III. Thoroughfare Plan

A. Overview

Based on existing traffic data and projected population growth by Policy Area in Augusta County, traffic volumes in 2025 were projected and levels of service were identified for roadway segments. The 2025 levels of service are displayed in **Map 33**. Traffic conditions on the segments that are already failing based on 2005 conditions are projected to further deteriorate by 2025, with most segments of Interstate 81 reaching an LOS of "F." Additional segments in the Route 11 corridor and in the Urban Service and Community Development Areas around Fishersville and Stuarts Draft are projected to fail. Other segments at LOS "D" include Route 340 just north of Waynesboro, and segments perpendicular to the Interstate 81/Route 11 corridor around Weyers Cave, Verona, and Staunton. The following Plan provides recommendations for mitigating the projected failing segments.

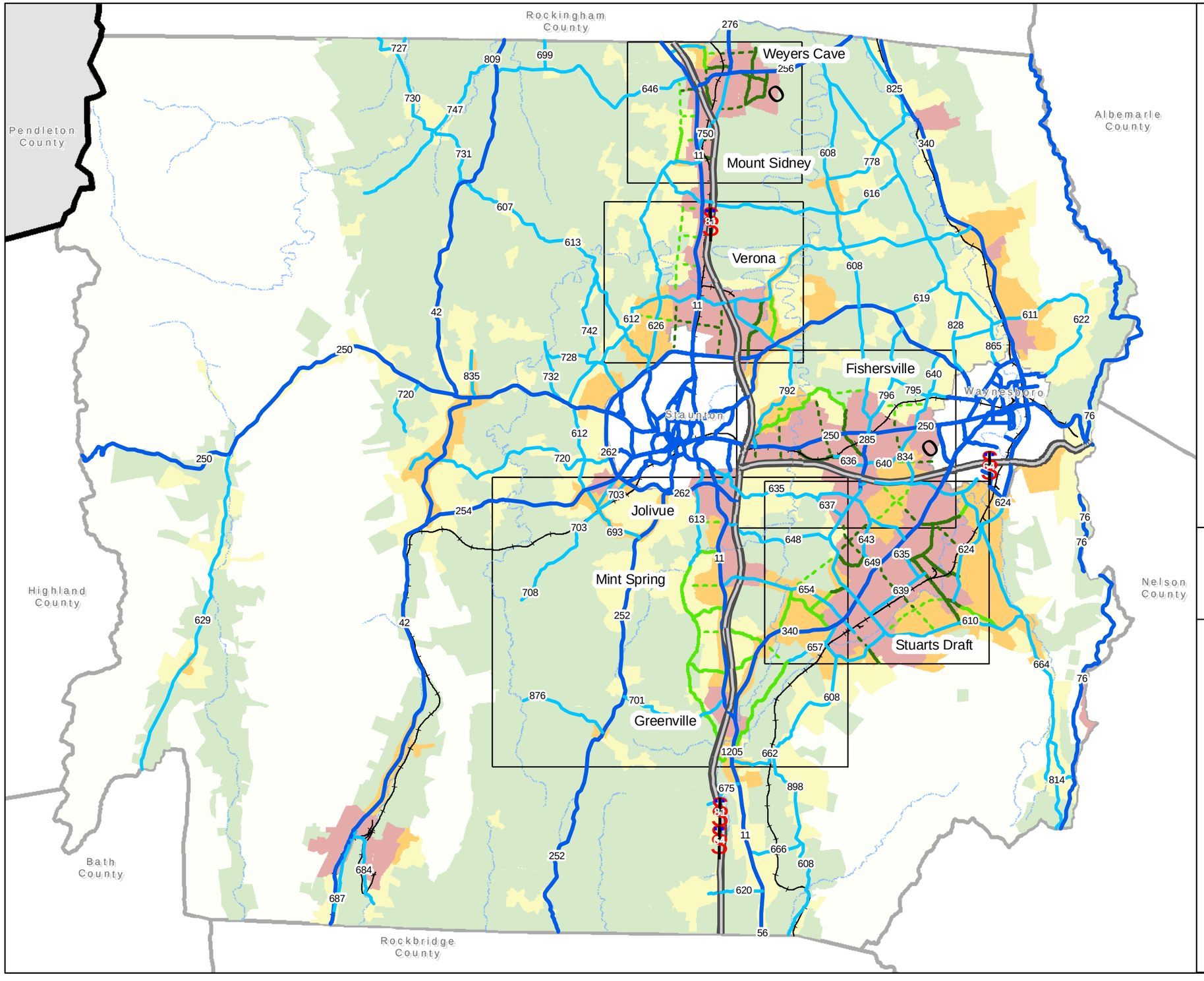
B. Proposed Thoroughfare Plan Strategies

During the Augusta County Comprehensive Plan Steering Committee Meeting on October 19, 2006, the Committee completed an exercise to prioritize the type of roadway improvement strategies that would be most effective, feasible, and appropriate based on the Policy Area that each roadway segment falls within. In general, the strategies recommended for Urban Service Areas were similar to those recommended for Community Development Areas, while the strategies recommended for Rural Conservation and Agriculture Conservation Areas were also similar to one another. Improving existing roadways ranked as the highest priority for all Planning Policy Areas, while the development of road networks also ranked highly for Urban Service and Community Development Areas. The priorities from the Committee are used in the Thoroughfare Plan, shown in **Map 1**, to generate the recommendations for mitigating projected failing road segments in 2025. The strategies fall into three general categories proposed in the Thoroughfare Plan:

1. Spot Improvements

This strategy involves making small-scale, strategic improvements to existing road segments to correct design deficiencies that currently limit the capacity on these roads. Spot improvements may include strategies such as applying access management strategies to limit excessive turning movements from roadways, improving or coordinating traffic signal timings, or adding turning or through lanes to alleviate bottlenecks. As these are typically the least costly types of improvements to make, they were recommended as the first priority strategy for all Policy Areas.

Detailed corridor studies are typically used to identify the specific type and location for spot improvements. Corridor studies are recommended for all failing road segments to identify potential spot improvements and assess their cost and



Legend

- Interstate
- Primary
- Secondary
- Railroads
- Rivers and Streams
- Airports
- Enhance Local to Urban Secondary, 2 lane
- Enhance Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans.

0 1 2 3 4 5 Miles

Thoroughfare Plan
Map 1
Concept Map

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP

effectiveness compared to strategies such as road widening or constructing parallel roadways. The two highest priorities for corridor studies are:

a. Route 11 countywide; and
b. Route 608 from Route 340 to Route 610.

Spot improvements have already been recommended in recent corridor studies for Route 608 from Route 340 to Route 254 and Route 636/640 from Route 250 to the Augusta Medical Center.

2. Upgrading Existing Local Roads to Secondary Roads

This strategy is also designed to increase the capacity of existing roadways, but may necessitate more comprehensive and expensive improvements to existing roads. Local roads likely do not meet current secondary road standards based on pavement type (or lack of paving), lane width, or roadway geometry. However, many local roads in Augusta County are located where they have the potential to make a vital connection in the secondary road network. By upgrading existing roads rather than constructing new roads or widening existing roads, additional network capacity can be provided at a cost that is most likely cheaper than other road construction strategies. As this strategy is similar to spot improvements in that it improves conditions on existing roads rather than constructing new roads, this strategy was also recommended for all Policy Areas.

3. Network Development

Where spot improvements and road upgrades cannot improve the capacity on a roadway adequately to improve the LOS to "C" or better, new road construction to create a network of streets is the next priority for mitigation in Urban Service and Community Development Areas. The network is intended to relieve traffic on existing congested roadways (e.g. Route 11) by providing alternative travel paths that allow travelers to make local connections that bypass the congested roadways, resulting in more direct travel with shorter vehicle trip lengths. Road networks are also vital for limiting future congestion in currently undeveloped Urban Service and Community Development Areas where the networks help to diffuse traffic throughout the network rather than concentrating it onto a limited number of major roads. Networks also serve the county's goal of promoting walkability in communities, as pedestrians typically will walk only ¼ of a mile on average for most trips. Short block lengths provide opportunities for making walking trips that may not be possible with more sparsely spaced roads.

The road network recommendations should be considered conceptual in the sense that they are not proposed alignments but rather are general locations where a road connection would make a vital link in the network and would help to relieve traffic on existing congested roadways. An ideal grid of streets includes collector streets spaced ½-to-one mile apart with local streets spaced 300-600 feet apart. The Thoroughfare Plan demonstrates two layers of a proposed collector road network:

a. Conceptual Grid: The conceptual grid is an idealized overlay based on a collector street spacing of ½-to-one mile between collectors. This grid is illustrative only.
b. Proposed Connections: The proposed connections are conceptual road locations that provide the road connections necessary to enhance the existing road network to function more closely to the idealized overlay grid.

