



SAWMPO Bicycle and Pedestrian Regional Connectivity Study

April 2022



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Waynesboro**
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Organization

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Bicycle and Pedestrian Regional Connectivity Study

Title

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Report Date: April 2022

This report was prepared by the Staunton-Augusta-Waynesboro Metropolitan Planning Organization (SAWMPO) through a cooperative process involving the Cities of Staunton and Waynesboro, Augusta County, the Virginia Department of Transportation, and the Virginia Department of Rail and Public Transportation.

The preparation of this work program was financially aided through grants from the Federal Highway Administration, Federal Transit Administration, Virginia Department of Transportation, Virginia Department of Rail and Public Transportation, and the three localities comprising the SAWMPO. Administrative support and technical assistance was provided by the Central Shenandoah Planning District Commission.

Bicycle and Pedestrian Regional Connectivity Study

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Bicycle and Pedestrian Regional Connectivity Study

1. BACKGROUND

The City of Staunton, Augusta County, and the City of Waynesboro each have bicycle and pedestrian plans identifying non-motorized infrastructure improvements, and each locality has made progress expanding their network of non-motorized facilities, yet the SAWMPO lacks information for connecting these networks across the region.

This study identifies regional bicycle and pedestrian connectivity gaps between existing, funded, and proposed non-motorized facilities in Staunton, Augusta County, and Waynesboro, and suggests potential corridors and facilities to create a connected regional network. The Study focuses on the connectivity gaps in Augusta County, which is the critical connection point between both cities.

A Study Group guided the planning process and included planning staff from each locality, Augusta County Parks and Recreation, Waynesboro Parks and Recreation, the SAWMPO, VDOT, the Shenandoah Valley Bicycle Coalition, and the Augusta Cycling Club. The Study Group met on August 11 and December 3, 2021.

Purpose

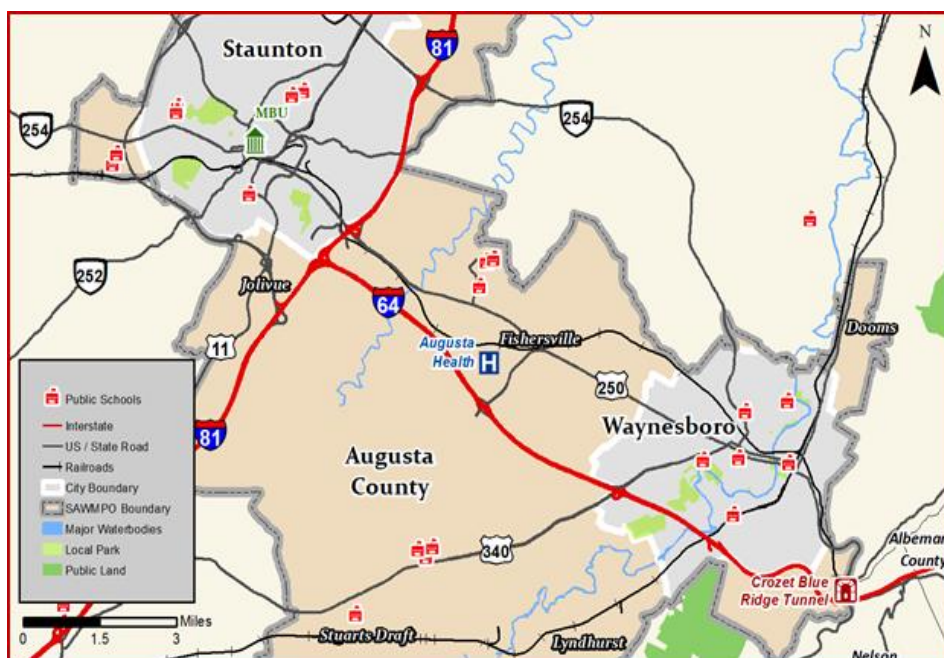
Each locality in the MPO area has identified the need for non-motorized facilities to address mobility choice, reduce traffic congestion, promote economic development, and enhance quality of life. The analysis identifies connectivity gaps based on existing, funded, and proposed non-motorized projects to assist with establishing a continuous bicycle and pedestrian network between Staunton, Augusta County, and Waynesboro. This analysis is intended to:

- Facilitate a regional vision for a connected non-motorized network between each locality;
- Assist localities in identifying and prioritizing future non-motorized projects; and,
- Establish a baseline for more in-depth studies.

Study Area

The study area is an east-west corridor paralleling Interstate-64 and U.S. 250 from Staunton through Augusta County to Waynesboro in the SAWMPO area, and also includes the area north of the MPO boundary extending to Hermitage Road (Route 254), and south near Stuarts Draft along U.S. 340 (see **Map 1**). There are two areas defined for planning purposes: north of I-64, and south of I-64.

Map 1. General Study Area



2. GAP IDENTIFICATION

This section identifies the on-road non-motorized facility gaps in relation to existing, funded, and proposed facilities between Staunton, Augusta County, and Waynesboro to assist with identifying the preferred corridors for future projects. MPO staff reviewed regional plans, VDOT's Six Year Improvement Program (SYIP), and coordinated with the Study Group to create an inventory of the existing, funded, and proposed non-motorized projects.

The gap identification considers connection points, interstate crossing points, and three segment gap types in relation to existing and funded projects, proposed projects and the following site characteristics: connection to existing/funded infrastructure, system/corridor connections, segment length, functional classification, pavement width, speed, traffic volume, parcel density, slope, and site constraints. Parcel density divides the number of parcels along a segment by the segment length. Slope percentage identifies the biggest elevation change along a segment.

Defining Non-Motorized Gaps

Less than three percent of roads in Augusta County have non-motorized facilities, compared to 28 percent in Staunton, and 22 percent in Waynesboro. Non-motorized gaps range from shorter "missing links" on a specific road, to larger geographic areas. Gaps are organized based on length and other characteristics and are classified into three categories. **Figure 1** represents each gap type.

System gaps

System gaps are defined as segments where no on-road facilities exist that are generally east-west, longer than three miles, and connect to a larger geographic area. System gaps exist where a minimum of two intersecting facilities would be required to achieve connectivity. These segments are required to establish a continuous east-west connection.

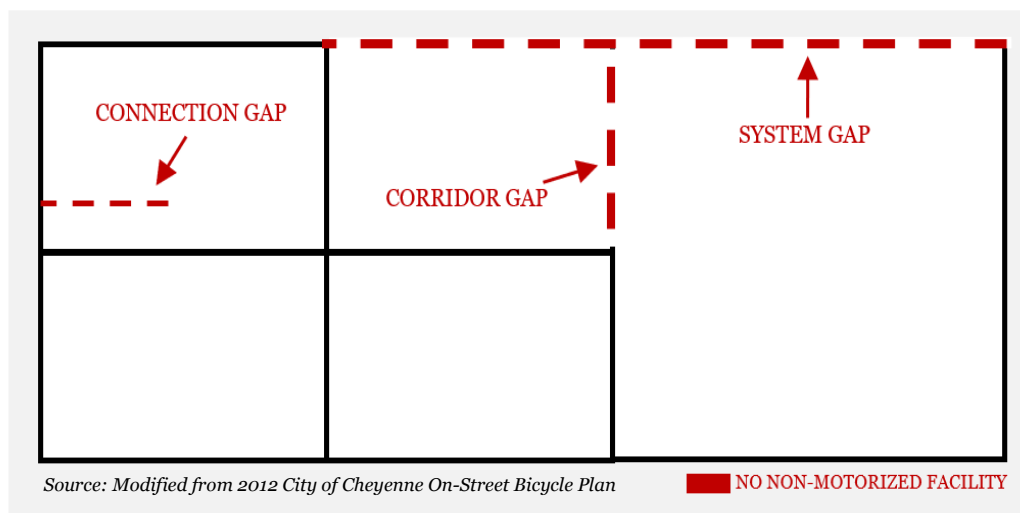
Corridor gaps

Corridor gaps are segments less than three miles long that would provide a connection either between existing infrastructure and a system gap, or two different system gaps. These segments typically provide a north-south connection between system gaps.

Connection gaps

Connection gaps are missing segments one-quarter mile or less that do not connect to more than one roadway.

Figure 1. Non-motorized gap types



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Gap Identification: Connection Points

Connection points were determined by identifying the nearest existing and funded facilities between each locality along the 11.8-mile distance between downtown Staunton and downtown Waynesboro (see **Map 1**). All but two connection points are located north of I-64. Connection points in the study area are below.

