Systems Inventory and Data Collection

Existing Conditions Final Technical Memorandum

March 2013

I-75 North
Atlanta
Chattanooga
Corridor Study

Georgia Department of Transportation

Systems Inventory and Data Collection

Existing Conditions Final Technical Memorandum

March 2013

Prepared for:

Georgia Department of Transportation

One Georgia Center

600 West Peachtree St NW

Atlanta, GA 30308

Prepared by:

Parsons Brinckerhoff

3340 Peachtree Road NE

Suite 2400

Atlanta, GA 30326

Consultant Team:

PARSONS BRINCKERHOFF

PARSONS

dpr Derryberry Public Relations

SYCAMORE Consulting, Inc.

CONTENTS

FIGURES

TABLES

1 INTRODUCTION

Providing safe and efficient transportation infrastructure for the movement of people and goods is a stimulus for improving Georgia's economy, a sentiment echoed in Governor Nathan Deal's strategic goals for the State. The Governor's strategies also emphasize the need to expand Georgia's role as a major logistics hub and to leverage public and private relationships to stay competitive in a 21st century global economy. In this context, the Governor recognizes the strategic importance of the Northwest Corridor (I-75 and I-575 north of Atlanta) to move people and goods. As work continues on the Northwest Corridor Project, the Georgia Department of Transportation (GDOT) has begun studying the I-75 Atlanta to Chattanooga Corridor for strategic improvements, as well.

GDOT is analyzing the conditions and operations to optimize the mobility and accessibility in the I-75 North corridor between Atlanta, Georgia and Chattanooga, Tennessee through the horizon year 2040. The study will address the short range and long range needs along the corridor, taking into account trends in population, employment, and economic growth on a local and regional level, as well as current and projected changes in travel patterns and demand. Overall system safety will be evaluated, including impacts due to changes in travel demand and user operations. Through this comprehensive study, needed improvements will be identified for the corridor, and a prioritized program of projects to meet travel demand and to enhance mobility will be developed for two time horizons: 2020 and 2040. Projects will encompass capacity, roadway operations and maintenance, safety and security, freight movement, and economic access opportunities.

The work plan for the development of the I-75 North Corridor Study follows the steps shown below:

- Systems Inventory and Data Collection
- Assessment of Corridor Deficiencies
- Development and Refinement of Multi-Modal Solutions
- Project Prioritization
- Preparation of the Corridor Improvement Plan/Program

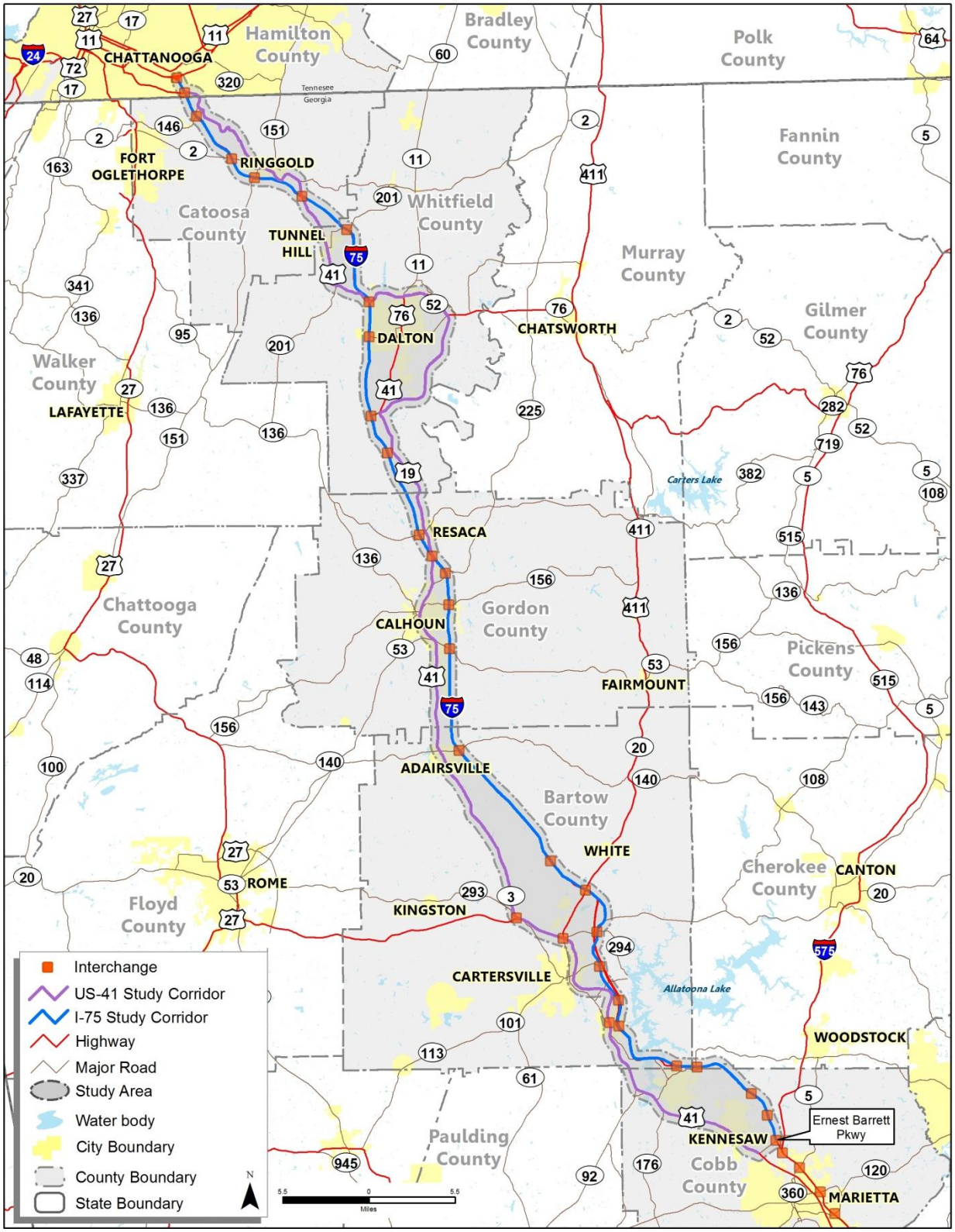
1.1 Project Background

The linkages between Atlanta and Chattanooga are growing. The I-75 North Corridor plays a key role in supporting the economic and social ties in northwest Georgia. The corridor provides critical regional access. It also provides key freight connectivity between ports in Savannah and Florida with the Midwestern United States. The anticipated completion of the Panama Canal expansion in 2014 will increase the importance of the corridor for the movement of overseas goods to and from the Midwest by truck and rail.

For these reasons, GDOT is analyzing the conditions and operations to optimize the mobility and accessibility in the I-75 North Corridor between Atlanta and Chattanooga through the horizon year 2040.

As illustrated in Figure 1-1, the study area for the I-75 North Corridor Study extends from just north of Barrett Parkway in Kennesaw to I-24 in Chattanooga, a distance of about 90 miles. The

Figure 1-1. Study Area



corridor encompasses ½-mile on either side of US-41 and I-75 in Cobb, Cherokee, Bartow, Gordon, Whitfield, and Catoosa Counties in Georgia and Hamilton County in Tennessee.

1.2 Purpose of this Report

The I-75/US-41 study corridor is a major local, state, and regional freight route and an important intercity route for users traveling to, from, and through Atlanta and Chattanooga. Population and freight movement along this corridor are forecast to increase significantly over the coming decades. Metropolitan planning organizations (MPO) within the study area estimate that their populations will grow between 33 and 77 percent.[1] GDOT anticipates that truck traffic on I-75 between I-285 and Chattanooga will increase by 109 percent by 2035. As this growth occurs over time, competing uses by automobiles and trucks are expected to increase, thereby reducing the efficiency and capacity along the I-75 North Corridor. Thus, the identification of potential actions, improvements, and measures to efficiently move people, goods, and services along the corridor is important to the local, state, and regional economy.

This study will provide recommendations addressing the anticipated future growth along the I-75/US-41 study corridor by analyzing the existing conditions within the study area and modeling growth and development scenarios for the study area.

1.3 Organization and Content

This report is organized into 13 sections summarizing existing conditions research, analyses, and stakeholder outreach throughout the corridor. Section 2 (Previous Plans) lists previous planning efforts and projects throughout the study area. Section 3 (Performance Goals and Measures), identifies criteria for prioritizing improvements. Section 4 (Congestion) highlights the existing and future congested segments along the study area. Section 5 (Operations and Maintenance) summarizes the intelligent transportation systems (ITS) along the study area, including incident response, real-time travel updates, 511 systems, electronic message signs, transportation management centers, and video detection equipment. In addition, a brief history of ITS implementation and future expansion plans along the corridor are provided. Section 6 (Crash Data Analysis) identifies segments along the study corridor that exceed statewide average crash rates. Section 7 (Freight Movement and Diversion) describes the actions and plans of shifting from trucks to rail. Existing and future freight movement operations and issues by both trucks and rail are summarized. Section 8 (Passenger Rail) summarizes the most recent high-speed rail feasibility study completed in 2012 and discusses intercity connections. Section 9 (Transit Services) provides the operational characteristics and ridership of transit routes within the study area. Section 10 (Economic Access) summarizes regionally significant developments that may put a strain on the adjacent road network in the study area. Section 11 (Environmental Conditions) summarizes information obtained through a desktop survey of historical sites and environmentally sensitive habitats for the study area; and existing and future land use. Section 12 (Stakeholder Outreach) synthesizes stakeholder issues identified through an outreach process. Finally, Section 13 (Appendices) includes detailed results of the congested segments analysis from Section 4 as well as the crash rates analysis from Section 6.

[1] Population growth estimates include 51 percent growth from 2010 to 2040 in the Atlanta region, 77 percent growth from 2006 to 2035 in the Dalton region, and 33 (North Georgia) to 40 (Hamilton County) percent growth in the Chattanooga region.

2 PREVIOUS PLANS

Various agencies and organizations have studied portions of the I-75 North Corridor study area over the past decade. These studies, listed in Table 2-1, include statewide and regional transportation plans, freight studies, transit studies, and community comprehensive plans as of 2012.

Table 2-1. Previous Plans and Projects in the Study Area

Agency/Organization	Title	Year
Acworth	City of Acworth Comprehensive Plan	2007
Atlanta Regional Commission (ARC)	Plan 2040 Regional Transportation Plan	2011
	FY 2012-2017 Transportation Improvement Program	2011
	Transportation Investment Act Final Report: Approved Investment List Atlanta Roundtable Region	2011
	Regional Snapshots	Ongoing
	Atlanta Regional Freight Mobility Plan	2008
	Atlanta Strategic Truck Route Master Plan	2009
	Concept 3	2008
Bartow County	Joint County-City Comprehensive Plan 2007-2027	2008
Cartersville	2030 Comprehensive Master Plan	2007
Chattanooga-Hamilton County Regional Planning Agency (C-HCRPA)	Chattanooga Regional Freight Profile	2011
	Regional Travel Survey	2011
	Chattanooga Area Regional Bicycle and Pedestrian Plan	2010
	Chattanooga Urban Area Transportation Improvement Program	2010
	Long Range Transportation Plan 2035	2010
	Mass Transit Alternatives	2009
	North Georgia Feeders Transportation Study	2009
Cobb County Department of Transportation	Connect Cobb Alternatives Analysis	2012
Cobb Community Transit (CCT)	Service and Marketing Study	2011
Commission for a New Georgia	Task Force on Freight & Logistics Final Report	2008
Greater Dalton Metropolitan Planning Organization (GDMPO)	FY 2012-2015 Transportation Improvement Program	2011
	North Whitfield County Roadway Corridor Study	2011
	2035 Long Range Transportation Plan	2010
Georgia Department of Community Affairs (GDCA)	Developments of Regional Impact	2006-12
Georgia Department of Transportation (GDOT)	Atlanta to Chattanooga High Speed Ground Transportation Project Alternatives Analysis	Ongoing
	High Speed Rail Planning Services	2012
	FY 2012-2015 State Transportation Improvement Program	2011
	Georgia Statewide Freight and Logistics Plan, 2010-2050	2011
	Northwest Corridor Project Final Environmental Impact Study	2011
	Georgia Statewide Freight & Logistics Master Plan	2010
	Statewide Strategic Transportation Plan 2010-2030	2010
	State Rail Plan	2009

Agency/Organization	Title	Year
	Crash Analysis, Statistics, and Information Notebook	2008
	Statewide Truck Lanes Needs Identification Study	2008
	2005-2035 Georgia Statewide Transportation Plan	2007
	2005-2035 Georgia Statewide Freight Plan	2005
	HOV Strategic Implementation Plan for the Atlanta Region	2003
Georgia Regional Transportation Authority (GRTA)	2010 Transportation Metropolitan Atlanta Performance Report	2010
Kennesaw	2006-2026 Kennesaw Comprehensive Plan	2007
Kennesaw State University (KSU)	Kennesaw State University Transit Feasibility Study	2012
Lake Point, LLC	Traffic Impact Study for Lake Point Development	2011
	Traffic Impact Study for Lake Point South	2012
North Georgia Regional Development Center (NGRDC)	Transportation Needs Study	2006
Northwest Georgia Regional Commission (NWGRC)	Catoosa County Joint Comprehensive Plan	2010
	Transit Development and Coordination Plan	2010
Town Center Area Community Improvement District (TCACID)	Various improvement plans	Ongoing
Tennessee Department of Transportation (TDOT)	I-24 Corridor Feasibility Study	2012
	I-75 Corridor Feasibility Study	2010
	Transportation Enhancement Program: Exit 1 Gateway to Tennessee	2009
	Transportation Enhancement Program: Ringgold Road Multi-Use Streetscape	2009
	Tennessee Transportation Improvement Program FY 2008-2011	2007
	Plan Go	2005
	An Evaluation of the Tennessee Rail Plan's Treatment of a Trans-Tennessee Rail Routing	2005
	High Speed Trains: Nashville-Chattanooga-Atlanta: Application for Federal High Speed Rail Corridor Designation	2003
	I-75 @ I-24 Directional Interchange Area Interchange Modification Study	2002
	Tennessee Rail System Plan	2002
Whitfield County	Multimodal Transportation Study	2003

3 PERFORMANCE GOALS AND MEASURES

The Systems Inventory and Data Collection report will provide a basis for determining the performance (costs and benefits) of operational improvements ranging from Intelligent Transportation Systems (ITS) to significant construction activities in the study corridor. Each potential improvement will undergo a rigorous review to determine its performance against an established set of measures. GDOT will rank and prioritize improvements based on how well each potential improvement accomplishes the performance goals.

The selected performance measures are based on a federal set of performance goals outlined in 2012 by the United States Department of Transportation (USDOT) in response to the Moving Ahead for Progress in the 21st Century (MAP-21) legislation. This section summarizes the MAP-21 goals and provides appropriate performance measures applicable to the project.

3.1 MAP-21 Guidelines

MAP-21 establishes national performance goals for the Federal-aid highway program. The objective of this performance- and outcome-based program is for states to prioritize projects and invest scarce and limited resources in projects that not only achieve individual targets, but also collectively support and further national goals:

> "Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment of Federal transportation funds by refocusing on national transportation goals, increasing the accountability and transparency of the Federal-aid highway program, and improving project decision-making through "[§1203; 23 USC 150(a)]

MAP-21 establishes seven national performance goals for Federal highway programs:

- **Safety**: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure condition**: To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion reduction**: To achieve a significant reduction in congestion on the National Highway System (NHS).
- **System reliability**: To improve the efficiency of the surface transportation system.
- **Freight movement and economic vitality**: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental sustainability**: To enhance the performance of the transportation system while protecting and enhancing the natural environment.

- **Reduced project delivery delays**: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The legislation also requires the Secretary, in consultation with states, MPOs, and other stakeholders, to establish performance measures in the areas listed below within 18 months of enactment (by March 31, 2014) [§1203; 23 USC 150(c)]:

- Pavement condition on the Interstate System and on remainder of the NHS
- Performance of the Interstate System and the remainder of the NHS
- Bridge condition on the NHS
- Fatalities and serious injuries—both number and rate per vehicle mile traveled--on all public roads
- Traffic congestion
- On-road mobile source emissions
- Freight movement on the Interstate System

The national performance standards have not yet been established (MAP-21 requires establishment by March 31, 2014.); therefore, the performance measures identified in this study are consistent with the most recent information and guidance available from USDOT. In addition, the identified improvements will meet the funding eligibility requirements under each applicable federal-aid funding category.

3.2 GDOT Statewide Performance Goals and Measures

The study will include an evaluation of potential improvements based on a set of performance measures. These performance measures will include statewide measures to ensure consistency and cost-effective use of limited state resources for proposed highway improvements throughout the state, as well as regional measures to address unique, region-specific characteristics.

The identified performance measures for this study will be consistent with other similar studies, including the I-75 South and the Central Corridor Studies.

4 CONGESTION

The I-75/US-41 corridor between Atlanta and Chattanooga is an economic engine for the State, containing a large population and many service, industrial, and freight-related jobs. Congestion along this corridor, particularly near urban areas and industrial centers, is a byproduct of its success. This section identifies congested segments along the corridor using several different methods:

- A Level of Service (LOS) analysis using data provided by GDOT and TDOT
- A summary of congested segments identified in previous planning documents
- A list of planned and proposed roadway capacity expansion projects

4.1 Congested Segments Based on Analysis

This study analyzed congestion throughout the corridor by calculating the LOS for discrete segments of I-75, US-41, and the roadways that link the two highways. The congested segments analysis is a high-level screening tool that identifies roadways for more detailed study. Segments with a LOS D[2] or worse will be analyzed in greater detail in a separate memorandum under Task 5: Assessment of Deficiencies. For congestion analysis, discrete segments were primarily defined using functional classification and number of lanes. More specifically:

- I-75 segments span the distance between interchanges, totaling 27 segments. Because US-41 parallels I-75 throughout the corridor, its segments similarly span the distance between roadways that have existing or planned I-75 interchanges. These segments were further divided by functional classification and then the number of lanes to isolate specific criteria that may contribute to congestion.
- Segments for roadways that link I-75 to US-41 were similarly divided by functional classification and number of lanes.

The congestion analysis utilized methodologies established in the 2010 Highway Capacity Manual (HCM) to compute high-level LOS for freeways, highways, and arterials. Because levels of congestion vary throughout the day and by direction, congested segments analyses for this document were performed only for the peak direction during the highest peak hour (morning or afternoon) for each segment. However, northbound and southbound I-75 segments were treated as separate roadways, and this study analyzed both the southbound and northbound peak hour independently for each I-75 segment.

Peak-hour LOS results are shown in Figure 4-1 through Figure 4-3. These figures present the LOS rating of the most congested time period for each segment. However, LOS ratings for I-75 segments are presented by flow direction (northbound and southbound) and LOS ratings for US-41 segments and the roadways linking I-75 and US-41 are presented regardless of direction.

[2] LOS D may be considered acceptable in many MPO LRTPs. However, this study highlights LOS D segments for further study because these segments may deteriorate to LOS E or F by 2040 as a result of anticipated growth in population and freight movement.

Figure 4-1. Existing Congested Segments Analysis (2010 LOS) – South Section

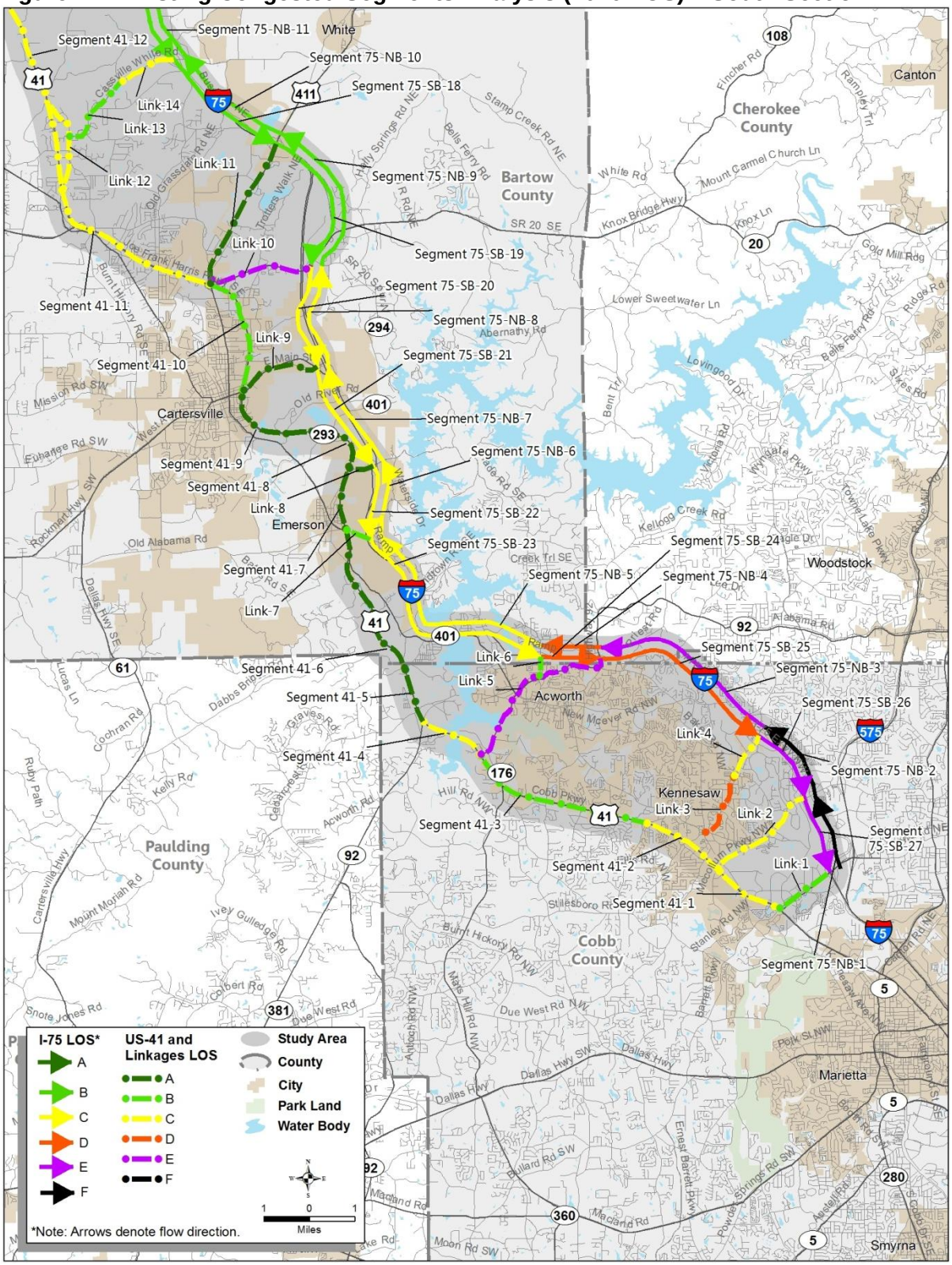


Figure 4-2. Existing Congested Segments Analysis (2010 LOS) – Central Section

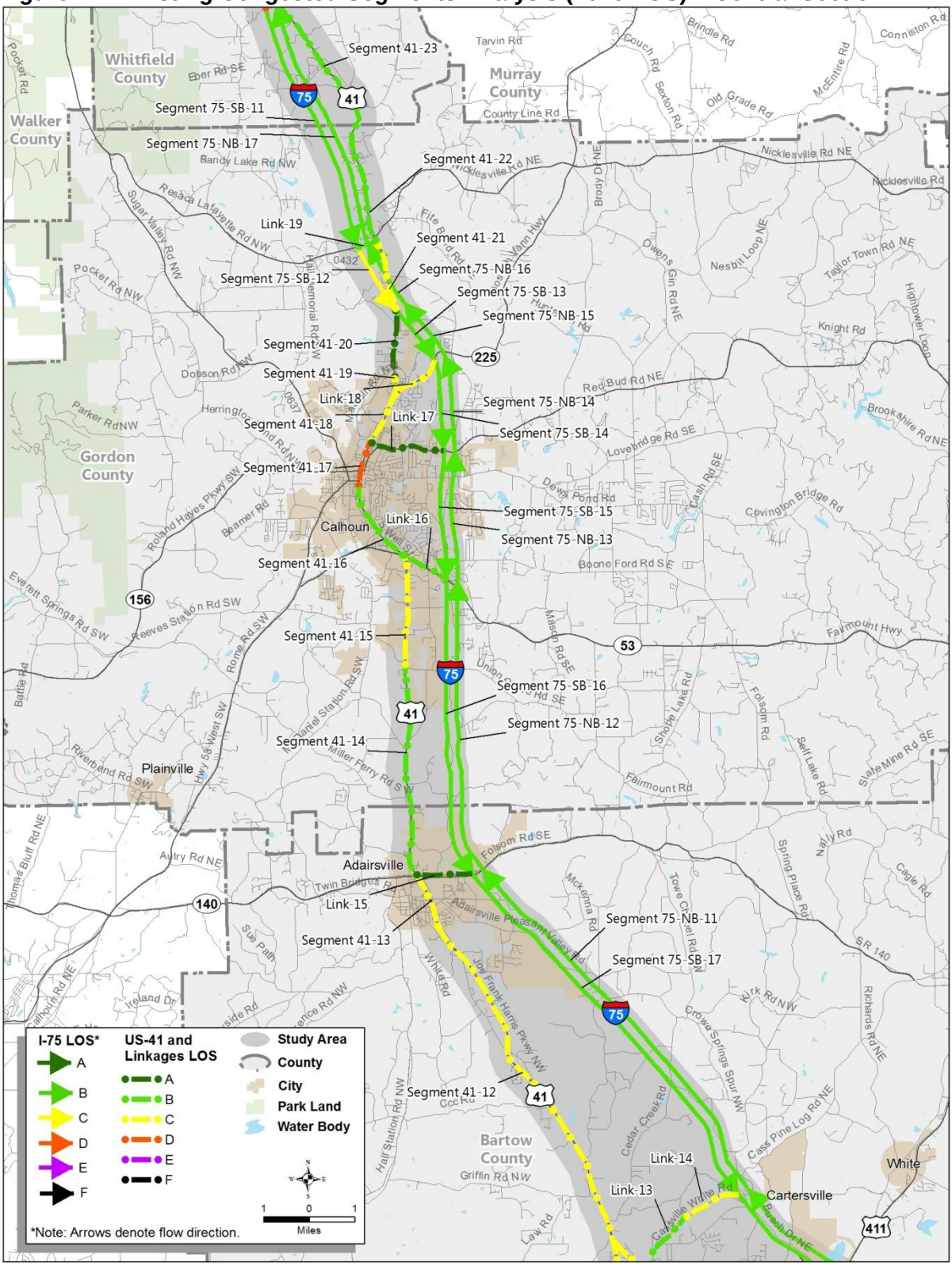
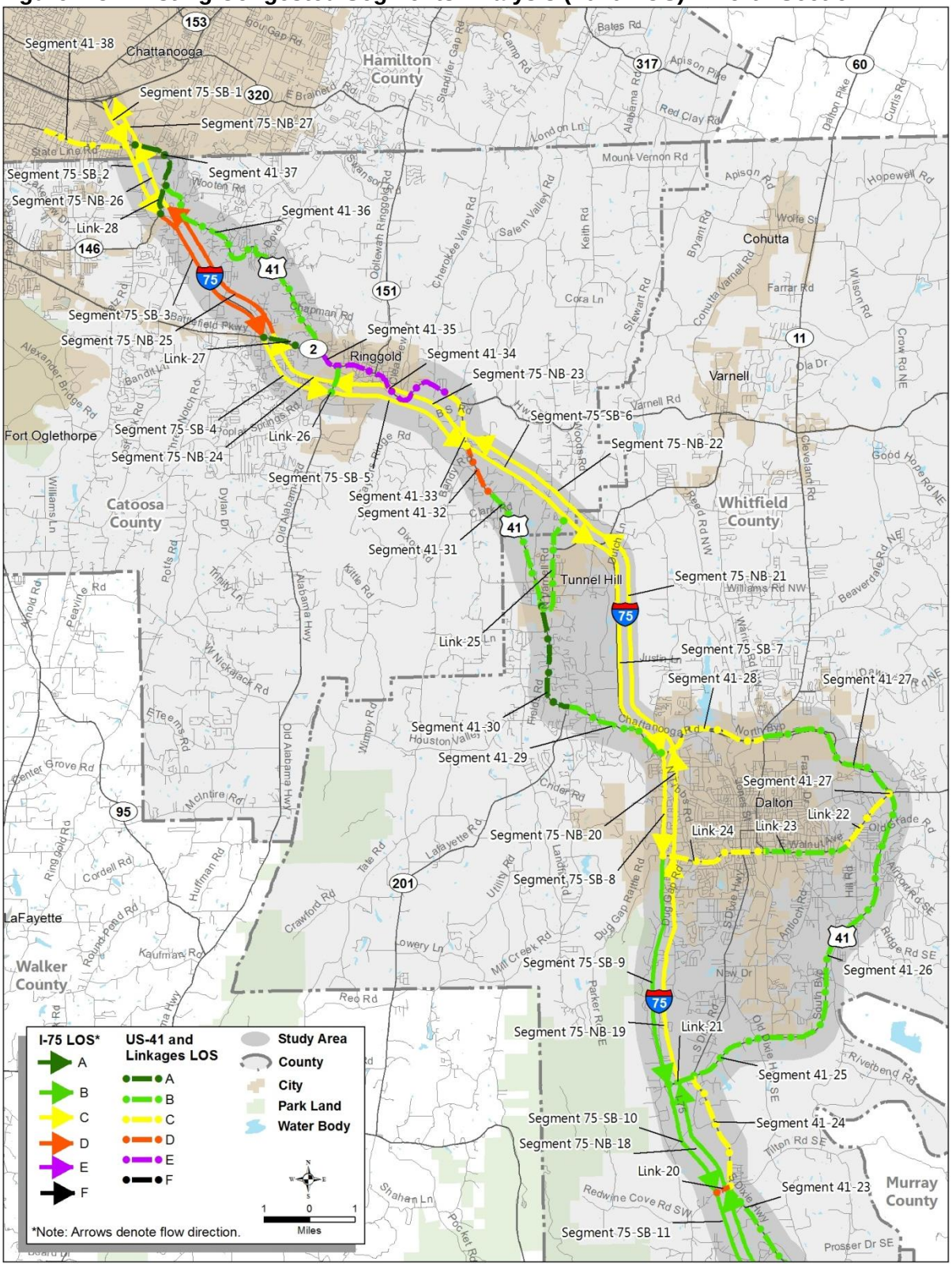


Figure 4-3. Existing Congested Segments Analysis (2010 LOS) – North Section

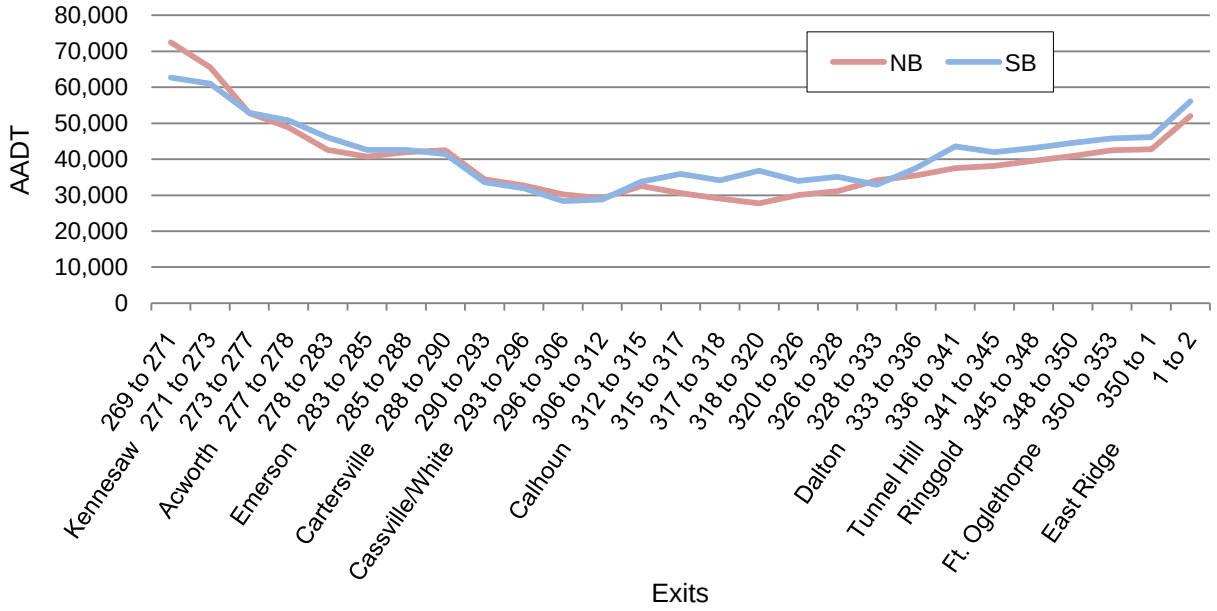


Detailed LOS information for Figure 4-1 through Figure 4-3 and the following summary is provided in the Appendices (Section 13.1). Based on the analysis, poor performing (LOS D or worse) I-75 segments are located in the Atlanta and Chattanooga regions, the largest population centers in the study area. The most congested I-75 segments are located south of Glade Road (exit 278) and north of Battlefield Parkway (exit 350). The 5:00 to 6:00 PM period is typically the most congested in these urban areas. The peak hour of segments within more rural counties varies, but generally occurs sometime between 2:00 to 7:00 PM. These segments perform better—LOS B and C—than the urban segments that bookend the study area.

Congestion along US-41 is most prevalent in segments where the highway passes through areas of commercial development. Where US-41 enters a town, congestion increases as the average vehicle speed decreases due to lower speed limits, more cross streets and driveways, and/or reduction of lanes. The most congested segments are found in or near downtown Kennesaw, Calhoun, and Ringgold. The peak hour and direction varies by segment, but most segments experience peak hourly volumes sometime between 4:00 to 6:00 PM. As an exception, the peak hour for US-41 segments in Dalton, as part of the Dalton Bypass, is 7:00 to 8:00 AM. Some of the roadways that link I-75 and US-41 throughout the study area experience high peak-hour congestion. In particular, poor performing segments are located in or near town centers, areas of commercial development, or on narrower roadways with only two travel lanes. Most segments between I-75 and US-41 see peak-hour volumes between 5:00 and 6:00 PM.

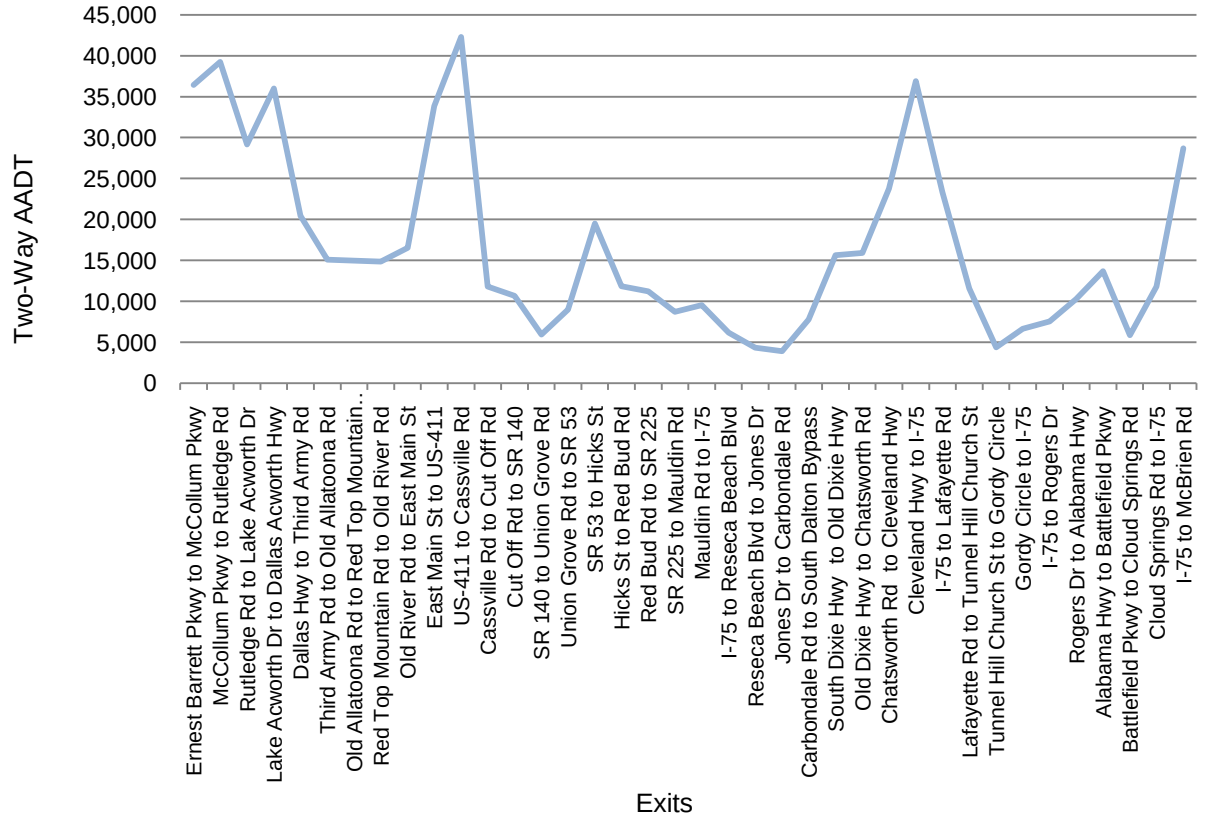
As illustrated in Figure 4-4, Annual Average Daily Traffic (AADT) along I-75 is the highest near Kennesaw. LOS is worse in this area than the rest of the study area. A similar pattern can be observed around Tunnel Hill to Chattanooga and East Ridge as well. As shown in Figure 4-5, AADT varies considerably throughout the US-41 corridor. Peak volumes occur in or adjacent to town centers, including in Kennesaw, Cartersville, Dalton, and Chattanooga.

Figure 4-4. I-75 AADT



Source: GDOT, TDOT, and Traffic Counts

Figure 4-5. US-41 AADT



Source: GDOT and TDOT

In addition to the congested segment analysis, this study checked ramp capacity for all I-75 and US-41 interchanges within the study area. This high-level analysis compared ramp AADT to ramp capacity outlined in Table 4-1. Ramp capacity analysis, based on the 2010 HCM data, provides a first check to identify potentially congested ramps. Details of the ramp capacity analysis are highlighted in Table 12-5 and Table 12-6 in the Appendices (Section 13.1).

Table 4-1. Capacity of Ramp Roadways

Ramp Free-Flow Speed (miles per hour)	Capacity of Ramp Roadway (passenger cars per hour)	
	Single-Lane Ramps	Two-Lane Ramps
> 50	2,200	4,400
40 to 50	2,100	4,200
30 to 40	2,000	4,000
20 to 30	1,900	3,800
< 20	1,800	3,600

Source: *Highway Capacity Manual 2010*

The analysis found that capacity is not exceeded on any ramp within the study area. Capacity, however, is only one aspect in determining deficient ramps. Additional indicators of potential ramp deficiencies that will be investigated during Task 5 (Assessment of Deficiencies) include

locations with significant reduction in free-flow speed (e.g. loop ramps), high crash frequency, an unsignalized intersection, known issues identified by stakeholders, or where design hour ramp volumes are near capacity.

4.2 Congested Segments Based on Plans and Reports

4.2.1 Atlanta Region

The Atlanta region's transportation performance is documented annually by a variety of agencies in the *Transportation Metropolitan Atlanta Performance Report* (MAP report). The 2010 edition of MAP report, which used 2009 data, includes performance metrics for the segment of I-75 from I-285 to Wade Green Road (exit 273), a part of which (Ernest Barrett Parkway to Wade Green Road) is contained in the I-75 North Corridor Study. Table 4-2 highlights results of three metrics from the 2010 MAP report for this I-75 segment and compares them to the metropolitan Atlanta average. The metrics of Table 4-2 are:

- Travel Time Index (TTI), which measures the degree of congestion experienced by a traveler compared to free-flow conditions. A freeway that experiences free-flow conditions has a TTI of 1.0. TTI values greater than 1.0 represent slower travel speeds with more congestion.

- Planning Time Index (PTI), which measures day-to-day trip reliability. A PTI of 1.0 implies that the traveler does not need to allot additional trip time to arrive at the destination on time. As the PTI increases above 1.0, a traveler must allot additional time to his or her trip due to unreliability in travel conditions.

- Buffer Time Index (BTI) is similar to PTI and measures trip reliability, but is represented as a percentage. The closer to 0 percent the better, as trip reliability decreases with larger values.

Table 4-2. Performance Metrics for I-75 from Barrett Parkway to Wade Green Road (2009)

Measure	Metropolitan Atlanta Freeways		SB I-75 in Study Area		NB I-75 in Study Area	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Travel Time Index	1.18	1.20	1.43	1.00	1.00	1.57
Planning Time Index	1.50	1.72	1.94	1.06	1.08	2.15
Buffer Time Index	28.5%	37.9%	42%	8%	12%	38%

Source: 2010 *Transportation Metropolitan Atlanta Performance Report*

The portion of I-75 within the study area performs worse than the metropolitan Atlanta average for all three indexes in the peak directions (i.e. southbound in the AM Peak and northbound in the PM Peak), indicating this segment experiences more congestion, less reliability, slower travel speeds, and greater travel times compared to the metropolitan Atlanta average.

The MAP report indicates that 2006 was the worst year for freeway travel performance in the entire metropolitan Atlanta region. Since that point, the TTI, PTI, and BTI regionwide averages have improved (see Table 4-3). This improvement in the performance of the Atlanta metropolitan region's freeway network is likely attributable to reduced volume from the economic recession during the same period.

Table 4-3. Congestion Reduction in the Atlanta Metropolitan Region

Measure	AM Peak			PM Peak		
	2006	2009	Difference	2006	2009	Difference
Travel Time Index	1.34	1.18	-11.9%	1.36	1.20	-11.8%
Planning Time Index	1.80	1.50	-16.7%	2.02	1.72	-14.9%
Buffer Time Index	33.8	28.5	-15.7%	42.9	37.9	-11.7%

Source: 2010 *Transportation Metropolitan Atlanta Performance Report*

The Atlanta MPO—Atlanta Regional Commission (ARC)—most recently compiled and mapped the most congested roadways in the Atlanta metropolitan area in the July 2010 *Regional Snapshot* as part of the federally required Congestion Management Process. ARC ranks congested roadways on three criteria: intensity (the average daily delay for commuter), duration (the length of average delay), and extent (the number of people affected). The results of the ARC's analysis revealed that several study-area arterials are considered some of the most congested in the region, as summarized in Table 4-4. In addition, I-75 between Ernest Barrett Parkway and SR 92 is within the top 25 percent of the region's most congested freeways.

Table 4-4. Atlanta Region's Most Congested Arterials within the I-75 Study Area

Congested Arterial	Segment within Study Area Only
Top 10 Percent Most Congested Arterials	
Ernest Barrett Pkwy	I-75 to US-41
US-41	Ernest Barrett Pkwy to Old Allatoona Rd
Jiles Rd	Cherokee St to US-41
Mars Hill Rd	South of US-41
SR 20	East of I-75
Top 25 Percent Most Congested Arterials (Excluding Segments Already Listed in the Top 10 Percent)	
SR 92	US-41 to I-75
SR 92	South of US-41
Cherokee St/Shiloh Rd	Main St (Kennesaw) to Wooten Lake Rd
Old US-41	US-41 to Ernest Barrett Pkwy

Source: ARC *Regional Snapshot*, July 2010

The ARC calculated that the southbound segment of Ernest Barrett Parkway southwest of I-75, which is partially within the study area, is the third most congested non-interstate facility in Cobb County. Within Bartow County, all of the top three most congested non-interstate facilities are found, at least partially, within the study area (in order):

1. Old Alabama Road (eastbound) from SR 61 (Dallas Highway) to SR 293 (S. Tennessee Street)

2. N. Tennessee Street (southbound) from US-41 to SR 113 (W. Main Street)

3. Old Alabama Road (westbound) from SR 293 (S. Tennessee Street) to SR 61 (Dallas Highway)

4.2.2 Dalton Region

The Greater Dalton Metropolitan Planning Organization's (GDMPO) *2035 Long Range Transportation Plan* (LRTP) identifies that SR 3/US-41 is congested and has other operational issues such as lack of left-turn bays, lack of signalization, and sight distance concerns.

The *Whitfield County/City of Dalton Multimodal Transportation Study* (2003) identifies some congested roadways in the area as well, including the northbound and southbound I-75 ramps at Walnut Avenue/SR 52 and the North Dalton Bypass (US-41/US-76) and Cleveland Highway (SR 71) intersection. About 70 percent of vehicles traveling eastbound on the North Dalton Bypass turn north onto Cleveland Highway with one dedicated left turn lane and one shared left/straight lane for the eastbound to northbound movement. This type of shared lane usage requires the signal at the intersection to be split phased, with the east/westbound approaches receiving their green signal phases one after the other in a sequence rather than concurrently, causing additional signal control delays at this intersection. The study also mentioned congestion at Dalton-area intersections due to inadequate turning radii for trucks with 53-foot trailers.

