Air Cargo Strategic Development Plan

January 2026

TALLAHASSEE INTERNATIONAL AIRPORT

TALLAHASSEE INTERNATIONAL AIRPORT

Air Cargo Strategic Development Plan

Executive Summary

There are two key initiatives under development by IMS Worldwide (IMSW) on behalf of Tallahassee International Airport (TLH or Airport), the development of the new Foreign-Trade Zone (FTZ or Zone) and the development of new air cargo operations and services. These two initiatives are linked because international air cargo arriving or departing to/from foreign markets requires a U.S Customs and Border Protection (CBP) presence to clear and process the crew, passengers, and cargo at the international airport and to oversee Zone activities. Domestic cargo operations exist at TLH, and the Airport is active in supporting the expansion requirements for FedEx, who operate aircraft in their captive hub and spoke operations across the United States. TLH is one of the airports in their network that support their Integrated Cargo Services System. Many of the future initiatives at TLH focus on international air cargo operations and flights. TLH has the infrastructure and procedures established for processing arriving and departing international operations, these will become viable when CBP is operational with facilities and support staff at TLH.

The Air Cargo Strategic Development Plan scope requirements are presented below in numerical order aligned with the TLH Air Cargo Strategic Development Plan. Below each numerical requirement, enumerated in Task 1 - Existing Conditions Analysis, Task 2 - Cargo Marketing Research, and Task 3 - Leverage Local Resources are a summary of the deliverables provided to TLH. This report provides a summary of the work products to validate to TLH that the requirements of the Air Cargo Strategic Development Plan have been completed as stipulated in the contract. Additional input from IMSW is also included in a recently completed Strategic Summary Report attached to this report for review and reference.

Supplemental to this report, refer to **Appendix A** for the Regional Freight Study completed by the Capital Region Transportation Planning Agency (CRTPA) in which the "goal is to provide a freight mobility framework that serves as a reference and tool for promoting safe and efficient movement of freight and contributes to the economic viability for the region."

Task 1 - Existing Conditions Analysis

Routing Configuration

FedEx operates an integrated hub and spoke freight system in North America and around the globe. FedEx operates their hub operations primarily in Memphis, TN, and Indianapolis, IN supporting local spoke city deliveries with an array of aircraft operations and trucks depending on seasonal demands and/or distance between hub and spoke operations. FedEx currently operates ten (10) scheduled operations per day in support of their hub and spoke system at TLH. The FedEx system is based on direct flights to/from Memphis and multiple daily operations to/from Orlando, FL (MCO). FedEx has indicated an expected expansion in TLH at the 2027 timeframe, adding two (2) operations per day to their TLH network.

FedEx also co-mingles international cleared cargo that enters their gateways from international origin points with domestic cargo in their last air mile delivery system. FedEx operates a ground delivery system for products that are not as time-sensitive as their air product system supports. This system operates a fleet of dedicated truck operations between hubs, postal services, and dedicated cargo operations at key locations across the United States to support inbound domestic and international cargo which is co-mingled in their truck network system.

United Parcel Service (UPS) does not conduct aircraft operations at TLH but does operate a ground delivery system that supports time-sensitive, cargo operations in and around the TLH region. UPS does operate aircraft in their hub and spoke system to/from Albany, GA, and Atlanta, GA. UPS operates cargo processing centers in Jacksonville, Orlando, and Pensacola with connections to Louisville and Philadelphia gateway centers. UPS also operates the UPS Supply Chains Services Division both as a stand-alone freight forwarding entity and as a carrier that operates scheduled services on key global cargo lanes. The freight forwarding entity competes with UPS for certain high-volume contracts and allows UPS to engage in projects and oversized cargo delivery requirements.

Amazon operates minimal distribution facilities in the region:

- Project Mango TLH2 FC: 2635 Vineland Dr, Tallahassee, FL 32308 (634,000 sf)
- XFL1: 3529 Russell Road, Marianna, FL 32446 (20,000 sf Delivery Station),
- Project Cyprus, 3799 NW Psge, Tallahassee, FL 32303 (123,000 sf Delivery Station)

Amazon conducts air operations at the following Florida airports: Miami International Airport (MIA), Tampa International Airport (TPA), and Lakeland Linder International Airport (LAL).

Forward Air Corporation (Forward) operates a national truck-based line-haul feeder system to major and minor air cargo operations, supported by the air cargo freight forwarding community. This is a national less-than-truckload (LTL) operation that Forward conducts on lanes where sufficient volumes and balanced origin/ destination cargo exist to justify nightly and/or daily

services between gateways and stations. In Florida, Forward operates numerous stations as shown on the map below. Forward operates both a line-haul and hub-spoke network in a manner that allows smaller forwarders and city stations to be competitive in costs and services with larger gateways. Forwarders have the option to utilize the Forward network, or if the forwarder has sufficient volumes, many of them operate their own closed loop line-haul between key volume points in their station network. Most of the goods moved in Forward's system are destined for one or more of the major international hub gateways of ORD, JFK, ATL, DFW, MIA or LAX.

Forward senior staff are aware of the efforts to build cargo volumes and logistics services at TLH. However, the largest shipper in the TLH market is currently served by DSV, which operates a global freight hub in Huntsville, AL (HSV) and numerous dedicated line-haul truck routes that connect their nationwide network of operation/stations to the hub. Freight moved to and from this shipper in TLH for export will move by line-haul to either ATL or HSV for consolidation and uplift on DSV freighters that serve the world.

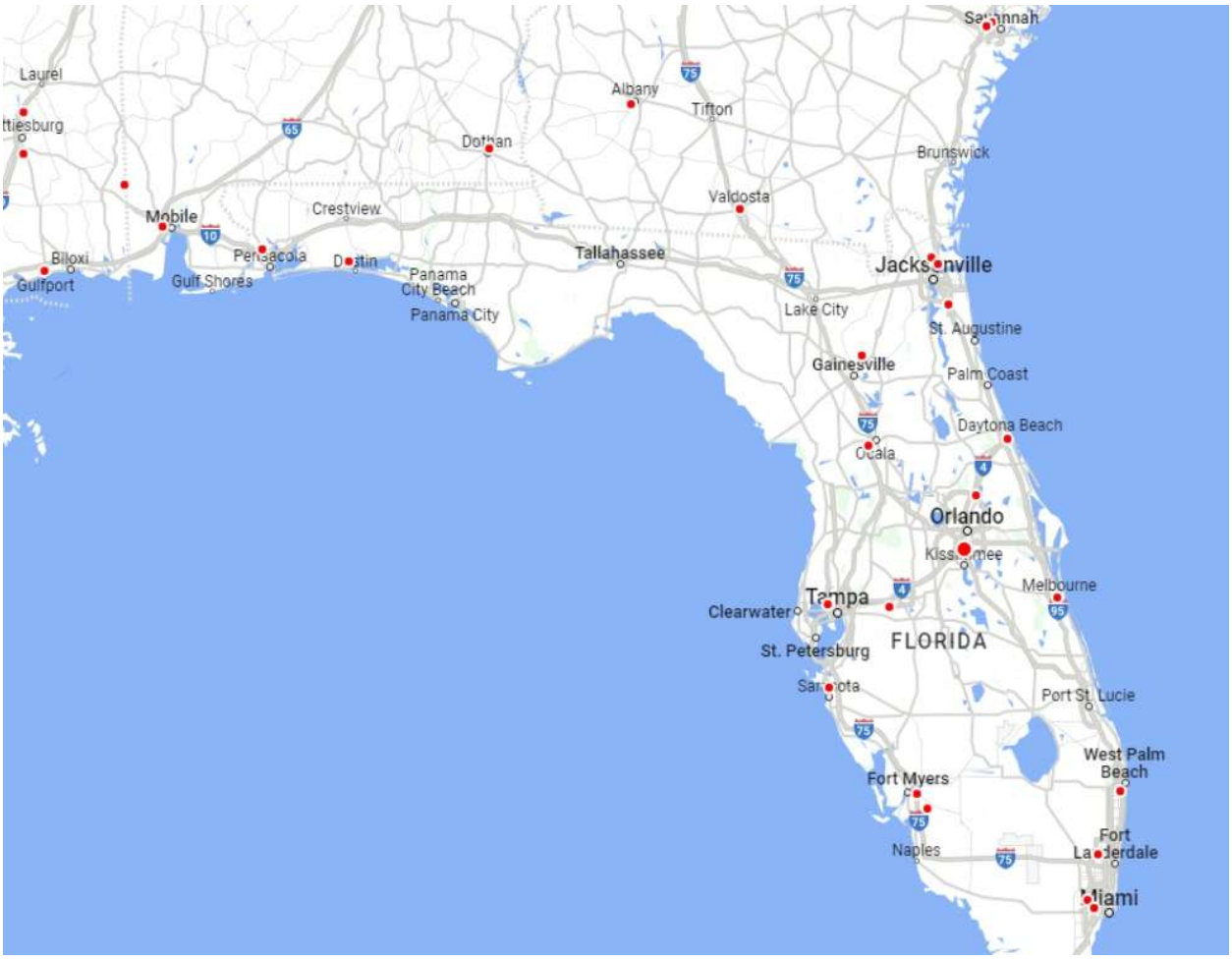


Figure 1. Forward Cargo Hubs and Cities Served in the Region

Catchment Zone

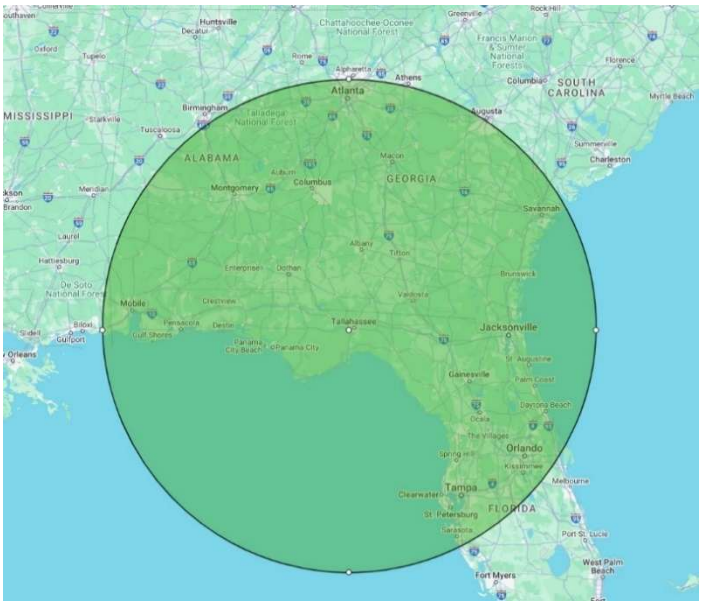


Figure 2. Tallahassee 250 Mile Radius Map

Tallahassee, Florida representing the area in which added air cargo services may provide opportunities. Outside of this radius, a company would defer to another airport to achieve lower drayage and transportation costs. The 250-mile radius is used to represent the typical daily capability and reach of a single truck operator with TLH centered in the catchment area.