Staunton

- Existing sidewalk at the intersection of Greenville Avenue and Barterbrook Road
- Existing sidewalk and funded shared use path near Richmond Road and Crossing Way
- Funded shared use path on Commerce Road and New Hope Road
- Funded Crossing Way Extension on Crossing Way to Valley Center Drive
- Existing sidewalk and funded sidewalk on North Augusta Street

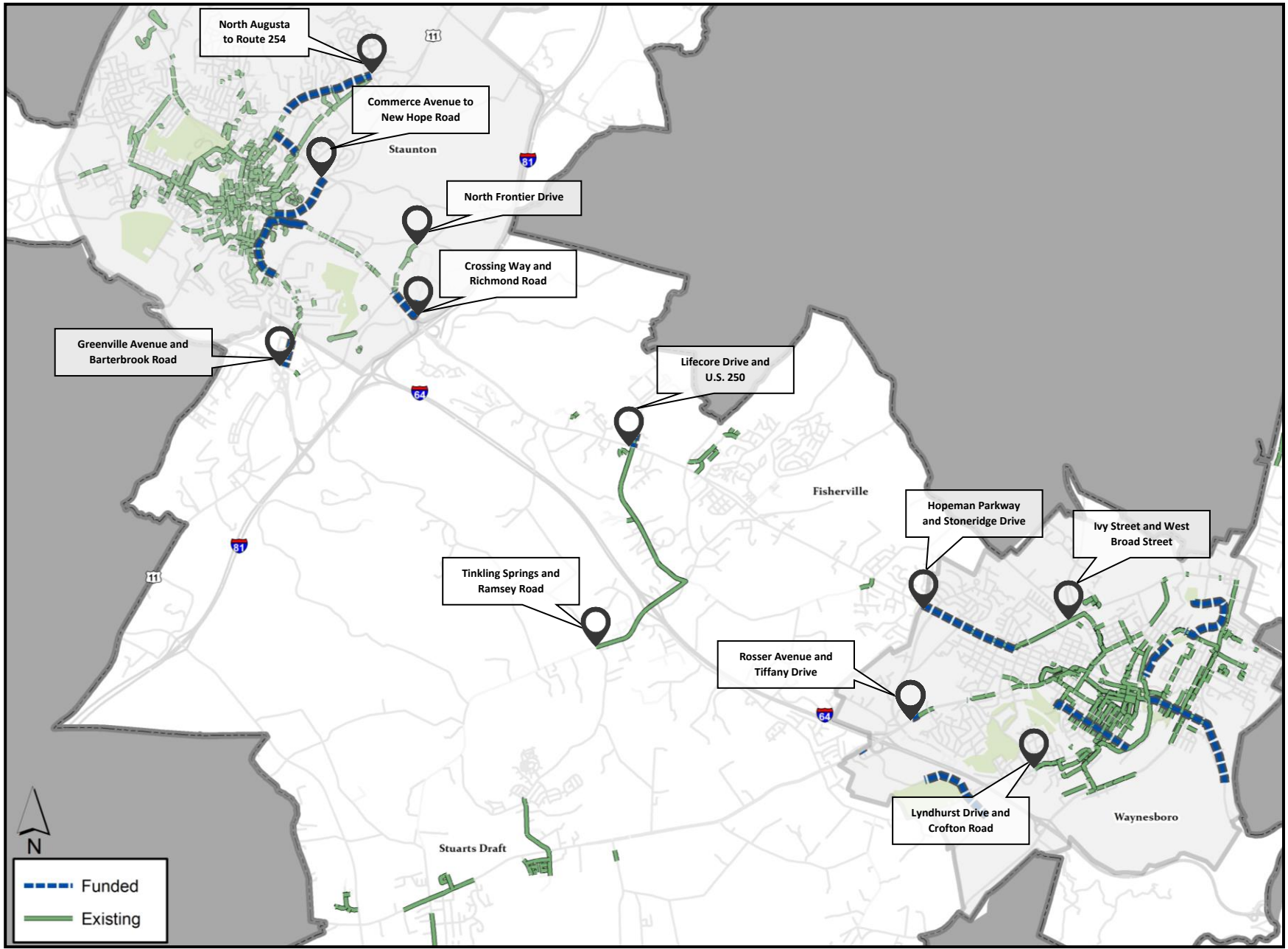
Augusta County

- Funded sidewalk near the Staunton City Limits along Greenville Avenue from the existing sidewalk to Frontier Drive
- Lifecore Drive shared use path at U.S. 250 to the intersection of Tinkling Springs Road
- Tinkling Springs Road shared use path from the intersection of Lifecore Drive to Ivy Ridge Lane, with eventual endpoint at Ramsey Road.

Waynesboro

- Funded sidewalk along West Main Street from Hopeman Parkway to Stoneridge Drive
- Existing infrastructure at the intersection of Hopeman Parkway and Ivy Road
- Funded and existing sidewalk along Rosser Avenue near Tiffany Drive
- Existing sidewalk along Lyndhurst Road at Crofton Road

Map 1. Connection Points in Relation to Existing and Funded Facilities



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Gap Identification: Interstate Crossing Points

Six roads cross I-81 (see **Figure 2**), and two roads cross I-64 at Jericho Road and Lyndhurst Road. At least one of these points must be crossed to establish a continuous east-west on-road connection. The crossings with the largest shoulders are along Woodrow Wilson Parkway (VA 262) and Richmond Road (U.S. 250), with each road having approximately a seven-foot shoulder on each side; however, both crossings have the highest traffic volume in the study area. New Hope Road has a four-foot shoulder, as well as a four-foot sidewalk along the north side of the bridge.

The other interstate crossings have minimal shoulder width, especially along Barterbrook Road, which does not appear to have any shoulder area. However, the Barterbrook Road bridge is scheduled to be rebuilt for I-81 widening, and will have two 12-foot driving lanes and 6-foot paved shoulders on both sides of the bridge.

Figure 2. I-81 Interstate Crossings in the Study Area
(Note: I-64 Crossings at Jericho Road and Lyndhurst Road not shown)

Woodrow Wilson Parkway



Richmond Road



New Hope Road



Barterbrook Road



Christians Creek Road



Whitehill Road



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Gap Identification: On-Road Facilities

System Gaps

Eleven system gaps were identified in the study area north and south of I-64 in relation to existing and funded facilities (see **Table 1** and **Map 2**). Most system gaps are major collectors or minor arterial roadways, average approximately five connections to smaller roads, and are about six miles long. Average traffic volume (see **Appendix A**) is similar for areas both north and south of the interstate, but south of I-64 there is less parcel density along each segment. The most significant slope considerations are along U.S. 250 just east of the I-81 interchange at Exit 222, and northbound along Sangers Lane Road. A part of Sangers Lane Road is unpaved, which is likely why this system gap has the lowest overall traffic volume.

Table 1. System Gaps

System Gap Segment	Connections	Length	Functional Classification	Pavement Width	Speed Limit	Traffic Volume	Parcel Density	Slope
North of I-64								
New Hope Road (from Commerce Road to Hermitage Road)	3	5.0	Major Collector	19	55	1,200	17.6	1%
Sangers Lane Road (from U.S. 250 to Barrenridge Road)	4	4.8	Local	20	35	330	18.3	7%
U.S. 250 (from Richmond Road and Crossing Way to Stoneridge Drive)	8	7.1	Minor Arterial	55 - 65	45	18,000	77.5	7%
Woodrow Wilson/ Hermitage Road (from Route 11 to Hopeman Parkway) ¹	9	11.8	Principal Arterial; Minor Arterial	27	55	12,000; 4,800	13.9	Less than 1%
Saint James Road (from Hermitage Road to Gilford Lane and Ivy Street)	6	7.4	Minor Collector	16	55	690	19.5	Less than 1%
South of I-64								
Barterbrook Road (from Greenville Avenue to Ramsey Road and Tinkling Springs Road)	4	5.5	Minor Collector	16	45	870	23.3	3.3%
Christians Creek Road (from Route 11 to Tinkling Springs Road)	2	4.1	Minor Collector	26	55	1,300	10.7	1.1%
Ladd Road/Lyndhurst Road (from Tinkling Springs Road to Circular Court)	4	4.0	Major Collector	20	45	2,700	41.5	Less than 1%
Tinkling Springs Road (from Ivy Ridge Lane to U.S. 340)	10	4.4	Minor Arterial	20	45 - 55	NA	25.7	4.4%
U.S. 340 (from western MPO boundary to Rosser Avenue)	6	7.4	Minor Arterial	24	45 - 55	16,000	28.2	Less than 1%
White Hill Road (from Greenville Avenue to U.S. 340)	5	4.7	Major Collector	24	45	6,600	18.7	4.3%

¹ Note: Woodrow Wilson (Route 262) and Hermitage Road (Route 254) were combined as one continuous roadway. The main difference is a significant difference in traffic volume on Woodrow Wilson; however, other roadway characteristics are similar.