4.2.3 Chattanooga Region

Like ARC, the Chattanooga-Hamilton County Regional Planning Agency (C-HCRPA) uses the Congestion Management Process (CMP) to define congested roadways. The agency last updated its CMP for its *Long Range Transportation Plan 2035* document, released in February 2010, resulting in an AM and PM peak period level of service analysis for year 2008. The results show that most congestion in the study area is found in Georgia near Ringgold and Tunnel Hill. Table 4-5 highlights these congested roadways in the Chattanooga-Hamilton County area.

Table 4-5. Chattanooga-Area Congested Roadways (LOS D or Worse)

Congested Roadway	AM and PM Peak LOS	Segment within Study Area
US-41	D	Chapman Rd to Whaley Ln
Tunnel Hill Varnell Rd	D	I-75 to Reed Rd

Source: C-HCRPA *Long Range Transportation Plan 2035*

4.3 Projects Identified in Plans and Reports

4.3.1 Metropolitan Planning Organizations

Roadways in the study area that are currently or anticipated to be congested may also be identified through capacity expansion projects found in MPO Transportation Improvement Programs (TIP) or Long Range Transportation Plans (LRTP). Often such capacity-expansion projects are in response to existing congestion or safety issues.

The projects listed in Table 4-6 are considered cost-feasible by various LRTPs for horizon years ranging from the short to long term. In addition to the cost-feasible projects, each MPO develops a list of unfunded, or aspirational, future projects to address a variety of issues. Aspirational capacity expansion projects for MPOs in the study area are summarized in Table 4-7, and, like the list of financially constrained projects, are identified in response to current or emerging

congestion on area roadways. Figure 4-6 through Figure 4-8 highlight the projects listed in Table 4-6 and Table 4-7.

Table 4-6. Financially Constrained Capacity Expansion Projects

Roadway	Proposed Project	Project Limits	MPO Project ID	Horizon Year	Category*
Atlanta Regional Commission (MPO)					
I-75	Managed lanes	Akers Mill Rd to Hickory Grove Rd	AR-ML-930	2020	1
Big Shanty Rd	Extension under I-75	George Busbee Pkwy to Town Point Pkwy	CO-297B	2030	3
SR 92	Widen: 2 to 4 lanes	US-41 to Glade Rd (near I-75)	CO-301	2030	3
SR 92 Connector	New roadway	Paulding County line to US-41	CO-329	2030	3
Greater Dalton Metropolitan Planning Organization (MPO)					
I-75	Reconstruct interchange	Chattanooga Rd (US-41)	LRTP 1; TIP 0000931	2010-15	1
I-75	Reconstruct interchange	Carbondale Rd	LRTP 2; TIP 610890	2010-15	2
US-41	Intersection improvement	Cleveland Hwy (SR 71)	LRTP 38	2010-15	3
US-41	Widen: 2 to 4 lanes	SR 3 Connector to Gordon County line	LRTP 56; TIP 632670	2016-25	2
I-75	Widen	SR 201	LRTP 10-13	2016-25	3
US-41	Widen	Campbell Rd to Catoosa County line	LRTP 3	2016-25	3
US-41	Widen	SR 3 Conn to Walnut Ave	LRTP 11	2016-25	3
US-41	Intersection improvement	Old Chattanooga Rd	LRTP 21	2016-25	3
Morris Street	Widen: 2 to 4 lanes	SR 52 to Glenwood Ave	LRTP 15	2026-35	3
Underwood Rd	Widen: 2 to 4 lanes	Dawnville Rd to N Dalton Bypass	LRTP 6	2026-35	3
Dug Gap Rd	Widen	Trade Center Dr to Hurricane Rd	LRTP 50	2026-35	3
Chattanooga-Hamilton County Regional Planning Agency (MPO)					
Three Notch Rd	Widen: 2 to 4 lanes	Boynton Road to GA SR 2	LRTP 91	2015	3
GA SR 151	Widen: 2 to 4 lanes	Holcomb Road to US-41	LRTP 5; TIP STP-98-2	2025	1
TN SR 321/GA SR	Widen: 2 to 4 lanes	Lee Hwy to US-41	LRTP 6	2025	3
I-75 NB ramp	Widen: 1 to 2 lanes	I-75 NB to I-24 WB	LRTP 104	2025	3
Ringgold bypass	New roadway	SR 151 to US-41	LRTP 83	2025	3
GA SR 2	Widen: 4 to 6 lanes	S Cedar Ln to I-75	LRTP 35	2035	3
Camp Jordan Pkwy extens.	New roadway	Camp Jordan Rd to Gunbarrel Rd	LRTP 38	2035	3

Roadway	Proposed Project	Project Limits	MPO Project ID	Horizon Year	Category*
Moore Rd	Widen: 2 to 4 lanes	Ringgold Rd to N Terrace Rd	LRTP 73	2035	3

* 1) Construction phase in TIP; 2) Development phase(s) in TIP, construction phase in LRTP; and 3) All project phases in LRTP, not TIP
Source: ARC, GDMPO, C-HCRPA

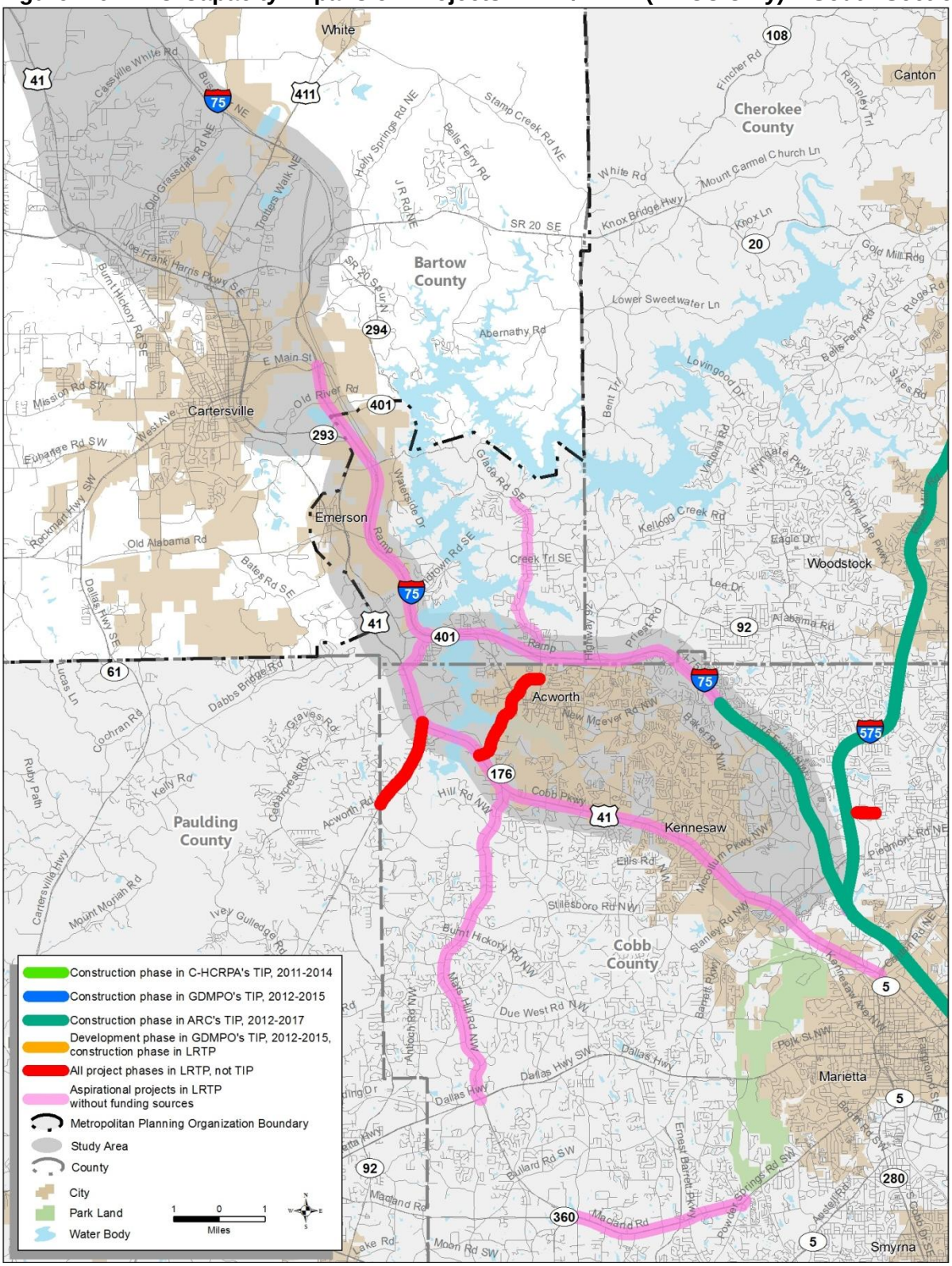
Table 4-7. Aspirational Capacity Expansion Projects

Roadway	Proposed Project	Project Limits	MPO Project ID	Horizon Year
Atlanta Regional Commission (MPO)				
I-75	Managed lanes interchange mod	I-75 and I-575	ASP-AR-ML-013	2041+
I-75	Managed lanes	Hickory Grove Rd to SR 113	ASP-AR-ML-940	2041+
I-75	New interchange	I-75 and Third Army Rd	ASP-CO-411; ASP-CO-421	2041+
US-41	Widen: 4 to 6 lanes	Third Army Rd to Canton Rd Connector	ASP-CO-412	2041+
Mars Hill Rd	Widen: 2 to 4 lanes	Dallas Hwy to US-41	ASP-CO-418	2041+
Glade Rd	Widen	Bartow Carver Rd to Homestead Rd	ORP-BT-015	TBD
Greater Dalton Metropolitan Planning Organization (MPO)				
SR 201	Widen: 2 to 4 lanes	Mt. Vernon Rd to US-41	LRTP 18	TBD
Riverbend Rd	Widen: 2 to 4 lanes	S Dalton Bypass to Walnut Ave	LRTP 25	TBD
N Dalton Byp.	New interchange	N Dalton Bypass at SR 71	LRTP 47	TBD
Thornton Ave	Widen: 2 to 4 lanes	N Dalton Bypass to Waugh St	LRTP 7	TBD
Brickyard Rd & Antioch Rd	Widen: 2 to 4 lanes	US-41 to Riverbend Rd	LRTP 19	TBD
Mill Creek Rd	Widen	Hurricane Rd to US-41	LRTP 37	TBD
Dug Gap Rd	Widen	S Dalton Bypass to Dug Gap Mtn Rd	LRTP 42	TBD
I-75	Widen: 6 to 8 lanes	Gordon County to Catoosa County	LRTP 60	TBD
I-75	New interchange	I-75 at Waugh St	LRTP 60	TBD
SR 52	Widen: 4 to 6 lanes	SR 52 Business to CR 112	LRTP 14	TBD
E Dug Gap Rd & Treadmill Rd	Widen	Dug Gap Road to US-41	LRTP 41	TBD
SR 52	Widen: 4 to 6 lanes	Dalton Bypass to county line	LRTP 17	TBD
S Dalton Bypass	Widen: 4 to 6 lanes	I-75 to Lakeland Rd	LRTP 46	TBD
Chattanooga-Hamilton County Regional Planning Agency (MPO)				
US-41	Widen: 4 to 6 lanes	Spring Creek Rd to Fred Pruett Pkwy	LRTP 31	TBD
I-75	Widen: 6 to 8 lanes (HOV)	I-24 to TN SR 2	LRTP 49a	TBD
I-75	Widen 6 to 8 lanes (HOV)	TN SR 2 to Catoosa County line	LRTP 49b	TBD

Roadway	Proposed Project	Project Limits	MPO Project ID	Horizon Year
I-75	Widen: 4/6/8 to 8/10 lanes (HOV)	I-24 to Bradley County line	LRTP 50	TBD
I-24	Widen: 6/8 to 8/10 lanes (HOV)	I-75 to US 27	LRTP 51	TBD
US-41	Widen: 2 to 4 lanes	GA SR 151 to GA SR 146	LRTP 99	TBD
I-75	Widen: 8 general purpose lanes	I-24 to Exit 12	LRTP 171	TBD

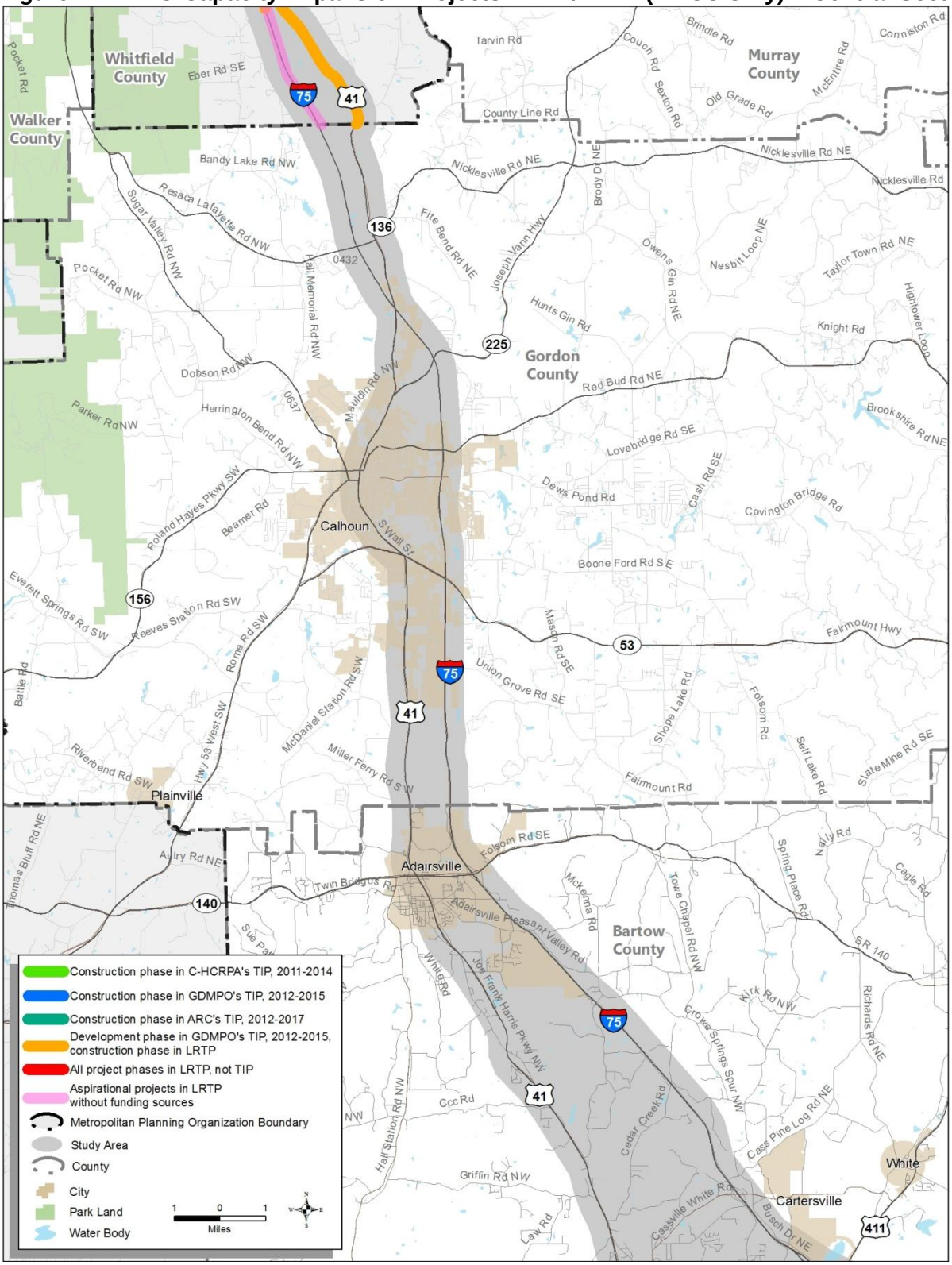
Source: ARC, GDMPO, C-HCRPA

Figure 4-6. MPO Capacity Expansion Projects in TIP/LRTP (MPOs Only) – South Section



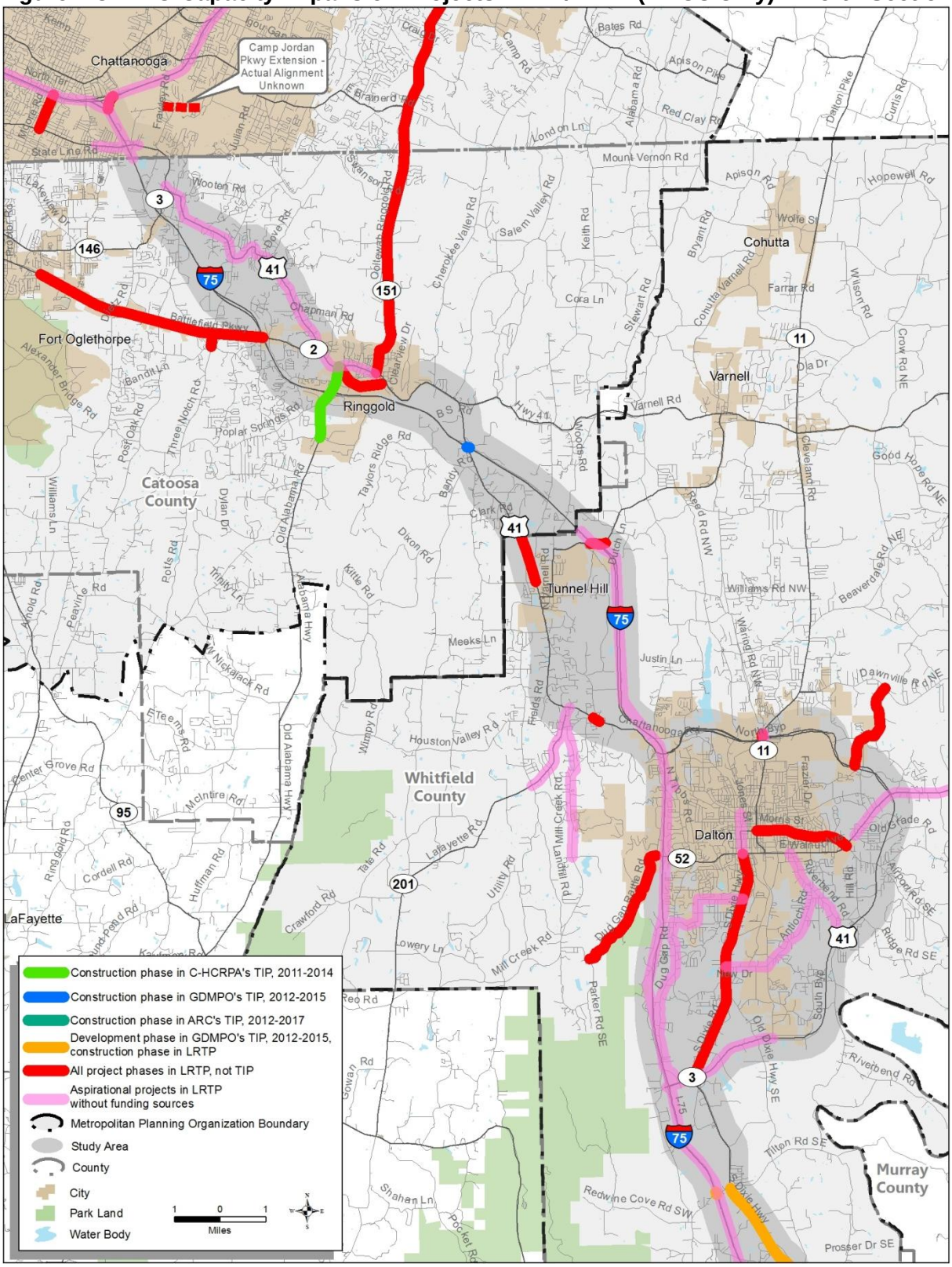
Source: ARC

Figure 4-7. MPO Capacity Expansion Projects in TIP/LRTP (MPOs Only) – Central Section



Source: GDMPO

Figure 4-8. MPO Capacity Expansion Projects in TIP/LRTP (MPOs Only) – North Section



Source: GDMPO, C-HCRPA

4.3.2 GDOT's Construction Work Program

Roadways in the study area that are currently or anticipated to be congested may also be identified through capacity expansion projects listed in GDOT's Construction Work Program (CWP). Often such capacity expansion projects are in response to existing congestion or safety issues. These projects are listed in Table 4-8 and highlighted in Figure 4-9.

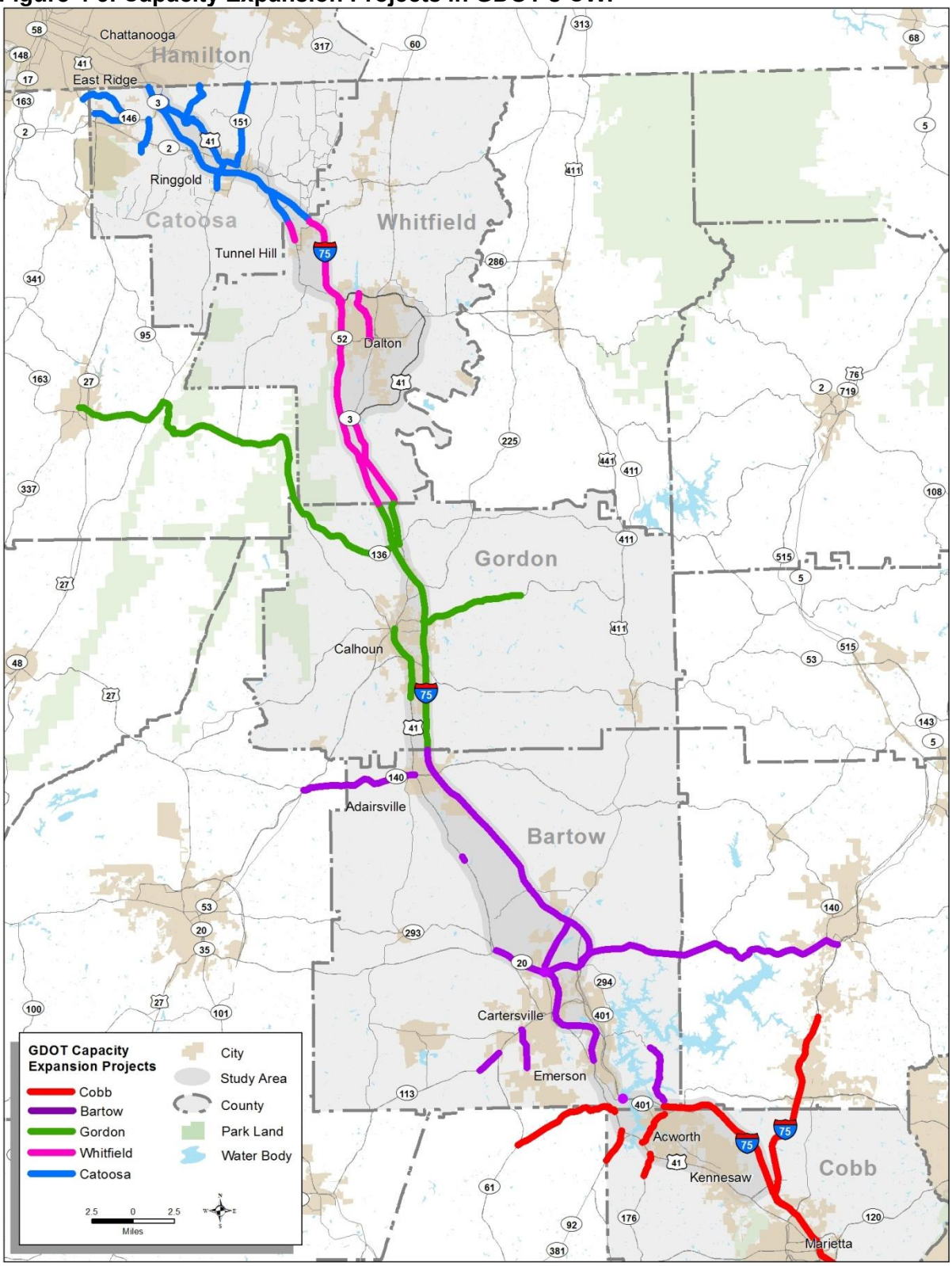
Table 4-8. Capacity Expansion Projects in GDOT's CWP

Roadway	Project	Project Limits	Project ID	TIP ID
Cobb County				
Dabbs Br Rd	Widen, reconstruct	SR 61 (Paulding County) to US-41	0001175	PA-032
SR 92	Widen	Glade Rd to US-41	0006862	CO-301
SR 92	Widen	US-41 to Paulding County line	0006866	CO-329
I-75	Widen	SR 5 Connector to Glade Rd	0007892	-
I-75/I-575	Managed lanes	Cobb and Cherokee	0008256	AR-ML-930
Mars Hill Rd	Widen	Stilesboro Rd to US-41	721685	-
Bartow County				
SR 20	Widen	I-75 to I-575 (Cherokee County)	0007836	CH-020A2
SR 20	Widen and relocate	I-75 to SR 61/US-411	621350	-
US-411	Relocate and new interchange	US-41 to I-75	661950	-
US-41/ US4-11/ SR 61 interch.	Redesign	Interchange	0002626	-
US-41	Widen	CSX railroad to SR 20	0002866	-
US-41	Turn lanes	Old SR 3	M003682	-
US-41	Widen	Main St to SR 61	0007274	-
Glade Rd	Widen	Homestead Dr to Ryan Rd	0003770	ORP-BT-015
SR 140	Widen	SR 53 to Oothkalooga Creek	0004915	-
SR 140	Widen	Oothkalooga Creek to US-41	621500, 621505	-
SR 113	Widen (new alignment)	Old Alabama Rd to SR 61	0008382, 621410, 621440	-
Douthit Ferry Rd	Widen	Old Alabama Rd to SR 61	0007494	-
I-75	Widen	SR 20 to Cassville White Rd	0007894	-
I-75	Widen	Cassville White Rd to SR 140	0007895	-
I-75	New interchange	Third Army Road	0009322	CO-404
Gordon County				
SR 156	Widen	Newtown Church Rd to Cash Rd	0005313	-
SR 156	Widen and interchange	I-75	610750	-
I-75	Widen	SR 140 to SR 156	0007896	-
US-41	Widen	SR 156 to Calhoun Bypass	620780	-
US-41	Widen	Union Grove Rd to SR 53	621365	-
SR 136	Widen	SR 1 to I-75	632810	-
Whitfield County				
US-41	Widen	SR 136 to Dalton Bypass	632670	56

Roadway	Project	Project Limits	Project ID	TIP ID
US-41	Widen	Campbell Rd to I-75 (Catoosa)	631360	3
I-75	Reconstruct interchange	US-41 (Rocky Face exit)	0000931	1
I-75	Widen	SR 156 to Carbondale Rd	0007897	-
I-75	Widen	Carbondale Rd to US-41	0007898	-
Thornton Ave	Widen	US-41 (North Dalton Bypass) to Walnut Ave (SR 52)	620630	-
Catoosa County				
I-75	Widen	US-41 (Whitfield County) to SR 151	0007899	-
I-75	Widen	SR 151 to SR 2	611010	NH-75-LR
I-75	Widen	SR 2 to SR 146	610800	NH-IM-LR
I-75	Widen	SR 146 to TN state line	610810	NH-IM-LR
SR 151	Widen	Holcomb Rd to US-41	621530	GA-621530
SR 151	Widen	US-41 to TN state line	642190	STP-98
Lakeview Rd	Widen	US-27 to SR 146	642200	STP-98(2)
Cloud Springs Rd	Widen	US-27 to Lakeview Rd	642220	STP-98(4)
Graysville Rd	Widen	US-41 to TN state line	642230	STP-98(5)
US-41	Widen	SR 151 to SR 146	642240	STP-98(6)
Dietz Rd	Widen	Boynton Rd to SR 146	650520	STP-98(7)

Source: GDOT

Figure 4-9. Capacity Expansion Projects in GDOT's CWP



Source: GDOT

Interchange justification reports (IJR) or modification reports (IMR) are additional sources of information regarding congested roadways, as these documents highlight locations where there is some need for a new interchange or a modification to an existing interchange. For example, TDOT completed an IMR for the I-75/I-24 interchange, one of the worst bottlenecks in the Atlanta to Chattanooga corridor, in 2002. The IMR recommended three improvements, including eliminating the I-75 northbound to I-24 westbound lane drop on the directional ramp; eliminating the weaving conflicts at the Tennessee Welcome Center; and eliminating the weaving section within US-41 interchange in Ringgold. TDOT is currently preparing a new study of the interchange. Previous IJRs and IMRs along the corridor are identified in Table 4-9 and visualized in Figure 4-10.

Table 4-9. Previous I-75 Interchange Justification and Modification Reports

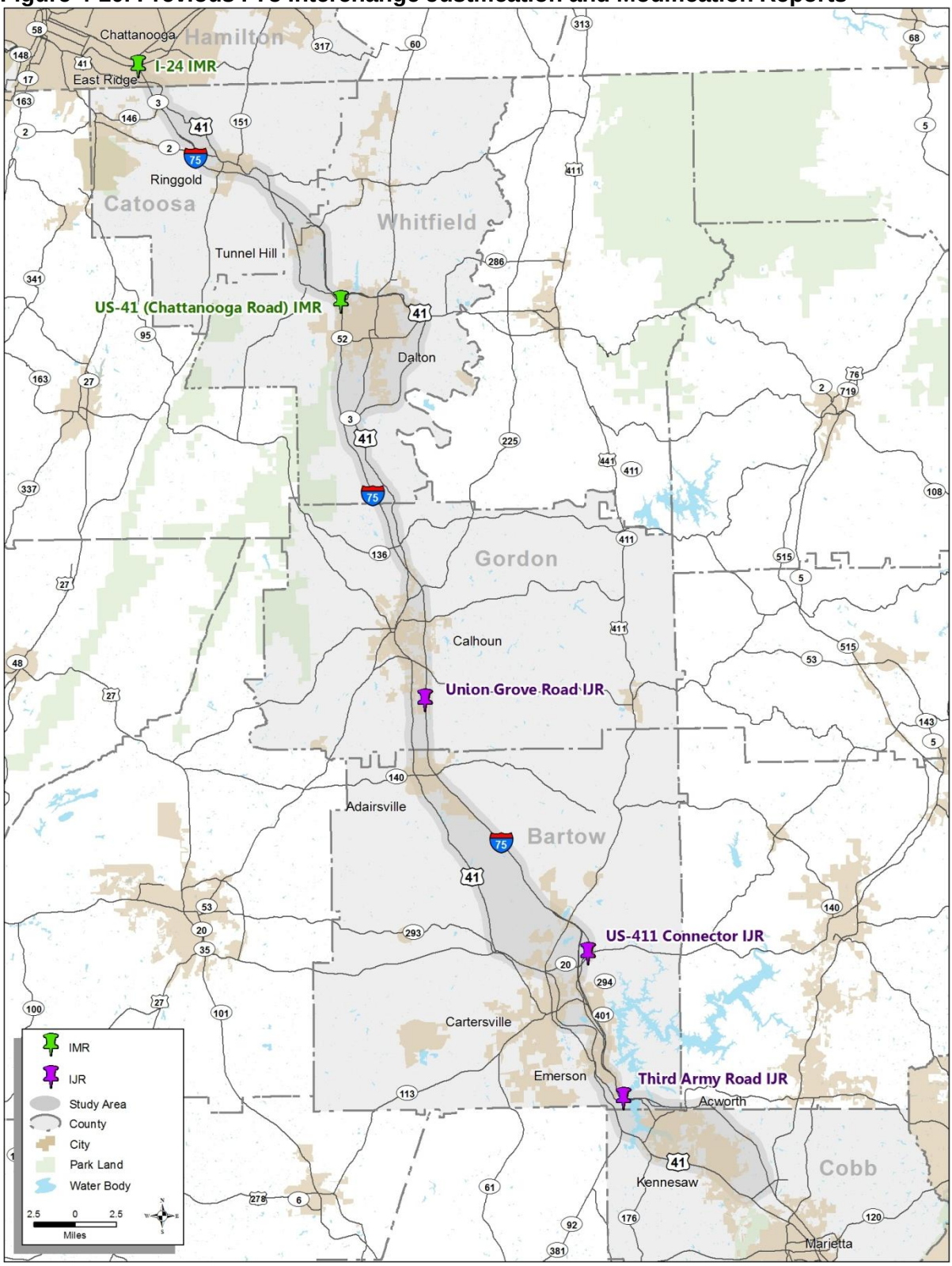
Interchange	Exit	Type	Project ID	Report Completed
Third Army Rd	-	IJR	0009322	2009
US-411 Connector	-	IJR	661950	2010
Union Grove Rd	-	IJR	610870	2012
US-41 (Chattanooga Rd)	336	IMR	0000931	2009
I-24	2	IMR	-	2002

Source: GDOT, TDOT

Federal policy states that eight requirements must be met in order for approval of new interstate access. In general, these requirements must show that:

1. The existing system is incapable of accommodating traffic;
2. All reasonable alternatives have been considered;
3. The proposal does not adversely impact operational safety of the existing freeway;
4. A full interchange with all traffic movements at a public road is provided;
5. The proposal is consistent with local and regional plans;
6. The proposal is consistent with state highway master plans;
7. The proposal is coordinated with the area's development; and
8. Planning and environmental constraints of the proposal are considered.

Figure 4-10. Previous I-75 Interchange Justification and Modification Reports



Source: GDOT, TDOT

5 OPERATIONS AND MAINTENANCE

5.1 GDOT's Intelligent Transportation System

GDOT operates the Georgia Navigator service along the study area between Ernest Barrett Parkway (Exit 269) and SR 92 (Exit 277), and elsewhere throughout metro Atlanta. Georgia Navigator is the public face of GDOT's ITS network in the metro Atlanta region, using advanced technology to reduce incident response time and provide real-time information to travelers via Changeable Message Signs (CMS), computers and mobile devices, and an extensive 511 service that can be accessed from anywhere in the state. The service is managed from the Transportation Management Center (TMC) in Atlanta, which first opened for operation in 1996 in time for the summer Olympics, and information is mostly gathered using Video Detection Systems (VDS) along Interstates.

Of the network's 1,645 VDS stations, 28 are located along I-75 in the study area corridor; no VDS stations are presently located along US-41 or any other highways or arterials in the corridor. VDS stations continuously collect speed and traffic volume data, allowing the 511 system as well as the three CMSs along the corridor to receive automated travel time information. The CMSs can display automated dynamic travel times to certain points along corridors between 6 AM and 9 PM, or TMC-controlled alerts such as downstream incidents, construction information, air quality messages, or public safety alerts at any time. TMC staff is able to directly monitor roadways using VDS stations, allowing GDOT to quickly confirm incident reports or other travel information received via the general public.

In addition to GDOT's TMC, Cobb County monitors study-area traffic and vehicle incidents from their Regional Transportation Management Center (RTMC), located in Marietta. The county monitors 29 intersections along US-41 with adaptive traffic signals, allowing the RTMC to alter signals to provide bus priority during congested conditions. In addition, the RTMC is implementing SCATS (Sydney Coordinated Adaptive Traffic System) in the Town Center area, which uses VDS equipment at specified locations to record real-time traffic data. This data is sent to the RTMC, from which traffic signal timing in the corridor can be modified in real time to better respond to conditions on the roadway. The Town Center area SCATS project includes 75 intersections and became operational in three phases:

- US-41 from White Circle to Third Army Road by March 31, 2012
- Barrett Parkway from Old US-41 to Bells Ferry Road by June 18, 2012
- Chastain Road/McCollum Parkway from US-41 to Bells Ferry Road by August 31, 2012

Since 2006, 73 intersections in the Cumberland CID utilize SCATS, but there is no current timetable to connect the two systems along US-41 (Cobb Parkway).

Similar to Cobb County, the City of Dalton installed 18 cameras to observe traffic flows and alter adaptive traffic signals to reduce emergency response times. These cameras are mostly located along I-75 southbound, Walnut Avenue (SR 52), and the northern section of the Dalton Bypass.

The GDOT TMC is able to dispatch HERO units (Highway Emergency Response Operators) to respond to incidents. HERO units clear travel lanes in the event of an incident to maintain traffic flow, and even assist stranded motorists experiencing minor vehicle issues, including flat tires,

weak batteries, and emergency fuel. HERO unit coverage along I-75 extends from Ernest Barrett Parkway (Exit 269) in Cobb County to Old Allatoona Road (Exit 283) in Bartow County within the study area. In addition, under a new program funding by the State, 35 Georgia State Patrol troopers were added to the force to help reduce response times to incidents, deter speeding, and enforce traffic violations on I-75 in Cobb County.

GDOT has operated ramp metering throughout the metro Atlanta region since 2008 to regulate the flow of vehicles entering Interstates during peak travel periods. Within the study area, GDOT has implemented ramp meters on both northbound and southbound directions of I-75 between SR 92 (Exit 277) and Ernest Barrett Parkway (Exit 269) in Cobb County. On weekdays, southbound meters operate between 6:15 to 10:00 AM and northbound meters operate from 2:00 to 7:00 PM. Meters are only active during weekday peak periods. Ramp meters employ VDS technology to control vehicle flow.

5.2 TDOT's Intelligent Transportation System

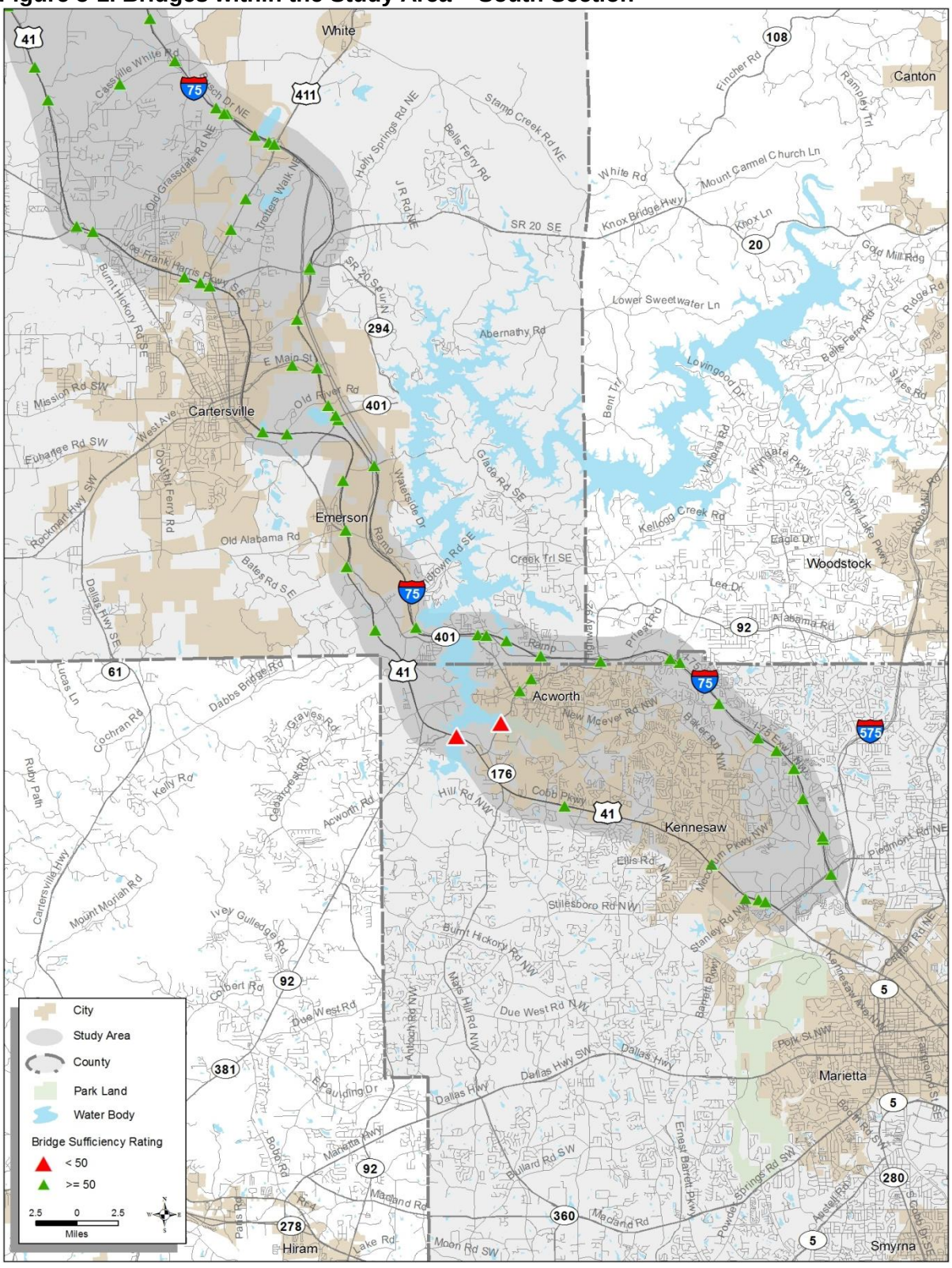
TDOT has implemented its own ITS network, TDOT SmartWay, throughout the state's largest metropolitan areas, including Chattanooga. TDOT SmartWay is structured and operates in much the same way as Georgia Navigator by providing real-time traffic information to the state's 511 system, updating dynamic messaging signs along Interstates with messages and alerts, verifying incidents through the use of video detection, and dispatching incident response vehicles, or HELP vehicles, from various TMCs. TDOT SmartWay, however, is different from Georgia Navigator in that travel time information is not currently displayed on dynamic message signs (although this feature is being tested by TDOT) and traffic volume and speed data is obtained through roadway sensors rather than video detection.

Chattanooga became the most recent addition to the expanded TDOT SmartWay network with the completion of its own TMC in January 2010, located at the Enterprise South Industrial Park. The Chattanooga area had previously experienced some, but not all, TDOT SmartWay benefits, which included the HELP service since 2000, the statewide 511 service since 2006, and the SmartWay website. Although no dynamic messaging signs are located in the Chattanooga area, four VDS stations are located between the Georgia state line and I-24 within the study area.

5.3 Bridge Sufficiency

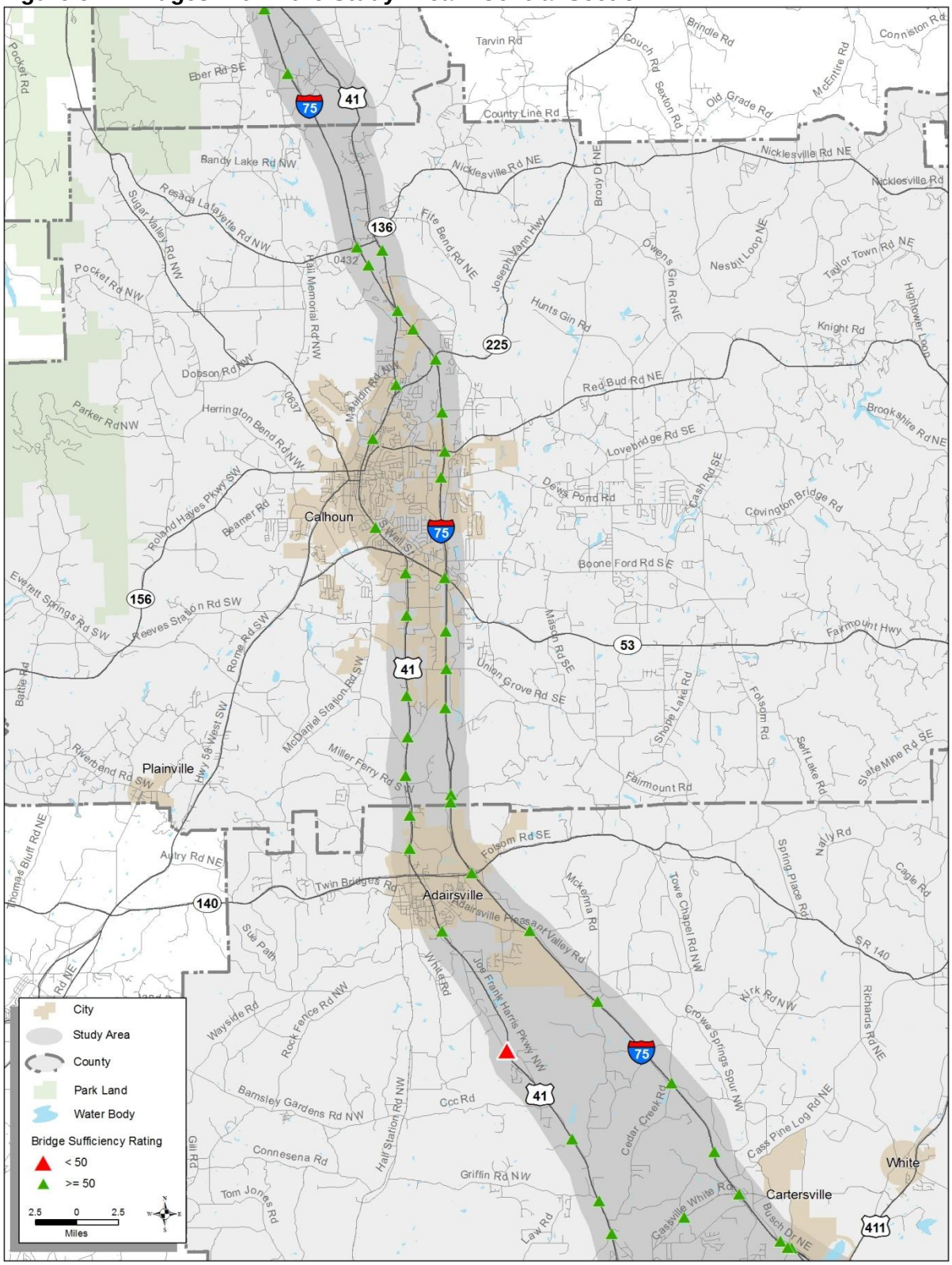
The bridge sufficiency rating is an evaluation tool that helps FHWA and GDOT allocate bridge repair and replacement funds. The rating, which ranges from 0 to 100 (100 being the best), is a result of a formula that accounts for structural adequacy and safety, serviceability, daily traffic, length of detour, military use, and other factors. Bridges with sufficiency ratings below 50 and that are 10 years or older qualify for replacement using Federal funds. Only a few bridges in the study area have a sufficiency rating below 50, as shown in Figure 5-1 through Figure 5-3 and listed in Table 5-1. These bridges are concentrated on US-41 and other major roadways in the study area. All I-75 bridges in the study area are rated above 50.

