

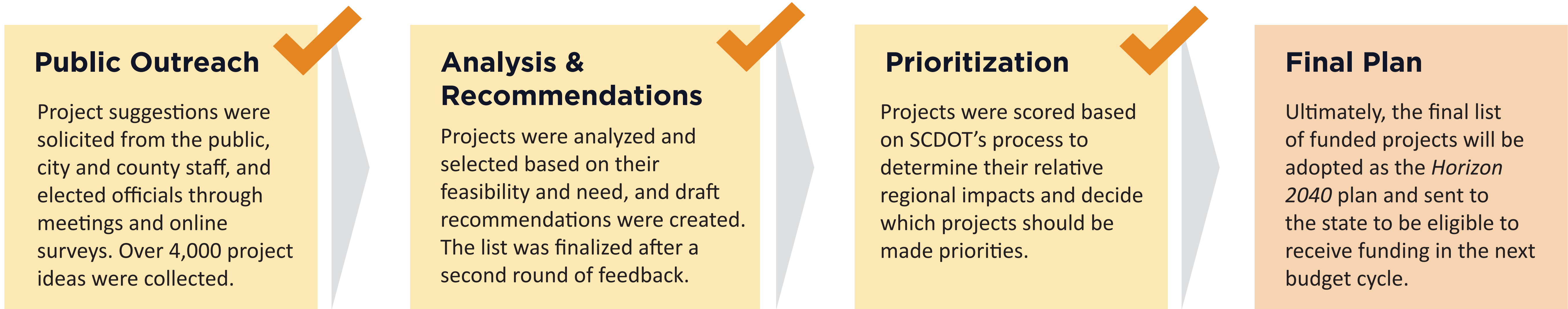
Roadway Recommendations

Improving the region's roads and highways



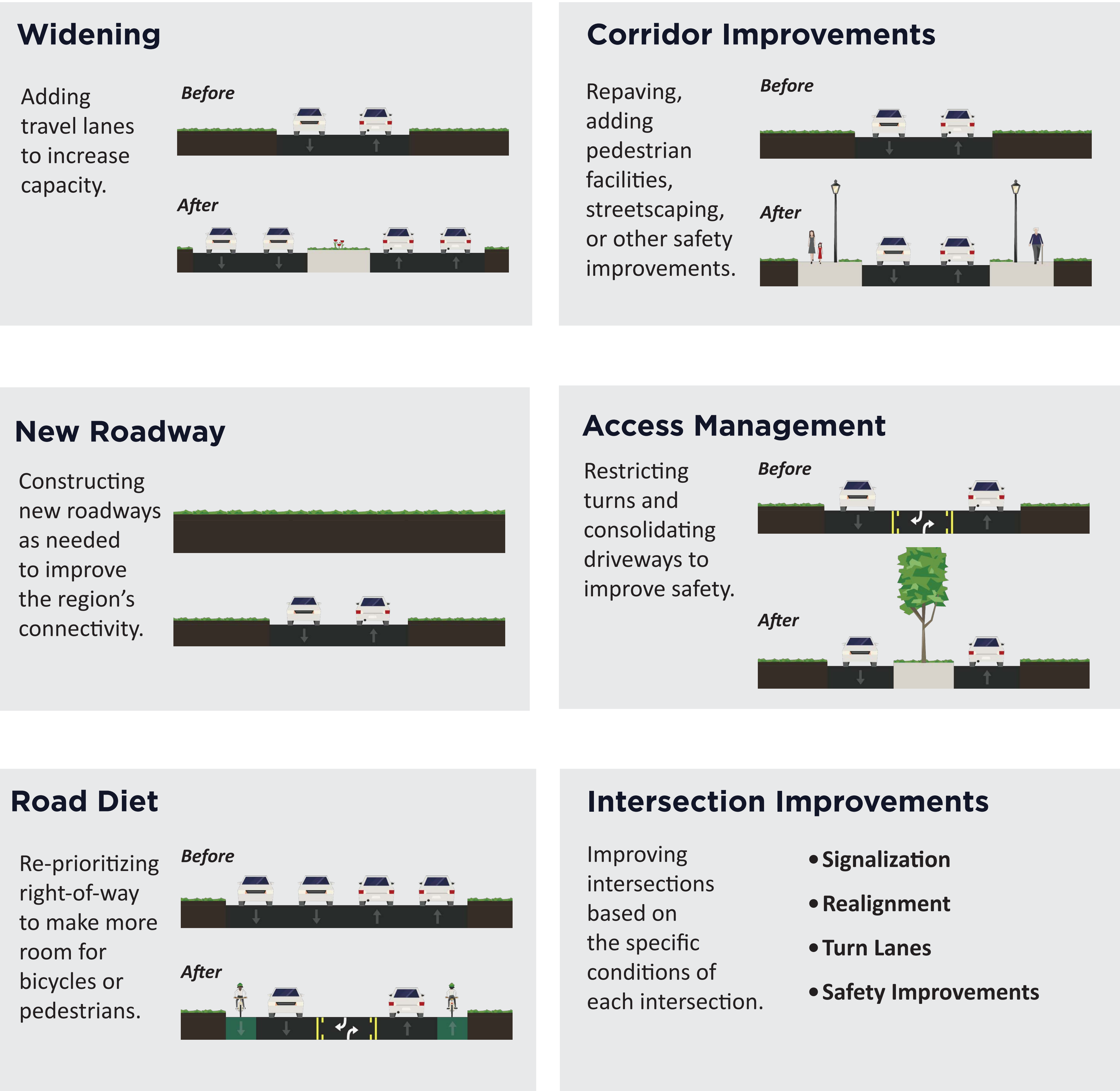
How Projects Were Selected

The *Horizon 2040* process brought the public's priorities to the forefront as the plan moved toward a final set of recommended projects.



Types of Improvements

The roadway improvement projects recommended in *Horizon 2040* take several forms. The diagrams below explain some of the most common types of projects.



Prioritization

After the full list of projects had been drafted and vetted, each project is scored through SCDOT's prioritization process. In this way, the projects are ranked according to their relative benefits and effects on the larger region, and funding is assigned to the top-scoring projects based on reasonable estimates of future revenues. Projects are scored based on these categories:

- Environmental Impacts
- Location on a Priority Network
- Traffic Volume and Congestion
- Economic Development
- Alternative Transportation Solutions
- Safety and Crash Data
- Consistency with Local Land Use Plans
- Financial Viability
- Truck Traffic
- Pavement Quality Index
- Intersection Geometric Alignment

Access Management

Improving safety and traffic flow



What is Access Management?

Congestion, travel delay, and safety are growing concerns on key corridors in the region. To preserve mobility and protect the overall efficiency of the network, it is important to maintain traffic flow and enhance safety. As part of a coordinated system-level plan, access management strategies that make turning movements more predictable can help minimize congestion and reduce crashes.

Access management strategies systematically control the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. Areas with poor access management – which can include unprotected left turns and many driveway cuts within a short distance – often have higher crash rates, greater congestion, and more spillover cut-through traffic on adjacent residential streets.

A Diverse Toolbox

Access management should never be considered a one-size-fits-all solution. Successful implementation will include a diversity of strategies that respond to the specific land use and travel context surrounding the corridor.

Dotted Line Markings

These pavement markings reduce driver confusion and increase safety by guiding drivers through complex intersections.