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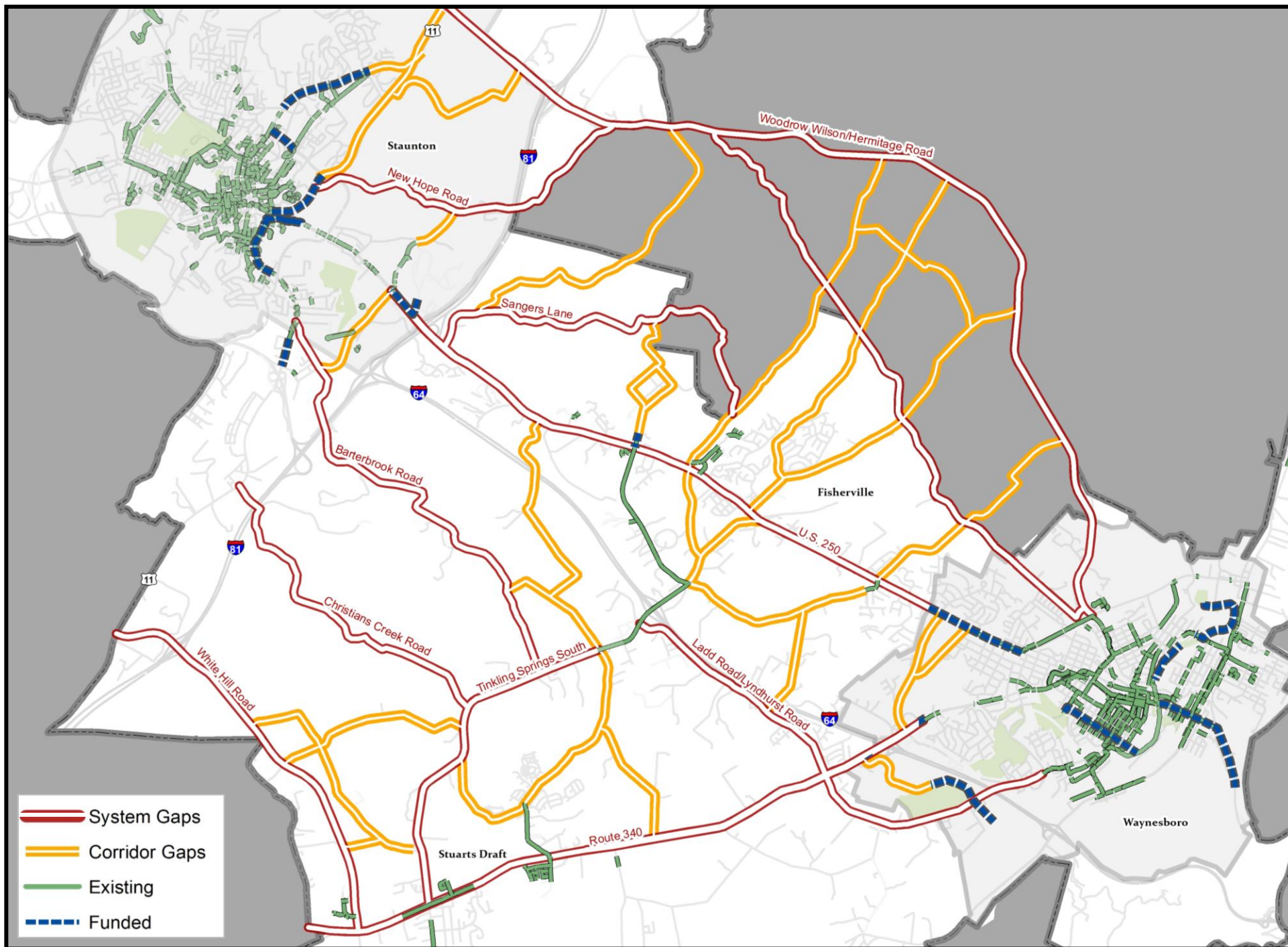
Corridor Gaps

There are total of 29 corridor gaps, with 18 gaps north of I-64 in relation to existing and funded facilities. Generally, road length, width, traffic volume are greater north of I-64. Most roads south of the Interstate are smaller minor collector or local roads (see **Table 2 and Map 2**). Guthrie Road, Jericho Road, and Miller Road are unpaved roads.

Table 2. Corridor Gaps

Road	Length	Functional Classification	Pavement Width	Speed	Traffic Volume
North of I-64					
Balsley Road	3.9	Local	16	55	360
Bells Lane	1.9	Local	16	NA	NA
Bookerdale Road	.08	Local	16	NA	NA
Frontier Drive	1.2	Major Collector	20	NA	8,500
Goose Creek Road	2.9	Major Collector	20	45	3,000
Hickory Hill Road	1.3	Major Collector	16	45	1,400
Hornet Road	1.7	NA	18	NA	NA
Jericho Road	2.5	Local	10	NA	160
Lew Dewitt	1.5	Minor Arterial	27	NA	13,000
Long Meadow Road	4.5	Major Collector	16	35	2,000
Long Meadow Road to Kiddsville Road	3.9	Minor Collector	18	45	1,200
Miller Road	1.9	Local	13	55	100
North Augusta	.67	Minor Arterial	30	45	7,200
Old Goose Creek Road	1.3	Major Collector	18	40	180
Old White Bridge Road	2.8	Major Collector	22	35	3,000
Tinkling Springs Road North	1.1	Minor Arterial	22	35	17,000
Twin Hills Lane	0.7	Local	NA	NA	NA
U.S. 11 (north Staunton)	2.4	Minor arterial	68	45	5,900
South of I-64					
August Farms Road	2.1	Major Collector	18	40	4,000
Barrenridge Road	0.8	Local	18	NA	370
Jericho Road	2.5	Local	10	NA	160
Kindig Road	1.5	Minor Collector	16	40	1,600
Guthrie Road	2.2	Local	18	NA	130
Churchmans Mill Road	2.7	Local	18	NA	270
Mule Academy Road	1.0	Minor Collector	24	40	3,600
Ramsey Road	1.4	Minor Collector	16	NA	390
Round Hill Drive	1.3	Minor Collector	16	25	940
Shenandoah Village Drive	1.0	Minor Collector	16	55	3,000
Twin Hill Road	0.4	Local	18	35	560

Map 2. System and Corridor Gaps in Relation to Existing and Funded Facilities



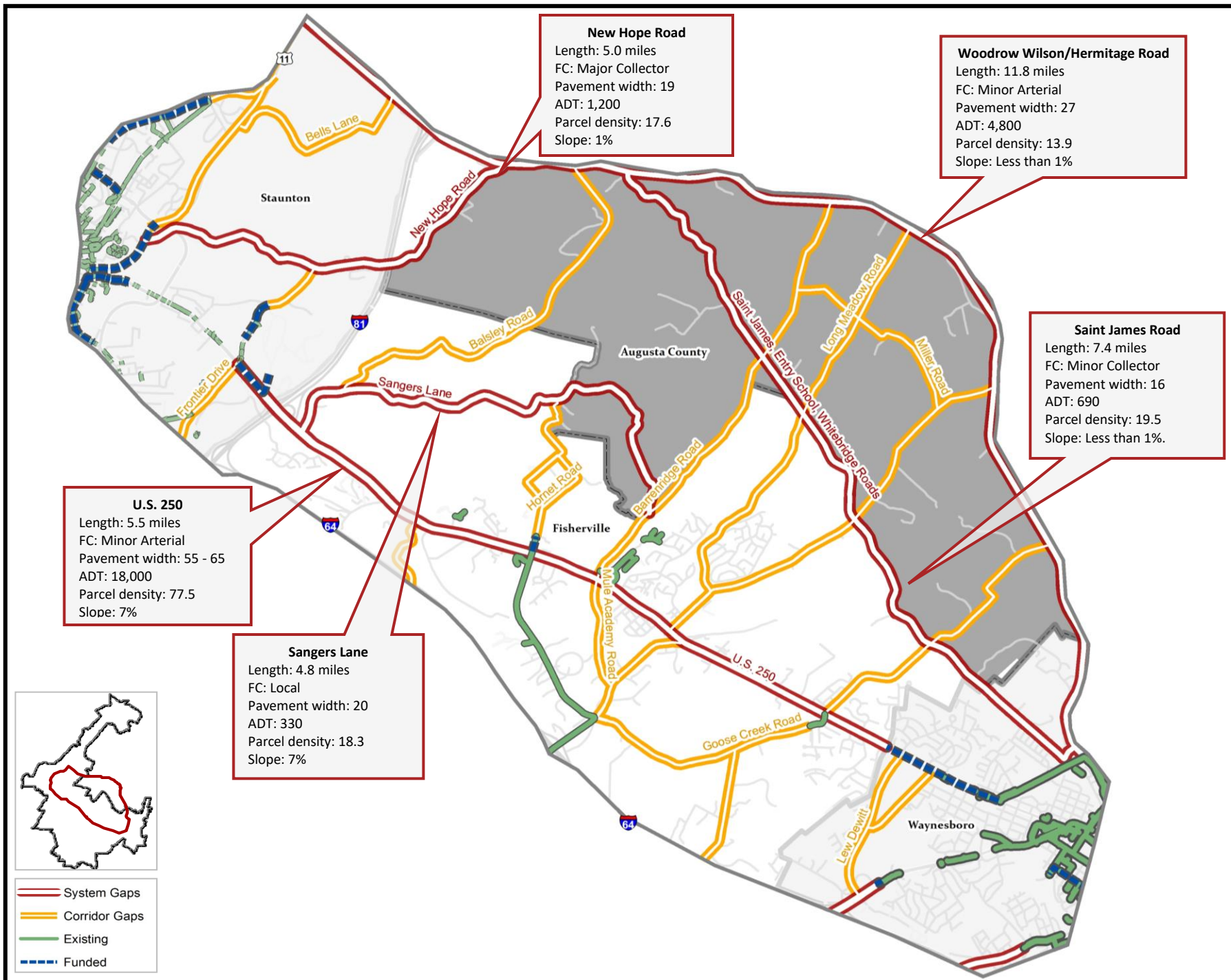
North of I-64

Five system gaps were identified north of I-64, with two roads entirely in the MPO boundary (see **Map 3**). The main east-west segment is U.S. 250, which has the highest traffic volume, parcel density, and connects to the most corridor segments of any system gap in the study area. Conversely, Sangers Lane has the lowest traffic volume and one of the lowest parcel densities.

Woodrow Wilson/Hermitage Road (VA 262/254) and Saint James Road are the only two segments that would establish a continuous east-west connection outside the MPO. Both system gaps have low parcel density and relatively low traffic volume. There are four corridor gaps between each road with Barrenridge, Long Meadow, Kiddsville, and Old White Bridge connecting to points south in the MPO, and Miller Road providing an unpaved east-west connection outside the MPO.

The 18 corridor gaps are primarily major collector or local roads, average 1.8 miles in length, 22 feet in pavement width, and average 4,400 in annual daily traffic.