Figure 5-1. Bridges within the Study Area – South Section



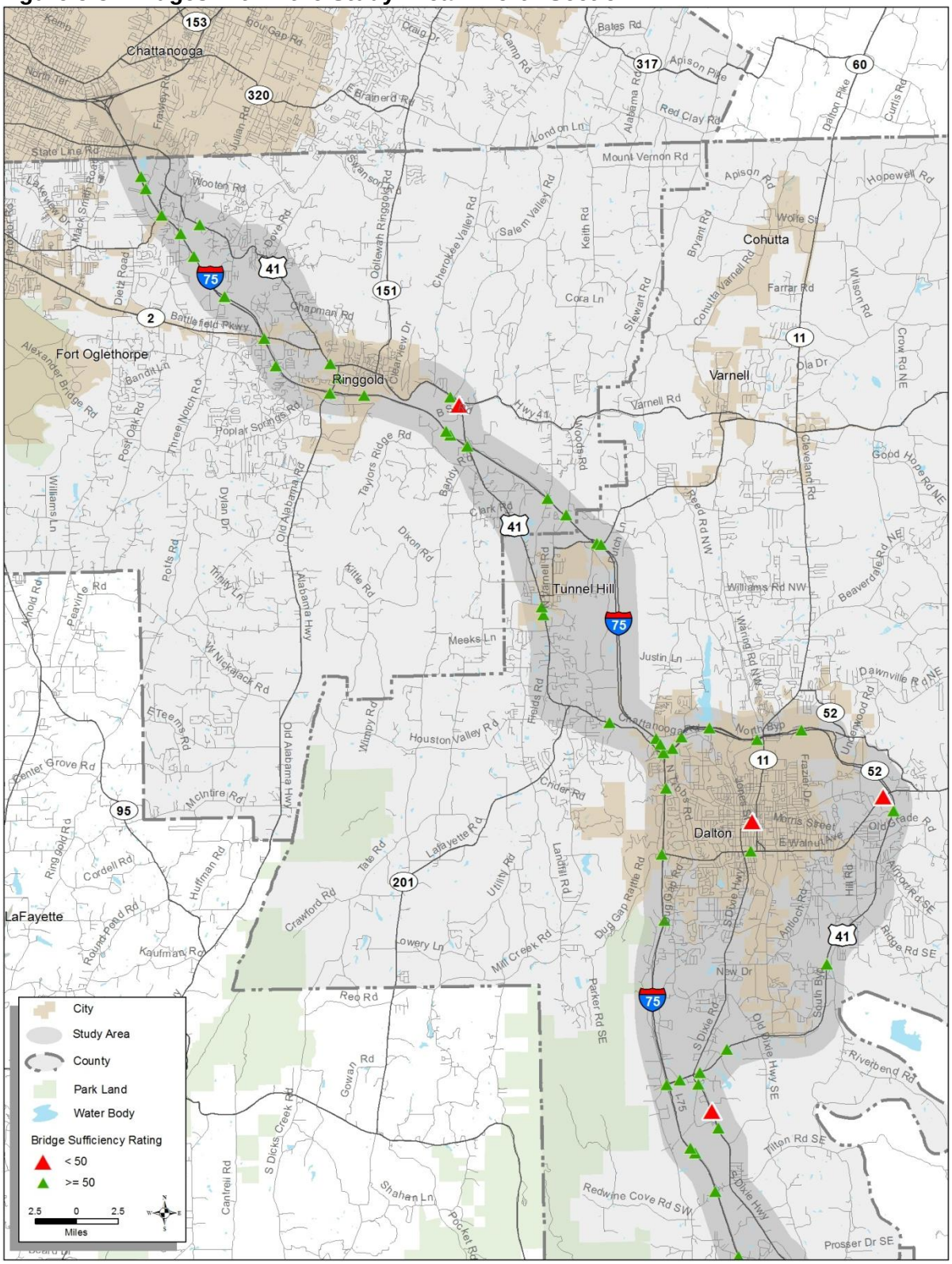
Source: GDOT

Figure 5-2. Bridges within the Study Area – Central Section



Source: GDOT

Figure 5-3. Bridges within the Study Area – North Section



Source: GDOT

Table 5-1. Deficient Bridges within the Study Area

ID	Bridge	Feature Crossed	Sufficiency Rating
Cobb County			
067-0010-0	US-41	Lake Allatoona	46.5
067-0035-0	SR 92 (Lake Acworth Dr)	Lake Allatoona and Acworth	44.5
Bartow County			
015-0021-0	US-41	Old US-41 near Orchard Rd	28.6
Whitfield County			
313-0006-0	US-41	Little Swamp Creek	43.2
313-0020-0	SR 52	Mill Creek	48.2
313-0063-0	Gordon St	NS Railroad (Downtown Dalton)	10.8
Catoosa County			
047-0013-0	US-41	Tiger Creek	34.1

Source: GDOT

Table 5-2. Privately Owned Bridges within the Study Area

ID	Bridge*	Feature Crossed
Cobb County		
067-5251-0	CSX Railroad	Cowan Rd
Bartow County		
015-0129-0	CSX Railroad	I-75 and exit 283 ramps
015-5080-0	CSX Railroad	Old River Rd and Etowah River
015-0128-0	CSX Railroad	I-75 near N Main St (Acworth)
015-0131-0	CSX Railroad	SR 293
Whitfield County		
313-5074-0	Hamilton Medical Center	Broadrick Dr
Catoosa County		
047-5033-0	Shaw conveyer belt	SR 293
047-0057-0	CSX Railroad	US-41 (Downtown Ringgold)

* Bridges are privately owned but cross public ROW. It is likely that these bridges have not been rated by the Department since their sufficiency ratings are listed as zero.
Source: GDOT

6 CRASH DATA ANALYSIS

Crash data is an important part of any corridor assessment. Examining the location and characteristics of crashes can provide information concerning geometric and operational characteristics at the crash location that should be corrected. It is important to understand that just because the number of crashes is high it does not necessarily mean there are issues with the roadway. For example, congestion increases the number of crashes on a roadway largely due to the number of vehicles in proximity to each other. Locations where traffic changes directions or merges with other traffic are also high crash locations by their very nature; intersections and interchanges are major contributors to these conditions.

This study analyzed crash rates within the corridor for I-75, US-41, and the roadways that link the two highways. The roadway segments applied to this analysis are consistent with congestion analysis segments defined in Section 4.1. Critical Analysis Reporting Environment (CARE) software was used to identify crash data for each segment.

This analysis identifies segments with relatively high crash rates by comparing the crash rates of segments to statewide average crash rates (Table 6-1) with respect to functional classification. Note that Georgia statewide crash rates were the basis of comparison for US-41 and I-75 segments within Tennessee, as statewide Tennessee crash rates are not delineated by functional classification. Results of this comparison for I-75, US-41, and the roadways that link the two highways are shown in this section and in more detail in the Appendices (Section 13.2).

Table 6-1. Georgia Statewide Average Crash Rates (2007-2008)

Facility	Rate per 100 Million Vehicle Miles of Travel				
	All Crashes	Injuries	Injury Crashes	Fatalities	Fatal Crashes
Principal Arterial Freeway, Urban	186.5	63.0	43.0	0.60	0.54
Principal Arterial Freeway, Rural	60.0	30.0	18.0	1.00	0.80
Principal Arterial, Urban (Non-NHS)	630.5	220.0	146.6	1.43	1.39
Principal Arterial, Urban (NHS)	437.4	170.6	110.5	1.41	1.36
Principal Arterial, Rural (Non-NHS)	251.0	133.5	82.5	1.94	1.87
Minor Arterial, Urban (Non-NHS)	491.1	183.0	121.0	1.47	1.34
Minor Arterial, Rural (Non-NHS)	189.8	102.9	63.6	2.71	2.45
Major Collector, Rural	198.5	104.5	70.0	3.47	3.14

Source: GDOT

Table 6-2 indicates the I-75 crash rate by segment and crash type from 2007-2009; all crashes, number of injuries, injury crashes, number of fatalities, and fatal crashes. These rates are per 100 million vehicle miles of travel (VMT). The rates were then compared by segment facility type to the Statewide Average Crash Rates from Table 6-1. Those segments where the rate exceeds the statewide average are highlighted in gray in the table. Table 6-3 examines segments on US-41, and Table 6-4 contains crash rates for the roadways linking I-75 and US-41.

More than half of the I-75 segments exceed statewide averages for fatalities and fatal crashes. However, approximately 26 percent of US-41 segments and 14 percent of link segments exceed the statewide average rates for fatalities or fatal crashes.

One third of the I-75 segments exceed statewide averages for one or more of the remaining categories: all crashes, injuries, and injury crashes. Similarly, approximately 32 percent of link segments exceed statewide averages for one or more of these categories. Conversely, almost half—47 percent—of US-41 segments exceed one or more of these categories.

Figure 6-1 through Figure 6-4 illustrate the locations of individual crashes, fatal crashes, and crash hot spots in the southern portion of the corridor. Figure 6-1 also indicates "crash clusters" within segments that do not otherwise exceed statewide averages at locations that are not related to interchanges. These crash clusters will be investigated for causality under Task 5: Assessment of Deficiencies. Many of the I-75 segments in the southern portion of the corridor have high fatality and fatal crash rates. Where data exists, the locations of the fatal crashes are positioned. For the purpose of this report, hot spots were defined as segments where statewide average crash rates are exceeded in two or more of the following categories: all crashes, injury crashes, and fatal crashes.

Figure 6-5 through Figure 6-7 illustrate the locations of individual crashes, fatal crashes, and hot spots in the central portion of the corridor.

Figure 6-8 through Figure 6-10 illustrate the locations of individual crashes, fatal crashes, and hot spots in the northern portion of the corridor.

Table 6-2. I-75 Crash Analysis

ID	County	From	To	Functional Classification	Two-Way AADT (2007-2008)	Rate per 100 Million Vehicle Miles of Travel (2007-2008)*				
						All Crashes	Injuries	Injury Crashes	Fatalities	Fatal Crashes
75-1	Cobb	Ernest Barrett Parkway	Chastain Road	Urban Interstate Principal Arterial	134,065	**399.8**	**111.1**	**73.7**	**1.8**	**1.78**
75-2	Cobb	Chastain Road	Wade Green Road	Urban Interstate Principal Arterial	127,500	**323.5**	**72.8**	**55.2**	0.0	0.00
75-3	Cobb/Cherokee	Wade Green Road	SR 92	Urban Interstate Principal Arterial	103,180	173.4	55.3	38.7	**1.2**	**1.25**
75-4	Cherokee/Bartow	SR 92	Glade Road	Urban Interstate Principal Arterial	95,675	176.2	**81.5**	**49.6**	**1.1**	**1.10**
75-5	Bartow	Glade Road	Old Allatoona Road	Urban Interstate Principal Arterial	84,980	81.7	42.8	25.2	**1.0**	**0.96**
75-6	Bartow	Old Allatoona Road	Red Top Mountain Road	Urban Interstate Principal Arterial	79,475	69.6	23.2	20.2	**1.0**	**1.01**
75-7	Bartow	Red Top Mountain Road	East Main Street	Urban Interstate Principal Arterial	80,950	101.5	35.8	23.2	**0.7**	**0.66**
75-8	Bartow	East Main Street	SR 20	Urban Interstate Principal Arterial	80,510	95.7	29.2	16.8	0.0	0.00
75-9	Bartow	SR 20	US-411	Urban/Rural Interstate Principal Arterial	65,935	**61.4**	28.3	**21.1**	**1.8**	**1.20**
75-10	Bartow	US-411	Cassville White Road	Urban Interstate Principal Arterial	63,045	60.8	23.0	16.3	**2.2**	**0.74**
75-11	Bartow	Cassville White Road	SR 140	Rural Interstate Principal Arterial	59,920	41.6	21.7	15.0	**1.2**	**1.23**
75-12	Bartow/Gordon	SR 140	SR 53	Urban/Rural Interstate Principal Arterial	54,535	**64.7**	**30.1**	**19.0**	**1.1**	**1.14**
75-13	Gordon	SR 53	Red Bud Road	Urban Interstate Principal Arterial	61,795	96.2	31.6	21.3	0.8	**0.79**
75-14	Gordon	Red Bud Road	SR 225	Urban Interstate Principal Arterial	62,250	73.0	36.0	20.7	0.0	0.00
75-15	Gordon	SR 225	US-41	Urban Interstate Principal Arterial	59,635	57.9	34.0	22.1	0.0	0.00
75-16	Gordon	US-41	Resaca Beach Boulevard	Urban Interstate Principal Arterial	61,415	35.6	8.2	6.8	0.0	0.00
75-17	Gordon/Whitfield	Resaca Beach Boulevard	Carbondale Road	Rural Interstate Principal Arterial	60,970	50.2	28.3	17.9	0.8	0.80
75-18	Whitfield	Carbondale Road	South Dalton Bypass	Rural Interstate Principal Arterial	62,310	**76.7**	**48.9**	**29.5**	**1.7**	**1.68**
75-19	Whitfield	South Dalton Bypass	Walnut Avenue	Urban/Rural Interstate Principal Arterial	62,165	52.9	21.1	14.2	**0.9**	**0.86**
75-20	Whitfield	Walnut Avenue	North Dalton Bypass	Urban Interstate Principal Arterial	66,800	128.7	49.7	34.9	**0.9**	**0.92**
75-21	Whitfield	North Dalton Bypass	SR 201	Urban/Rural Interstate Principal Arterial	68,155	43.5	19.8	12.4	0.8	0.39
75-22	Whitfield/Catoosa	SR 201	US-41	Rural Interstate Principal Arterial	66,545	55.0	28.7	17.2	0.0	0.00
75-23	Catoosa	US-41	Alabama Highway	Urban/Rural Interstate Principal Arterial	69,855	**70.8**	26.3	**19.9**	0.0	0.00
75-24	Catoosa	Alabama Highway	Battlefield Parkway	Urban Interstate Principal Arterial	73,290	100.9	42.6	30.5	**0.9**	**0.93**
75-25	Catoosa	Battlefield Parkway	Cloud Springs Road	Urban Interstate Principal Arterial	75,680	137.9	**67.2**	41.6	0.5	0.50
75-26	Catoosa/Hamilton	Cloud Springs Road	US-41	Urban Interstate Principal Arterial	88,955	165.0	55.9	35.7	0.0	0.00
75-27	Hamilton	US-41	I-24	Urban Interstate Principal Arterial	112,194	**233.2**	60.4	**45.3**	**1.4**	**1.37**

* Gray cells indicate values that exceed statewide rates of the same functional classification.
Source: AADTs from GDOT and TDOT, crash statistics from CARE

Table 6-3. US-41 Crash Analysis

ID	County	From	To	Functional Classification	Two-Way AADT (2007-2008)	Rate per 100 Million Vehicle Miles of Travel (2007-2008)*				
						All Crashes	Injuries	Injury Crashes	Fatalities	Fatal Crashes
41-1	Cobb	Ernest Barrett Parkway	McCollum Parkway	Urban Minor Arterial (Non-NHS)	31,395	**1,266.4**	**276.7**	**204.9**	0.0	0.0
41-2	Cobb	McCollum Parkway	Rutledge Road	Urban Minor Arterial (Non-NHS)	38,025	**841.9**	**208.1**	**159.9**	**1.9**	**1.9**
41-3	Cobb	Rutledge Road	Lake Acworth Drive	Urban Minor Arterial (Non-NHS)	30,525	**553.4**	135.9	110.0	0.0	0.0
41-4	Cobb	Lake Acworth Drive	Dallas Highway	Urban Minor Arterial (Non-NHS)	34,000	340.7	148.7	94.6	0.0	0.0
41-5	Cobb	Dallas Highway	Third Army Road	Urban Minor Arterial (Non-NHS)	15,980	**1,001.3**	**389.0**	**237.7**	0.0	0.0
41-6	Cobb/Bartow	Third Army Road	Old Allatoona Road	Urban Minor Arterial (Non-NHS)	15,235	149.0	82.2	59.1	0.0	0.0
41-7	Bartow	Old Allatoona Road	Red Top Mountain Road	Urban Minor Arterial (Non-NHS)	15,005	278.4	71.2	64.7	0.0	0.0
41-8	Bartow	Red Top Mountain Road	Old River Road	Urban Minor Arterial (Non-NHS)	14,775	109.3	74.3	35.0	**4.4**	**4.4**
41-9	Bartow	Old River Road	East Main Street	Urban Principal Arterial (Non-NHS)	16,820	512.4	145.6	118.7	**5.4**	**5.4**
41-10	Bartow	East Main Street	US-411	Urban Principal Arterial (Non-NHS)	34,365	598.7	213.3	**151.5**	0.0	0.0
41-11	Bartow	US-411	Cassville Road	Urban Principal Arterial (NHS)	42,290	214.7	138.4	89.1	0.5	0.5
41-12	Bartow	Cassville Road	Cut Off Road	Rural Minor Arterial (Non-NHS)	11,985	127.2	79.5	56.4	0.0	0.0
41-13	Bartow	Cut Off Road	SR 140	Rural Minor Arterial (Non-NHS)	9,935	**694.9**	**408.1**	**187.5**	0.0	0.0
41-14	Bartow/Gordon	SR 140	Union Grove Road	Rural Minor Arterial (Non-NHS)	7,045	138.0	87.8	**66.9**	0.0	0.0
41-15	Gordon	Union Grove Road	SR 53	Urban Minor Arterial (Non-NHS)	10,075	490.4	172.7	**139.3**	0.0	0.0
41-16	Gordon	SR 53	Hicks Street	Urban Principal Arterial (Non-NHS)	18,600	418.0	103.5	91.6	0.0	0.0
41-17	Gordon	Hicks Street	Red Bud Road	Urban Principal Arterial (Non-NHS)	13,430	**737.2**	202.0	**151.5**	0.0	0.0
41-18	Gordon	Red Bud Road	SR 225	Urban Principal Arterial (Non-NHS)	12,735	542.4	**257.4**	**183.9**	0.0	0.0
41-19	Gordon	SR 225	Mauldin Road	Urban Principal Arterial (Non-NHS)	9,225	**642.1**	160.5	**160.5**	0.0	0.0
41-20	Gordon	Mauldin Road	I-75	Urban Principal Arterial (Non-NHS)	10,255	234.7	90.3	54.2	0.0	0.0
41-21	Gordon	I-75	Reseca Beach Boulevard	Urban Minor Arterial (Non-NHS)	7,150	190.4	**202.3**	95.2	**11.9**	**11.9**
41-22	Gordon	Reseca Beach Boulevard	Jones Drive	Urban Minor Arterial (Non-NHS)	5,665	86.4	64.8	21.6	0.0	0.0
41-23	Gordon/Whitfield	Jones Drive	Carbondale Road	Rural Minor Arterial (Non-NHS)	4,355	156.6	91.4	58.7	**6.5**	**6.5**
41-24	Whitfield	Carbondale Road	South Dalton Bypass	Rural Minor Arterial (Non-NHS)	7,915	**290.7**	**178.4**	**105.7**	**19.8**	**13.2**
41-25	Whitfield	South Dixie Highway	Old Dixie Highway	Rural Principal Arterial (Non-NHS)	16,300	135.9	100.6	55.4	**5.0**	**5.0**
41-26	Whitfield	Old Dixie Highway	Chatsworth Road	Urban Principal Arterial (Non-NHS)	15,725	258.8	136.8	86.3	**3.7**	**3.7**
41-27	Whitfield	Chatsworth Road	Cleveland Highway	Urban Principal Arterial (NHS)	23,515	279.6	133.9	83.7	0.0	0.0
41-28	Whitfield	Cleveland Highway	I-75	Urban Principal Arterial (NHS)	36,465	**447.6**	**179.0**	**114.5**	0.0	0.0
41-29	Whitfield	I-75	Lafayette Road	Urban Minor Arterial (Non-NHS)	23,305	356.5	136.9	92.1	0.0	0.0
41-30	Whitfield	Lafayette Road	Tunnel Hill Church Street	Urban Minor Arterial (Non-NHS)	11,830	104.5	60.9	34.8	0.0	0.0
41-31	Whitfield/Catoosa	Tunnel Hill Church Street	Gordy Circle	Urban Minor Arterial (Non-NHS)	4,925	181.2	95.9	85.3	0.0	0.0
41-32	Catoosa	Gordy Circle	I-75	Urban Minor Arterial (Non-NHS)	6,700	164.3	18.3	18.3	0.0	0.0

ID	County	From	To	Functional Classification	Two-Way AADT (2007-2008)	Rate per 100 Million Vehicle Miles of Travel (2007-2008)*				
						All Crashes	Injuries	Injury Crashes	Fatalities	Fatal Crashes
41-33	Catoosa	I-75	Rogers Drive	Urban Minor Arterial (Non-NHS)	7,400	**514.2**	**297.1**	**182.8**	0.0	0.0
41-34	Catoosa	Rogers Drive	Alabama Highway	Urban Minor Arterial (Non-NHS)	10,485	363.8	97.3	71.7	0.0	0.0
41-35	Catoosa	Alabama Highway	Battlefield Parkway	Urban Minor Arterial (Non-NHS)	14,655	389.5	**218.1**	**124.6**	0.0	0.0
41-36	Catoosa	Battlefield Parkway	Cloud Springs Road	Urban Minor Arterial (Non-NHS)	5,700	490.8	**351.2**	**241.2**	**12.7**	**12.7**
41-37	Hamilton	Cloud Springs Road	I-75	Urban Principal Arterial (Non-NHS)	11,487	445.4	136.5	107.8	**7.2**	**7.2**
41-38	Hamilton	I-75	McBrien Road	Urban Principal Arterial (Non-NHS)	28,802	**763.0**	**295.0**	**216.2**	0.0	0.0

* Gray cells indicate values that exceed statewide rates of the same functional classification.
Source: AADTs from GDOT and TDOT, crash statistics from CARE

Table 6-4. I-75 to US-41 Linkages Crash Analysis

ID	County	Roadway	From	To	Functional Classification	Two-Way AADT (2007-2008)	Rate per 100 Million Vehicle Miles of Travel (2007-2008)*				
							All Crashes	Injuries	Injury Crashes	Fatalities	Fatal Crashes
Link-1	Cobb	Ernest Barrett Parkway	I-75	US-41	Urban Principal Arterial (Non-NHS)	46,405	**1,235.0**	**349.4**	**230.9**	**2.0**	**2.0**
Link-2	Cobb	Chastain Road/McCollum Parkway	I-75	US-41	Urban Minor Arterial (Non-NHS)	40,950	299.3	55.3	37.7	0.0	0.0
Link-3	Cobb	Cherokee Street	Chalker Road	Main Street	Urban Minor Arterial (Non-NHS)	14,145	457.7	126.0	106.1	0.0	0.0
Link-4	Cobb	Cherokee Street/Wade Green Road	I-75	Chalker Road	Urban Minor Arterial (Non-NHS)	37,330	294.8	84.2	63.2	0.0	0.0
Link-5	Cobb	SR 92	I-75	US-41	Urban Principal Arterial (Non-NHS)	24,710	451.9	144.3	94.4	0.0	0.0
Link-6	Cobb	Glade Road	I-75	SR 92	Urban Minor Arterial (Non-NHS)	16,035	117.8	58.9	44.2	0.0	0.0
Link-7	Bartow	Old Allatoona Road	I-75	US-41	Urban Minor Arterial (Non-NHS)	7,553	453.4	170.0	113.4	0.0	0.0
Link-8†	Bartow	Red Top Mountain Road	I-75	US-41	Urban Minor Arterial (Non-NHS)	8,855	N/A	N/A	N/A	N/A	N/A
Link-9	Bartow	East Main Street	I-75	US-41	Urban Principal Arterial (Non-NHS)	19,535	260.4	59.0	45.1	0.0	0.0
Link-10	Bartow	SR 20	I-75	US-41	Urban Principal Arterial (NHS)	22,645	357.9	141.2	108.4	**2.5**	**2.5**
Link-11	Bartow	US-411	I-75	US-41	Urban Principal Arterial (NHS)	9,845	309.2	165.6	95.7	0.0	0.0
Link-12	Bartow	Cassville Road	US-41	US-41	Urban Minor Arterial (Non-NHS)	4,195	61.3	15.3	15.3	0.0	0.0
Link-13	Bartow	Cassville White Road	Brown Loop Road	Cassville Road	Urban Minor Arterial (Non-NHS)	3,910	292.0	**214.1**	**175.2**	0.0	0.0
Link-14	Bartow	Cassville White Road	I-75	Brown Loop Road	Rural Minor Arterial (Non-NHS)	3,910	**429.0**	**238.3**	**143.0**	0.0	0.0
Link-15	Bartow	SR 140	I-75	US-41	Rural Minor Arterial (Non-NHS)	18,345	**420.4**	**265.5**	**121.7**	0.0	0.0
Link-16	Gordon	SR 53	I-75	US-41	Urban Principal Arterial (Non-NHS)	35,525	**690.7**	**231.4**	**150.9**	0.0	0.0
Link-17	Gordon	Red Bud Road	I-75	US-41	Urban Minor Arterial (Non-NHS)	13,540	**558.2**	**232.6**	**174.4**	0.0	0.0
Link-18	Gordon	SR 225	I-75	US-41	Urban Minor Arterial (Non-NHS)	4,165	145.1	72.6	48.4	0.0	0.0
Link-19	Gordon	Resaca Beach Boulevard	I-75	US-41	Urban Minor Arterial (Non-NHS)	3,870	264.2	105.7	105.7	0.0	0.0
Link-20	Whitfield	Carbondale Road	I-75	US-41	Rural Major Collector	15,705	188.6	94.3	**94.3**	0.0	0.0
Link-21	Whitfield	South Bypass	I-75	US-41	Urban Principal Arterial (Non-NHS)	20,360	326.8	125.0	115.3	0.0	0.0
Link-22	Whitfield	SR 52	Airport Road	US-41	Urban Principal Arterial (Non-NHS)	24,435	556.9	**319.8**	**210.7**	0.0	0.0
Link-23	Whitfield	SR 52	Glenwood Avenue	Airport Road	Urban Principal Arterial (Non-NHS)	25,995	425.1	209.6	122.3	**2.9**	**2.9**
Link-24	Whitfield	SR 52	I-75	Glenwood Avenue	Urban Principal Arterial (Non-NHS)	26,820	618.8	199.2	122.9	0.0	0.0
Link-25	Whitfield	Tunnel Hill Church Road/Varnell Road	I-75	US-41	Urban Minor Arterial (Non-NHS)	3,170	283.4	124.0	70.8	**17.7**	**17.7**
Link-26	Catoosa	Alabama Highway	I-75	US-41	Urban Minor Arterial (Non-NHS)	27,915	**566.2**	181.2	105.7	0.0	0.0
Link-27	Catoosa	Battlefield Parkway	I-75	US-41	Urban Minor Arterial (Non-NHS)	11,050	382.8	**209.7**	**127.6**	0.0	0.0
Link 28	Catoosa	Cloud Springs Road	I-75	US-41	Urban Principal Arterial (Non-NHS)	2,895	608.4	67.6	67.6	0.0	0.0

* Gray cells indicate values that exceed statewide rates of the same functional classification.
† Crash data unavailable for this portion of Red Top Mountain Road
Source: AADTs from GDOT and TDOT, crash statistics from CARE