For the integrators moving cargo into and out of Tallahassee, such as Amazon and UPS, truck operations routinely move cargo on behalf of these forwarders to the major cargo gateways for import and export. These gateways are supported by brokerage staff, booking, warehousing/distribution, and contract logistics services for many of the largest global freight forwarders. Traditional air cargo gateways exist in Atlanta, Miami, Los Angeles, New York (JFK), Dallas, and Chicago. DSV and Maersk operate their own controlled gateways with operations for DSV in Huntsville, AL and Mesa, AZ, while Maersk operates out of Greenville, SC and Rockford, IL.

Goods Movement to Tallahassee

Ocean cargo volumes, delivered in ocean containers, arrive from a wide array of deep-water ocean ports around the United States. The delivery port where the freight is discharged from the ocean carriers' network is a function of the origin source/country where the products, goods, or parts were manufactured, or the origin for raw materials used to produce goods in TLH or to support distribution or fulfillment in the TLH region. Trucks or rail carriers fulfill the last mile between the ocean terminal and the destination facility or intermodal rail hub where the cargo is transferred intact from rail to truck. This means that the same container in which the goods were stuffed overseas is placed on a truck for delivery to the local distribution or production center in TLH.

Freight moving to or from Mexico for production or assembly is mostly moved by truck because there are no intermodal loading facilities or intermodal rail hubs to support this goods transfer by rail in the Northern Florida region.

Cargo originating in China would be delivered on ships that would berth at Savannah, Mobile, or Charleston if the goods transverse the Panama Canal. For other China origination products, most goods would arrive at the Los Angeles and Long Beach ports because they are the ports most heavily dominated by China origin cargo. Freight from western ports would move by rail to one of the two intermodal container transfer facility in ATL and transferred by drayage trucking operations to a facility in TLH or in the region.

Freight arriving from China or other origin points to Gulf Coast or East Coast ports would be moved by drayage truck operations directly to the consumption point in the TLH region. Some cargo arrivals may occur from the Miami or Jacksonville ports. However, these ports are not supported by ocean carriers who operate the largest ships from Asia-Vietnam, China, or other Asia-Pacific carriers. These two ports are more often supported by carriers who operate liner vessels from Central or South American ports.

TLH does not have an intermodal rail terminal, thus all rail transfers that are used to move cargo containers from ocean ports to TLH must occur outside the region and trucks compete for the local delivery or drayage.

Below (Table 1) is a roster of firms within the Leon County area identified by exported commodities.

Table 1. Roster of Companies Exporting Based on North American Industry Classification System (NACIS)

Company Name	Primary NAICS	NAICS Description	Location Employee Range	Location Sales Volume Range
Chapman & Bruijn Produce	31199906	All Other Miscellaneous Food Manufacturing	20 to 49	$5-10 Million
Synth Taxus LLC	32519903	All Other Basic Organic Chemical Manufacturing	20 to 49	$50-100 Million
Danfoss Turbocor Compressors	33391202	Air And Gas Compressor Manufacturing	100 to 249	$50-100 Million
Syn-Tech Systems Inc	33391405	Measuring, Dispensing, And Other Pumping Equipment	100 to 249	$50-100 Million
Johnson Controls	33399814	All Other Miscellaneous General-Purpose Machinery	100 to 249	$10-20 Million
Georgia-Florida Burglar Alarm	33429001	Other Communications Equipment Manufacturing	50 to 99	$5-10 Million
Eminent Technology Inc	33431018	Audio And Video Equipment Manufacturing	10 to 19	$5-10 Million
Teligentems	33441201	Bare Printed Circuit Board Manufacturing	100 to 249	$10-20 Million
Glasshouse Fiber Optics Inc	33592103	Fiber Optic Cable Manufacturing	50 to 99	$10-20 Million
GT Technologies	33639011	Other Motor Vehicle Parts Manufacturing	100 to 249	$20-50 Million

Below (Table 2) is a roster of firms within the Leon County area identified by volume of import records.

Table 2. Importers Based on Shipment Records

Company	Records	Records Last 90 Days	Last Shipment
Akhtar Apparel Inc.	78	3	2025-01-13
Coton Colors Express LLC	142	0	2022-12-08
Danfoss LLC	168	8	2025-02-14
Danfoss Turbocor Compressors Inc.	850	51	2025-02-20
De Leon Supplies Corp.	49	7	2025-02-20
Divvy Up	41	0	2024-11-13
Faccin USA Inc.	104	4	2025-01-26
Ghost Control	193	17	2025-02-13
Golden Dragon Association Inc.	69	0	2024-09-23
Golden Lighting	888	27	2025-02-19
GT Technologies Inc.	134	0	2024-07-24
Isla Outfitters Corp.	69	3	2025-01-30
JG. Banis Company Inc.	228	17	2025-02-19
Mustafa Trading Corp.	76	0	2023-04-06
Reathlete LLC	40	4	2025-02-13
Skagfield Corporation	47	2	2025-01-09
Southern Furniture Leasing	49	1	2025-01-30
Sureal Corporation	55	0	2024-09-17
Walters Electronics	66	5	2025-02-20
Xinghua Trading Inc	71	66	2025-02-20

These firms in Table 2 are all within the FTZ service area for TLH and represent two opportunities. The first opportunity is to capture some or all of this cargo movement and engage in part of their supply chains from TLH as an origin or destination to global origins or destinations. This requires continued engagement with the local economic development community leaders by TLH staff to be aware of the transportation requirements that are available and determine how to support these opportunities with a local solution. Second, these firms represent prospects for the new FTZ in TLH, either as new Operators or as prospects for a Zone User within the 250-mile radius TLH Operator Incubator Zone.

Determine Pricing Points

The pricing matrix below (Table 3) contains input from trucking firms and express/package carriers related to cost burdens to move cargo into and out of Tallahassee, FL. These are guidelines created to demonstrate the cost associated with moving goods to key gateway markets, for a forwarder moving air cargo or for a cargo owner who would ship to and from nearby ocean ports with less-than-truckload (LTL) or full truckload volumes. Container drayage is not included because most of the container traffic moving to a west coast port would also have a railroad cost component to insert into the transit costs. The array of ports and markets selected represents locations where volumes could be aggregated for international shipping.

There are significant variables in shipping LTL volumes. The two most important considerations for LTL shipping are the distance sensitivity between origin point and destination/delivery point and the freight classification. LTL systems are built on volume/weight relationships, and all LTL shipments are assigned a classification based on the density, weight, handling requirements, and value/liability for shipping the goods in a carrier's system. In addition, for both Truckload (TL) and LTL, there are various surcharges assigned depending on other sensitivity issues such as applicable fuel surcharges (in some cases up to 30% of the total shipping invoice), weight, and extra handling surcharges are applied to oversize or overweight shipments.

Express shipments, shipped directly with a package/express services provider (UPS, USPS, DHL, or FedEx), are also priced based on a size/weight or density ratio. Many of the express carriers operate a ground and air system, and often they select, based on distance or day of the week, route express (overnight, second-day or deferred-delivery) packages in one of their systems based on the time-sensitivity and delivery requirements. A shipment tendered for overnight service between TLH and ATL may be flown on the carrier's aircraft on certain days, and trucked to destination on other days, based on volumes and truck schedules. These flexibility options are used by the service providers to support on-time delivery using the most cost-effective mode of transport to accomplish the customer demand for service.

These prices are guidelines for comparison between destinations for shippers from TLH. Larger shippers leverage volumes to gain lower prices. In addition, the ability to aggregate international cargo volumes with a forwarder that has other customers' cargo moving to the

same destination can impact how the pricing models are developed for shippers. For each existing or new shipper in TLH it will be necessary for them to disclose volumes, density, value, and destination priorities to the carrier in order for the carrier to build a pricing matrix that applies specifically and only to the individual shipper's account.

Table 3. Pricing Matrix for Shippers moving goods out of TLH

Origin	Destination	Truckload Rate	1 Pallet @ 750lbs.	2 Pallets @ 1500 lbs.	Express/ Ground 120 lbs.
Tallahassee, FL	Huntsville, AL	$1,000	$282.39	$330.55	$96.66
Tallahassee, FL	Mobile, AL	$900	$270.08	$328.61	$91.19
Tallahassee, FL	Jacksonville, FL	$850	$209.76	$268.17	$91.19
Tallahassee, FL	Miami, FL	$1,600	$103.12	$108.25	$96.66
Tallahassee, FL	Orlando, FL	$1,100	$287.46	$331.56	$91.19
Tallahassee, FL	Atlanta, GA	$800	$245.67	$289.16	$91.19
Tallahassee, FL	Macon, GA	$800	$214.24	$248.53	$91.19
Tallahassee, FL	Greenville, SC	$1,000	$287.10	$362.20	$96.66
Tallahassee, FL	Laredo, TX	$1,800	$170.79	$198.79	$115.96

Source: Multiple trucking company rates

Task 2 - Cargo Marketing Research

Roster of Trucking Firms

For this report, IMSW has selected an array of trucking firms that support cargo movements into or out of Tallahassee, FL. These operators provide less-than-truckload (LTL), truckload (TL), intermodal, or express/package services. Some of the firms identified are local operations based in, or near, Tallahassee. Others represent national and regional firms that can support pick-up and delivery activities in the Tallahassee region. For this report, IMSW identified operators with fleets containing a minimum of three (3) vehicles in their operations capabilities (Table 4). Smaller operators exist, and may provide excellent services, but for future considerations, some flexibility and scalability are necessary when selecting a cargo/logistics partner. Only a small number of cargo or logistics operators were identified as national in scope with the ability to move cargo across a closed-loop network without any agents engaged in the handling, pick-up, or delivery. Other firms were identified as agents of larger carriers who could support national coverage, but do not have an operation in or near Tallahassee. These carriers elect to use a local cartage, drayage, or delivery firm to accomplish first or last-mile delivery.

Several of the firms also provide logistics services in the market or have an array of options for customers including warehousing, contract logistics, or final-mile delivery.

Table 4. Key Transportation Firms

Diversified Transport
Hackbarth Delivery
SAIA LTL Freight
Bassi Transport
BR Williams Logistics
R&R Carriers/Express
A Major Transport
Ash ABC Trucking
WI Brown
TK Trucking
Baltic Logistics

The Florida Trucking Association (www.floridatrucking.org) is located in Tallahassee, and is a strong source for future prospects to utilize when they begin to source local, regional, or national transport. IMSW met in person with Alix Miller, President & CEO of the organization.

Roster of Industry Sectors

For this section of the report, the top global growth industry sectors were identified as many of these sectors have strong requirements for air cargo and import/export services which align with the intent and vision of this report in support of the fully functional FTZ and international air cargo strategic plan.

As noted above, in the importer and exporter rosters, the top priorities are companies who already import or export products into and out of the Tallahassee region. These rosters of prospects will be the first group of firms to be researched and interviewed to identify their viability for the FTZ program as a Zone Operator or User of the TLH FTZ Incubator program. These prospects will need further evaluation to determine their capability to support local or regional air cargo goods movements to/from overseas locations and production hubs. In addition, industry sectors are presented in the rosters below (Table 5) that have strong global growth history and are viable prospects to target for FTZ and air cargo discussions.