Map 3. System and Corridor Gaps North of I-64 in Relation to Existing and Funded Facilities

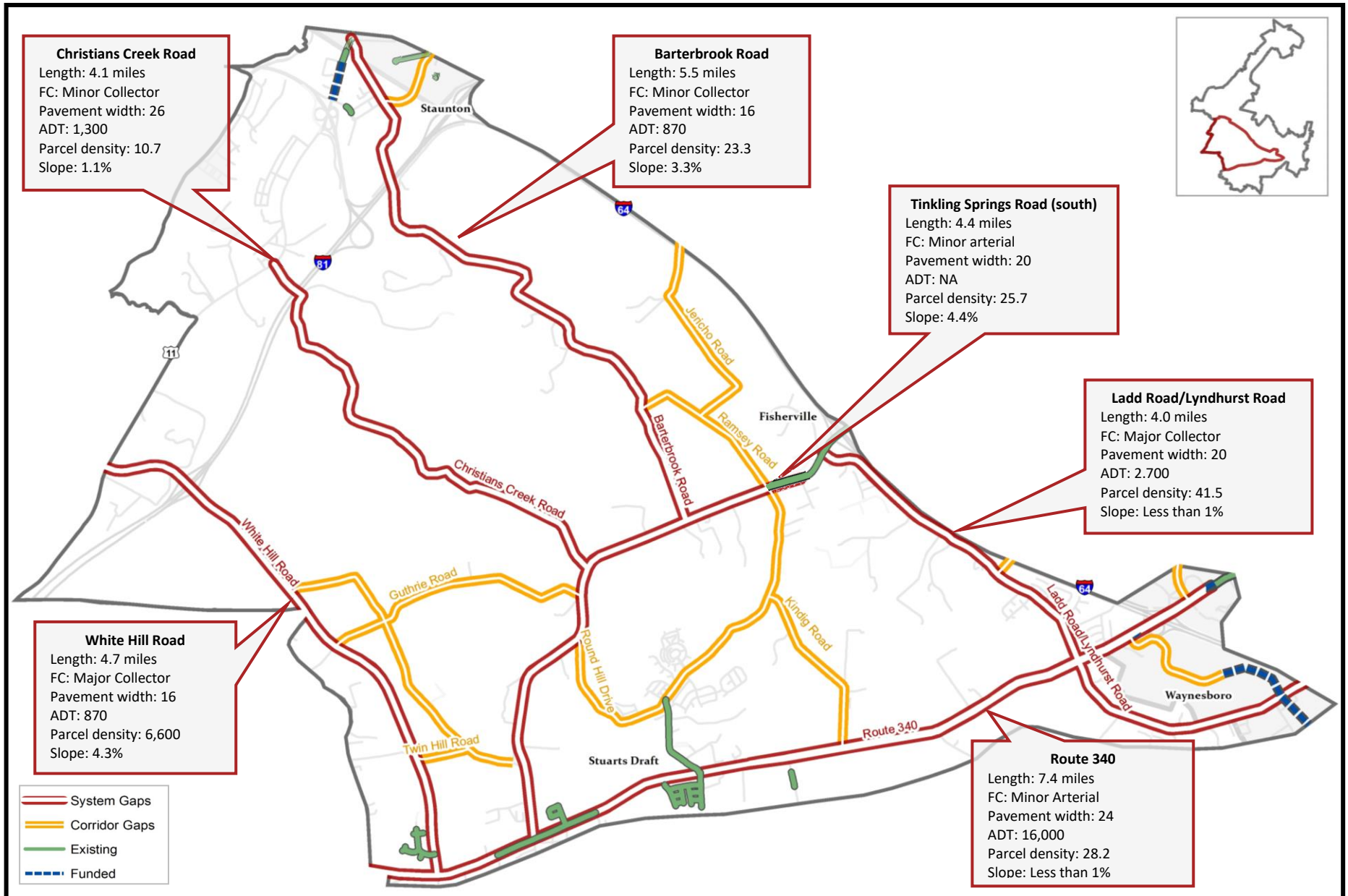


South of I-64

There are six system gaps south of I-64 (see **Map 4**). Segments in this area typically average two lanes, 45 mph, and average 2,800 average daily traffic outside of U.S. 340, which averages 16,000. Four of the six system gaps connect to existing or funded infrastructure. Tinkling Springs Road and U.S. 340 each have the highest connectivity by connecting both existing/funded infrastructure, and also to four different system and/or connector segments. Christians Creek Road has the lowest parcel density and widest pavement, while Ladd Road/Lyndhurst Road has the highest parcel density.

The ten corridor gaps are primarily minor collectors or local roads, 1.5 miles in average length, average 1,300 in annual daily traffic, and connect to system gaps near Stuarts Draft. The Jericho Road corridor gap provides connection across I-64.

Map 4. System and Connection Gaps South of I-64 in Relation to Existing and Funded Facilities



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Connectivity Gaps in Relation to Proposed Projects

Staff reviewed 18 different local planning documents to identify proposed bicycle and pedestrian projects in the region (see Table 1). **Map 5** displays the proposed projects from plans since 2010; some projects were omitted for visual clarity and topical relevance.

Overall, most of the proposed projects are north of I-64, except for several projects near Stuarts Draft. The proposed projects in Staunton, specifically from the 2018 Bicycle and Pedestrian Plan and 2020 Greenways Plan, seek to establish multimodal connections to the eastern city limits, primarily to the system gap segments of Woodrow Wilson Parkway, New Hope Road, U.S. 250, and Barterbrook Road. There is also a convergence of existing, funded, and proposed projects in two locations: 1) near the 250 interchange and near Crossing Way and the George Cochran Parkway, and 2) near the intersection of I-81 Exit 222 on New Hope Road and Statler Boulevard.

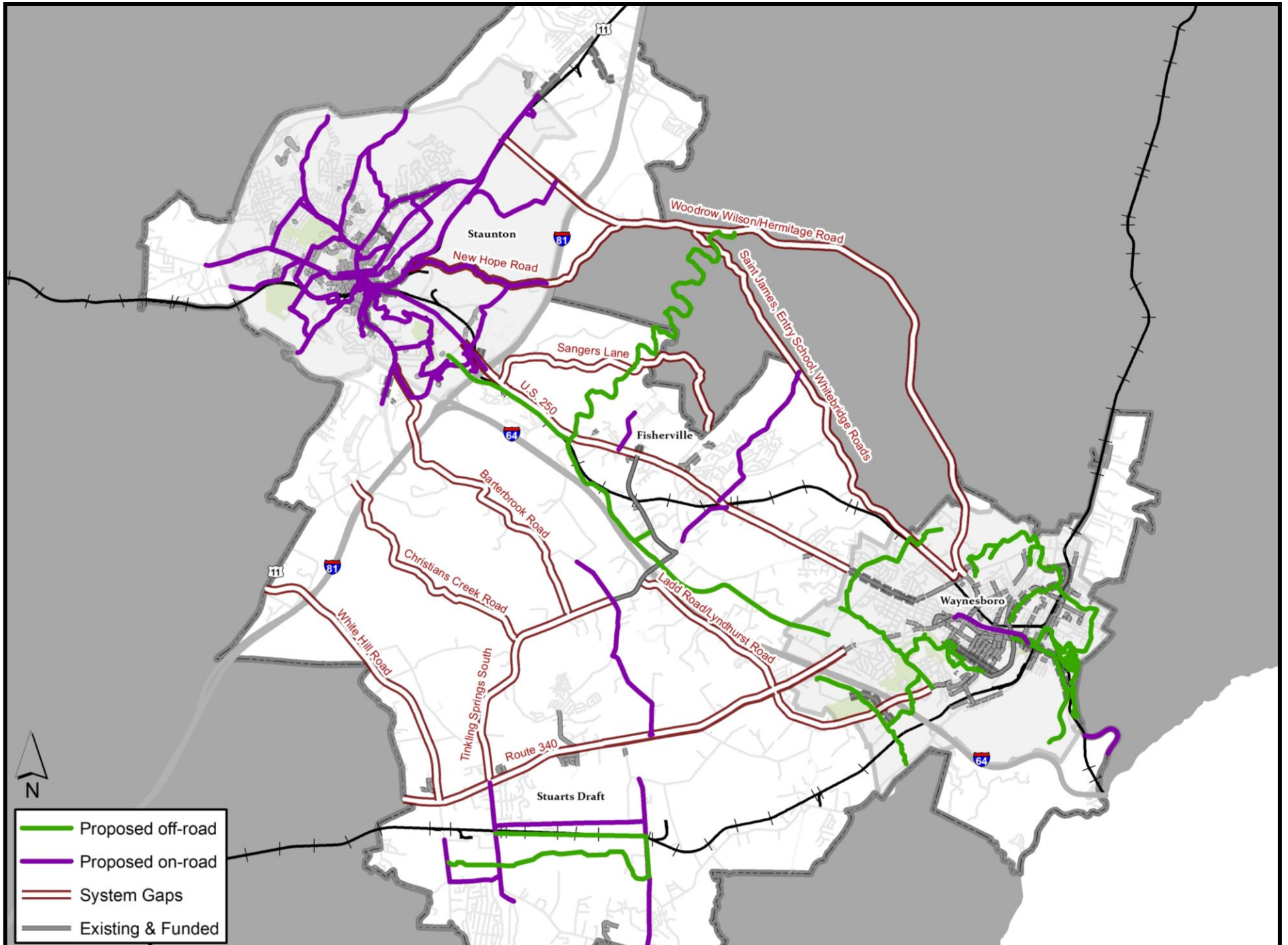
In Augusta County, the only proposed east-west oriented projects are the Goose Creek Greenway, and a sidewalk segment along Augusta Farms and Kindig Road near Stuarts Draft. County plans have conceptually identified three off-road projects: Goose Creek Greenway, Christians Creek Greenway, and the Stuarts Draft Greenway.