Figure 6-1. Total Crashes (2007-2008) – South Section

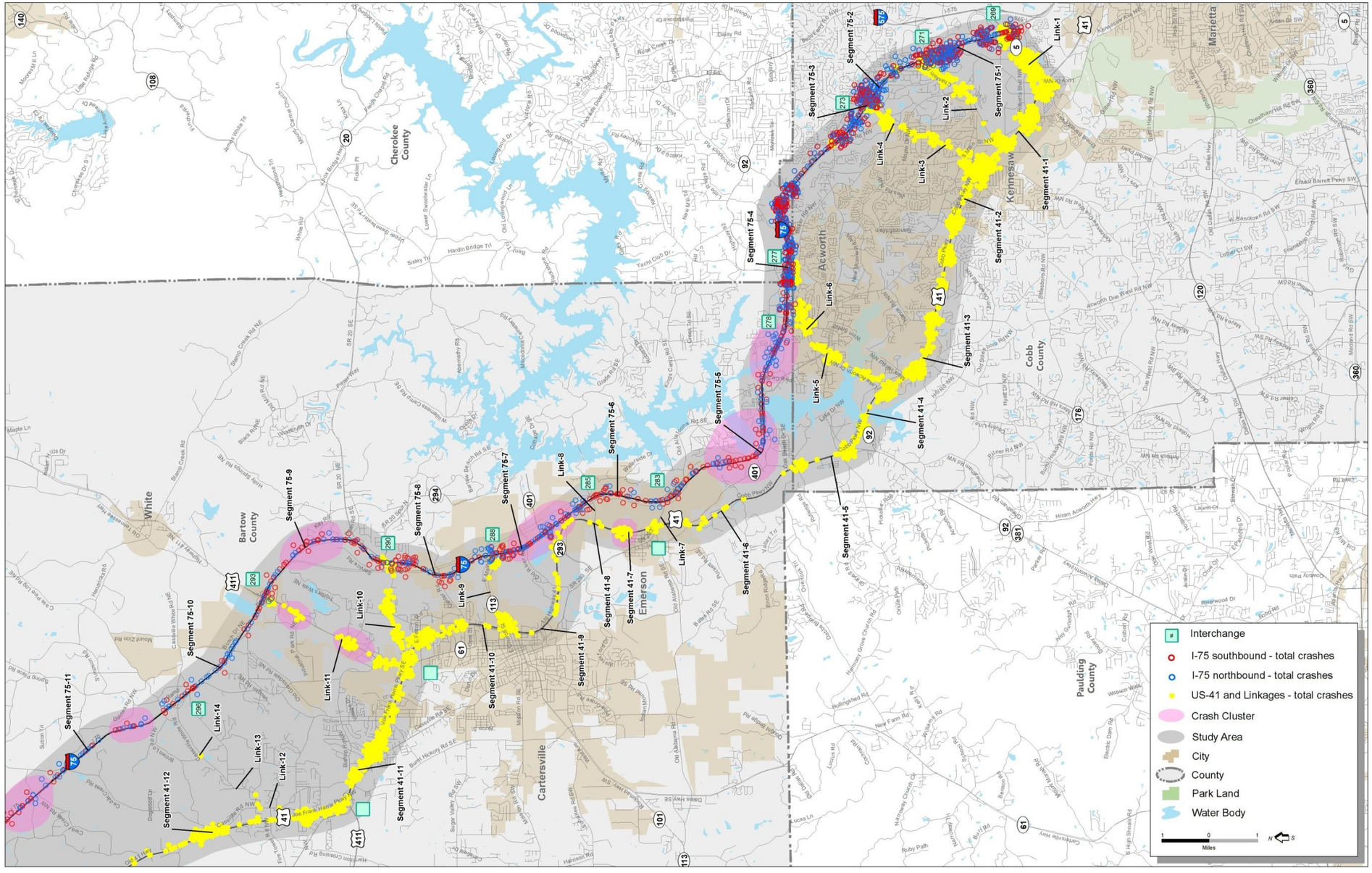


Figure 6-2. Total Crashes (2007-2008) – South Section Zoom

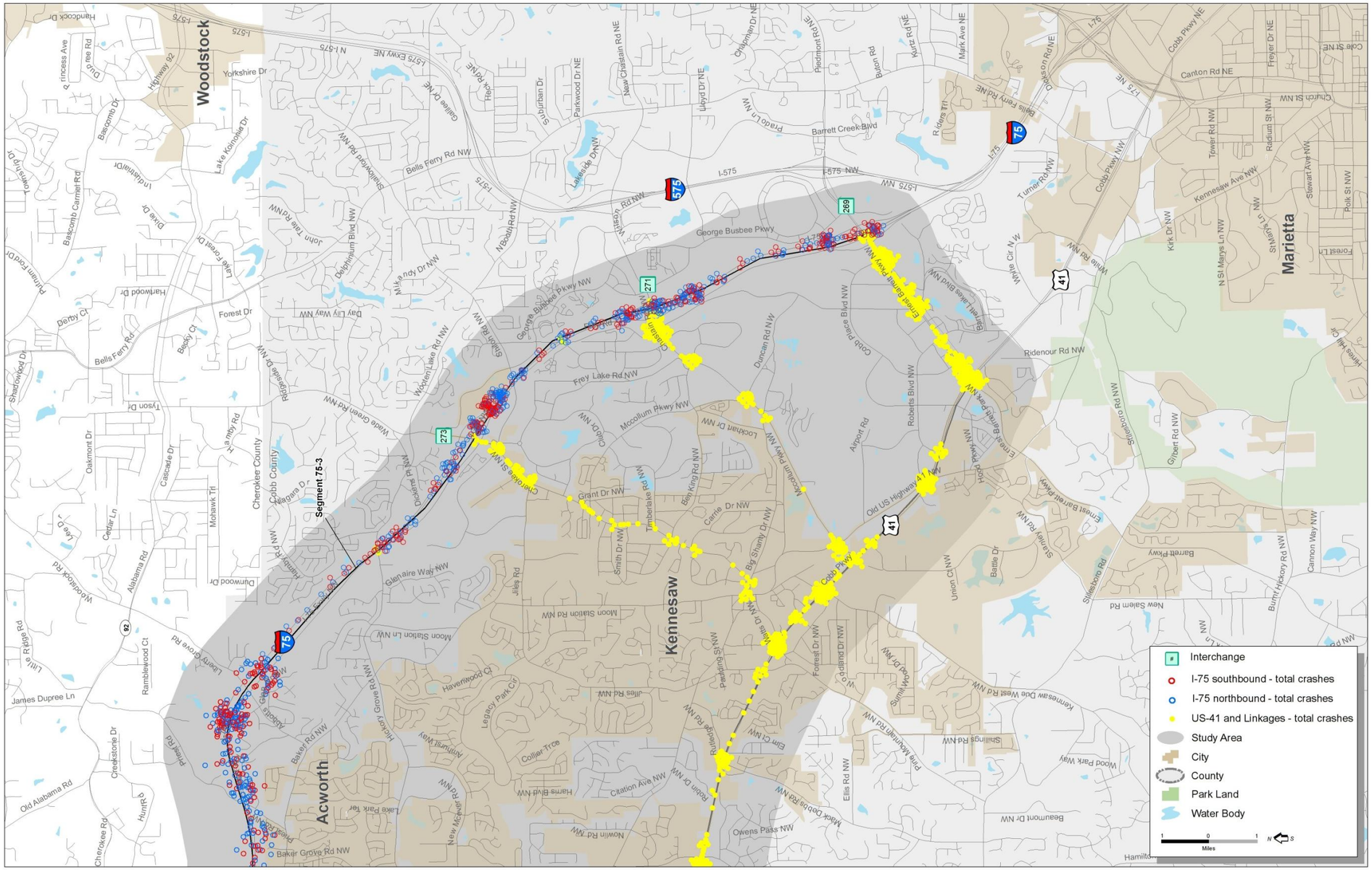


Figure 6-3. Fatal Crashes (2007-2008) – South Section

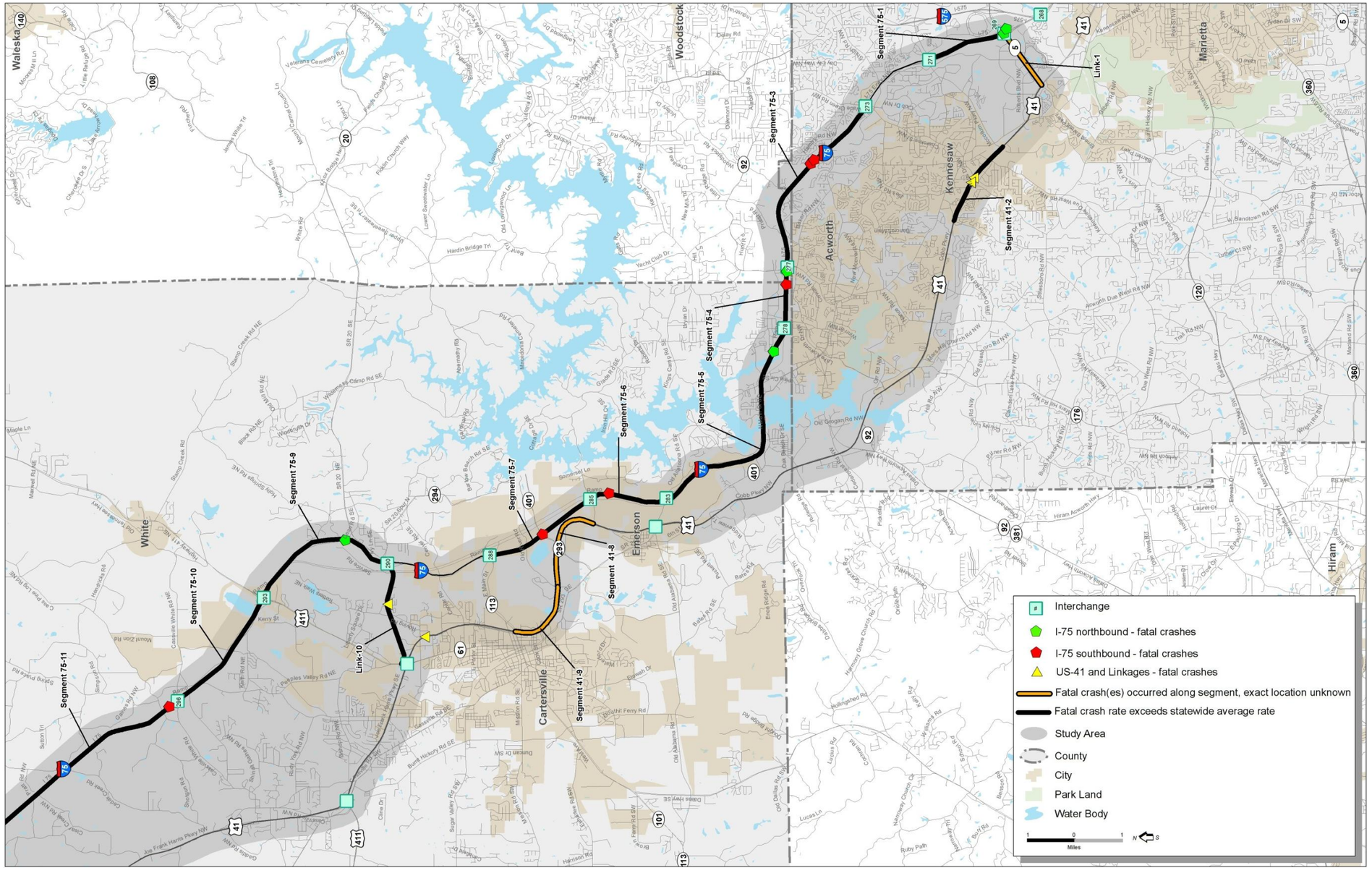


Figure 6-4. Crash Hot Spots (2007-2008) – South Section

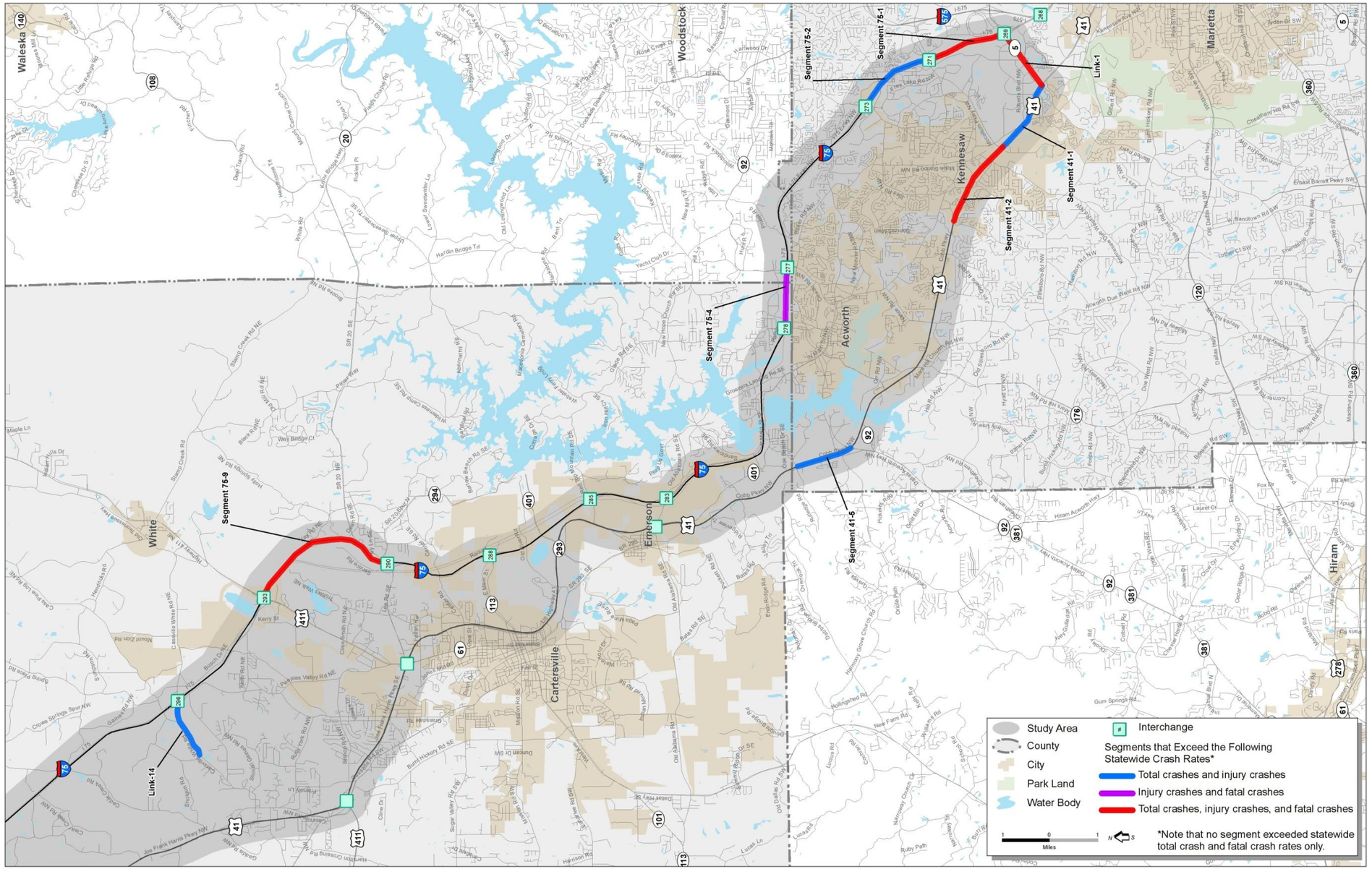


Figure 6-5. Total Crashes (2007-2008) – Central Section

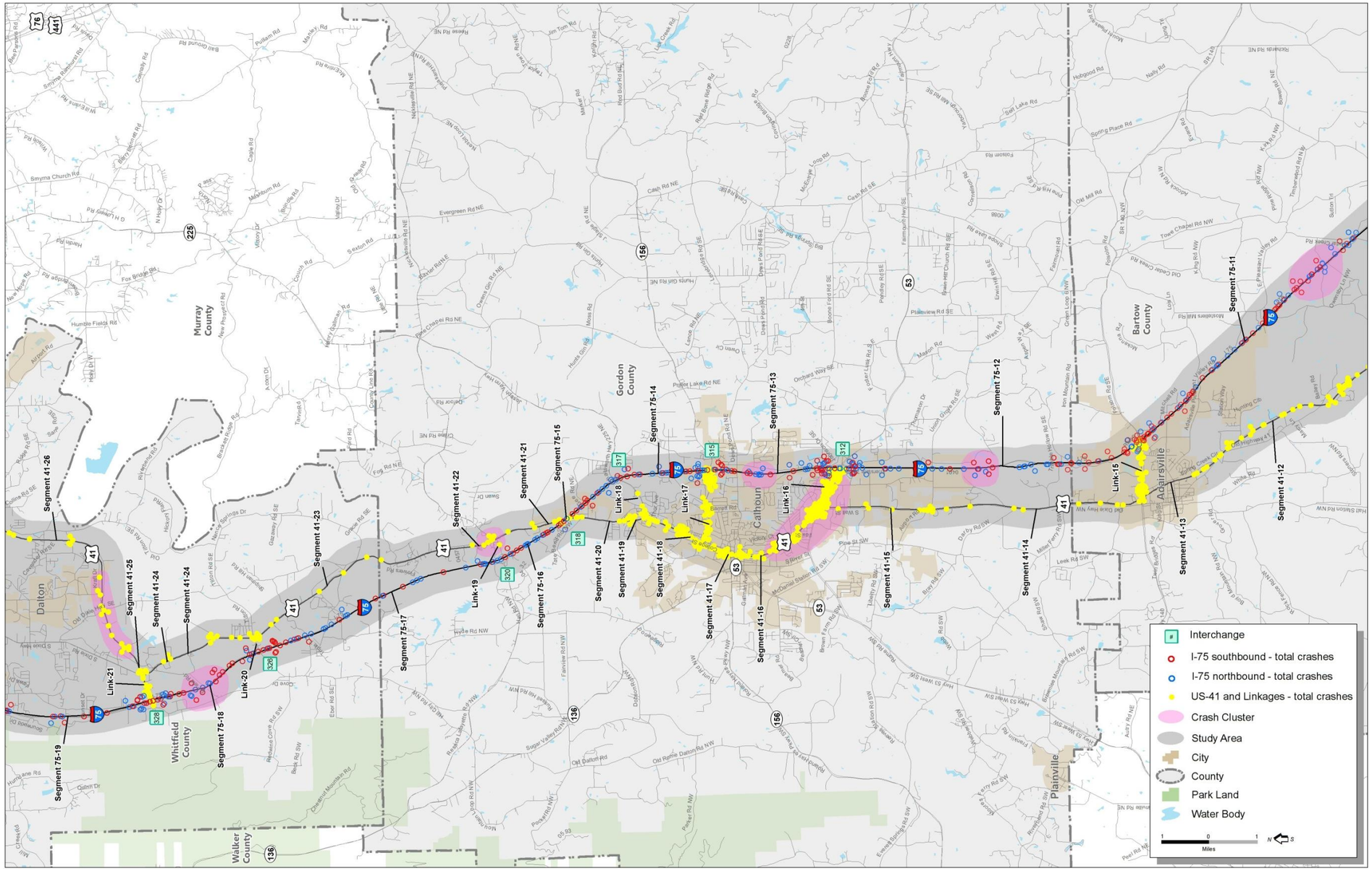


Figure 6-6. Fatal Crashes (2007-2008) – Central Section

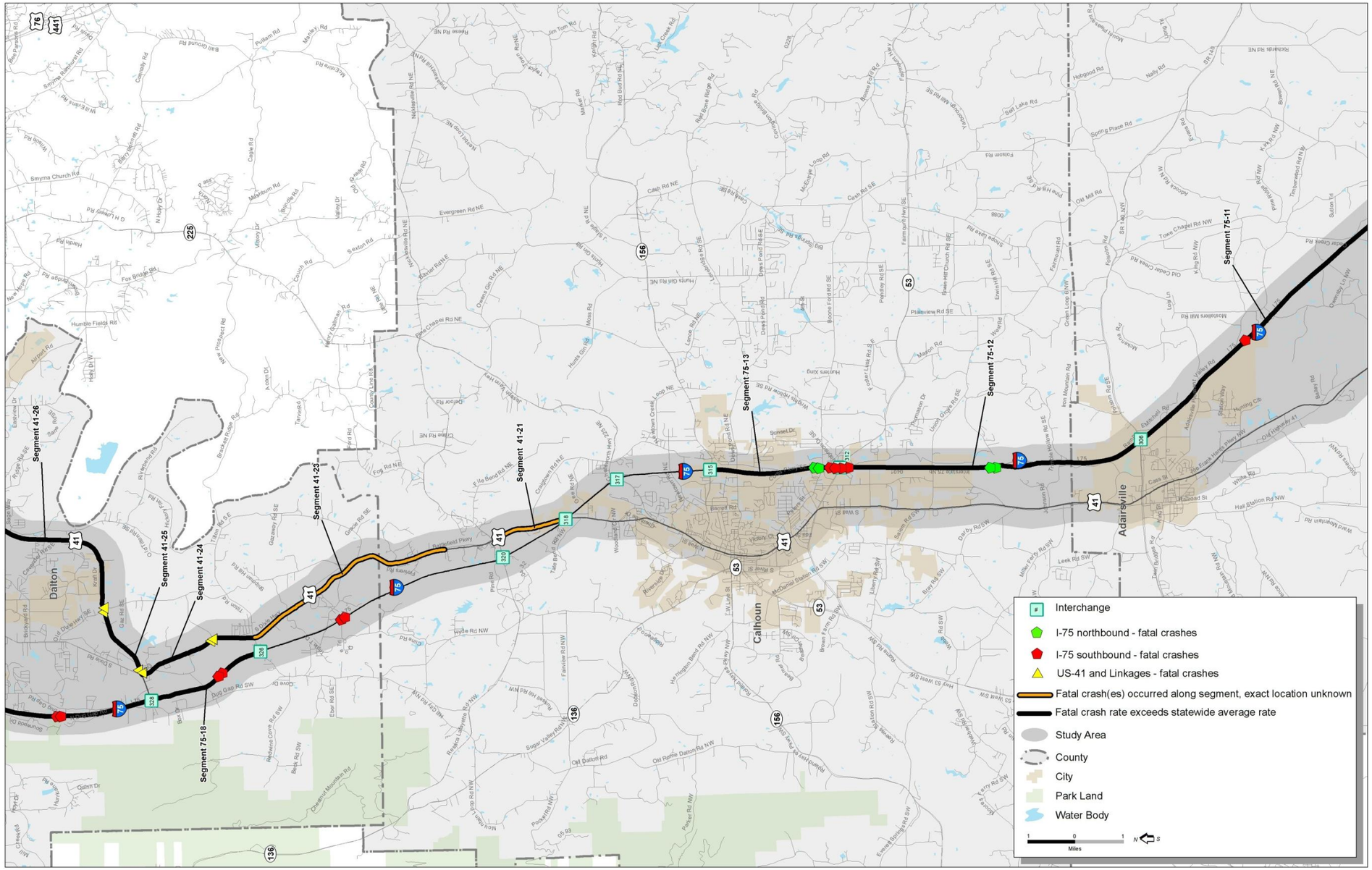


Figure 6-7. Crash Hot Spots (2007-2008) – Central Section

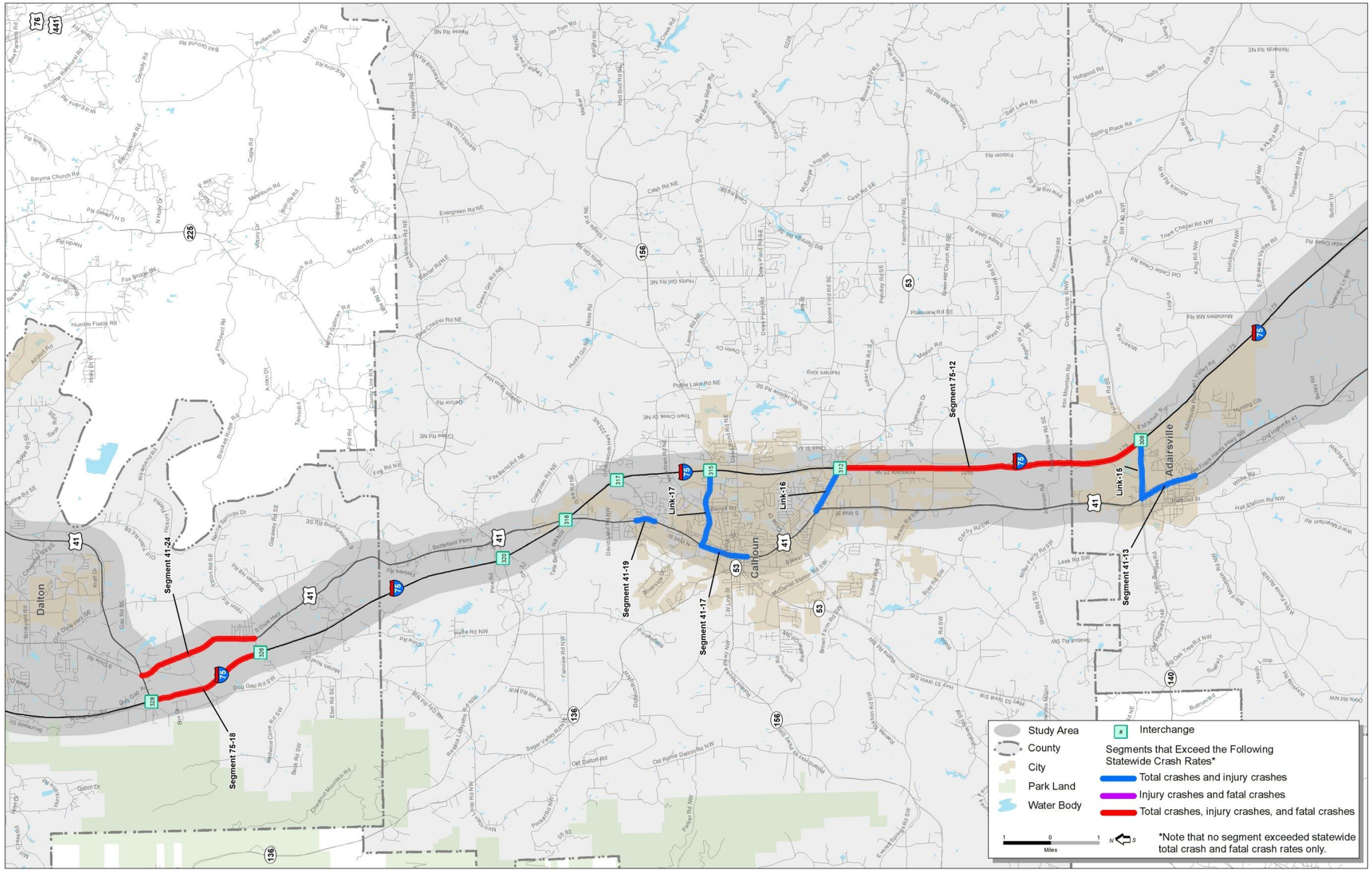


Figure 6-8. Total Crashes (2007-2008) – North Section

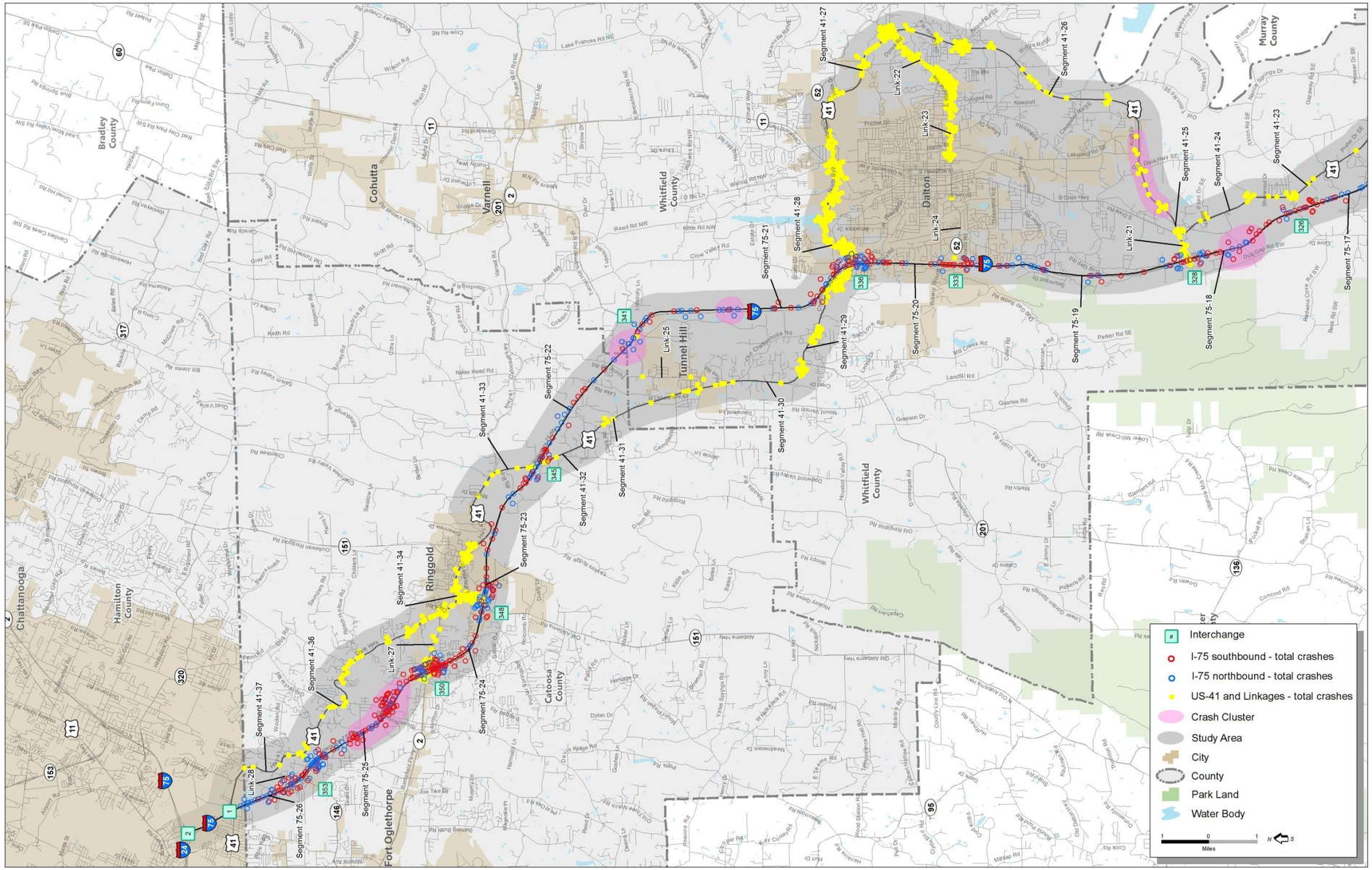


Figure 6-9. Fatal Crashes (2007-2008) – North Section

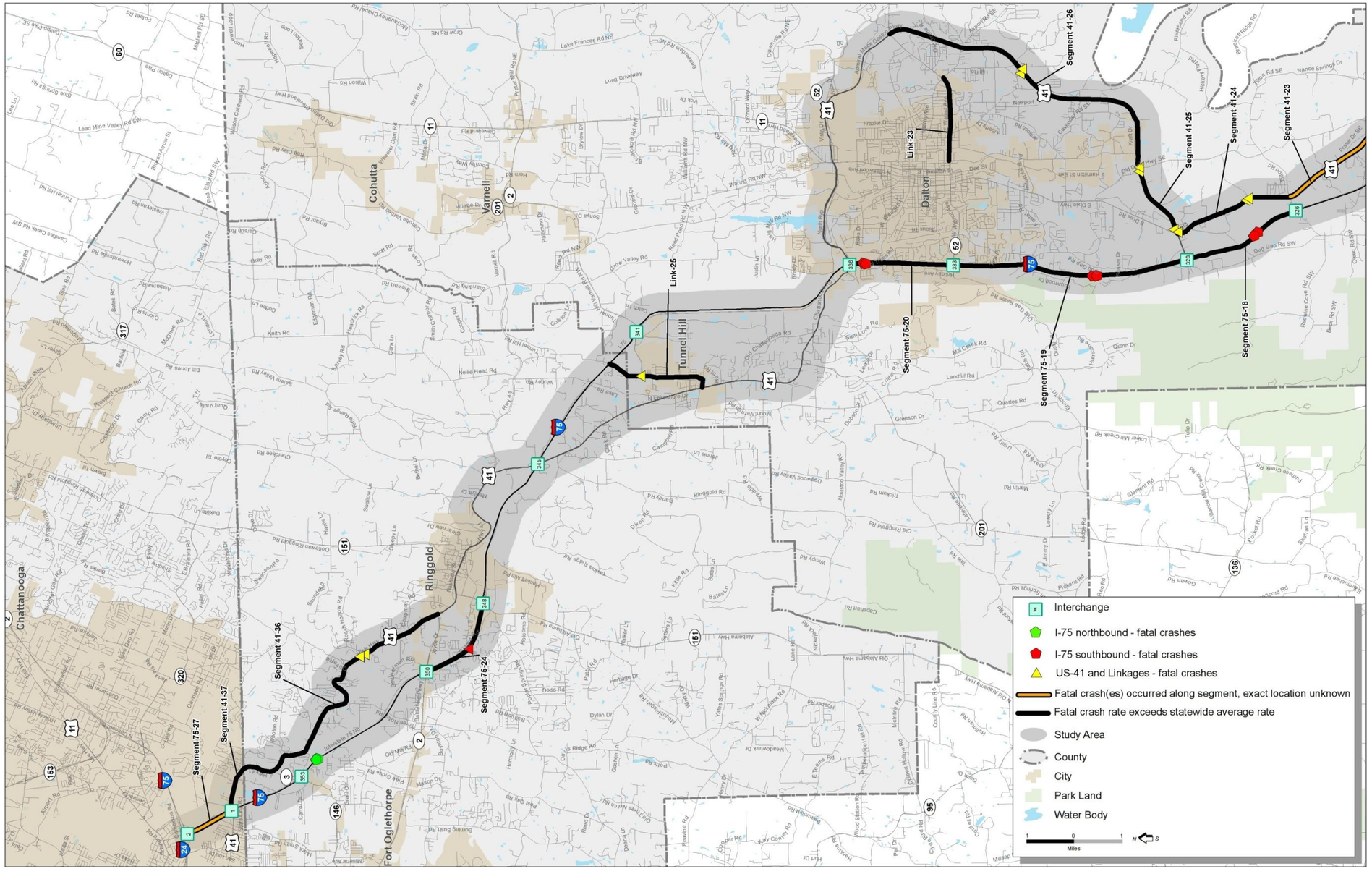
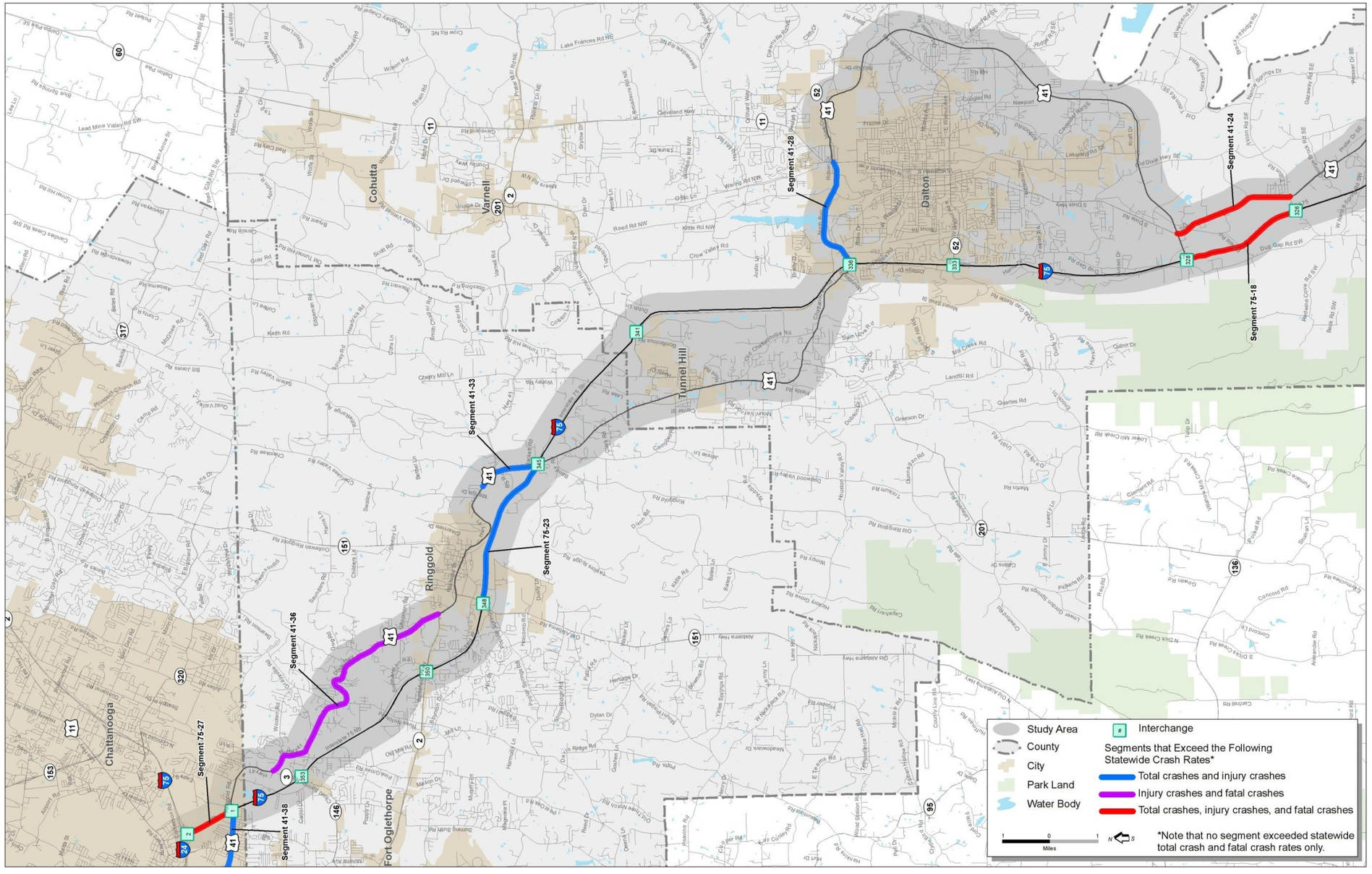


Figure 6-10. Crash Hot Spots (2007-2008) – North Section



6.1 Southern Corridor Assessment

Figure 6-1 through Figure 6-4 indicate the crash data for the southern portion of the corridor. This area is directly focused on the Atlanta area, particularly northwest Cobb County and southern Bartow County. On I-75 there are large clusters of crashes at the Barrett Parkway, Chastain Road, and Wade Green Road interchanges. There is also a cluster of crashes just north of the Wade Green Road interchange that may have a relationship to the truck lane termination on the southbound side. Crashes are then scattered along I-75, with some clustering at interchanges all the way through the US-411 interchange. The frequency of crashes seems to be reduced north of the US-411 interchange. Both Bartow County and the Georgia State Patrol identified frequent crashes on I-75 in the vicinity of the Allatoona Lake Bridge. There is a minor concentration of crashes at that location, which may be a result of the roadway configuration, icing, or fog. While there may not be an exceptional number of crashes at that location, when there is one it is particularly severe and memorable. ARC made a similar comment.

Along US-41 (Cobb Parkway) there are significant numbers of crashes at all the signalized intersections in Cobb County (Figure 6-1). Crash frequency seems to be particularly heavy at intersections with roadways that link to I-75: Barrett Parkway, Chastain Road, Wade Green Road, and both intersections with SR 92 (Lake Acworth Drive and Dallas Acworth Highway). The linking roadways also show clusters of accidents, largely around signalized intersections.

GDOT District 7 noted that there were safety issues at the Wade Green Road interchange southbound on-ramp due to a short acceleration lane.

In Bartow County there are clusters of crashes along US-41 at the interchanges and major signalized intersections. The high crash segments continue through Cartersville with the slower moving traffic and traffic signals. The linkages to the interstate also have a higher incidence of crashes, particularly along Canton Highway (Link 10). In Cassville, as identified by county officials, there is a cluster of crashes where the roadway narrows from four to two lanes. Bartow County officials also identified a cluster of accidents at Pleasant Valley Road in the vicinity of the elementary school.

Figure 6-3 indicates there are many segments on I-75 in the southern portion of the corridor that exceed the statewide average for fatalities and fatal crashes; every segment from Wade Green Road to East Main Street (about 15 miles) exceeds these statewide averages. North of the Canton Highway interchange, many segments exceed the statewide fatal crash averages once again. On US-41, the segments between Red Top Mountain Road and East Main Street in Cartersville exceed the state averages for fatalities and fatal crashes.

Figure 6-4 shows the hot spot map, where crash rates in at least two of the categories on a segment exceed state averages. Half of the eight I-75 hot spot segments are located in the southern corridor: Barrett Parkway to Chastain Road, Chastain Road to Wade Green Road, SR 92 to Glade Road, and SR 20 to US-411. Some southern US-41 segments also meet the hot spot designation, including segments in Kennesaw, northwest Cobb County, and north of Cartersville. Only Barrett Parkway met the hot spots criteria for all Link segments in the southern end of the corridor.

6.2 Central Corridor Assessment

Figure 6-5 through Figure 6-7 depict the crash data for the central part of the corridor. These maps center on Calhoun, and include northern Bartow, Gordon, and southern Whitfield counties. On I-75, as shown on Figure 6-5, there does not seem to be a particular concentration of crashes except at individual interchanges. There is a strong cluster of crashes at the SR 53 interchange with I-75, including two fatalities. This is a fairly busy interchange with many traveler service, manufacturing, and distribution facilities accessing I-75. Gordon County officials commented that the interchange lacks lighting and this could be a potential reason for the crashes. County officials noted that there were many crashes at the river bridge south of exit 326, but recent improvements should have resolved the issue. Georgia State Patrol also identified hydroplaning crashes from SR 53 to US-41 through Resaca.

Along US-41 there are significant clusters of crashes in Calhoun and at the key intersections with linking roadways to I-75. Within Calhoun, the statewide crash rate is exceeded for two segments: 41-17 and 41-19. A US-41 segment just south of the Dalton bypass (41-24) also exceeds the statewide crash rate. In Calhoun, county officials indicated that there are many rear-end crashes. Raised medians have been suggested to correct the issue, but are actively opposed by the business community. Link segments 15, 16, and 17 all exceed statewide crash rates.

Figure 6-6 identifies the segments where fatalities have occurred and where the fatal crashes exceed the statewide average for a similar functional class facility. On I-75, fatal crash rates are exceeded between exits 296 and 315 (segments 75-11 through 75-13) in Calhoun and between Carbondale Road and Walnut Avenue in Dalton (segments 75-18 and 75-19). On US-41, much of the corridor between I-75 (exit 318) and the Dalton Bypass exceeds the state crash rate for fatalities.

The crash hot spots are illustrated in Figure 6-7. Two crash hot spots were identified on I-75 through the central part of the corridor: 75-12 (SR 140 to SR 53) and 75-18 (Carbondale Road to South Dalton Bypass). On US-41, hot spots were identified in northern Bartow County (segment 41-13), in Gordon County (segment 41-17 and 41-19), and in southern Whitfield County (41-24). Link 15, 16, and 17 in or near Calhoun are considered hot spots.

6.3 Northern Corridor Assessment

Figure 6-8 through Figure 6-10 depict the crash information for the northern part of the corridor from Dalton to Chattanooga, including Whitfield and Catoosa counties in Georgia and Hamilton County in Tennessee. For much of I-75, as shown on Figure 6-8, there does not seem to be a particular concentration of crashes. There is, however, a significant number of crashes at interchanges. The statewide crash rates are exceeded on segments 75-23 (US-41 to Alabama Highway) and 75-27 (US-41 to I-24). There does appear to be a cluster of crashes on segment 75-23, between exits 350 and 353. They appear to be concentrated in the vicinity of the southbound Welcome Center. Whitfield County staff identified traffic issues just south of exit 341 at Tunnel Hill/SR 201 with the curve geometry. However, there does not seem to be a concentration of crashes at that location. They also noted that excessive speed was an issue at the Rocky Face interchange (exit 336). Several stakeholders identified issues with the directional interchange between I-75 and I-24, particularly as a result of required weaving, lane drop (from two to one) on the northbound I-75 ramp to westbound I-24, changes in the speed

limit, and the heavy congestion at the interchange. Some US-41 segments exceed the statewide crash rates: segment 41-28 (between Cleveland Highway and I-75 in Dalton), segment 41-33 (between I-75 and Rogers Drive in Ringgold), and 41-38 (between I-75 and McBrien Road at East Ridge, Tennessee). Whitfield County staff identified the intersection of US-41 and US-71 (Cleveland Highway) on the northern Dalton Bypass as one of the worst intersections in the state for safety and congestion. Only Link 26 (Alabama Highway) in Ringgold exceeds the statewide crash rate.

Figure 6-9 identifies the northern corridor segments where fatalities have occurred or where the fatal crash rate exceeds statewide averages. Three I-75 segments in Dalton exceed state fatal crash rate averages: 75-18 through 75-20. Farther north, 75-24 (Alabama Highway to Battlefield Parkway) in Ringgold and 75-27 (US-41 to I-24) in East Ridge also exceed fatal crash rates. US-41 from Jones Drive to Chatsworth Road (41-23 to 41-26) in Dalton and from Battlefield Parkway to I-75 (41-36 to 41-37) north of Ringgold exceeds fatal crash rates. Only two links exceed these rates: Link 23 (SR 52/Walnut Avenue) and Link 25 (Tunnel Hill Church Road/Varnell Road).

Figure 6-10 identifies the crash hot spots for the northern part of the corridor. One segment in the Dalton (75-18), one in Ringgold (75-23), and one in East Ridge (75-27) each qualify as a hot spot. Of all US-41 hot spots in the northern corridor, only segment 41-24 exceeded crash rates in all categories. Four other US-41 segments in the northern corridor qualify as hot spots. In addition, segment 41-28, between I-75 and SR 72, and Links 26 and 27, between I-75 and US-41 in the Ringgold area, exceeded the statewide averages for all crashes and injury crashes. No linkages in the northern corridor are hot spots.

7 FREIGHT MOVEMENT AND DIVERSION

Freight movement has been a major factor in the development of both Georgia's and Tennessee's economy in the past. Today, it continues to rise and is expected to increase in the coming years. By 2035, Georgia's freight tonnage is expected to increase 159 percent from 945 million tons to 2.45 billion tons and its freight value is expected to increase 77 percent from $1.6 trillion to $4.9 trillion. By 2020, Tennessee's freight tonnage is expected to increase from 370 million tons to 655 million tons and its freight value is expected to increase from $294 billion to $868 billion. In order to sustain current services and meet future growth, Georgia and Tennessee must ensure the efficiency of freight flow in, out, and through their jurisdictions. Some of the challenges that both states face include highway and rail capacity issues, congestion, fuel costs, and outside competition.

This section describes both Georgia's and Tennessee's current actions and plans to divert some portion of truck freight movement to rail freight movement and how this diversion relates to and impacts the I-75/US-41 study corridor. A review of existing reports, plans, and studies reveals current and projected truck and rail activities in the states and within the study area.

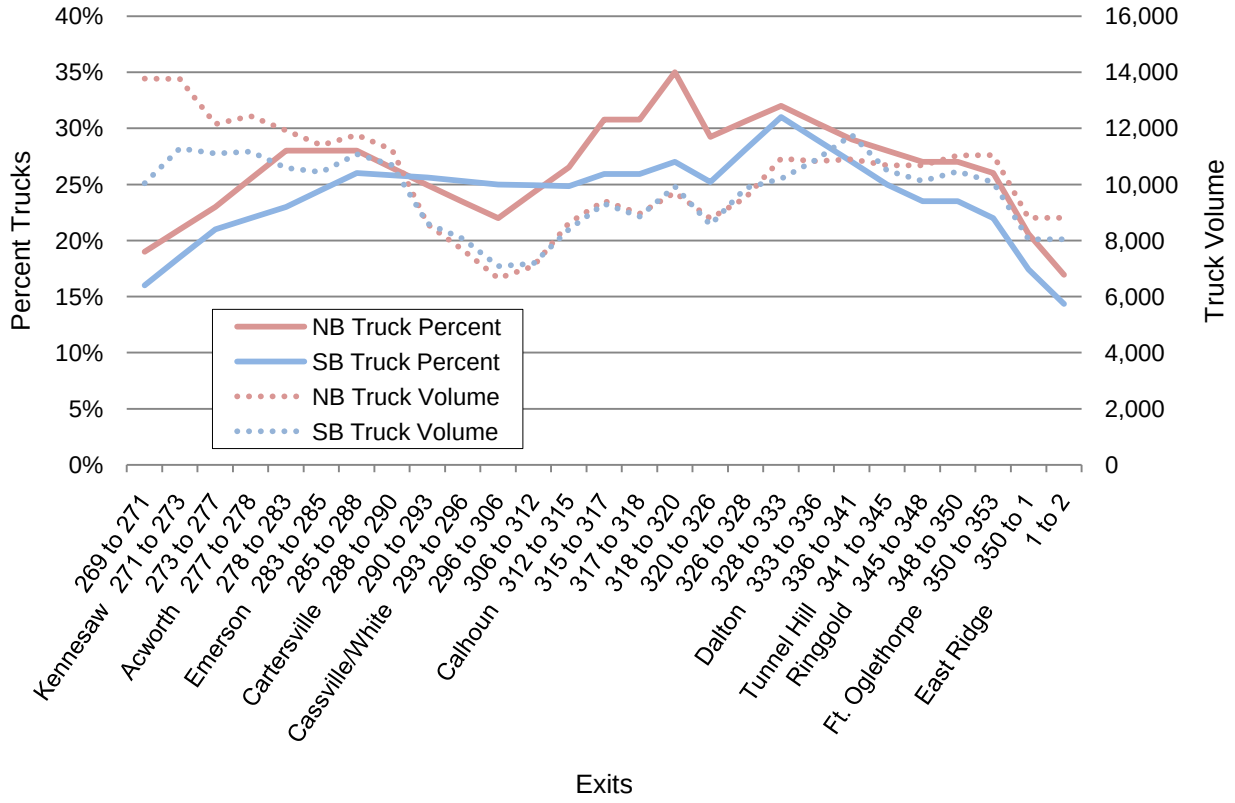
7.1 Truck Movement in Georgia and Tennessee

The interstate system handles more freight movement than any other highway system due to its intercity connectivity, capacity, and structural sufficiency. However, it makes up only a small portion of the overall transportation network. The interstate centerlines (both rural and urban) in Georgia only account for approximately 1.1 percent of the overall transportation network, and in Tennessee, they account for approximately 1.2 percent. Yet, a significant portion of annual VMT is on the interstates—over 26 percent in Georgia and 60 percent in Tennessee. Trucks account for 4 to 25 percent of daily traffic volume in Georgia and 27 percent in Tennessee. Generally, peak truck volume occurs during midday, and high truck volumes also occur early in the mornings and at night.

Although, there is a similar trend in truck volume in Georgia and Tennessee, the distribution of truck traffic is disproportionate between rural and urban areas. While the percentage of trucks is higher in rural than urban areas, the volume of trucks is often higher in the urban areas. This pattern, depicted in Figure 7-1, was observed on I-75 during data collection efforts for the congested segments analysis (Section 4.1). Higher truck volumes and lower truck percentages were observed on I-75 near the Atlanta region. A similar pattern was observed near Chattanooga as well. Figure 7-1 shows that more trucks generally travel on I-75 in the northbound direction than in the southbound direction. This may be due to the influence of the Savannah and Jacksonville ports, as northbound trucks contain time-sensitive shipments that may require use of I-75. In the Atlanta region in general, heavy trucks account for 6 percent of overall traffic during peak periods. In Tennessee, trucks account for 17 percent and 8 percent of all traffic in rural and urban areas, respectively. In 2004, Fulton, Chatham, Cobb, Gwinnett, and DeKalb counties handled over 50 percent of Georgia's truck freight movement; by 2035, these counties, particularly Fulton County, are expected to handle over 60 percent of Georgia's truck freight movement.[3]

[3] GDOT's *Truck Lanes Needs Identification Study*

Figure 7-1. I-75 Truck Percentages and Volumes



Source: GDOT and TDOT for AADT and truck percentages; traffic counts for K and D factors

7.1.1 Truck Routes

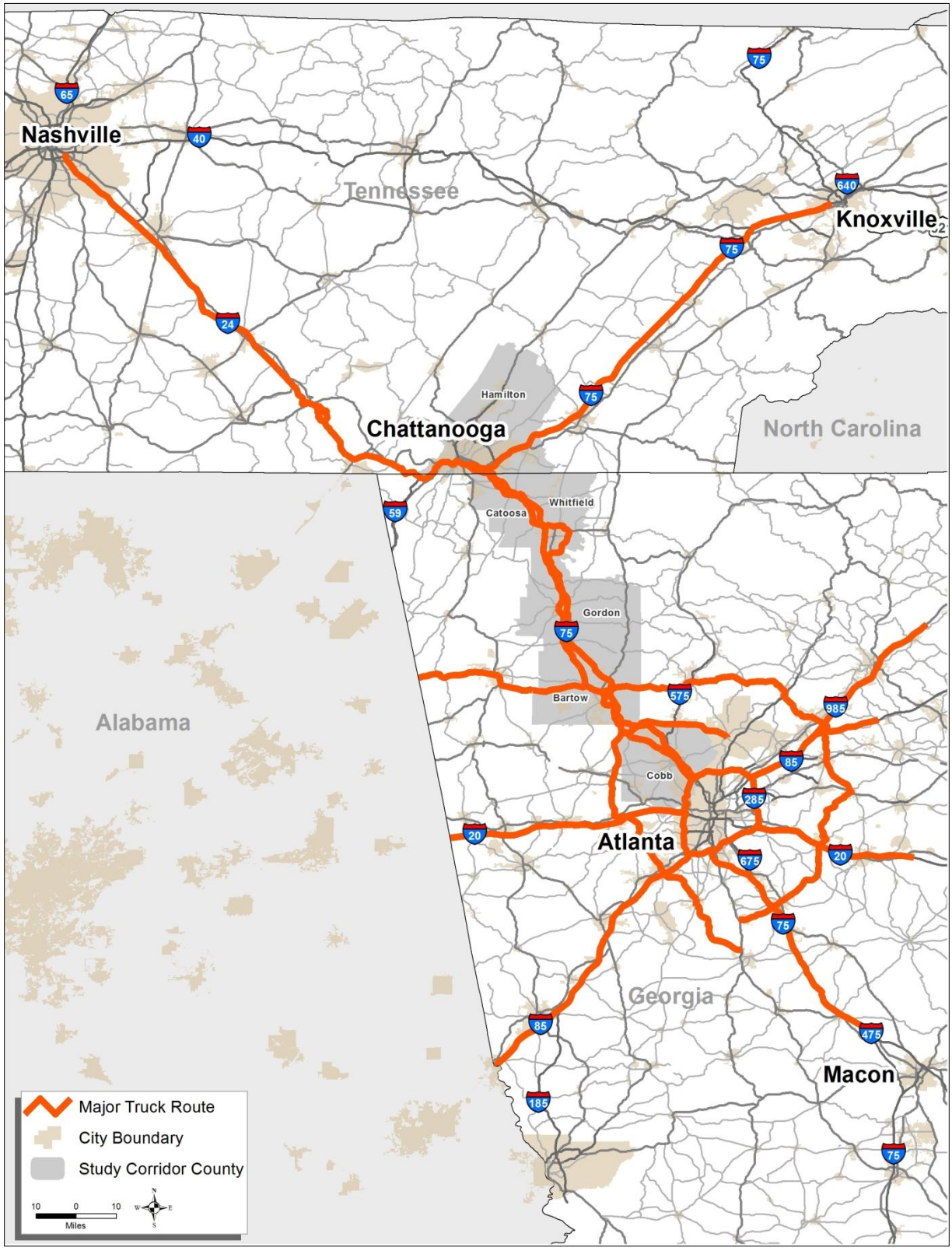
ARC's *Atlanta Strategic Truck Route Master Plan*, GDOT's *Statewide Truck Lanes and Needs Identification Study,* and the C-HCRPA's *Chattanooga Regional Freight Profile* identified several major truck routes. The interstates and major arterials carry the most commercial truck volume (Figure 7-2). The routes that are in the proximity of the study corridor are listed in Table 7-1.

Table 7-1. Major Truck Routes

Roadway	Segment	
	To	From
I-75	I-475 north	I-285 south
I-75	I-285 north	GA/TN state line
I-85	GA/AL state line	I-285 south
I-20	GA/AL state line	I-285 west
I-285	I-75	I-75 (Loop)
I-24	Chattanooga	Nashville
I-75	Chattanooga	Knoxville
US-41/SR-3	Chattanooga	Atlanta
SR 92	Fulton County	Spalding County
SR 20	Bartow/Floyd County line	Henry County

Source: ARC, GDOT, and TDOT

Figure 7-2. Major Truck Routes



Source: GDOT and TDOT

7.1.2 Distribution Centers

The I-75 corridor is rich with major distribution centers for a variety of companies and industries, particularly in Dalton and Chattanooga, as shown in Figure 7-3. Distribution centers greatly contribute to freight-related traffic along the corridor.

7.1.3 Truck Issues

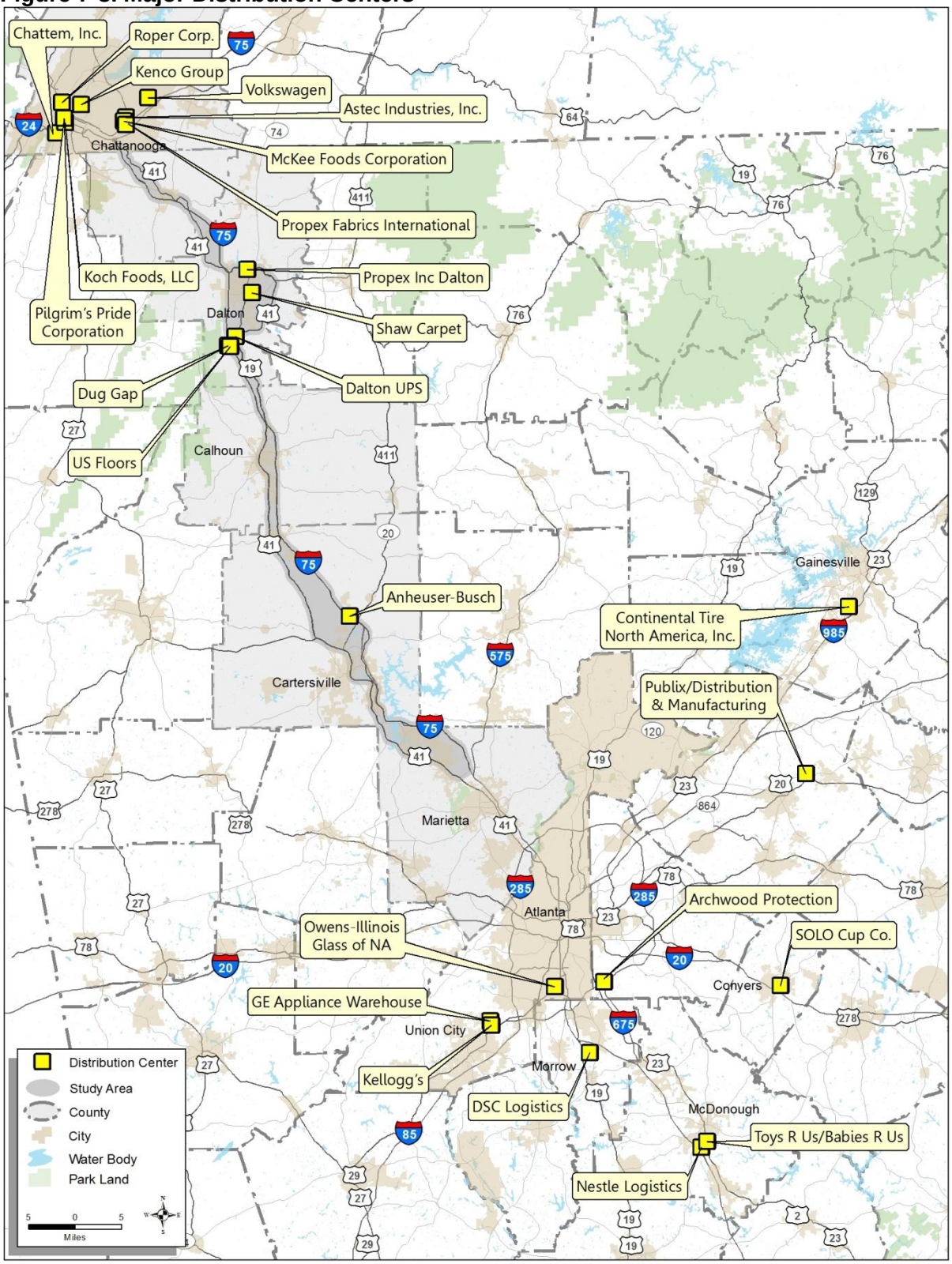
Statewide truck and rail freight movement in both Georgia and Tennessee is expected to rise significantly in the future. Currently, trucks make up a greater share of freight movement in weight and volume than rail. GDOT's *Statewide Truck Lanes Needs Identification Study* notes that approximately 86 percent of freight tonnage in Georgia is attributable to trucks and TDOT's *PlanGo* notes that trucks carry approximately 75 percent of freight in Tennessee.