Driveway Length

Increasing the driveway length to commercial development prevents internal site operations from affecting the adjacent street.

Access Management at Work

Horizon 2040 recommends access management improvements for 6 corridors. To show how options in the Access Management Toolbox can be applied, four demonstration corridors were selected. These corridors have congestion, safety, access, and land development conditions that can be found on similar corridors throughout the region. The table below shows how the toolkit can be applied to these locations.

Driveway Consolidation or Relocation

Shared-access driveway minimize curb cuts and reduce traffic conflicts and are particularly effective near intersections.

Intersection and Driveway Curb Radii

Curb radii sized for area context and vehicular usage limits occurrences of vehicles using opposing travel lanes or mounting the curb when turning. Less damage to infrastructure and enhanced pedestrian safety results.

Left-Turn Storage Lanes

Left-turn lanes reduce vehicle delay related to waiting for vehicles to turn and may decrease the frequency of collisions attributable to lane blockages.

Minor Street Approach Improvements

Adding left- and right-turn lanes on minor street approaches allows more green time to be allocated to the major street.

Non-Traversable Median

Medians separate opposing vehicle flows and provide refuge for pedestrians. Carefully planned access points and median U-turn access are critical considerations.

Offset Left-Turn Treatment

Offset turn lanes shift the left-turn lanes to the left, which reduces crossing and exposure time and improves sight distance and gap recognition.

	Access Management Strategies							
	Dotted Line Markings	Driveway Length	Driveway Consolidation or Relocation	Intersection and Driveway Curb Radii	Left-Turn Storage Lanes	Minor Street Approach Improvements	Non-Traversable Median	Offset Left-Turn Treatment
West Main Street in Williamston (Academy St to Hamilton St)		X	X	X	X			
White Horse Road in Greenville (Broadway Dr to Pendleton Rd)	X	X	X	X		X	X	X
US 276 in Mauldin (Knollwood Dr to Owens Rd)		X	X	X			X	X
US 123 in Easley (Brushy Creek Rd to Main Street)	X	X	X	X		X	X	X

Safety

Improving safety at key regional intersections



Safe Regional Travel

Enhancing travel safety is an important outcome of any long range transportation plan. Through consultation with local officials, residents, and planning staff, Horizon 2040 identified dozens of intersections for safety improvements. Though the ultimate re-design of an intersection will be finalized in consultation with SCDOT, several countermeasures often are the first options considered to improve safety and intersection operations. These options are listed below. Ten demonstration intersections have been selected to show how these options can be applied in the GPATS region.

Realignment

Roadways are realigned to meet at as close to a 90-degree angle as possible. This improves visibility and turning radius.

Signalization

Some unsignalized intersections may be eligible for a traffic signal based on their traffic counts. The State DOT must perform a study to determine if an intersection is eligible.

Connectivity

Improving connectivity throughout the area providing alternative routing options to destinations and reduce some of the traffic at key intersections.

Improved Crossings

Often the danger to pedestrians and bicycles can be reduced by providing improved crossing facilities, such as painted crosswalks, median refuges, or flashing beacons.

Roundabouts

Replacing a traditional signalized intersection with a roundabout reduces the number of serious crashes while improving traffic flow.

Turn Lanes

Turn lanes allows space for vehicles waiting to turn, and reduces the risk of rear-end crashes.

Driveway Consolidation

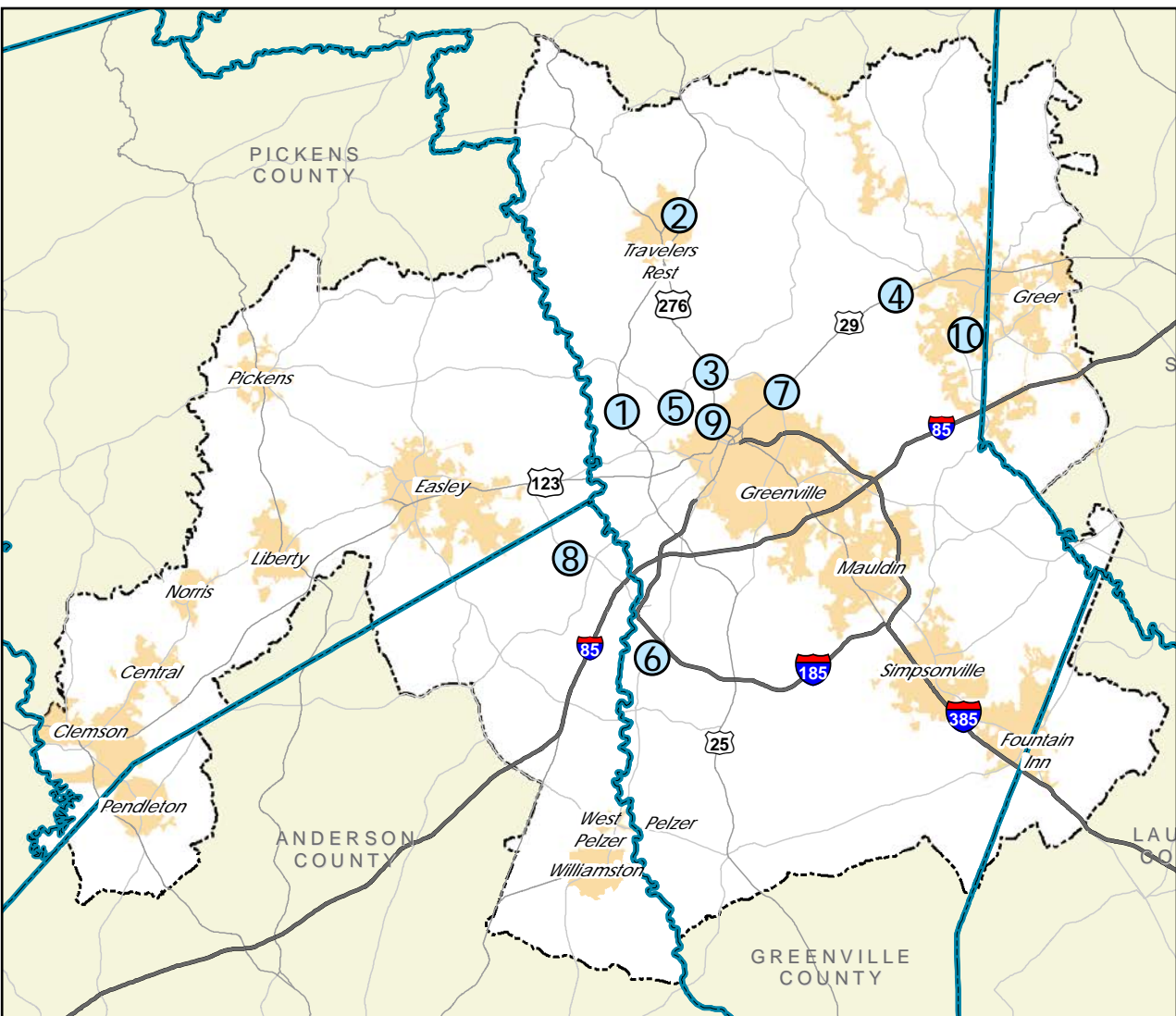
Curb cuts that are too close to an intersection are consolidated or relocated to reduce the number of turning movements or potential crashes.