In Waynesboro, projects are primarily from the City's 2010 Bicycle Plan and mostly include off-road connections along the system gaps of U.S. 250, Old White Bridge Road, Hermitage Road, and Lyndhurst Road.

Table 1. Local Plans Reviewed to Identify Proposed Projects

Area	Description	Year
Augusta County	Comprehensive Plan – Transportation Chapter Update	2020
	Stuarts Draft Small Area Plan	2019
	Fishersville Small Area Plan	2009
Staunton	Greenways Plan	2020
	Comprehensive Plan	2019
	Bicycle and Pedestrian Plan	2018
Waynesboro	Comprehensive Plan	2018
	Bicycle Plan	2012
SAWMPO Region	2045 SAWMPO LRTP	2020
	VDOT STARS US 250 Corridor Improvement Study	2020
	VDOT STARS Greenville Avenue (US 11) Corridor Improvement Study	2019
	SAWMPO Richmond Road Multimodal Corridor Study	2019
	US 340 (Rosser Avenue) Corridor Signal Optimization Study	2019
	US 250/Wilson Workforce and Rehabilitation Center Small Area Study	2018
Shenandoah Valley Region	Rural Transportation Plan	2011
	Central Shenandoah Bicycle Routes	2008
	CSPDC Bicycle Plan	2005
	Central Shenandoah Greenways Plan	2004

Map 5. System and Connection Gaps in Relation to Proposed Projects



3. ROUTE EVALUATION

The Study Group reviewed the site characteristics of connectivity gaps from Section 2 with an emphasis on the following site variables to determine the preferred east-west routes:

- Bicyclist and pedestrian comfort;
- The location and accessibility to points of interest; and,
- East-west routes on low-volume roads.

Opportunities and Constraints

The area north of I-64 has the best system-wide connectivity due to more system connections directly to existing or funded facilities, and more north-south corridor connections. Access to the downtown areas of both Staunton and Waynesboro is challenging due to system gaps on U.S. 250, the lack of more direct, parallel east-west segments both north and south of I-64, and the challenges of crossing establishing an east-west connection across I-81.

North of I-64

U.S. 250 has the shortest, most direct connection between each locality, but the most constraints

While U.S. 250 provides a direct connection, the road is constrained by traffic volume, slope, parcel density, and crossing under I-81. Additional information is needed regarding shoulder widths along the corridor that would allow safe on-road facilities. The road does provide connections to Sangers Lane system gap, which has very low traffic volume and has a large portion of unpaved roadway, and several corridor gaps such as unpaved Jericho Road and the existing Lifecore Drive shared use path that could facilitate parallel off-road connections.

New Hope Road is near multiple funded projects and is a less congested alternative to crossing I-81

New Hope Road is near the funded Commerce Road and Frontier Drive projects, and has the widest I-81 connection outside of the minor arterial routes such as U.S., which have wider shoulders, but more traffic volume. There is high parcel density along a portion of New Hope Road and poor sight distance, which could be hazardous for riders even if shoulder widening improvements are made.

Goose Creek Road could be a potential segment

Old Goose Creek Road was not identified as a corridor gap due to the road ending approximately .18 miles west of Lifecore Drive. This potential corridor connection, along with Goose Creek Road, could provide an alternative parallel route off of U.S. 250, which will be evaluated in Task 3 of the report.

South of I-64

Barterbrook Road is the only system gap connecting to existing infrastructure south of I-64

While Barterbrook Road does connect to existing infrastructure along Greenville Avenue, and has low traffic volume and parcel density, the lack of shoulder on the I-81 bridge is a significant constraint, but will be improved in the next five years. Other system gaps south of I-64, such as Christians Creek Road at Mint Spring, are likely not practical east-west connections due to being located outside of Staunton City Limits.

Tinkling Springs Road south of I-64 is the most interconnected system gap

This road provides a necessary mid-region connection from the existing shared use path north to Lifecore Drive, to points south into Stuarts Draft. Any facility south of I-64 would be required to extend the existing network along Tinkling Springs Road.

Potential options for a north-south connection from Lifecore Drive to Stuarts Draft

There are possible connections along Jericho Road and Ramsey Road to Tinkling Springs and south to Augusta Farms Road towards Stuarts Draft. Some of these segments were identified as planned projects in regional studies.

Table 3. Summary of Opportunities and Constraints

	Opportunities	Constraints
Connectivity	<ul style="list-style-type: none"> • U.S. 250 is the shortest, most direct east-west route and connects to the most residential and commercial destinations • Low-volume roads offer parallel, scenic routes 	<ul style="list-style-type: none"> • Lack of direct, parallel east-west connections in addition to U.S. 250 • Distance between Staunton and Waynesboro on non-U.S. 250 roads • Interstate crossings
Site Characteristics	<ul style="list-style-type: none"> • Topography and volume on most roads has minor slope variation, and a majority of system gaps are low-volume roadways • U.S. 250 and Tinkling Springs could support on-road facility improvements • Goose Creek Road may provide an alternative east-west parallel segment along U.S. 250 	<ul style="list-style-type: none"> • Traffic volume and speed on U.S. 250 and U.S. 340 • Steep grades on U.S. 250 from Staunton to Goose Creek Road and Sangers Lane • Speeds and shoulder width on rural roads • Distance of roads outside the MPO, and south of Barterbrook Road from existing facilities and destinations • Rural roads likely could not support on-road facility options
Segments	<ul style="list-style-type: none"> • Preferred segments: U.S. 250, Tinkling Springs, Barterbrook, New Hope, Entry School, Ladd, and Lyndhurst 	<ul style="list-style-type: none"> • Unfavorable segments: Sangers Lane, Woodrow Wilson, Hermitage, White Hill, Christians Creek roads

Preferred Routes and Connections

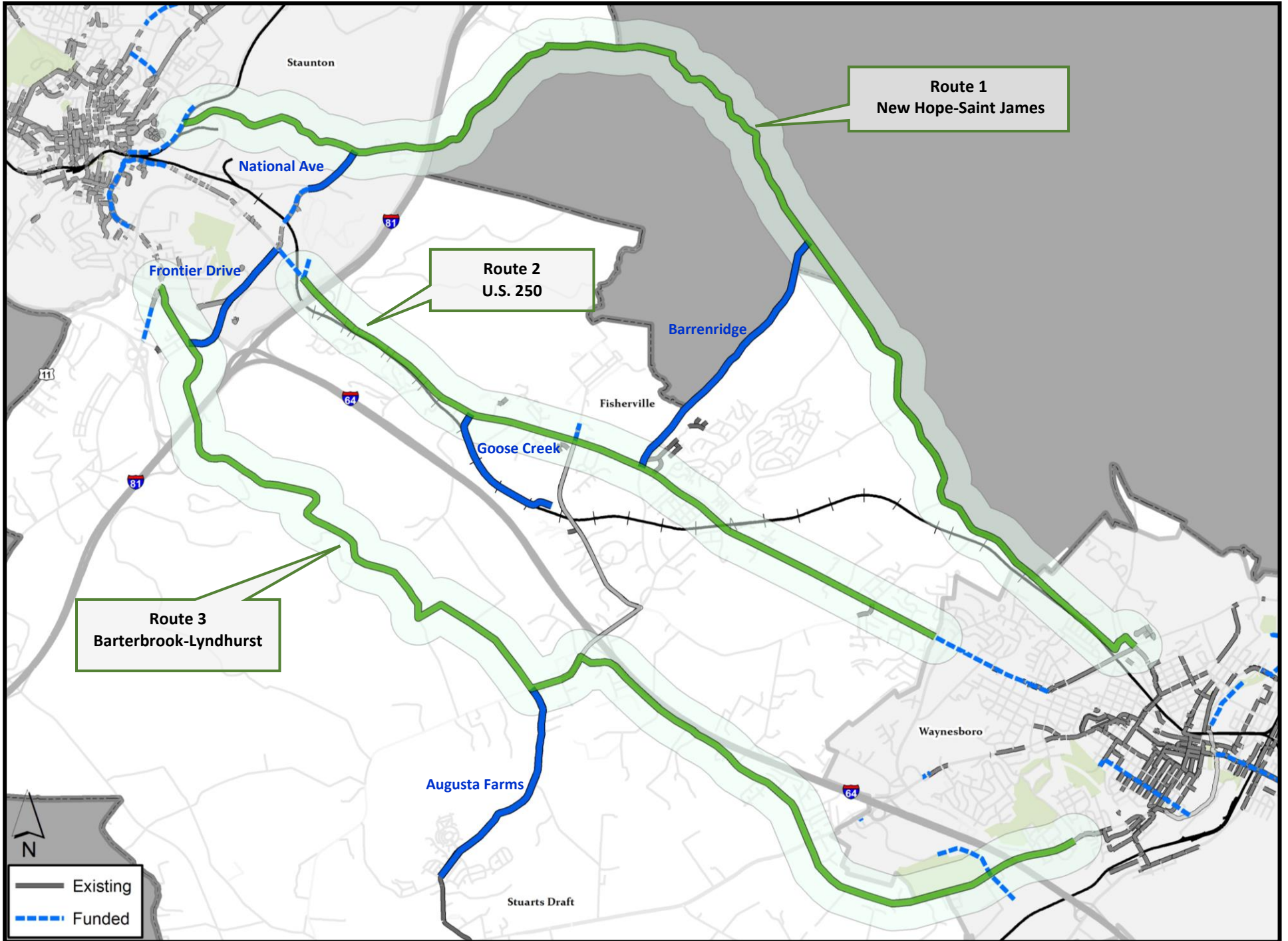
Based on the gap identification data, and the opportunities and constraints, the preferred east-west routes addressing system gaps are (see **Map 5**):

