.

Supervisor McKay

I agree. I was driving near Dulles and passing data center after data center with large, flat roofs on them and not a solar panel in sight. These centers are huge users of electricity and there is no reason that the urban areas cannot generate their share of solar energy instead of depending on the rural areas to do it for them. We need the farmland too badly to have it become solar facilities. The money generated from hundreds of acres of farmland comes back into the community as farmers buy fuel,



feed, animals, tires, and equipment. The money generated by hundreds of acres of solar facilities does not do the same.

#### Supervisor Lawrence

Requested clarification on the resolution's second stated objective.

- Brandon Stidham responded that, if the current regulations were changed to eliminate the solar power plant use, it would make any existing facilities or facilities with zoning approval non-conforming, which limits their ability to expand. With this point, the county aims to treat any existing facilities or facility with zoning approval as conforming uses.
- Chris Boies added that they would still need to get a Special Use Permit for any expansion.

#### Chairman Weiss

The Board initially included solar facilities in 2010 with trepidation. At the time, solar seemed to compete against agriculture, both in use of land and in the rentals and income that could be derived from it. That is exactly what has happened. For me, this is akin to sliding scale zoning and the developmental pressure on agriculture from houses in the 1980s. The amount of people who are coming to farmers and attempting to talk them in to solar is phenomenal. The financial bait they are hanging in front of farmers is crazy. The county has allowed solar and has provided, in our view, what is our share of the necessary energy. Solar is part of the energy grid; it needs to be and it will be in the future. However, if we do not have farmland, then we will not be able to eat and our zoning will be threatened. Objective one of the Comprehensive Plan is to preserve and protect agriculture. Solar fields degrade and endanger agriculture. If we allow the expansion of solar, there will not be a farm in Clarke County in ten years. We have to step forward and protect our farmland, it is that important. One of the selling points of solar is giving farmers another revenue source, but there is a flaw in that premise. The way to make more money farming is to become a better farmer: diversify, utilize everything you can, find better markets, etc. Taking your own land out of production for a short-term cash bonus is not a way to protect agriculture and is not the way to be a better farmer. It is not the county's responsibility to fix the bad management practices of farmers who are not making money. We are here to provide land and the opportunity for people to farm and make a living.

#### Supervisor Lawrence

Asked if the Planning Commission would be bound to the objectives stated in the resolution.

- Brandon Stidham answered that the Planning Commission would develop a text amendment to the Zoning Ordinance and hold public hearing on it. After

that, the Planning Commission would have to vote on it as well and could vote to support it, to send it forward with a recommendation to deny it, or could come up with an alternate text amendment approach to send forward.

**Supervisor McKay moved to adopt 2023-16R – Resolution to Initiate Zoning Ordinance Text Amendment as presented. The motion carried by the following vote:**

Matthew E. Bass	-	Aye
Terri T. Catlett	-	Aye
Doug M. Lawrence	-	Aye
Beverly B. McKay	-	Aye
David S. Weiss	-	Aye

<b>SOLAR POWER PLANT</b>	
<b>Permitted Use</b>	None
<b>Accessory Use</b>	None
<b>Special Use</b>	AOC

**Definition:**

A utility-scale commercial facility with a rated nameplate capacity greater than 100kW (DC), which uses solar energy specifically for the conversion of sunlight into electricity by photovoltaics (a technology that converts light directly into electricity).

**Use Regulations:**

The following regulations establish minimum requirements and standards for the placement, construction and modification of large photovoltaic solar power plants, while promoting the safe, effective and efficient use of such energy systems.

1. Location. If such plant is not part of a “behind-the-meter” program, then such plant shall be adjacent to and all facilities located within one mile of a pre-existing electrical sub-station of 138 kV or higher voltage.
2. Minimum Lot Size. No such plant shall be erected on any lot less than twenty acres in size.
3. Setbacks. All above ground facilities associated with such plant (excluding perimeter security fencing) shall be considered a structure for the purposes of determining required setbacks.
4. Safety/Access. A security fence (height and material to be established through the special use permit process) shall be placed around the perimeter of the solar power plant and electrical equipment shall be locked. Knox boxes and keys shall be provided at locked entrances for emergency personnel access. Warning signage shall be placed on electrical equipment and plant entrances.
5. Noise. No such plant shall exceed sixty-five dBA as measured at the property line or fifty dBA as measured at the nearest neighboring inhabitable building.
6. Landscaping. Such a power plant shall be considered a commercial use for the purposes of determining landscaping requirements.
7. Local, State, and Federal Permits. Such a plant shall be required to obtain all necessary permits from the U.S. Government, Commonwealth of Virginia, and Clarke County, and comply with standards of the major code and safety organizations that apply to generation projects (the National Fire Protection Association (NFPA), Underwriters Laboratories (UL), and Institute of Electrical and Electronics Engineers (IEEE)).

8. Electrical Interconnections. All electrical interconnection or distribution lines shall comply with all applicable codes and standard commercial large-scale utility requirements. Use of above ground transmission lines shall be minimized.
9. Additional Special Use Factors. The following additional factors shall be addressed in the Special Use Permit application for such plant:
  - a. Project description and rationale. Identify the type, size, rated power output, performance, safety and noise characteristics of the system, including the name and address of the manufacturer, model. Identify time frame, project life, development phases, likely markets for the generated energy, and possible future expansions.
  - b. Economic analysis. Provide economic cost/benefit analysis describing generated property taxes, sales taxes, other taxes, construction dollars spent locally, estimated construction jobs and construction payroll, estimated permanent jobs and continuing payroll, and costs associated with impact on roads and other county infrastructure in the area.
  - c. Visual impacts, appearance and scenic view sheds. Provide visual simulations providing vantage points considering a three hundred sixty degree view of the project site.
  - d. Wildlife habitat areas and migration patterns. Address potential impact on wildlife especially endangered or threatened species, on the site and in a biologically significant area surrounding the site.
  - e. Environmental analysis. Identify impact analysis on historic, cultural and archaeological resources, soil erosion, flora in the project area, water quality and water supply in the area, dust from project activities, and cumulative impacts of other adjacent power plant projects.
  - f. Waste. Identify solid waste or hazardous waste generated by the project and methods of disposal.
  - g. Lighting. Provide lighting plan showing impacts on adjacent properties.
  - h. Transportation plan. Provide access plan during construction and operation phases. Show proposed project service road ingress and egress access onto primary and secondary routes, layout of the plant service road system and degree of upgrade plan to new and existing roads, anticipated volume and route for traffic, including oversized and heavy equipment needed for construction, maintenance and repairs, methodology of repairs and maintenance of roads and bridges used for the project, and related public pedestrian and vehicular access and associated fencing.



- i. Public safety. Identify emergency and normal shutdown procedures. Identify potential hazards to adjacent properties, public roadways, communities, aviation, etc., that may be created and address response to such hazards.
- j. Noise limitations. Identify noise levels at the property line of the project boundary.
- k. Telecommunications interference. Identify electromagnetic fields and communications interference generated by the project.
- l. Life of the project and final reclamation. Describe the decommissioning and final land reclamation plan after anticipated useful life or abandonment or termination of the project, including evidence of an agreement with the property owner that ensures proper final removal of power generating equipment.

**Required Review Processes:**

1. Special Use Permit Review is required per [Section 6.3.1](#).
2. Site Development Plan Review is required per [Section 6.2.2](#).



## Clarke County Planning Department

101 Chalmers Court, Suite B

Berryville, Virginia 22611

(540) 955-5132

[www.clarkecounty.gov](http://www.clarkecounty.gov)

**TO: Planning Commission members**

**FROM: Brandon Stidham, Planning Director**

**RE: 2023 Transportation Plan Update – Review Draft from Policy & Transportation Committee**

**DATE: August 16, 2023**

Enclosed for your review and discussion at the August 29 Work Session is the draft 2023 Transportation Plan. This draft was developed by the Policy & Transportation Committee and Staff and the Committee has recommended it for consideration by the full Commission.

### **Summary of Major Changes from Current (2013) Plan**

#### Structure

The revised draft is organized in similar fashion to other component plans that were recently updated. The new introduction section contains an executive summary of the Plan, a new summary statement of the County's transportation philosophy, and a description of what is addressed in this Plan revision. This section also contains an inventory of the County's transportation network as required by State code. This includes a revised list of public roads by Virginia Department of Transportation (VDOT) functional classification and definitions of each classification term. New for this revision is a description of the County's unpaved public roads and the funding process for hard surfacing them. Staff has also updated demographic information in this section using tables from the 2022 Comprehensive Plan.

The current Plan's list of five strategies enumerated in the conclusion has been significantly expanded and included as a new Chapter II – Objectives and Strategies. These expanded objectives and strategies are summarized below. The new Conclusion (Chapter IV) includes language regarding the importance of reviewing the Plan every five years.

#### Revised Issues and Recommendations

As noted above and similar to recently updated component plans, the revised draft includes a "Summary Statement of Transportation Philosophy." This statement provides an overview of the County's vision for its transportation network as it relates to the land use philosophy set forth in the Comprehensive Plan. The five points in the summary statement are as follows:

1. *The Commonwealth of Virginia, through the Virginia Department of Transportation (VDOT), is responsible for ensuring that Clarke County has a safe and efficient public road network through professional guidance and provision of funding opportunities.*

This is a new position that is emphasized in other locations throughout the Plan, that VDOT is the entity primarily responsible for ensuring that the County's public road network is safe and efficient. This position goes hand in hand with the concept that our land use philosophy effectively prevents unplanned growth that causes congestion and degradation of level of service in other localities. The County will expect the State, through VDOT, to identify and provide funding for necessary road improvements.

- 2. The capacity of existing public roads outside of the Towns and designated business intersections, including the County's primary highways, should not be expanded – even to accommodate growth generated by adjoining jurisdictions. The County's land use philosophy ensures that no unplanned growth will be generated in the county to require road capacity expansion in the rural areas.*

This position is referenced in the current Plan and is reinforced in the revised Plan. As mentioned above, the County does not allow for growth outside of the towns and business intersections that would adversely impact the public road network. Without these self-induced growth pressures, it is not necessary to expand the capacity of roads in the rural areas which could impact farmland, open space, and encourage new growth pressures.

- 3. The County will invest in road improvements to support existing towns and business intersection areas which are consistent with the Comprehensive Plan and applicable component plans. Road improvements in rural areas shall be limited to safety and functional improvements.*

This point emphasizes that the County's land use philosophy as set forth in the Comprehensive Plan will be coordinated with all transportation network investments. The current point that rural improvements shall be limited to safety and functional improvements is emphasized.

- 4. The County expects developers of public and private projects to mitigate all impacts that their projects may have on the County's transportation network.*

This current position, noted in the current Plan and Comprehensive Plan, is further emphasized. Development projects must address all transportation impacts that they cause or the projects may not be approved.

- 5. Private roads shall be designed to ensure safe connectivity to the public road network and to minimize environmental impacts. Private roads are the sole responsibility of the landowners and easement holders that use them – public funds shall not be used to maintain private roads or to upgrade them to public roads.*

This new point is added based on the large number of private roads in the County. Many localities have been pressured by private road owners to take over maintenance of their roads or pay to have them hard-surfaced for State acceptance. While this has not happened in Clarke, this point will help to emphasize that private roads are solely the responsibility of landowners and easement holders. Language is also included to ensure that our private road construction standards ensure safety and minimize environmental impacts.

Perhaps the most significant substantive change is the expansion of the Plan’s current strategies into a new chapter containing objectives and strategies addressing a number of issues. The three Plan objectives, reflected in the Summary Statement of Transportation Philosophy, are:

1. *Plan for a safe, cost-efficient, and cost-effective County-wide transportation network.*
2. *Continue to focus the County’s limited transportation funds and resources on projects that:*
  - *Improve traffic safety, improve and functionality within the Towns and business intersections,*
  - *Add compatible bicycle or pedestrian features,*
  - *Provide new or enhance existing commuting opportunities, or*
  - *Replace existing gravel public roads or road segments with new hard surfaces.*
3. *Improvements to the transportation network shall be consistent with the County’s land use philosophy and the recommendations of the Comprehensive Plan.*

Notable additions and changes to the strategies are as follows:

- Objective 1, Strategy 1 – This is a current Plan strategy.
- Objective 1, Strategy 2 – This strategy recommends reviewing the list of proposed improvement projects in Chapter III on an annual basis to reconfirm project priority and need as well as to take advantage of any new funding opportunities. The five-year review cycle for the Plan may be insufficient to ensure that the project priorities address the County’s needs. Reviewing the projects annually helps to ensure that adjustments can be made to address new impacts or respond to changes in funding programs or review criteria.
- Objective 1, Strategy 3 – This strategy provides additional guidance for considering new projects that may come up between five-year review cycles. Only those new projects recommended for short-term action by VDOT and with a strong likelihood of receiving Federal and/or State funding should be prioritized.
- Objective 1, Strategy 4 – Consistent with the concept of relying on VDOT to provide transportation guidance, this strategy recommends requesting VDOT to conduct new or update current safety studies along primary highways, secondary roads, and intersections where there are safety concerns. VDOT’s review should result in safety recommendations including implementation strategies, cost estimates, and funding likelihood. The strategy recommends reviewing the County’s Federal (U.S. 340, U.S. 50/17) and State (Va. Route 7) highway corridors and business intersections in particular where current project priorities are identified.
- Objective 1, Strategy 5 – This strategy also echoes the Summary Statement of Transportation Philosophy, stating that development projects shall mitigate the impacts of their projects on the public transportation network. The strategy also recommends

encouraging voluntary provision of right-of-way, sight distance improvements, turn lane/acceleration lane improvements, and off-site transportation improvements. This strategy will provide guidance in reviewing land development applications with significant transportation impacts.

- Objective 2, Strategy 1 – This strategy reinforces the importance of prioritizing transportation projects that either have a committed funding source or are strong candidates for Federal and/or State funding. This helps to ensure that County time and resources are not spent on advancing projects that have minimal chance of funding, or that would require local taxpayer funding.
- Objective 2, Strategy 2 – This strategy pertains to the County’s limited six-year secondary road construction budget which most recently has been used for hard surfacing gravel roads, stormwater improvements, and safety enhancements. The language recommends continuing with this prioritization and also recommends that public comment be solicited for future projects to hard surface gravel roads.
- Objective 2, Strategy 3 – This strategy provides guidance for bicycle and pedestrian improvements. Such improvements are supported in the designated growth areas. In the rural areas, these projects may be supported so long as they do not require significant road widening especially along scenic byways. This is to ensure that private properties and areas of scenic or natural beauty are not impacted.
- Objective 2, Strategy 4 – This strategy echoes the County’s position on private roads as noted in the Summary Statement of Transportation Philosophy.
- Objective 3, Strategy 1 – This current Plan strategy to oppose capacity expansion of roads in the rural areas includes new language to avoid projects that may adversely impact properties in conservation easement.
- Objective 3, Strategy 2 – This strategy recommends the County support the Towns’ transportation projects so long as they are consistent with their own comprehensive plans and the County’s land use and transportation philosophy.
- Objective 3, Strategy 3 – This strategy notes that projects proposing new roads or other significant improvements in growth areas shall be consistent with the County’s Comprehensive Plan and applicable component plans.