Improved/Advance Signage

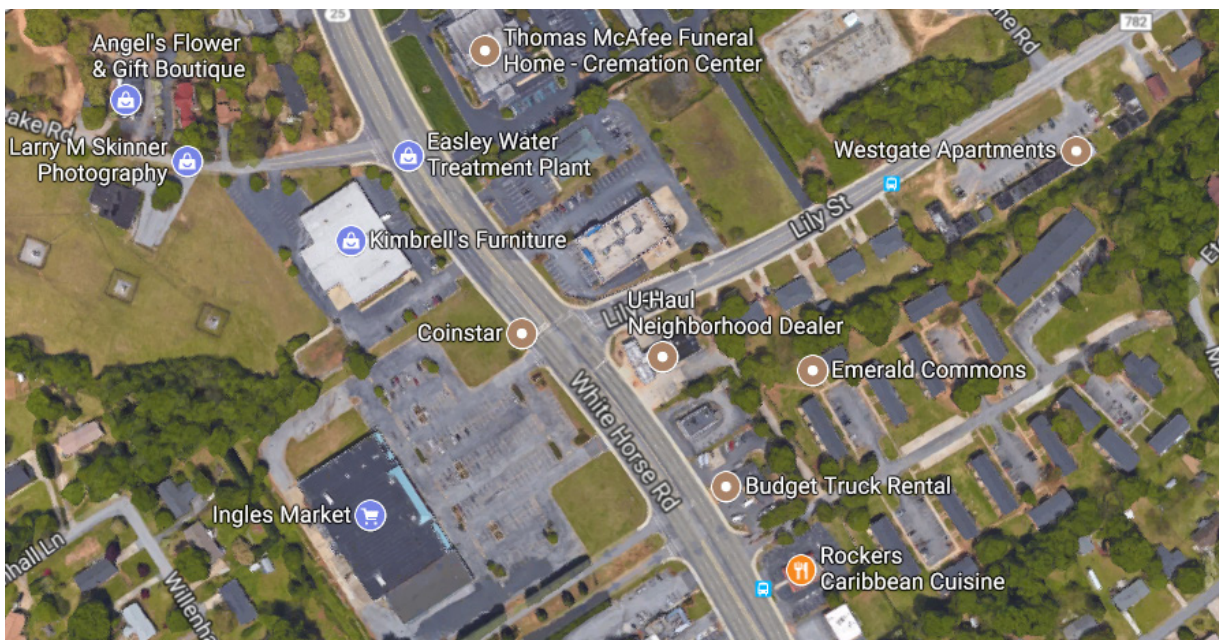
Providing advanced warning signs or installing reflective backplates on traffic signals can reduce crashes due to reduced visibility.

Demonstration Intersections

In collaboration with local officials, residents, and crash data, ten intersections were identified as priority intersections for safety improvements in the GPATS region. While any intersection improvements are ultimately identified through state safety studies and analysis, some general recommendations have been identified here.

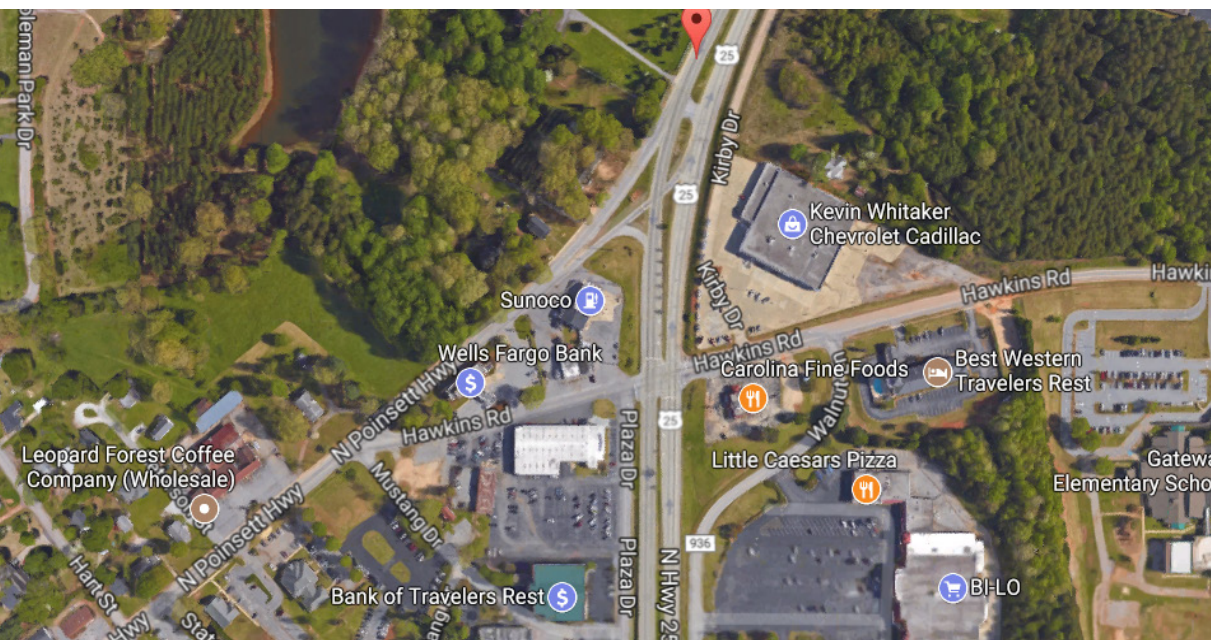


1. White Horse Road at Lily Street



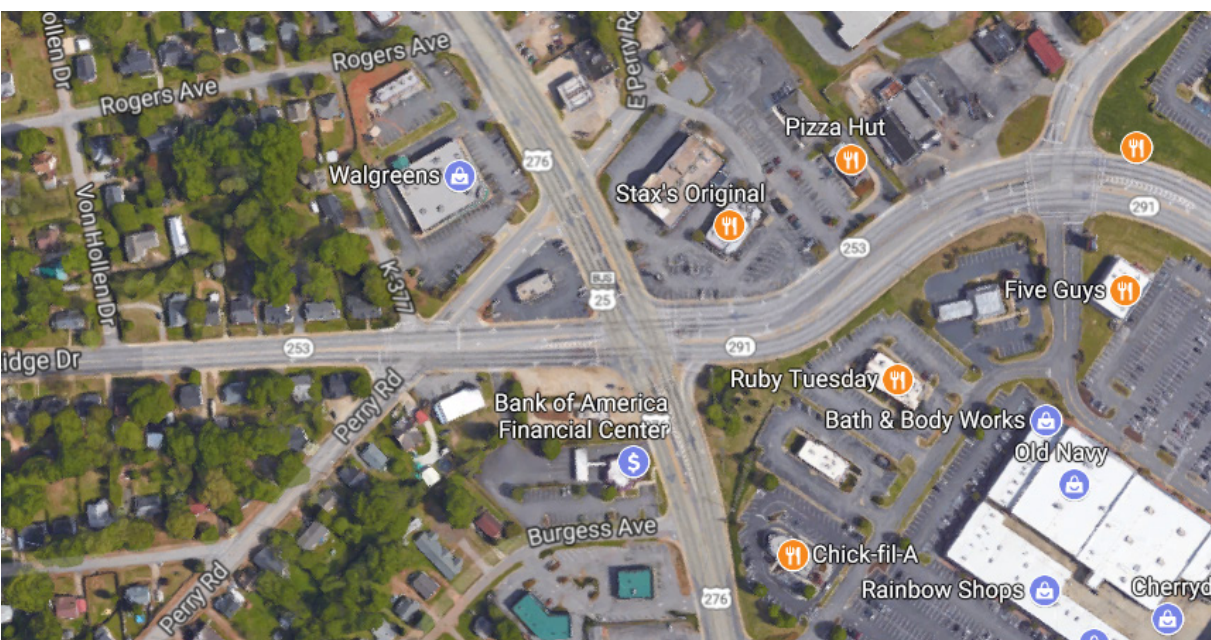
Recommended: Turn Lanes, Improved Crossings, Driveway Consolication, Connectivity