Table 5. The Top 10 North American Firms by Total Cubic Feet

1.	**Lineage Logistics: over 2.3 billion cubic feet (CF) (Canada and US)**
2.	**Americold Logistics: 1.5 billion CF (Canada and US)**
3.	**US Cold Storage: 373,987,950 CF (US)**
4.	**Interstate Warehousing: 116,301,722 CF (US)**
5.	**Frialsa Frigorificos: 102,227,430 CF (Mexico)**
6.	**Burris Logistics: 74,901,966 CF (US)**
7.	**FreezPak Logistics: 67,985,000 CF (Canada and US)**
8.	**Congebec Logistics: 57,741,880 CF (Canada)**
9.	**Conestoga Cold Storage: 56,621,606 CF (Canada)**
10.	**Confederation Freezers: 34,580,000 CF (Canada)**

Table 6. Top Cold Chain Firms and Their Florida Locations

Lineage Logistics	
1.	Jacksonville - West Beaver Port Facility, 1780 West Beaver Street Jacksonville, FL 32209
2.	Jacksonville - Dignan Port Facility, 4501 Dignan Street Jacksonville, FL 32254
3.	Jacksonville - Doolittle Port-Centric Facility, 5459 Doolittle Road Jacksonville, FL 32254
4.	Haines City, 100 Railroad Ave. Haines City, FL 33844
5.	Lakeland - Knights Station, 2505 Knights Station Rd. Lakeland, FL 33810
6.	Lakeland - County Line, 1110 County Line Rd. Lakeland, FL 33815
7.	Miami (Hialeah), 3990 W. 108th Street Hialeah, FL 33018
8.	Miami (Hialeah Gardens), 13801 NW 112th Avenue Hialeah Gardens, FL 33016
9.	Miami (Medley), 13700 NW 115th Ave Medley, FL 33178
10.	Miami, 12855 NW 113th Court Miami, FL 33178
11.	Albany, GA (Not FL, but closest location) 1019 Worth Street Albany, GA 31705-3233

Americold Logistics None in Florida, closest are:	
1.	**2201 Perimeter Road, Mobile, AL 36605 (246 miles away from TLH)**
2.	**2006 Industrial Boulevard North, Douglas, GA 31533 (139 miles away from TLH)**

US Cold Storage Only Florida location:	
1.	**211 NE McCloskey Avenue Lake City, FL 32055 (121 miles away from TLH)**

Burris Logistics/Sunny Morning Distribution	
1.	**1881 Central Florida Parkway, Orlando, FL 32837**
2.	**5422 Carrier Drive, Suite 304, Orlando, FL, 32819**
3.	**5330 NW 35th Ave, Ft Lauderdale, FL 33309**

Table 7. Top 25 Global Freight Forwarders List (Armstrong & Assoc)

1.	Kuehne + Nagel
2.	DHL Supply Chain & Global Forwarding
3.	DSV
4.	DB Schenker
5.	Sinotrans
6.	Nippon Express
7.	CEVA Logistics
8.	CH Robinson
9.	Expeditors
10.	Kerry Logistics
11.	GEODIS
12.	UPS Supply Chain Solutions
13.	Hellmann Worldwide Logistics
14.	Maersk Logistics
15.	Kintetsu World Express
16.	Bolloré Logistics
17.	LX Pantos
18.	CTS International Logistics
19.	Yusen Logistics/NYK Logistics
20.	LOGISTEED
21.	CIMC Weltrans Logistics
22.	DASCHER
23.	AWOT Global Logistics group
24.	Savino Del Bene
25.	Toll Group

Table 8. Pharma Associations

1.	**BioFlorida - https://www.bioflorida.com/**
2.	**Global E-Commerce Market Hosts**

The roster below (Table 9) documents the largest global e-commerce market operators or hosts for sales across the globe. Companies like Shein and TEMU are not included on this roster, but have become significant disruptors given their sales strategies worldwide. Both have an appetite for delivery options that includes direct air cargo flights to key global gateway markets.

Table 9. Top Ten Global E-Commerce Companies

1.	**Amazon (US)**
2.	**JD.com (Jingdong Mall) (China)**
3.	**Alibaba (China)**
4.	**Meituan (China)**
5.	**Coupang (South Korea)**
6.	**Pinduodo (China)**
7.	**Vipshop (China)**
8.	**Rakuten (Japan)**
9.	**Wayfair (US)**
10.	**Garena/Sea (Singapore)**

Real Estate Challenges

During the course of this project, IMSW received input from local industrial developers related to how the City of Tallahassee compares and competes with other cities for development projects. Other nearby markets have shorter and less complex entitlement and permit procedures, which in many cases results in projects for industrial development selecting locations outside of the Tallahassee Metropolitan Statistical Area (MSA). These gaps must be addressed for deal flow and project opportunities to be captured and located in the Tallahassee MSA. Noted in prior reports, IMSW recommends routine interactions with the top industrial real estate brokers and leasing agents to identify specific prospects that were lost due to this lack of competitiveness, or to be aware of process improvements, as they are noted in the industrial real estate community that would make the market in the Tallahassee MSA more competitive. A roster of the top Industrial Real Estate (IRE) groups is presented in Table 10.

Table 10. Industrial Real Estate Brokers/Tallahassee

Company	Office Location
NAI Talcor	1018 Thomasville Rd, Ste 200A Tallahassee, FL 32303
CBRE	111 W Oak Ave, Suite 100 Tampa, FL 33602
JLL	250 S. Orange Avenue, Suite 700P Orlando, FL 32801
Colliers	76 S Laura Street Suite 1500 Jacksonville, FL 32202
Cushman & Wakefield	20 North Orange Avenue Orlando, FL 32801
Lee & Associates	1017 E. South Street Orlando, FL 32801
Liberty Investment Properties, Inc.	834 Highland Avenue Orlando, FL 32803
Prologis	300 S Orange Ave Suite 1110 Orlando, FL 32801
Marcus & Millichap	5200 Belfort Road, Suite 250 Jacksonville, FL 32256
Stream	201 S Biscayne Blvd., Suite 1420, Miami, FL 33131

Roster of Industry Sectors – OEV Prospect Rosters

The rosters of firms presented in Section 2, (Tables 5-8) documents the proliferation of manufacturing and production in the FTZ and cargo catchment areas. These data elements, provided by the Office of Economic Vitality (OEV) in Tallahassee, suggest that investigation into each MSA in the FTZ service area may provide additional insight into firms that manufacture goods that require international shipping (imports and exports) and logistics requirements. As these data points were recently provided to IMSW, this roster of opportunities will be considered a key focus for future work products to support the FTZ program and to identify any additional companies to the existing roster, above, that could support international air cargo operations and contribute to the FTZ project at TLH.

Task 3 - Leverage Local Resources

Identify Annual Logistics Opportunities

IMSW identified numerous local area and regional resources that could be leveraged to promote both the air cargo capabilities and the FTZ at TLH. The role of staff across the TLH management team must be considered as the supporting cast for the success of the local economic development professionals that work in the serviced counties. This requires scheduled updates with stakeholders, held in person with TLH leadership, to discuss the FTZ and future initiatives that further support global air cargo operations at TLH.

Table 11. Opportunities for Engagement

1.	The CNS Partnership Conference (Cargo Network Services Corporation) will be held May 13-15, 2025, at the JW Marriott Miami Turnberry Resort & Spa in Miami, FL.
2.	The World Cargo Summit 2025 will be held in Belgium. https://www.worldcargosummit.com/ (Consider perhaps in future years, once some international air operations are in place, passenger and cargo.)
3.	The Air Cargo Conference is held annually in March. Air Cargo is the premier annual trade show and conference for the AEMCA, the AfA, and ACI-NA. https://aircargoconference.com/
4.	Air Cargo Americas Conference & Exhibition will be held at the Miami Beach Convention Center from November 11-13, 2025. The expo will welcome exhibitors, stakeholders, and suppliers from transport and logistics, maritime transport, shipping packaging, air transport, and logistics together at a single platform.
5.	CGU Presents: Cloud Health: Revolutionizing Healthcare through Technology, was held in Miami Beach, on March 27th, 2025. Research into this event for future years might provide insight into this growing industry.
6.	Life Science Women's Conference was held in Tampa, FL, April 2-3, 2025.
7.	Celebration of Biotechnology was held in Alachua, FL, April 24, 2025.
8.	Florida International Medica Expo (FIME) 2025 will be held in Miami Beach, FL, June 11-13, 2025.

Table 12. Additional Conference and Industry Event Roster

Conference	Organization	Website	2025 Dates
Georgia Automotive Manufacturers Association	GAMA	https://www.gama-georgia.org/events	February 5-6, 2025
SCbio		https://www.scbio.org/events2/	February 18-20, 2025
South Carolina Automotive Council		14th Annual SC Automotive Summit | South Carolina Manufacturers Alliance (SCMA) on Glue Up	February 25 - 27, 2025
Airforwarders Association	AfA	https://www.airforwarders.org/events/aircargo-2025	March 2-4, 2025
North American FT MS Conference	MagLab (Maybe Academic Focused)	https://nationalmaglab.org/news-events/events/	March 30 - April 3, 2025
International Air Transport Association	IATA	https://www.iata.org/en/events/	May 13-15, 2025
Alabama Automotive Manufacturers Association	AAMA	https://www.automotivealabama.org/southern-automotive-conference/	October 7-9, 2025
Airports Council International - North America	ACI - NA	https://airportscouncil.org/education/conferences/future-aci-na-events/	October 25 -28, 2025
The International Air Cargo Association	TIACA	https://tiaca.org/our-events/	November 3 - 6, 2025

Capturing the eighth edition of TakeOff North America (2025) in Tallahassee is a wonderful start to marketing and showcase the leadership and facilities at TLH. Being active in the aviation, air cargo, logistics, industrial real estate, as well as the local economic development industry events will continue to position TLH as the foundation for international growth in the region. TLH's new International Processing Facility and the establishment of the Foreign-Trade Zone reflects the commitment of TLH leadership to continue pushing the boundaries and building a vision that will expand well beyond the Airport facilities in terms of business development, economic impact, service offerings, and new employment opportunities.

Impact of Foreign-Trade Zone on Air Cargo

This initiative is an ongoing effort by staff and stakeholders (including IMSW) in the region to maintain an elevated level of communication between TLH staff and the county economic development agencies within the FTZ service region. Identifying resources that will accelerate insight into firms that operate in the county service area is crucial. TLH and IMSW resources must be allocated to monitor and interact with local community leadership in the counties to support recruitment and expansion of international business in the FTZ service area. Even small import or export operations should be considered as prospects for the TLH FTZ Incubator program. These prospects should be considered as prospective future Zone Operators who will work within the incubator to increase the volumes needed to create a stand-alone FTZ site within the new TLH Zone project.

E-Commerce

Global e-commerce, comprised of small packages moving between buyers and sellers, now makes up about 20% of all the global air cargo volumes (FreightWaves July 11, 2024). Some of this volume moves inside an integrated air carrier's system. Other e-commerce goods move under the control of a global freight/logistics service provider that builds consolidations at origins, buys positions on cargo flights or passenger belly space, and receives, pre-sorts, and delivers the packages in a last-mile system.

However, U.S. regulations on e-commerce, low-value purchases from Chinese sellers could blunt some of this growth as the new Trump Administration is considering a change in the de minimis import program for consumers in the United States. Such a change, expected to apply tariffs to low-volume products and require an entry protocol, will remove some volumes from the global air cargo operations, but demand for low-cost, easily purchased products from low-cost producers will not diminish this new driver for air cargo and related logistics services.