#### Priority Transportation Projects

Chapter III contains the current list of transportation improvement projects with a few notable additions. The scope and cost estimate for each project has been updated using VDOT’s tool for determining planning-level estimates. The project list has also been prioritized which differs from the current and previous Plans. The prioritized project list includes:

1. Double Tollgate intersection

2. Intersection of Va. Route 7 and Shepherds Mill Road (Rt. 612)
3. NEW – Intersection of Va. Route 7 and Blue Ridge Mountain Road (Rt. 601)
4. NEW – Va. Route 7 Appalachian Trail pedestrian bridge
5. East Main Street (Business Route 7) segment, Town of Berryville
6. West Main Street (Business Route 7) segment, Town of Berryville
7. Waterloo intersection
8. Stormwater improvements, Town of Boyce
9. Park-and-ride lot west of Berryville

New for this revision is a section for “Other Unprioritized Projects” which contains the Town of Berryville’s southeastern collector road project. A project description is included along with challenges and concerns that must be addressed before this project can be added to the priority list.

New language is also included at the beginning of this chapter reiterating that the County should request VDOT to evaluate each project on the list over the next five-year Plan period and provide guidance for further prioritization. VDOT’s evaluation should answer these questions:

- Whether there is still a need for the project
- Whether the project scope should be modified
- Whether the project estimate is accurate
- The likelihood of each project being competitive for Federal and State funding, in particular Smart Scale funding

### **Recommended Action and Next Steps**

Per Code of Virginia §15.2-2223, localities are required to have their transportation plans reviewed by VDOT to ensure that they are consistent with State code requirements. If the Commission is comfortable with the draft, Staff will forward it to VDOT for review which should take 30-45 days to complete.

Once VDOT has approved the draft or forwarded comments to be addressed, Staff will bring it back to the Commission for continued review and possible scheduling of public hearing. As with the Comprehensive Plan and all component plans, the Commission must hold a public hearing on the draft before forwarding it to the Board of Supervisors for their review, public hearing, and final adoption.

If you have questions in advance of the meeting, please do not hesitate to contact me.



# **2023 Transportation Plan**

**An Implementing Component Plan of the  
2022 Clarke County Comprehensive Plan**

**DRAFT FOR PLANNING COMMISSION REVIEW  
August 29, 2023**

## **ACKNOWLEDGEMENTS**

### **CLARKE COUNTY PLANNING COMMISSION**

George L. Ohrstrom, II, Chair (Russell Election District)  
Randy Buckley, Vice Chair (White Post Election District)  
Frank Lee (Berryville Election District)  
Gwendolyn Malone (Berryville Election District)  
Scott Kreider (Buckmarsh Election District)  
Ronnie “Ron” King (Buckmarsh Election District)  
Bob Glover (Millwood Election District)  
John Staelin (Millwood Election District)  
Pearce Hunt (Russell Election District)  
Buster Dunning (White Post Election District)  
Terri Catlett (Board of Supervisors representative)

### **PLANNING COMMISSION POLICY & TRANSPORTATION COMMITTEE**

Buster Dunning (White Post Election District)  
Bob Glover (Millwood Election District)  
Scott Kreider (Buckmarsh Election District)  
Gwendolyn Malone (Berryville Election District)  
George L. Ohrstrom, II, Ex-Officio (Russell Election District)

### **CLARKE COUNTY BOARD OF SUPERVISORS**

David Weiss, Chair (Buckmarsh Election District)  
Terri Catlett, Vice-Chair (Millwood Election District)  
Matthew Bass (Berryville Election District)  
Doug Lawrence (Russell Election District)  
Beverly B. McKay (White Post Election District)

### **CLARKE COUNTY PLANNING DEPARTMENT**

Brandon Stidham, Planning Director  
Jeremy Camp, Senior Planner/Zoning Administrator  
Lorien Lemmon, Conservation Planner/GIS Coordinator  
Alison Teetor, Natural Resources Planner; CCEA Coordinator  
Kristina Maddox, Office Manager/Zoning Officer

Clarke County Planning Department  
101 Chalmers Court, Suite B  
Berryville, VA 22611  
540-955-5132

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**DATE OF PLANNING COMMISSION PUBLIC HEARING AND ADOPTION:**

**To be determined**

**DATE OF BOARD OF SUPERVISORS PUBLIC HEARING AND ADOPTION:**

**To be determined**



# 8-29-2023 DRAFT FOR PC REVIEW -- REDLINED

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**8-29-2023 DRAFT FOR PC REVIEW -- REDLINED**

## I. INTRODUCTION

### A. Executive Summary

The Clarke County Transportation Plan is an implementing component of the ~~2022~~ ~~2013~~ Clarke County Comprehensive Plan. *This iteration is an update of the 2013 Transportation Plan which was the first standalone plan document. Prior to the 2013 version, transportation planning objectives and strategies were included as a chapter within the Comprehensive Plan.*

The *purpose of the* Transportation Plan *is to identify and prioritize short and long-term transportation network needs as they relate to the management of growth by the County and its incorporated towns. The Plan* is designed to comply with the requirements of Code of Virginia §15.2-2223 which *states the following* ~~outlines specific transportation elements that must be included as part of a jurisdiction's comprehensive plan. These required elements include:~~

- ~~• An inventory of the County's transportation system.~~
- ~~• Planning assumptions to support the County's policies and proposed improvement projects.~~
- ~~• A needs assessment that compares the existing transportation system with the County's land use policies to determine how future growth will affect the system.~~
- ~~• Proposed improvement projects (see Transportation Facilities and Improvement Projects Map in Appendix) with cost estimates that address the County's transportation needs.~~

*As part of the comprehensive plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, freight corridors, and public transportation facilities. The plan shall recognize and differentiate among a hierarchy of roads such as expressways, arterials, and collectors. In developing the plan, the locality shall take into consideration how to align transportation infrastructure and facilities with affordable, accessible housing and community services that are located within the territory in order to facilitate community integration of the elderly and persons with disabilities. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation plan.*

*Transportation plans are required by State code to be consistent with the Commonwealth Transportation Board's Statewide Transportation Plan, the Six-Year Improvement Program, and the location of routes to be followed by roads comprising systems of state highways pursuant.*

The ~~2022~~ ~~2013~~ Comprehensive Plan's Objective 12 on Transportation directs the specific recommendations that are provided by this Transportation Plan. The Objective includes the following policies:

*Ensure that the County's transportation system provides safe and efficient means for all modes of travel for citizens and visitors through coordinated land use decision-making and judicious use of limited fiscal resources.*

***1. Maintain a transportation plan that includes an inventory of the County's existing transportation network, planning assumptions, needs assessment, and recommended future improvements.***

~~1. Create and maintain a transportation plan that includes an inventory of the County's existing transportation network, planning assumptions, needs assessment, and recommended future improvements. Conduct an annual review of this plan to ensure consistency with the County's Six-Year Secondary Road Improvement Plan and Budget and with the Commonwealth Transportation Board's Statewide Transportation Plan.~~

2. *Develop specific strategies for prioritizing transportation projects, responding to new State and Federal projects in the County, and identifying new projects to improve safety or increase capacity of the public road system. Include policies on bicycle and pedestrian facilities and commuter facilities.*

3. *Maintain the existing primary road system at its present level and upgrade it only for safety purposes or planned traffic increases to the extent funds are provided by the Virginia Department of Transportation.*

4. *Establish specific transportation planning policies in the area plans for the County's designated growth areas including but not limited to policies on walkability, bicycle and pedestrian mobility, interconnected street networks, traffic calming, and other modern techniques that support high quality communities and neighborhoods.*

5. *Carefully assess the short- and long-range fiscal impacts of transportation improvements when land-use decisions and plans are made.*

6. ***Continue to Develop and*** maintain a County bicycle and pedestrian plan.

***The Transportation Plan should be used in concert with the Comprehensive Plan and relevant component plans to guide land use decisions and to prioritize investments in transportation infrastructure. Objectives and strategies found in the Plan's Chapter II provide specific guidance and recommendations on implementation. Chapter III contains a list of current County-wide project priorities including scoping and planning-level cost estimates.*** Policies and required transportation planning elements for the Town of Berryville are found in the Town's comprehensive plan and in the Berryville Area Plan for the designated annexation areas. Elements for the Town of Boyce may be found in the Boyce Comprehensive Plan.

~~As an implementing component plan, the Transportation Plan will be evaluated for potential updating following the five-year scheduled review of the County's Comprehensive Plan. The Transportation Plan will also be reviewed periodically to determine whether new impacts and land use decisions warrant an interim evaluation of the document.~~

## **B. Summary Statement of Transportation Philosophy**

*As described in the Comprehensive Plan, Clarke County's land use philosophy focuses residential and commercial development into designated growth areas where it can be best served by public infrastructure. These growth areas include the Towns of Berryville and Boyce and the business intersections of Waterloo and Double Tollgate, all of which are served by primary highways. This philosophy has successfully prevented sprawl and unplanned growth which causes congestion and reduces level of service within the transportation network.*

*Hand in hand with directing growth to designated areas is the preservation of rural areas for agriculture and open space. Tools such as sliding-scale zoning and the County's conservation easement program have ensured that rural areas have not become dotted with subdivisions and unplanned business areas. An expectation has been established over decades that residents and property owners in the County's rural areas will have a rural level of service for infrastructure including transportation. Increasing the capacity of roads and constructing new roads in rural areas is unnecessary and can facilitate development pressures.*

*The County's transportation philosophy can be summarized as follows:*

- 1. The Commonwealth of Virginia, through the Virginia Department of Transportation (VDOT), is responsible for ensuring that Clarke County has a safe and efficient public road network through professional guidance and provision of funding opportunities.*
- 2. The capacity of existing public roads outside of the Towns and designated business intersections, including the County's primary highways, should not be expanded – even to accommodate growth generated by adjoining jurisdictions. The County's land use philosophy ensures that no unplanned growth will be generated in the county to require road capacity expansion in the rural areas.*
- 3. The County will invest in road improvements to support existing towns and business intersection areas which are consistent with the Comprehensive Plan and applicable component plans. Road improvements in rural areas shall be limited to safety and functional improvements.*
- 4. The County expects developers of public and private projects to mitigate all impacts that their projects may have on the County's transportation network.*
- 5. Private roads shall be designed to ensure safe connectivity to the public road network and to minimize environmental impacts. Private roads are the sole responsibility of the landowners and easement holders that use them – public funds shall not be used to maintain private roads or to upgrade them to public roads.*

### **C. Scope of Current Revision**

*The Clarke County Planning Commission adopted a resolution on January 4, 2019 to initiate a review of the 2013 Transportation Plan. This resolution directed the review to include the following issues:*

- 1. Integrate new transportation funding programs adopted or modified since 2014, including the Commonwealth of Virginia’s “Smart Scale” program, into the Transportation Plan.*
- 2. Evaluate each priority improvement project to determine whether the project remains relevant and would address current County needs, along with the likelihood of being funded through State and/or Federal programs such as “Smart Scale.”*
- 3. Evaluate whether to include new priority projects including the Town of Berryville’s proposed southeastern collector road that may involve the extension of Jack Enders Boulevard to U.S. 340.*
- 4. Determine whether to integrate recommendations from the 2014 Town of Berryville-Clarke County Bicycle and Pedestrian Plan into the Transportation Plan.*
- 5. Determine whether to request the Virginia Department of Transportation to conduct new transportation studies, such as a crossover study of the County’s four-lane divided primary highways, to aid in developing future project and funding priorities.*
- 6. Coordinate any proposed changes to Comprehensive Plan Objective 12 (Transportation) with any revised recommendations in the Transportation Plan.*

*In addition to these issues, the 2013 Plan’s strategies have been expanded into a more detailed objectives/strategies format. This revision also addresses changes and new information generated since 2013 including population and growth data from the 2020 Census.*

### **D. Statistics and Growth Assumptions**

As described in detail in the ~~2022~~ ~~2013~~ Clarke County Comprehensive Plan, the County’s land use philosophy focuses residential and business growth into the incorporated towns of Berryville and Boyce and utilizes robust land use controls and programs to ensure preservation of open lands and agricultural operations in the unincorporated areas of the County. Subdivision of land outside of the incorporated towns is limited by the County’s sliding-scale zoning system and regulations to ensure that large parcels are maintained. The County also has an active conservation easement purchase program and, together with the efforts of the Virginia Outdoors Foundation and other preservation organizations, have facilitated the placement of approximately ~~25%~~ ~~20%~~ of the total land area of Clarke County in permanent conservation easement. This approach to growth management has resulted in the County experiencing a much lower growth rate over the past few decades compared to surrounding jurisdictions.

The County’s land use policies also focus commercial growth into the incorporated towns and two designated business growth areas at intersections of primary highways -- Waterloo (U.S. 50/17 and U.S. 340) and Double Tollgate (U.S. 340 and U.S. 522). The County has been disciplined over the years in ensuring that commercial growth occurs predominantly in these locations and at a scale that can be managed with minimal upgrades to the County’s infrastructure. Public water and sewer – the primary catalyst for commercial growth – is provided within the incorporated towns, the Waterloo intersection (*U.S. 340 and U.S. 50/17*), and the Village of Millwood. Public water is provided to the Village of White Post. *Plans to extend public water and public sewer from Frederick County to the Double Tollgate intersection (U.S. 340/Va. 277 and US 522) are also underway.* Focusing public water and sewer into designated growth areas helps to prevent haphazard commercial growth outside of these areas.