Growth along the major truck routes is expected to occur as demand for just-in-time deliveries and other services increase. The I-75 corridor connecting Macon, Atlanta, and Chattanooga is no exception. According to GDOT's *Statewide Truck Lanes Needs Identification Study*, the observed annualized average daily traffic along the Macon-Atlanta-Chattanooga corridor is 180,077 for all vehicles, and 30,001 for trucks. The study expects truck volume to increase 56 to 62 percent by 2035 as a result of current trends. By 2030, truck volume and VMT along I-75 in Tennessee are expected to increase 46 and 129 percent, respectively. Concurrent with these expected increases, average highway speeds are expected to decrease from 66 mph to 57 mph.

The study found that I-75 from Tennessee to Macon operated at LOS F (1.01 traffic volume to capacity ratio) based on observed traffic counts at the time. However, the base year (2004) of the Statewide Transportation Plan model's Existing Scenario, which does not account for local trips within counties (i.e. intra-zonal trips), operated at LOS C. The discrepancy reveals that through trips (i.e. trips from one county to another) make up the majority of all trips on I-75 between Tennessee and Macon. The Existing Scenario of the model also found that I-75 between Kennesaw and Cartersville experienced some of the highest truck congestion in the state at LOS F. According to the TDOT's I-75 Corridor Feasibility Study, in 2030, almost the entire I-75 corridor within Tennessee is expected to operate at LOS D or worse.

Bottlenecks typically develop in congested situations. Bottlenecks are locations where the flow of traffic is constrained, thus leading to delays. One of the major bottlenecks in Tennessee is at the I-75 and I-24 interchange, and the I-75 and I-285 interchange is one of the major bottlenecks in Georgia.

Figure 7-3. Major Distribution Centers



7.1.4 Future Truck Traffic

GDOT's *Statewide Truck Lanes Needs Identification Study* and TDOT's *PlanGo* estimated future truck traffic conditions to 2035 and 2030, respectively, through their statewide travel demand models. Results from these studies help provide a better understanding of future truck traffic in the *I-75 North Corridor Study* area, which is expected to increase over the next two decades.

GDOT's *Statewide Truck Lanes Needs Identification Study* (2008) summarized truck traffic results obtained from the statewide travel demand model. The study performed individual corridor analyses for I-75 between I-285 north and the Tennessee state line for year 2035 conditions. The study split this I-75 segment into two halves: from I-285 north to the Bartow/Gordon County line (4A), and from the Bartow/Gordon County line to Tennessee (4B). The statewide model estimated an average daily LOS by 2035 of C and D for segments 4A and 4B, respectively. The results showed a consistent truck percentage of 38 percent throughout both segments. The study only calculated a 2035 average PM peak-period LOS for segment 4A, which resulted in a LOS F.

Table 7-2. 2035 Level of Service and Truck Volumes

	Corridor Demand				Average LOS	
Corridor	Cars	Trucks	Total	Percent Truck	Daily	PM Peak
4A: I-75 from I-285 to Bartow/Gordon	91,555	56,621	148,176	38.2%	C	F
4B: I-75 from Bartow/Gordon to TN	45,444	27,895	73,338	38.0%	D	N/A

Source: GDOT's *Statewide Truck Lanes Needs Identification Study* (2008)

TDOT's *PlanGo* (2005) summarized statewide model results by both city pairs and MPOs. Statewide traffic results were broken down by rural and urban highway systems, while results by MPOs further distinguished between interstates and state routes. *Plan Go* estimated that the average daily LOS for the entire length of I-75 between Chattanooga to Knoxville will be either an E or F. Congested traffic conditions are estimated to increase the average travel time between these cities from two hours and 12 minutes in 2003 to two hours and 41 minutes by 2030.

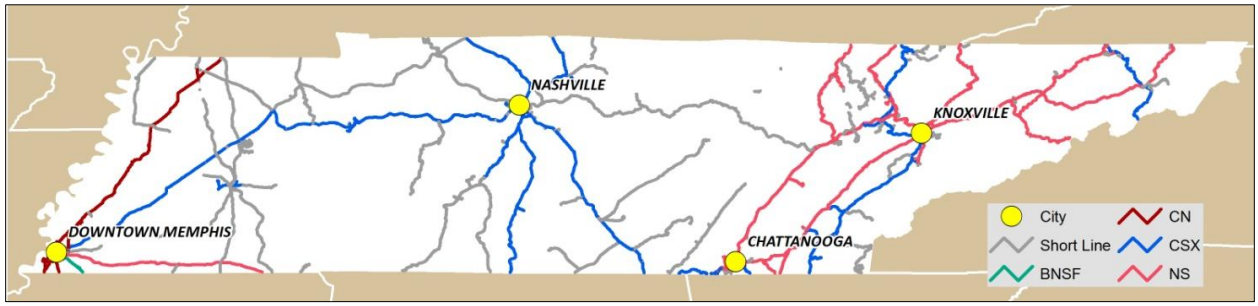
GDOT analyzed truck-only lanes as a potential strategy to reduce peak-period interstate congestion. The *Statewide Truck Lanes Needs Identification Study* analyzed four unique "systems" of truck-only lanes within the 20-county Atlanta non-attainment area using results from ARC's model. All four systems included a section of I-75 from the I-575 split to Cartersville, which is located within the *I-75 North Corridor Study* area. The study concluded that the high costs of implementing a network of truck-only lanes (approximately $22 billion in year-of-expenditure dollars) outweighed the benefits. Only 60 percent of truck drivers would use the dedicated lanes, and that any resulting excess capacity in the general purpose lanes would be "quickly consumed by 'latent demand'…the phenomenon that after supply increases, demand for the facility increases or is consumed."

7.2 Rail Issues and Studies in Georgia and Tennessee

7.2.1 Rail Operations

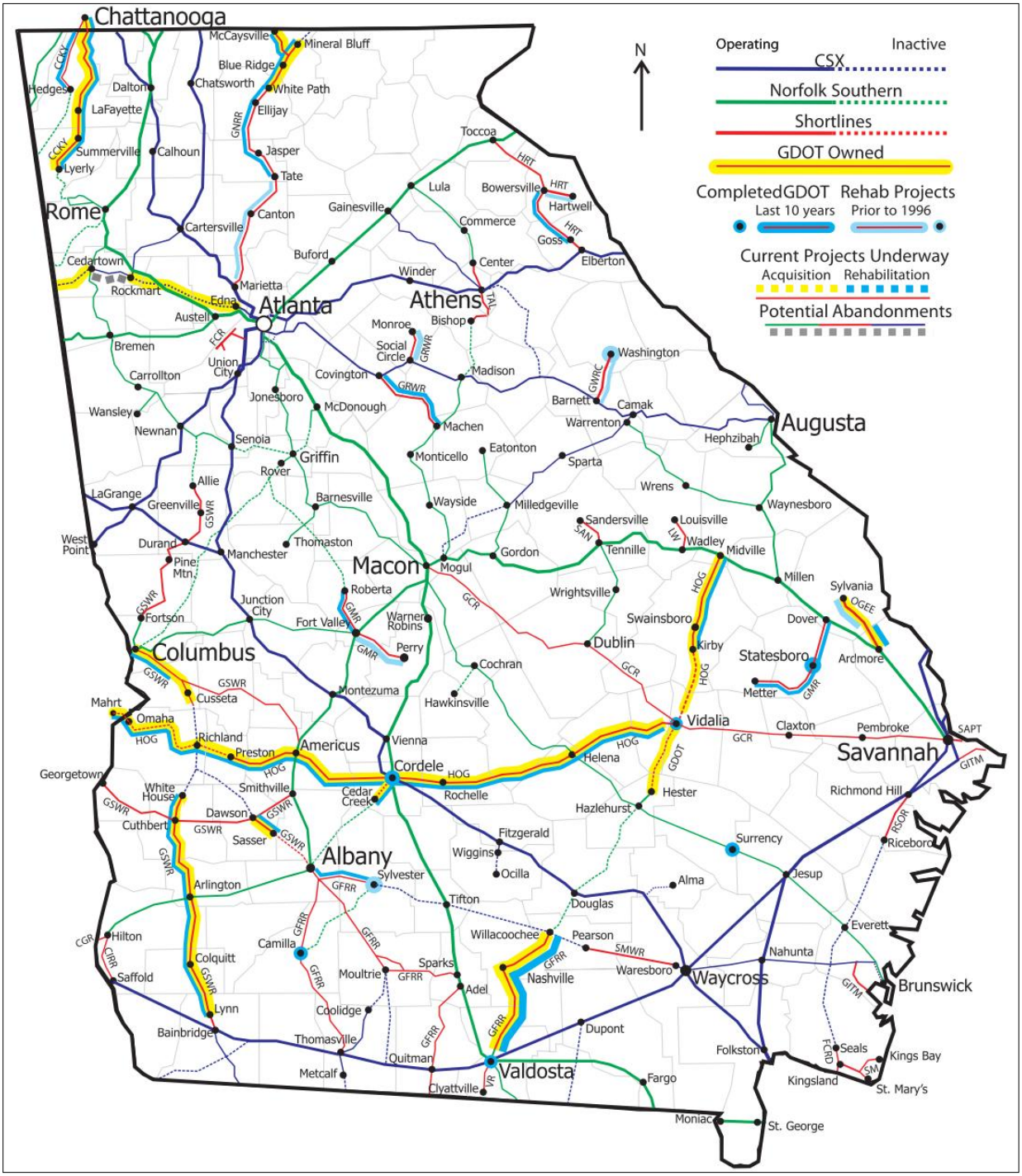
The existing rail network in Georgia and Tennessee supports freight movement in several directions. However, as illustrated in Figure 7-4 and Figure 7-5, Georgia's rail network is more prevalent than Tennessee's. Georgia has approximately 5,000 miles of tracks and Tennessee has approximately 3,000 miles of tracks. As shown in Figure 7-6, both the CSX and Norfolk Southern (NS) north/south alignments cross the I-75/US-41 study area at multiple points.

Figure 7-4. Railroad Operations in Tennessee



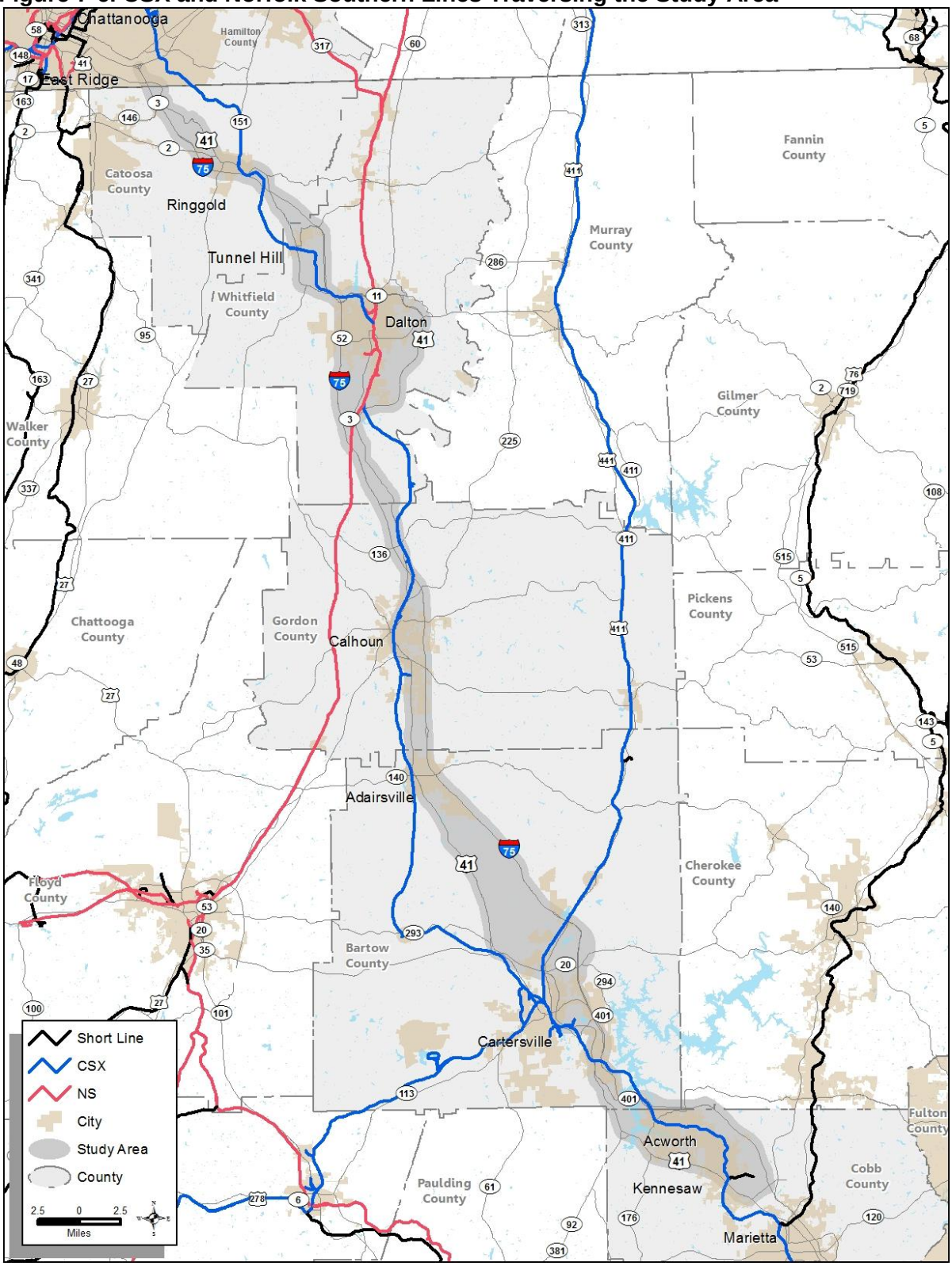
Source: Bureau of Transportation Statistics

Figure 7-5. Railroad Operations in Georgia



Source: GDOT

Figure 7-6. CSX and Norfolk Southern Lines Traversing the Study Area



Source: Bureau of Transportation Statistics

CSX and NS are the primary Class I railroads in Georgia and Tennessee. The Association of American Railroads (AAR) defines Class I Railroads as "line haul freight railroad with 2010 operating revenue of $398.7 million or more." As shown in Table 7-3, Tennessee has six Class I Railroads while Georgia has two.

Table 7-3. Class I Railroads in Tennessee and Georgia

State	Class I Railroad	Miles
GA	CSX Transportation	1,615
	Norfolk Southern Corp.	1,778
TN	BNSF Railway Company	144
	CSX Transportation	1,006
	Grand Trunk Corporation	145
	Kansas City Southern Railway Co.	5
	Norfolk Southern Corp.	848
	Union Pacific Railroad Co.	14

Source: AAR, Rail Fast Facts for 2009

Class II and Class III Railroads are known as Regional and Short Line railroads, respectively. Regional railroads are "line haul railroads operating at least 305 miles of road and/or earning revenue between $40 million and the Class I revenue threshold ($398.7 million)." There are no Regional Railroads in both Tennessee and Georgia. Short Line railroads are defined in two ways:

- "Local railroads are line-haul railroads below the Regional criteria.
- Switching & Terminal railroads are railroads that are either jointly owned by two railroads for the purpose of transferring cars between railroads or operate solely within a facility or group of facilities."[4]

Georgia has 19 local railroads; while Tennessee has 14. There are six Switching and Terminal railroads in Tennessee (one of which is the East Chattanooga Belt Railway Co.) and one in Georgia (Savannah Port Terminal Railroad, Inc.). Table 7-4 provides the proportion of Class I, Short Line, and Switch & Terminal railroads in Tennessee and Georgia.

Table 7-4. Miles of Railroad Tracks

State	Class I	Short Line	Switch & Terminal	Total
GA	3,393	1,387	18	4,798
TN	2,162	751	63	2,976

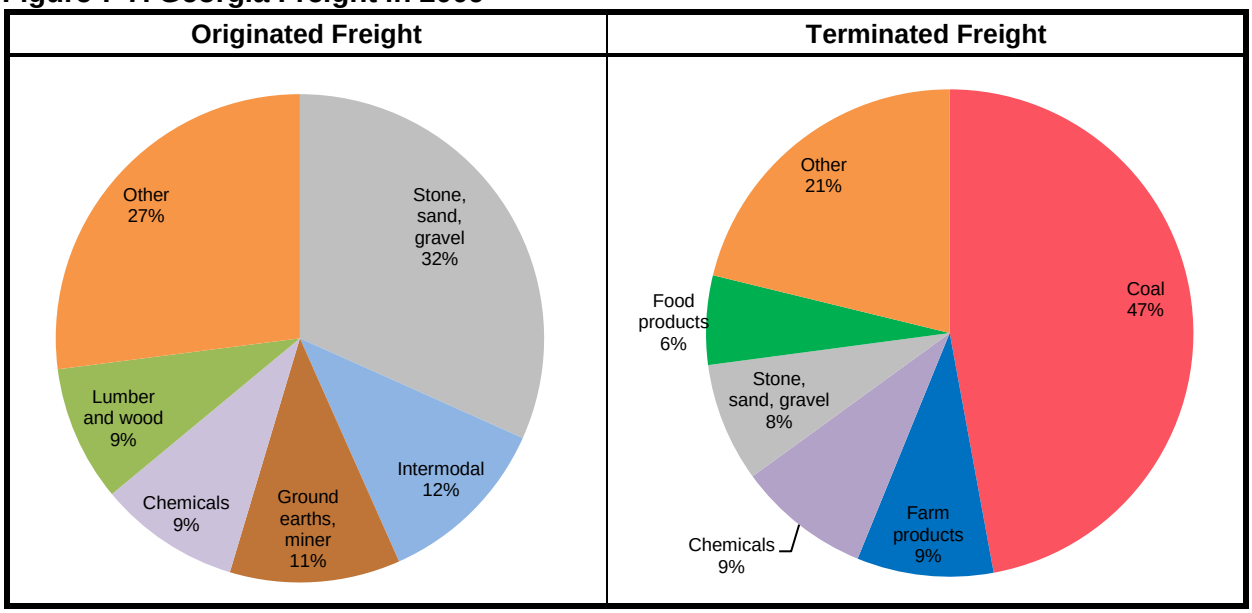
Source: AAR, Rail Fast Facts for 2009

Railroads move a significant amount of freight tonnage in and out of both Georgia and Tennessee. In terms of tonnage, coal is the number one commodity terminating in both states; followed by chemicals and farm products. However, as illustrated in Figure 7-7 and Figure 7-8, most of the freight originating from Georgia differs from the types originating from Tennessee.

[4] American Short Line and Regional Railroad Association, http://www.aslrra.org/about_aslrra/faqs/. Retrieved 3/6/2012

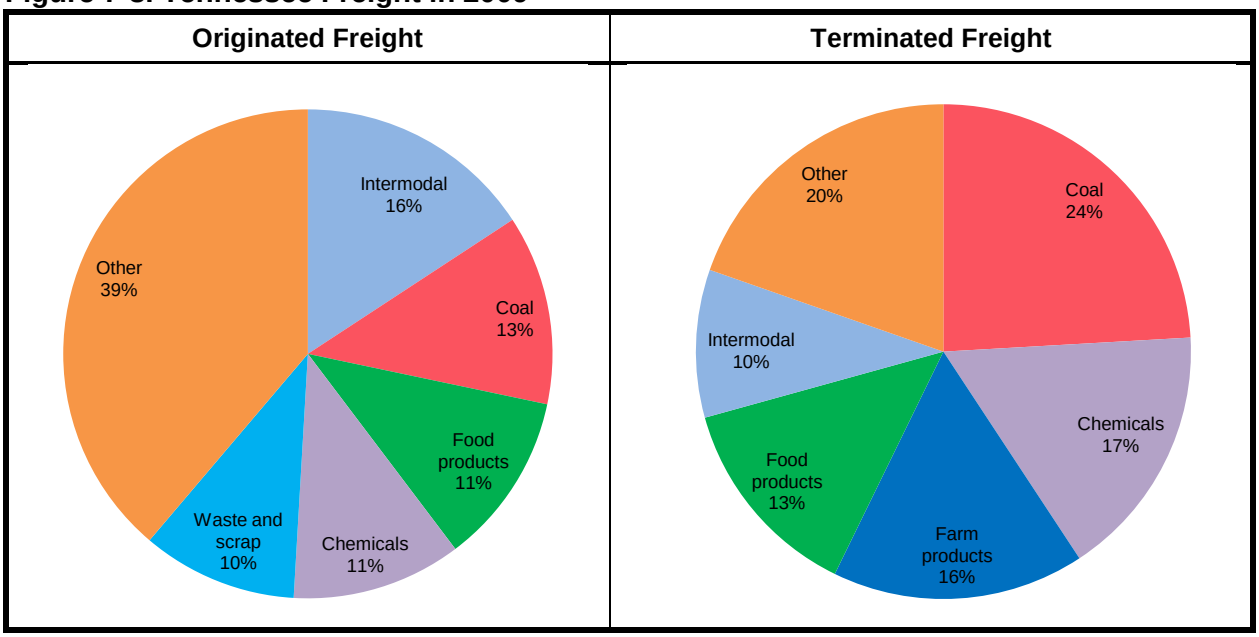
Chemicals and intermodal are the only two common commodities for both states. As depicted in Table 7-5, Georgia's freight tonnage and carloads originating and terminating in the state surpass those of Tennessee's.

Figure 7-7. Georgia Freight in 2009



Source: AAR, Rail Fast Facts for 2009

Figure 7-8. Tennessee Freight in 2009



Source: AAR, Rail Fast Facts for 2009

Table 7-5. Freight Tonnage and Carloads in 2009

Measure	GA	TN
Originating Freight Tonnage	27.6 million	14.4 million
Terminating Freight Tonnage	75.9 million	24.1 million
Originating Carloads	669,600	390,300
Terminating Carloads	1,212,200	460,700

Source: AAR, Rail Fast Facts for 2009

Rail traffic is expected to increase in parallel with freight tonnage. According to the *Tennessee Rail System Plan: Freight Movement Inventory and Future Demand Analysis*, rail traffic is expected to increase nearly 70 percent from 1998 to 2020. According to the *Georgia Statewide Freight Plan*, Georgia's rail volume is expected to double in tonnage and value by 2035, from 40 million tons to 60 million tons and from $40 billion to $100 billion, respectively. Currently, the largest rail volume is along the CSX mainline from Atlanta to Chattanooga and the NS segment from Macon through Atlanta to Chattanooga. Volume along these two segments is projected to increase more than any other segment within Georgia.

7.3 Georgia and Tennessee Freight Model Capabilities

7.3.1 Georgia

Georgia's future freight forecast is generated from its statewide travel demand model (TDM). The state's TP+ model is explained further to provide a better understanding of the development of the freight forecast.

In early 2000, a TDM was developed for GDOT's *Interstate System Plan* and completed in 2004. The TDM is compatible with TP+ software, which is used by GDOT to forecast roadway conditions in its Statewide Transportation Plan Update. Attributable information from GDOT's Roadway Classification (RC) file was included in the TDM; thus, allowing classification of traffic conditions by zones in the TP+ statewide model.

The TP+ network consists of generalized links representing the characteristics of the counties where the links are located. Each county was assigned a Traffic Analysis Zone (TAZ) and linked to the TP+ model network with at least one connector road, depending on its population density. Zones where major road(s) extends into another state were identified as external zones.

Trip tables were generated for autos, trucks, and planes. Trip tables for the two ground transportation modes were generated using 2001 AADT data, following procedures from the TransCAD Origin Destination Matrix Estimation (ODME). Two resources were used to analyze aviation—the *Hartsfield-Jackson Atlanta International Airport's Capital Development Program* and the *Georgia Aviation System Plan*. Freight flow data from HIS Global Insight's Transearch database was used to generate a freight truck trip table. The Transearch database has "…current and future freight flows by origin, destination, commodity, and transport mode." Freight rail conditions were analyzed for the Short Line operators using information from the *Georgia Freight Rail Plan: Update 2000*.

Future trip tables for 2035 were generated from the economic forecasts in the Statewide Transportation Plan Update, which considered several factors, such as employment, population, logistics, and industry. The 2035 truck freight table was generated by linking the Standard

Transportation Commodity Codes, developed by the Association of American Railroads, of neighboring state forecasts to Georgia's freight truck table.

AADT forecasts for autos and trucks were developed by associating the growth rates in the TDM network to the RC file. This was the base network for the TP+ statewide model. Using this network, various scenarios were modeled to capture different growth rates and potential projects in the GDOT's Construction Work Program, Regional Transportation Plans (specifically projects that were identified under the State TIP), Georgia Rail Passenger Program, *Georgia Freight Rail Plan: Update 2000*, and Southeast High-Speed Rail studies.

Although the four-step model provides more robust information, results from the TP+ statewide model provide valuable forecasts at the macro-level and as a basis for lower levels. However, its limitations do present some drawbacks. Detailed information cannot be easily extrapolated from the broad county TAZs; thus, the identification of patterns is difficult to discern. Also, the TP+ model cannot model traffic that originates and terminates within the same zone. Therefore, growth rates from the model were used to get the observed volumes.

The model forecasts a 171 percent increase in freight tonnage and a 204 percent increase in the value of freight by 2035 throughout Georgia. Although through freight currently exceeds originating and terminating freight, it is forecast to decline slightly. Georgia truck volume is expected to increase from 72 percent to 79 percent in tonnage and from 82 percent to 86 percent in value.

7.3.2 Tennessee

TDOT's Systems Planning and Policy Office is responsible for the development of the state's TDM. The TDM includes the interstates and major roads within the state and connecting ones beyond the state's borders. Model results are included in the state's *Long Range Transportation Plan* to identify and address future needs of the state's transportation network, including freight movement in, out, and through the state. The model allowed for the analysis of both trucks and rail.

County level freight flow data was retrieved from the 2001 Transearch database. Data for external freight flows were "based on geographic regions of business economic areas, state, census region, border crossing location or port."

The model was developed to forecast intercity freight movement rather than intra-city freight movement. It was integrated with the TransCAD network. The truck trip tables were not exclusively based on the model. They included feedback from TDOT associates and results from TransCAD's origin destination matrix estimator function. Other factors that were taken into consideration included:

- Payload by commodity;
- Percentage of null estimates;
- Comparison of observed truck counts versus assigned truck counts;
- Quality check with the Freight Analysis Framework data.

The freight rail network was disaggregated into 44 zones and integrated into TransCAD. In order to connect the local freight rail to the national network, counties where no rail line exists were assigned links.

By associating freight volume to sector-based employment data from the Bureau of Labor Statistics, a 2030 freight flow forecast was achievable. Then, both truck and rail trip tables were developed using the Fratar model process, which ensures that the number of originating vehicles matches the number of terminating vehicles in each zone.

Results from the statewide model indicate that through truck traffic will increase 125 percent by 2030 and that internal truck traffic will increase 81 percent throughout Tennessee. Statewide truck VMT in 2030 is expected to increase two times beyond 2003 VMT.

7.4 Freight Issues and Studies in Georgia and Tennessee MPO Plans

7.4.1 Atlanta Regional Commission

Truck Freight

I-75 route through Cobb and Bartow counties is a major truck corridor. Manufacturing industries are a vital element of Bartow County's economy. According to the Cartersville-Bartow County Department of Economic Development, Shaw Industries, a floor covering company, employs over 2,500 employees, followed by Toyo Tires with 1,070 employees and Anheuser-Busch with nearly 571 employees. Manufacturing is also an important industry in Cobb County. It follows behind the service and retail industries.

The *Atlanta Region Freight Mobility Plan* identified some key issues along the I-75 North study corridor that hinders truck freight movement in Cobb and Bartow counties:

- Poorly synchronized traffic lights along Cobb Parkway (US-41)
- Cobb County has the third highest commercial vehicle crashes within the 20-county metro Atlanta region
- Limited truck route access, particularly in the east/west direction
- Bottleneck at I-75 and I-575 (I-75 and I-285 was identified as well)

The plan recommends the following infrastructure strategies:

- Cobb Parkway (US-41) – Improve signalization from SR 5 to Paces Ferry Road
- I-75 North Corridor Improvements – Improve bottlenecks, provide additional capacity, and reconstruct interchanges; an Environmental Impact Statement (EIS) is currently under review for this corridor

Rail Freight

The CSX line is the only Class I track that runs through the study area within Cobb and Bartow counties (NS runs through Cobb County as well). The CSX line passes through Marietta, Kennesaw, Acworth, Emerson, Cartersville, and Adairsville. According to the Bartow Community Assessment document, freight rail traffic impacts auto traffic in downtown Cartersville. Data from

the Bureau of Transportation Statistics suggests there are 10 and 15 rail crossings within the study corridor in Cobb County and Bartow County, respectively.

There is one approved intermodal facility in Cobb County, NS Whitaker Intermodal Rail Yard, located in Austell, which is approximately 12 linear miles from the southern tip of the study corridor. The yard is open every day and can handle 275,000 lifts between trucks and rail annually.

7.4.2 Greater Dalton Metropolitan Planning Organization

Truck Freight

The carpet industry of Dalton and Whitfield County is dependent upon goods movement by truck, not only to and from points beyond but within the City and County as well. In all, Whitfield County includes 158 freight terminals. The GDMPO 2035 LRTP noted that Shaw Incorporated, the County's largest manufacturer, maintained many distribution centers and 63 manufacturing plants in northwest Georgia. However, several of these plants closed since publication of the LRTP in 2010.

The GDMPO 2035 LRTP recommends the following strategies to improve truck freight movement through the county:

- Create a Goods Movement Task Force of trucking firm, carpet manufacturer, and railroad (NS and CSX) representatives to identify freight issues and propose solutions.
- Consider the needs of trucking industry when improving area roadways to facilitate "just in time" delivery.
- Improve connectivity for trucks between Whitfield County terminal sites while imposing time-based restrictions for truck mobility through residential, educational, and recreational areas.

Whitfield County/City of Dalton Multi-Modal Transportation identifies the following needs with respect to movement of goods:

- Increased turning radii for downtown Dalton intersections
- Roadway maintenance at locations experiencing high truck volumes
- Improvements at intermodal locations (rail and truck connections)
- Railroad grade separation north of Waugh Street in downtown Dalton
- Strategies to alleviate disruption to downtown traffic caused by the CSX/NS track crossing in downtown Dalton
- Bridge widening over railroad tracks
- Further railroad grade separations for smoother traffic flow

Rail Freight

Both NS and CSX operate within Whitfield County. NS provides rail connections from Dalton to Rome to the south and Cleveland, Tennessee, to the north. Similarly, CSX connects Dalton to Cartersville to the south and Chattanooga to the north. NS and CSX rail lines converge in downtown Dalton. Downtown Dalton features three grade-separated crossings (Walnut Avenue/SR 52, Gordon Street, and Waugh Street/MLK Boulevard) to speed up rail and roadway traffic and reduce conflicts. None of these grade-separated crossings are located in northern downtown Dalton. Subsequently, vehicular traffic is frequently delayed in this area.

Planned Infrastructure Improvements

NS infrastructure improvement projects include upgrading the passing track and construct yard improvements in Dalton. CSX plans to expand capacity and perform bridge upgrades and improve bridge connectivity from Atlanta to Chattanooga.

NS and CSX routinely maintain track and replace railroad ties. Neither railroad plans to construct new railroad track in Whitfield County. However, the *2035 Whitfield County Road Improvement Plan* includes railroad crossing improvement projects which are listed in Table 7-6.

Table 7-6. Whitfield County 2035 Railroad Crossings Improvements

Project ID	Name	Description	Funding	Implementation Period
4607/29	CR 3/Henry Adams Rd at Norfolk RR	Install safety equipment	FHWA/State	Short-Range RIP (1-5 years)
30	CR 290/Beaver Rd at CSX RR	Install safety equipment	FHWA/State	Short-Range RIP (1-5 years)
39	Tyler St extension from Clark St to W. Waugh St and two railroad grade separations	Extension to give connections between Glenwood and Waugh plus RR grade separation at Tyler near Chattanooga and Tyler near Hamilton	Local	Long-Range Illustrative (11 years to Horizon Year 2035)

Source: GDMPO 2035 LRTP

7.4.3 Chattanooga-Hamilton County Regional Planning Agency

Truck Freight

According to the *Chattanooga Regional Freight Study*, freight in the Chattanooga region is largely transported by truck. In 2007, trucks moved approximately 76 percent of all freight by weight in the region, and this share is estimated to increase to almost 80 percent by 2035, at the expense of rail movement. I-75 and I-24 are the primary truck routes in the region, each carrying more than 15,000 trucks per day in 2008 on average.

The study noted that the I-75/I-24 interchange is a significant congestion hot spot as a result of these interstates operating over capacity in addition to steep grades on I-24 west of I-75. I-24 lacks truck lanes along these grades, forcing other motorists to slow down as the trucks progress more slowly through the area. The Chattanooga region's status as a convergence area of major interstates and highways increases congestion as well. Between 62 and 85 percent of all trucks on I-24 and I-75 in the Chattanooga region are passing through without stopping. The study notes that congestion and crashes from the I-75/I-24 interchange and the I-75 weigh station in North Georgia often create supply chain inefficiencies for regional companies. In

addition, the study notes that the region lacks parallel routes in case of disruptions on the interstates.

Rail Freight

The study estimates that rail's share of regional freight by weight will fall from just over 15 percent in 2007 to approximately 10 percent in 2035, mostly as a result of shifts to trucks. Rail deficiencies in the study are focused on grade crossings—none of which are within the *I-75 Atlanta to Chattanooga Corridor Study* area.

Recommendations

The study presents several recommendations relevant to the I-75 corridor:

- Develop a Chattanooga bypass to alleviate congestion resulting from through trucks.
- Prioritize interstate capacity improvements. For example, widen I-75 to between eight and 10 lanes and widen I-24 to eight lanes.
- Work with NS and CSX to address low clearances on railroad underpasses.
- Designate a regional truck route network.
- Evaluate grade crossing improvements opportunities that would benefit both rail and truck freight movement.
- Work with TDOT to shift freight from truck to rail. NS believes that the Crescent Corridor can handle one million more divertible truck trips.

8 PASSENGER RAIL

8.1 High Speed Rail

GDOT recently completed a high-speed rail feasibility study, which has been approved by the Federal Railroad Administration (FRA). The study evaluated the feasibility of implementing and operating high-speed rail and intercity passenger rail along three corridors in the southeastern US, including the Atlanta, GA to Louisville, KY corridor, which includes this report's study area from Atlanta to Chattanooga.

For the Atlanta to Chattanooga to Nashville to Louisville corridor, three high-speed rail technologies were evaluated:

- Emerging High-Speed Rail (90-110 mph),
- Express High-Speed Rail (180-220 mph), and
- Maglev High-Speed Rail (220+ mph).

Emerging High-Speed Rail typically follows the existing rail alignment of freight railroads. It is commonly known as a "Shared Use" service. Top speeds may reach 90-110 mph using Diesel-electric Tilt Train Technology to address curvature and topography constraints.

Express High-Speed Rail generally follows a dedicated route that has minimal topographic challenges and curves. However, it follows the existing tracks prior to entering and leaving a terminal area (typically a major city). It is grade-separated and electrified. Top speeds may reach 180-220 mph.

Magnetic Levitation, aka Maglev, has the potential to reach 220+ mph. The technology involves lifting, propelling, and guiding a vehicle along a Guideway using magnetic force. Similar to Express High-Speed Rail, it requires a dedicated corridor.

The measures used to evaluate the feasibility of each of the technologies included capital costs, funding and financing opportunities, operation and maintenance costs, ridership and revenue, operating ratios and benefit-cost analysis. The study found that high-speed rail service along the Atlanta to Louisville corridor is feasible. Although the initial investment is high, the potential benefits may offset costs.

The Tier 1 EIS for the *Atlanta to Chattanooga High Speed Ground Transportation Project* evaluated the potential issues of four alternatives that were identified to provide high-speed rail service. The corridor is the same one that was assessed in the 2011 high-speed rail feasibility study. The Tier 1 EIS identified and evaluated the alternatives based on operations, costs, revenues, ridership, and economic impacts. Station locations were proposed at Southern Crescent, Downtown Atlanta, Cumberland/Galleria, Town Center, Cartersville, Dalton, Lovell Field Airport, and Downtown Chattanooga.

The purpose of the study was to increase mobility and provide an efficient alternative to travel by air and auto within the northwest Georgia region, while limiting impacts on the existing communities and the environment.

Figure 8-1. Atlanta to Chattanooga High Speed Rail Corridor

Source: GDOT's High Speed Rail Planning Services Report (2012)

9 TRANSIT SERVICES

9.1 Existing Transit Services

Fixed-route transit systems are located at the southern and northern ends of the study corridor as a result of proximity to Atlanta and Chattanooga, respectively. Transit operations in more rural counties in the study area, if available, involve demand-based services that require advanced registration.

9.1.1 Georgia Regional Transportation Authority

The Georgia Regional Transportation Authority (GRTA) operates two Xpress commuter routes, 480 and 481, within the study area. These Xpress routes operate toward downtown and midtown Atlanta in the morning and toward the suburbs in the afternoon. Although the services are marketed under the banner of GRTA, these express routes are operated by Cobb Community Transit (CCT) and primarily run on I-75, except when utilizing arterials and other streets to access park-and-ride lots. Route 480 serves the Acworth Park-and-Ride, which has about 500 parking spaces, while both routes serve the Busbee Park-and-Ride, which has 364 parking spaces (see Figure 9-1).

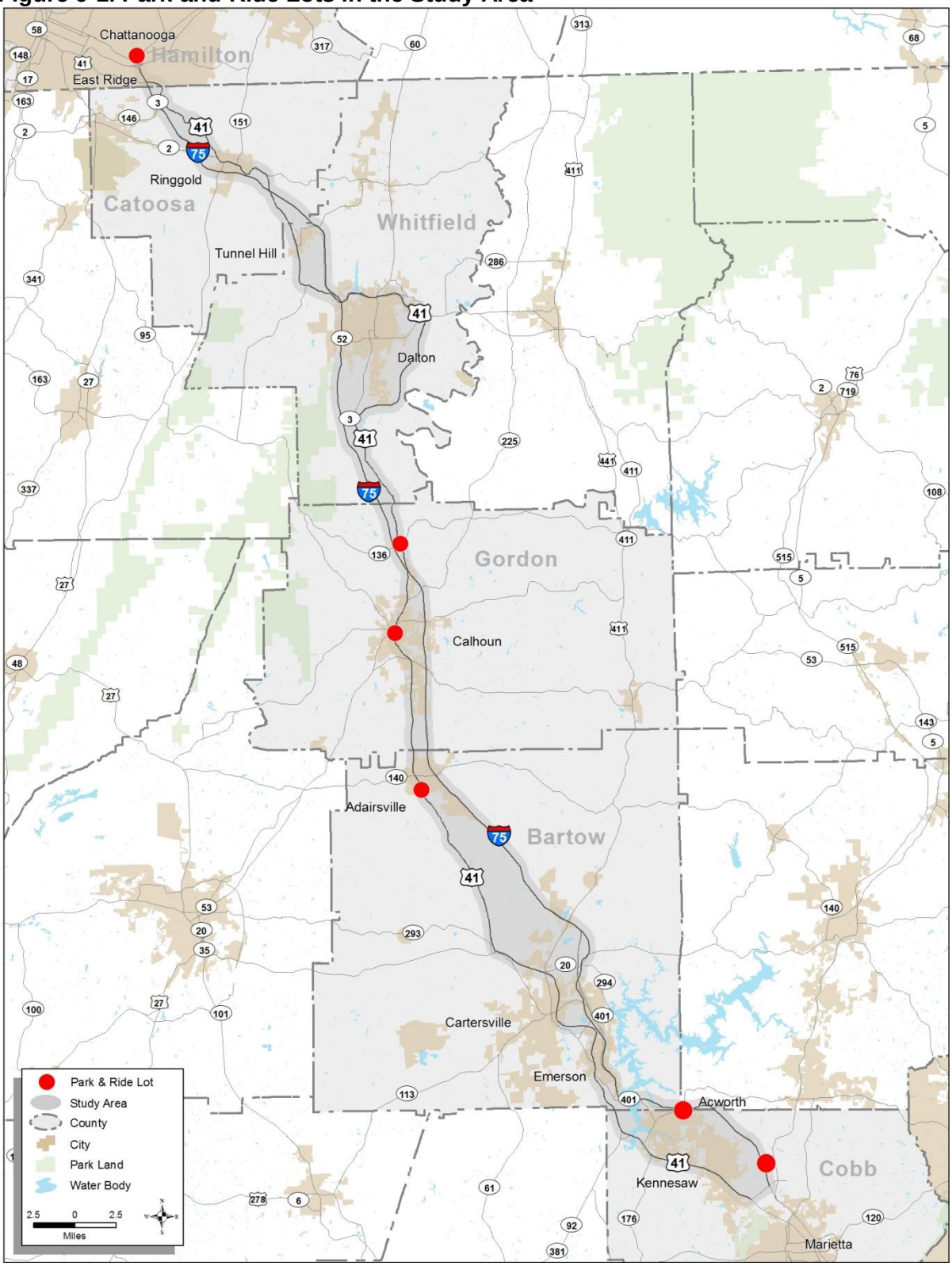
Table 9-1. GRTA Xpress Routes Serving the Study Area

		AM Peak		Midday		PM Peak	
Route	Locations Served	Trips	Headway (minutes)	Trips	Headway (minutes)	Trips	Headway (minutes)
480	Acworth P&R, Busbee P&R, Downtown Atlanta	6	30	2	N/A, one round trip	5	30 min.
481	Busbee P&R, Midtown Atlanta	5	30	-	-	5	30 min.

Source: GRTA

In CCT's fiscal year (FY) 2012, three trips were cut from route 480 and two were cut from 481, reducing each route's revenue hours by 26 percent and 16 percent, respectively (information in Table 9-1 reflects these recent changes). As of February 2011, route 480 had 291 daily boardings and route 481 had 170. GRTA expects these routes to each lose about 20 passenger trips as a result of the FY 2012 service changes.

Figure 9-1. Park-and-Ride Lots in the Study Area



Source: ARC, CARTA, GDOT

9.1.2 Cobb Community Transit

CCT operates seven fixed-route services located partially within the study area (see Figure 9-3). Five routes—100, 102, 10C, 480, and 481—operate as express service between park-and-ride lots and downtown or midtown Atlanta via I-75 (see section 9.1.1 for discussion of routes 480 and 481). Routes 100 and 102 only operate during peak-periods in the peak direction (i.e. southbound in the morning and northbound in the afternoon) on weekdays. Route 10C has similar operating characteristics, except it provides reverse commute trips (i.e. northbound in the morning and southbound in the afternoon). Table 9-2 summarizes these routes' operating characteristics.