2. US 25 at N Poinsett Highway



Recommended: Realignment, Driveway Consolidation

3. E Blue Ridge Dr at Poinsett Highway



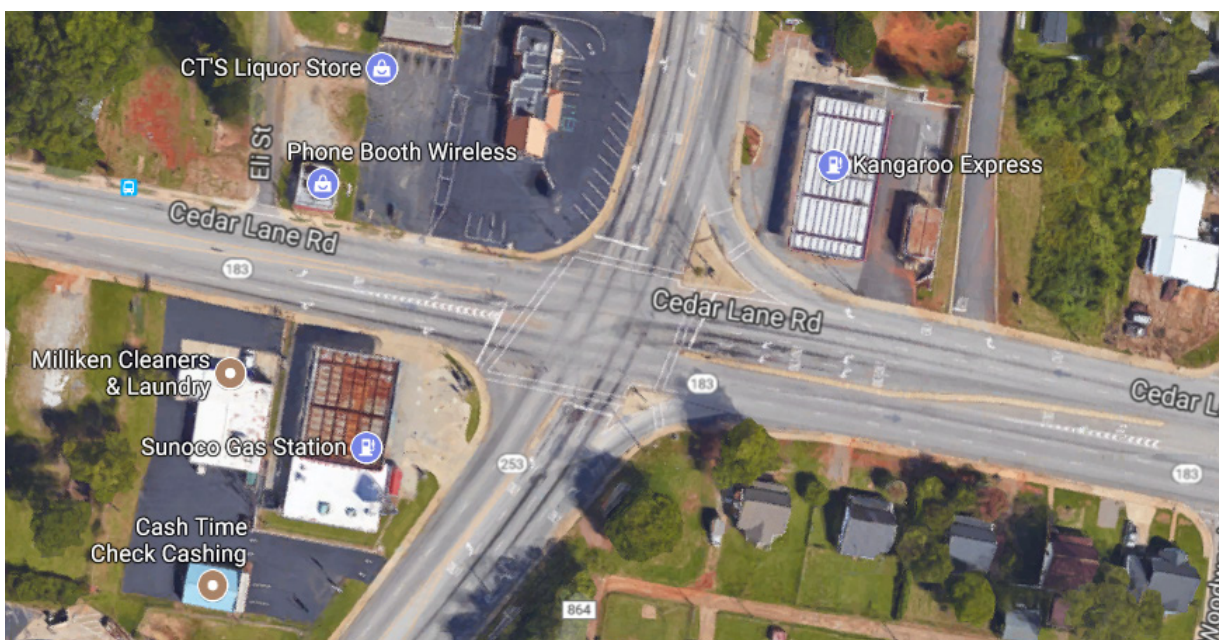
Recommended: Driveway Consolidation, Connectivity, Improved Crossings

4. Wade Hampton Blvd at Fairview Rd



Recommended: Realignment, Driveway Consolidation

5. W Blue Ridge Dr at Cedar Lane Rd



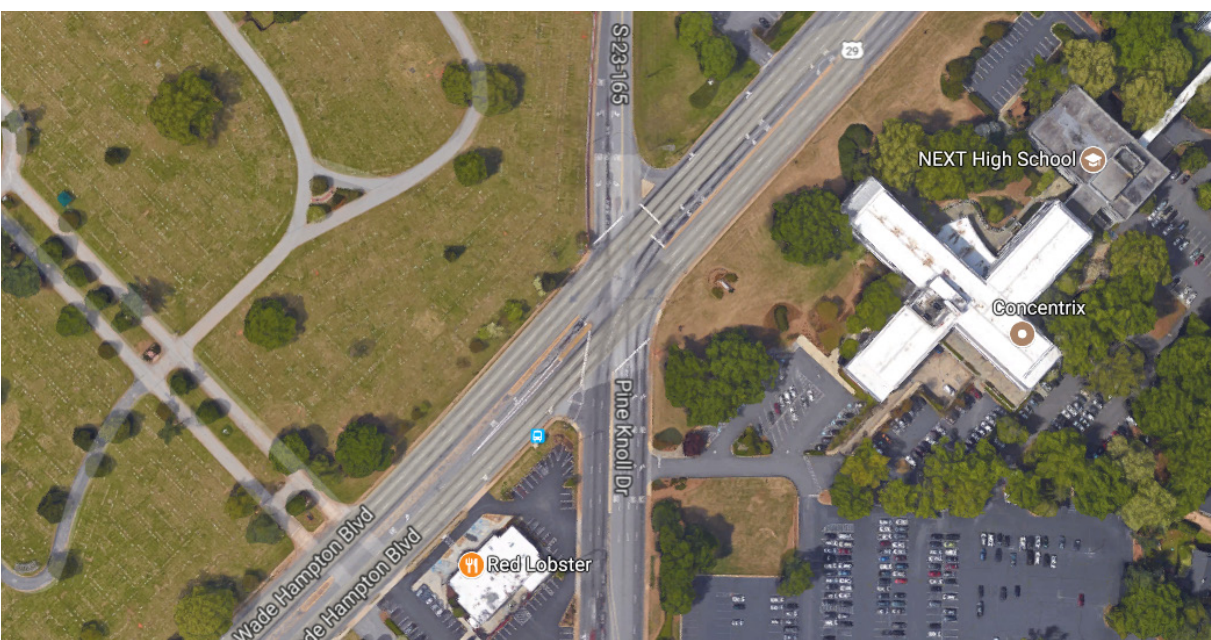
Recommended: Improved Crossings, Driveway Consolidation, Connectivity