The Thoroughfare Plan is intended only to identify the need for the proposed collector connections. Not every proposed connection may be feasible as they do not take into account existing development or features such as railroads, rivers, wetlands, and topography that may present a challenge to their development. The precise alignment and feasibility of the roads will need to be determined through more detailed studies, such as small area plans, and coordinated through specific development proposals. The small area plans and development proposals should also provide alignment recommendations for the local street network.

The proposed connections also include recommendations from approved studies, such as the proposed Triangle Drive extension, the Route 636 extension, and Alternative "A," or the Route 909 extension, from the Stuarts Draft Transportation Study.

C. Proposed Roadway Cross-Sections

The proposed roadway cross-sections illustrate context-sensitive applications of VDOT standards that support the transportation and land use goals of the Comprehensive Plan. Whereas the conventional roadway design in Augusta County is appropriate for moving vehicles safely and at high speeds of travel, this design places a heavy burden on a small number of facilities while encouraging development patterns that are inconsistent with the county's vision for future growth and development. In contrast, the road types proposed here are intended mainly for shorter local and commuter trip-making as opposed to long-distance regional travel, and place more of an emphasis on providing for multiple modes of travel while enhancing existing and future community design. This approach is intended to achieve better balance between the need to move vehicles and the need to create livable communities.

In the following cross-sections, some dimensions are provided as a range where the precise widths will need to be determined based on the function of the roadway and the context within which the road fits in the community. It should also be noted that the proposed cross-sections are idealized without consideration for right-of-way constraints. Dimensions may need to be modified or elements of the cross-sections may need to be removed based on the characteristics of a roadway corridor and the availability of right-of-way. While the recommendations in the thoroughfare plan are for two-lane roads, four-lane cross-sections are also presented below in the event that a road widening or new four-lane road is proposed in the future. Local coordination

with the VDOT Residency is essential to the successful design and approval of context-sensitive road facilities. The standards published in the Institute of Transportation Engineers' *Context Sensitive Design for Major Urban Thoroughfares* should be considered in addition to VDOT design standards.

All proposed new road connections on the Thoroughfare Plan map are intended to be secondary roads. Additional local roads are recommended within Urban Service and Community Development Areas, but their precise locations and alignments need to be determined through small area plans and development proposals to meet the connectivity standards outlined in the Transportation Element of the Comprehensive Plan. The following eight roadway types are proposed for the Thoroughfare Plan, along with an indication of where these roadway types are appropriate:

Table 1. Proposed Roadway Types by Planning Policy Area

	Roadway type	Planning Policy Areas
1	Two-lane urban secondary roadway	USA
2	Two-lane rural secondary roadway	CDA, RCA, ACA
3	Four-lane urban secondary roadway	USA
4	Four-lane rural secondary roadway	CDA, RCA, ACA
5	Unstriped urban local roadway	USA
6	Two-lane urban local roadway	USA
7	Two-lane primary roadway	USA, CDA, RCA, ACA
8	Four-lane primary roadway	USA, CDA, RCA, ACA

Only the first two of these roadway types are recommended in the thoroughfare plan maps. The two-lane urban commercial roadway is intended for all proposed collector roads or local-to-collector upgrades within the Urban Service Areas. A variation of this road type is also provided for use in a residential area, but as a collector road is intended to carry a moderate volume of traffic, commercial activity is typically more appropriate along a collector corridor. The two-lane rural roadway is intended for all proposed collector roads or local-to-collector upgrades within the Community Development, Rural Conservation, and Agricultural Conservation Areas. The primary roadway and four-lane road sections are provided in the event that the need for new or improved primary or four-lane roads is identified in the future. The local road sections are designed to be located within the collector road grid but are not displayed in the thoroughfare plan. These road types are more applicable for small area plans and subdivision development plans. A summary of the standards for all road types is provided in **Table 2**.

Table 2. Proposed Road Standards by Roadway Type

Roadway type	Design Speed	Number of Traffic Lanes	Traffic Lane Width	Median Width	Parking Lane Width
1. Two-lane urban collector roadway					
a. Commercial cross-section	25-35 mph	2	10-11'	n/a	8'
b. Residential cross-section	25-35 mph	2	10-11'	n/a	7'
2. Two-lane rural collector roadway	35-45 mph	2	11-12'	n/a	n/a
3. Four-lane urban collector roadway	25-35 mph	4	10-11'	11'	8'
4. Four-lane rural collector roadway	35-45 mph	4	11-12'	12'	n/a
5. Unstriped urban local roadway	25 mph	1+	14-16'	n/a	7'
6. Two-lane urban local roadway					
a. Residential cross-section	25 mph	2	10'	n/a	7'
b. Commercial cross-section	25 mph	2	10’	n/a	8’
7. Two-lane primary roadway	45 mph	2	12’	n/a	n/a
8. Four-lane primary roadway	45 mph	4	12’	12’	n/a

Roadway type	Bike Lane Width	Buffer Width	Sidewalk Width	Trail Width	Total ROW Width
1. Two-lane urban collector roadway					
a. Commercial cross-section	5’	n/a[1]	8-10’	n/a	62-68’
b. Residential cross-section	5’	6’	5’	n/a	66-68’
2. Two-lane rural collector roadway	n/a	6-10’	n/a	10’	54-64’
3. Four-lane urban collector roadway	5’	n/a[1]	8-10’	n/a	99-107’
4. Four-lane rural collector roadway	n/a	6-10’	n/a	10’	88-100’
5. Unstriped urban local roadway	n/a	6’	5’	n/a	50-52’
6. Two-lane urban local roadway					
a. Residential cross-section	n/a	6’	5’	n/a	56’
b. Commercial cross-section	n/a	n/a[1]	8-10’	n/a	52-56’
7. Two-lane primary roadway	n/a	10’	n/a[2]	10’	64’
8. Four-lane primary roadway	n/a	10’	n/a[2]	10’	100’

(1) If on-street parking is not provided, a buffer width of six feet is recommended.
(2) Where a multi-use trail is not provided, a sidewalk with a minimum width of 5’ should be provided.

Table 2. Proposed Road Standards by Roadway Type (Cont'd)

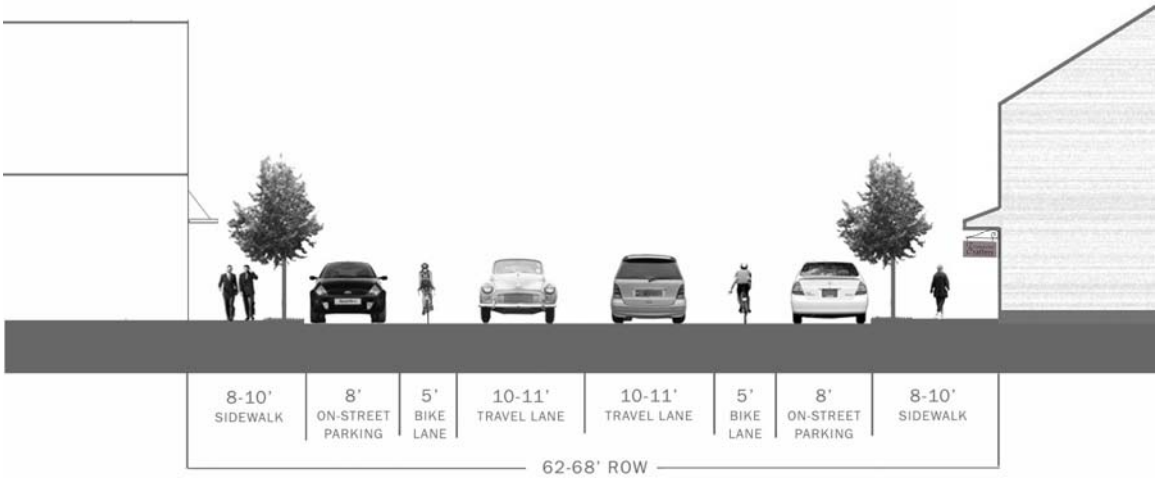
Roadway type	Daily capacity estimate[3]	Minimum driveway spacing	Minimum median opening spacing	Intersection spacing	Corner radius
1. Two-lane urban collector roadway					
a. Commercial cross-section	7,000	250'	n/a	300-600'	25-30'
b. Residential cross-section	7,000	250'	n/a	300-600'	25-30'
2. Two-lane rural collector roadway	8,000	n/a[4]	n/a	n/a	n/a
3. Four-lane urban collector roadway	16,400	250'	660'	300-600'	25-30'
4. Four-lane rural collector roadway	16,400	n/a[4]	n/a	n/a	n/a
5. Unstriped urban local roadway	2,800	n/a	n/a	300-600'	15-25'
6. Two-lane urban local roadway					
a. Residential cross-section	4,800	n/a	n/a	300-600'	15-25'
b. Commercial cross-section	4,800	n/a	n/a	300-600'	15-25'
7. Two-lane primary roadway	13,100	660'	1320'	> 660'	n/a
8. Four-lane primary roadway	32,800	660'	1320'	> 660'	n/a

(3) Daily capacity estimates are based on FDOT Generalized Level of Service Tables. Actual capacities will vary based on design speed, turn-lane design, traffic signal spacing, the presence of medians, etc.
(4) Although no spacing standards are provided for rural roads, direct access to collector roads is discouraged.