As depicted in the tables below, Clarke County’s growth rate has been much slower and is expected to continue be slower in the future compared to our neighboring jurisdictions:

**TABLE 1 – Population and Growth Rates, 1950-2020**

<i>Jurisdiction*</i>	<i>1950</i>	<i>1960</i>	<i>1970</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>
<i>Clarke</i>	<i>7,074</i>	<i>7,942</i> <i>(12.2%)</i>	<i>8,102</i> <i>(2.0%)</i>	<i>9,965</i> <i>(23.0%)</i>	<i>12,101</i> <i>(21.4%)</i>	<i>12,652</i> <i>(4.5%)</i>	<i>14,034</i> <i>(10.9%)</i>	<i>14,783</i> <i>(5.3%)</i>
<i>Loudoun</i>	<i>21,147</i>	<i>24,549</i> <i>(16.1%)</i>	<i>37,150</i> <i>(51.3%)</i>	<i>57,427</i> <i>(54.6%)</i>	<i>86,129</i> <i>(50.0%)</i>	<i>169,599</i> <i>(96.9%)</i>	<i>312,311</i> <i>(84.1%)</i>	<i>420,959</i> <i>(34.8%)</i>
<i>Frederick/City of Winchester</i>	<i>31,378</i>	<i>37,051</i> <i>(18.1%)</i>	<i>48,322</i> <i>(30.4%)</i>	<i>54,367</i> <i>(12.5%)</i>	<i>67,686</i> <i>(24.5%)</i>	<i>82,794</i> <i>(22.3%)</i>	<i>104,508</i> <i>(26.2%)</i>	<i>119,539</i> <i>(14.4%)</i>
<i>Warren</i>	<i>14,801</i>	<i>14,655</i> <i>(-1.0%)</i>	<i>15,301</i> <i>(4.4%)</i>	<i>21,200</i> <i>(38.6%)</i>	<i>26,142</i> <i>(23.3%)</i>	<i>31,584</i> <i>(20.8%)</i>	<i>37,575</i> <i>(19.0%)</i>	<i>40,727</i> <i>(8.4%)</i>
<i>Fauquier</i>	<i>21,248</i>	<i>24,066</i> <i>(13.3%)</i>	<i>26,375</i> <i>(10.0%)</i>	<i>35,889</i> <i>(36.1%)</i>	<i>48,860</i> <i>(36.1%)</i>	<i>55,139</i> <i>(12.9%)</i>	<i>65,203</i> <i>(18.3%)</i>	<i>72,972</i> <i>(11.9%)</i>
<i>Fairfax</i>	<i>98,557</i>	<i>275,002</i> <i>(179.0%)</i>	<i>454,275</i> <i>(65.2%)</i>	<i>598,901</i> <i>(31.8%)</i>	<i>818,584</i> <i>(36.7%)</i>	<i>969,749</i> <i>(18.4%)</i>	<i>1,081,726</i> <i>(11.5%)</i>	<i>1,150,309</i> <i>(6.3%)</i>
<i>Berkeley, WV</i>	<i>30,359</i>	<i>33,791</i> <i>(11.3%)</i>	<i>36,356</i> <i>(7.6%)</i>	<i>46,775</i> <i>(28.7%)</i>	<i>59,253</i> <i>(26.7%)</i>	<i>75,905</i> <i>(28.1%)</i>	<i>104,169</i> <i>(37.2%)</i>	<i>122,076</i> <i>(17.2%)</i>
<i>Jefferson, WV</i>	<i>17,184</i>	<i>18,665</i> <i>(8.6%)</i>	<i>21,280</i> <i>(14.0%)</i>	<i>30,302</i> <i>(42.4%)</i>	<i>35,926</i> <i>(18.6%)</i>	<i>42,190</i> <i>(17.4%)</i>	<i>53,498</i> <i>(26.8%)</i>	<i>57,701</i> <i>(7.9%)</i>

*Source: US Census 2020*

*\*County government unless otherwise specified*

**TABLE 1—Population and Growth Rates, 1950-2010**

<b>Jurisdiction</b>	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>
<b>Clarke</b>	7,074	7,942 (12.2%)	8,102 (2.0%)	9,965 (23.0%)	12,101 (21.4%)	12,652 (4.5%)	14,034 (10.9%)
<b>Loudoun</b>	21,147	24,549 (16.1%)	37,150 (51.3%)	57,427 (54.6%)	86,129 (50.0%)	169,599 (96.9%)	312,311 (84.1%)
<b>Frederick/City of Winchester</b>	31,378	37,051 (18.1%)	48,322 (30.4%)	54,367 (12.5%)	67,686 (24.5%)	82,794 (22.3%)	104,508 (26.2%)
<b>Warren</b>	14,801	14,655 (-1.0%)	15,301 (4.4%)	21,200 (38.6%)	26,142 (23.3%)	31,584 (20.8%)	37,575 (19.0%)
<b>Fauquier</b>	21,248	24,066 (13.3%)	26,375 (10.0%)	35,889 (36.1%)	48,860 (36.1%)	55,139 (12.9%)	65,203 (18.3%)

<b>Fairfax</b>	98,557	275,002 (179.0%)	454,275 (65.2%)	598,901 (31.8%)	818,584 (36.7%)	969,749 (18.4%)	1,081,726 (11.5%)
<b>Berkeley Co., WV</b>	30,359	33,791 (11.3%)	36,356 (7.6%)	46,775 (28.7%)	59,253 (26.7%)	75,905 (28.1%)	104,169 (37.2%)
<b>Jefferson Co., WV</b>	17,184	18,665 (8.6%)	21,280 (14.0%)	30,302 (42.4%)	35,926 (18.6%)	42,190 (17.4%)	53,498 (26.8%)

Source—US Census 2010

**TABLE 2 – Population Projections, 2020-2045**

<i>Jurisdiction</i>	<i>2020*</i>	<i>2025**</i>	<i>Growth % 2020-2025</i>	<i>2035**</i>	<i>Growth % 2025-2035</i>	<i>2045**</i>	<i>Growth % 2035-2045</i>
<i>Clarke</i>	14,783	14,894	.8%	15,560	4.5%	16,123	3.6%
<i>Loudoun</i>	420,959	492,696	17.0%	611,954	24.2%	726,245	18.7%
<i>Frederick/City of Winchester</i>	119,539	127,265	6.5%	142,917	12.3%	157,526	10.2%
<i>Warren</i>	40,727	42,108	3.4%	45,679	8.5%	48,930	7.1%
<i>Fauquier</i>	72,972	75,046	2.8%	81,775	9.0%	87,928	7.5%
<i>Fairfax</i>	1,150,309	1,203,264	4.6%	1,276,124	6.1%	1,340,323	5.0%
<i>Berkeley Co., WV</i>	122,076	128,196***	5.0%	144,886***	13.0%	No data	No data
<i>Jefferson Co., WV</i>	57,701	62,463***	8.3%	68,245***	9.3%	No data	No data

Sources:

\* US Census (2020)

\*\* University of Virginia’s Weldon-Cooper Center (projections)

\*\*\* West Virginia University’s Bureau of Business and Economic Research unpublished data, published by the WV Solid Waste Management Board

**TABLE 2—Population Projections, 2000-2030**

<b>Jurisdiction</b>	<b>2010*</b>	<b>2020**</b>	<b>Growth % 2010-2020</b>	<b>2030**</b>	<b>Growth % 2020-2030</b>	<b>2040**</b>	<b>Growth % 2030-2040</b>
-	-	-	-	-	-	-	-
<b>Clarke</b>	14,034	15,025	7.1%	15,871	5.6%	16,631	4.6%
<b>Loudoun</b>	312,311	397,272	27.2%	482,234	21.4%	567,195	17.6%
<b>Frederick</b>	78,305	97,192	24.1%	119,419	22.9%	145,938	22.2%
<b>City of Winchester</b>	26,203	27,967	6.7%	29,449	5.3%	30,781	4.5%
<b>Warren</b>	37,575	41,856	11.4%	45,818	9.5%	49,709	8.5%
<b>Fauquier</b>	65,203	74,118	13.7%	83,312	12.4%	93,028	10.4%
<b>Fairfax</b>	1,081,726	1,182,609	9.3%	1,271,995	7.6%	1,350,245	6.2%
<b>Berkeley Co., WV</b>	104,169	128,550***	23.4%	155,566***	21.0%	n/a	n/a
<b>Jefferson Co., WV</b>	53,498	62,691***	17.2%	71,208***	13.6%	n/a	n/a

Sources:

\* US Census (2010 population)



~~\*\* University of Virginia's Weldon Cooper Center (projections)~~

~~\*\*\* West Virginia University's Bureau of Business and Economic Research (WV projections)~~

The County expects to continue to strengthen this philosophy in the coming years so growth rates will continue to be well below those of our neighboring jurisdictions. As noted in Table 2 above, the County is projected to add approximately ~~1,340~~ ~~2,600~~ new residents through the year ~~2045~~ ~~2040~~.

The County's growth rate and land use approach translates into a conservative philosophy in regards to transportation planning. As a matter of practice, the County focuses its limited transportation funds on projects that provide substantial safety improvements or improve gravel-surface roads as opposed to projects that expand the capacity of the public road network. The County supports efforts by the incorporated Towns to expand the safety and efficiency of their internal road networks as the County's designated growth areas. The County also supports ~~localized, developer-funded~~ capacity and safety improvements to support new business growth at the intersections of Waterloo and Double Tollgate *in partnership with developers, landowners, and VDOT*.

One of the major challenges in the future will be to balance the County's transportation and land use philosophies with increasing impacts generated by neighboring localities. The County is generally opposed to expanding the capacity of its public road network including the State and Federal primary highways as these projects could attract additional growth that would be inconsistent with the County's land use philosophies. Alternatives to adding capacity, including expansion of commuting opportunities, should be pursued.

## **E. Existing Transportation Network**

Clarke County is a rural, agricultural county with an area of ~~178~~ ~~174~~ square miles and is located in the Northern Shenandoah Valley. It is bordered by Frederick County to the west, Warren County to the south, Loudoun and Fauquier Counties to the east, and Jefferson County, West Virginia to the north. The County is bisected by the Shenandoah River and the eastern portion of the County falls within the Blue Ridge Mountains. Population is centered in the two incorporated towns of Berryville and Boyce along with the unincorporated villages of Millwood, White Post, and Pine Grove. Business growth areas are designated at the intersections of Waterloo and Double Tollgate.

Clarke County is not included in any metropolitan planning organization (MPO) study area but is bordered by the Winchester-Frederick MPO to the west and the National Capital Region *Transportation Planning Board (TPB) area* ~~TCB~~ to the east.

### **IA. Public Road System<sup>1</sup>**

*The Virginia Department of Transportation (VDOT) maintains all public roads within the County with the exception of secondary streets within the Town of Berryville, which are maintained by the Town. Public roads are classified by VDOT using the following terms:*

<sup>1</sup> Source for functional classification is the Virginia Department of Transportation (VDOT) 2005 Functional Classification map.

- **Other principal arterials** – Roads that serve corridor movements of substantial statewide or interstate travel and provide an integrated network without stub connections (dead ends).
- **Minor arterials** – Roads that provide service for trips of moderate length, serve geographic areas that are smaller than their higher arterial counterparts, and offer connectivity to the higher arterial system. Minor arterials in rural areas link cities and large towns, along with other major traffic generators, and form an integrated network providing interstate and inter-county service.
- **Major collectors** – Roads that provide service to any county seat not on an arterial system and to larger towns not directly served by arterial systems. Major collectors link these places to nearby larger towns and cities or with arterial routes and serve the most important intra-county travel corridors. Compared to minor collectors, major collectors have lower connecting driveway densities, higher speed limits, are spaced at greater intervals, have higher annual average traffic volumes, and may have more travel lanes.
- **Minor collectors** – Roads that collect traffic from local roads and bring all developed areas within a reasonable distance of a collector roads. Minor collectors provide service to the remaining smaller communities and link local traffic generators with rural areas. They are typically spaced at intervals consistent with population density.
- **Local roads** – Roads that serve primarily as direct access to adjacent land. They provide service to travel over relatively short distance as compared to collectors or other higher systems. All roads not classified as an arterial or collector is classified as a local road.

The County’s major public road infrastructure consists of the following:

<b><u>Federal Primary Highways</u></b>	
<b><u>U.S. 50/17 – John Mosby Hwy</u></b>	-- Frederick County line to Fauquier County line -- Four-lane divided minor arterial
<b><u>U.S. 340 – Lord Fairfax Hwy</u></b>	-- Four-lane divided other principal arterial from West Virginia state line to Va. Rt. 7 (Harry Byrd Highway) -- Two-lane minor arterial from Va. Rt. 7 to U.S. 522 (Stonewall Jackson Highway) -- Four-lane minor arterial from U.S. 522 to Warren County line (runs concurrently with U.S. 522)
<b><u>U.S. 522 – Stonewall Jackson Hwy</u></b>	-- Four-lane minor arterial from Warren County line to Frederick County line (runs concurrently with U.S. 340 from Warren County line to Double Tollgate intersection)

Federal Primary Highways

- ~~U.S. 50/17— John Mosby Highway (Frederick County line to Fauquier County line). Four-lane divided urban minor arterial.~~
- ~~U.S. 340— Lord Fairfax Highway (Warren County line to West Virginia State line).
 
  - ~~Four-lane divided urban principal arterial from West Virginia State line to Virginia Route 7 (Harry Byrd Highway).~~
  - ~~Two-lane urban minor arterial from Virginia Route 7 (Harry Byrd Highway) to U.S. 522 (Stonewall Jackson Highway).~~
  - ~~Four-lane urban minor arterial from U.S. 522 (Stonewall Jackson Highway) to Warren County line (runs concurrently with U.S. 522 along this segment).~~~~
- ~~U.S. 522— (Stonewall Jackson Highway). Four-lane urban minor arterial from Warren County line to Frederick County line (runs concurrently with U.S. 340 from Warren County line to Double Tollgate intersection).~~

<i>State Primary Highways</i>	
<i>Route # and Name</i>	<i>Segment, design, and classification</i>
<i>Va. 7 – Harry Byrd Hwy</i>	<i>-- Frederick County line to Loudoun County line -- Four-lane divided other principal arterial</i>
<i>Va. 7 Business – West Main St and East Main St (Town of Berryville)</i>	<i>-- Two-lane major collector</i>
<i>Va. 255 – Bishop Meade Rd</i>	<i>-- Lord Fairfax Hwy (U.S. 340) to John Mosby Hwy (U.S. 50/17) -- Two-lane major collector</i>
<i>Va. 277 – Lord Fairfax Hwy</i>	<i>-- Double Tollgate intersection to Frederick County line -- Two-lane minor arterial</i>

State Primary Highways

- ~~Route 7— Harry Byrd Highway (Frederick County line to Loudoun County line). Four-lane divided urban principal arterial.~~
- ~~Route 7 Business— West Main Street/East Main Street (Town of Berryville). Two-lane urban collector.~~
- ~~Route 255— Bishop Meade Road (U.S. 340 to U.S. 50/17). Two-lane rural major collector.~~
- ~~Route 277— Lord Fairfax Highway (Double Tollgate intersection to Frederick County line). Two-lane urban minor arterial.~~

<i>Classified Secondary Roads – Major Collectors</i>		
<i>#</i>	<i>Name</i>	<i>Segment From/To</i>
<i>611</i>	<i>Summit Point Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) to West Virginia state line</i>
<i>612</i>	<i>Shepherds Mill Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) to Harry Byrd Hwy (Va. 7)</i>
<i>615</i>	<i>First St</i>	<i>East Main St (Va. Business 7) to Liberty St</i>
<i>616</i>	<i>South Church St</i>	<i>South Buckmarsh St (U.S. 340) to East Main St (Va. Business 7)</i>
<i>616</i>	<i>North Church St</i>	<i>East Main St (Va. Business 7) to Liberty St (Rt 1005)</i>

620	<i>Browntown Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) to Bishop Meade Rd (Va. 255)</i>
628	<i>Berrys Ferry Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) White Post Rd (Rt 658)</i>
632	<i>Crums Church Rd</i>	<i>Old Charles Town Rd (Rt 761) to Harry Byrd Hwy (Va. 7)</i>
632	<i>Triple J Rd</i>	<i>Harry Byrd Hwy (Va. 7) to Senseny Rd (Rt 657)</i>
636	<i>Westwood Rd</i>	<i>West Main St (Va. Business 7) to Senseny Rd (Rt 657)</i>
638	<i>Howellsville Rd</i>	<i>John Mosby Hwy (U.S.50/17) to Warren County line</i>
657	<i>Senseny Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) to Frederick County line</i>
658	<i>White Post Rd</i>	<i>Lord Fairfax Hwy (U.S. 340) to Carters Line Rd (Rt 627)</i>
723	<i>Old Winchester Rd</i>	<i>North Greenway Ave (U.S. 340) to Frederick County line</i>
723	<i>Millwood Rd</i>	<i>Bishop Meade Rd (Va 255) to John Mosby Hwy (U.S. 50/17)</i>
761	<i>Old Charles Town Rd</i>	<i>Frederick County line to West Virginia state line</i>
1005	<i>Liberty St</i>	<i>First St (Rt 615) to N. Church St (Rt 616)</i>
1035	<i>Mosby Blvd</i>	<i>N. Buckmarsh St (U.S. 340) and West Main St (Va. Business 7)</i>
1041	<i>Jackson St</i>	<i>Mosby Blvd (Rt 1035) to West Main St (Va. Business 7)</i>

*Classified Secondary Roads*

This inventory does not include secondary roads that are located exclusively within the limits of the Town of Berryville. There are no secondary roads designated as rural principal or rural minor arterial routes.