6. Old Pelzer Rd at Piedmont Golf Course Rd



Recommended: Improved/Advance Signage, Realignment

7. Wade Hampton Blvd at Pine Knoll Dr



Recommended: Driveway Consolidation, Connectivity, Improved Crossings

8. Powdersville Rd at Three Bridges Rd



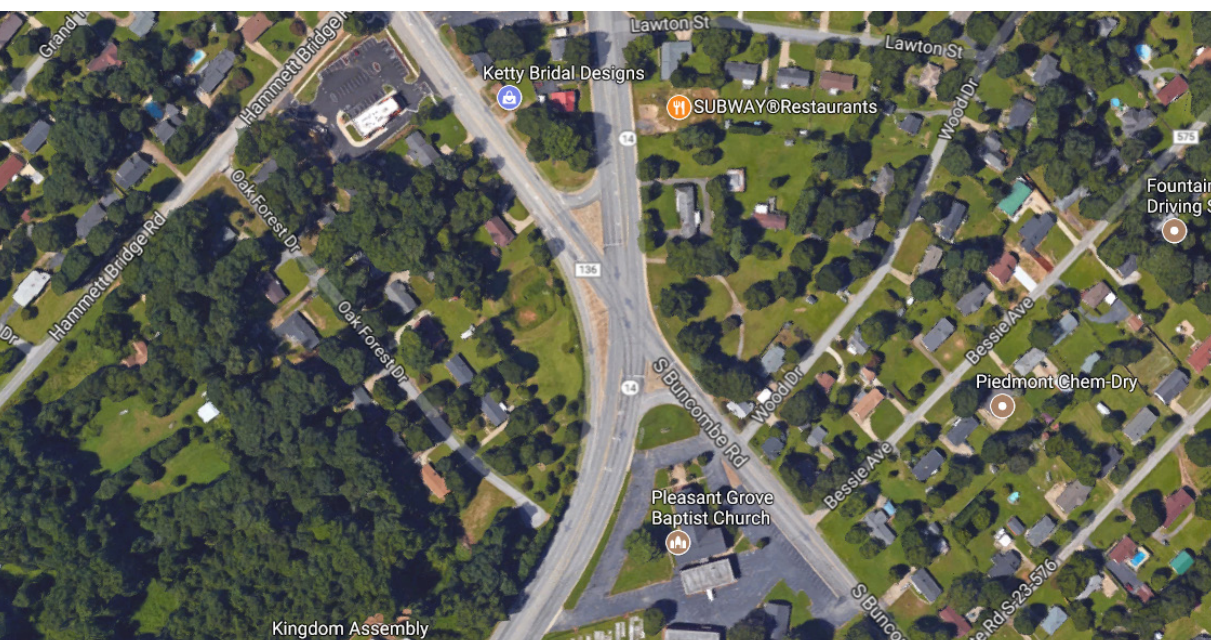
Recommended: Realignment, Advance Signage

9. Earle St at Rutherford St



Recommended: Improved Crossings, Advanced Signage

10. SC-14 at S Buncombe Rd



Recommended: Realignment, Improved Crossings, Driveway Consolidation

Corridor Improvements

Improving the region's roads and highways



Note: The recommendations are identified below by their project ID numbers. The order they are listed is not indicative of their scoring or level of priority.

- New Roadway
- Widening
- Access Management
- Corridor Improvements
- Road Diet
- Other

1

US 123

2

Butler Rd

3

S Batesville Rd

4

Woodruff Parallel

5

SC-153

6

Roper Mtn Rd

7

Hampton Ave

8

US-29 Church St

9

SC-153 Corridor Improvements

10

Woodruff Rd

11

Grove Rd

12

Farrs Bridge Rd

13

SC-8

14

Us 29

15

Howell Rd

16

Miller Rd

17

Fairview Rd

18

Conestee Rd

19

Harrison Bridge Rd

20

Bridges Rd

21

Bennetts Bridge Rd

22

US 123

23

Beattie/College Corridor

24

W. Main St

25

Woodruff Rd

27

Scuffletown Rd

28

Five Forks Rd

29

E. Georgia Rd

30

Batesville Rd

31

Roper Mountain Rd

32

Anderson Ridge Rd

33

Howard Drive Ext.

34

SC-253

35

Boiling Springs Rd

37

Garlington Rd

38

Pelham Street Ext.

39

Powdersville Rd/Old Pendleton Rd

40

SC-418

41

Anderson Rd

42

SC-86

43

Pine Knoll

44

Saluda Dam Rd/Olive St

45

Farrs Bridge Rd

46

Salters Rd Realignment

47

E. Butler Rd

48

University Ridge Ext.

49

Fork Shoals Rd

50

Fairview St

51

Edwards Rd

52

SC-133

53

Ashmore Bridge Rd

54

Hudson Rd

55

SC-418

56

West Georgia Rd

57

Miller Rd

58

SE Main St

59

Fork Shoals Rd

60

Forrester Dr

61

SC-290

62

SC-253

63

Holly Ridge Rd

64

Ben Hamby Ext.

65

SC-101

66

East Washington St. Ext.

67

Garlington Rd

68

US-178

69

Hammett Bridge Rd

70

S. Buncombe Rd

71

Brushy Creek Rd

72

Black Snake/Adger/135

73

David Stone Road

74

LEC Road Ext.

75

Quillen Ave

76

SC-81

77

St. Mark Rd

78

Prince Perry Rd

79

SC-76

80

N. Rutherford Rd

81

Pendleton Rd

83

Issaqueena Trail

84

Berkley Dr

85

Milford Church Rd

87

Gibbs Shoals Rd

88

SC 357/Arlington Rd

89

Haywood Rd

90

Old Spartanburg Rd/Enoree Rd

91

N Pleasantburg Dr/Pine Knoll Rd

92

Wade Hampton Blvd

93

Stallings Road

94

US 29/Mills Ave

95

Cedar Lane/Pete Hollis Blvd

96

Augusta Rd

97

W Faris Rd

98

White Horse Rd

99

N Pleasantburg Dr

100

Laurens Rd

101

E Perry Rd

102

Stone Ave

103

Brushy Creek Rd

104

Fews Bridge Rd

105

US-25

106

Blue Ridge Rd

107

White Horse Rd

108

Old Buncombe Rd

109

US 276 (N Main St)