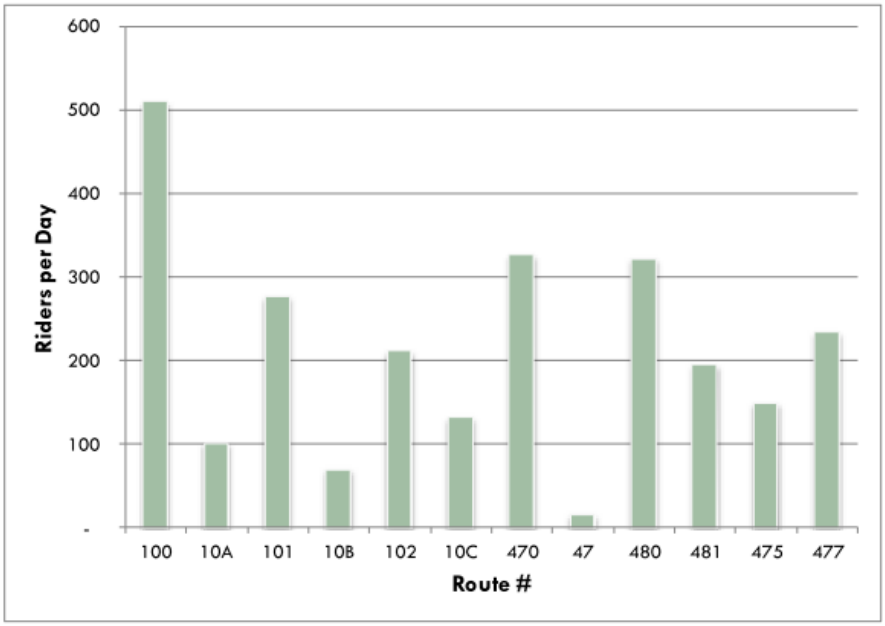
Table 9-2. CCT Commuter Routes Serving the Study Area

		AM Peak		Midday		PM Peak	
Route	Locations Served	Trips	Headway (minutes)	Trips	Headway (minutes)	Trips	Headway (minutes)
100	Busbee P&R, Town Center P&R (limited), Downtown Atlanta	11	10-20	-	-	11	10-30
102	Acworth P&R, Midtown Atlanta	6	30	-	-	6	30-35
10C	Midtown Atlanta, MTC, Town Center (limited)	6	30-35	-	-	6	30-35

Source: *Cobb Community Transit Service and Marketing Study*

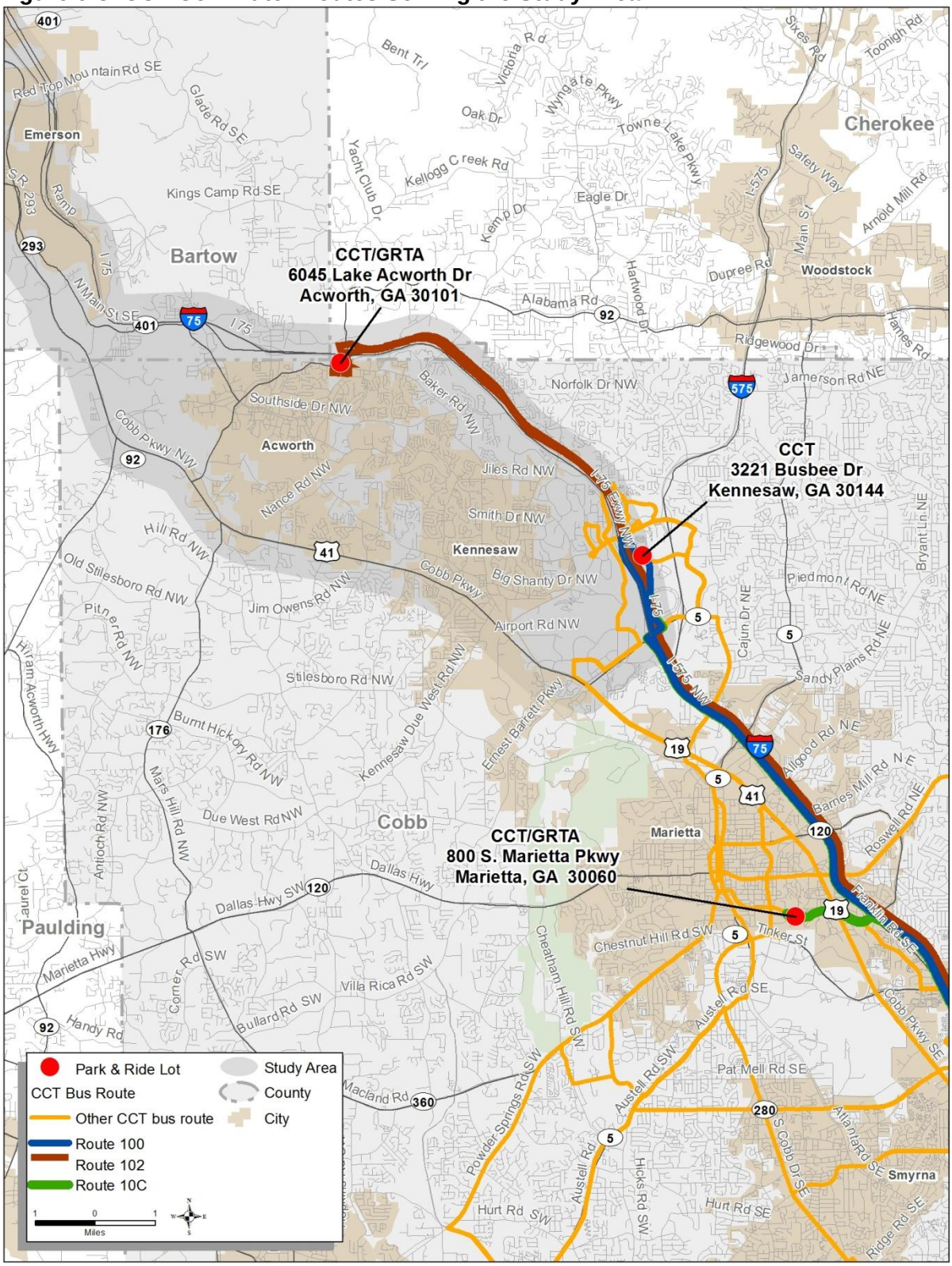
As of 2010, route 100 has the highest ridership of all CCT express routes and is among the agency's best performing express routes in terms of ridership per boarding hour. Express routes 102, 480, and 481 generally perform average to above average, while express route 10C performs relatively worse.

Figure 9-2. CCT Express Fixed-Route Ridership



Source: *Cobb Community Transit Service and Marketing Study*

Figure 9-3. CCT Commuter Routes Serving the Study Area



Source: CCT

CCT's remaining fixed routes in the study area—Routes 40 and 45—involve local bus service operating weekdays and Saturday with longer headways and longer service hours compared to the commuter routes. Both routes link Marietta and Town Center. Table 9-3 summarizes these routes' operating characteristics.

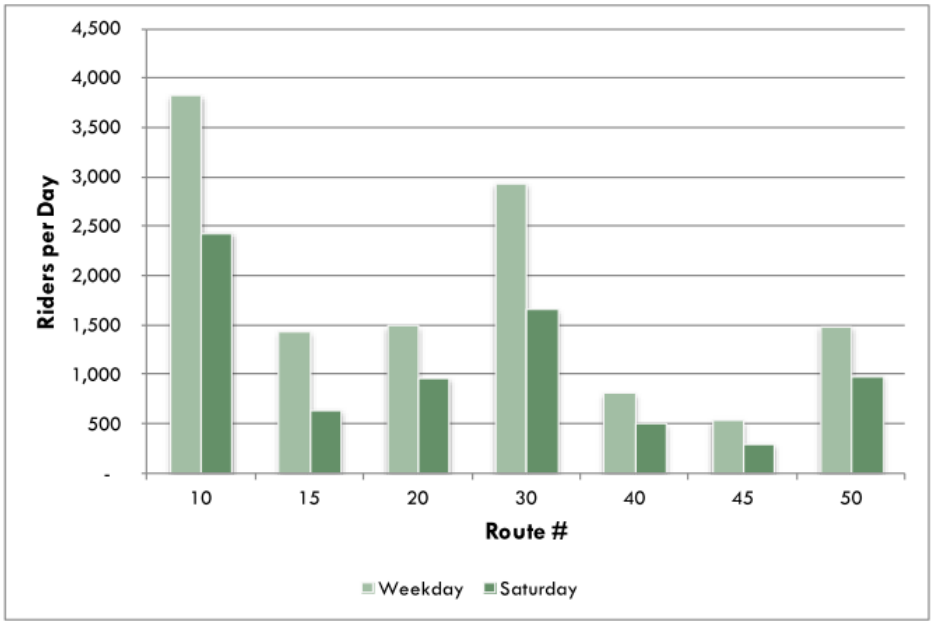
Table 9-3. CCT Local Routes Serving the Study Area

Route	Locations Served	Span of Service		Weekday Headway (minutes)		Saturday Headway (minutes)
		Mon-Fri	Saturday	Peak	Off Peak	
40	Marietta, Kennestone, Town Center, KSU	6:00-21:00	7:00-20:00	60	60	60
45	Marietta, KSU, Chastain Wal-Mart, Town Center	6:30-20:30	7:30-20:30	30-95	55-105	60-130

Source: *Cobb Community Transit Service and Marketing Study*

As of 2010, routes 40 and 45 were the poorest performing daily local fixed routes, each with the fewest weekday boardings and weekday boardings per revenue hour.

Figure 9-4. CCT Local Fixed-Route Ridership



Source: *Cobb Community Transit Service and Marketing Study*

The *Cobb Community Transit Service and Marketing Study* recommended several local service changes within the study area, as summarized in Table 9-4. No new CCT routes are planned to operate within the study area.

Table 9-4. Proposed Service Changes to CCT Local Routes

Route	Improvements		
	Near Term (0-2 Years)	**Mid Term (3-5 Years)**	**Long Term (6-10 Years)**
40	• Weekday peak headways to 30 minutes • Add 25 weekday revenue hours • Add 12 weekday trips • Add 3 weekday peak buses	• Add 1 Saturday trips • Add 2 Saturday revenue hours	• Add Sunday service (same as Saturday)
45	• Weekday peak headways to 30 minutes • Truncate route at KSU • Add 18 weekday trips • Add 1 weekday peak buses	• Add 9 Saturday trips • Add 2 Saturday revenue hours	• Add Sunday service (same as Saturday)

Source: *Cobb Community Transit Service and Marketing Study*

9.1.3 Cobb and Bartow Commuter Club (Vanpool)

The Cumberland CID-funded Commuter Club website provides an opportunity for commuters who work in the Cumberland area to connect to vanpools in their area. Several Commuter Clubs have been formed within the I-75 North Corridor study area.

Cobb County:

- Via I-75 departing from Home Depot (1655 Shiloh Road, Kennesaw)
- Via US-41 to I-75 departing from Kroger (8876 Dallas Acworth Highway, Dallas) with stops at Home Depot (3355 Cobb Parkway, Acworth) and Publix (2774 Cobb Parkway, Kennesaw)

Bartow County:

- Via I-75 departing from the Collins Pointe Shopping Center (US-41 and Felton Road)
- Via US-41 to I-75 departing from Home Depot (100 Gentilly Boulevard, Cartersville) with a stop at Home Depot (3355 Cobb Parkway, Acworth)

9.1.4 Bartow County Transit

Bartow County has no fixed-route transit services, but the County does provide dial-a-ride service for residents. Bartow County Transit operates from 8 AM to 4:30 PM on weekdays only,

and passengers must reserve their ride 24 hours in advance. Some rural areas of Bartow County cannot be covered by this service. Bartow County has one park-and-ride lot in Adairsville for those who carpool (see Figure 9-1).

9.1.5 Gordon and Whitfield County Transit

Local transit services for both counties are provided by a federally-funded public transportation service for non-urbanized areas that is administered by GDOT through the Federal Transit Administration 5311 grant. These dial-a-ride bus services are available to county residents for various trip purposes from their home to their desired location between 6:30 AM to 6:00 PM. Trip purposes include medical, nutrition, shopping, education, and recreation. Mountain Area Transportation Services (MATS) operates these demand responsive services for both counties with eight transit vehicles per county. MATS's major client groups are senior citizens and those with physical or mental disabilities that inhibit them from using private transportation.

Gordon County has three park-and-ride lots, two of which are located in the study area: one at the US-41/SR 136 intersection in Resaca and the other at the courthouse in Calhoun (see Figure 9-1). A park-and-ride lot in Fairmount is located outside of the study area. There are no park-and-ride lots in Whitfield County, though the county is served by 11 taxicab companies.

9.1.6 Catoosa Trans-Aid

Similar to Bartow County, Catoosa County's transit service—Catoosa Trans-Aid—only provides on-demand transit service, requiring Catoosa County residents to reserve their trip at least 24 hours in advance. Catoosa Trans-Aid operates Monday through Friday, 8 AM to 4:30 PM for all general trips. Medical trips to Chattanooga are permitted between 9 AM and 2 PM, Monday through Friday, but shopping trips are only permitted on Tuesdays.

9.1.7 Chattanooga Area Regional Transportation Authority

The Chattanooga Area Regional Transportation Authority (CARTA) transit network includes 16 fixed routes, paratransit service, and shuttles. However, only one fixed route operates within the I-75 North Corridor study area: Route 4 (Eastgate/Hamilton Place). Route 4 runs east-west between downtown Chattanooga and the Hamilton Place Mall via local streets. However, the route includes two AM peak and two PM peak express trips via I-75 and I-24.

Table 9-5. CARTA Routes Serving the Study Area

Route	Locations Served	Peak Period Service		Average Trip Time (minutes)
		Trips	Headway (minutes)	
4 Express	Downtown, Hamilton Place Mall	4 (2 AM, 2 PM)	30	50-55

Source: CARTA

CARTA is supported by several park-and-ride facilities, but only the Eastgate Town Center Park-and-Ride (north of the I-75/I-24 interchange) is located in the study area (see Figure 9-1).

9.1.8 Greyhound

Greyhound operates coaches along the study corridor arriving and departing from nearby stations in Atlanta, Dalton, and Chattanooga. The Dalton station, located south of Dalton on Carbondale Road, is the only station within the study area. Table 9-6 summarizes service characteristics of these stations.

Table 9-6. Greyhound Stations In or Near Study Area

Station	Service Hours	Service Days
Atlanta	24 hours	Every day
Dalton	8:30 AM-3:30 PM	Monday-Friday
Chattanooga	6:30 AM-11:15 AM; 2:30 PM-10:00 PM	Every day

Source: Greyhound

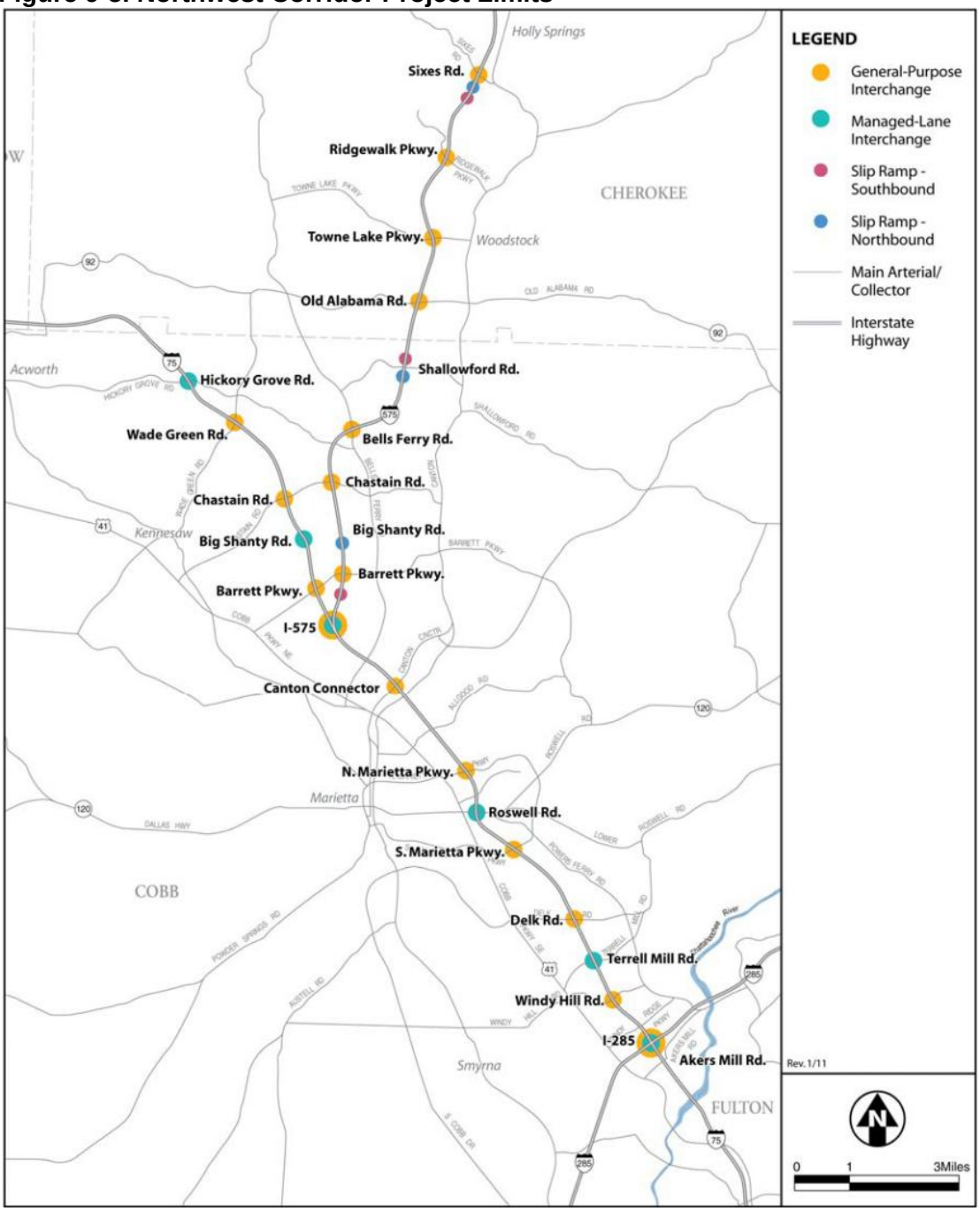
9.2 Future Transit Services

9.2.1 GDOT

GDOT's Georgia Rail Passenger Program (GRPP) is composed of planned and proposed high speed rail, intercity rail, and commuter rail that would radiate from the planned Multi-Modal Passenger Terminal in downtown Atlanta. Aside from high speed rail to Louisville via Chattanooga—summarized in Section 8—the only commuter rail line to partially serve the study area would serve Cartersville, Emerson, Acworth, and Kennesaw, and then continue toward Marietta, Cumberland, and downtown Atlanta. Commuter rail service would share track with freight operations and require careful scheduling to avoid incidents and delay.

GDOT studied the public-private partnership (P3) implementation of managed lanes, truck-only toll lanes, and BRT along I-75 and I-575, known as the Northwest Corridor Project. Since the publication of the Draft EIS in 2007, truck-only toll lanes and BRT have been dropped from the Northwest Corridor Project because of funding limitations. The project was downsized to two reversible managed lanes south of the I-75/I-575 interchange, and one reversible managed lane on both I-75 and I-575 north of the interchange (see Figure 9-5). The State Transportation Board cancelled the project's P3 component in December 2011. A revised Request for Qualifications (RFQ) was issued in May 2012 as a design/build/finance P3 project.

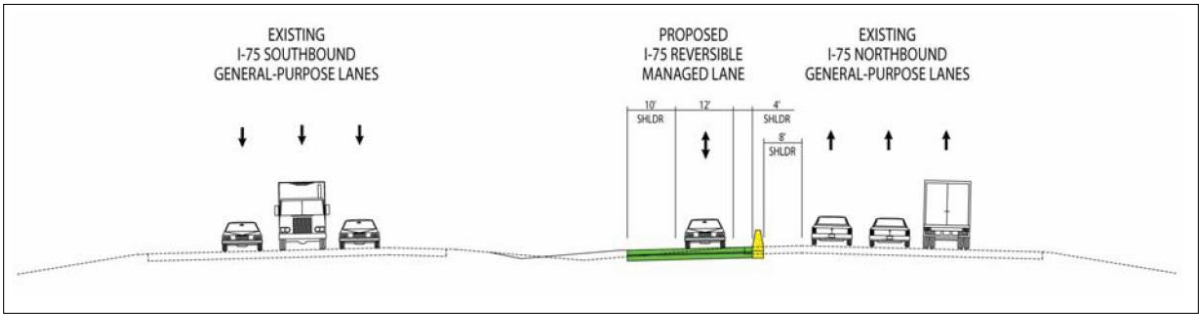
Figure 9-5. Northwest Corridor Project Limits



Source: *Northwest Corridor Project Final Environmental Impact Statement* (February 2011)

The I-75 segment would include managed lane-only interchanges at Hickory Grove Road and Big Shanty Road, both of which currently have no access to I-75. This single reversible managed lane, as shown in Figure 9-6, would be at-grade with the existing northbound I-75 general travel lanes and separated by a concrete barrier. The proposed managed lanes south of the I-75/I-575 interchange would be in an elevated structure paralleling I-75 to the west. Express bus services would be permitted to use the managed lanes during peak periods.

Figure 9-6. I-75 Managed Lane North of the I-575 Interchange (Looking North)



Source: *Northwest Corridor Project Final Environmental Impact Statement* (February 2011)

9.2.2 Atlanta Regional Commission

The ARC's Concept 3 is the official transit vision for the Atlanta region, and a component of the *2040 Regional Transportation Plan*. Concept 3, adopted in August 2008, includes new transit services to northwest Cobb County that would operate within the study area. These new services, highlighted in Table 9-7, have no estimated implementation date and are included in ARC's "Aspirations Plan," a grouping of regional transportation project needs without dedicated funding.

Table 9-7. Concept 3 New Transit Services Serving the Study Area

Mode/Facility	Project Limits	Horizon Year
Light Rail	Canton to Town Center via I-575	TBD
	Town Center to Cumberland via I-75 and US-41	TBD
Expressway Bus	Acworth to Cumberland via I-75	TBD
Regional Bus	Norcross to Douglassville via SR 92	TBD
Transit Center	Acworth	TBD

Source: ARC *Concept 3*

9.2.3 Greater Dalton Metropolitan Planning Organization

The *City of Dalton Multimodal Transportation Study*, completed in January 2003, indicated fixed-route public transit might be feasible in the county, particularly in more densely developed corridors. In the *2035 Long Range Transportation Plan*, a new fixed-route transit service in downtown has been identified as one of the core transportation issues in Dalton.

Local transit service in Dalton and the surrounding area could be feasible, based on the *2006 Public Transportation Needs Study* which was adopted by the Dalton-Whitfield County Metropolitan Planning Organization. Five service option "packages" were developed as part of this study. Options 1 and 2 were designed as demand-response options to serve all of Whitfield County (basically expanding upon the existing Whitfield County Transit Service). Options 3, 4, and 5 were designed to offer various types of services to serve the urbanized area of Dalton, encompassing a broad range of possible service levels and their associated costs.

Although there may be limited "rural general public" transportation needs outside the County, local transit services could provide a connection to the existing intercity services. A local transit connection to the existing Greyhound services stop (three departures each way per day) at the

Pilot Travel Center on Carbondale Road can provide connectivity to both Atlanta and Chattanooga. In addition, the Groome Transportation service to the Atlanta and Chattanooga airports is provided from a stop at Exit 333, which could also be served by local transit (if implemented). Potential also exists for express bus service to Chattanooga central business district from a future park-and-ride facility on I-75 just north of Dalton.

9.2.4 Northwest Georgia Regional Commission

The Northwest Georgia Regional Commission (NWGRC) released its *Transit Development and Coordination Plan* (TDCP) that provides a comprehensive and critical evaluation of the vision and mission of public transit for Catoosa, Whitfield, Gordon, and Bartow counties. Following a review of unmet needs and opportunities for improved public transportation in the region, a number of specific projects were identified for implementation by the different jurisdictions and agencies. Needs for regional commuter trips would be addressed by the creation of a regional Mobility Management/Rideshare program, which would work with existing providers to meet gaps in regional connectivity, while supporting the development of car and vanpool operations to meet longer-distance work trip needs.

At the local level, the TDCP identified a need for additional public transportation, with fixed-route transit services in specific locations in Catoosa County, the City of Dalton, and Whitfield County.

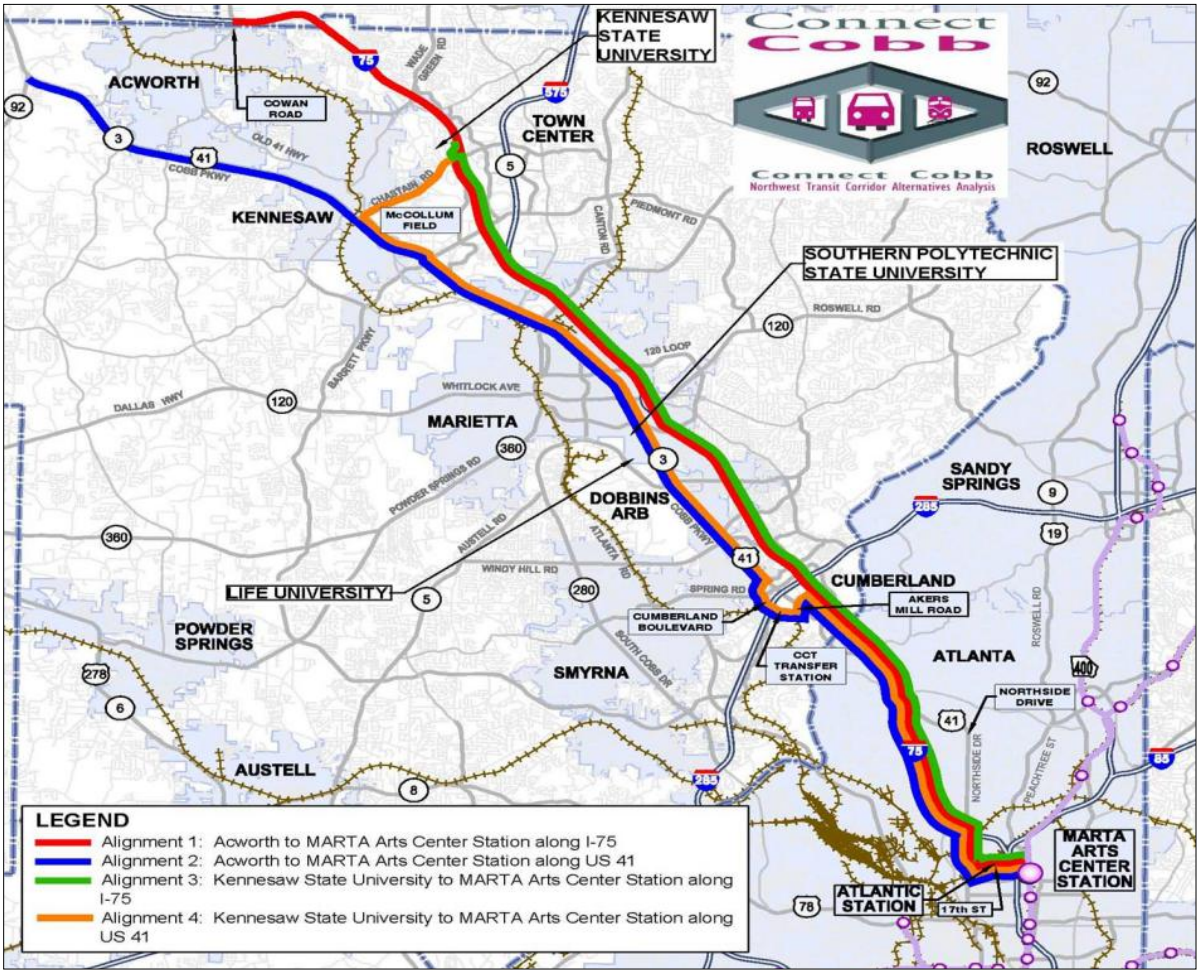
9.2.5 Chattanooga Hamilton County Regional Planning Agency

The C-HCRPA's list of fiscally constrained projects for its 2035 LRTP include funds for the proposed Chattanooga-to-Atlanta high speed rail/maglev service and maintenance and improvements to CARTA service. Most of the transit funding until 2035 will be spent for preventative maintenance and bus and incline car replacements. The list of constrained transit projects includes funding for CARTA route expansions as well, but specific routes are not provided.

9.2.6 Cobb County

Cobb County is conducting an alternatives analysis—*Connect Cobb*—in the Atlanta region's northwest corridor, which includes I-75 and US-41, from Arts Center MARTA station to Acworth via Cumberland, Marietta, and Kennesaw. *Connect Cobb* will result in a locally preferred alternative (LPA) of a high-capacity transit system that will serve future demand, reduce congestion in the corridor, and encourage transit-oriented development. The study is analyzing different fixed guideway transit services, including light rail, bus rapid transit, and dedicated busway. All four alternative alignments operate on either I-75 or US-41, as shown in Figure 9-7. Results of the study will become available in 2012.

Figure 9-7. Connect Cobb Alternative Alignments

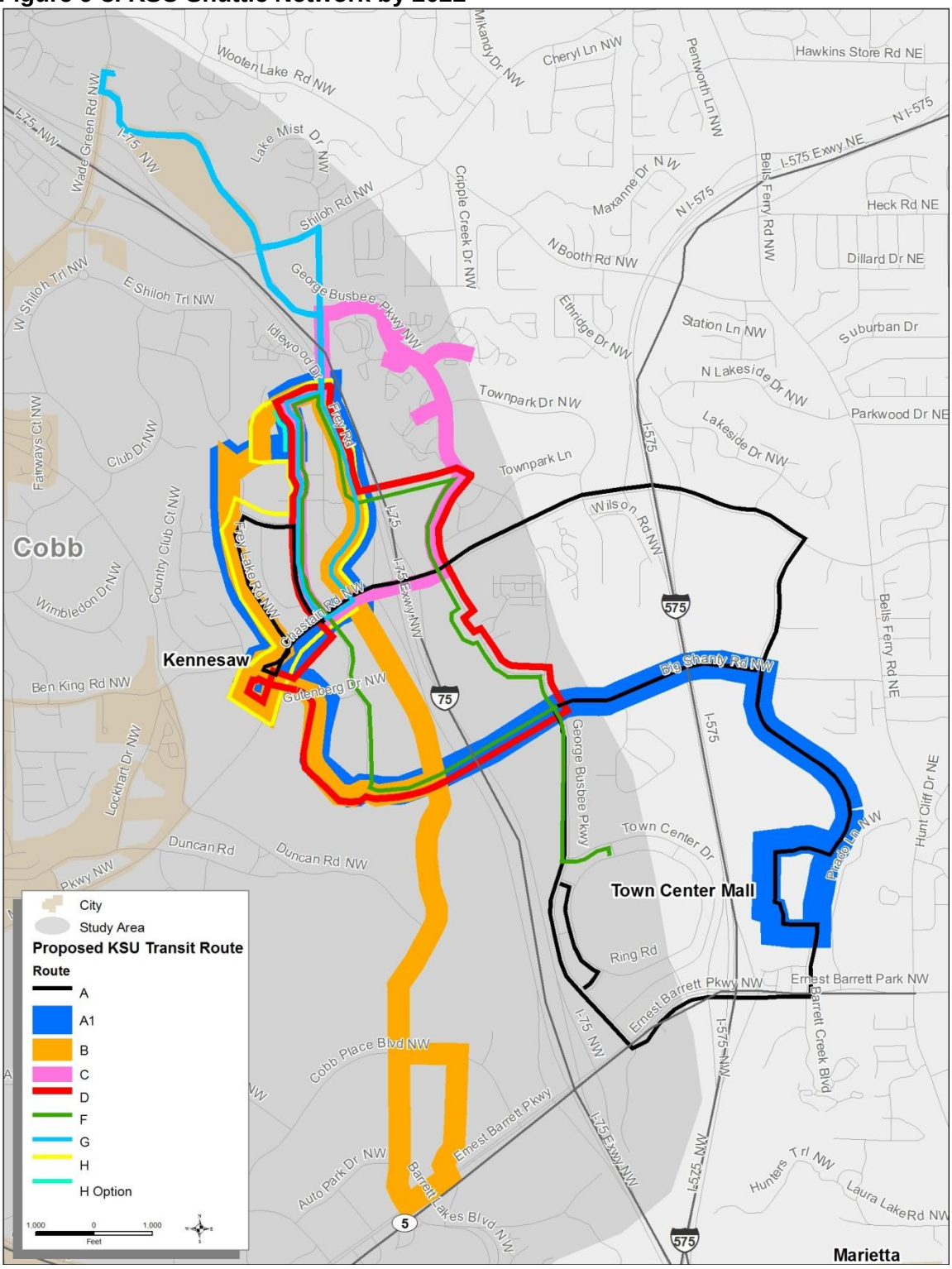


Source: *Connect Cobb*

9.2.7 Kennesaw State University

Kennesaw State University (KSU), in an effort to increase campus quality of life and expand mobility throughout the greater campus area, completed its *Transit Feasibility Study* in early 2012. Recognizing that parking is a finite resource for the rapidly growing university of 24,000 full-time students, KSU has proposed modifications to its existing shuttle routes and developed new shuttle routes to be implemented over the next 10 years. These proposed changes are highlighted in Figure 9-8 and listed in Table 9-8.

Figure 9-8. KSU Shuttle Network by 2022



Source: KSU Transit Feasibility Study

Table 9-8. New and Modified KSU Shuttle Routes

Scenario	Action	Headway (minutes)
Fall 2012	Reroute existing Gold and Black Routes to utilize Big Shanty Rd extension	-
	Operate Route C to apartments along George Busbee Pkwy	30
	Operate Route E to Town Center Mall via the KSU Center	20
	Operate Route G to I-75 North Park-and-Ride Lot at Wade Green Rd	30
Five Year	Operate Route B to Target	20
	Operate Route H, an internal circulator on the main KSU campus	10
	Coordinate KSU shuttles with CCT routes 40 and 45 (e.g. shared stops)	-
10 Year	Revise shuttle routes for Busbee-Frey Connector	-
	Operate Route A to Wal-Mart and Town Center Mall	30
	Operate Route F to Town Center Mall via the KSU Center	20
	Operate Route D to Busbee Dr Park-and-Ride Lot via the KSU Center	20
	Increase peak period shuttle trips (9:30 AM to 3:30 PM)	-
	Coordinate with CCT and GRTA for use of parking facilities	-

Source: KSU Transit Feasibility Study

10 ECONOMIC ACCESS

Linking major metropolitan areas and industry, the study area is a prime corridor for economic development in Georgia. This section highlights significant developments along the corridor that may impact access or create the need for additional access on or to I-75 or US-41.

10.1 Developments of Regional Impact

A Development of Regional Impact (DRI) is a designation for developments that may have impacts beyond local boundaries. DRIs are reviewed by the Georgia Department of Community Affairs, but local governments decide whether or not to approve developments. Table 10-1 summarizes DRI submittals within or near the study area since 2006.

Table 10-1. Developments of Regional Impact within or Near the Study Area

Development	Type	Location	Submitted / Approved†
Cobb County			
Lafarge Building Materials	Cement plant	Unavailable*	2007 / 2010
Cherokee County			
Outlet Shoppes at Atlanta	Commercial	Woodstock Pkwy, Woodstock	2011 / 2011
The Avenue Ridgewalk	Commercial	Ridge Walk Pkwy, Woodstock	2007 / 2010
Bartow County			
LakePoint Town Center	Mixed use	Emerson	2010 / 2011
Park Village Community	Mixed use	Douthit Ferry Rd, Cartersville	2009 / 2009
Highland 75	Industrial	Cassville White Rd and Zion Rd	2009 / 2009
Walker Ridge	Mixed use	US-411 and Old Gilliam Springs Rd	2008 / 2008
Highland Park	Mixed use	Unavailable*	2007 / 2007
Tract 2 Industrial Center	Distribution	Emerson	2006 / 2010
Universal Site	Distribution	Adairsville	2006 / 2006
Town West	Mixed use	SR 140, Adairsville	2006 / 2006
Gordon County			
Foster Glen	Housing	Foster Lusk Rd, Calhoun	2009 / 2009
Vinland of Folsom	Housing	Folsom Rd, Rydal	2006 / 2006
Deer Valley	Housing	Unavailable*	2006 / 2006
Whitfield County			
Carbondale Business Park	Mixed use	Carbondale Rd at I-75	2010 / 2010
Whitfield Co. Commer. Park	Industrial	South Dalton Bypass	2009 / 2009

* Specific location is not listed in the DRI

† Approval means that the relevant Regional Development Commission has assessed the project and issued positive findings ("The proposed action is in the best interest of the Region and therefore of the State."). Local jurisdictions have final project approval authority.

Source: Georgia Department of Community Affairs

10.2 Other Significant Developments

Developments that are planned or proposed within the study but have not gone through the DRI process may also impact access in the area. These developments, which are not reported in the Georgia Department of Community Affairs DRI database, are summarized in Table 10-2.

Table 10-2. Other Significant Developments within or Near the Study Area

Development	Type	Location	Horizon Year
Cobb County			
Kennesaw State University phase II expansion	Education	Frey Rd, Kennesaw	2014
Kennesaw State University phase III expansion	Education	Frey Rd, Kennesaw	2015+
Bartow County			
Cartersville Medical Center ER expansion	Medical	US-41 and SR 20, Cartersville	2013
Toyo Tire expansion	Industrial	US-411, White	2020
Whitfield County			
Dalton State College expansion	Education	College Dr, Dalton	2025
Catoosa County			
Georgia Northwestern Technical College new satellite campus	Education	Old Alabama Rd and Holcomb Rd, Ringgold	2012
Hamilton County			
Enterprise South Industrial Park	Industrial	Bonny Oaks Dr	Unknown

11 ENVIRONMENTAL CONDITIONS

The study team conducted an initial desktop survey of historical sites and environmentally sensitive habitats for the study area. Since the occurrences of protected and rare species areas change regularly, further consideration and validation of their occurrences may need to be reassessed in the future. Table 11-1 provides a list of the environmental resources that were evaluated in the initial desktop screening and it identifies whether or not there are anticipated issues or conflicts with the resources.

Table 11-1. Anticipated Issues and Conflicts with Environmental Resources

Resource	Anticipated Issues or Conflicts?
Compensatory Mitigation Sites	✓
Warm water streams	No
Cold water streams	No
Tennessee Exceptional Waters	No
Etowah Habitat Conservation Plan Streams	No
Habitat Conservation Areas	✓
Potential Migratory Bird Habitat	✓
Hazardous waste and leaking underground storage tanks	No
Critical habitats	No
Wetlands	No
Cemeteries	No
Community Resources and Senior Centers	No
National Register of Historic Places	No
Public Golf Courses	No
Public Parks	No
Recreational Trails	No

11.1 Land Use

11.1.1 Existing Land Use

The study area is evenly mixed between urban and rural land uses. The southern and northern ends of the corridor are dominated by the Atlanta and Chattanooga regions, respectively. These urban regions are characterized by large tracts of single-family homes, retail and employment centers along arterial streets, and nodes of industrial land for manufacturing and distribution. Both the Cobb County Airport and the Chattanooga Metropolitan Airport are located in or adjacent to the study area.

The Town Center regional activity center anchors the southern terminus of the study area with millions of square feet of retail space (including Town Center Mall), high-density suburban housing, and the rapidly expanding Kennesaw State University, the third largest in Georgia with over 24,000 students. Downtown Chattanooga and the Volkswagen manufacturing plant are located approximately six miles from the I-75/I-24 interchange, which serves as the northern terminus of the study area. The Volkswagen plant, which began operations in April 2011, is the

most significant industrial development in the Chattanooga area in recent years, and has been the catalyst for new and expanded industry elsewhere throughout the study area.

Smaller cities, such as Cartersville, Calhoun, Dalton, and Ringgold, are located between the Atlanta and Chattanooga regions, and account for the bulk of industrial land use in the study area. The Cartersville and Dalton areas, in particular, are well known manufacturing centers of flooring and auto parts, and are home to many major warehousing and distribution centers with shipments ranging from local to global destinations. Proximity to I-75, the Port of Savannah, and the Atlanta region, coupled with relatively low cost of business, has contributed greatly to industrial development in these locations. These smaller cities also serve as retail, institutional, and medical centers for the predominantly rural population of the greater northwest Georgia region.

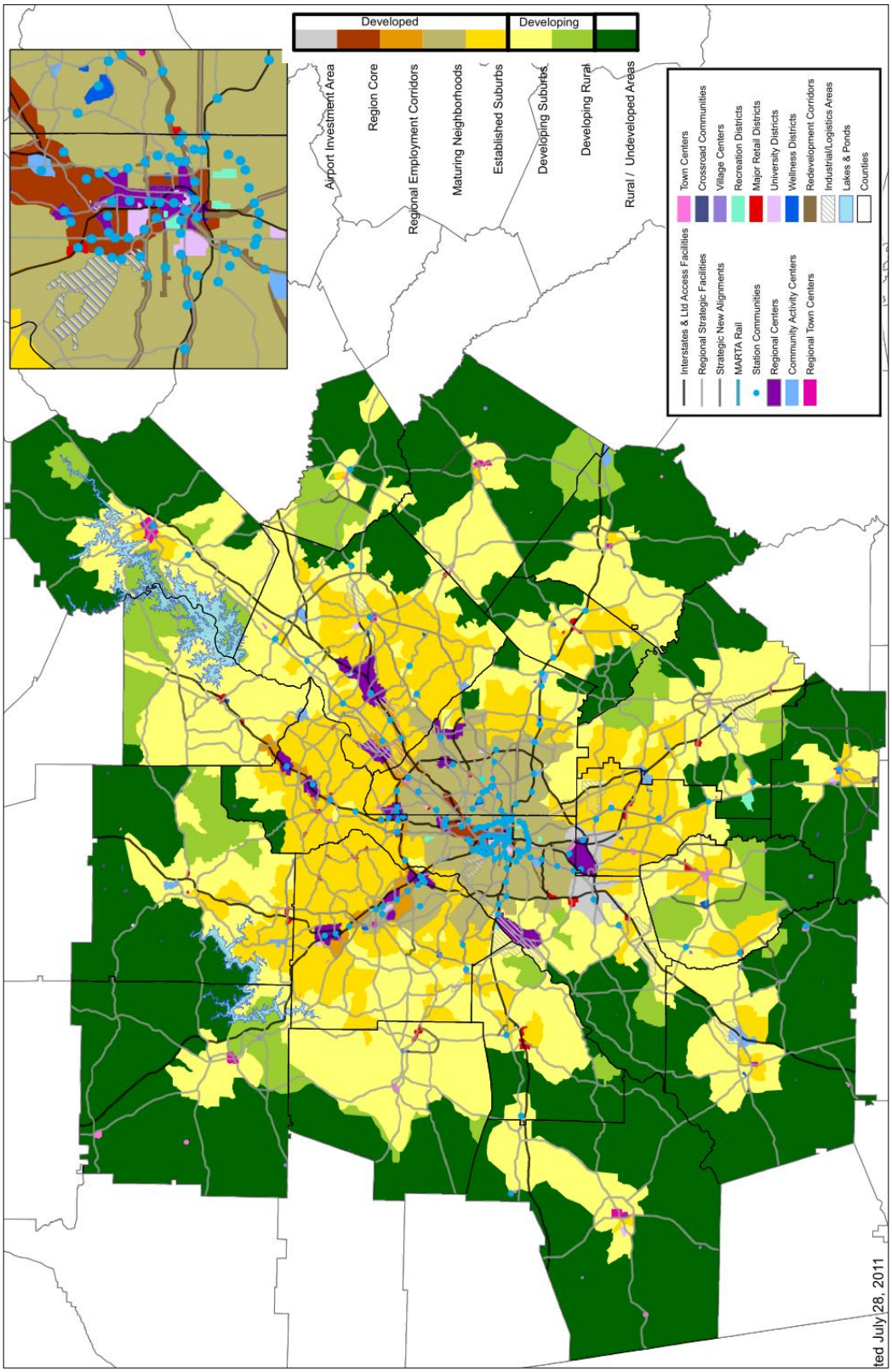
Prominent parks and natural features along the study area (from south to north) include Kennesaw Mountain National Battlefield Park, Lake Allatoona, Red Top Mountain State Park, Johns Mountain Wildlife Management Area, and Camp Jordan Park.

11.1.2 Future Land Use

The ARC created the Plan 2040 Regional Development Guide (RDG) to provide direction for future growth. The region is estimated to add three million people and 1.5 million jobs by 2040, and this document, which includes the Unified Growth Policy Map (see Figure 11-1), guides the region toward more sustainable development. From the I-75/I-575 interchange to Cartersville, the southern end of the I-75 North Corridor study area is characterized by development patterns that range from Regional Center (the Town Center Area) to Rural/Undeveloped Areas north of in northern Bartow County, while varying stages of suburban development transition between these two extremes.

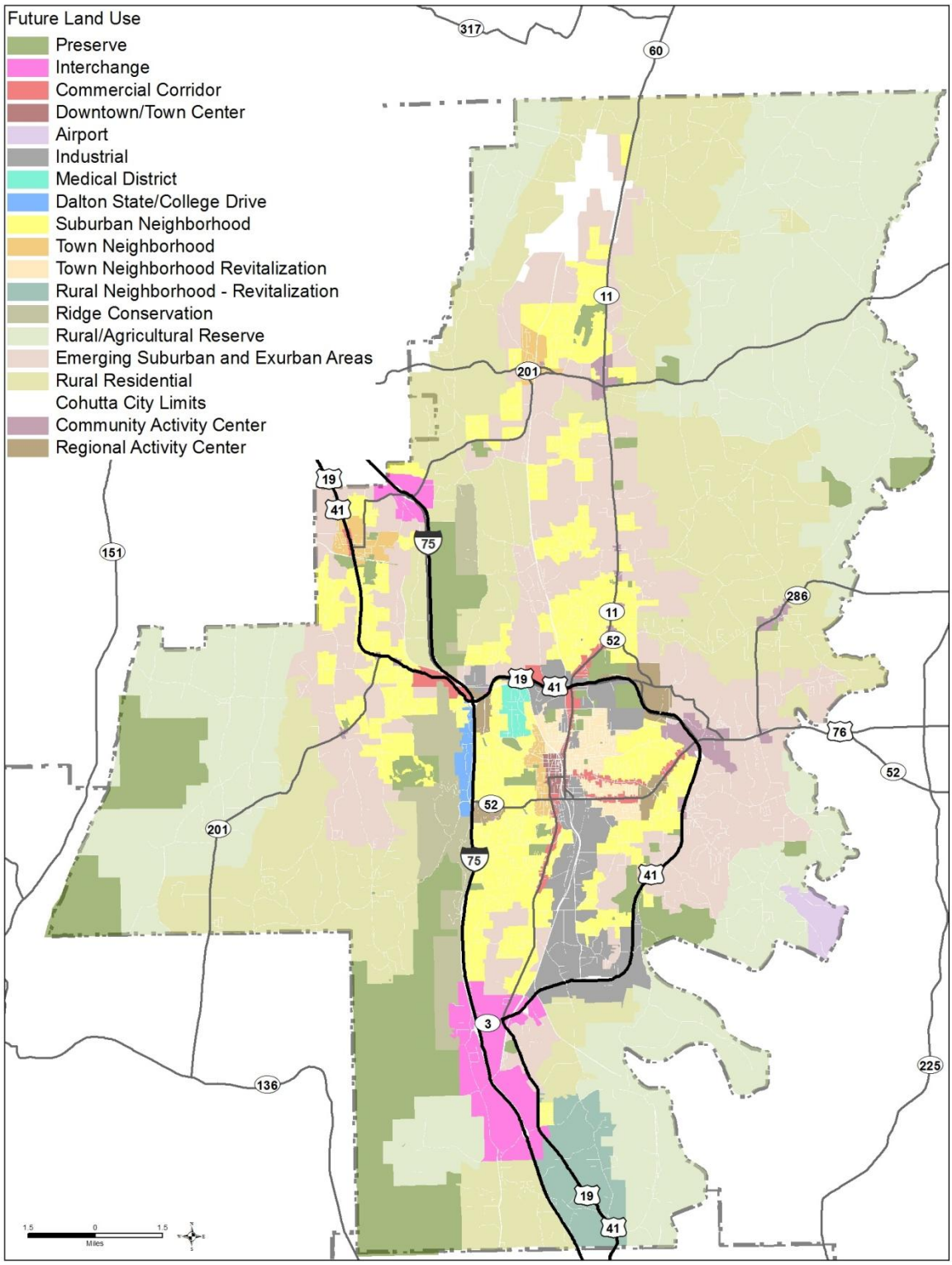
Figure 11-2 depicts the desired pattern of development for Whitfield County and City of Dalton through the year 2018. Information about future land use projections is discussed in the GDMPO 2035 LRTP. The future land use map shows that the MPO is anticipating an approximately 2 percent decrease in agricultural and forest land in the MPO region and a slight increase in commercial and industrial areas. However, the region is anticipating approximately 5 percent increase in residential and about 16 percent increase in the parks, recreational, and conservation areas. The region is anticipating a reduction of about 23 percent in undeveloped area by 2018.