- Route 1: New Hope-Saint James (New Hope-Saint James-Entry School)
- Route 2: U.S. 250 (U.S. 250 from the Staunton City Limit to the Waynesboro City Limit)
- Route 3: Barterbrook-Lyndhurst (Barterbrook-Ramsey-Tinkling Springs-Ladd-Lyndhurst)

Additionally, five different corridor connections addressing corridor gaps were identified that connect to preferred routes and key destinations:

- Barrenridge Road from U.S. 250 to St. James Road
- National Avenue from North Frontier Road to New Hope Road
- Augusta Farms Road from Tinkling Springs to August Boulevard
- Frontier Drive from U.S. 250 to Barterbrook Road
- Goose Creek Road from U.S. 250

Map 5. Preferred east-west routes (green) and connector routes (blue)

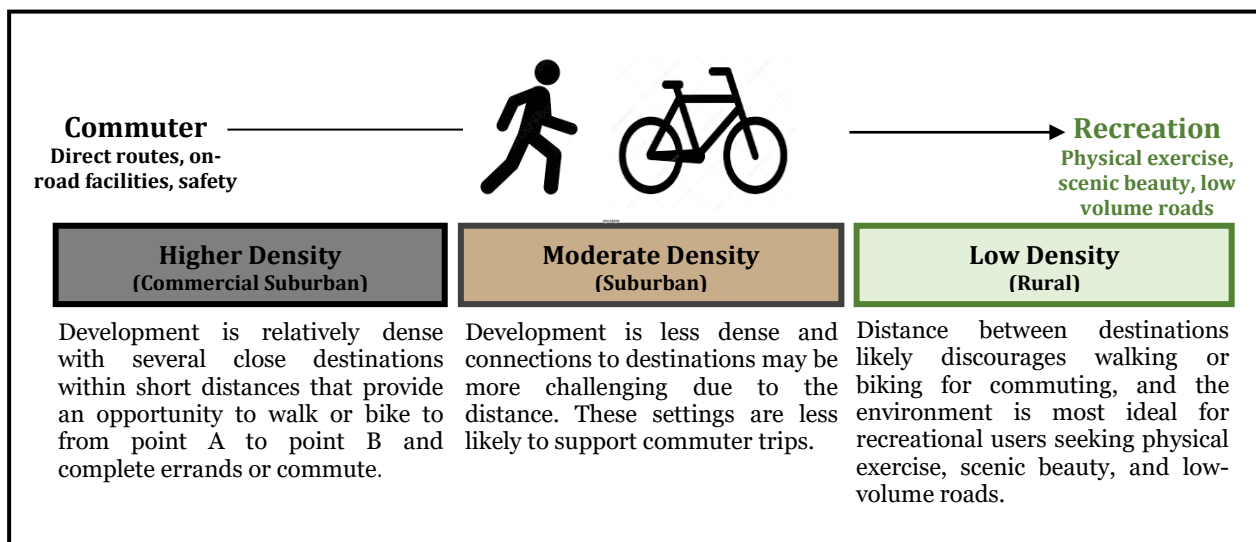


Density Context and User Type

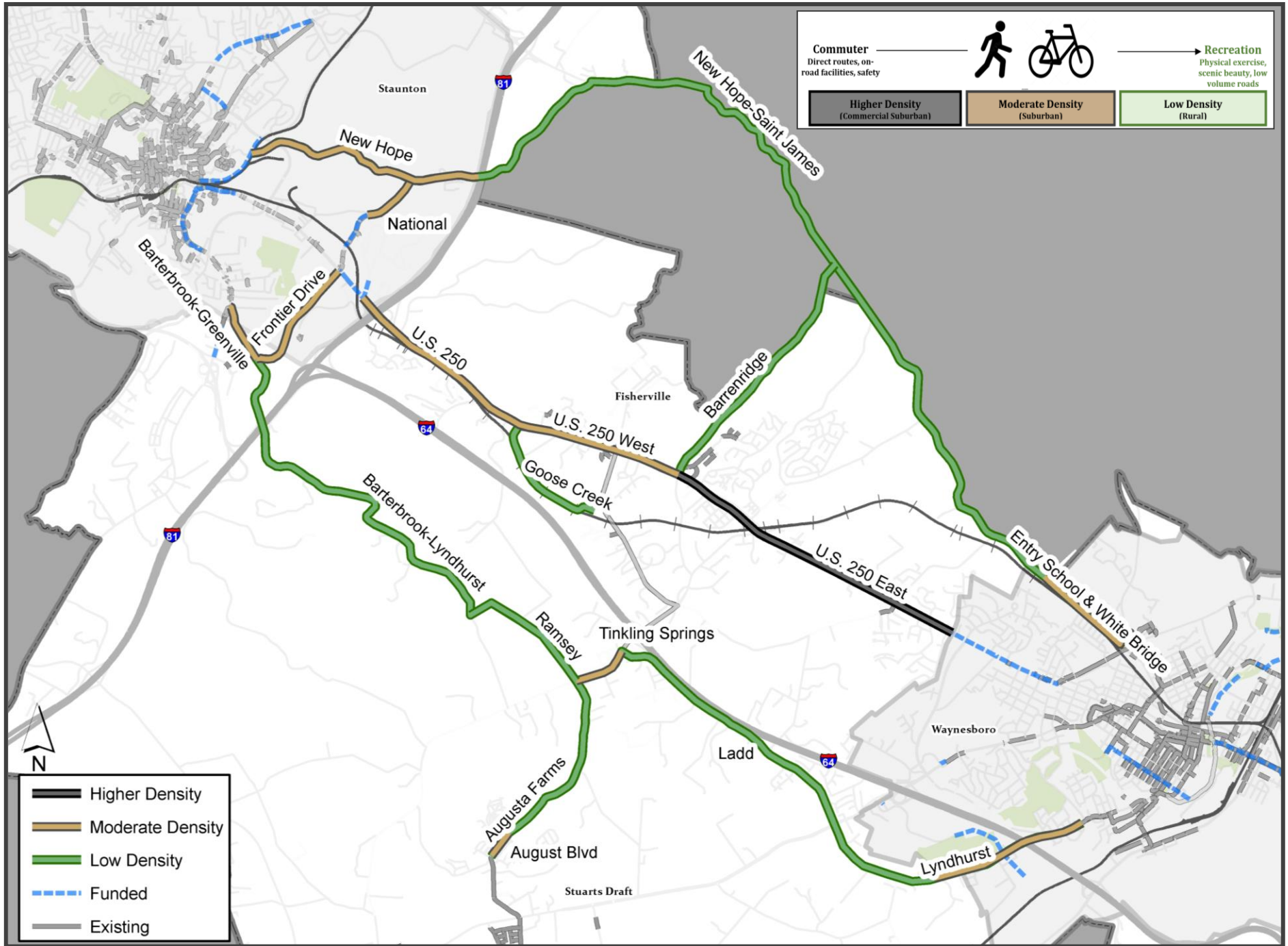
The preferred routes and corridor connections in the study area were categorized as higher density, moderate density, or low density based on roadway characteristics. The Study Group identified the likely user types based on the density context (see **Figure 3**).

The U.S. 250 segment from Barrenridge to the Waynesboro City limit has the highest parcel density and development intensity in the study area. The Study Group noted the most future development will likely occur along this segment. Moderate density areas are segments in city limits, or adjacent to towns, while the low density roads parallel U.S. 250 (see **Map 6**).