Report Update, as of August 29, 2025, the Trump Administration will no longer support the de-minimis shipment program that previously had allowed individuals to import up to $800.00 value of good per day into the United States without any duty or Customs obligation-formal filing or entry fees. This change in policy will remove a significant volume of package and express shipments from the air cargo capacity, producing a major shift in lift and growth in package volumes into the United States. Many of the sellers who supported the de-minimis program will now occupy distribution facilities in the US to fulfill orders from domestic sources that have been shipped into the country by ocean and been entered into the US by a Customs Broker with formal entry and fee filing accomplished at the time of entry. The FTZ program is useful for some importers as they could hold cargo in a Zone for local fulfillment and those goods would be held in bond and only pay duties or taxes when they are removed from the Zone rather that at the time and point of entry into the commerce of the US.

This narrative sets the context for IMSW's focus on multiple-growth building efforts on behalf of TLH's future air cargo program. Integrators already exist at TLH, but opportunities to expand and capture new integrated service providers represent an opportunity to be pursued. TLH staff must also be familiar with economic development activities, FTZ requests, and the status of other shippers in the region so that they can appraise the integrators of new prospective users shifting or expanding production or distribution in the Tallahassee region. Freighter services, supported by global freight forwarders or logistics service providers, currently do not exist at Tallahassee. This aspect of growth will require the most effort to move from a zero-base to a sustainable return on investment volume for Tallahassee.

E-commerce volumes originate out of China today. This sector is moving toward an integrator-last mile model with Chinese forwarding firms taking control over aggregation and sorting at origin, air charter to key airports worldwide, and final-last mile delivery to consumers. Geo-political considerations may impact the future recruitment success to secure contracts with these firms for facilities and infrastructure in some markets. Still, the future of the global air cargo industry is strong, and capacity in both the freighter and passenger systems have seen increases that amount to 7% growth from January 2020 through July 2024 (DHL Global Forwarding).

As the arrival of air-related logistics, distribution, and manufacturing services begins or is pending at TLH, it will be critical for senior leadership at TLH to identify an internal strategy for cargo and cargo aircraft handling on the ramp at TLH. Two options exist for consideration:

Option 1	Option 2
Hire a third-party service provider to move, position, and service all aircraft arrivals and departures, load, and unload aircraft, handle all the related ancillary services for the aircraft operations and cargo facility. This option places most of the burden for supporting infrastructure and equipment on the third-party provider.	**Hire internal support staff as employees of TLH to perform all the aircraft, cargo, and material handling requirements to process inbound and outbound cargo. Option Two requires an investment in machinery, material handling equipment, and facilities capable of processing imports and exports. However, while this option provides a more seamless program for the air carrier, it does require significant investments in personnel, material handling equipment, and training to accomplish all the aircraft handling requirements.**

In addition, TLH must anticipate future cargo ramp and related infrastructure requirements that must be in place or funded to support future air cargo operations. Ramps for public use that have an approved funding/ fee system for access, staging, or parking are a vital component to future cargo operations. Commercial aircraft operators must be able to access, park, and service aircraft on the ramp between flights at TLH.

Therefore, airport expansion and ramp development is as critical as facility construction and infrastructure. Leading with ramp infrastructure to support future operations is critical, because carriers, integrated, scheduled, and ad-hoc, require the capability to function through their respective operation cycles at airports such as TLH. This is a critical component for the TLH overall cargo and logistics strategy. This infrastructure must also include selection of one of the options identified above to support storage of cargo related equipment, aircraft movement, support equipment, loading and unloading equipment, material handling, and cargo/security visibility while in transit into/through or through/out the airport ramp, cargo handling areas and facilities.

Summary

These cargo operations and infrastructure issues presented above require a balanced approach for funding, timing for infrastructure, and understanding the future demand that cargo and Foreign-Trade Zone operations will place on TLH. A holistic approach to building infrastructure must be a follow-on initiative that mirrors the demands identified by TLH marketing staff related to where future cargo will originate. While passenger or cargo or integrated carriers, all have different requirements for staffing, material and aircraft handling, and cargo processing systems all must be balanced with facilities (buildings, ramps, aprons and equipment) that align with the anticipated demand.

These cargo handling systems and facilities include support for the existing and future operations at TLH that require specific attention to support the FedEx program at TLH. The movement of aircraft, taxi lanes, object free areas and vehicle service roads/areas must align with anticipated capacity expansions which must also consider the addition of new aircraft parking and ground support equipment marshalling space. The ramp expansion requirements align with the need to maintain growth that meets the demand of current tenant operations at TLH, and provide TLH with capacity to meet both existing and forecast future air cargo demand to and from TLH.

Current efforts by IMSW are focused on building support within the community for the air cargo initiative at TLH. In parallel, IMSW is identifying the level of demand for air and logistics services that would result in companies within this industry sector moving to TLH to support global logistics operations. Success will follow these efforts as the focus for all stakeholders is aligned toward building a movement that changes lives in the North Florida Region.

Steve Schellenberg
IMS Worldwide

3/21/2025 (Revision 1: 4/22/2025, Revision 2: 8/21/2025, Revision 3: 12/16/2025)

Appendix A: CRTPA Regional Freight Study

Existing Conditions

CRTPA

REGIONAL FREIGHT STUDY



RS&H

Contents

Figures 2
Tables 3
Introduction 4
Goals 4
Study Area 4
Objectives 6
Relevant Study Overview 7
Statewide Freight Mobility and Trade Plan (2020) 7
Statewide Truck Parking Study (2020) 7
Florida Rail System Plan (2022) 8
Connections 2045 Regional Mobility Plan (2020) 10
Tallahassee International Airport Master Plan Update (2019) 10
Existing Conditions 13
National Freight and Freight Related System Designations 13
National Highway System 13
National Highway Freight Network 15
Alternative Fuel Corridor Designations 19
Foreign Trade Zones 22
Pipelines 22
Statewide Freight and Freight Related System Designations 25
Strategic Intermodal System (SIS) 25
Functional Classification 28
State Highway System 28
Transportation Assets 32
Public Roadways 32
Bridges 41
Regional Weigh Stations 43
Truck Parking Supply 45
Demographic/Business Allocation 47
Heavy Truck Origins and Destinations 55
Rail Transportation 69

Air Transportation....72
Freight Analysis Framework 5 (FAF5)....73
Stakeholder Coordination....77
Freight Stakeholder Committee....77
Individual Stakeholder Meetings....78
Amazon....78
FDOT District Three....78
Rail....78
Port of Port St. Joe....79
Tallahassee International Airport (TLH)....79

Figures

Figure 1: Study Area....5
Figure 2: CRTPA Freight Objectives....6
Figure 4: TLH Preferred Air Cargo Expansion....12
Figure 5: National Highway System....14
Figure 6: National Highway Freight Network....17
Figure 7: Florida Multimodal Freight Network - Draft Representation....19
Figure 8: FHWA Alternative Fuel Corridors....21
Figure 9: Pipeline Locations....24
Figure 10: Strategic Intermodal Systems (SIS)....27
Figure 11: Roadway Functional Classification....30
Figure 12: Florida State Highway Network....31
Figure 13: Truck AADTT....34
Figure 14: Truck Percent of Total AADT....35
Figure 15: CMV Crash Hotspots (2018-2022)....39
Figure 16: CMV Crashes (2018-2022)....40
Figure 17: Bridges....42
Figure 18: 2022 Employment Estimates....49
Figure 19: Freight and Heavy Vehicle Related Businesses....53
Figure 20: Freight and Heavy Vehicle Related Businesses by Employee Count....54
Figure 21: Regional Incoming Freight Origin....57
Figure 22: Incoming Freight Destination....58
Figure 23: Outgoing Freight Origin....59
Figure 24: Outgoing Freight Destination....60
Figure 25: Crawfordville Origin & Destination Analysis....63
Figure 26: Havana Origin & Destination Analysis....64
Figure 27: Monticello Origin & Destination Analysis....65
Figure 28: Tallahassee Origin & Destination Analysis....67

Figure 29: Quincy Origin & Destination Analysis 68
Figure 30: Railroads and At Grade Rail Crossing 71
Figure 31: FAF5 2022 Annual Freight Tonnage Estimates 76

Tables

Table 1: TLH Cargo Forecasts 11
Table 2: National Highway System Mileage 13
Table 3: National Highway Freight System Mileage 16
Table 4: Pipeline Mileage 23
Table 5: SIS Facilities in the CRTPA Region 25
Table 6: Strategic Intermodal Systems – Highway and Railway Mileage 26
Table 7: Road Mileage by Functional Classification 28
Table 8: State Highway System Mileage 29
Table 9: Truck Percentage Summary 32
Table 10: CMV Crashes by KABCO Severity and Year (2018-2022) 36
Table 11: Statewide CMV Related Crashes 36
Table 12: CMV Fatal Crashes First Harm 37
Table 13: CMV Fatal Crash Types 37
Table 14: Regional Bridge Summary 41
Table 15: Public Rest Areas 46
Table 16: Private Truck Parking Areas 47
Table 17: Bureau of Transportation Statistics County Transportation Profiles 48
Table 18: CRTPA Residential and Employment Summary 2022 Year 50
Table 19: NAICS Industries Most Likely to Rely on Freight 51
Table 20: Businesses Summary 52
Table 21: Crawfordville Freight Trip Distance 61
Table 22: Havana Freight Trip Distance 62
Table 23: Monticello Freight Trip Distance 62
Table 24: Tallahassee Freight Trip Distance 66
Table 25: Quincy Freight Trip Distance 66
Table 26: Railroad Summary 70
Table 27: Rail Crossings 70
Table 28: TLH Cargo Forecasts 72
Table 29: 2022 Freight Movement with an Origin in the FAF5 Zone 129 73
Table 30: 2022 Freight Movement with a Destination in the FAF5 Zone 129 74
Table 31: FAF5 Over 10 Million Tons of Truck Freight 74

Existing Conditions and Relevant Study Review

Introduction

This Regional Freight Study is being conducted to identify freight movement trends, challenges, and opportunities for improvement within the Capital Region Transportation Planning Agency (CRTPA) region. The onset of global freight, trade and logistics has played a significant role on the impact of transportation and the economy prior to the COVID-19 pandemic, but an even more significant role post-pandemic. The increase of on-demand consumption expanded the e-commerce phenomena, and stressed supply-chains and transportation networks. In addition to shifts in global supply-chains and pandemic impacts, CRTPA's freight movements and local industry are expanding, spurred by statewide growth. This study will assess the CRTPA's freight-related conditions and trends from national to local levels and their impacts on the region. It will analyze the governmental policies, transportation systems, and stakeholder operations; and provide recommendations for improving freight mobility needs through project, policy, and strategy development.

Goals

The overall goal of the study is to provide a freight mobility framework that serves as a reference and tool for promoting safe and efficient movement of freight and contributes to the economic viability for the region. In addition, the study will align with the federal and state freight mobility goals, objectives, and recommendations to promote a collective freight vision and account for policy requirements, leverage funding opportunities, and foster partnerships.