110

Woodruff Rd

112

US-123

113

Miller Rd Connector

114

Main St

115

Main St

116

E Faris Rd

118

Academy St

119

McDaniel Ave Bridge

120

SC-153 Extension Phase 3

121

US-123

122

Garrison Rd

123

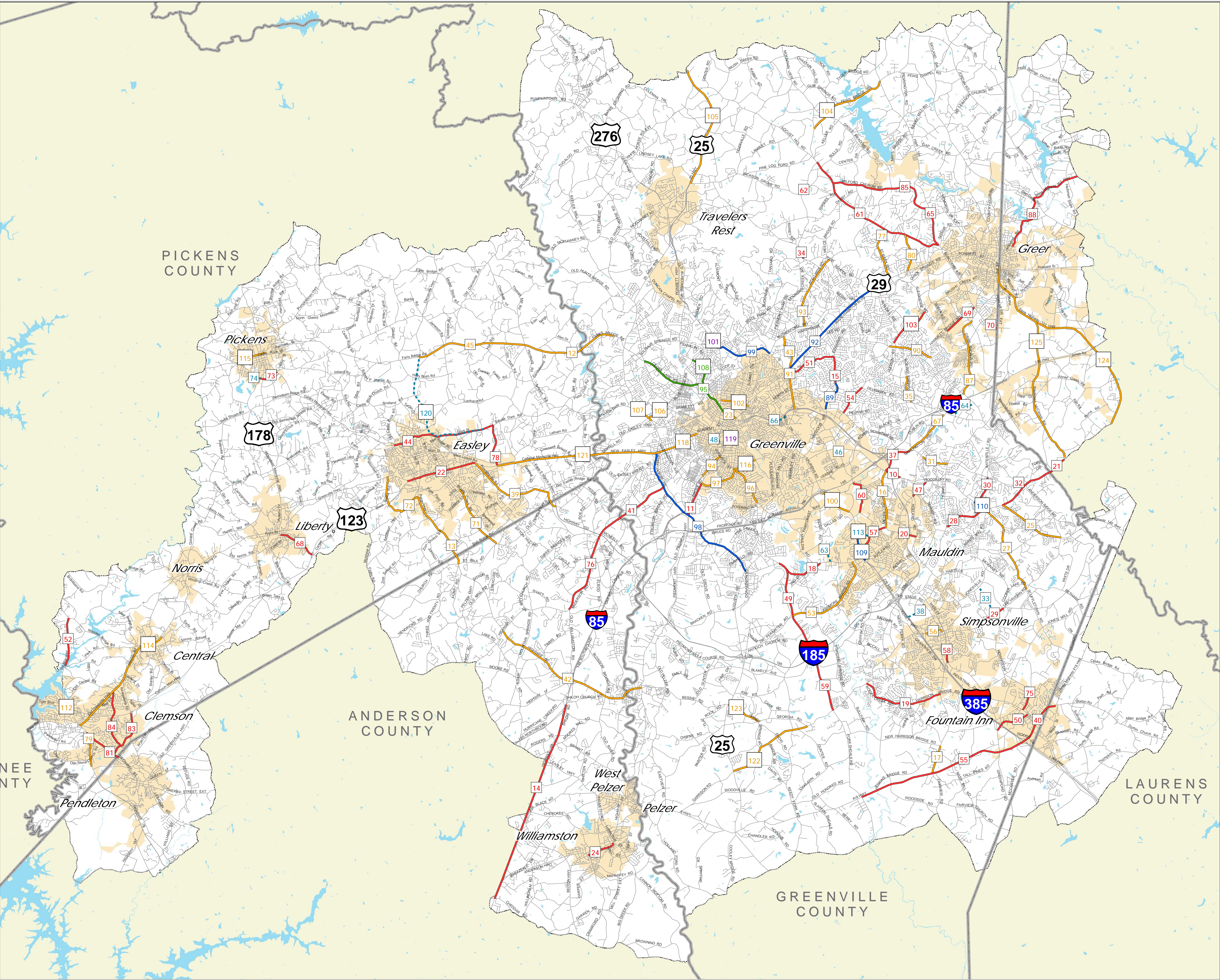
Sandy Springs Rd

124

SC-101

125

Brockman McClimmon Rd



Intersection Improvements

Enhancing safety and traffic flow throughout the area



Note: The recommendations are identified below by their project ID numbers. The order they are listed is not indicative of their scoring or level of priority.

Greenville County

- 4
- Farrs Bridge (SC 183)/Hunts Bridge/ Sulphur Springs
- 6
- Butler/US 276
- 8
- Sandy Flat (SC 253) and Jackson Grove
- 9
- State Park (SC 253) and Altamont
- 11
- Wade Hampton and SC 101
- 13
- Ashmore Bridge and Fowler Circle
- 14
- Main Street (SC 14) and Howard Dr.
- 15
- Tigerville and Jackson Grove
- 16
- SC 20 and Main Street (SC 86)
- 17
- SC 14 and Taylor
- 20
- Butler and Murray
- 22
- Reid School and Edwards Mill
- 23
- Lee Vaughn (SC 417) and Scuffletown
- 24
- Buncombe and Brushy Creek
- 25
- SC 14 and Loma St.
- 26
- SC 418 and Fork Shoals
- 27
- SC 8 and Garrison
- 28
- State Park and E Mountain Creek
- 31
- New Easley Highway (US 123) at Rison Road
- 32
- Bethel and Tanner
- 33
- 5th St. and 2nd St.
- 34
- Blue Ridge (253) @ Perry Rd
- 35
- Blue Ridge (253) @ N Franklin Rd
- 36
- Main St (SC 93) @ Pendleton St
- 40
- Main St (Greer) @ Brushy Creek Rd
- 42
- Main St./Curtis
- 43
- Sc 8/Courtney
- 44
- US 29/St. Marks
- 45
- Miller Rd/Hamby
- 46
- Main/College
- 48
- W Butler and Ashmore Br.
- 54
- Old Stage/Old Laurens
- 55
- Miller/Oak Forest
- 56
- SC-183 @ Old Farrs Br. Rd. (LTL @ lane reduction)
- 57
- Jonesville @ Stokes (realignment)
- 58
- SC 101 at Pennington Rd
- 59
- Edwards Rd at Botany Rd (signalization)
- 61
- Miller and Old Mill
- 62
- Miller/Burning Bush
- 63
- Intersection of W. Georgia and Neely Ferry (RTLs)
- 64
- Intersection of N. Maple and W. Georgia (LTLs)
- 65
- Miller/Murray
- 68
- S Bennetts Bridge Rd/Anderson Ridge Rd
- 69
- Main Street/SC-14
- 70
- Fairview Rd/I-385 Ramp
- 71
- Farrs Bridge Rd/White Horse Rd
- 72
- White Horse Rd/Blue Ridge Rd
- 73
- Lily St/White Horse Rd
- 77
- US 25/N Poinsett Hwy
- 78
- Wade Hampton/Pine Knoll Dr
- 79
- Hwy 101/Berry Mill Rd
- 80
- Wade Hampton at Balfer/Rushmore
- 81
- Blue Ridge/Poinsett Hwy
- 82
- US 276/US 25 Interchange
- 83
- Wade Hampton Blvd/Fairview Rd
- 84
- Blue Ridge Dr/Cedar Lane Pkwy
- 85
- Old Pelzer Rd/Piedmont Golf Course Rd
- 86
- Elizabeth Dr/E Lee Rd
- 87
- Old Rutherford Rd/SC-290
- 88
- Boiling Springs Rd/Old Spartanburg Rd
- 89
- E Georgia Rd/Lee Vaughn Rd
- 90
- Earle St/Rutherford St
- 92
- Valley View Rd/Howard Dr
- 93
- I-385/McCarter Rd
- 94
- Main St/Quillen Ave
- 95
- SC-14/Roper Mountain Rd
- 102
- Whie Horse Rd/Berea Dr
- 103
- White Horse/Old White Horse
- 104
- Edgewood/Miller
- 105
- Bridges/Bethel
- 106
- Haywood/I-385 Diverging Diamond
- 107
- Roper Mountain Rd/I-385
- 108
- Stone Ave/I-385

- 109
- Academy St/North St
- 110
- Stone Ave/Church St
- 111
- Mauldin Rd/Augusta St
- 112
- Pleasantburg Dr/Villa Rd/Century Dr
- 113
- Pleasantburg Dr/Antrim Dr
- 114
- Academy St/Pendleton St
- 115
- Pleasantburg Dr/Mauldin Rd
- 116
- Pleasantburg Dr/Rutherford Rd
- 117
- Haywood Rd/Pelham Rd
- 118
- Pleasantburg Dr/Cleveland St
- 119
- Augusta St/Church st
- 120
- Faris Rd/Cleveland St
- 121
- Larens Rd/Woodruff Rd
- 122
- Academy St/College St
- 123
- Stone Ave/Rutherford St
- 124
- Pelham Rd/E North St
- 125
- Laurens Rd/Verdae Blvd
- 126
- Roper Mountain Rd/Independence Blvd
- 127
- Laurens Rd/Millennium Blvd
- 128
- Westfield St/McBee Ave/West Broad St
- 129
- SC-14/S Buncombe Rd
- 130
- Harts Ln/Jonesville Rd
- 131
- Gap Creek Rd/Country Club Rd
- 132
- White Horse Rd/Duncan Chapel Rd
- 133
- Batesville Rd/Dry Pocket Rd
- 134
- Lynn Rd/Waters Rd
- 135
- US-123/Washington Ave
- 138
- Edwards Rd/Rushmore Dr