Figure 3. Urban-Rural Context and User Type



Map 5. Route and Corridor Connection Density








Bicycle and Pedestrian Regional Connectivity Study

Proposed Facility Types and Improvements

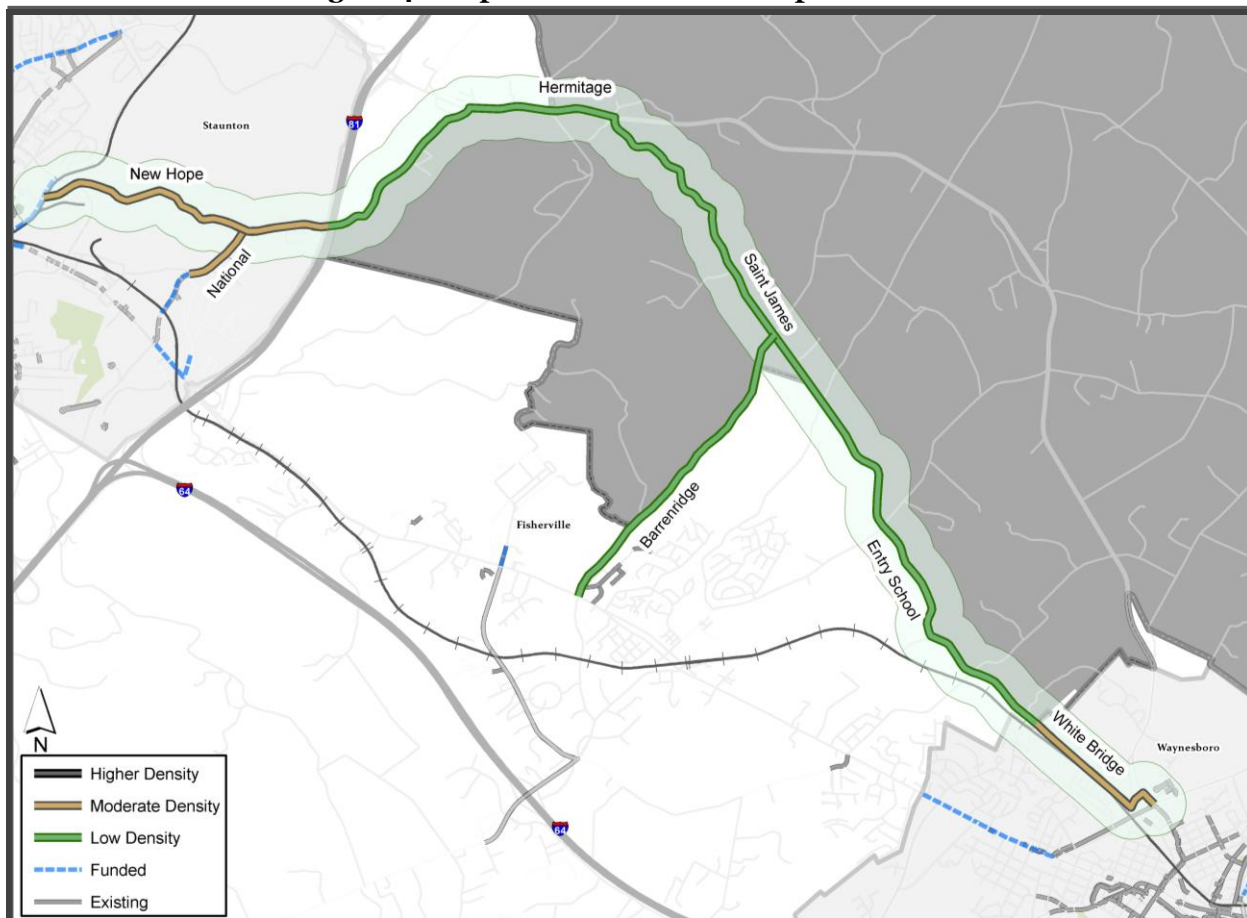
There are five proposed facility types and improvements for the preferred routes and corridor connections based on roadway characteristics, urban-rural context, and user type.

Table 6. Proposed Facility Types

	Improvement	Context
	Sidewalk Minimum 5' sidewalk.	Urban, suburban
	Shared Use Path Minimum 10' path accommodating bicyclists and pedestrians.	Urban, suburban
	Intersection Crossing Treatments Facilitate safe crossing of pedestrians and bicyclists. Possible improvements include crosswalks, lighting, refuge islands, hybrid beacons, and flashing beacons.	Urban, suburban
	Shared Lane Markings High-visibility pavement markings that raise awareness of on-road bicycle users. Used where bike lanes are desirable but are not possible due to site constraints.	Urban, suburban
	Widened Shoulders Minimum 4' widened shoulders for bicycling. Implemented with pavement upgrades on roads without curb and gutter.	Rural

Based on the identified routes and corridor connections, there were a total of 17 segments identified, with ten segments north of I-64. Note that all proposed segments would include safety signage to enhance the visibility of cyclists and pedestrians such as “share the road” signage, or pedestrian crossing signage.

Figure 4. Proposed Route 1: New Hope-Saint James

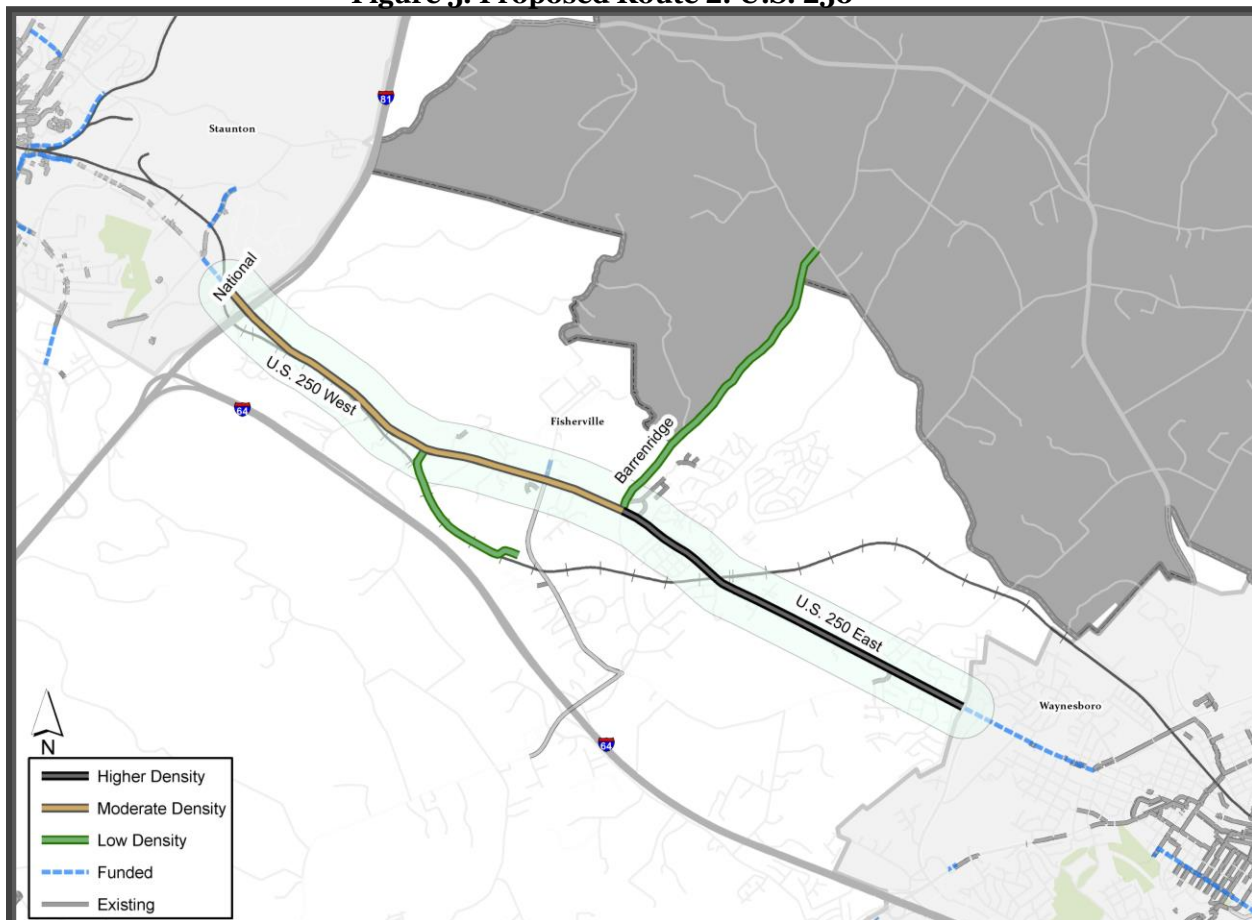


Description

The New Hope-Saint James Route is a 12.6-mile segment that begins at Statler Boulevard in Staunton, connects to Hermitage Road, Saint James Road, and Old White Bridge Road, and ends at Ivy Street in Waynesboro. The Route includes two rural segments and three suburban segments, and the primary use is recreational. Improvements focus on shoulder widening. A connector route at National Avenue would provide a continuous connection between New Hope Road and U.S. 250, and the connector route along Barrenridge would provide a connection to the heart of Fishersville.

Segment	Length (miles)	Locality	Context	Primary Use	Potential Improvements
Route Segments					
New Hope Road from I-81 bridge to Hermitage Road, Saint James Road, Entry School Road, and White Bridge	5.6	Augusta County	Rural	Recreation	Shoulder widening
New Hope Road from Staunton City Limit to Statler Road	2.4	Staunton	Suburban	Recreation	Shoulder widening, shared lane markings
Frontier Drive from U.S. 250 to Barterbrook	1.3	Staunton, Augusta County	Suburban	Recreation	Shoulder widening, shared lane markings
Entry School/White Bridge Road from Waynesboro City Limit to Ivy Road	1.3	Waynesboro	Suburban	Recreation	Shoulder widening, shared lane markings
Connector Segments					
Barrenridge Road from U.S. 250 to Saint James Road	2.6	Augusta County	Rural	Recreation	Shoulder widening
National Avenue from North Frontier Drive to New Hope Road	0.6	Staunton	Suburban	Recreation	Shared use path