Additional detail on each roadway type is provided on the following pages:

1. Two-Lane Urban Collector Roadway

Commercial Cross-Section

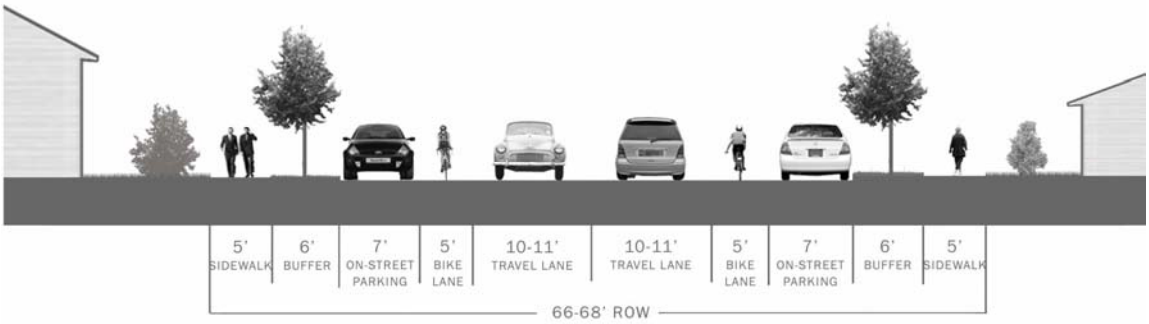


Within a commercial area, a two-lane urban road (with curb and gutter) serves the needs of customers and employees arriving by car, bike, and on foot, as well as providing for through traffic movement. This street type is designed for 25-35 mph traffic depending on whether the function of the road is intended more for local traffic or more for commuter traffic. A narrow lane width of 10 feet may be

appropriate for 25 mph local traffic, whereas a wider lane width of 11 feet is recommended for 35 mph commuter traffic. On-street parking can be provided in this cross-section to serve three functions: the provision of front-door parking access, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. A bike lane designed next to on-street parking should be a minimum of five feet in width to prevent parked car doors from opening unexpectedly on a cyclist. The sidewalk should be a minimum of eight feet in width although a sidewalk 10 feet in width is more appropriate where heavy pedestrian traffic is expected and/or buildings are designed to be located directly adjacent to the sidewalk. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be placed within a buffer between the edge of the curb and the sidewalk. These may be located in a grass buffer or in/on the sidewalk as long as a clear sidewalk width of six feet is provided where no objects are located.

Where on-street parking is not provided, a bike lane five feet in width is recommended as measured from the edge of the curb. A grass buffer of a minimum six feet in width is also recommended between the edge of the curb and the sidewalk for the placement of street trees or other pedestrian amenities.

Residential Cross-Section

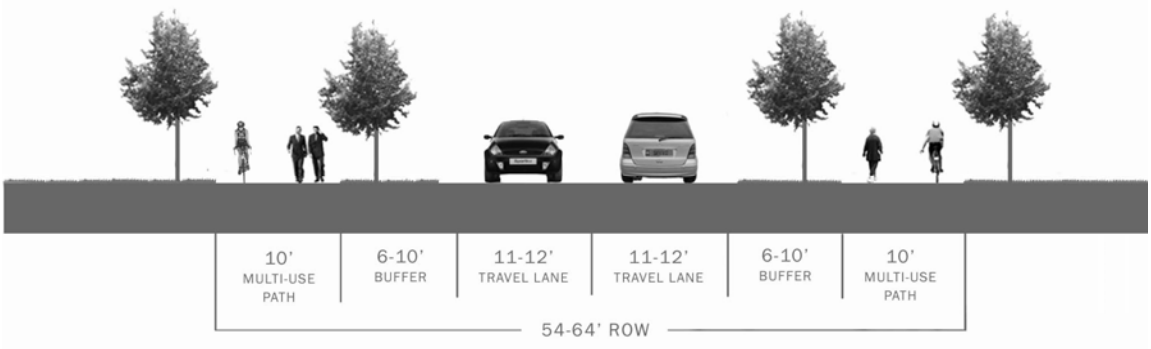


Within a residential area, a two-lane urban road (with curb and gutter) serves the needs of residents by car, bike, and on foot, as well as providing for through traffic movement. This street type is designed for 25-35 mph traffic depending on whether the function of the road is intended more for local traffic or more for commuter traffic. A narrow lane width of 10 feet may be appropriate for 25 mph local traffic, whereas a wider lane width of 11 feet is recommended for 35 mph commuter traffic. On-street parking can be provided in this cross-section to serve three functions: the provision of resident or visitor parking, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. A bike lane designed next to on-street parking should be a minimum of five feet in width to prevent parked car doors from opening unexpectedly on a cyclist. The sidewalk should be a minimum of five feet in width. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be

placed within a grass buffer of a minimum 6 feet in width between the edge of the curb and the sidewalk.

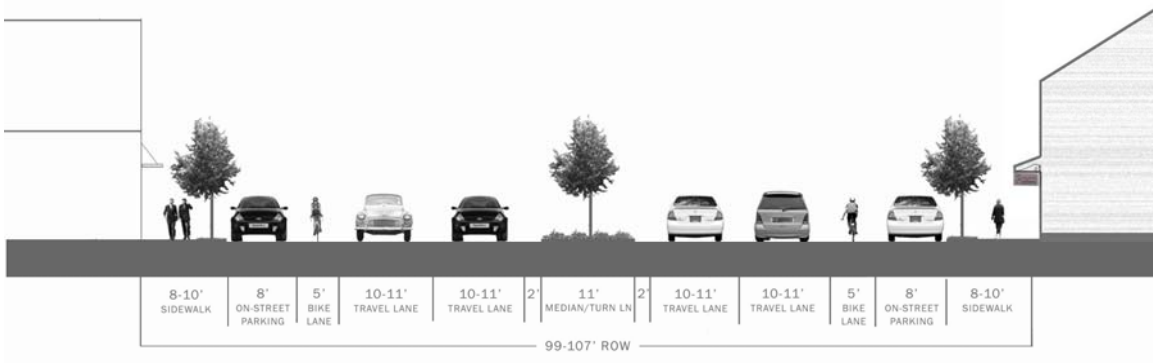
Where on-street parking is not provided, a bike lane five feet in width is recommended as measured from the edge of the curb. A grass buffer of a minimum six feet in width is also recommended between the edge of the curb and the sidewalk for the placement of street trees or other pedestrian amenities.

2. Two-Lane Rural Collector Roadway



Within a rural area, where the land along the corridor is largely undeveloped, an open roadway section without curb and gutter is recommended. This roadway type is designed for 35-45 mph traffic with a lane width ranging from 11-12 feet depending on the anticipated traffic volume and intended travel speed. In this context, cycling within the vehicular travel way is uncomfortable for all but the most experienced cyclists. It is not necessary or feasible to provide cycling facilities along every primary roadway, but where cycling facilities are desired or are identified in a local or regional bicycle plan, a multi-use trail 10 feet in width is recommended to be located six to 10 feet outside of the travel way to serve both cycling and pedestrian travel. Street trees and pedestrian-scaled lighting are encouraged to be placed within the grass buffer between the edge of the shoulder and the multi-use trail. Where agricultural traffic is anticipated, it is preferable to keep the buffer area clear from objects to allow large vehicles additional room to operate.