Pickens County

- 5
- Farrs Bridge/Hamburg
- 10
- Main Street (SC 93) and Pendleton St.
- 12
- Moorefield Memorial (US 178) and Rices Creek
- 18
- Moorefield Memorial (US 178) and Mauldin Lake
- 19
- Saluda Dam and Prince Perry
- 21
- Liberty St (SC 93) and Ross Rd.
- 29
- Moorefield Memorial (US 178) and LEC Rd
- 30
- Moorefield Memorial (US 178) and Belle Shoals
- 37
- Main (Liberty) @ Summit Dr
- 38
- Liberty St (SC 93) @ Ross Ave
- 39
- Farrs Bridge (SC 183) @ Dacusville Hwy
- 41
- 5th St @ 2nd St
- 49
- US 123/Dogwood/Pilgrim (Signal and Turn lanes)
- 50
- Issaqueena Trail/Cambridge
- 51
- Issaqueena Trail/Pendleton
- 52
- Issaqueena Tail/US 123 Ramps
- 66
- Main St. (Pickens) and Ann/Pendleton (realignment)
- 67
- US 123/ S Pendleton St
- 74
- US 123 and College St
- 75
- US 123/US 76
- 76
- College Blvd/Old Greenville Hwy
- 96
- Hwy 93/Hwy 123
- 136
- Crestview Rd/Sheffield Rd
- 137
- E Main St/Pepper St

Anderson County

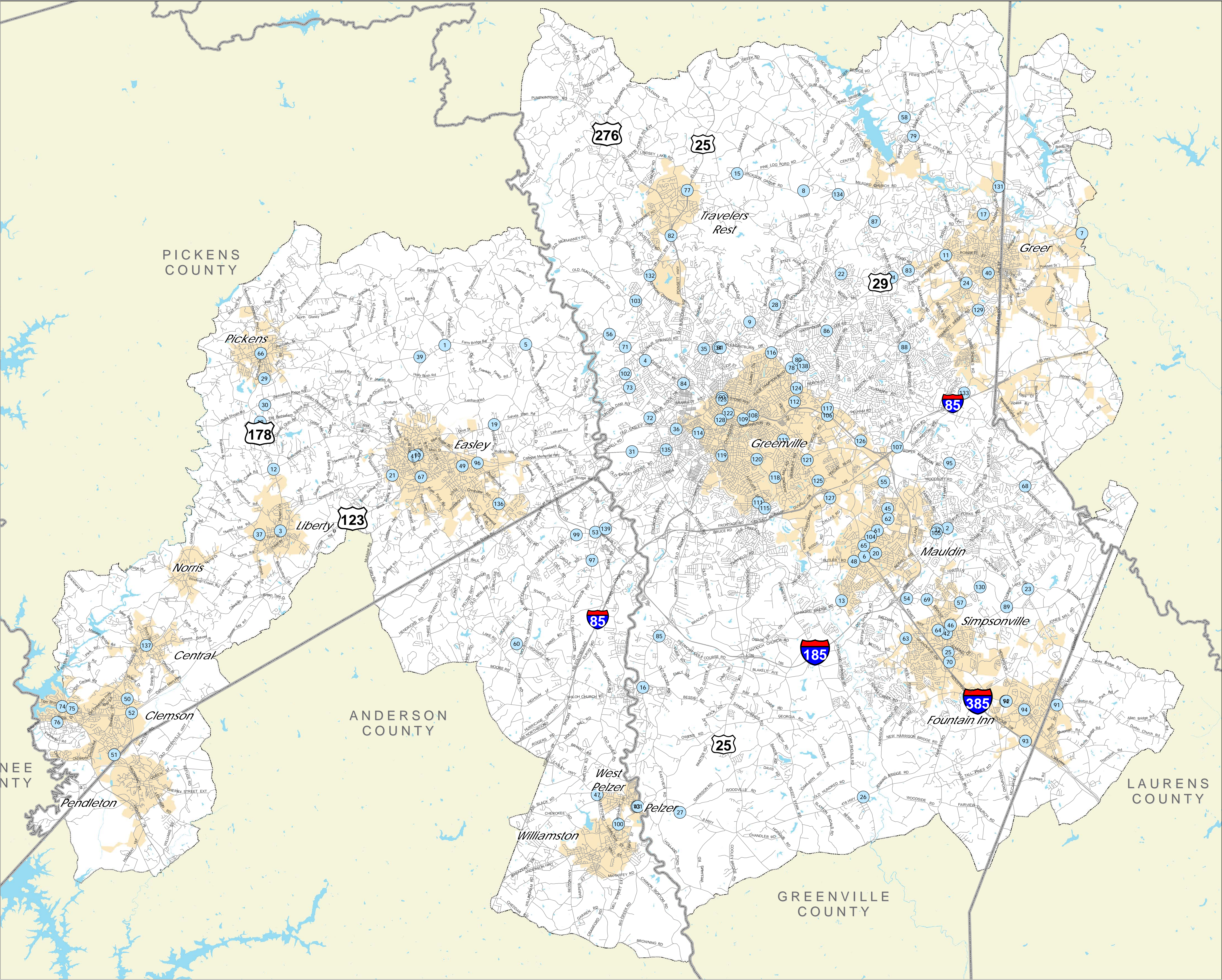
- 47
- Sc 8/Palmetto
- 53
- Three Bridges Rd/Powdersville Main
- 60
- SC86 and Wigginton Rd.
- 97
- Hwy 18/Cirice Rd
- 98
- James Rd/Powdersville Rd
- 99
- Powdersville Rd/3 Bridges
- 100
- Hwy 20/Courtney St
- 101
- SC-8/Murray St
- 139
- SC-81/Old Anderson Rd

Laurens County

- 91
- Durbin Rd/Hwy 418

Spartanburg County

- 7
- Wade Hampton (US 29) and Gap Creek Rd



Regional Congestion

Modeling future conditions for better planning



Modeling Congestion

The maps below show the results of the region's travel model, which helps predict the road network's future performance through a combination of existing data, population growth projections, and knowledge of future roadway improvements. The resulting maps help us understand where improvements might be necessary and how certain projects might affect future congestion.