Study Area

The CRTPA region is located in the panhandle of Florida in the area surrounding the State Capital of Tallahassee. The four counties are Gadsden, Jefferson, Leon and Wakulla as shown in Figure 1.

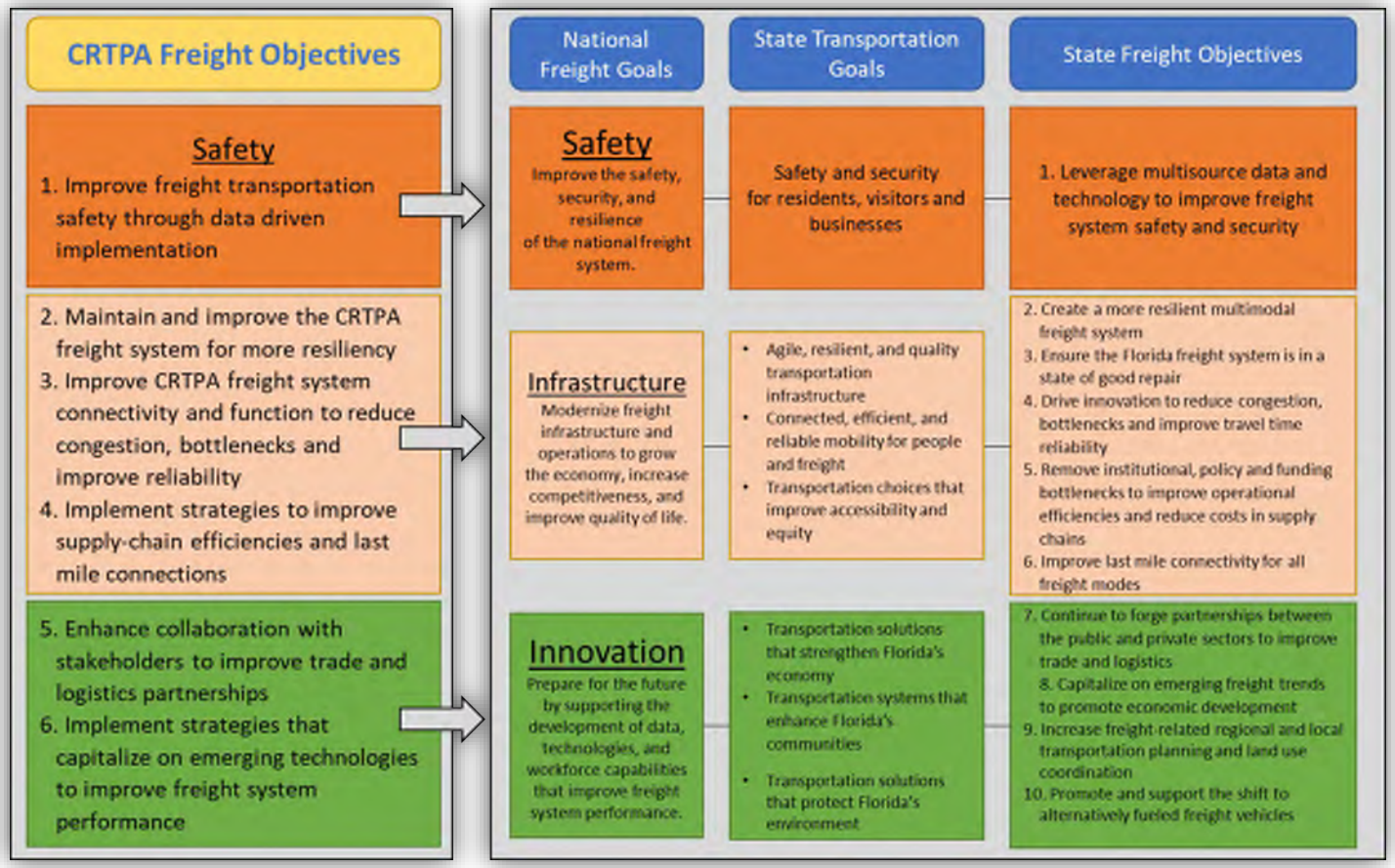
Figure 1: Study Area



Objectives

Serving as a freight mobility framework, the objective of the study is to ensure efficacy of the goal by guiding development of the assessments and recommendations. CRTPA has six freight objectives that align with the National Freight Strategic Plan Goals, the Florida Transportation Plan Goals, and the Florida Freight Mobility and Trade Plan Objectives:

Figure 2: CRTPA Freight Objectives



Relevant Study Overview

The freight study development starts with building a foundation for assessing CRTPA freight mobility framework using stakeholder outreach and peer literature reviews. This collaborative approach provides CRTPA a bottom-up assessment of demand/impact profile from an all-user perspective; and it empowers collective visioning for strategy development and needs resourcing. Through the outreach and review, general guidance and best practices were captured for CRTPA freight mobility assessment.

The following summary discusses the importance of each review from the core of the Study Goals and Objectives. This summary only covers the most significant reviews for freight mobility assessment; the complete reviews are located in Technical Memorandum 1: Peer Review.

Statewide Freight Mobility and Trade Plan (2020)

The Freight Mobility and Trade Plan (FMTP)[1] is a comprehensive plan that identifies freight transportation facilities critical to the state's economic growth and guides multimodal freight investments in the state. It fulfils the federal requirement for a statewide freight plan, allowing FDOT to access National Highway Freight Program (NHFP) funding identified in an Investment Element.

Importance to CRTPA is FMTP data shows that truck parking is an issue along I-10 in and around the CRTPA, and empty backhaul on I-10 reflects a real mismatch of trade flow. The FMTP Investment Element lists three Project Development and Environmental (PD&E) studies along I-10 in CRTPA. These projects support the CRTPA freight mobility framework by assessing the need for road and bridge widening, and interchange improvements along the rest area.

Statewide Truck Parking Study (2020)

The Florida Statewide Truck Parking Study[2] identified, prioritized, and recommended solutions to address truck parking problems throughout Florida. It identified areas of concern based on scale of demand using a demand (V = volume) to supply (C = capacity) ratio.

Importance to CRTPA is the Study shows FDOT District 3 (encompassing CRTPA) with 15% of truck parking spaces statewide. It also identified CRTPA as having two of the twenty areas of concern statewide; both ranked low on scale of demand though identified areas of concern. CRTPA's areas of concern locations are I-10 at the Jefferson/Madison County Line, and I-10 at the Gadsden/Leon County Line and

[1] https://www.fdot.gov/rail/plandevel/freight-mobility-and-trade-plan
[2] https://www.fdot.gov/rail/studies/truck-parking

US 90 Interchange. Figure 3 highlights these areas on the CRTPA Region map. The Study also identified potential truck parking expansion opportunities with twenty parcels (aggregated into 10 locations) candidates. View the interactive GIS map. CRTPA taking advantage of these opportunities would support the CRTPA freight mobility framework by helping improve truck parking conditions.

Florida Rail System Plan (2022)

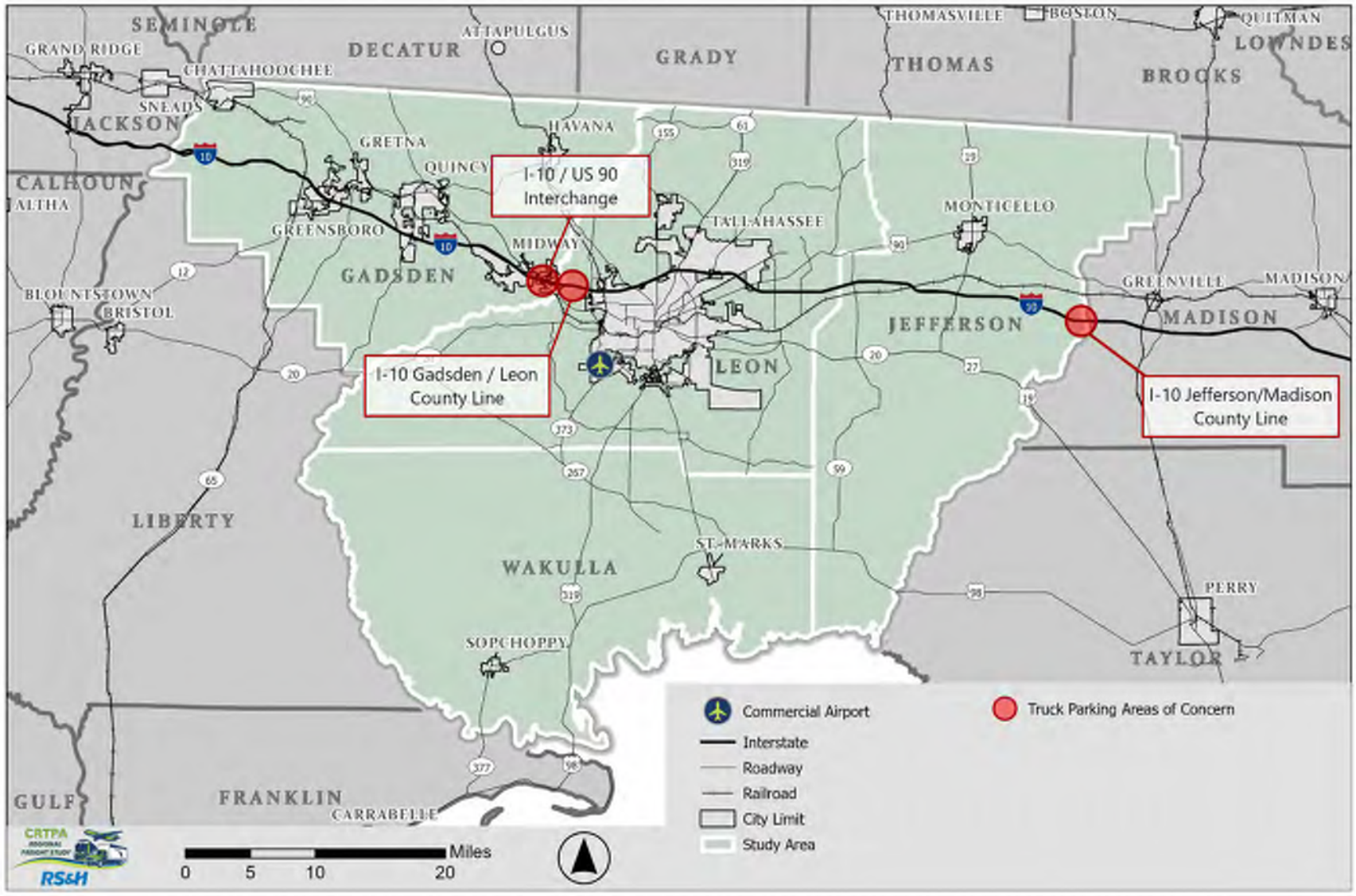
The Florida Rail System Plan[3] represents a holistic look at the Florida rail network for freight and passenger operations and the indication of potential areas for improvement. It identifies the following freight rail lines operating through the CRTPA region to include:

- Florida Gulf & Atlantic Railroad (FG&A) with a mainline corridor that runs east/west.
- Apalachicola Northern Railway (AN) with a mainline corridor that runs north/south from Gulf County up to Gadsden County and connects with FG&A.