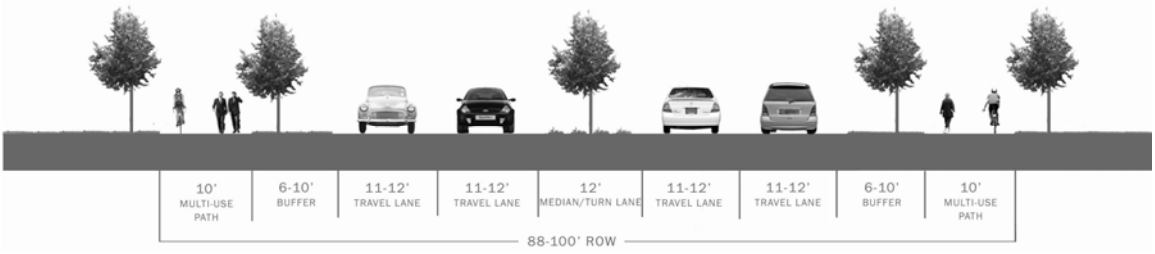
3. Four-Lane Urban Collector Roadway



Within a commercial area, a four-lane urban road (with curb and gutter) serves the needs of customers and employees arriving by car, bike, and on foot, as well as providing for through traffic movement. This street type is designed for 25-35 mph traffic depending on whether the function of the road is intended more for local traffic or more for commuter traffic. A narrow lane width of 10 feet may be appropriate for 25 mph local traffic, whereas a wider lane width of 11 feet is recommended for 35 mph commuter traffic. With four travel lanes, the inclusion of a raised median with turn lanes increases safety for vehicles through access management and for pedestrians by providing a refuge that allows crossing of only one direction of traffic at a time. A landscaped median also provides an aesthetically pleasing and traffic calming design to a corridor. On-street parking can be provided in this cross-section to serve three functions: the provision of front-door parking access, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. A bike lane designed next to on-street parking should be a minimum of five feet in width to prevent parked car doors from opening unexpectedly on a cyclist. The sidewalk should be a minimum of eight feet in width although a sidewalk 10 feet in width is more appropriate where heavy pedestrian traffic is expected and/or buildings are designed to be located directly adjacent to the sidewalk. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be placed within a buffer between the edge of the curb and the sidewalk. These may be located in a grass buffer or in/on the sidewalk as long as a clear sidewalk width of six feet is provided where no objects are located.

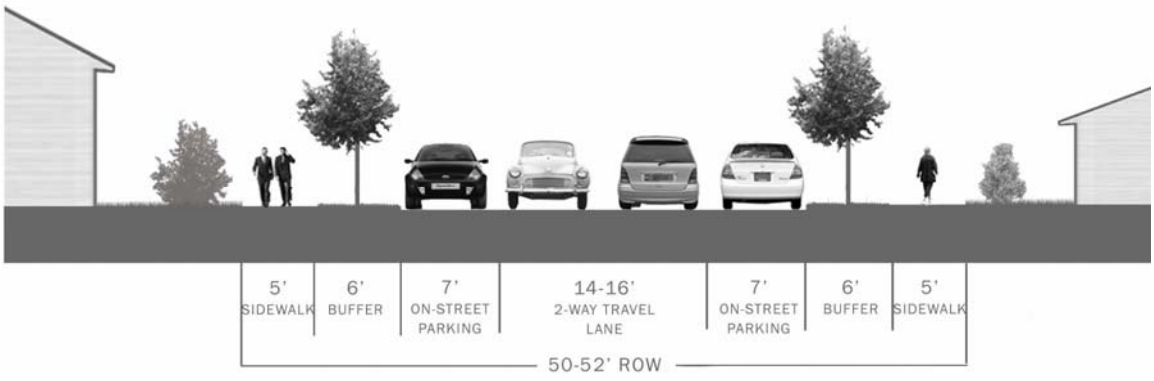
Where on-street parking is not provided, a bike lane five feet in width is recommended as measured from the edge of the curb. A grass buffer of a minimum six feet in width is also recommended between the edge of the curb and the sidewalk for the placement of street trees or other pedestrian amenities.

4. Four-Lane Rural Collector Roadway



Within a rural area, where the land along the corridor is largely undeveloped, an open roadway section without curb and gutter is recommended. This roadway type is designed for 35-45 mph traffic with a lane width ranging from 11-12 feet depending on the anticipated traffic volume and intended travel speed. With four travel lanes, the inclusion of a median with turn lanes increases safety for vehicles through access management and for pedestrians by providing a refuge that allows crossing of only one direction of traffic at a time. In this context, cycling within the vehicular travel way is uncomfortable and potentially unsafe for all but the most experienced cyclists. It is not necessary or feasible to provide cycling facilities along every primary roadway, but where cycling facilities are desired or are identified in a local or regional bicycle plan, a multi-use trail 10 feet in width is recommended to be located six to 10 feet outside of the travel way to serve both cycling and pedestrian travel. Street trees and pedestrian-scaled lighting are encouraged to be placed within the grass buffer between the edge of the shoulder and the multi-use trail. Where agricultural traffic is anticipated, it is preferable to keep the buffer area clear from objects to allow large vehicles additional room to operate.

5. Unstriped Urban Local Roadway

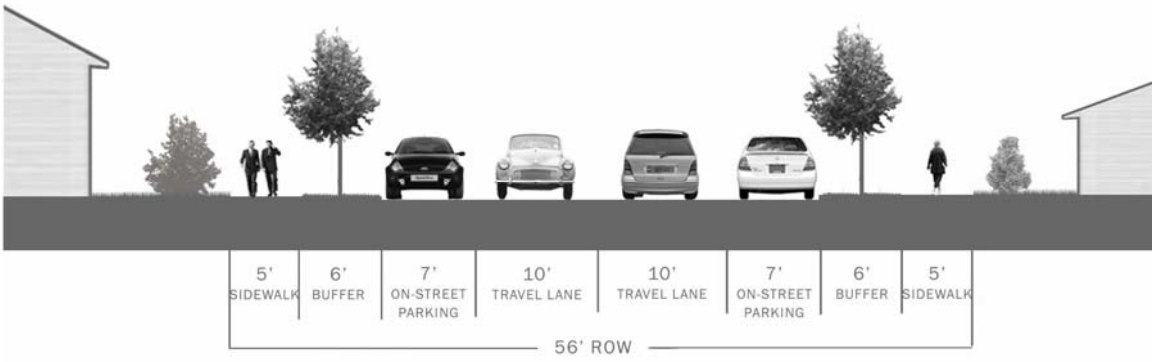


Within a residential area, an unstriped urban road (with curb and gutter) serves the needs of residents by car, bike, and on foot, as well as providing for a very low volume of through traffic movement; there is a strong emphasis on safety and low travel speeds. This street type is designed for 25 mph traffic with an unstriped travel way between 14 and 16 feet in width. This width allows for two-way

traffic to safely pass but only at very low travel speeds. On-street parking can be provided in this cross-section to serve three functions: the provision of resident or visitor parking, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. A bike lane of five feet in width can be provided, but the anticipated traffic speed and volume on this type of street is low enough to allow cyclists to safely travel within the vehicular travel way. The sidewalk should be a minimum of five feet in width. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be placed within a grass buffer of a minimum 6 feet in width between the edge of the curb and the sidewalk.

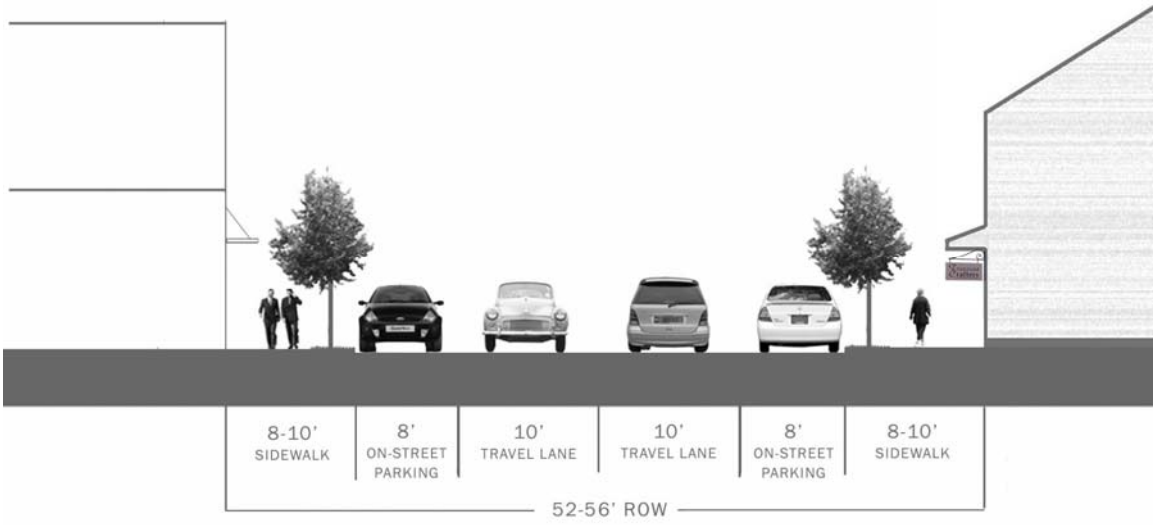
6. Two-Lane Urban Local Roadway

Residential Cross-Section



Within a residential area, a two-lane urban road (with curb and gutter) serves the needs of residents by car, bike, and on foot, as well as providing for a low volume of through traffic movement. This street type is designed for 25 mph traffic with a narrow lane width of 10 feet. On-street parking can be provided in this cross-section to serve three functions: the provision of resident or visitor parking, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. A bike lane of five feet in width can be provided, but the anticipated traffic speed and volume on this type of street is low enough to allow cyclists to safely travel within the vehicular travel way. The sidewalk should be a minimum of five feet in width. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be placed within a grass buffer of a minimum 6 feet in width between the edge of the curb and the sidewalk.