*Rural Major Collectors*

- ~~Route 611 (Summit Point Road) from Lord Fairfax Highway (U.S. 340) to West Virginia State line.~~
- ~~Route 612 (Shepherds Mill Road) from Lord Fairfax Highway (U.S. 340) to Harry Byrd Highway (Route 7).~~
- ~~Route 620 (Browntown Road) from Lord Fairfax Highway (U.S. 340) to Bishop Meade Road (Route 255).~~
- ~~Route 628 (Berrys Ferry Road) from Lord Fairfax Highway to White Post Road (Route 658).~~
- ~~Route 632 (Crums Church Road) from Old Charles Town Road (Route 761) to Harry Byrd Highway (Route 7).~~
- ~~Route 632 (Triple J Road) from Harry Byrd Highway (Route 7) to Senseny Road (Route 657).~~
- ~~Route 638 (Howellsville Road) from U.S. 50/17 (John Mosby Highway) to Warren County line.~~
- ~~Route 657 (Senseny Road) from Lord Fairfax Highway (U.S. 340) to Frederick County line.~~
- ~~Route 658 (White Post Road) from Lord Fairfax Highway (U.S. 340) to Carters Line Road (Route 627).~~
- ~~Route 723 (Old Winchester Road) from Frederick County line to North Greenway Avenue (U.S. 340).~~
- ~~Route 723 (Millwood Road) from North Greenway Avenue (U.S. 340) to U.S. 50/17 (John Mosby Highway).~~

- ~~Route 761 (Old Charles Town Road) from Frederick County line to West Virginia State line.~~

<i>Classified Secondary Roads – Minor Collectors</i>		
<i>#</i>	<i>Name</i>	<i>Segment From/To</i>
<del>601</del>	<del>Blue Ridge Mountain Rd</del>	<del>Harry Byrd Hwy (Va. 7) to John Mosby Hwy (U.S. 50/17)</del>
<del>601</del>	<del>Raven Rocks Rd</del>	<del>Harry Byrd Hwy (Va. 7) to West Virginia state line</del>
<del>606</del>	<del>River Rd</del>	<del>Harry Byrd Hwy (Va. 7) to Frogtown Rd (Rt 649)</del>
<del>606</del>	<del>Mt. Carmel Rd</del>	<del>John Mosby Hwy (U.S. 50/17) to Frogtown Rd (Rt 649)</del>
<del>608</del>	<del>Wickliffe Rd</del>	<del>Harry Byrd Hwy (Va. 7) to West Virginia state line</del>
<del>613</del>	<del>Springsbury Rd</del>	<del>Jack Enders Blvd (Rt 700) to Possum Hollow Rd (Rt 647)</del>
<del>615</del>	<del>First St</del>	<del>Liberty St (Rt 1005) to East Fairfax St (Rt T-1015)</del>
<del>616</del>	<del>North Church St</del>	<del>Liberty St (Rt 1005) to Bundy St (Rt 616)</del>
<del>616</del>	<del>Bundy St</del>	<del>North Church St (Rt 616) to North Buckmarsh St (U.S. 340)</del>
<del>617</del>	<del>Briggs Rd</del>	<del>Bishop Meade Rd (Va. 255) to Lockes Mill Rd (Rt 618)</del>
<del>624</del>	<del>Red Gate Rd</del>	<del>John Mosby Hwy (U.S. 50/17) to Warren County line</del>
<del>644</del>	<del>Gun Barrel Rd</del>	<del>John Mosby Hwy (U.S. 50/17) to Lord Fairfax Hwy (U.S. 340)</del>
<del>649</del>	<del>Frogtown Rd</del>	<del>River Rd (Rt 606) to Mt. Carmel Rd (Rt 606)</del>
<del>653</del>	<del>Kimble Rd</del>	<del>Harry Byrd Hwy (Va. 7) to Stringtown Rd (Rt 654)</del>
<del>658</del>	<del>Sugar Hill Rd</del>	<del>White Post Rd (Rt 658) to Warren County line</del>
<del>661</del>	<del>Brucetown Rd</del>	<del>Swimley Rd (Rt 672) to Frederick County line</del>
<del>672</del>	<del>Swimley Rd</del>	<del>Brucetown Rd (Rt 661) to Old Charles Town Rd (Rt 761)</del>
<del>700</del>	<del>Jack Enders Blvd</del>	<del>East Main St (Va. Business 7) to Springsbury Rd (Rt 613)</del>

*Rural Minor Collectors*

- ~~Route 601 (Raven Rocks Road) from Route 7 (Harry Byrd Highway) to West Virginia State line.~~
- ~~Route 601 (Blue Ridge Mountain Road) from Route 7 (Harry Byrd Highway) to Route 50/17 (John Mosby Highway).~~
- ~~Route 606 (River Road) from Route 7 (Harry Byrd Highway) to Route 649 (Frogtown Road).~~
- ~~Route 606 (Mt. Carmel Road) from Route 649 (Frogtown Road) to U.S. 50/17 (John Mosby Highway).~~
- ~~Route 613 (Springsbury Road) from Berryville Town limits to Route 618 (Lockes Mill Road).~~
- ~~Route 617 (Briggs Road) from Route 255 (Bishop Meade Road) to Route 618 (Lockes Mill Road).~~
- ~~Route 618 (Lockes Mill Road) from Route 617 (Briggs Road) to Route 613 (Springsbury Road).~~
- ~~Route 615 (Boom Road) from Berryville Town limits to End of State Maintenance.~~
- ~~Route 624 (Red Gate Road) from U.S. 50/17 (John Mosby Highway) to Warren County line.~~

- ~~Route 644 (Gun Barrel Road) from U.S. 50/17 (John Mosby Highway) to U.S. 340 (Lord Fairfax Highway).~~
- ~~Route 649 (Frogtown Road) from Route 606 (River Road) to Route 606 (Mt. Carmel Road).~~
- ~~Route 653 (Kimble Road) from Route 7 (Harry Byrd Highway) to Route 654 (Stringtown Road).~~
- ~~Route 658 (White Post Road) from Route 627 (Carters Line Road) to Warren County line (name changes to Sugar Hill Road before crossing into Warren County).~~
- ~~Route 660 (Russell Road) from Route 7 (Harry Byrd Highway) to Route 674 (Cather Road).~~
- ~~Route 672 (Swimley Road) from Route 761 (Old Charles Town Road) to Frederick County line.~~

A complete road classification table is located in Appendix B.

*The County also has 22 unpaved public roads or road segments that are maintained by VDOT totaling approximately 24.35 miles. Most of these roads have gravel surfaces with limited or nonexistent shoulders and drainage areas. Below is a breakdown of the general location and characteristics of these unpaved public roads. A full list is included in Appendix D.*

- *East of the Shenandoah River – 5 roads, approximately 6.85 miles*
- *West of the Shenandoah River – 17 roads, approximately 17.5 miles*
- *Unpaved segments of paved roads – 7 roads, approximately 9.75 miles*
- *Through roads (connects two paved public roads) – 11 roads, approximately 18.66 miles*
- *Dead end roads – 11 roads, approximately 5.69 miles*

*VDOT's Rural Rustic Roads program provides funding to hard surface unpaved public roads which meet the following criteria:*

- *Must currently be in the State Secondary System of public roads*
- *Maximum traffic of 1,500 vehicles per day*
- *Must be used predominately for local traffic*
- *Must have minimal anticipated traffic growth*
- *Board of Supervisors must pass a resolution designating the road as a Rural Rustic Road*

*Funding for the Rural Rustic Roads program can come from the locality's annual six-year secondary road construction budget or via direct application for funding, the latter of which requires a public involvement process. Roads approved for funding would be paved with a compacted or impervious surface with reestablishment of existing associated ditches and shoulders. Trees, vegetation, side slopes, and open drainage along the roadway are typically left undisturbed. Project costs are minimized by not requiring project engineering or acquiring right-of-way from property owners.*



## **2B. Private Roads**

There are ~~over 300~~ ~~currently 343~~ private roads in the County that are recognized with an official County road name by virtue of serving three or more addressable structures. Private roads are maintained solely by the property owners that access the road or by an organized homeowners association. As a long standing policy, the County does not expend public funds to maintain and repair private roads or to accept private roads into the public road system. The County Subdivision Ordinance requires all new subdivisions *that will* ~~to~~ be served by private roads to include a note on the plat indicating that the private road will never be maintained by Clarke County or the Virginia Department of Transportation.

*A complete list of private roads is located in Appendix C.*

## **3C. Bicycle and Pedestrian Facilities**

*In 2014, the Town of Berryville and Clarke County accepted a joint Bicycle and Pedestrian Plan which was produced by the Northern Shenandoah Valley Regional Commission (NSVRC). NSVRC staff developed the Plan under the guidance of a steering committee consisting of Town and County staff members, the Town's chief of police, and a representative from the County Planning Commission. The Plan contains a comprehensive overview of the existing transportation network, recommendations for bicycle and pedestrian enhancements, and outdoor recreational opportunities in the Town and County. It also contains an analysis of the interconnectivity among on-street bicycle accommodations, pedestrian facilities, trails, parks, and other points of interest or tourist destinations. The goal of the Plan is to inform future planning efforts and tourism, marketing, and economic development initiatives. The Plan has not been reviewed or updated since its 2014 completion.*

The County currently does not have any *Federal or* state-designated bicycle routes. ~~The County has plans to develop and implement a bicycle plan in the near future.~~

Pedestrian facilities in the form of sidewalks and walking paths are found predominantly in the incorporated towns and the business intersections at Waterloo and Double Tollgate. The Appalachian Trail is located along the eastern portion of the County.

## **4D. Railroads**

The County is served by two rail lines. The primary line is a Norfolk Southern line that runs from Warren County in the southeast to the West Virginia State line in the northeast portion of the County. This line passes through both the Town of Berryville and Boyce with sidings serving existing businesses located in Berryville. A second line, operated by CSX, passes through the northern tip of the County from West Virginia to Frederick County near the community of Wadesville.

There is no passenger train access in the County.

## **5E. Airports**

There are no public airports in the County although there are a handful of private airstrips that are recognized by the Federal Airport Administration. The closest public airports are Winchester

Regional Airport in eastern Frederick County and Washington Dulles International Airport in Loudoun County.

**6F. Commuter Facilities**

The Virginia Department of Transportation (VDOT) maintains two park-and-ride lots. The larger of the two is located in Waterloo near the intersections of U.S. 50/17 and U.S. 340. This facility contains 165 spaces and contains pick-up areas for commuter vans. The second lot is located on the east side of U.S. 522/340 at the Virginia Department of Corrections facility. This lot contains 24 spaces. RideSmart provides commuter assistance for residents of Clarke County and the Northern Shenandoah Valley.



## II. PLAN OBJECTIVES AND STRATEGIES

*This Chapter contains the 2023 Transportation Plan's Objectives and Strategies. The Objectives are statements of the County's transportation planning philosophy and the Strategies are recommended action items to be followed in order to implement the Objectives. The Objectives and Strategies are consistent with the guidance set forth in the 2022 Comprehensive Plan.*

### Objective 1

*Plan for a safe, cost-efficient, and cost-effective County-wide transportation network.*

#### Strategy 1

*Conduct a formal evaluation of the Transportation ~~component~~ Plan in conjunction with ~~each the~~ five-year review of the County's Comprehensive Plan.*

#### Strategy 2

*Between five-year reviews of the Comprehensive Plan, evaluate the Transportation Plan's list of proposed improvement projects on an annual basis to gauge whether new impacts or funding opportunities may impact the need or priority of the projects. Consult with the Virginia Department of Transportation (VDOT) and Clarke County Sheriff's Office for input on these evaluations.*

#### Strategy 3

*Consider supporting new projects which may not be on the Plan's list of projects but that arise between five-year review periods due to new or changed impacts or new funding opportunities. Such projects shall be recommended for implementation by VDOT staff and have a strong likelihood of receiving State and/or Federal funding.*

#### Strategy 4

*Request VDOT to conduct new or update current safety studies along primary highways, secondary roads, and intersections with safety concerns including but not limited to:*

- *Lord Fairfax Highway (U.S. 340) corridor*
- *Harry Byrd Highway (Va. Route 7) corridor*
- *John Mosby Highway (U.S. 50/17) corridor*
- *Double Tollgate intersection – U.S. 340/Va. 277 and U.S. 522*
- *Waterloo intersection – U.S. 50/17 and U.S. 340*

*Request that VDOT provide recommendations on safety improvements including implementation strategies, cost estimates, and likelihood of funding through VDOT's Smart Scale funding process and other programs.*

#### Strategy 5

*Ensure that developers mitigate impacts of their development projects on the safety and functionality of the transportation network by providing required improvements.*

*Encourage voluntary provision of recommended improvements such as right-of-way dedication, sight distance improvements, turn lane and acceleration/deceleration lanes, and off-site transportation improvements.*

~~Perform interim evaluations of the Transportation Plan to gauge how any new impacts or funding challenges may impact the Plan's approach.~~

### Objective 2

Continue to focus the County's limited transportation funds *and resources* on projects that:

- *Improve traffic safety, improve and functionality within the Towns and business intersections;*
- *Add compatible bicycle or pedestrian features;*
- *Provide new or enhance existing commuting opportunities;*
- *Replace existing gravel public roads or road segments with new hard surfaces.*

### Strategy 1

*Prioritize projects that would serve designated growth areas and either have a committed funding source or would be a strong candidate for transportation funding through programs such as Smart Scale.*

### Strategy 2

*Apply the County's limited six-year secondary road construction funding towards projects that improve safety, address stormwater impacts, or that hard-surface existing gravel public roads. For projects to hard-surface gravel roads, solicit and evaluate public comments from property owners and users of these roads before construction is authorized.*

### Strategy 3

*Projects that add or improve the safety of bicycle and/or pedestrian accommodations in designated growth areas should be supported. Bicycle and pedestrian projects along secondary roads in the rural areas shall not require significant road widening, in particular along the County's scenic byways.*

### Strategy 4

*Private roads and access easements are the responsibility of the property owners that use them. Public funds shall not be used for hard surfacing or other improvements, nor shall public funds be used to bring these private roads and access easements into the public road system for State maintenance.*

~~Support projects that improve safety, functionality, and capacity of the public road network that serves the Towns of Berryville and Boyce and the business growth areas of Waterloo and Double Tollgate.~~

### Objective 3

*Improvements to the transportation network shall be consistent with the County's land use philosophy and the recommendations of the Comprehensive Plan.*

#### Strategy 1

Oppose public and private efforts to expand capacity of the County's road network outside of the incorporated towns and business growth areas including the State and Federal primary highways. *Improvement projects which may adversely impact properties in conservation easement or the County's scenic byways shall be avoided.*

#### Strategy 2

*Support those projects contained within the corporate limits of and proposed by the Towns of Berryville and Boyce that are consistent with the comprehensive plans of these towns and compatible with the County's land use and transportation philosophy.*

#### Strategy 3

*Projects that propose new public roads or significant improvements to existing public roads in designated growth areas shall be consistent with guidance from the following component plans:*

- *2022 Comprehensive Plan*
- *Berryville annexation areas – Berryville Area Plan*
- *Double Tollgate – Double Tollgate Area Plan*
- *Waterloo – Waterloo Area Plan*

~~Develop and maintain a clearinghouse of County traffic data, in conjunction with the Virginia Department of Transportation, to aid the governing bodies in making land use decisions and allocating transportation funding to specific projects.~~



### **III. PROJECT PRIORITIES AND PLANNING-LEVEL COST ESTIMATES**

The project priorities ~~included in this Transportation Plan~~ are specifically designed to support the planned growth within the two incorporated towns of Berryville and Boyce along with the business intersections of Waterloo and Double Tollgate. The priorities list *also* includes projects to improve safety conditions outside of the growth areas along the County's Federal and State primary routes and to provide alternatives to single-occupant vehicle traffic.

*Aside from a few noted exceptions, the majority of these projects have not been evaluated in detail for many years. The County should request that VDOT study each project over the upcoming Plan term and provide the following guidance:*

- *Whether there is still a need for the project*
- *Whether the project scope should be modified*
- *Whether the project estimate is accurate*
- *The likelihood of each project being competitive for Federal and State funding, in particular Smart Scale funding*

Note that the project costs provided below are planning-level estimates only and do not reflect actual costs derived from preliminary engineering work. Cost estimates were *developed using VDOT's taken from the Virginia Department of Transportation's* Statewide Planning Level Cost Estimates *tool* (January *2015, current version 2009*).

#### **A. Current Project Priorities**

##### **13. Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate.**

###### **Scope:**

*Turn lane, safety, and capacity improvements at primary highway intersection -- approximately 3000 feet 4-lane divided rural (U.S. 340/522) and 2300 feet 3-lane rural (U.S. 340, Va. 277)*

**Planning Cost Estimate:**      *3000 feet, 4-lane divided rural: \$6,290,000 -- \$9,480,000*  
   *2300 feet, 3-lane rural: \$2,720,000 -- \$4,100,000*  
   *\$2,100,000*

###### **Assessed Need/Description:**

This dangerous intersection has experienced an increase in traffic of over 30% since 2001 and has insufficient turn lanes and through lane capacity. The Double Tollgate intersection is one of the County's two designated business growth areas and currently contains a gas station/ convenience store, church, flea market, and tourist attraction (Dinosaur Land). *Both passenger vehicle and truck* traffic is expected to increase in the coming years as large-scale residential development occurs in nearby Lake Frederick (2,000+ units in Frederick County) *and industrial growth continues around the Virginia Inland Port in Warren County* ~~in addition to further development in Frederick and Warren Counties along the corridor.~~

*Planned extension of public water and public sewer from Frederick County to the Double Tollgate area in Clarke to serve the recently-expanded business intersection area is also likely to increase both traffic counts and the priority for safety and capacity improvements. It is anticipated that some of the necessary improvements will be constructed by the private sector as new development occurs.*

This project was first added to the County’s priorities list in 1997.

Recommendation:

~~Project—Safety and capacity improvements at intersection. Improve existing right and left turn lanes to current urban design standards and the reconfiguration of the north and south sides of the intersection to add through capacity when new development occurs.~~



Double Tollgate intersection – US 340, US 522, and Va. Route 277

2. Intersection of **Va. Route 7 (Harry Byrd Highway)** and **Route 612 (Shepherds Mill Road)**, approximately 3 miles east of Berryville.

Scope:

*Construct turn lane, safety, and capacity improvements at primary highway intersection.*

Planning Cost Estimate: \$1,100,000

Assessed Need/Description:

Shepherds Mill Road (Route 612) is a high-volume shortcut for commuter traffic traveling to and from West Virginia via Route 7 and U.S. 340. The intersection has serious safety issues due to

insufficient sight distance and substandard turn lanes. An existing convenience store on the northeast corner of the intersection has an entrance located within the right turn lane, creating additional conflict points.

*In 2019, VDOT completed a corridor safety study for Va. Route 7 which included a detailed evaluation of this intersection. The report confirmed issues with the intersections and recommended the following counter measures:*

- *Improve sight distance to the east by removing vegetation, cutting back the slope on the north side of Va. Route 7.*
- *Install signing to encourage traffic to use Va. Route 7 and U.S. 340 instead of Shepherds Mill Road as a shortcut to West Virginia.*
- *Install optical speed bars on Va. Route 7 westbound to possibly reduce the speed of traffic approaching the intersection.*
- *Install centerline in the crossover.*
- *Refresh the stop bar on Shepherds Mill Road.*
- *Widen and extend the westbound right turn lane to Shepherds Mill Road north.*
- *Modify the crossover to allow eastbound traffic to turn north onto Shepherds Mill Road but not allow southbound traffic to cross the westbound lanes to turn east onto Va. Route 7. Close westbound left turn to Va. Route 7 eastbound and extend westbound left turn lane at Hawthorne Lane.*
- *Raise the grade of the sag vertical curve in the westbound lanes east of the intersection.*

*As of August 2023, VDOT had implemented several of the recommended counter measures and was in the process of implementing the crossover modifications.*

Recommendation:

~~Project—Safety improvements at intersection of state primary and rural major collector. Upgrade two existing turn lanes to VDOT standards.~~

~~In 2013, a project to perform safety improvements (UPC 104352) at this intersection was added to the FY2013-2014 secondary road construction budget by the Board of Supervisors. The planning level cost estimate adds the upgrade of two existing turn lanes to VDOT standards to the safety improvement project.~~





Intersection of Va. Route 7 and Shepherds Mill Rd. (Rt. 612)

**3. *Intersection of Va. Route 7 (Harry Byrd Highway) and Route 601 (Blue Ridge Mountain Road)***

**Scope:**

***Construct turn lane, safety, and capacity improvements at primary highway intersection.***

**Planning Cost Estimate:                      \$2,650,000**

**Assessed Need/Description:**

***A recent increase in traffic resulting from construction of a brewery/event center on Route 601 in Loudoun County as well as increased usage of the Bears Den overlook and Appalachian Trail has produced safety and capacity deficiencies at this intersection. A 2022 study by VDOT recommended implementation of an “R-CUT” intersection design which would replace current left turn movements at this intersection with east and westbound U-turn movements at other downslope crossovers. This design was not supported by the Board of Supervisors so VDOT proposed a smaller safety improvement project that does not mandate U-turns. A Smart Scale application to fund these necessary improvements was filed in 2023 but was not selected for funding. Applications for this project should be pursued in future Smart Scale funding rounds. As a possible alternative, a new project which combines this project with the Appalachian Trail pedestrian project described in #4 below could be evaluated.***





Intersection of Va. Route 7 and Blue Ridge Mountain Rd (Rt. 601)

**4. Va. Route 7 – Appalachian Trail Pedestrian Bridge**

**Scope:**

*Construct a 300' X 8' pedestrian bridge over Va. Route 7 near the intersection with Route 679 (Pine Grove Road) including 450 square feet of retaining wall and 490 feet of new trail.*

**Planning Cost Estimate:**                      \$5,400,000 -- \$7,200,000

**Assessed Need/Description:**

*This project was identified at the same time as the intersection improvement project at Va. Route 7 and Route 601 above. It is intended to provide Appalachian Trail visitors who park at the Pine Grove Road parking area with a safe means of crossing Va. Route 7. VDOT conducted a collaborative study of this project which resulted in consensus on a recommended bridge design in 2023. Funding sources for this project have not yet been identified. As a possible alternative, a new project which combines this project with the Va. Route 7/Route 601 crossover project described in #3 above could be evaluated.*



Intersection of Va. Route 7, Pine Grove Rd (Rt. 679), and Appalachian Trail (green)

- 56. Va. Route 7 Business (East Main Street) from Va. Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway).**

**Scope:**

*Reconstruct 0.94 miles of primary highway to improve capacity and safety, add drainage improvements, add bicycle/pedestrian facilities.*

**Planning Cost Estimate:** \$5,890,000 -- \$8,850,000 \$7,700,000

**Assessed Need/Description:**

The roadway serves as a major route for truck traffic to several industrial businesses on the east side of town including the County’s industrial park and a major (800 employees) publishing company. The project area is located predominantly within the Town of Berryville.

*In 2023, the Town of Berryville was selected to receive Smart Scale funding to construct sidewalk improvements in two phases (Phase 1 -- \$4.089 million, Phase 2 -- \$4.274 million). Should the southeastern collector road project be pursued (see below), the need for capacity improvements on East Main Street should be determined and funding identified.*

This project has been on the County’s list of priorities since 1995.

**Recommendation:**

~~Project— Safety/capacity improvements, drainage improvements, and addition of bicycle/pedestrian facilities to state primary route. Reconstruct East Main Street with a three-~~

lane section where feasible along with utility relocations, drainage improvements, and new sidewalk construction.



East Main Street corridor from Norfolk Southern railroad to Battletown Drive



East Main street corridor from Battletown Drive to Va. Route 7

- 64. **Va. Route 7 Business (West Main Street) from Va. Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway).**

**Scope:**

**Reconstruct approximately 1.2 miles of primary highway to improve capacity and safety, add drainage improvements, and add bicycle/pedestrian facilities.**

**Planning Cost Estimate: \$7,520,000 -- \$11,300,000 \$3,800,000**

**Assessed Need/Description:**

This section of Route 7 Business serves five public school buildings, the County’s Parks and Recreation Facility, and the Ruritan Fairgrounds in addition to serving as the main western route into the Town of Berryville. The original project concept was to upgrade the current two-lane section to three lanes with turn lanes, drainage, and safety improvements at major intersections, and sidewalks and bike lanes/trails ~~should be added~~ to facilitate pedestrian and bicycle traffic. **With The recent construction of the new Clarke County High School and extension of Mosby Boulevard to West Main Street, included the construction of a roundabout has been added at this new intersection** and new sidewalks added along **the corridor the north side of West Main**



~~Street~~ in addition to other improvements. Additionally, the Mosby Boulevard extension now provides a new route for traffic between the west end of town and the north end of town at U.S. 340. The scope of this project, particularly along the segment in the Town, will need to be evaluated *to determine whether it remains necessary for possible changes in the near future as traffic data is accumulated at the new intersection and along Mosby Boulevard.*

This project was first added to the County’s priorities list in 1992.

Recommendation:

~~Project—Safety/capacity improvements, drainage improvements, and addition of bicycle/ pedestrian facilities to state primary route. Reconstruct the segment of West Main Street from Route 7 to the roundabout at Mosby Boulevard to a three-lane section with sidewalk on the north side, along with safety and drainage improvements on the remaining section from the roundabout to Hermitage Boulevard.~~



West Main Street corridor – Va. Route 7 to Hermitage Blvd.

- 71. Intersection of US Route 340 (Lord Fairfax Highway) and US Routes 50/17 (John Mosby Highway) at Waterloo.**

Scope:

*Turn lane, safety, and capacity improvements at primary highway intersection. Includes improving two existing right turn lanes.*

Planning Cost Estimate:

~~\$3,500,000 -- \$5,580,000~~ \$2,100,000

Assessed Need/Description:

The Waterloo intersection is one of the County's two designated business growth areas and additional safety and capacity improvements are necessary to facilitate economic development. Some functional improvements were added to the intersection in conjunction with development of a convenience store/gas station complex on the southeast quadrant. As new development occurs at the intersection, the scope and type of improvements should be evaluated based on the projected traffic to be generated by the new uses. The cost of some portions of this project could be assumed by the development community as part of their projected traffic impacts.

This project was first added to the County's transportation priorities list in 1992. Partial funding for engineering design was approved (UPC 54384) ~~but and~~ full funding ~~is sought to~~ complete the design phase of the project *was not identified. This project should be evaluated by VDOT to determine whether the project scope should be re-defined, in particular to account for improvements made by developers since the project was originally identified in 1992. Historical and projected traffic volumes should also be considered in evaluating the scope and prioritizing the need for this project.*

Recommendation:

~~Project— Safety and capacity improvements at intersection. Improve two existing right turn lanes to current urban design standards and reconfigure the north and south sides of the intersection to add capacity when new development occurs.~~



Waterloo intersection – US 340 and US 50/17

**85. US Route 340 (Greenway Avenue) Drainage Issues in the Town of Boyce.**

**Scope:**

***Construct drainage improvements along corridor.***

**Planning** Cost Estimate: \$750,000 (2013 estimate)

**Assessed Need/Description:**

The project is necessary in order to replace existing drainage swales that are insufficient to handle runoff from US Route 340 and cause frequent flooding on nearby properties. Some drainage improvements were made in conjunction with a recent residential development project on the south end of town. The Town should re-evaluate the scope of the project taking into consideration these improvements. The project area is located entirely within the Town of Boyce.

The project was first added to the County's priorities list in 2003.

**Recommendation:**

**Project—Drainage improvements.**



Town of Boyce – Intersection of US 340 and East/West Main St.