Important to CRTPA is the existing rail infrastructure and operations for both rail lines would support the freight mobility framework. Currently, investments are being made to maintain the existing infrastructure; and additional investments have been planned to continue improvements. There is no existing passenger rail for CRTPA which nullifies impact to freight operations. Amtrak services between Pensacola and Jacksonville Florida are currently suspended; and the plan identified no passenger rail development efforts for CRTPA.

[3] https://www.fdot.gov/rail/plans/railplan

Figure 3: Truck Parking Areas of Concern



Source: Statewide Truck Parking Study (2020); Map by RS&H

Connections 2045 Regional Mobility Plan (2020)

The Connections 2045 MTP[4] is the long-range transportation plan for the CRTPA and plays a major role in this study initiative. It facilitates a regional and cooperative planning process for spending the region's state and federal transportation funds including freight improvements. The goals of the plan address safety, connectivity, access, multimodalism, land use, security, economic development, natural resource protection and conservation, and public health.

Importance to CRTPA is that the Plan makes three freight policy recommendations:

- Identification and provision of truck parking areas within the region on federal, state, and local roadways.
- Continue to promote and support the development of Systems Management and ITS technologies within the region.
- Promote the development and continued enhancement of e-commerce freight movements.

The Plan also lists roadway capacity projects with funding obligated or programmed for 2021-2025 in the Cost Feasible Plan. These recommendations and identified funding augment this study and support the CRTPA freight mobility framework.

Tallahassee International Airport Master Plan Update (2019)

The Tallahassee International Airport (TLH) Master Plan Update[5] assessed the airport's immediate and long-term compliance, maintenance, and development needs. Since the last Master Plan Update in 2006, the airport was renamed an "International" facility, and the current Update highlighted the path forward for TLH to become a broader facility for air travel, business development, and trade.

The most relevant takeaway to the Regional Freight Study may be the discussion of current and forecast cargo. The cargo apron area contains cargo facilities for Delta, DHL, FedEx, and USPS. Most cargo activity at TLH is conducted by FedEx on regularly scheduled flights between TLH and FedEx's hub at Memphis International Airport (MEM) using Boeing 757- 200 freighter jets. FedEx also conducts feeder routes using Cessna 208 Caravan turboprops through airports like Orlando International, Jacksonville International, and Mobile Downtown. Delta carries some belly cargo on its scheduled flights.

[4] https://crtpa.org/documents/connections-2045-regional-mobility-plan/
[5] https://www.talgov.com/airport/tlhmasterplan

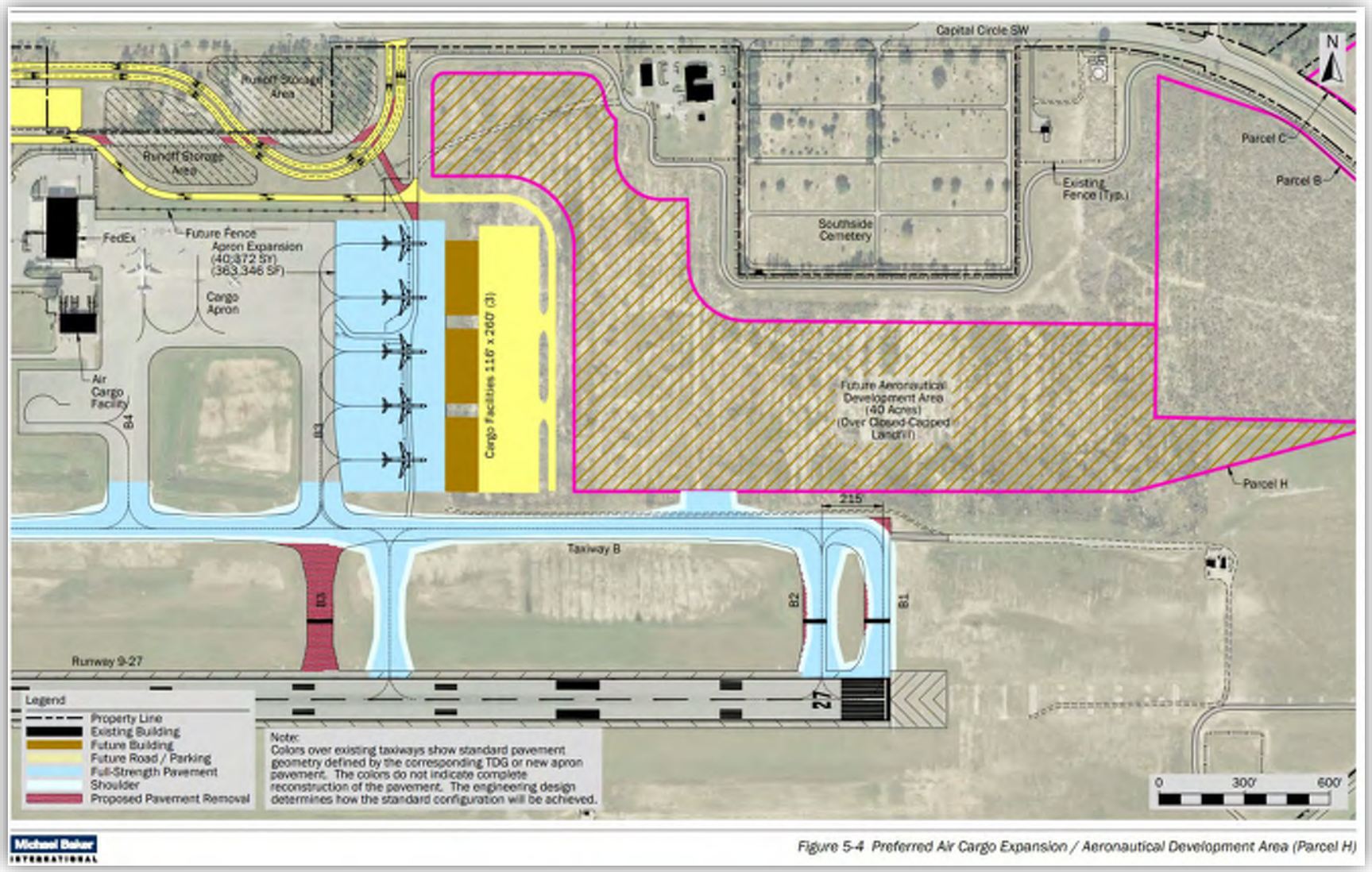
Table 1: TLH Cargo Forecasts

Year	Total Cargo (lbs.)	Total Operations (Aircraft)
2015	19,045,447	1,370
2025	22,891,341	1,513
2035	25,286,281	1,672

Source: Tallahassee International Airport Master Plan Update (2019)

The Master Plan Update outlines a preferred expansion of air cargo facilities that would include the eastward expansion of the current Air Cargo Apron, development of three additional air cargo handling/processing facilities along the east side of the expanded apron and associated private vehicle/truck parking and access. Expanding the Cargo Apron approximately 8.3 acres would accommodate a variety of large and mid-sized aircraft potentially having up to ADG IV wingspans. Additional recommendations regarding cargo include the removal and eastward relocation of exit taxiway connector B3 to satisfy current FAA airport design standards and elimination of the existing direct connection between the Air Cargo Apron and Runway 9-27.

Figure 4: TLH Preferred Air Cargo Expansion



Source: Tallahassee International Airport Master Plan Update (2019)

Existing Conditions

The transportation system is essential for efficient movement of people and goods in, out, and within CRTPA (the region); and it accounts for all modes in terms of infrastructure and related users, programs, and stakeholders. Identifying the transportation system's framework and characteristics is imperative for understanding the benefits, needs, and issues experienced by the region. This section identifies the exiting conditions for the region's transportation freight systems elements; it describes the characteristics and locations of each element while evaluating the benefits, needs, or issues experienced by the region.

The section will also identify socioeconomic conditions to further capture a more comprehensive freight profile for the region. The profile is presented in a scaling format from the national and state to the region's transportation system with the understanding that freight operations are not limited by the region's boundary. Equally important, national and state transportation systems conditions profiles will also provide a point of reference for impact to the region's transportation system benefits, needs, and issues.

National Freight and Freight Related System Designations

National Highway System

The National Highway System (NHS) is a major roadway network identified by its importance to general mobility, national defense, and economic growth. This system is broken into five categories as described within Table 2.

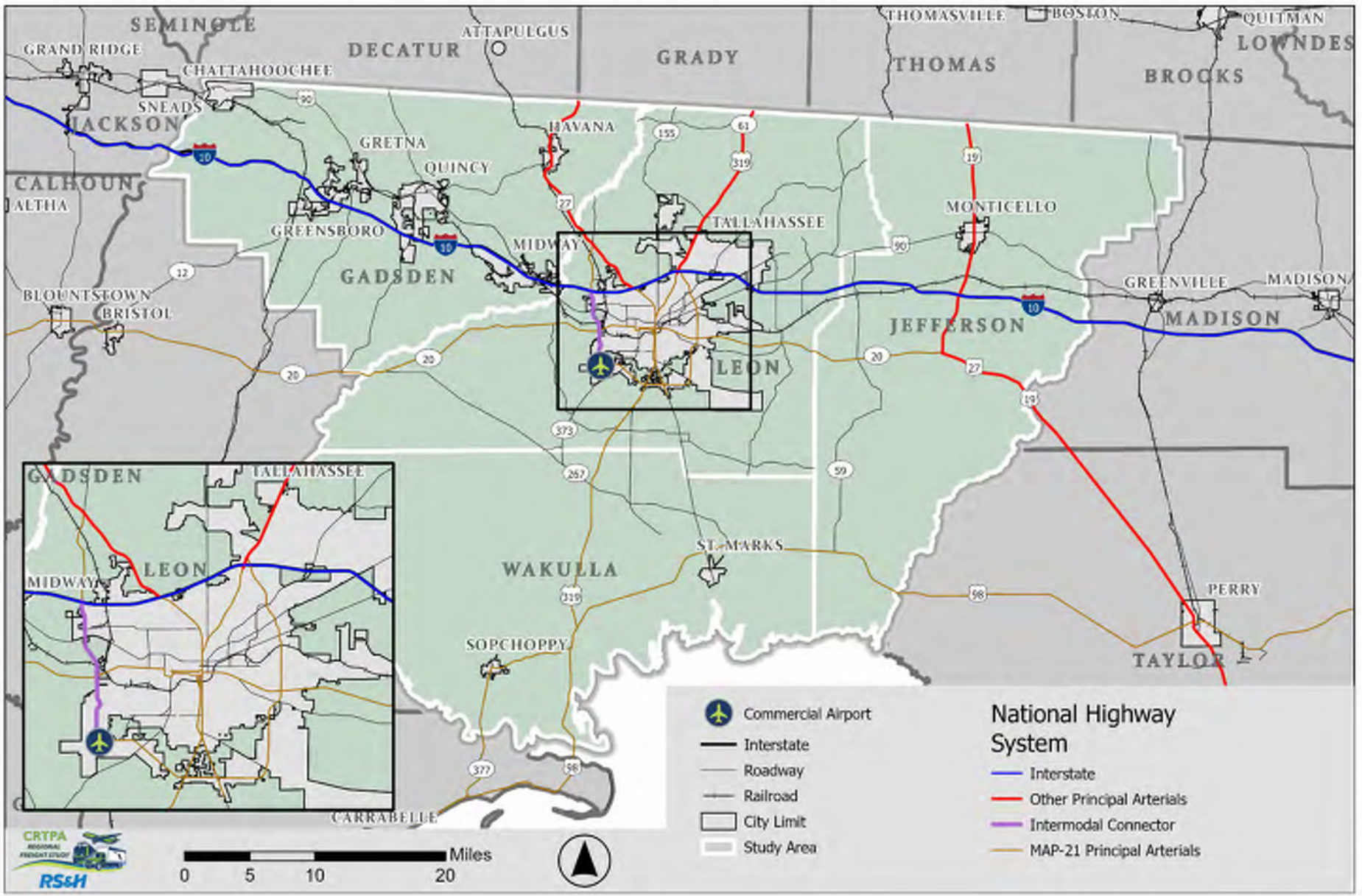
Table 2: National Highway System Mileage

Type	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
Interstate / STRAHNET	38.89	22.58	25.73	-	87.20
Other Principal Arterials	13.28	29.19	24.14	-	66.61
Intermodal Connector	-	-	7.52	-	7.52
MAP-21 Principal Arterials	20.20	-	97.50	64.54	182.24
Total	72.37	51.77	154.89	64.54	343.57

*I-10 is also a Strategic Highway Network (STRAHNET) Corridor

The STRAHNET is a Department of Defense (DoD) designated roadway network necessary for the movement of troops and equipment during mobilization or deployment. Within the region, I-10 is the only STRAHNET corridor.