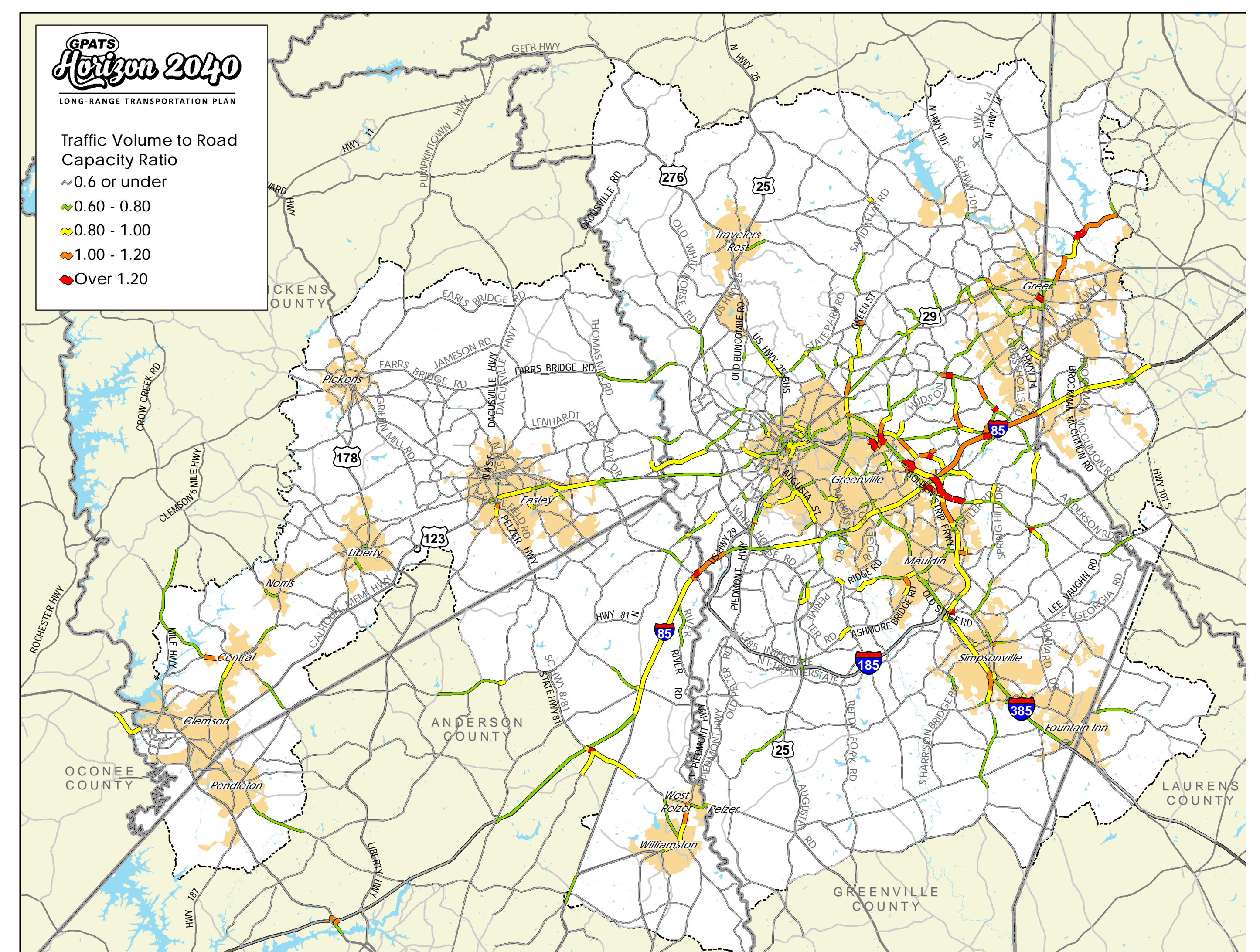
The data is displayed as a ratio of traffic volume to road capacity, meaning a road with a value of 1.0 is carrying the maximum amount of traffic it was designed for. Roads over 1.0 are carrying more traffic than they were designed for. This helps us understand which roads might be in need of widening, intersection improvements, or alternative routes to help relieve some of the pressure.

Mapping the Results

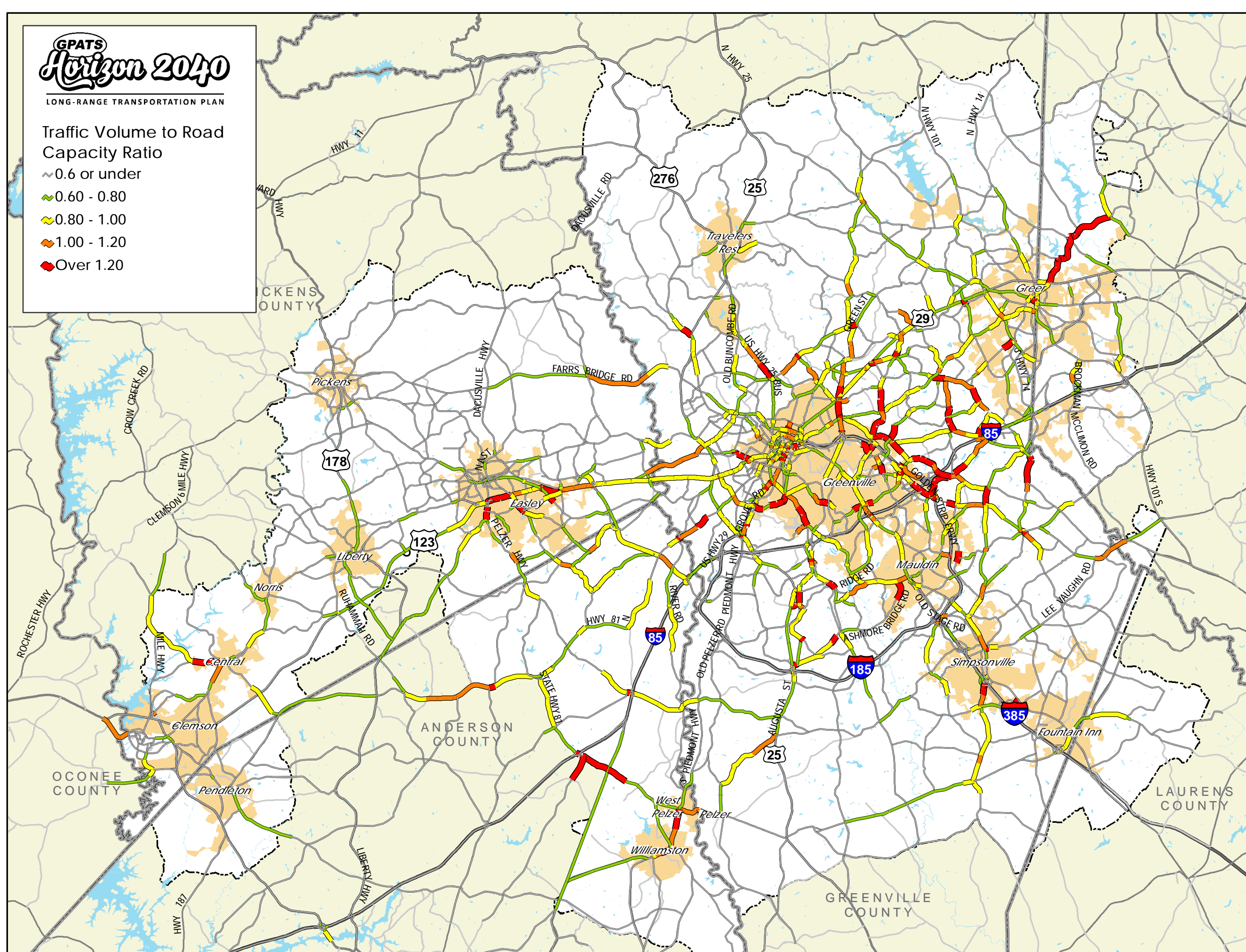
The maps shown here depict the following:

- **2015 Congestion Model:** The map at right shows 2015 congestion in the GPATS area, based on current data. This data gives us a good baseline when comparing future years.
- **2040 Congestion - Existing Projects:** The map below shows how the regional network is expected to perform in the year 2040 if the currently committed and funded roadway improvements are completed. Even with committed and funded projects, regional growth is projected to result in increased congestion.
- **2040 Congestion - Vision Plan:** The map at bottom right shows how congestion is expected to perform if all of the *Horizon 2040* recommended projects are completed. Note that some congested areas remain. While modeling these results help us decide which areas to focus on, they also suggest that the region will likely never be able to fully build its way out of congestion.

2015 Congestion Model



2040 Congestion Model - Existing Projects



2040 Congestion Model - Vision Plan