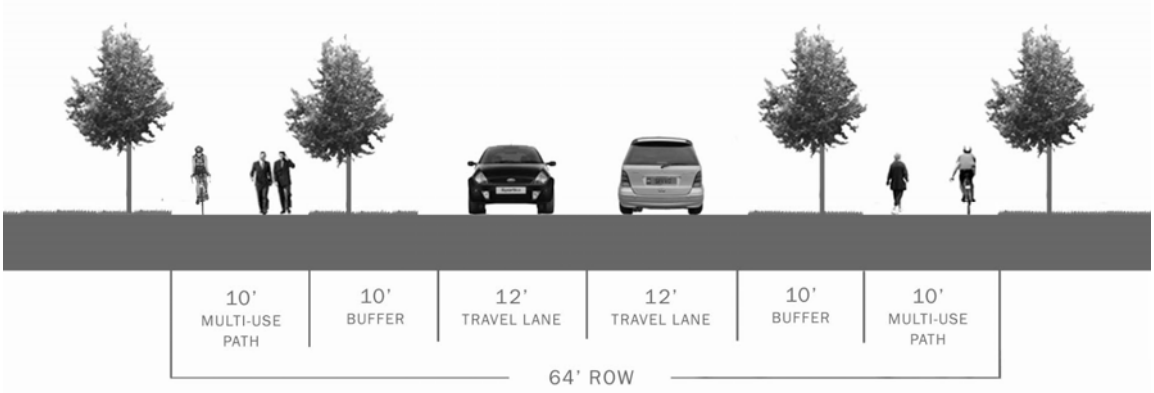
Commercial Cross-Section



This design may also be used within a commercial area, where a two-lane urban road (with curb and gutter) serves the needs of customers and employees arriving by car, bike, and on foot, as well as providing for minimal through traffic movement. This street type is designed for 25 mph traffic with a narrow lane width of 10 feet. On-street parking can be provided in this cross-section to serve three functions: the provision of front-door parking access, traffic calming for through traffic, and a protective barrier between pedestrians and vehicle traffic. The sidewalk should be a minimum of eight feet in width although a sidewalk 10 feet in width is more appropriate where heavy pedestrian traffic is expected and/or buildings are designed to be located directly adjacent to the sidewalk. Street trees, pedestrian-scaled lighting, benches, and other pedestrian amenities are encouraged to be placed within a buffer between the edge of the curb and the sidewalk. These may be located in a grass buffer or in/on the sidewalk as long as a clear sidewalk width of six feet is provided where no objects are located.

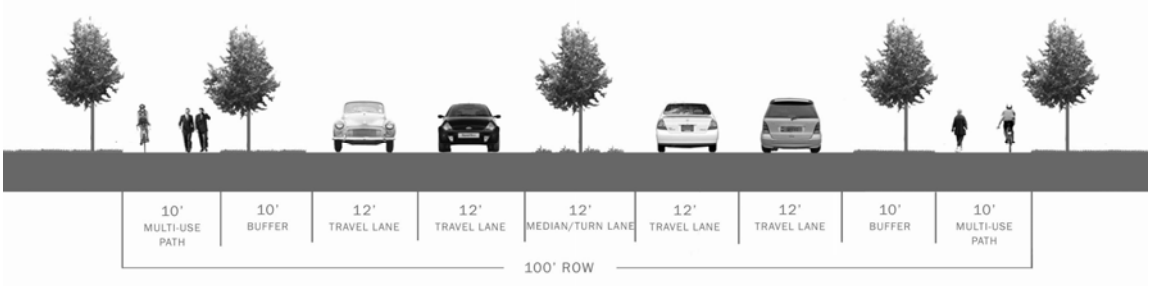
Where on-street parking is not provided, a bike lane five feet in width is recommended as measured from the edge of the curb. A grass buffer of a minimum six feet in width is also recommended between the edge of the curb and the sidewalk for the placement of street trees or other pedestrian amenities.

7. Two-Lane Primary Roadway



In an urban or a rural area, where development is set well back from the street or the land along the corridor is largely undeveloped, an open roadway section without curb and gutter is recommended and is demonstrated here, although a design with curb and gutter may also be appropriate. This roadway type is designed for 45 mph traffic (potentially 55 mph in a rural area) with a lane width of 12 feet. In this context, cycling within the vehicular travel way is uncomfortable for all but the most experienced cyclists. It is not necessary or feasible to provide cycling facilities along every primary roadway, but where cycling facilities are desired or are identified in a local or regional bicycle plan, a multi-use trail 10 feet in width is recommended to be located 10 feet outside of the travel way to serve both cycling and pedestrian travel. At a minimum in an urban area, a sidewalk five feet in width should be provided. Street trees and pedestrian-scaled lighting are encouraged to be placed within the grass buffer between the edge of the shoulder and the multi-use trail or sidewalk.

8. Four-Lane Primary Roadway



In an urban or a rural area, where development is set well back from the street or the land along the corridor is largely undeveloped, an open roadway section without curb and gutter is recommended and is demonstrated here, although a design with curb and gutter may also be appropriate. This roadway type is designed for 45 mph traffic (potentially 55 mph in a rural area) with a lane width of 12 feet. With four travel lanes, the inclusion of a median with turn lanes

increases safety for vehicles through access management and for pedestrians by providing a refuge that allows crossing of only one direction of traffic at a time. In this context, cycling within the vehicular travel way is uncomfortable for all but the most experienced cyclists. It is not necessary or feasible to provide cycling facilities along every primary roadway, but where cycling facilities are desired or are identified in a local or regional bicycle plan, a multi-use trail 10 feet in width is recommended to be located 10 feet outside of the travel way to serve both cycling and pedestrian travel. At a minimum in an urban area, a sidewalk five feet in width should be provided. Street trees and pedestrian-scaled lighting are encouraged to be placed within the grass buffer between the edge of the shoulder and the multi-use trail or sidewalk.

D. Sub-Area Thoroughfare Plans

Maps 2-6 display the Thoroughfare Plan recommendations for the following sub areas:

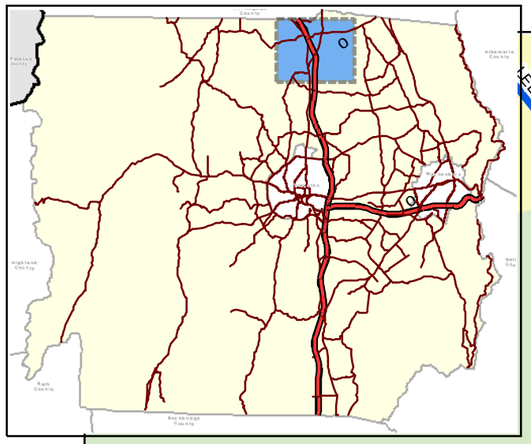
- **Map 2:** Weyers Cave and Mount Sidney
- **Map 3:** Verona
- **Map 4:** Fishersville
- **Map 5:** Stuarts Draft
- **Map 6:** Jolivue, Mint Spring, and Greenville

The following narrative describes the existing conditions and Thoroughfare Plan recommendations for each sub area:

1. Weyers Cave and Mount Sidney

The Weyers Cave and Mount Sidney sub area is projected to have failing roadway segments along Route 11 south of Route 646 and on Route 256 around the I-81 interchange. Currently, Route 11 serves as a major north-south travel corridor both as a reliever to I-81 and for local traffic movement, putting significant stress on this facility. The corridor is located within an Urban Service Area where continued development is expected in the future. The recommendation in **Map 2** demonstrates the development of a network of streets adjacent to Route 11 that would create parallel travel corridors to Route 11 and additional connections for local traffic to avoid the need for every trip to use Route 11. Route 11 is also recommended for a more detailed corridor study to identify potential spot improvements, intersection improvements, or access improvements that may increase the capacity through this corridor.