Figure 5: National Highway System



Source: Federal Highway Administration

National Highway Freight Network

The National Highway Freight Network (NHFN) is part of the National Highway Freight Program (NHFP) and was established by the Federal Highway Administration to improve the efficient movement of Freight under FAST Act sec 1116, 23 USC 167. The Florida Department of Transportation (FDOT) Freight and Rail Office manages Florida's NHFP and has established sections of the NHFN in the region that are eligible for federal funding under the NHFP. The NHFN consists of the following network components:

- Primary Highway Freight System (PHFS): This system of highways is considered the most critical portions for the efficient movement of Freight across the national freight system.
- Critical Rural Freight Corridors: These are public roads not located in an urbanized area that provide connection to the PHFS and access to other important freight hubs and facilities such as ports and intermodal facilities.
- Critical Urban Freight Corridors: These are public roads located in urbanized areas that provide connections to the PHFS and access to other important freight hubs and facilities such as ports and intermodal facilities.
- Portions of the Interstate System not designated as part of the PHFS: These highways are the remaining portion of Interstate roads not included in the PHFS. They provide additional connection and continuity for the PHFS, CRFC, and CUFC and access to other important freight hubs and facilities such as ports and intermodal facilities.

The importance of the NHFP is that it provides criteria to access designated freight funding for highway jurisdictions. The NHFP has funding criteria for jurisdictions that have any component of the NHFN and an investment plan that identifies the needs and costs of the eligible freight facility improvements. The region has the following sections of the NHFN located withing all four counties:

- 87.20 centerline miles for the PHFS runs east to west of the region starting in Gadsden County and runs for 38.89 centerline miles to Leon County for 25.73 centerline miles then to Jefferson County for 22.58 centerline miles. The PHFS moves 1,858,887 thousand tons of freight in, out, and through the region per year.
- Leon county also has 7.80 centerline miles of the CUFC running along sections of Florida State Road 263 in the southwest quadrant of the county. The CUFC moves 6,536 thousand tons of freight in, out and through the region per year.

Benefits to the region: The current NHFN designated mileage located in the region makes the region eligible for freight project funding under the FDOT NHFP. The FDOT currently receives an estimated $60M apportionment each year.

Needs and Issues for the region: The region's current NHFN is a total of 95.00 centerline miles for a total percentage of 4.42% of the State's NHFN, this is a ratio of

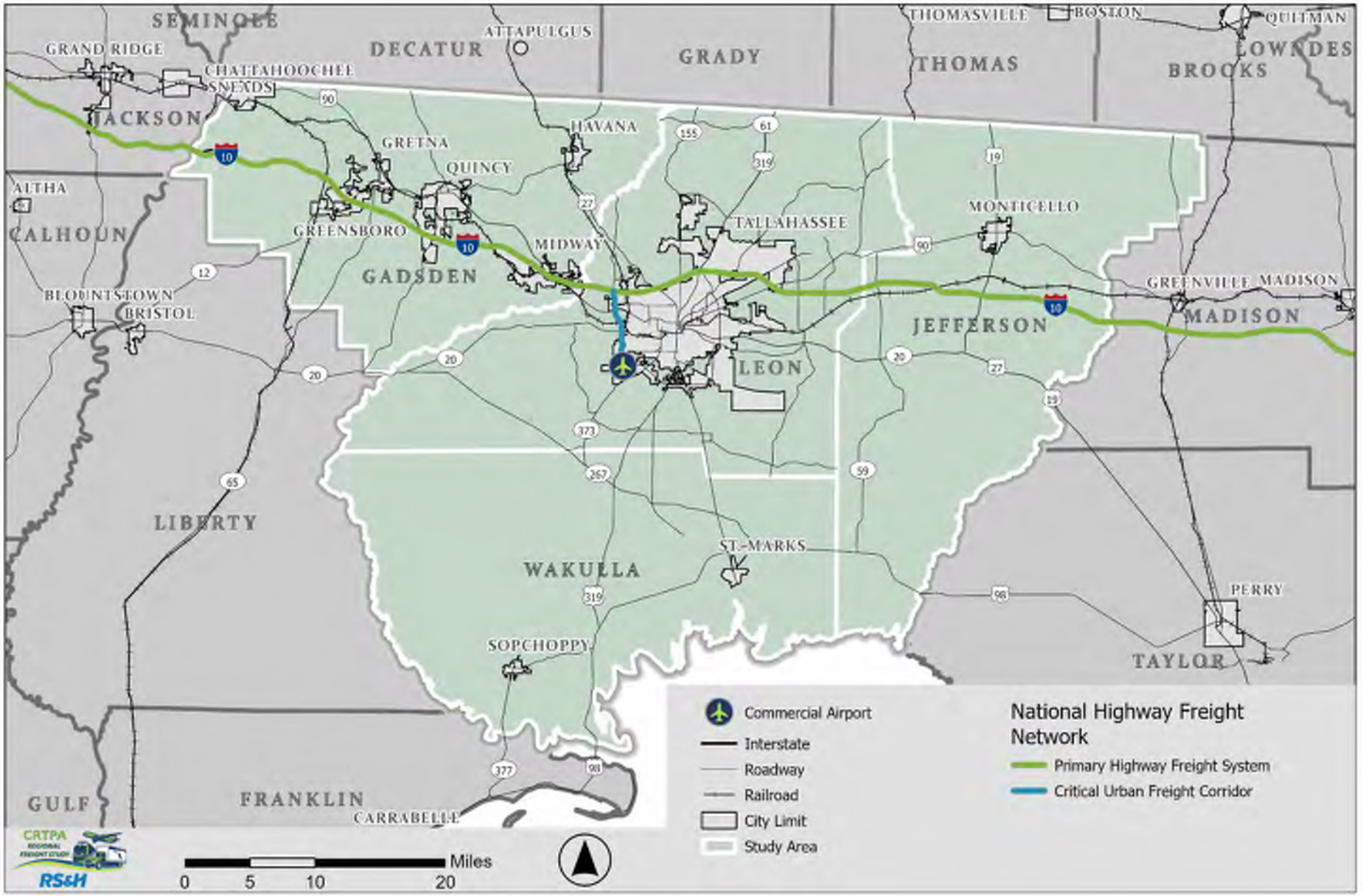
19,636 thousand tons per centerline mile for the region versus 5,716 thousand tons per centerline mile moved for the State. Additional regional level evaluation of needs and issues are further discussed in other sections of the study.

Table 3: National Highway Freight System Mileage

Type	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
Primary Highway Freight System	38.89	22.58	25.73	-	87.20
Critical Urban Freight Corridor	-	-	7.80	-	7.80
Total	38.89	22.58	33.53	0.00	95.00

Source: Federal Highway Administration

Figure 6: National Highway Freight Network



Source: Federal Highway Administration

Interim National Multimodal Freight Network

The U.S. Department of Transportation (DOT) Assistant Secretary for Multimodal Freight is directed to establish the National Multimodal Freight Network in accordance with 49 U.S. Code Section 70103. Key tasks under this direction include:

1. Assisting States in strategically directing resources toward improving efficient movement of freight on the Network
2. informing freight transportation planning
3. assisting in the prioritization of Federal investment
4. assessing and supporting Federal investments to achieve the national multimodal freight policy goals

The DOT conducted a series of stakeholder outreach to identify critical freight facilities and corridors that are vital to achieving the national multimodal freight policy goals. Stakeholders included multimodal freight system users, transportation providers, metropolitan planning organizations, local governments, ports, airports, railroads, and States. As a result, designation of the Interim National Multimodal Freight Network (NMFN) was developed consisting of the following elements:

- The National Highway Freight Network (NHFN)
- The freight rail systems of Class I railroads
- The public ports of the United States that have total annual foreign and domestic trade of at least 2,000,000 short tons
- The inland and intracoastal waterways of the United States
- The Great Lakes, the St. Lawrence Seaway, and coastal and ocean routes along which domestic freight is transported
- The 50 airports located in the United States with the highest annual landed weight
- Other strategic freight assets, railroad and facilities critical to interstate commerce

The region has the following sections of the NMFN located withing three counties:

- 87.20 centerline miles for I-10 runs east to west of the region starting in Gadsden County and runs for 38.89 centerline miles to Leon County for 25.73 miles then to Jefferson County for 22.58 centerline miles.
- 138.814 rail line miles for the FG&A Railway runs east to west of the region starting in Gadsden County and runs for 76.95 rail line miles to Leon County for 40.04 rail line miles then to Jefferson County for 21.82 rail line miles.

Benefits to the region:

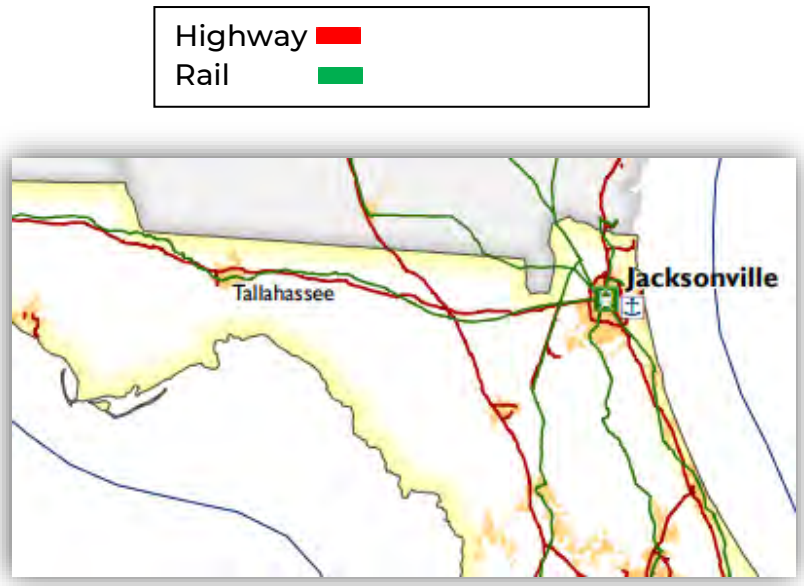
- Highway: the current NMFN designated highway miles located in the region are the exact miles designated for the NHFN given that the NHFN is an element that makes up the NMFN. Therefore, NMFN designation makes the region eligible for highway freight project funding under the FDOT NHFP.