Figure 11-1. Atlanta Region Unified Growth Policy



Source: ARC Plan 2040

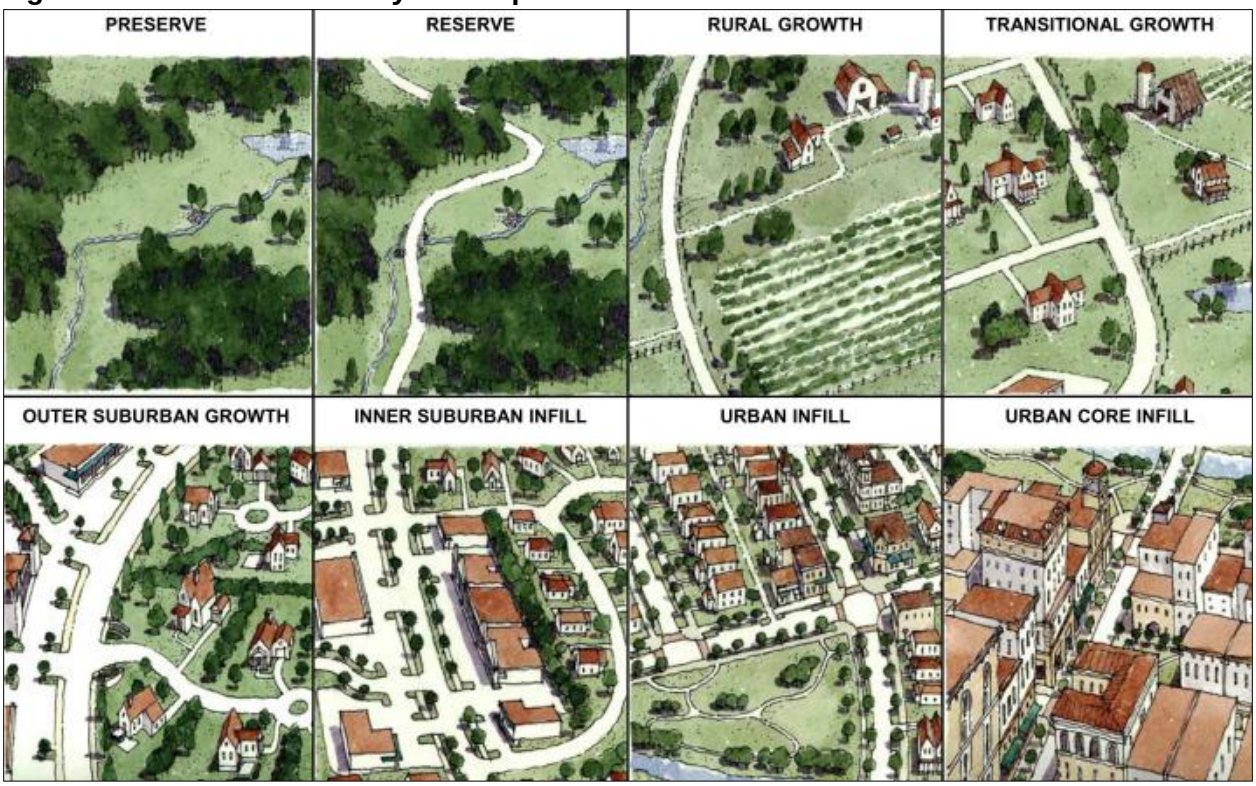
Figure 11-2. Whitfield County and City of Dalton Future Land Use



Source: GDMPO LRTP 2035

The adopted land use goal for the Chattanooga region is to create desirable and diverse communities and to encourage and provide for new business and development opportunities while protecting neighborhoods, infrastructure, and the environment. The MPO shuns a one-size-fits-all approach to development, instead opting for context-sensitive recommendations tailored to each community type. The region's Development Plan, which has taken the place of a traditional land use plan, defines development sectors (see Figure 11-3) and areas of new or redevelopment ("Opportunity Areas") throughout Hamilton County. Land near the I-75/I-24 interchange is classified as Inner Suburban Infill, Preserve, and Reserve. The Development Plan recommends primarily recreational and parkland uses Preserve and Reserve sectors, and states that traditional neighborhoods (i.e. pre-WWII style development) and mixed use developments are most appropriate for Inner Suburban Infill sectors. The plan categorizes Brainerd Town Center (formerly Eastgate Town Center), just north if the I-75/I-24 interchange, as an Opportunity Area because of its strong potential for revitalization as a mixed-use town center, as noted in the Brainerd Town Center Plan of 1998.

Figure 11-3. Hamilton County Development Sectors



Source: C-HCRPA Comprehensive Plan 2030

11.2 Protected and Rare Species and Species Habitat

The proposed project study area intersects Cobb, Cherokee, Bartow, Gordon, Whitfield and Catoosa counties in Georgia and Hamilton County in Tennessee. The Georgia Department of Natural Resources (GDNR) was consulted to obtain rare and protected species occurrence data within the project study area. GDNR provided shapefiles for rare, endangered, and protected species located within 10 miles of the proposed project study area. Similarly, the Tennessee Department of Environment and Conservation (TDEC) was contacted concerning rare,

endangered, and protected species in Tennessee. TDEC provided shapefiles for protected and rare species occurrences within a 10-mile buffer of the study area in Hamilton County, Tennessee. Protected and rare species occurrence data would be considered areas of environmental concern and do change regularly. A summary of the federal and state protected species that are known to occur within the project study area is provided in Table 13-10 in the Appendix (Section 13.3). Because of the scope of this study, further consideration and validation of species occurrences within the project study area and within specific proposed project corridors would need to be reassessed in the future.

11.3 Compensatory Mitigation Sites

Compensatory mitigation site information was collected using the US Army Corps of Engineers (USACE) Regulatory In lieu fee and Bank Information Tracking System (RIBITS). RIBITS was developed by the USACE with support from the Environmental Protection Agency (EPA) and the US Fish and Wildlife Service to provide better information on mitigation and conservation banking and in-lieu fee programs across the country. RIBITS allows users to access information on the types and numbers of mitigation and conservation bank and in-lieu fee program sites, associated documents, mitigation credit availability, service areas, as well as information on national and local policies and procedures that affect mitigation and conservation bank and in-lieu fee program development and operation. Mitigation banks were delineated for the proposed project based on the eight-digit Hydrologic Unit Code (HUC). Mitigation banks located within the Etowah, Oostanaula, Conasauga, Middle Tennessee-Chickamauga, Tallapoosa, Upper Middle Chattahoochee, Chattooga, Upper Chattahoochee, Toccoa and Ocoee HUC 8 boundaries were considered to be relevant to the project study area. Wetland and stream mitigation banks can sell out or close; in the future, each mitigation bank status will need to be updated.

11.4 Warm Water Streams

Warm water streams located within the project study area were identified using the EPA *MyWaters* mapping tool. There are no anticipated issues or conflicts that may arise in this environmental area.

11.5 Cold Water Streams

Designated cold water streams were delineated that intersect the project corridor. The status of cold water streams is not expected to change over time. There are no anticipated issues or conflicts that may arise on this topic.

11.6 Tennessee Exceptional Waters

A list of Tennessee Exceptional Waters (TEW) was provided by TDEC. TEWs that intersect the project study area were delineated. There are no anticipated issues or conflicts that may arise on this topic.

11.7 Etowah Habitat Conservation Plan Streams

Streams located within the Etowah Habitat Conservation Plan (Etowah HCP) were identified based on maps provided by the Etowah HCP. Streams within the Etowah HCP boundary that

intersect the project study area were delineated as Etowah HCP streams. Streams located within the Etowah HCP are not expected to change over time. There are no anticipated issues or conflicts that may arise on this topic.

11.8 Habitat Conservation Areas

US Forest Service owned parks and recreational areas located within the project study area were considered habitat conservation areas. Wildlife refuges and wildlife management areas were also considered; however none are located within the project study area.

11.9 Potential Migratory Bird Habitat

Using Google Earth aerial imagery, unfragmented parcels of land greater than 100 acres were identified within the project study area and were considered to be potential migratory bird habitat. Future development and fragmentation could influence the identified parcels and cause them to be ineligible for migratory bird habitat by the above standards. Parcel size and fragmentation will need to be considered in the future.

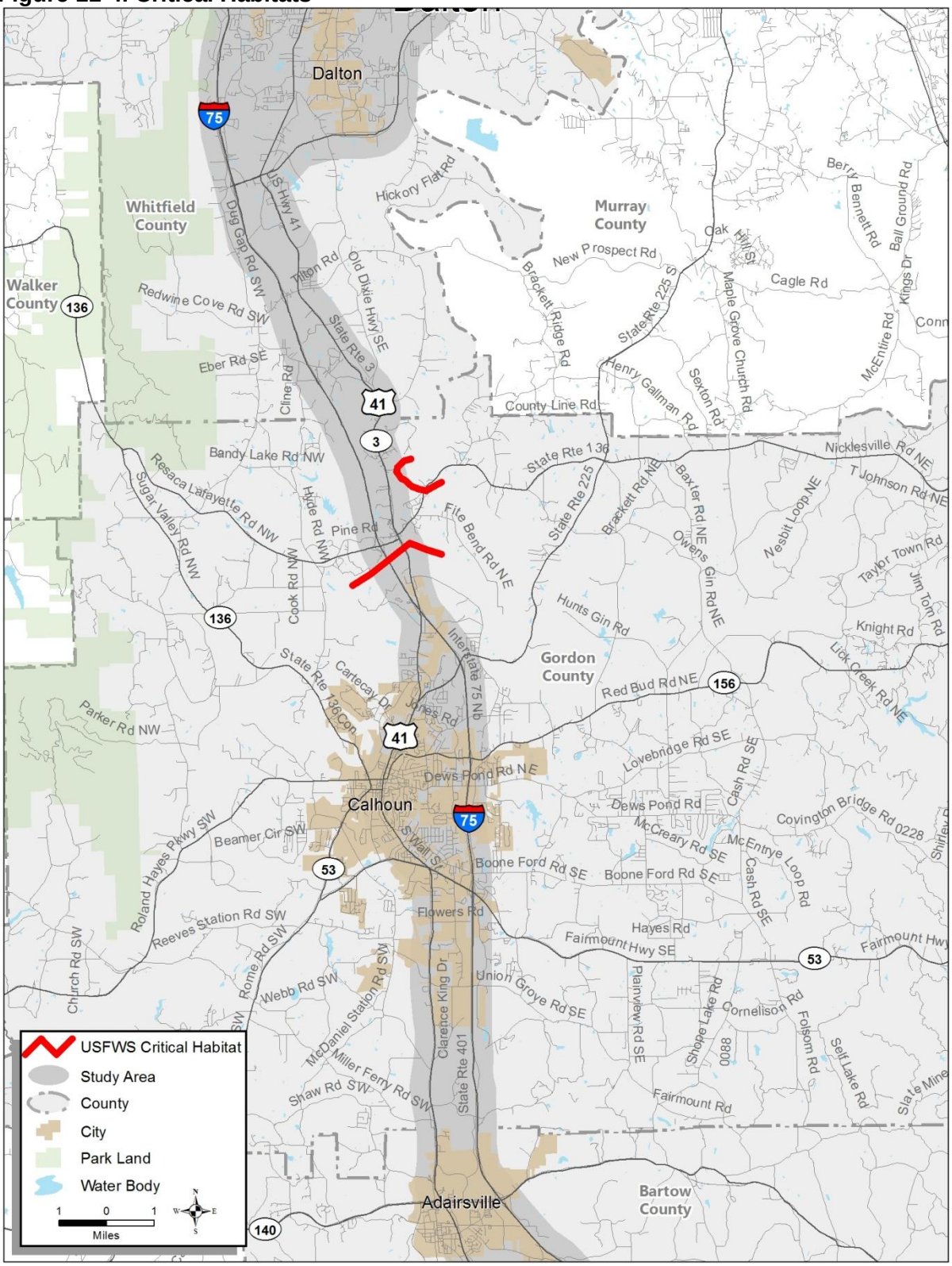
11.10 Hazardous Waste and Leaking Underground Storage Tanks (LUST)

The Google Earth Primary Database was used to locate potential LUST and hazardous waste sites located within the project study area. Aerial imagery was also analyzed for unmarked and abandoned potential LUST sites. All gas stations, auto repair, dry cleaning and chemical manufacturing facilities within the project study were identified. There are no anticipated issues or conflicts that may arise on this topic.

11.11 Critical Habitat

Critical Habitat—essential habitat areas for species listed under the Endangered Species Act—was recognized within the project study area using the US Fish and Wildlife Service Critical Habitat Viewer. Critical habitat intersecting the project study area was identified and mapped (Figure 11-4). There are no anticipated issues or conflicts that may arise on this topic.

Figure 11-4. Critical Habitats



Source: US Fish and Wildlife Service

11.12 Wetlands

The US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data was viewed using Google Earth. NWI wetlands intersecting the project study area were identified and mapped (Figure 11-5 through Figure 11-7). Data on the USFWS NWI website represent the latest, most accurate information available; these data were last updated on May 20, 2010. Because the NWI is updated periodically, NWI wetlands located within the project study area may need to be reevaluated and/or updated in the future.

11.13 Cemeteries

Cemeteries located within the project study area were identified using the Google Earth Primary Database Cemetery layer in addition to aerial verification. There are no anticipated issues or conflicts that may arise on this topic.

11.14 Community Resources and Senior Centers

Community resources and senior centers located within the project study area were identified using the Google Earth Primary Database Places layer in addition to aerial verification and internet searches using the Google search engine. There are no anticipated issues or conflicts that may arise on this topic.

11.15 National Register of Historic Places

Sites listed on the National Register of Historic Places (NRHP) within the project study area were identified using the Google Earth in addition to aerial verification. Potential NRHP sites were not identified as data is not easily accessible and information to determine additional resources is limited. There are no anticipated issues or conflicts that may arise on this topic.

11.16 Public Golf Courses

Public golf courses located within the project study area were identified using the Google Earth Primary Database Places layer in addition to aerial verification and internet searches using the Google search engine. There are no anticipated issues or conflicts that may arise on this topic.

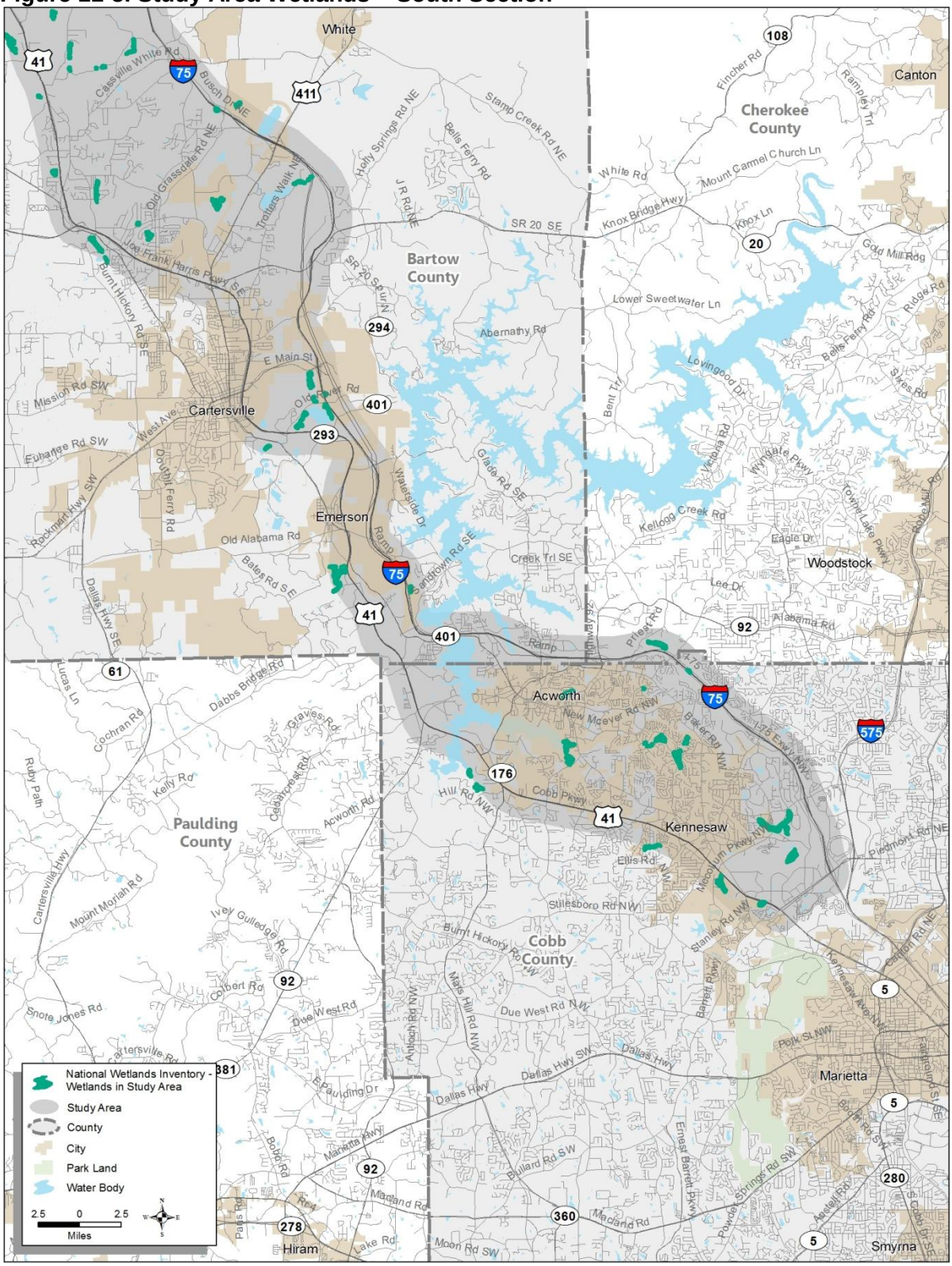
11.17 Public Parks

Public parks located within the project study area were identified using the Google Earth Primary Database Parks layer in addition to aerial verification and internet searches using the Google search engine. There are no anticipated issues or conflicts that may arise on this topic.

11.18 Recreational Trails

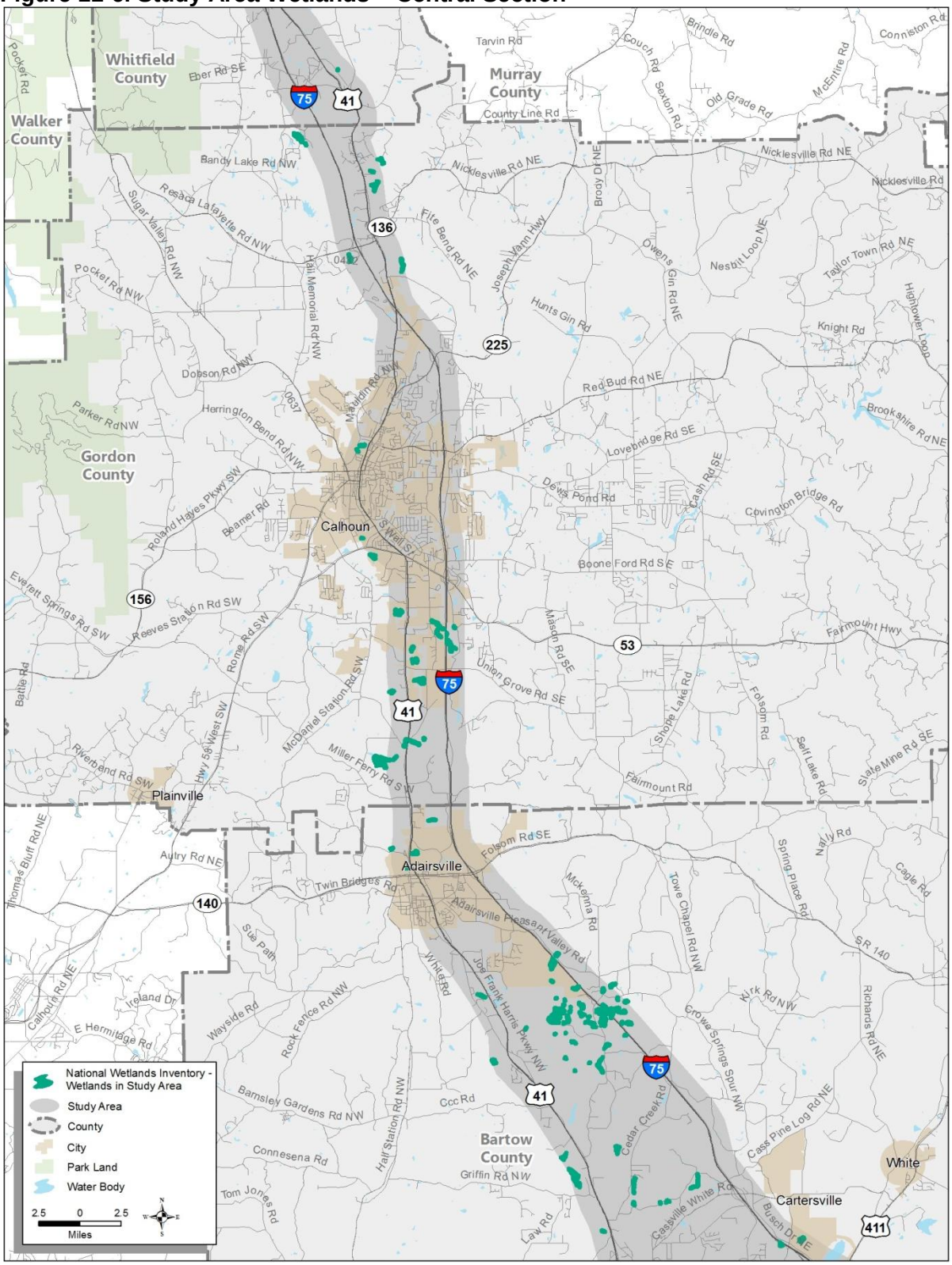
Recreational trails located within the project study area were identified by County Recreation Department Maps found on the Cobb, Cherokee, Bartow, Gordon, Whitfield and Catoosa Counties' websites in Georgia and the Hamilton County websites in Tennessee. Cities and unincorporated municipalities websites were also used. There are no anticipated issues or conflicts that may arise on this topic.

Figure 11-5. Study Area Wetlands – South Section



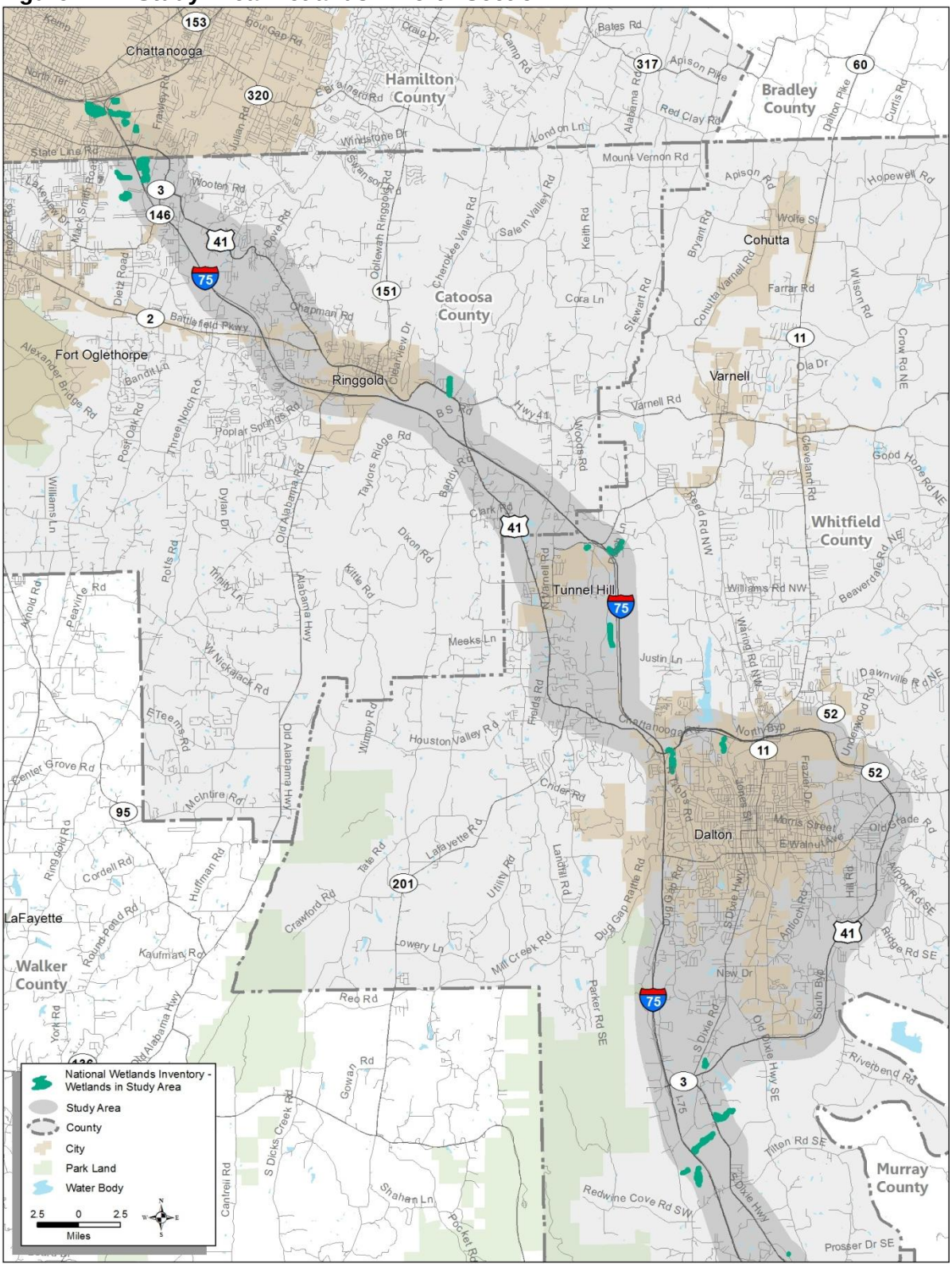
Source: USFWS

Figure 11-6. Study Area Wetlands – Central Section



Source: USFWS

Figure 11-7. Study Area Wetlands – North Section



Source: USFWS

12 STAKEHOLDER OUTREACH

Outreach meetings were held with stakeholders along the corridor, including local governments, metropolitan planning organizations, State agencies, businesses, and other organizations. The following is a summary of key issues and deficiencies identified during these interviews.

12.1 Capacity and Congestion

- Planned new interchanges include I-75 at Third Army Road in Acworth and Union Grove Road in Calhoun, and a new southbound ramp on I-24 at Hamilton Place Mall.

- A variety of rebuilt interchanges, roadway widenings, and other improvements are planned throughout the corridor, including many that would receive Transportation Investment Act (TIA) funding if the voter referendum passes. Numerous additional unfunded improvements and new roadways were requested by stakeholders.

- Several stakeholders requested an east-west connection between I-75 and I-85 to avoid I-285 congestion and delay.

- Major interchange bottlenecks bookend the corridor:

    - The I-75/I-24 interchange due to an inadequate number of lanes on ramps and weaving traffic from the Tennessee Welcome Center and exit 1; and

    - The I-75/I-575 interchange due to weaving between it and the Canton Road Connector as well as high traffic volumes.

- A lack of direct SB I-75 to NB I-575 and SB I-575 to NB I-75 connections create congestion on east-west routes north of the I-75/I-575 interchange (e.g. Barrett Parkway, Chastain Road, and SR 92).

- US-41 congestion results due to varying number of travel lanes, routes through towns, and high number of intersections.

- The downtown Dalton rail crossing experiences 40 to 60 trains per day and is estimated to rise to 180 trains per day by 2015. This crossing is a freight bottleneck and causes significant traffic delay.

12.2 Operations and Maintenance

- US-41 was frequently cited as a poor alternative during incidents on I-75 due to uncoordinated signal timing, lack of clear and quick east-west connections back to I-75 between Town Center and Emerson, poor signage, and bottlenecks where US-41 narrows to two travel lanes.

- ITS solutions are being implemented on Ringgold Road (US-41) and Lee Highway (US-64) near Chattanooga, and signal coordination is being implemented on US-41 in Cobb County.

- There is a desire for coordinated incident management plans in Chattanooga and the North Georgia region.

- Pavement rutting and wear and tear is found along I-75.

- Tire debris can be found along I-75.

12.3 Safety and Security

- I-75 collision hot spots include:

    - Cartersville to Allatoona Lake due to roadway icing, congestion, and truck driver fatigue;

    - SR 53 (exit 312) to US-41 (exit 318) due to pooling water after rain;

    - At Calhoun due to driver fatigue; and

    - Walnut Avenue (exit 333) to mile marker 352 due to high truck volumes and fog.

- US-41 collision hot spots include:

    - At Cassville due to intersections; and

    - At the Cleveland Avenue/Northern Bypass intersection in Dalton.

- Truck drivers park on I-75 ramps and shoulders to rest due to lack of parking along the corridor. Hot spots include ramps at Old Allatoona Road (exit 283), Cassville White Road (exit 296), SR 53 (exit 312), US-41 (exit 318), and Walnut Avenue (exit 333), and near the Gordon County rest stop (north of exit 306).

- Flooding and fog in the north end of the corridor create unsafe roadways. Flooding is most prominent in Catoosa County (SR 2, Dietz Road, and US-41) and Hamilton County (I-75 and I-24 near East Ridge).

- Other safety issues include:

    - Weaving from the I-75/SR 5 interchange to the I-75/I-575 interchange; and

    - Driver unfamiliarity with US-41 while using it as an I-75 alternative during incidents.

12.4 Freight Movement and Diversion

- Stakeholders interviewed ship overwhelmingly via truck.
- Congestion, particularly near Atlanta and Chattanooga, is cited most often by freight stakeholders as the number one issue as all shipments from these stakeholders are time sensitive.
- The corridor is heavily utilized by trucks, and freight traffic is growing due to population growth and expanding industry, which includes Volkswagen, Amazon, Georgia Power, Shaw Industries, and carpet manufacturers. The Port of Savannah and Anheuser Busch are both expected to add more freight shipments to the corridor as well.
- Low clearance bridges on US-41 at the Old Allatoona Road interchange and the railroad overpass in downtown Ringgold impact truck freight movements.
- Stakeholders noted that roadway design must accommodate larger 53-foot trailers.
- I-24 between I-75 and downtown Chattanooga is challenging for trucks.
- In 2014, Alstom Power will begin shipping gas generators via truck. Each generator will require two lanes due to the width of the shipment.

12.5 Economic Access

- Significant developments in the corridor include:
    - The LakePoint Sports Complex in Emerson, which will draw millions of visitors annually;
    - Lowes distribution center west of Adairsville at the SR 52/SR 140 intersection;
    - Kennesaw State University; and
    - Continued concentration of industry in Bartow County and near Chattanooga.
- Residential growth in the corridor will continue on the northwest side of the Atlanta region and northeast and west of Chattanooga.
- The McCollum Airport may receive executive hangers and a FAA customs inspection site, which will increase usage of the airport, particularly for those visiting the planned LakePoint Sports Complex.

12.6 Intermodal Facilities

- CSX line is a single track in the middle of the corridor.

- Port of Savannah expected to increase rail traffic by 10 to 20 percent in the corridor.

- Double stacking may not improve rail capacity as yards may be at capacity. There is little communication between GDOT and railroads concerning the yards.

- Whitfield County is encouraging more rail traffic in the Dalton area.

12.7 Transit Services

- High speed rail would run in the I-75 ROW, but not prohibit future expansion of the highway.

- Demand transit services in northwest Georgia counties would have been consolidated into a single agency if the TIA was approved.

- TIA revenues would fund park-and-ride lots in Kennesaw and transit signal priority enhancements along US-41.

- Kennesaw State University is investigating the feasibility of a shuttle system serving off-campus apartment housing where students are concentrated.

12.8 Environment

- Environmental constraints include:

    - The New Echota tribe site in Calhoun;

    - A variety of historic Civil War sites in Calhoun; and

    - A colony of Tennessee Yellow-Eyed Grass, an endangered plant, located in the US-411/I-75 interchange ROW.

- Several environmental justice groups are located in Bartow County:

    - Low-income population in Mechanicsville and Glade Road trailer park;

    - African American population north of downtown Cartersville around Bartow Street and Martin Luther King Jr. Drive;

    - Hispanic population north of downtown Cartersville around Douglas Street; and

    - Minority groups in Adairsville, Kingston, and Emerson.

13 APPENDICES

13.1 Congested Segments Analysis and Ramp Capacity Tables

Congested segment analysis results for all roadway segments are listed in Table 13-1 through Table 13-4. Segments with peak-period LOS ratings from D, E, or F are highlighted in gray in these tables.

The congestion analysis utilized methodologies established in the 2010 HCM to compute high-level LOS for freeways, highways, and arterials. Because levels of congestion vary throughout the day and by direction, congested segments analyses for this document were performed only for the peak direction during the peak hour for each segment. However, northbound and southbound I-75 segments were treated as separate roadways, and this study analyzed both the southbound and northbound peak hour independently for each I-75 segment.

In addition to AADT, several factors are utilized in each analysis, for example truck percentages, K and D factors, and PHFs (Peak Hour Factors). Observed truck percentages and K and D factors were used when available, while remaining segments used interpolated values. PHFs were assigned to segments according to the surrounding area: 0.92 for urban areas, 0.91 for transitioning areas, and 0.90 for rural areas.

Ramp capacity check results for I-75 and US-41 are listed in Table 13-5 and Table 13-6. This high-level analysis compared ramp AADT to ramp capacity outlined in Table 4-1. Ramp capacity analysis, based on the 2010 HCM data, provides a first check to identify potentially congested ramps.

13.2 Crash Analysis Tables

Safety analysis results for all roadway segments are listed in Table 13-7 through Table 13-9. Segments that exceed statewide crash rate averages of the corresponding functional classification are highlighted in these tables.

13.3 Federally Protected Species Table

A summary of the federal and state protected species that are known to occur within the project study area is provided in Table 13-10.

Page intentionally left blank

Table 13-1. I-75 Northbound Congested Segments Peak Hour Analysis

ID	County	From	To	Functional Classification	2010 NB AADT	Daily Truck %	K Factor	PHF*	Demand Flow Rate■	Peak Hour LOS†
75-NB-1	Cobb	Ernest Barrett Parkway	Chastain Road	Urban Interstate Principal Arterial	72,474	19%	0.078	1.00	2,063	**F**
75-NB-2	Cobb	Chastain Road	Wade Green Road	Urban Interstate Principal Arterial	65,494	21%	0.083	1.00	2,002	**F**
75-NB-3	Cobb/Cherokee	Wade Green Road	SR 92	Urban Interstate Principal Arterial	52,821	23%	0.088	1.00	1,728	**E**
75-NB-4	Cherokee/Bartow	SR 92	Glade Road	Urban Interstate Principal Arterial	48,788	26%	0.083	1.00	1,525	**D**
75-NB-5	Bartow	Glade Road	Old Allatoona Road	Urban Interstate Principal Arterial	42,567	28%	0.078	0.91	1,386	C
75-NB-6	Bartow	Old Allatoona Road	Red Top Mountain Road	Urban Interstate Principal Arterial	40,700	28%	0.076	0.91	1,292	C
75-NB-7	Bartow	Red Top Mountain Road	East Main Street	Urban Interstate Principal Arterial	42,005	28%	0.075	0.91	1,316	C
75-NB-8	Bartow	East Main Street	SR 20	Urban Interstate Principal Arterial	42,480	26%	0.070	0.91	1,231	C
75-NB-9	Bartow	SR 20	US-411	Urban/Rural Interstate Principal Arterial	34,420	25%	0.070	0.91	993	B
75-NB-10	Bartow	US-411	Cassville White Road	Urban Interstate Principal Arterial	32,694	23%	0.070	0.91	935	B
75-NB-11	Bartow	Cassville White Road	SR 140	Rural Interstate Principal Arterial	30,231	22%	0.065	0.91	799	B
75-NB-12	Bartow/Gordon	SR 140	SR 53	Urban/Rural Interstate Principal Arterial	29,174	24%	0.068	0.90	823	B
75-NB-13	Gordon	SR 53	Red Bud Road	Urban Interstate Principal Arterial	32,502	27%	0.071	0.90	970	B
75-NB-14	Gordon	Red Bud Road	SR 225	Urban Interstate Principal Arterial	30,604	31%	0.068	0.90	890	B
75-NB-15	Gordon	SR 225	US-41	Urban Interstate Principal Arterial	29,114	31%	0.068	0.90	847	B
75-NB-16	Gordon	US-41	Resaca Beach Boulevard	Urban Interstate Principal Arterial	27,749	35%	0.066	0.90	797	B
75-NB-17	Gordon/Whitfield	Resaca Beach Boulevard	Carbondale Road	Rural Interstate Principal Arterial	30,039	29%	0.070	0.90	892	B
75-NB-18	Whitfield	Carbondale Road	South Dalton Bypass	Rural Interstate Principal Arterial	31,096	31%	0.073	0.90	971	B
75-NB-19	Whitfield	South Dalton Bypass	Walnut Avenue	Urban/Rural Interstate Principal Arterial	34,133	32%	0.077	0.90	1,129	C
75-NB-20	Whitfield	Walnut Avenue	North Dalton Bypass	Urban Interstate Principal Arterial	35,511	31%	0.081	0.90	1,229	C
75-NB-21	Whitfield	North Dalton Bypass	SR 201	Urban/Rural Interstate Principal Arterial	37,560	29%	0.086	0.90	1, 363	C
75-NB-22	Whitfield/Catoosa	SR 201	US-41	Rural Interstate Principal Arterial	38,137	28%	0.082	0.90	1,320	C
75-NB-23	Catoosa	US-41	Alabama Highway	Urban/Rural Interstate Principal Arterial	39,548	27%	0.077	0.91	1,267	C
75-NB-24	Catoosa	Alabama Highway	Battlefield Parkway	Urban Interstate Principal Arterial	40,879	27%	0.077	0.92	1,295	C
75-NB-25	Catoosa	Battlefield Parkway	Cloud Springs Road	Urban Interstate Principal Arterial	42,468	26%	0.072	0.92	1,252	**D**
75-NB-26	Catoosa/Hamilton	Cloud Springs Road	US-41	Urban Interstate Principal Arterial/Urban Interstate	42,800	21%	0.076	0.92	1,302	C
75-NB-27	Hamilton	US-41	I-24	Urban Interstate	51,985	17%	0.076	0.92	1,553	C

* Assume a Peak Hour Factor of 1.00 for segments with ramp metering
■ Demand flow rate shown in passenger car equivalents per peak hour per lane
† Gray cells indicate segments with LOS D, E, or F
Source: 2010 AADT (the latest data available during the data collection and existing conditions analysis phases of this study) from GDOT's Traffic Count Database System

Table 13-2. I-75 Southbound Congested Segments Peak Hour Analysis

ID	County	From	To	Functional Classification	2010 SB AADT	Daily Truck %	K Factor	PHF*	Demand Flow Rate■	Peak Hour LOS†
75-SB-1	Hamilton	I-24	US-41	Urban Interstate	56,066	14%	0.072	0.92	1,565	C
75-SB-2	Catoosa/Hamilton	US-41	Cloud Springs Road	Urban Interstate Principal Arterial/Urban Interstate	46,160	17%	0.072	0.92	1,307	C
75-SB-3	Catoosa	Cloud Springs Road	Battlefield Parkway	Urban Interstate Principal Arterial	45,802	22%	0.078	0.92	1,437	**D**
75-SB-4	Catoosa	Battlefield Parkway	Alabama Highway	Urban Interstate Principal Arterial	44,531	24%	0.073	0.92	1,319	C
75-SB-5	Catoosa	Alabama Highway	US-41	Urban/Rural Interstate Principal Arterial	43,082	24%	0.073	0.91	1,290	C
75-SB-6	Whitfield/Catoosa	US-41	SR 201	Rural Interstate Principal Arterial	41,963	25%	0.069	0.90	1,201	C
75-SB-7	Whitfield	SR 201	North Dalton Bypass	Urban/Rural Interstate Principal Arterial	43,550	27%	0.066	0.90	1,205	C
75-SB-8	Whitfield	North Dalton Bypass	Walnut Avenue	Urban Interstate Principal Arterial	37,529	29%	0.065	0.90	1,037	C
75-SB-9	Whitfield	Walnut Avenue	South Dalton Bypass	Urban/Rural Interstate Principal Arterial	32,887	31%	0.065	0.90	914	B
75-SB-10	Whitfield	South Dalton Bypass	Carbondale Road	Rural Interstate Principal Arterial	35,114	28%	0.067	0.90	993	B
75-SB-11	Gordon/Whitfield	Carbondale Road	Resaca Beach Boulevard	Rural Interstate Principal Arterial	33,921	25%	0.070	0.90	989	B
75-SB-12	Gordon	Resaca Beach Boulevard	US-41	Urban Interstate Principal Arterial	36,781	27%	0.068	0.90	1,051	C
75-SB-13	Gordon	US-41	SR 225	Urban Interstate Principal Arterial	34,176	26%	0.069	0.90	987	B
75-SB-14	Gordon	SR 225	Red Bud Road	Urban Interstate Principal Arterial	35,926	26%	0.069	0.90	1,037	B
75-SB-15	Gordon	Red Bud Road	SR 53	Urban Interstate Principal Arterial	33,828	25%	0.071	0.90	1,001	B
75-SB-16	Bartow/Gordon	SR 53	SR 140	Urban/Rural Interstate Principal Arterial	28,816	25%	0.068	0.90	816	B
75-SB-17	Bartow	SR 140	Cassville White Road	Rural Interstate Principal Arterial	28,339	25%	0.065	0.91	759	B
75-SB-18	Bartow	Cassville White Road	US-411	Urban Interstate Principal Arterial	31,886	25%	0.065	0.91	854	B
75-SB-19	Bartow	US-411	SR 20	Urban/Rural Interstate Principal Arterial	33,570	26%	0.065	0.91	903	B
75-SB-20	Bartow	SR 20	East Main Street	Urban Interstate Principal Arterial	41,431	26%	0.065	0.91	1,115	C
75-SB-21	Bartow	East Main Street	Red Top Mountain Road	Urban Interstate Principal Arterial	42,625	26%	0.066	0.91	1,164	C
75-SB-22	Bartow	Red Top Mountain Road	Old Allatoona Road	Urban Interstate Principal Arterial	42,630	25%	0.065	0.91	1,139	C
75-SB-23	Bartow	Old Allatoona Road	Glade Road	Urban Interstate Principal Arterial	46,023	23%	0.065	0.91	1,222	C
75-SB-24	Cherokee/Bartow	Glade Road	SR 92	Urban Interstate Principal Arterial	50,762	22%	0.075	0.92	1,531	**D**
75-SB-25	Cobb/Cherokee	SR 92	Wade Green Road	Urban Interstate Principal Arterial	52,889	21%	0.085	1.00	1,656	**D**
75-SB-26	Cobb	Wade Green Road	Chastain Road	Urban Interstate Principal Arterial	60,976	19%	0.082	1.00	1,821	**E**
75-SB-27	Cobb	Chastain Road	Ernest Barrett Parkway	Urban Interstate Principal Arterial	62,726	16%	0.079	1.00	1,784	**E**

* Assume a Peak Hour Factor of 1.00 for segments with ramp metering
■ Demand flow rate shown in passenger car equivalents per peak hour per lane
† Gray cells indicate segments with LOS D, E, or F
Source: 2010 AADT (the latest data available during the data collection and existing conditions analysis phases of this study) from GDOT's Traffic Count Database System