Access management improvements are also recommended on the Route 256 segment where the presence of the I-81 interchange will continue to put significant traffic pressure on this roadway. Additionally, a network that includes the recommendations from the Triangle Drive study is proposed in the Urban Service and Community Development Areas to the east of I-81. Turn lane



994 - DICES SPRING ROAD
LEE HIGHWAY
768 - DICES SPRING RD
7.73 - CAVE VIEW LN
847 - VALLEY CHURCH RD
256 - WEYERS CAVE RD
646 - FADLEY ROAD
201.1 - TRIANGLE DR
773 - WESTVIEW SCHOOL RD
771 - NEW AIRPORT RD
771 - AIRPORT RD
750 - KEEZLETOWN ROAD
11 - LEE HIGHWAY
748 - FLINT HILL RD
775 - BUTTERMILK RD
626 - SEAWRIGHT SPRING ROAD
626 - CIDER MILL ROAD
616 - FORT DEFIANCE RD

Legend

- Interstate
- Primary
- Secondary
- Railroads
- Airports
- Rivers and Streams
- Spot Improvements for Failing LOS in 2025
- Enhance Local to Urban Secondary, 2 lane
- Enhance Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Conceptual Grid (approx. 1 mile)
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

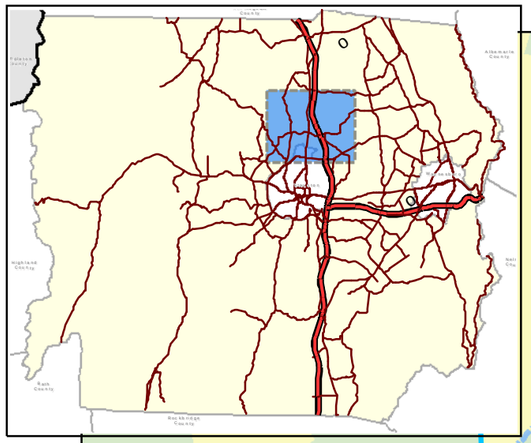
NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans.

0 0.5 1 Miles

Thoroughfare Plan
Map 2
Weyers Cave, Mount Sidney Sub Area Analysis

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP



616 - DAM TOWN ROAD

11 - LEE HIGHWAY

11 - LEE HIGHWAY

81

626 - LIMESTONE ROAD

612 - LAUREL HILL ROAD

612 - QUICKS MILL ROAD

612 - LAUREL HILL RD

792 - INDIAN MOUND ROAD

792 - WEST AMBER RD

613 - SPRING HILL ROAD

626 - BERRY FARM ROAD

81

790 - LEWIS CREEK RD

789 - PLEASANT GROVE RD

254 - HERMITAGE ROAD

792 - BALSLEY RD

262 - WOODROW WILSON PARKWAY

Legend

- Interstate
- Primary
- Secondary
- Railroads
- Rivers and Streams
- Spot Improvements for Failing LOS in 2025
- Enhance Local to Urban Secondary, 2 lane
- Enhance Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Conceptual Grid (approx. 1 mile)
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

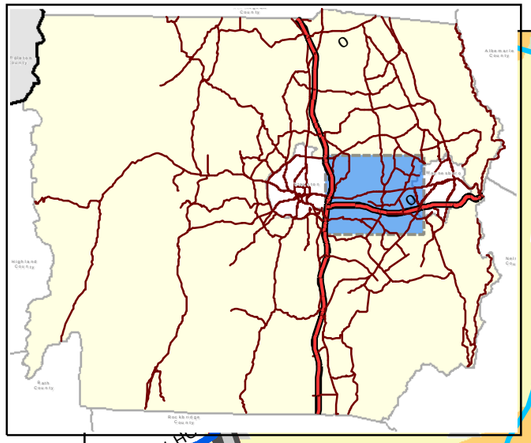
NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans.

0 0.5 1 Miles

Thoroughfare Plan
Map 3
Verona
Sub Area Analysis

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP



Legend

- Interstate
- Primary
- Secondary
- Railroads
- Airports
- Rivers and Streams
- Spot Improvements for Failing LOS in 2025
- Enhance Local to Urban Secondary, 2 lane
- Enhanced Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Conceptual Grid (approx. 1 mile)
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

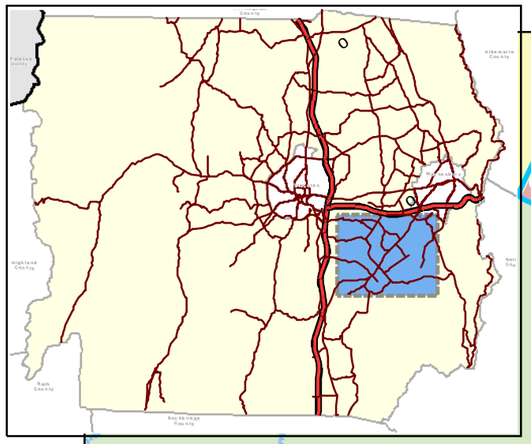
NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans. Some elements of the Stuarts Draft sub area analysis appear on this map.

0 0.5 1 Miles

Thoroughfare Plan
Map 4
Fishersville
Sub Area Analysis

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP



635 - RAMSEY ROAD
637 - BARTERBROOK ROAD
631 - LADD ROAD
635 - KINDIG ROAD
632 - SHALOM RD
624 - MOUN
643 - AUGUSTA FARMS ROAD
340 - STUARTS DRAFT HIGHWAY
970 - HALL SCHOOL RD
624 - LYNDHURST ROAD
635 - MOUNT VERNON ROAD
971 - LIPSCOMB RD
634 - PATTON FARM RD
639 - WAYNE AVENUE
639 - PATTON FARM RD
634 - CHINA CLAY RD
610 - HOWARDSVILLE TURNPIKE
648 - CHRISTIANS CREEK ROAD
649 - ROUNDHILL DR
608 - TINKLING SPRING ROAD
654 - WHITE HILL ROAD
653 - TWIN HILL RD
831 - OLD WHITE HILL RD
652 - GUTHRIE RD
909 - JOHNSON DRIVE
340 - STUARTS DRAFT HIGHWAY
657 - INDIAN RIDGE ROAD
608 - COLD SPRINGS ROAD
612 - HORSESHOE CIR

Legend

- Interstate
- Primary
- Secondary
- Railroads
- Rivers and Streams
- Spot Improvements for Failing LOS in 2025
- Enhance Local to Urban Secondary, 2 lane
- Enhanced Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Conceptual Grid (approx 1 mile)
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

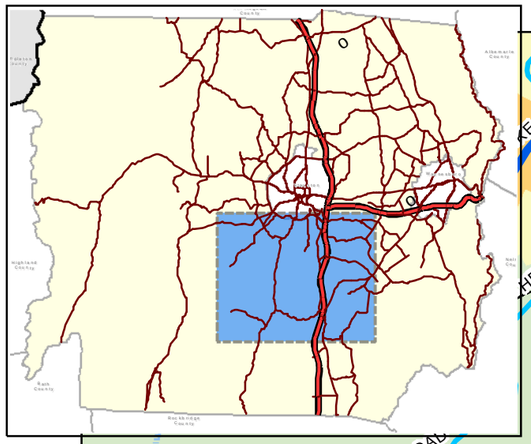
NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans.