**97. Park and Ride Lot, Va. Route 7 (Harry Byrd Highway) near intersection of Va. Route 7 Business one mile west of Berryville.**

**Scope:**

***Construct new commuter parking facility.***

**Planning** Cost Estimate: \$2,500,000 for 250 space facility.



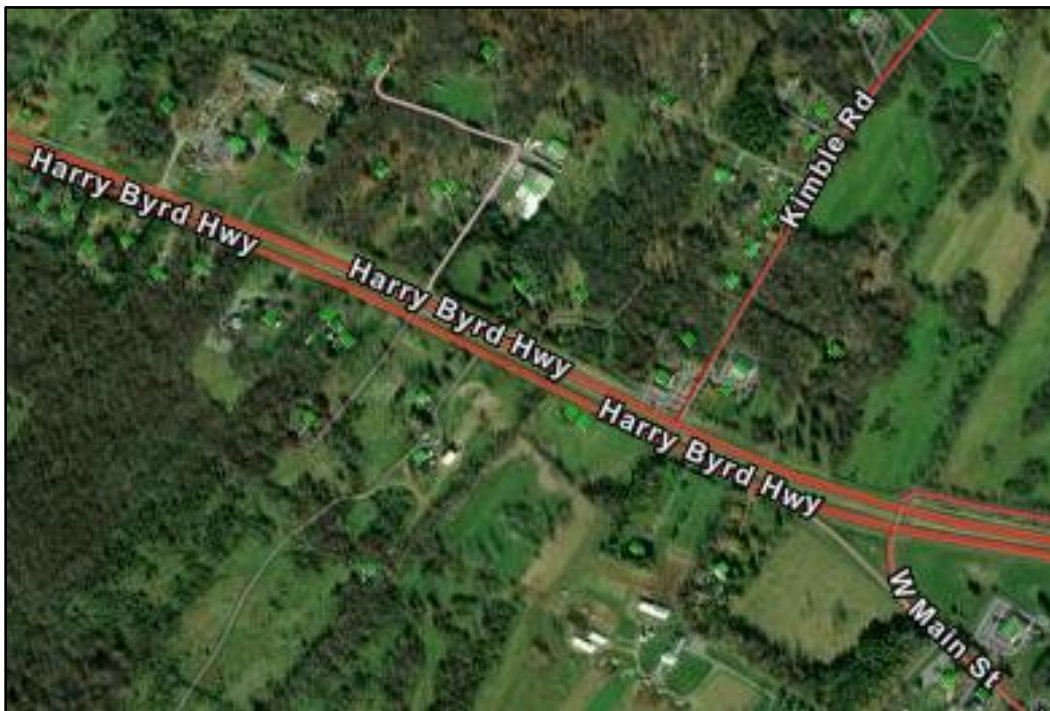
Assessed Need/Description:

Route 7 is a major east-west commuter route between the Winchester area and employment centers in the Washington metropolitan area. Commuter traffic has increased more than 50% along this route since 2001 and will continue to increase with new residential growth in Winchester, Frederick County, and surrounding jurisdictions. Alternatives to single-occupancy vehicle commuters must be developed to avoid increasing the capacity of Route 7 and a park and ride lot at this location would help with this effort.

The facility should be designed similar to the park and ride facility at Waterloo on U.S. 50 with a higher capacity to support the greater traffic demand along with accommodations for commuter buses and vans. The location on the west side of Berryville would help maximize convenience for Town and County residents who choose to commute.

Recommendation:

~~Project—Addition of a new commuter facility.~~



Area west of Town of Berryville, Va. Route 7

**B. Other Unprioritized Projects**

*Southeastern Collector Road, Town of Berryville.*

Scope:

*Construct a new collector road from Jack Enders Boulevard to Lord Fairfax Highway (U.S. 340) including upgrading a segment of Smallwood Lane (Route 680), expanding an existing railroad crossing, and constructing a new signalized intersection.*

Planning Cost Estimate:     \$9,600,000 (estimate from 2020 PrimeAE study)

Description:

*This Town of Berryville project proposes to construct a new collector road that would provide more direct access for Clarke County Business Park traffic to U.S. 340 and would reduce truck traffic through East Main Street and downtown.*

*The Town and County jointly undertook a study in 2020 with consultant PrimeAE to determine the optimum route for the collector road including the most feasible means to cross the Norfolk Southern railroad. The Town and County for many years had planned to extend Jack Enders Boulevard from its current terminus to U.S. 340 near the southern end of South Church Street. Work by PrimeAE staff with Norfolk Southern determined that this would be infeasible and would not be approved by the railroad. PrimeAE ultimately recommended extending Jack Enders Boulevard from a point near the entrance to the Business Park southeast to Smallwood Lane. The collector road would then merge with Smallwood Lane and extend to a new signalized intersection at U.S. 340, making use of an existing rail crossing with required improvements.*

*This proposed collector road project requires additional study to determine whether it would have an adverse impact on the capacity and safety of existing Jack Enders Boulevard, East Main Street, and East Main Street's intersection with Va. Route 7. If the collector road is constructed, it is possible that a significant amount of "pass-through" traffic attempting to go eastbound on Va. Route 7 from U.S. 340, and southbound on U.S. 340 from westbound Va. Route 7, would use the collector road as an alternative route. This would be especially true if GPS routing identifies the collector road as the shortest route for this traffic pattern. Additional study should be done to determine whether the capacity of Jack Enders Boulevard and East Main Street could support this "pass-through" traffic in addition to regular local traffic.*

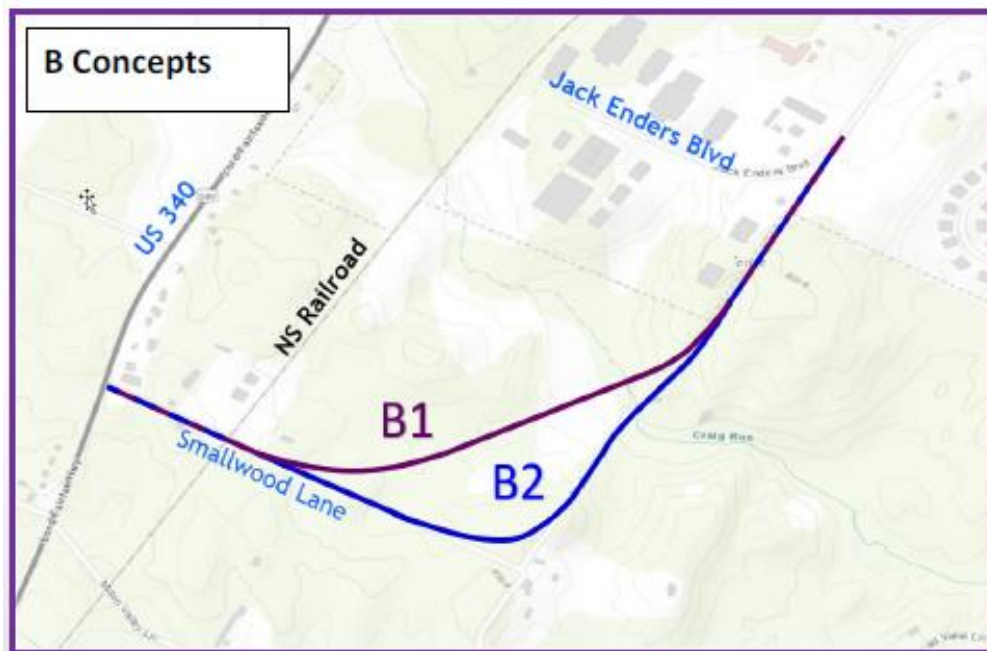
*Construction of a new signalized intersection at U.S. 340 and upgrades to the existing railroad crossing on Smallwood Lane present additional challenges. The current intersection borders a large farm in permanent conservation easement to the south and an existing business to the north. A new and much larger signalized intersection with turn lanes and tapers at this location would likely require private property to be acquired, potentially through eminent domain, on both sides of U.S. 340. Land cannot be obtained from the farm in conservation easement which could require the intersection to be relocated to the north. Similar challenges exist at the railroad crossing as the property at the northwestern quadrant of this crossing is VDOT's maintenance facility. Two small residential lots of 1.6 acres and 0.64 acres respectively occupy the southwestern and northeastern quadrants of the crossing. Significant land acquisition will be needed in order to accommodate a larger at-grade crossing to serve a much larger collector road.*

*Given these challenges it is likely that the ultimate project cost would be significantly higher than PrimeAE's estimate of \$9,600,000. Absent significant private sector funding, this project would have to be funded using State or Federal transportation funding. The most likely funding source is VDOT's Smart Scale program. This competitive process awards funding for*



*new projects based on five criteria – safety, congestion mitigation, accessibility, environmental quality, and economic development. The collector road project would likely score highest as an economic development project compared to other new road construction projects. Those new road construction projects that are awarded funding, particularly for economic development purposes, must be “shovel-ready.” This means that the project is included in the locality’s comprehensive plan and transportation plan, the area impacted by the project has been rezoned for development, and site plans for construction of businesses to be served by the new road have been approved. Significant work by the Town and County, and potentially financial investment, would be needed in order to make this project competitive for Smart Scale funding.*

*Solutions to these challenges must be identified before this project can be included in the priority list of projects.*



Proposed collector road routes, PrimeAE study presentation (July 14, 2020)

### **CB. Local Six Year Secondary Road Construction Project Priorities**

The Clarke County Board of Supervisors works with ~~Virginia Department of Transportation~~ (VDOT) on an annual basis to prioritize state funding for improvement projects in the County’s secondary road system. State secondary system funds are allocated to a locality based on their population and land area. These system funds compose the majority of secondary road funds made available to localities and are also vary based upon the adopted state transportation budget. Other funds are available for specific project types such as upgrading unpaved roads with a hard surface (e.g., Pave in Place and Rural Rustic Roads programs) and bridge improvements.

Because secondary road construction funding varies from year to year and project requirements can change, the secondary road construction priorities are not included in the Transportation Plan.



#### **IV. Conclusions**

Clarke County's approach to transportation planning mirrors the County's unique land use philosophies *and the Comprehensive Plan*. Safety, functionality, and limited capacity improvements are encouraged in the incorporated towns and business growth intersections to maximize the efficiency of the road network. Capacity expansion in the unincorporated areas is strongly opposed in order to reduce future development pressures and to maintain the County's rural, agrarian, and historic character. Modest improvements to add hard surfaces to unpaved secondary roads and improve traffic safety in the unincorporated areas are generally supported.

*While new development within the County does not regularly impact the transportation network, development in adjoining localities has a significant impact particularly on the County's primary highways and collector roads. The County should continue to rely on the Virginia Department of Transportation to identify solutions to address safety and functionality issues and to assist in funding these solutions.*

*It is also recommended that the Transportation Plan be reviewed on a five-year review schedule to ensure projects are accurately scoped and prioritized, objectives and strategies are up to date, and the Transportation Plan overall is consistent with the Comprehensive Plan. The five-year review should be conducted according to the following process:*

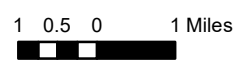
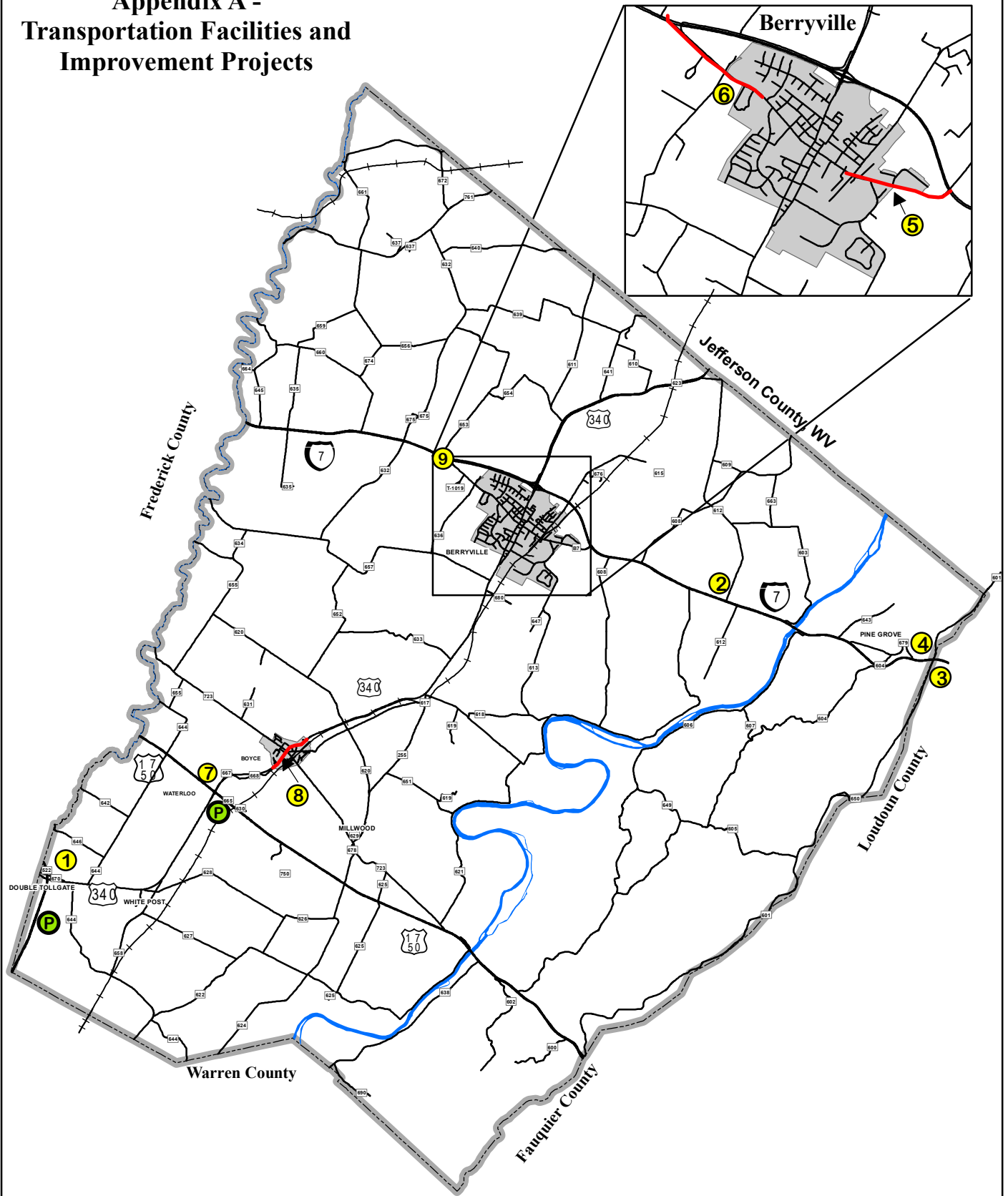
- 1. On a five-year schedule from the adoption date of the current Transportation Plan, the Planning Commission shall adopt a resolution addressing the status of the Plan, whether it should be updated, and to what degree it should be updated. This resolution may come in one of the following forms:*
  - A finding that the current Plan recommendations are sufficient and that no amendment is necessary.*
  - A finding that changes in the community warrants a comprehensive review and update of the Plan. An example would be the release of decennial Census data and growth projections.*
  - A finding that the Plan does not address, or inadequately addresses, a specific topic area or areas warranting a focused update of the Plan. While the update may have a specific purpose, the review should remain comprehensive to ensure that all impacts are carefully evaluated.*
  