Table 13-3. US-41 Congested Segments Peak Hour Analysis

ID	County	From	To	Functional Classification	2010 Two-Way AADT	Lanes	Daily Truck %	K Factor	D Factor	PHF	Demand Flow Rate*	Peak Hour LOS†
41-1	Cobb	Ernest Barrett Parkway	McCollum Parkway	Urban Minor Arterial	36,440	4	4%	0.066	0.712	0.92	949	C
41-2	Cobb	McCollum Parkway	Rutledge Road	Urban Minor Arterial	39,240	4	4%	0.077	0.692	0.92	1,159	C
41-3	Cobb	Rutledge Road	Lake Acworth Drive	Urban Minor Arterial	29,150	4	4%	0.079	0.581	0.92	742	B
41-4	Cobb	Lake Acworth Drive	Dallas Acworth Highway	Urban Minor Arterial	35,980	4	4%	0.085	0.604	0.92	1,024	C
41-5	Cobb	Dallas Highway	Third Army Road	Urban Minor Arterial	20,450	4	7%	0.085	0.535	0.92	523	A
41-6	Cobb/Bartow	Third Army Road	Old Allatoona Road	Urban Minor Arterial	15,100	4	9%	0.087	0.519	0.91	391	A
41-7	Bartow	Old Allatoona Road	Red Top Mountain Road	Urban Minor Arterial	14,975	4	9%	0.085	0.501	0.91	366	A
41-8	Bartow	Red Top Mountain Road	Old River Road	Urban Minor Arterial	14,850	4	10%	0.083	0.518	0.91	368	A
41-9	Bartow	Old River Road	East Main Street	Urban Principal Arterial	16,560	4	10%	0.083	0.546	0.91	433	A
41-10	Bartow	East Main Street	US-411	Urban Principal Arterial	33,830	4	4%	0.079	0.517	0.91	774	B
41-11	Bartow	US-411	Cassville Road	Urban Principal Arterial	42,290	4	3%	0.077	0.575	0.91	1,044	C
41-12	Bartow	Cassville Road	Cut Off Road	Rural Minor Arterial	11,800	2	9%	0.097	0.508	0.90	675	C
41-13	Bartow	Cut Off Road	SR 140	Rural Minor Arterial	10,690	2	10%	0.092	0.522	0.90	599	C
41-14	Bartow/Gordon	SR 140	Union Grove Road	Rural Minor Arterial	5,950	2	10%	0.103	0.522	0.90	373	B
41-15	Gordon	Union Grove Road	SR 53	Urban Minor Arterial	9,000	2	11%	0.090	0.522	0.90	493	C
41-16	Gordon	SR 53	Hicks Street	Urban Principal Arterial	19,500	4	9%	0.094	0.535	0.90	569	B
41-17	Gordon	Hicks Street	Red Bud Road	Urban Principal Arterial	11,850	2	12%	0.093	0.522	0.90	678	**D**
41-18	Gordon	Red Bud Road	SR 225	Urban Principal Arterial	11,210	2	10%	0.086	0.540	0.90	607	C
41-19	Gordon	SR 225	Mauldin Road	Urban Principal Arterial	8,740	2	9%	0.083	0.544	0.90	458	C
41-20	Gordon	Mauldin Road	I-75	Urban Principal Arterial	9,530	4	10%	0.085	0.556	0.90	263	A
41-21	Gordon	I-75	Reseca Beach Boulevard	Urban Minor Arterial	6,180	2	13%	0.085	0.531	0.90	330	C
41-22	Gordon	Reseca Beach Boulevard	Jones Drive	Urban Minor Arterial	4,340	2	15%	0.089	0.544	0.90	251	B
41-23	Gordon/Whitfield	Jones Drive	Carbondale Road	Rural Minor Arterial	3,910	2	17%	0.099	0.544	0.90	254	B
41-24	Whitfield	Carbondale Road	South Dalton Bypass	Rural Minor Arterial	7,780	2	12%	0.100	0.544	0.90	498	C
41-25	Whitfield	South Dixie Highway	Old Dixie Highway	Rural Principal Arterial	15,660	4	20%	0.104	0.557	0.90	554	B
41-26	Whitfield	Old Dixie Highway	Chatsworth Road	Urban Principal Arterial	15,900	4	16%	0.118	0.595	0.90	670	B
41-27	Whitfield	Chatsworth Road	Cleveland Highway	Urban Principal Arterial	23,780	4	11%	0.098	0.530	0.90	721	B
41-28	Whitfield	Cleveland Highway	I-75	Urban Principal Arterial	36,880	4	15%	0.093	0.850	0.90	1,741	C
41-29	Whitfield	I-75	Lafayette Road	Urban Minor Arterial	23,320	4	8%	0.102	0.690	0.90	948	B
41-30	Whitfield	Lafayette Road	Tunnel Hill Church Street	Urban Minor Arterial	11,590	4	10%	0.104	0.505	0.90	355	A
41-31	Whitfield/Catoosa	Tunnel Hill Church Street	Gordy Circle	Urban Minor Arterial	4,390	2	10%	0.089	0.556	0.90	253	B
41-32	Catoosa	Gordy Circle	I-75	Rural Minor Arterial	6,650	2	12%	0.074	0.606	0.90	351	**D**

ID	County	From	To	Functional Classification	2010 Two-Way AADT	Lanes	Daily Truck %	K Factor	D Factor	PHF	Demand Flow Rate*	Peak Hour LOS†
41-33	Catoosa	I-75	Rogers Drive	Urban Minor Arterial	7,550	2	12%	0.115	0.647	0.90	662	C
41-34	Catoosa	Rogers Drive	Alabama Highway	Urban Minor Arterial	10,280	2	8%	0.106	0.567	0.91	706	**E**
41-35	Catoosa	Alabama Highway	Battlefield Parkway	Urban Minor Arterial	13,680	2	8%	0.106	0.567	0.91	940	**E**
41-36	Catoosa	Battlefield Parkway	Cloud Springs Road	Urban Minor Arterial	5,890	2	14%	0.097	0.513	0.91	345	B
41-37	Catoosa/Hamilton	Cloud Springs Road	I-75	Urban Minor/Principal Arterial	11,814	4	6%	0.093	0.663	0.92	408	A
41-38	Hamilton	I-75	McBrien Road	Urban Principal Arterial	28,700	4	3%	0.087	0.566	0.92	780	C

* Demand flow rate shown in passenger car equivalents per peak hour per lane
† Gray cells indicate segments with LOS D, E, or F
Source: 2010 AADT (the latest data available during the data collection and existing conditions analysis phases of this study) from GDOT's Traffic Count Database System

Table 13-4. I-75 to US-41 Linkages Congested Segments Peak Hour Analysis

ID	County	Roadway	From	To	Functional Classification	2010 Two-Way AADT	Lanes	Daily Truck %	K Factor	D Factor	PHF	Demand Flow Rate*	Peak Hour LOS†
Link-1	Cobb	Ernest Barrett Parkway	I-75	US-41	Urban Principal Arterial	43,610	6	3%	0.069	0.515	0.92	570	B
Link-2	Cobb	Chastain Rd/McCollum Pkwy	I-75	US-41	Urban Minor Arterial	40,390	4	4%	0.086	0.501	0.92	965	C
Link-3	Cobb	Cherokee Street	Chalker Rd	Main St	Urban Minor Arterial	14,230	2	3%	0.083	0.569	0.92	741	**D**
Link-4	Cobb	Cherokee St/Wade Green Rd	I-75	Chalker Rd	Urban Minor Arterial	35,160	4	3%	0.075	0.569	0.92	828	C
Link-5	Cobb	SR 92	I-75	US-41	Urban Principal Arterial	24,140	2 to 4	6%	0.085	0.501	0.92	1,151	**E**
Link-6	Cobb	Glade Road	I-75	SR 92	Urban Minor Arterial	18,290	4	5%	0.089	0.605	0.92	549	B
Link-7	Bartow	Old Allatoona Road	I-75	US-41	Urban Minor Arterial	7,725	2	10%	0.088	0.512	0.91	402	B
Link-8	Bartow	Red Top Mountain Road	I-75	US-41	Urban Minor Arterial	8,940	4	10%	0.087	0.583	0.91	262	A
Link-9	Bartow	East Main Street (SR 113)	I-75	US-41	Urban Principal Arterial	14,920	4	9%	0.086	0.557	0.91	410	A
Link-10	Bartow	SR 20	I-75	US-41	Urban Principal Arterial	22,290	2	14%	0.075	0.504	0.91	991	**E**
Link-11	Bartow	US-411/SR 61	I-75	US-41	Urban Principal Arterial	9,630	3 to 4	9%	0.082	0.540	0.91	245	A
Link-12	Bartow	Cassville Road	US-41	US-41	Urban Minor Arterial	4,190	2	3%	0.114	0.510	0.90	275	C
Link-13	Bartow	Cassville White Road	Brown Loop Rd	Cassville Rd	Urban Minor Arterial	3,850	2	3%	0.089	0.510	0.90	197	B
Link-14	Bartow	Cassville White Road	I-75	Brown Loop Rd	Rural Minor Arterial	3,850	2	6%	0.089	0.510	0.90	200	C
Link-15	Bartow	SR 140	I-75	US-41	Rural Minor Arterial	18,050	4	14%	0.089	0.516	0.90	493	A
Link-16	Gordon	SR 53	I-75	US-41	Urban Principal Arterial	23,680	4	10%	0.087	0.520	0.90	625	B
Link-17	Gordon	Red Bud Road (SR 156)	I-75	US-41	Urban Minor Arterial	14,020	4	7%	0.090	0.530	0.90	380	A
Link-18	Gordon	SR 225	I-75	US-41	Urban Minor Arterial	5,580	2	12%	0.094	0.530	0.90	327	C
Link-19	Gordon	Resaca Beach Blvd (SR 136)	I-75	US-41	Urban Minor Arterial	4,020	2	15%	0.094	0.530	0.90	239	B
Link-20	Whitfield	Carbondale Road	I-75	US-41	Rural Major Collector	13,870	2	14%	0.057	0.530	0.90	498	**D**
Link-21	Whitfield	South Bypass	I-75	US-41	Urban Principal Arterial	20,590	4	16%	0.104	0.550	0.90	707	B
Link-22	Whitfield	Walnut Avenue (SR 52)	Airport Rd	US-41	Urban Principal Arterial	25,070	4	3%	0.097	0.694	0.90	949	C
Link-23	Whitfield	Walnut Avenue (SR 52)	Glenwood Ave	Airport Rd	Urban Principal Arterial	26,290	6	3%	0.096	0.523	0.90	496	B
Link-24	Whitfield	Walnut Avenue (SR 52)	I-75	Glenwood Ave	Urban Principal Arterial	27,120	4	3%	0.093	0.591	0.90	841	C
Link-25	Whitfield	Tunnel Hill Varnell Road	I-75	US-41	Urban Minor Arterial	3,630	2	14%	0.101	0.530	0.90	231	B
Link-26	Catoosa	Alabama Highway (SR 151)	I-75	US-41	Urban Minor Arterial	23,190	4	8%	0.078	0.509	0.91	526	B
Link-27	Catoosa	Battlefield Parkway (SR 2)	I-75	US-41	Urban Minor Arterial	9,780	3 to 4	9%	0.092	0.627	0.91	324	A
Link 28	Catoosa	Cloud Springs Road (SR 146)	I-75	US-41	Urban Principal Arterial	13,260	4	6%	0.087	0.583	0.92	376	A

* Demand flow rate shown in passenger car equivalents per peak hour per lane
† Gray cells indicate segments with LOS D, E, or F
Source: 2010 AADT (the latest data available during the data collection and existing conditions analysis phases of this study) from GDOT's Traffic Count Database System

Table 13-5. I-75 Ramp Capacity Check

To or From	Exit	I-75 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
Barrett Parkway	269	NB	Off	Standard	Signal	15,460	0.078	1,206	2	No	6,420	N/A
		SB	On	Standard	Signal	14,860	0.079	1,174	1	No	N/A	N/A
		NB	On	Standard	Signal	6,130	0.078	478	1	No	N/A	N/A
		SB	Off	Standard	Signal	5,280	0.079	417	1	No	3,510	N/A
Chastain Road	271	NB	Off	Standard	Signal	10,860	0.078	847	1	No	2,750	Ramp metering does not seem to improve Chastain Road traffic
		SB	On	Standard	Signal	10,730	0.079	848	1	No	N/A	Ramp metering does not seem to improve Chastain Road traffic
		NB	On	Standard	Signal	6,680	0.083	554	1	No	N/A	Ramp metering does not seem to improve Chastain Road traffic
		SB	Off	Standard	Signal	5,380	0.082	441	1	No	3,180	Ramp metering does not seem to improve Chastain Road traffic
Wade Green Road	273	NB	Off	Standard	Signal	14,380	0.083	1,194	1	No	3,360	N/A
		SB	On	Standard	Signal	15,280	0.082	1,253	1	No	N/A	Dual left and right turn lanes into ramp could help ease congestion
		NB	On	Standard	Signal	3,920	0.088	345	1	No	N/A	N/A
		SB	Off	Standard	Signal	4,150	0.085	353	1	No	3,340	Extend I-75 SB off-ramp to meet truck lane
SR 92	277	NB	Off	Standard	Signal	7,500	0.088	660	1	No	2,570	N/A
		SB	On	Standard	Signal	7,720	0.085	656	1	No	N/A	N/A
		NB	On	Standard	Signal	4,380	0.083	364	1	No	N/A	N/A
		SB	Off	Standard	Signal	4,120	0.075	309	1	No	2,940	N/A
Glade Road	278	NB	Off	Standard	Signal	7,120	0.083	591	1	No	2,910	N/A
		SB	On	Standard	Signal	7,810	0.075	586	1	No	N/A	N/A
		NB	On	Standard	Signal	1,520	0.078	119	1	No	N/A	N/A
		SB	Off	Standard	Signal	2,010	0.065	131	1	No	2,900	N/A
Old Allatoona Road	283	NB	Off	Standard	Stop Sign	4,220	0.078	329	1	No	2,120	Overnight truck parking
		SB	On	Standard	Free Flow	3,750	0.065	244	1	No	N/A	Overnight truck parking
		NB	On	Standard	Free Flow	1,160	0.076	88	1	No	N/A	Overnight truck parking
		SB	Off	Standard	Stop Sign	1,310	0.065	85	1	No	1,620	Overnight truck parking
Red Top Mountain Road	285	NB	Off	Standard	Stop Sign	1,830	0.076	139	1	No	2,810	N/A
		SB	On	Standard	Free Flow	2,310	0.065	150	1	No	N/A	N/A
		NB	On	Standard	Free Flow	2,630	0.075	197	1	No	N/A	N/A
		SB	Off	Standard	Stop Sign	2,590	0.066	171	1	No	2,390	N/A

* Off = off ramp from I-75; on = on ramp to I-75
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for I-75 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: GDOT's Traffic Count Database System and Google Earth

Table 13.5 (continued). I-75 Ramp Capacity Check

To or From	Exit	I-75 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
East Main Street	288	NB	Off	Standard	Signal	5,500	0.075	413	1	No	1,890	N/A
		SB	On	Standard	Free Flow	4,980	0.066	329	1	No	N/A	N/A
		NB	On	Standard	Signal	4,660	0.070	326	1	No	N/A	N/A
		SB	Off	Standard	Stop Sign	4,630	0.065	301	1	No	1,740	N/A
SR 20	290	NB	Off	Standard	Signal	11,830	0.070	828	1	No	2,730	N/A
		SB	On	Standard	Signal	12,310	0.065	800	1	No	N/A	N/A
		NB	On	Standard	Signal	3,890	0.070	272	1	No	N/A	N/A
		SB	Off	Standard	Signal	3,590	0.065	233	1	No	1,820	N/A
US-411/ SR 61	293	NB	Off	Standard	Stop Sign	4,050	0.070	284	1	No	2,100	Endangered plants in ROW
		SB	On	Loop	Free Flow	3,800	0.065	247	1	No	N/A	Endangered plants in ROW; Convert interchange to full diamond
		NB	On	Loop	Free Flow	1,790	0.070	125	1	No	N/A	Endangered plants in ROW; Convert interchange to full diamond
		SB	Off	Standard	Stop Sign	2,100	0.065	137	1	No	2,680	Endangered plants in ROW
Cassville White Road	296	NB	Off	Standard	Signal	7,860	0.070	550	1	No	1,610	Overnight truck parking
		SB	On	Standard	Signal	7,600	0.065	494	1	No	N/A	Overnight truck parking
		NB	On	Standard	Signal	5,450	0.065	354	1	No	N/A	Overnight truck parking
		SB	Off	Standard	Signal	2,880	0.065	187	1	No	1,650	Overnight truck parking
SR 140	306	NB	Off	Standard	Signal	6,800	0.065	442	1	No	2,420	N/A
		SB	On	Standard	Signal	4,560	0.065	296	1	No	N/A	N/A
		NB	On	Standard	Signal	3,650	0.068	248	1	No	N/A	N/A
		SB	Off	Standard	Signal	6,130	0.068	417	1	No	2,400	N/A
SR 53	312	NB	Off	Standard	Signal	3,870	0.068	263	1	No	1,080	Overnight truck parking; Bring ramp up to design standards
		SB	On	Standard	Signal	4,210	0.068	286	1	No	N/A	Overnight truck parking; Bring ramp up to design standards
		NB	On	Standard	Signal	7,850	0.071	557	1	No	N/A	Overnight truck parking; Bring ramp up to design standards
		SB	Off	Standard	Signal	7,450	0.071	529	1	No	1,210	Overnight truck parking; Bring ramp up to design standards
Red Bud Road	315	NB	Off	Standard	Stop Sign	2,440	0.071	173	1	No	1,000	N/A
		SB	On	Standard	Free Flow	2,740	0.071	195	1	No	N/A	N/A
		NB	On	Standard	Free Flow	2,880	0.068	196	1	No	N/A	N/A
		SB	Off	Standard	Stop Sign	2,950	0.069	204	1	No	920	N/A

* Off = off ramp from I-75; on = on ramp to I-75
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for I-75 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: GDOT's Traffic Count Database System and Google Earth

Table 13.5 (continued). I-75 Ramp Capacity Check

To or From	Exit	I-75 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
SR 225	317	NB	Off	Standard	Signal	1,890	0.068	129	1	No	1,960	Bring ramp up to design standards
		SB	On	Standard	Free Flow	2,360	0.069	163	1	No	N/A	Bring ramp up to design standards
		NB	On	Standard	Signal	580	0.068	39	1	No	N/A	Bring ramp up to design standards
		SB	Off	Standard	Stop Sign	630	0.069	43	1	No	2,050	Bring ramp up to design standards
US-41/ SR 3	318	NB	Off	Standard	Signal	3,220	0.068	219	1	No	1,630	Overnight truck parking; Bring ramp up to design standards
		SB	On	Standard	Signal	2,410	0.069	166	1	No	N/A	Overnight truck parking; Bring ramp up to design standards
		NB	On	Standard	Signal	4,030	0.066	266	1	No	N/A	Overnight truck parking; Bring ramp up to design standards
		SB	Off	Standard	Signal	3,340	0.068	227	1	No	1,200	Overnight truck parking; Bring ramp up to design standards
Resaca Beach Blvd	320	NB	Off	Standard	Stop Sign	2,930	0.066	193	1	No	1,350	Bring ramp up to design standards
		SB	On	Standard	Free Flow	2,040	0.068	139	1	No	N/A	Bring ramp up to design standards
		NB	On	Standard	Free Flow	2,730	0.070	191	1	No	N/A	Bring ramp up to design standards
		SB	Off	Standard	Stop Sign	2,040	0.070	143	1	No	1,500	Bring ramp up to design standards
Carbon-dale Road	326	NB	Off	Standard	Stop Sign	3,770	0.070	264	1	No	1,170	N/A
		SB	On	Standard	Free Flow	4,290	0.070	300	1	No	N/A	N/A
		NB	On	Standard	Free Flow	4,410	0.073	322	1	No	N/A	N/A
		SB	Off	Standard	Stop Sign	3,970	0.067	266	1	No	1,000	N/A
South Dalton Bypass	328	NB	Off	Standard	Signal	6,840	0.073	499	1	No	1,910	N/A
		SB	On	Standard	Signal	7,310	0.067	490	1	No	N/A	N/A
		NB	On	Standard	Signal	6,200	0.077	477	1	No	N/A	N/A
		SB	Off	Standard	Signal	5,710	0.065	371	1	No	1,790	N/A
Walnut Avenue	333	NB	Off	Standard	Signal	4,620	0.077	356	1	No	2,120	Bring ramp up to design standards
		SB	On	Standard	Signal	5,360	0.065	348	1	No	N/A	Bring ramp up to design standards
		NB	On	Standard	Signal	6,610	0.081	535	1	No	N/A	Bring ramp up to design standards
		SB	Off	Standard	Signal	6,670	0.065	434	1	No	2,010	Bring ramp up to design standards
US-41/ North Dalton Bypass	336	NB	Off	Standard	Signal	6,470	0.081	524	1	No	2,780	N/A
		SB	On	Standard	Signal	7,340	0.065	477	1	No	N/A	N/A
		NB	On	Standard	Signal	8,460	0.086	728	1	No	N/A	N/A
		SB	Off	Loop	Signal	9,670	0.066	638	1	No	1,090	N/A

* Off = off ramp from I-75; on = on ramp to I-75
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for I-75 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: GDOT's Traffic Count Database System and Google Earth

Table 13.5 (continued). I-75 Ramp Capacity Check

To or From	Exit	I-75 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
SR 201	341	NB	Off	Standard	Stop Sign	3,240	0.086	279	1	No	1,340	N/A
		SB	On	Standard	Free Flow	4,040	0.066	267	1	No	N/A	N/A
		NB	On	Standard	Free Flow	2,580	0.082	212	1	No	N/A	N/A
		SB	Off	Standard	Stop Sign	2,270	0.069	157	1	No	1,600	N/A
US-41/ SR 3	345	NB	Off	Standard	Signal	2,480	0.082	203	1	No	2,010	N/A
		SB	On	Standard	Signal	4,690	0.069	324	1	No	N/A	N/A
		NB	On	Standard	Signal	4,650	0.077	358	1	No	N/A	N/A
		SB	Off	Standard	Signal	3,280	0.073	239	1	No	2,230	N/A
Alabama Highway	348	NB	Off	Standard	Signal	4,480	0.077	345	1	No	1,090	N/A
		SB	On	Standard	Signal	6,430	0.073	469	1	No	N/A	N/A
		NB	On	Standard	Signal	6,120	0.077	471	1	No	N/A	N/A
		SB	Off	Standard	Signal	4,990	0.073	364	1	No	1,040	N/A
Battle-field Parkway	350	NB	Off	Standard	Signal	4,580	0.077	353	1	No	2,460	N/A
		SB	On	Standard	Signal	5,620	0.073	410	1	No	N/A	N/A
		NB	On	Standard	Signal	5,520	0.072	397	1	No	N/A	N/A
		SB	Off	Standard	Signal	5,100	0.078	398	1	No	1,950	N/A
Cloud Springs Road	353	NB	Off	Standard	Signal	1,420	0.072	102	1	No	2,040	N/A
		SB	On	Standard	Signal	1,390	0.078	108	1	No	N/A	N/A
		NB	On	Standard	Signal	5,340	0.076	406	1	No	N/A	N/A
		SB	Off	Standard	Signal	6,300	0.072	454	1	No	2,500	N/A
US-41/ SR 8 (EB)	1A	NB	Off	Standard	Free Flow	482	0.076	37	1	No	1,460	N/A
		NB	On	Loop	Free Flow	7,382	0.076	561	1	No	N/A	N/A
US-41/ SR 8 (WB)	1B	NB	Off	Loop	Free Flow	2,207	0.076	168	1	No	1,300	N/A
		NB	On	Standard	Free Flow	5,149	0.076	391	1	No	N/A	N/A
US-41/ SR 8	1	SB	On	Standard	Signal	3,507	0.072	253	1	No	N/A	N/A
		SB	Off	Standard	Signal	11,940	0.072	860	2	No	3,570	N/A

* Off = off ramp from I-75; on = on ramp to I-75
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for I-75 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: GDOT's Traffic Count Database System, TDOT, and Google Earth

Table 13.5 (continued). I-75 Ramp Capacity Check

To or From	Exit	I-75 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
I-24 (EB)	2	SB	On	Interchange	Free Flow	26,060	0.072	1,876	2	No	N/A	N/A
		NB	Off	Interchange	Free Flow	29,008	0.076	2,205	2	No	N/A	Bottleneck due to lane reduction on I-24 WB ramp
I-24 (WB)	2	NB	Off	Interchange	Free Flow	22,533	0.076	1,713	1	No	N/A	Bottleneck due to lane reduction
		SB	On	Interchange	Free Flow	23,133	0.072	1,666	2	No	N/A	N/A

* Off = off ramp from I-75; on = on ramp to I-75
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for I-75 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: TDOT and Google Earth

Table 13-6. US-41 Ramp Capacity Check

To or From	US-41 Direction	Ramp *	Ramp Type **	Intersection Traffic Control	2010 Ramp AADT	K Factor	2010 Ramp Design Hour Volume	Ramp Lanes***	Exceeds HCM 2010 Ramp Capacity? ■	Net Queuing Distance Storage Space (ft) †	Stakeholder Comments
Old Allatoona Road	NB	Off	Standard	Stop Sign	1,480	0.087	129	1	No	300	N/A
	SB	On	Standard	Free Flow	1,740	0.087	151	1	No	N/A	N/A
	NB	On	Standard	Free Flow	550	0.085	47	1	No	N/A	N/A
	SB	Off	Loop	Stop Sign	360	0.085	31	1	No	320	N/A
SR 20 (EB)	NB	Off	Standard	Yield Sign	1,800	0.079	142	1	No	280	N/A
SR 20 (WB)	NB	Off	Standard	Stop Sign	630	0.079	50	1	No	1,030	N/A
US-411/ SR 61/ SR 20 (NB)	SB	On	Standard	Signal	150	0.079	12	1	No	N/A	N/A
	NB	On	Loop	Free Flow	1,750	0.077	135	1	No	N/A	N/A
US-411/ SR 61/ SR 20 (SB)	SB	On	Loop	Free Flow	690	0.079	55	1	No	N/A	N/A
	NB	On	Standard	Free Flow	8,480	0.077	653	1	No	N/A	N/A
US-411/ SR 61/ SR 20	SB	Off	Standard	Signal	10,000	0.077	770	1	No	1,300	N/A
US-411/ SR 20 (EB)	SB	On	Interchange	Free Flow	8,600	0.077	662	1	No	N/A	N/A
	NB	On	Loop	Free Flow	710	0.077	55	1	No	N/A	N/A
US-411/ SR 20 (WB)	NB	Off	Interchange	Free Flow	9,810	0.077	755	1	No	N/A	N/A
	SB	Off	Interchange	Free Flow	930	0.077	72	1	No	N/A	N/A

* Off = off ramp from US-41; on = on ramp to US-41
** Ramp types: standard ramp = diamond interchange, loop ramp = loop interchange, interchange ramp = highway-to-highway interchange
*** Number of lanes at gore point
■ Assumed free-flow speeds for ramp capacity check: standard ramps = 30 to 40 mph, loop ramps = 20 to 30 mph, and interchange ramps > 50 mph
† Storage space is the sum of the distance of all lanes from the stop bar to the taper. Only calculated for US-41 off-ramps. Measured in Google Earth and rounded to the nearest 10 feet.
Source: GDOT's Traffic Count Database System and Google Earth

Table 13-7. I-75 Crashes in Detail

ID	County	From	To	Two-Way AADT (2007-2008 Average)	Raw Data (Not Averages)									
					Total Crashes		Injuries		Injury Crashes		Fatalities		Fatal Crashes	
					2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
75-1	Cobb	Ernest Barrett Parkway	Chastain Road	134,065	312	361	78	109	58	66	1	2	1	2
75-2	Cobb	Chastain Road	Wade Green Road	127,500	303	230	71	49	48	43	0	0	0	0
75-3	Cobb/Cherokee	Wade Green Road	SR 92	103,180	335	220	121	56	81	43	3	1	3	1
75-4	Cherokee/Bartow	SR 92	Glade Road	95,675	72	88	44	30	22	23	1	0	1	0
75-5	Bartow	Glade Road	Old Allatoona Road	84,980	145	111	79	55	44	35	1	2	1	2
75-6	Bartow	Old Allatoona Road	Red Top Mountain Road	79,475	47	22	19	4	16	4	1	0	1	0
75-7	Bartow	Red Top Mountain Road	East Main Street	80,950	79	74	24	30	18	17	1	0	1	0
75-8	Bartow	East Main Street	SR 20	80,510	66	65	26	14	13	10	0	0	0	0
75-9	Bartow	SR 20	US-411	65,935	64	38	33	14	24	11	1	2	1	1
75-10	Bartow	US-411	Cassville White Road	63,045	49	33	19	12	13	9	3	0	1	0
75-11	Bartow	Cassville White Road	SR 140	59,920	109	60	56	32	40	21	2	3	2	3
75-12	Bartow/Gordon	SR 140	SR 53	54,535	90	80	46	33	27	23	3	0	3	0
75-13	Gordon	SR 53	Red Bud Road	61,795	62	60	20	20	13	14	1	0	1	0
75-14	Gordon	Red Bud Road	SR 225	62,250	35	32	17	16	9	10	0	0	0	0
75-15	Gordon	SR 225	US-41	59,635	16	18	11	9	6	7	0	0	0	0
75-16	Gordon	US-41	Resaca Beach Boulevard	61,415	11	15	2	4	1	4	0	0	0	0
75-17	Gordon/Whitfield	Resaca Beach Boulevard	Carbondale Road	60,970	63	63	36	35	24	21	1	1	1	1
75-18	Whitfield	Carbondale Road	South Dalton Bypass	62,310	48	43	35	23	17	18	1	1	1	1
75-19	Whitfield	South Dalton Bypass	Walnut Avenue	62,165	67	56	20	29	16	17	1	1	1	1
75-20	Whitfield	Walnut Avenue	North Dalton Bypass	66,800	72	68	29	25	22	16	1	0	1	0
75-21	Whitfield	North Dalton Bypass	SR 201	68,155	61	51	28	23	15	17	0	2	0	1
75-22	Whitfield/Catoosa	SR 201	US-41	66,545	50	46	17	33	12	18	0	0	0	0
75-23	Catoosa	US-41	Alabama Highway	69,855	65	56	17	28	13	21	0	0	0	0
75-24	Catoosa	Alabama Highway	Battlefield Parkway	73,290	74	35	32	14	22	11	0	1	0	1
75-25	Catoosa	Battlefield Parkway	Cloud Springs Road	75,680	174	101	98	36	60	23	1	0	1	0
75-26	Catoosa/Hamilton	Cloud Springs Road	US-41	88,955	89	91	39	22	23	16	0	0	0	0
75-27	Hamilton	US-41	I-24	112,194	74	96	21	23	16	17	1	0	1	0

Source: GDOT and TDOT

Table 13-8. US-41 Crashes in Detail

ID	County	From	To	Two-Way AADT (2007-2008 Average)	Raw Data (Not Averages)									
					Total Crashes		Injuries		Injury Crashes		Fatalities		Fatal Crashes	
					2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
41-1	Cobb	Ernest Barrett Parkway	McCollum Parkway	31,395	257	219	65	39	44	33	0	0	0	0
41-2	Cobb	McCollum Parkway	Rutledge Road	38,025	240	197	52	56	40	43	1	0	1	0
41-3	Cobb	Rutledge Road	Lake Acworth Drive	30,525	282	231	73	53	61	41	0	0	0	0
41-4	Cobb	Lake Acworth Drive	Dallas Highway	34,000	71	55	25	30	19	16	0	0	0	0
41-5	Cobb	Dallas Highway	Third Army Road	15,980	75	64	27	27	15	18	0	0	0	0
41-6	Cobb/Bartow	Third Army Road	Old Allatoona Road	15,235	29	29	12	20	9	14	0	0	0	0
41-7	Bartow	Old Allatoona Road	Red Top Mountain Road	15,005	21	22	4	7	4	6	0	0	0	0
41-8	Bartow	Red Top Mountain Road	Old River Road	14,775	9	16	9	8	3	5	0	1	0	1
41-9	Bartow	Old River Road	East Main Street	16,820	56	39	17	10	14	8	0	1	0	1
41-10	Bartow	East Main Street	US-411	34,365	199	208	75	70	52	51	0	0	0	0
41-11	Bartow	US-411	Cassville Road	42,290	201	204	124	137	83	85	0	1	0	1
41-12	Bartow	Cassville Road	Cut Off Road	11,985	39	49	24	31	16	23	0	0	0	0
41-13	Bartow	Cut Off Road	SR 140	9,935	30	33	15	22	9	8	0	0	0	0
41-14	Bartow/Gordon	SR 140	Union Grove Road	7,045	17	16	12	9	8	8	0	0	0	0
41-15	Gordon	Union Grove Road	SR 53	10,075	52	36	13	18	13	12	0	0	0	0
41-16	Gordon	SR 53	Hicks Street	18,600	48	57	13	13	11	12	0	0	0	0
41-17	Gordon	Hicks Street	Red Bud Road	13,430	41	32	8	12	6	9	0	0	0	0
41-18	Gordon	Red Bud Road	SR 225	12,735	33	26	13	15	10	10	0	0	0	0
41-19	Gordon	SR 225	Mauldin Road	9,225	8	8	2	2	2	2	0	0	0	0
41-20	Gordon	Mauldin Road	I-75	10,255	9	17	2	8	1	5	0	0	0	0
41-21	Gordon	I-75	Reseca Beach Boulevard	7,150	7	9	11	6	4	4	0	1	0	1
41-22	Gordon	Reseca Beach Boulevard	Jones Drive	5,665	3	1	0	3	0	1	0	0	0	0
41-23	Gordon/Whitfield	Jones Drive	Carbondale Road	4,355	13	11	11	3	6	3	0	1	0	1
41-24	Whitfield	Carbondale Road	South Dalton Bypass	7,915	25	19	12	15	8	8	3	0	2	0
41-25	Whitfield	South Dixie Highway	Old Dixie Highway	16,300	18	9	15	5	8	3	1	0	1	0
41-26	Whitfield	Old Dixie Highway	Chatsworth Road	15,725	109	101	66	45	39	31	2	1	2	1
41-27	Whitfield	Chatsworth Road	Cleveland Highway	23,515	84	83	49	31	27	23	0	0	0	0
41-28	Whitfield	Cleveland Highway	I-75	36,465	165	140	67	55	46	32	0	0	0	0
41-29	Whitfield	I-75	Lafayette Road	23,305	87	64	38	20	24	15	0	0	0	0
41-30	Whitfield	Lafayette Road	Tunnel Hill Church Street	11,830	6	18	7	7	4	4	0	0	0	0
41-31	Whitfield/Catoosa	Tunnel Hill Church Street	Gordy Circle	4,925	9	8	4	5	4	4	0	0	0	0
41-32	Catoosa	Gordy Circle	I-75	6,700	4	5	0	1	0	1	0	0	0	0

ID	County	From	To	Two-Way AADT (2007-2008 Average)	Raw Data (Not Averages)									
					Total Crashes		Injuries		Injury Crashes		Fatalities		Fatal Crashes	
					2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
41-33	Catoosa	I-75	Rogers Drive	7,400	22	23	12	14	7	9	0	0	0	0
41-34	Catoosa	Rogers Drive	Alabama Highway	10,485	39	32	13	6	9	5	0	0	0	0
41-35	Catoosa	Alabama Highway	Battlefield Parkway	14,655	17	8	8	6	5	3	0	0	0	0
41-36	Catoosa	Battlefield Parkway	Cloud Springs Road	5,700	45	71	36	47	24	33	1	2	1	2
41-37	Hamilton	Cloud Springs Road	I-75	11,487	34	28	11	8	9	6	0	1	0	1
41-38	Hamilton	I-75	McBrien Road	28,802	172	128	75	41	53	32	0	0	0	0

Source: GDOT and TDOT

Table 13-9. I-75 to US-41 Linkages Crashes in Detail

ID	County	Roadway	Two-Way AADT (2007-2008 Average)	Raw Data (Not Averages)									
				Total Crashes		Injuries		Injury Crashes		Fatalities		Fatal Crashes	
				2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Link-1	Cobb	Ernest Barrett Parkway	46,405	317	298	78	96	54	61	0	1	0	1
Link-2	Cobb	Chastain Road/McCollum Parkway	40,950	118	120	16	28	10	20	0	0	0	0
Link-3	Cobb	Cherokee Street (Chalker Road to Main Street)	14,145	36	33	9	10	8	8	0	0	0	0
Link-4	Cobb	Cherokee Street/Wade Green Road (I-75 to Chalker Road)	37,330	49	49	11	17	8	13	0	0	0	0
Link-5	Cobb	SR 92	24,710	171	164	53	54	32	38	0	0	0	0
Link-6	Cobb	Glade Road	16,035	3	5	1	3	1	2	0	0	0	0
Link-7	Bartow	Old Allatoona Road	7,553	6	18	2	7	1	5	0	0	0	0
Link-8*	Bartow	Red Top Mountain Road	8,855	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Link-9	Bartow	East Main Street	19,535	42	33	8	9	8	5	0	0	0	0
Link-10	Bartow	SR 20	22,645	69	73	32	24	24	19	1	0	1	0
Link-11	Bartow	US-411	9,845	46	38	30	15	17	9	0	0	0	0
Link-12	Bartow	Cassville Road	4,195	2	2	1	0	1	0	0	0	0	0
Link-13	Bartow	Cassville White Road (Brown Loop Road to Cassville Road)	3,910	8	7	7	4	6	3	0	0	0	0
Link-14	Bartow	Cassville White Road (I-75 to Brown Loop Road)	3,910	10	8	6	4	2	4	0	0	0	0
Link-15	Bartow	SR 140	18,345	36	40	22	26	9	13	0	0	0	0
Link-16	Gordon	SR 53	35,525	100	106	19	50	17	28	0	0	0	0
Link-17	Gordon	Red Bud Road	13,540	55	41	23	17	17	13	0	0	0	0
Link-18	Gordon	SR 225	4,165	4	2	3	0	2	0	0	0	0	0
Link-19	Gordon	Resaca Beach Boulevard	3,870	2	3	2	0	2	0	0	0	0	0
Link-20	Whitfield	Carbondale Road	15,705	1	7	0	4	0	4	0	0	0	0
Link-21	Whitfield	South Bypass	20,360	18	16	6	7	5	7	0	0	0	0
Link-22	Whitfield	SR 52 (Airport Road to US-41)	24,435	74	74	49	36	32	24	0	0	0	0
Link-23	Whitfield	SR 52 (Glenwood Avenue to Airport Road)	25,995	76	70	30	42	21	21	0	1	0	1
Link-24	Whitfield	SR 52 (I-75 to Glenwood Avenue)	26,820	158	134	46	48	27	31	0	0	0	0
Link-25	Whitfield	Tunnel Hill Church Road/Varnell Road	3,170	6	10	0	7	0	4	0	1	0	1
Link-26	Catoosa	Alabama Highway	27,915	38	37	9	15	6	8	0	0	0	0
Link-27	Catoosa	Battlefield Parkway	11,050	23	19	8	15	5	9	0	0	0	0
Link 28	Catoosa	Cloud Springs Road	2,895	2	7	0	1	0	1	0	0	0	0

* Crash data unavailable for this portion of Red Top Mountain Road
Source: GDOT and TDOT

Table 13-10. Federally Protected Species Known from the Study Area Counties

Common Name	Scientific Name	Federal Status	Georgia Status	Tennessee Status	Counties						
					Hamilton	Catoosa	Whitfield	Gordon	Bartow	Cherokee	Cobb
Alabama Clubshell Mussel[3]	Pleurobema troshelianum	CS	NS[3]	NS[3]			✓[2]				
Alabama Moccasinshell	Medionidus acutissimus	T	T	T			✓[1, 2]	✓[1, 2]			
Amber Darter	Percina antesella	E	E	E			✓[1, 2]			✓[1, 2]	
Bald Eagle	Haliaeetus leucocephalus	BGEPA	T	D	✓	✓[2]	✓[2]	✓[2]		✓[1, 2]	✓[2]
Blue Shiner	Cyprinella caerulea	T	E	E			✓[1, 2]	✓[2]			
Cherokee Darter	Etheostoma scotti	T	T	NS					✓[1, 2]	✓[1]	✓[1, 2]
Conasauga Logperch	Percina jenkinsi	E	E	E			✓[1, 2]				
Coosa Moccasinshell	Medionidus parvulus	E	E	E			✓[1, 2]	✓[1, 2]			
Cumberland Monkeyface	Quadrula intermedia	E-historic	NS	E	✓						
Cylindrical Lioplax	Lioplax cyclostomaformis	E	NS	NS			✓[1]		✓[1]		
Dromedary Pearly Mussel	Dromus dromas	E-historic	NS	E	✓						
Dwarf Sumac	Rhus michauxii	E	E	NS							✓[1, 2]
Etowah Darter	Etheostoma etowahae	E	E	NS					✓[1, 2]	✓[1]	
Finelined Pocketbook	Hamiota altilis	T	T	T			✓[1, 2]				
Fine-rayed Pigtoe	Fusconaia cuneolus	E-historic	NS	E	✓						
Georgia Aster	Symphyotrichum georgianum	CS	T	NS							✓[1, 2]
Georgia Pigtoe	Pleurobema hanleyianum	CS	E	NS		✓[2]	✓[1]				
Georgia Rockcress	Arabis georgiana	CS	T	NS				✓[1, 2]			
Goldline Darter	Percina aurolineata	T	E	NS				✓[1, 2]			
Gray Bat	Myotis grisescens	E	E	E	✓	✓[1, 2]		✓[2]	✓[1]		
Gulf Moccasinshell	Medionidus penicillatus	E	E	NS							✓[1]
Indiana Bat	Myotis sodalis	E	E	E			✓[2]				
Interrupted Rocksnail, Georgia Rocksnail	Leptoxis foremani	CS	E	NS				✓[1, 2]			
Large-flowered Skullcap	Scutellaria montana	T	T	T	✓	✓[1, 2]	✓[1, 2]	✓[1, 2]			
Monkeyface Orchid	Platanthera integrilabia	CS	T	E	✓						✓[1, 2]
Orangefoot Pimpleback	Plethobasus cooperianus	E	NS	E	✓						
Oval Pigtoe Mussel	Pleurobema pyriforme	E	E	NS							
Ovate Clubshell Mussel	Pleurobema perovatum	E-USFWS	NS	E			✓[2]				
Painted Clubshell Mussel[4]	Pleurobema chattanoogaense	CS	NS[4]	NS[4]			✓[2]				
Pink Mucket Pearly Mussel	Lampsilis abrupta or orbiculata	E	NS	E	✓						
Rayed Kidneyshell[5]	Ptychobranchus foremanianus	E	E[5]	NS[5]			✓[1, 2]	✓[1, 2]			
Rough Pigtoe	Pleurobema plenum	E-historic	NS	E	✓						
Shinyrayed Pocketbook Mussel	Hamiota subangulata	E	E	NS							
Small-whorled Pogonia	Isotria medeoloides	T	T	E	✓						
Snail Darter	Percina tanasi	T	E	T	✓	✓[1, 2]					

Common Name	Scientific Name	Federal Status	Georgia Status	Tennessee Status	Counties						
					Hamilton	Catoosa	Whitfield	Gordon	Bartow	Cherokee	Cobb
Southern Acornshell	Epioblasma othcaloogensis	E	E	E			✓[1, 2]	✓[1, 2]			
Southern Clubshell Mussel[4]	Pleurobema decisum	E	E[4]	NS[4]			✓[1, 2]	✓[1, 2]			
Southern Pigtoe Mussel[3]	Pleurobema georgianum	E	E[3]	E[3]			✓[1, 2]	✓[1, 2]			
Spotfin Chub	Erimonax monachus	T	NS	T		✓[1]					
Tennessee Yellow-eyed Grass	Xyris tennesseensis	E	E	E			✓[1, 2]	✓[1, 2]	✓[1]		
Triangular Kidneyshell[5]	Ptychobranchus greenii	E	E[5]	E[5]							
Tuberculed-blossom Pearly Mussel	Epioblasma torulosa torulosa	E-historic	NS	NS	✓						
Upland Combshell	Epioblasma metastriata	E	E	E			✓[1, 2]	✓[1, 2]			
Virginia Spirea	Spiraea virginiana	T	T	E	✓						
Wood Stork	Mycteria americana	E	E	NS							

[1] GDNR or TDEC County List
[2] USFWS County List
[3] Formerly classified as Alabama clubshell, Pleurobema troshelianum, but now classified as Southern Pigtoe, Pleurobema georgianum, per pers. comm with Jason Wisnewski, GDNR Aquatic Ecologist.
[4] Formerly classified as Painted Clubshell, Pleurobema chattanoogaense, but now classified as Southern Clubshell, Pleurobema decisum, per pers. comm with Jason Wisnewski, GDNR Aquatic Ecologist.
[5] Formerly classified as Triangular Kidneyshell, Ptychobranchus greenii, but now classified as Rayed Kidneyshell, Ptychobranchus foremanianus, per pers. comm with Jason Wisnewski, GDNR Aquatic Ecologist.
Terminology: Bald and Golden Eagle Protection Act (BGEPA), endangered (E), threatened (T), candidate species (CS), no status (NS), and deemed in need of management (D)
Source: GDNR and TDEC