Figure 5. Proposed Route 2: U.S. 250

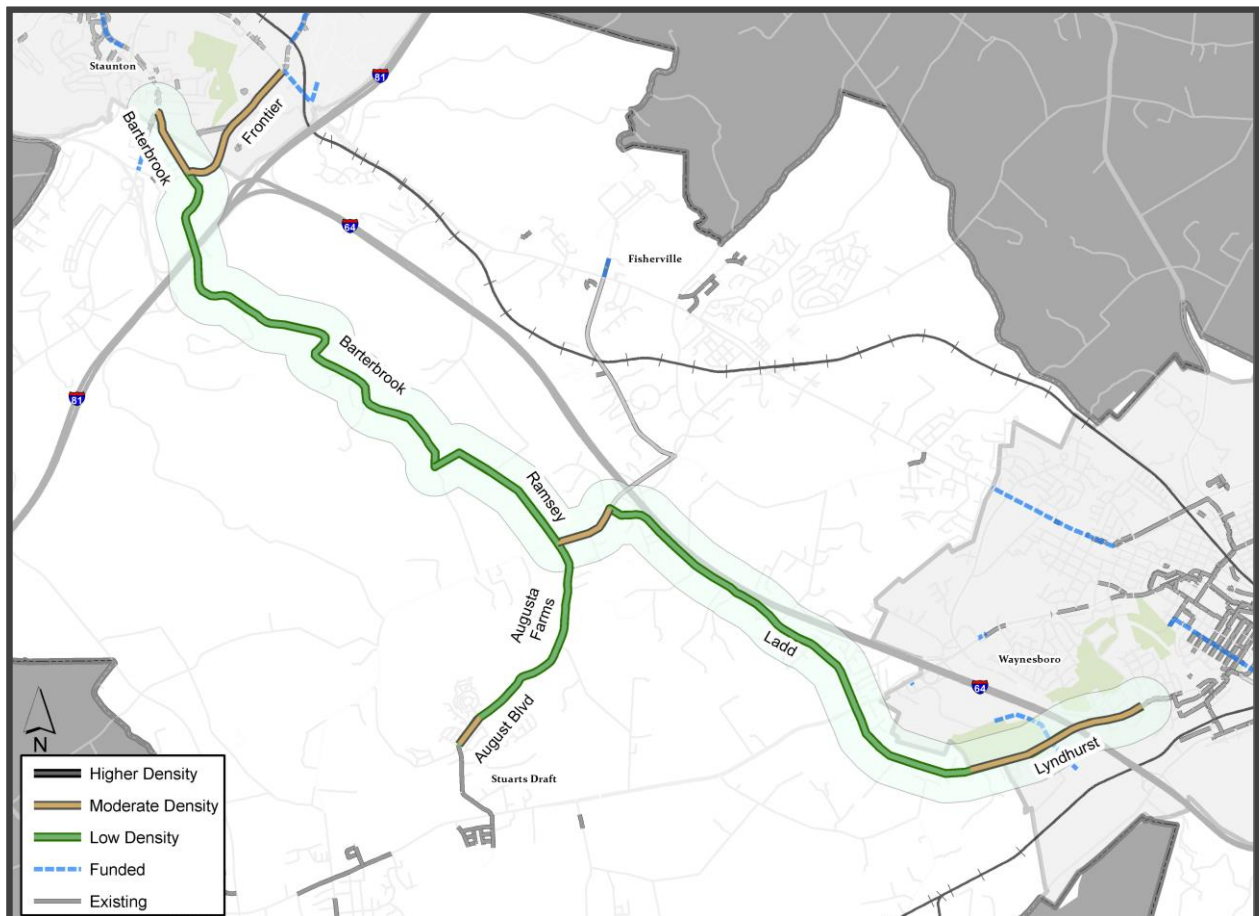


Description

The U.S. 250 Route is a 6.7-mile segment that begins at Crossing Way in Staunton, connects to Barrenridge Road on U.S.250, and ends at the Waynesboro city limit, and is the only route that would best serve commuter users. The Route is defined by two segments on U.S. 250 east and west of Barrenridge Road. The U.S. 250 West segment is characterized as moderate density, and the U.S. 250 East segment higher density. U.S. 250 West has more concentrated development in Fishersville, and it is projected that most new growth along the corridor will occur between Fishersville and Staunton. As a result, a sidewalk is proposed along the West segment to provide pedestrian access to destinations such as businesses, the County library, and the BRITE Transit stop. A shared use path is proposed for the East segment, which would connect to funded improvements in Staunton, and the proposed improvements on Goose Creek Road. The connector segment on Goose Creek Road proposes an off-road connection to the Lifecore Drive share use path, while the Barrenridge corridor connector would provide a connection to the New Hope-Saint James route.

Segment	Length (miles)	Locality	Context	Primary Use	Potential Improvements
Route Segments					
U.S. 250 West from Barrenridge Road to Waynesboro City Limit	3.6	Augusta County, Staunton	Urban	Commuter, Recreation	Shared use path, intersection treatments
U.S. 250 East from Barrenridge Road to Staunton City Limit	3.1	Augusta County	Suburban	Commuter	Sidewalk, intersection treatments, shared lane markings
Connector Segments					
Barrenridge Road from U.S. 250 to Saint James Road	2.6	Augusta County	Rural	Recreation	Shoulder widening
Goose Creek from U.S. 250	1.3	Augusta County	Rural	Recreation	Shoulder widening, off-road share use path

Figure 6. Proposed Route 3: Barterbrook-Lyndhurst



Description

The Barterbrook-Lyndhurst route is an 11.5-mile segment that begins at Greenville Avenue in Staunton, connects to Ramsey Road, Tinkling Springs Road, Ladd Road, and ends on Lyndhurst Road at Crofton Avenue. The route is primary rural and would best serve recreational users, except for moderate density connections in both cities. There are three corridor connector segments: one on Frontier Drive that would provide access to the U.S. 250 route, and two other connections on Augusta Farms and August Boulevard that would connect to Stuarts Draft.

Segment	Length (miles)	Locality	Context	Primary Use	Potential Improvements
Route Segments					
Ladd Road from Tinkling Springs to Waynesboro City Limit	4.0	Augusta County	Rural	Recreation	Shoulder widening
Barterbrook from Frontier to Ramsey Road	3.9	Augusta County	Rural	Recreation	Shoulder widening
Lyndhurst from Crofton Avenue to Waynesboro City Limit	1.6	Waynesboro	Suburban	Recreation	Shoulder widening, shared lane markings
Ramsey Road from Tinkling Springs to Barterbrook Road	1.4	Augusta County	Rural	Recreation	Shoulder widening, shared lane markings
Barterbrook from Frontier Drive to Greenville Avenue	0.6	Augusta County, Staunton	Suburban	Recreation	Sidewalk, shared lane markings
Connector Segments					
Augusta Farms Road from Tinkling Springs to August Boulevard	2.1	Augusta County	Rural	Recreation	Shoulder widening
Frontier Drive from Barterbrook to U.S. 250	1.4	Staunton	Suburban	Recreation	Shoulder widening, shared use lane markings
Augusta Farms Road from August Boulevard to Round Hill Drive	0.3	Augusta County	Suburban	Recreation	Sidewalk

4. RECOMMENDATIONS

The Plan provides local planning staff baseline criteria for identifying and prioritizing future regional bicycle and pedestrian routes and facilities.

Recommendation 1: Integrate regional bicycle-pedestrian connectivity in local plans and findings into project prioritization

The connectivity gap analysis provides a general review of the defining roadway characteristics, and potential facilities that could be implemented to facilitate regional connectivity. The proposed routes, corridor connections, and facilities can be incorporated into local planning documents, and provide information for more detailed studies that could further prioritize segments and improvements. Localities could also adopt this study as a stand-alone companion document in support of other plans related to bicycle and pedestrian infrastructure.

Future project prioritization could be based on the criteria identified such as urban-rural density context, commuter and recreation facility type, and user type.

Recommendation 2: Coordinate Pavement and Shoulder Widening Schedules

VDOT Staunton District is allocated limited funding for repaving roadways, which includes widening shoulders to current design standards, which are typically around 4' feet. VDOT prioritizes adding bicycle or pedestrian-related improvements, and shoulder widening, on routes that have been identified as multi-modal connections in planning documents. The proposed routes and corridor connections in this document could be utilized to prioritize future improvements with VDOT's repaving schedule and inform prioritization. While shoulder widening is mainly conducted on primary routes, secondary routes are also eligible.

Many secondary routes have site constraints, such as available right-of-way (ROW) or grading and drainage issues, that inhibit shoulder widening. More research is needed on the rural roads identified in this report to evaluate shoulder widening feasibility.

Recommendation 3: Consider off-road connection from Goose Creek Road to Lifecore Drive

The Goose Creek Greenway is the only proposed off-road project that would facilitate an east-west connection between each locality; however, the proposed project is over six miles, and would require significant ROW considerations. This plan identifies Goose Creek Road – a 1.3-mile segment that terminates less than .1 miles from the Lifecore Drive shared use path – as a potential parallel off-road connection along the U.S. 250 segment that could provide a low-volume, scenic alternative to traveling along U.S. 250.

This project could tie-in to the proposed shared use path along U.S. 250 west, and provide a focused alternative to providing a continuous connection between Staunton and Fishersville.

Recommendation 4: Region-wide Wayfinding and Safety Signage

In addition to the safety signage proposed along each proposed route and corridor connection, another non-location-specific improvement that would enhance multi-modal use is wayfinding signage for cyclists and pedestrians such as "Bicycle Route" signage.

Localities could develop a sign program with the specific uniform standards, or collaborate and establish a regional sign program that connects to points of interest. The public could provide guidance on sign design and layout, as well as which destinations should be included.

Bicycle and Pedestrian Regional Connectivity Study

APPENDIX A: AVERAGE ANNUAL DAILY TRAFFIC (AADT) FOR SYSTEM AND CORRIDOR GAPS

Map 4: AADT for System and Corridor Gaps