- 2. It is recommended that at the beginning of year four in the five-year schedule, the Commission should begin work evaluating the Plan status. This can be accomplished as a committee of the whole or by designating a special subcommittee. The Plan status should be evaluated by considering factors including, but not limited to:*
  - Recent release of updated demographics.*
  - Recent updates to the County Comprehensive Plan.*
  - Impact of new development projects since the previous Plan update.*
  - Impact of recently completed capital projects or transportation improvements.*
  - Any other subject not addressed or inadequately addressed by the current Plan.*

*While not recommended, a proposal may be considered to amend the Plan outside of the scope of the Plan's five-year review cycle. Frequent, piecemeal changes to the Plan are strongly discouraged as they can result in the document becoming fragmented and inconsistent. It can also devalue the importance of the document as a long-range planning guideline. For these reasons, interim amendments are strongly discouraged.*

In summation, below are five strategies that can help to further the County's transportation objectives:

1. Conduct a formal evaluation of the Transportation component plan in conjunction with the five-year review of the County's Comprehensive Plan. Perform interim evaluations of the Transportation Plan to gauge how any new impacts or funding challenges may impact the Plan's approach.
2. Continue to focus the County's limited transportation funds on projects that improve traffic safety, improve functionality, add bicycle or pedestrian features, provide new or enhance existing commuting opportunities, or replace existing gravel public roads or road segments with new hard surfaces.
3. Oppose public and private efforts to expand capacity of the County's road network outside of the incorporated towns and business growth areas including the State and Federal primary highways.
4. Support projects that improve safety, functionality, and capacity of the public road network within the Towns of Berryville and Boyce and the business growth areas of Waterloo and Double Tollgate.
5. Develop and maintain a clearinghouse of County traffic data, in conjunction with the Virginia Department of Transportation, to aid the governing bodies in making land use decisions and allocating transportation funding to specific projects.

# Appendix A - Transportation Facilities and Improvement Projects











Clarke County GIS  
August 21, 2023

P:\arcgis\_maps\comp\_plan\transportation.mxd

August 29, 2023 Planning Commission Work Session



-  Incorporated Town
-  Shenandoah River
-  County Boundary
-  Railroads
-  State Roads

-  Park and Ride Lot
-  Planned Improvement Project  
(See Transportation Plan text for project descriptions)
-  Corridor Project

**APPENDIX B -- FUNCTIONAL CLASSIFICATION TABLE**  
**Public Road System (Clarke County and Towns of Berryville and Boyce)**

<b>Route</b>	<b>Facility Name</b>	<b>From</b>	<b>To</b>	<b>Functional Class</b>
7	HARRY BYRD HWY	FREDERICK CL	LOUDOUN CL	Other Principal Arterial
7	WEST MAIN ST	HARRY BYRD HWY	N BUCKMARSH ST	Major Collector
7	EAST MAIN ST	N BUCKMARSH ST	HARRY BYRD HWY	Major Collector
50	JOHN MOSBY HWY	FREDERICK CL	FAQUIER CL	Minor Arterial
255	BISHOP MEADE RD	JOHN MOSBY HWY	LORD FAIRFAX HWY	Major Collector
277	LORD FAIRFAX HWY	FREDERICK CL	STONEWALL JACKSON HWY	Minor Arterial
340	LORD FAIRFAX HWY	STONEWALL JACKSON HWY	HARRY BYRD HWY	Minor Arterial
340	LORD FAIRFAX HWY	HARRY BYRD HWY	WEST VIRGINIA SL	Other Principal Arterial
522	STONEWALL JACKSON HWY	FREDERICK CL	WARREN CL	Minor Arterial
601	BLUE RIDGE MOUNTAIN RD	JOHN MOSBY HWY	LOUDOUN CL	Minor Collector
601	RAVEN ROCKS RD	LOUDOUN CL	WEST VIRGINIA SL	Minor Collector
606	MOUNT CARMEL RD	JOHN MOSBY HWY	FROGTOWN RD	Minor Collector
606	RIVER RD	HARRY BYRD HWY	FROGTOWN RD	Minor Collector
608	WICKLIFFE RD	HARRY BYRD HWY	WEST VIRGINIA SL	Minor Collector
611	SUMMIT POINT RD	LORD FAIRFAX HWY	WEST VIRGINIA SL	Major Collector
612	SHEPHERDS MILL RD	HARRY BYRD HWY	JOHN MOSBY HWY	Major Collector
613	SPRINGSBURY RD	JACK ENDERS BLVD	POSSUM HOLLOW RD	Minor Collector
615	FIRST ST	E MAIN ST	LIBERTY ST	Major Collector
615	FIRST ST	LIBERTY ST	E FAIRFAX ST	Minor Collector
616	S CHURCH ST	S BUCKMARSH ST	E MAIN ST	Major Collector
616	N CHURCH ST	E MAIN ST	LIBERTY ST	Major Collector
616	N CHURCH ST	LIBERTY ST	BUNDY ST	Minor Collector
616	BUNDY ST	N CHURCH ST	N BUCKMARSH ST	Minor Collector
617	BRIGGS RD	LOCKES MILL RD	BISHOP MEADE RD	Minor Collector
620	BROWNTOWN RD	BISHOP MEADE RD	LORD FAIRFAX HWY	Major Collector
624	RED GATE RD	JOHN MOSBY HWY	WARREN CL	Minor Collector

SOURCE: VDOT Functional Classification Map (updated 9/23/2022)

**APPENDIX B -- FUNCTIONAL CLASSIFICATION TABLE**  
**Public Road System (Clarke County and Towns of Berryville and Boyce)**

<b>Route</b>	<b>Facility Name</b>	<b>From</b>	<b>To</b>	<b>Functional Class</b>
628	BERRY'S FERRY RD	LORD FAIRFAX HWY	WHITE POST RD	Major Collector
632	TRIPLE J RD	SENSENY RD	HARRY BYRD HWY	Major Collector
632	CRUMS CHURCH RD	HARRY BYRD HWY	OLD CHARLES TOWN RD	Major Collector
636	WESTWOOD RD	W MAIN ST	SENSENY RD	Major Collector
638	HOWELLSVILLE RD	JOHN MOSBY HWY	WARREN CL	Major Collector
644	GUN BARREL RD	JOHN MOSBY HWY	LORD FAIRFAX HWY	Minor Collector
649	FROGTOWN RD	MT CARMEL RD	RIVER RD	Minor Collector
653	KIMBLE RD	HARRY BYRD HWY	STRINGTOWN RD	Minor Collector
657	SENSENY RD	FREDERICK CL	LORD FAIRFAX HWY	Major Collector
658	SUGAR HILL RD	WARREN CL	WHITE POST RD	Minor Collector
658	WHITE POST RD	LORD FAIRFAX HWY	CARTERS LINE RD	Major Collector
658	WHITE POST RD	CARTERS LINE RD	SUGAR HILL RD	Minor Collector
661	BRUCETOWN RD	SWIMLEY RD	FREDERICK CL	Minor Collector
672	SWIMLEY RD	OLD CHARLES TOWN RD	BRUCETOWN RD	Minor Collector
700	JACK ENDERS BLVD	E MAIN ST	SPRINGSBURY RD	Minor Collector
723	OLD WINCHESTER RD	FREDERICK CL	LORD FAIRFAX HWY	Major Collector
723	MILLWOOD RD	BISHOP MEADE RD	JOHN MOSBY HWY	Major Collector
761	OLD CHARLES TOWN RD	FREDERICK CL	WEST VIRGINIA SL	Major Collector
1005	LIBERTY ST	FIRST ST	N CHURCH ST	Major Collector
1035	MOSBY BLVD	N BUCKMARSH ST	JACKSON DR	Major Collector
1041	JACKSON DR	W MAIN ST	MOSBY BLVD	Major Collector

SOURCE: VDOT Functional Classification Map (updated 9/23/2022)

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Alder Ln	Retreat Rd	643
Allegheny Ridge Ln	Wadesville Rd	661
America Ln	River Rd	606
Anamaria Ln	Manor Rd	690
Ancient Oak Ln	Crums Church Rd	632
Annfield Farm Ln	Annfield Rd	633
Antique Ln	Withers Larue Rd	640
Ashley Ln	John Mosby Hwy	50/17
Ashley Woods Ln	Blue Ridge Mtn Rd	601
Ashwood Ln	Withers Larue Rd	640
Aspen Ln	Cedar Ln/Holly Ln (private roads)	n/a
Audley Ln	Harry Byrd Hwy/Boom Rd	7/615
Azalea Ln	Retreat Rd	643
Balsam Ln	Cedar Ln/Holly Ln (private roads)	n/a
Banjo Ln	Good Shepherd Rd	604
Barbour Ln	Moose Rd	635
Barker Ln	Blue Ridge Mtn Rd	601
Barred Owl Ln	Calmes Neck Ln (private road)	n/a
Bedrock Ln	Garden Rd	675
Beechwood Ln	Alder Ln (private road)	n/a
Bee Line Ln	Harry Byrd Hwy	7
Bell Hollow Ln	Ebenezer Rd	604
Bell Ln	Parshall Rd	608
Bellevue Ln	Old Winchester Rd	723
Bellringer Ln	Westwood Rd	636
Bench Ln	Ebenezer Rd	604
Beydler Ln	Allen Rd	639
Bittersweet Ln	Chilly Hollow Rd	621
Black Oak Ln	Cedar Ln/Holly Ln (private roads)	n/a
Blakemore Ln	Trapp Hill Rd	729
Blandy Farm Ln	Blandy Farm Ln/Berrys Ferry Rd	750/628
Blue Bird Ln	Calmes Neck Ln (private road)	n/a
Bolden Ln	Frogtown Rd	649
Boyer Ln	Lewisville Rd	641
Brecklyn Ln	Brooke Ln	676
Bridge Ln	River Rd	606
Bristow Ln	Castleman Rd	603
Broad View Ln	Possum Hollow Ln	647
Bryarly Ln	Lord Fairfax Hwy	340
Bungalow Ln	Westwood Rd	636
Burch Ln	Kennel Rd	625
Burleson Ln	Old Charles Town Rd	761
Burner Ln	Kimble Rd	653
Bushland Ln	Senseny Rd	657
Butler Ln	Gun Barrel Rd	644
Calmes Neck Ln	Mount Carmel Rd	606
Cardinal Ln	Calmes Neck Ln (private road)	n/a
Carefree Ln	Wildcat Hollow Rd	602



**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Carter Hall Ln	Bishop Meade Rd	255
Castlerock Ln	Russell Rd	660
Cedar Ln	Beechwood Ln/Holly Ln (private roads)	n/a
Cedar Hall Ln	Parshall Rd	608
Cedarwood Ln	Sugar Hill Rd	658
Chapel Ln	Bishop Meade Rd	255
Chapel Hill Ln	Lord Fairfax Hwy	340
Chapman Ln	Manor Rd	690
Cherry Ln	Retreat Rd	643
Chestnut Ln	Shepherds Mill Rd	612
Chestnut Coombe Ln	Blue Ridge Mtn Rd	601
Chilcott Ln	Feltner Rd	606
Childrens Ln	Chilly Hollow Rd	621
Clay Hill Farm Ln	Clay Hill Rd	651
Clermont Ln	East Main St	7
Cliff Ln	Horseshoe Ln (private road)	n/a
Clifton Farm Ln	Clifton Rd	610
Colonial Ln	Bishop Meade Rd	255
Concert Ln	Chilly Hollow Rd	621
Cool Spring Ln	Castleman Rd	603
Coulson Ln	Mount Weather Rd	650
Country Ln	Hawthorne Ln (private road)	n/a
Country Club Ln	Millwood Rd	723
Cunningham Ln	Bishop Meade Rd	255
Cunningham Ln	Millwood Rd	255
Dairy Ln	Summit Point Rd	611
Davis Ln	Lord Fairfax Hwy	340
Dearmont Hall Ln	Gun Barrel Rd	644
Deer Haven Ln	Frogtown Rd	649
Deer Wood Ln	Withers Larue Rd	640
Dogwood Ln	Timber Ln/Pine Crest Ln (private roads)	n/a
Doleman Ln	Clifton Rd	610
Dorsey Orchard Ln	Shepherds Mill Rd	612
Double Wood Ln	Ebenezer Rd	604
Duke Ln	Ebenezer Rd	604
Eagle Point Ln	Calmes Neck Ln (private road)	n/a
Eagle Rock Ln	Blue Ridge Mtn Rd	601
Earhart Ln	accessed from West Virginia	n/a
Easy Ln	Morgans Mill Rd	605
East Huntingdon Ln	N Greenway Ave	340
Edenbrook Ln	Old Charles Town Rd	761
Edgewood Ln	Lord Fairfax Hwy/Gun Barrel Rd	340/644
Elm Spring Ln	Janeville Rd	652
Elmington Ln	Lord Fairfax Hwy	340
Evergreen Ln	Retreat Rd	643
Fairfield Ln	Lord Fairfax Hwy	340
Fairview Ln	Longmarsh Rd	656
Farms Ridge Ln	Manor Rd (private road)	n/a