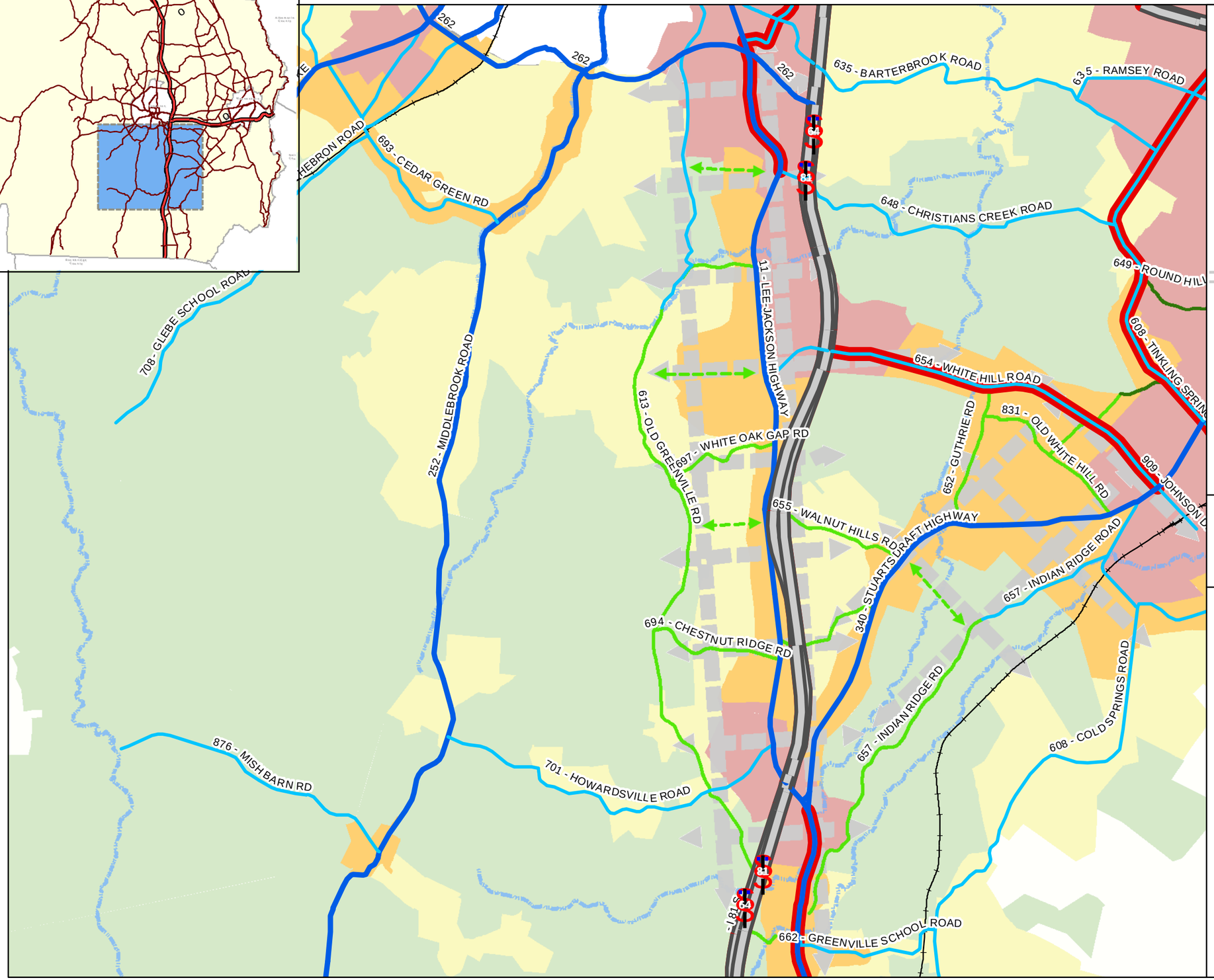
0 0.5 1 Miles

Thoroughfare Plan
Map 5
Stuarts Draft
Sub Area Analysis

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP





Legend

- Interstate
- Primary
- Secondary
- Railroads
- Rivers and Streams
- Spot Improvements for Failing LOS in 2025
- Enhance Local to Urban Secondary, 2 lane
- Enhance Local to Rural Secondary, 2 lane
- Proposed Urban Secondary, 2 lane
- Proposed Rural Secondary, 2 lane
- Conceptual Grid (approx. 1 mile)
- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

NOTE: This map depicts a conceptual future roadway framework as part of the overall County Thoroughfare Plan. It generally shows existing roadways (except for local roads), a conceptual grid of ideal roadway spacing (approximately one mile spacing) and potential future roadway connections. It should be noted that all potential connections shown are also conceptual in nature and are not intended to represent actual proposals for roadway alignments. The need for future roads and potential alignments should be confirmed with more detailed area-specific plans.

0 0.5 1 Miles

Thoroughfare Plan
Map 6
Jolivue, Mint Spring, Greenville
Sub Area Analysis

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP

improvements at the intersection of Routes 256 and 276 are included in the 2007 VDOT Six Year Improvement Program (SYIP). Both network proposals rely on a combination of upgrading existing roadways that already provide key connections, albeit below a collector roadway standard, and on new street connections that will be constructed as development necessitates.

2. Verona

The Verona sub area is projected to have failing roadway segments along Route 11 north of Route 612, on two segments of Route 612 on either side of I-81, and on Route 254 near the Staunton boundary. Currently, Route 11 serves as a major north-south travel corridor both as a reliever to I-81 and for local traffic movement, putting significant stress on this facility. The corridor is located within an Urban Service Area where continued development is expected in the future. The recommendation in **Map 3** demonstrates the development of a network of streets adjacent to Route 11 that would create a parallel travel corridor to Route 11 and additional connections for local traffic to avoid the need for every trip to use Route 11. Route 11 is also recommended for a more detailed corridor studying to identify potential spot improvements, intersection improvements, or access improvements that may increase the capacity through this corridor. Turn lane improvements on Route 11 south of Route 616 are included in the 2007 VDOT SYIP.

Within Verona and to the east of I-81, additional network connections are recommended throughout the Urban Service and Community Development Areas. This network proposal relies mainly on new street connections that will be constructed as development necessitates, although a few existing local roads that currently do not meet VDOT's secondary road standards are recommended for upgrades to bring them into the secondary road network.

3. Fishersville

The Fishersville sub area currently has a failing roadway segment on Route 285 between Route 250 and I-64 and is projected to have additional failing roadway segments on Route 608 north of Route 250 and on portions of Route 608 and 631 addressed in the Stuarts Draft sub area. Route 285 experiences significant congestion due to the presence of the I-64 interchange and the fact that this roadway is the only major direct connector between Stuarts Draft and Fishersville. Access management improvements are recommended on the Route 285 and 608 segments within the I-64 interchange area as well as improvements to the design of the interchange itself. An additional connection south from the intersection of Routes 834 and 631 would also provide a parallel route for travel between Stuarts Draft and Fishersville. The Route 608 study recommends spot improvements for both Routes 608 and 285. One significant recommendation is to realign the intersection of Routes 285, 608, and 250 to improve the current offset intersection.

The remainder of the network recommendations for the Fishersville sub area relies on a combination of upgrading existing roadways that already provide key connections, albeit below a collector roadway standard, and on new street connections that will be constructed as development necessitates, and includes the Route 636 extension proposed in the 636/640 Corridor Study. There is also a recommendation to upgrade the local segment of Route 636 and to provide an additional crossing of the railroad to develop a road network in the Urban Service Area south of Route 250. North of Route 250, an upgraded Sangers Lane may provide another key east-west corridor, although ideally an east-west collector would be located closer to Route 250.

4. Stuarts Draft

The Stuarts Draft sub area currently has a failing roadway segment on Route 608 between Route 340 and Route 610 and is projected to have failing roadway segments along the entire length of Routes 608 and 654, and on segments of Routes 631, 635 (Mt. Vernon Road), and 649 adjacent to Route 340. Spot improvements have already been recommended for Route 608 that need to be implemented where feasible. Spot improvements are also recommended rather than developing a street network for Route 654, which runs mainly through a small strip of Community Development Area surrounded by Agricultural Conservation Area. Throughout the remainder of the Urban Service and Community Development Areas, a network of streets is proposed to help relieve the projected congested corridors. Extending Route 909 and upgrading Route 634, as a part of the overall network concept, are recommended to relieve the congested segment of Route 608 through downtown Stuarts Draft. Additional parallel roads with rail and river crossings are recommended as well, although the cost of these proposed crossings will make them less feasible to implement.

The network proposal relies on a combination of upgrading existing roadways that already provide key connections, albeit below a collector roadway standard, and on new street connections that will be constructed as development necessitates.

5. Jolivue, Mint Spring, and Greenville

The Jolivue, Mint Spring, and Greenville sub area is projected to have failing roadway segments along Route 11 north of Route 648 and south of Route 340, and on segments of Routes 654 and 608 addressed in the Stuarts Draft sub area. Currently, Route 11 serves as a major north-south travel corridor both as a reliever to I-81 and for local traffic movement, putting significant stress on this facility. The corridor is located within an Urban Service and Community Development Area where continued development is expected in the future. The recommendation in **Map 6** demonstrates the development of a network of streets adjacent to Route 11 that would create a parallel travel corridor to Route 11 and additional connections for local traffic to avoid the need for every trip to use Route 11. Route 11 is also recommended for a more detailed corridor study to identify potential spot improvements, intersection improvements, or access

improvements that may increase the capacity through this corridor. One particular location where improvement is needed is at the intersection of Route 340 with Route 11. Both roads carry significant traffic volumes and the current intersection design is problematic both for traffic operations and for safety.