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Farnley Ln	Sugar Hill Rd	658
Fire Trail Rd	accessed from Warren County	n/a
Flint Spring Ln	Retreat Rd	643
Forest Ridge Ln	Blue Ridge Mtn Rd	601
Fox Ln	Vista Ln	1070
Fox Woods Ln	Calmes Neck Ln (private road)	n/a
Frankford Ln	Shepherds Mill Rd	612
Gillions Ln	Mercer Farm Ln (private road)	n/a
Glebe Ln	Castleman Rd	603
Glen Orchard Ln	Wickliffe Rd	608
Glen Owen Ln	Parshall Rd	608
Goat Hill Ln	Lord Fairfax Hwy	340
Good Success Ln	John Mosby Hwy	50/17
Gordons Ridge Ln	Harry Byrd Hwy	7
Gorham Ln	White Pine Ln (private road)	n/a
Grafton Ln	Wickliffe Rd	608
Granddaddy Ln	Senseny Rd	657
Grand View Ln	Parshall Rd	608
Green Bourne Ln	John Mosby Hwy	50/17
Greenfields Ln	White Post Rd	658
Greenstone Ln	Wildcat Hollow Rd	602
Grigsby Ln	Parshall Rd	608
Grouse Ridge Ln	Ebenezer Rd	604
Hackberry Ln	Beechwood Ln (private road)	n/a
Hampton Ln	Springsbury Rd	713
Harmony Ln	Flint Spring Ln (private road)	n/a
Harvue Ln	Longmarsh Rd	656
Hawthorne Ln	Harry Byrd Hwy	7
Heart Trouble Ln	Blue Ridge Mountain Rd	601
Helmley Ln	Senseny Rd	657
Hemlock Ln	Beechwood Ln (private road)	n/a
Hickory Ln	Retreat Rd	643
Hickory Green Ln	Berrys Ferry Rd	628
Hidden Hollow Ln	Mount Carmel Rd	606
Hidden Valley Ln	Alder Ln (private road)	n/a
Hideaway Ln	Carefree Ln (private road)	n/a
Highland Ridge Ln	Blue Ridge Mtn Rd	601
Hill And Dale Ln	Parshall Rd	608
Hollow Brook Ln	Ebenezer Rd	604
Holly Ln	Beechwood Ln (private road)	n/a
Honey Ln	Harry Byrd Hwy	7
Honeysuckle Ct	Honeysuckle Ln (private road)	n/a
Honeysuckle Ln	Retreat Rd	643
Horseshoe Ln	Morgans Mill Rd	605
Hunting Ridge Ln	Chilly Hollow Rd	621
Huntingdon Ln	N Greenway Ave	340
Huntover Ln	Red Gate Rd	624
Island Farm Ln	Tilthammer Mill Rd	621

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Jenkins Ln	Morgans Mill Rd	605
Journeys End Ln	Blue Ridge Mtn Rd	601
Juniper Ln	Wildcat Hollow Rd	602
Katharbrine Ln	Lord Fairfax Hwy	340
Kave Ln	Harry Byrd Hwy	7
Kelly Ln	Pine Grove Rd	679
Kent Farm Ln	River Rd	606
Kentland Ln	Harry Byrd Hwy	7
Kentmere Farm Ln	Millwood Rd	723
Kersey Ln	Swift Shoals Rd	622
Keystone Ln	Harry Byrd Hwy	7
Kinderhook Ln	Salem Church Rd	655
Kingsbury Ln	Crums Church Rd	632
Kinsky Ln	Parshall Rd	608
Kitchen Ln	Gun Barrel Rd	644
Lafayette Ln	Blue Ridge Mtn Rd	601
Lakeview Ln	Carefree Ln (private road)	n/a
Lakeville Farm Ln	John Mosby Hwy	50/17
Lander Ln	Senseny Rd	657
Laurel Ln	Timber Ln/Dogwood Ln	n/a
Laurel Wood Ln	Crums Church Rd	632
Leeds Manor Ln	River Rd	606
Leslie Ln	Wrights Mill Rd	645
Lewin Hill Ln	Frogtown Rd	649
Lewis Farm Ln	Lockes Mill Rd	613
Liberty Hill Ln	Liberty Hill Ln	600
Lindey Ln	Smallwood Ln	680
Linster Ln	Lockes Mill Rd	613
Lions Ln	Howellsville Rd	638
Little River Ln	Calmes Neck Ln (private road)	n/a
Llewellyn Ln	Lord Fairfax Hwy	340
Lloyds Ridge Ln	Mt. Carmel Rd	606
Lockesly Ln	Millwood Rd	723
Locust Ln	Old Ferry Ln (private road)	n/a
Lois Ln	River Park Ln (private road)	n/a
Long Branch Ln	Bordens Spring Rd/Nelson Rd	622/626
Long Field Ln	Pastoral Ln (private road)	n/a
Longwood Ln	Harry Byrd Hwy	7
Loyola Ln	Blue Ridge Mountain Rd	601
Lost Boys Ln	Eagle Rock Ln (private road)	n/a
Majestys Prince Ln	Walnut Hall Ln (private road)	n/a
Manor Rd	Manor Rd	690
Maple Ln	Beechwood Ln (private road)	n/a
Marsh Ln	Lord Fairfax Hwy	340
Meadowbrook Ln	Hawthorne Ln (private road)	n/a
Meadows Ln	Farnley Ln (private road)	n/a
Mercer Farm Ln	Feltner Rd	606
Middle Cottage Ln	Senseny Rd	657

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Mighty Turn Ln	Walnut Hall Ln (private road)	n/a
Mill Ln	Chapel Ln (private road)	n/a
Milton Valley Ln	Lord Fairfax Hwy	340
Minniewood Ln	Triple J Rd	632
Misty Hill Ln	Swimley Rd	672
Montalegre Ln	Harry Byrd Hwy	7
Montana Hall Ln	Bordens Spring Rd	622
Morgan Ln	Wildcat Hollow Rd	602
Morning Star Ln	Good Success Ln (private road)	n/a
Mount Airy Farm Ln	Bishop Meade Rd	255
Mount Prospect Ln	Swift Shoals Rd	622
Mountain Lake Ln	Mount Carmel Rd	606
Mountain Ridge Ln	Pine Grove Rd	679
Mountaineer Ln	Ebenezer Rd	604
Naylee Ln	Withers Larue Rd	640
Nellie Custis Ln	Audley Ln (private road)	n/a
Noble Ln	Crums Church Rd	632
Northfield Ln	Kennel Rd	625
North Hill Ln	Harry Byrd Hwy	7
Oak Cliff Ln	Calmes Neck Ln (private road)	n/a
Oakland Ln	Lord Fairfax Hwy	340
Oakleaf Ln	Longwood Ln (private road)	n/a
Old Barn Ln	Red Gate Rd	624
Old Blue Ridge Rd	Blue Ridge Mountain Rd	601
Old Ferry Ln	River Rd	606
Old Oak Ln	Manor Rd	690
Old Tavern Ln	Crums Church Rd	632
Old Tuley Ln	John Mosby Hwy	50
Page Brook Ln	Page Brook Ln	631
Paris Heights Ln	Blue Ridge Mountain Rd	601
Parker Ln	Harry Byrd Hwy	7
Pastoral Ln	Chilly Hollow Rd	621
Peaceful Hollow Ln	Ebenezer Rd	604
Pearl Ln	Calmes Neck Ln (private road)	n/a
Persimmon Ridge Ln	Crums Church Rd	632
Pine Crest Ln	Timber Ln (private road)	n/a
Piney Ridge Ln	Cliff Ln (private road)	n/a
Pioneer Ln	Lions Ln (private road)	n/a
Pleasant Ln	Wickliffe Rd	608
Pond Quarter Ln	Senseny Rd	657
Pope Ln	Crums Church Rd	632
Poplar Ln	Beechwood Ln (private road)	n/a
Poppy Ln	Wind Whistle Ln (private road)	n/a
Poston Ln	Frogtown Rd	649
Powhatan Ln	Millwood Rd	723
Princess Ln	Summerville Rd	652
Prospect Spring Ln	Browntown Rd	620
Providence Ln	Frogtown Rd	649

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Quarter Horse Ln	Clay Hill Rd	651
Quartermoon Ln	Kennel Rd	625
Queenship Ln	Swimley Rd	672
Ramsburg Ln	Westwood Rd	636
Randleston Ln	River Rd/Ebenezer Rd	606/604
Ratcliffe Ln	Ebenezer Rd	604
Ray Of Hope Ln	Stonewall Jackson Hwy	340
Redbud Ln	Beechwood Ln/Holly Ln (private road)	n/a
Ridgewood Ln	Manor Rd	690
River House Ln	John Mosby Hwy	50/17
River Park Ln	Feltner Rd	606
River View Farm Ln	River Rd/Ebenezer Rd	606/604
Riverside Farm Ln	Castleman Rd	603
Robin Ln	Calmes Neck Ln (private road)	n/a
Rock Dale Ln	Russell Rd	660
Rock Gate Ln	White Post Rd	658
Rock Hall Farm Ln	Harry Byrd Hwy	7
Rocky Bank Ln	Bishop Meade Rd	255
Rose Airy Ln	John Mosby Hwy	50
Rose Hill Ln	Harry Byrd Hwy	7
Ross Ln	Harry Byrd Hwy	7
Running Bear Ln	Calmes Neck Ln (private road)	n/a
Rutherford Ln	Harry Byrd Hwy	7
Scaleby Ln	Millwood Rd	723
Seltenhorst Ln	Harry Byrd Hwy	7
Shady Ford Ln	Wildcat Hollow Rd	602
Shady Grove Ln	Shepherds Mill Rd	612
Shan Hill Ln	Shan Hill Ln	619
Sheets Ln	John Mosby Hwy	50
Shenandoah River Ln	Howellsville Rd	638
Shepherd Ln	Anamaria Ln (private road)	n/a
Shepherds Ford Ln	River Rd	606
Silent Hill Ln	Stonewall Jackson Hwy	340/522
Silver Ridge Ln	Featherbed Rd	644
Sipe Hollow Ln	Boom Rd	615
Skyhorse Ln	Mount Weather Rd	650
Slate Ridge Ln	Mount Carmel Rd	606
Sleepy Hollow Ln	Frogtown Rd	649
Smithfield Ln	Wickliffe Rd	608
Soldiers Ln	Summit Point Rd	611
Solitude Ln	Carefree Ln (private road)	n/a
South Gate Ln	Millwood Rd	723
Springfield Ln	Crums Church Rd	632
Spring House Ln	Hawthorne Ln (private road)	n/a
Springsbury Farm Ln	Briggs Rd/Springsbury Rd	621/713
Stella Mae Ln	Frogtown Rd	649
Stock Ln	Berrys Ferry Rd	628
Stone Hill Ln	Harry Byrd Hwy	7

**APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY**

<b>Private Road</b>	<b>Public/Private Road Accessed by</b>	<b>Public Road Route #</b>
Stone Quarter Ln	White Post Rd	658
Stone Ridge Ln	John Mosby Hwy	50/17
Stonebrier Ln	Harry Byrd Hwy	7
Stonecrest Ln	Mount Weather Rd	650
Stonefield Ln	Salem Church Rd	655
Stubblefield Ln	Briggs Rd	617
Summer Springs Ln	John Mosby Hwy	50
Sunny Canyon Ln	Pyletown Rd	620
Sunset Ln	Browntown Rd	620
Sycamore Ln	Rocky Bank Ln	678
Tadpole Ln	Frogtown Rd	649
Taylor Hill Ln	Ebenezer Rd	604
Throwleigh Ln	Pyletown Rd	620
Timber Ln	Retreat Rd	643
Toy Hill Ln	Ebenezer Rd	604
Tuleyries Ln	Berrys Ferry Rd	628
Turtle Ln	Allen Rd	639
Valley Springs Ln	Harry Byrd Hwy	7
Valley View Ln	Blue Ridge Mtn Rd	601
Victory Ln	Thornton Rd	625
Victory Farm Ln	Frogtown Rd	649
Village Ln	Pine Grove Rd	679
Vita Bella Ln	Ebenezer Rd	604
Walnut Hall Ln	Summerville Rd	652
Warfield Ln	John Mosby Hwy	17
Warner Washington Ln	Lord Fairfax Hwy	340
Westfield Farm Ln	Lord Fairfax Hwy	340
Whispering Knolls Ln	Boom Rd	615
White Oak Ln	Retreat Rd	643
White Pine Ln	Solitude Ln (private road)	n/a
Wickliffe Farm Ln	Wickliffe Rd	608
Wiley Mountain Ln	Morgans Mill Rd	605
Wilkins Ln	Blandy Farm Ln	750
Williamstead Ln	Jack Enders Blvd	700
Willow Lake Ln	Feltner Rd	606
Wind Spring Ln	Senseny Rd	657
Wind Whistle Ln	Raven Rocks Rd	601
Windwood Ln	Blue Ridge Mtn Rd	601
Wolfe Ln	Boom Rd	615
Woodberry Ln	Shepherds Mill Rd	612
Woodley Ln	Briggs Rd	617
Worthington Ln	River Rd	606
York Ln	Lord Fairfax Hwy	340

## APPENDIX D -- UNPAVED PUBLIC ROADS

<u>Route</u>	<u>Road Name</u>	<u>From</u>	<u>To</u>	<u>Miles</u>
600	Liberty Hill Ln	John Mosby Hwy (US 50/17)	Liberty Hill Ln (PR)	0.65
602	Wildcat Hollow Rd	Carefree Ln (PR)	Greenstone Ln (PR)	0.89
603	Castleman Rd	Shepherds Mill Rd (Rt. 612)	Glebe Ln (PR)	2.13
604	Ebenezer Rd	River View Farm Ln (PR)	Saw Mill Hill Rd (Rt. 607)	1.00
605	Morgans Mill Rd	Blue Ridge Mountain Rd (Rt. 601)	Frogtown Rd (Rt. 649)	2.61
606	Feltner Rd	Mercer Farm Ln (PR)	Mt. Carmel Rd (Rt. 606)	1.70
619	Shan Hill Ln	Clay Hill Rd (Rt. 651)	Shan Hill Ln (PR)	0.60
621	Ellerslie Rd	Clay Hill Rd (Rt. 651)	Briggs Rd (Rt. 621)	2.00
621	Briggs Rd	Ellerslie Rd (Rt. 621)	Lockes Mill Rd (Rt. 618)	1.30
621	Lockes Mill Rd	0.96 mi east of Parshall Rd (Rt. 608)	Chilly Hollow Rd (Rt. 621)	1.08
622	Bordens Spring Rd	Sugar Hill Rd (Rt. 658)	Red Gate Rd (Rt. 624)	2.09
622	Swift Shoals Rd	Boat landing	Mt. Prospect Ln (PR)	2.20
625	Thornton Rd	John Mosby Hwy (US 50/17)	Millwood Rd (Rt. 723)	0.53
630	Iron Rail Ln	John Mosby Hwy (US 50/17)	Dead end	0.20
637	Linaburg Ln	Old Charles Town Rd (Rt. 761)	Dead end	0.30
637	Windy Hill Ln	Old Charles Town Rd (Rt. 761)	Dead end	0.15
644	Featherbed Rd	Lord Fairfax Hwy (US 340)	Sugar Hill Rd (Rt. 658)	2.07
644	Stonebridge Rd	Sugar Hill Rd (Rt. 658)	Warren County line	1.08
663	Auburn Rd	Castleman Rd (Rt. 603)	Wickliffe Rd (Rt. 608)	1.00
664	Neill Rd	Wrights Mill Rd (Rt. 645)	Dead end	0.30
678	Rocky Bank Ln	Bishop Meade Rd (Rt. 255)	Rocky Bank Ln (PR)	0.13
680	Smallwood Ln	Lord Fairfax Hwy (US 340)	Lindey Ln (PR)	0.34
			<b>TOTAL (approximate)</b>	<b>24.35</b>

PR -- Private Road

SOURCE: Virginia Department of Transportation County GIS