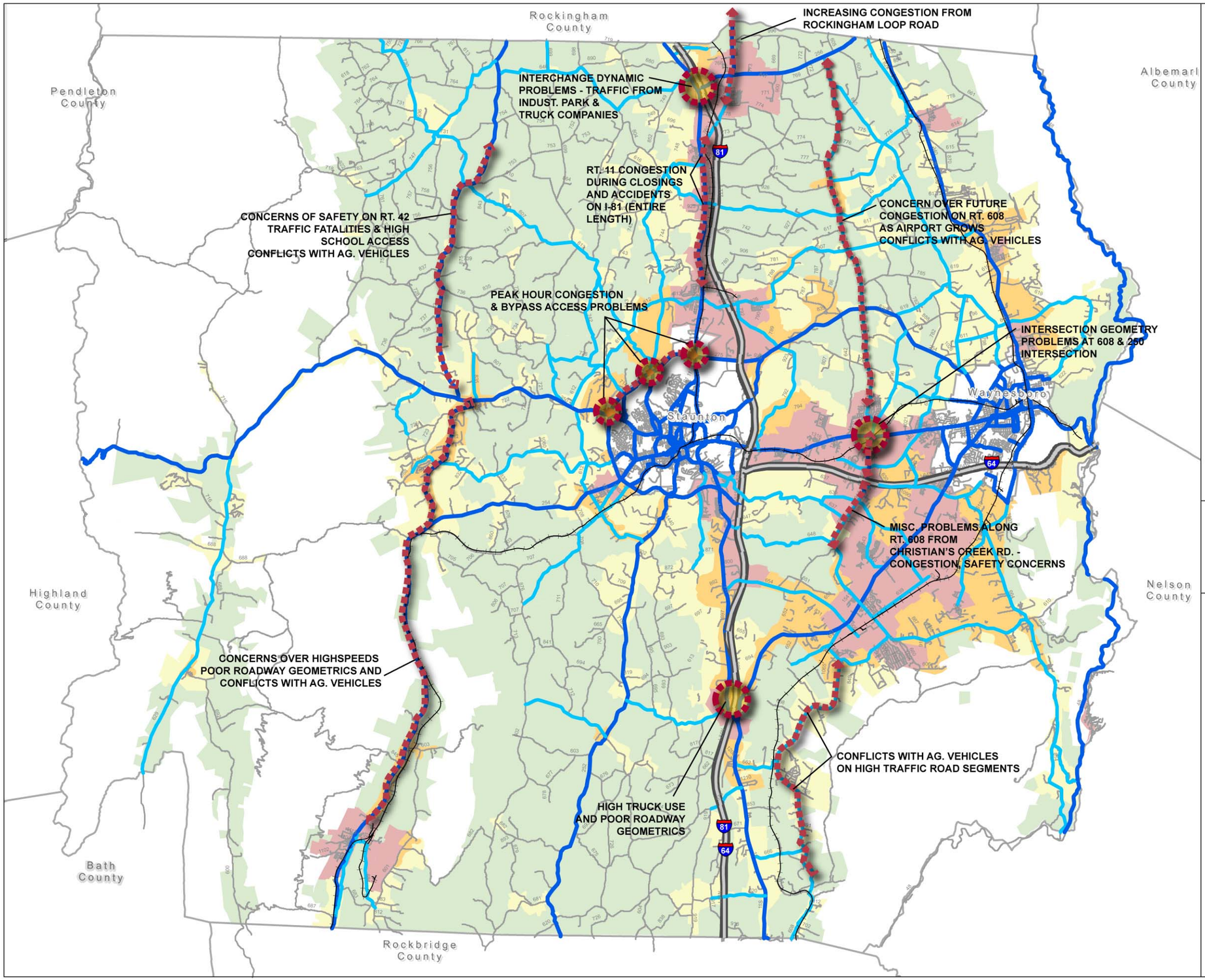
East of I-81, a few additional network connections are recommended, mostly relying on upgrading existing roadways that already provide key connections, albeit below a collector roadway standard.

E. Existing Safety/Capacity Issues Maps

The Comprehensive Plan Steering Committee also identified primary roadway safety and capacity issues in the county. **Map 7** shows the primary areas of concern on the countywide road network. In general, several types of concerns were noted:

- Roads or road segments that had high speed combined with poor geometrics (horizontal or vertical road alignments) that contributed to a perceived or real safety issue. These included portions of Routes 42 and the Route 608 and 250 intersection and Greenville Interchange at I-81.
- Existing or anticipated problems with traffic congestion, such as on portions of Route 608 and the Route 262 (old Route 275) Bypass intersections north and west of Staunton.
- Periodic congestion on Route 11, which serves as the designated "overflow" route during emergency diversions from I-81.

The information provided by the Steering Committee provides an important "on the ground" qualitative supplement to the existing and projected traffic conditions resulting from the quantitative analysis. Additionally, VDOT has identified road segments with high crash rates as part of the Central Shenandoah Long Range Transportation Plan, shown in **Map 8**. All of these information sources should be used by the county in determining priorities for more detailed studies and improvement plans for roadways, especially in prioritizing the subsequent corridor studies and small area plans that are recommended in the Comprehensive Plan policies.



Legend

Issue areas identified by Steering Commitee

Planning Policy Areas

- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

Existing Thoroughfare System

- Interstate
- Primary
- Secondary
- Local Roads
- Railroads-Augusta

Boundaries

- Augusta County
- West Virginia

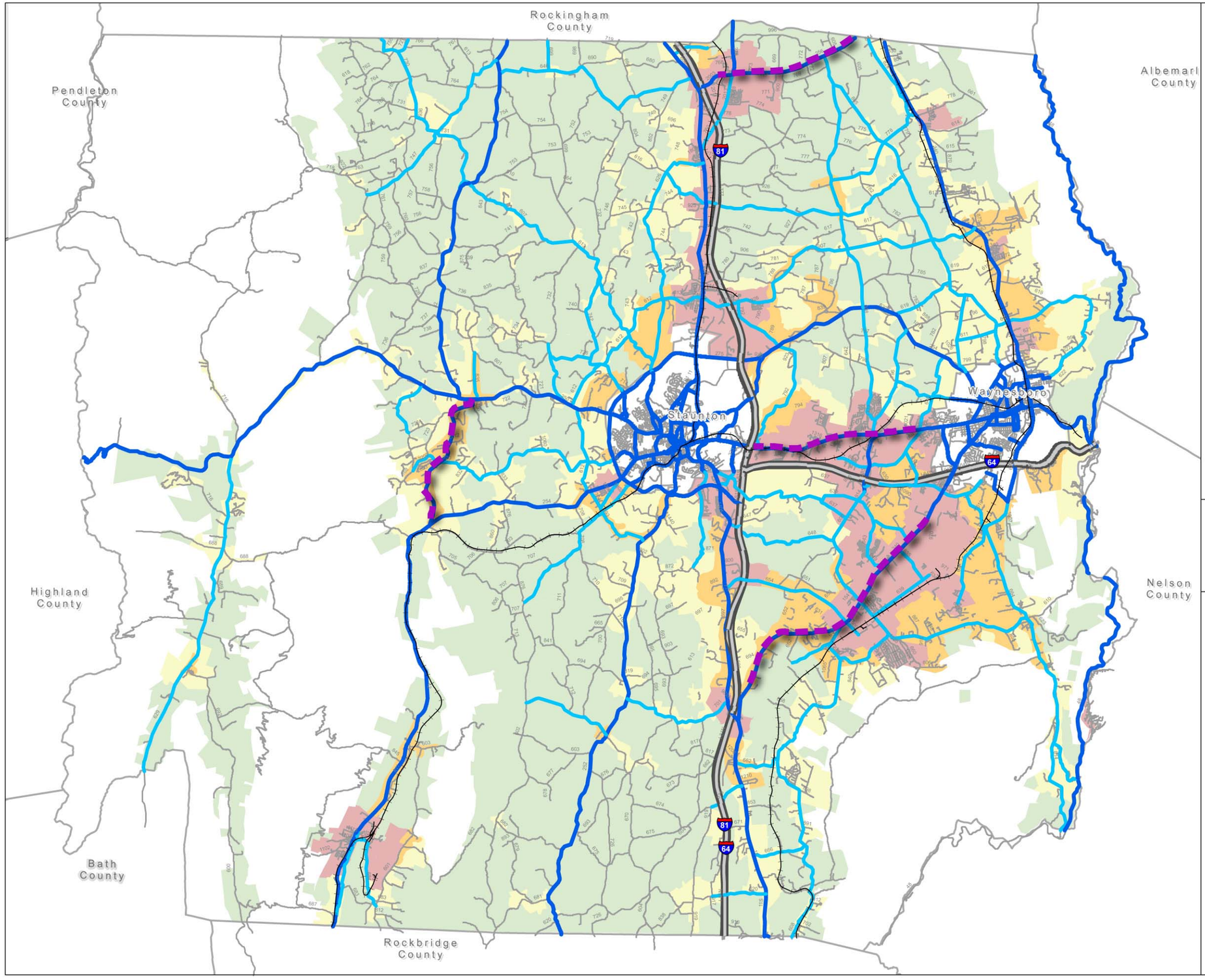
0 1 2 3 4 5 Miles

N

Thoroughfare Plan
Map 7
Safety and Capacity Concerns
from Steering Committee Meeting
October 19, 2006

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP



Legend

High crash rate road segment (Source: VDOT, LRTP. Note: Data were available only for Primary and Secondary Roads, not Interstates.)

Planning Policy Areas

- Urban Service Area
- Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area

Existing Thoroughfare System

- Interstate
- Primary
- Secondary
- Local Roads
- Railroads-Augusta

Boundaries

- Augusta County
- West Virginia

0 1 2 3 4 5 Miles

Thoroughfare Plan
Map 8
High Crash Road Segments
Identified by VDOT in the
Central Shenandoah
Long Range Transportation Plan

Augusta County
Comprehensive Plan
2007-2027

RENAISSANCE PLANNING GROUP