- Rail: the current NMFN designated rail miles located in the region gives the region an eligibility factor for freight rail project funding for federal discretionary grant pursuits.

Needs and Issues for the region:

- Highway: the NMFN highway needs and issues are the same as the NHFN.
- Rail: the region's current NMFN rail is a total of 138.81 rail line miles for a total percentage of 4.7% of the State's NMFN rail. Additional regional level evaluation of needs and issues are further discussed in the Rail Transportation Section of the study.
- 138.81 rail line miles for the FG&A Railway runs east to west of the region starting in Gadsden County and runs for 76.95 rail line miles to Leon County for 40.04 rail line miles then to Jefferson County for 21.82 rail line miles.

Figure 7: Florida Multimodal Freight Network - Draft Representation



Source: USDOT Interim Multimodal Freight Network

Alternative Fuel Corridor Designations

The proliferation of alternative fuels within the transportation network will change the way freight moves into the future. The federal government has developed the Alternative Fuels Program and the National Electric Vehicle Infrastructure Formula Program (NEVI) as part of these efforts to encourage and support the development of alternative fuels.

The Federal Highway Administration (FHWA) developed Alternative Fuel Corridors designation to highlight and provide grant funding for the development of

alternative fuels. These corridors are serviced by hydrogen, propane, natural gas, and electric vehicle charging and fueling locations. Through coordination with the U.S. Department of Energy[6] (US DOE), FHWA designates corridors which will be grant eligible into "Ready" and "Pending" categories.

The region has the following sections of the identified Alternative Fuel Corridor located withing three counties:

- 87.20 centerline miles for I-10 runs east to west of the region starting in Gadsden County and runs for 38.89 centerline miles to Leon County for 25.73 centerline miles then to Jefferson County for 22.58 centerline miles.
- 59.17 centerline miles for US-27 runs east to west of the region starting in Gadsden County and runs for 13.28 centerline miles to Leon County for 26.14 centerline miles then to Jefferson County for 19.75 centerline miles.

Benefit to the region: alternative fuel corridors located in the region improve freight network flexibility for growth and give more options to freight transportation stakeholders. Also, Alternative Fuels Corridor designations located in the region offer access to federal funding.

Needs and issues for the region: The Alternative Fuels Corridor designations have completed their sixth round of review. To date, both I-10 and US 27 within the region have been identified as Pending; however, there are no corridors that have achieved the Ready designation.

Related to the development of Alternative Fuel Corridors, the U.S. Department of Transportation (US DOT) and the US DEO have developed the NEVI which has identifed nearly $5 billion to support electric vehicle charging.[7]

[6] U.S. Dept of Energy
[7] US DOT/DOE NEVI Announcement

Figure 8: FHWA Alternative Fuel Corridors



Source: FHWA Alternative Fuel Corridors[8]

Related to the development of Alternative Fuel Corridors, the U.S. Department of Transportation (US DOT) and the US DEO have developed the NEVI which has identifed nearly $5 billion to support electric vehicle charging.[9]

[8] Alternative Fuel Corridors - Environment - FHWA (dot.gov)
[9] US DOT/DOE NEVI Announcement

Foreign Trade Zones

Foreign Trade Zones (FTZs) are the Untied State's version of the free trade zone which indicates a secure area in which foreign and domestic goods area handled and stored. These goods are typically free from the taxes and duties assessed until they officially cross into domestic territory. The FTZs are secured by the U.S. Customs and Border Patrol (CBP) which monitors the movement of goods and controls entry points in which goods transition from the FTZ into domestic. The CBP identifies the following advantages of FTZ implementation[10]:

- CBP duty and federal excise tax, if applicable, are paid when the merchandise is transferred from the zone for consumption.
- While in the zone, merchandise is not subject to U.S. duty or excise tax. Certain tangible personal property is generally exempt from state and local ad valorem taxes.
- Goods may be exported from the zone free of duty and excise tax.
- CBP security requirements provide protection against theft.
- Merchandise may remain in a zone indefinitely, whether or not subject to duty.

Benefit to the region: the Tallahassee International Airport is actively pursuing the development and designation of FTZ as related to its ongoing improvements. This development possesses the potential for significant economic development once complete.

Needs and issues for the region: Panama City and Jacksonville are the closest FTZs to the region which leaves a significant gap in northern Florida which means the region currently has no existing FTZ and is not able to take advantage of the services that these zones offer.

Pipelines

The movement of freight throughout the nation is also reliant on the development and maintenance of a pipeline network to move liquid goods. Pipeline-use adds a tremendous value for bulk freight movements which removes some capacity consumption on highway and rail leaving more capacity for passenger movement consumption. The table below shows Gadsden County with the largest pipeline network (gas transmission) in the region at 123.97 miles with an approximate capacity of .088 Bcf/d[11] (660 million gallons per day). The table shows Leon, Jefferson, and Wakulla counties falling below Gadsden with a combined region total of 299.38 miles and an approximate capacity of .21 Bcf/d (1.6 billion gallons per day).

[10] CBP Foreign Trade Zones

[11] https://energytransfer.com/operations-map/

Table 4: Pipeline Mileage

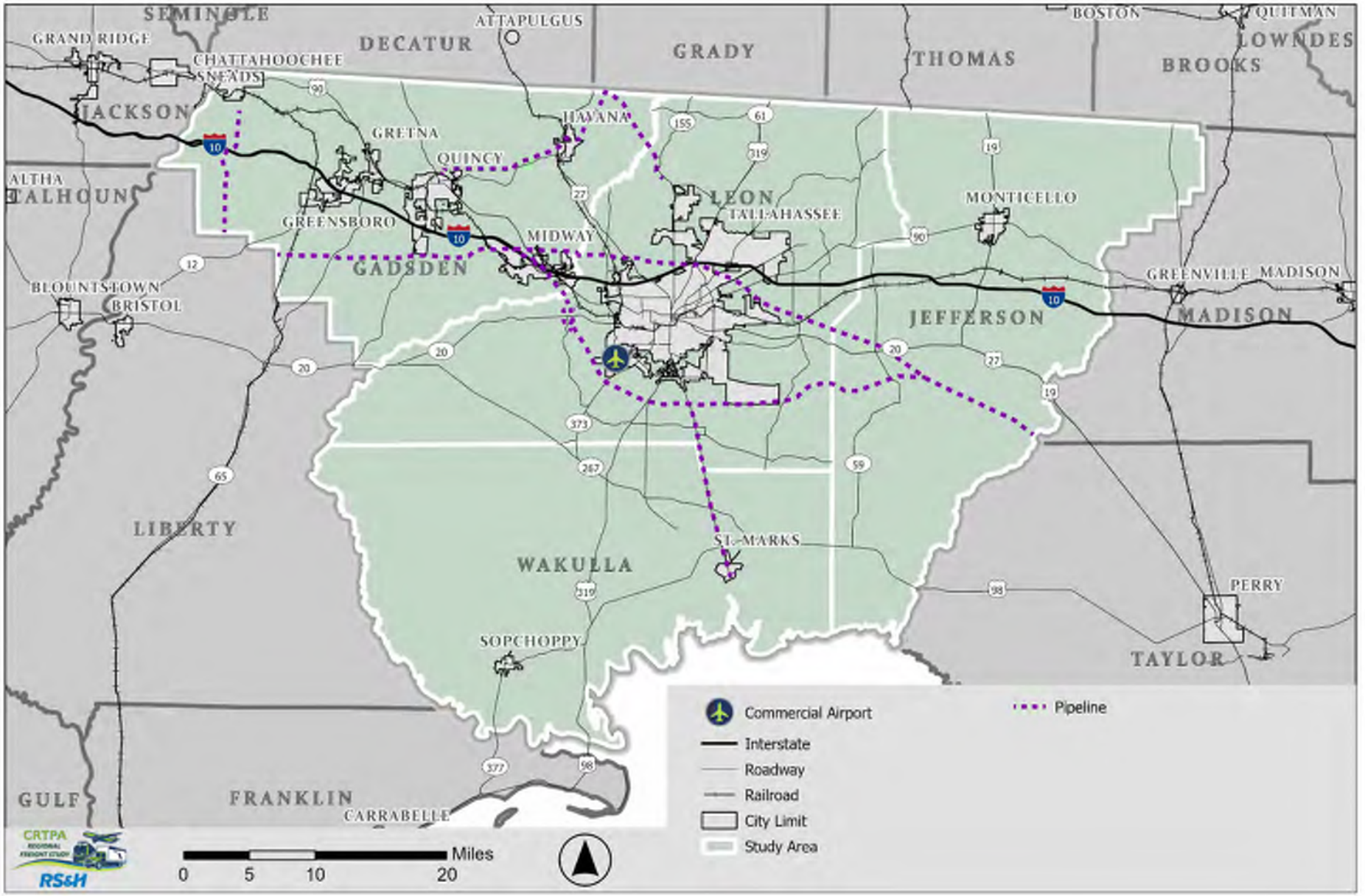
Type	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
Gas Transmission	123.97	60.69	106.10	8.62	299.38
Hazardous Liquid	-	-	-	-	0.00
Total	123.97	60.69	106.10	8.62	299.38

Source: US DOT National Pipeline Mapping System

Benefit to the region: The pipeline assets located in the region transmit approximately 1.6 billion gallons of gas per day through the region which converts to 132,966 to 531,865 trucks depending on the truck size. Though a small percentage of gas is transmitted by trucks, this still helps to alleviate highway and rail capacity consumption for both freight and passenger. To add to alleviating capacity consumption, there are two identified gas transmission operators that have pipeline assets only with no terminals, storage, or process/treatment which means gas transmission would only produce through freight traffic. Currently, there are no additional identified needs or issues.

Figure 9 indicates the approximate location of pipelines as they traverse the CRTPA region.

Figure 9: Pipeline Locations



Source: US DOT National Pipeline Mapping System

Statewide Freight and Freight Related System Designations

Strategic Intermodal System (SIS)

The FDOT SIS program was established in 2003 by Florida legislation that is implemented through the Florida Transportation Plan. It identifies the highest priority transportation facilities for capacity improvement investments that will advance the state's transportation mobility and economy. The facilities are organized into a network and are considered most important to the continued economic success of Florida. The network facilities include the state's most significant highways, railways, airports, seaports and waterways, spaceports and intermodal freight terminals. The program is supported through cooperative efforts across FDOT, MPO, local governments, and other partners.

The importance of the SIS is that it provides criteria to access high priority funding for transportation managing jurisdictions within the state. Equally, it creates a quantitative approach that promotes targeted capacity improvement investments that operate across jurisdictional boundaries. This is essential for planning improvement of freight mobility given that supply-chains operations are not restricted by jurisdictional boundaries. These facilities are identified using a series of objective criteria based on the three primary designations.[12] Table 5 provides a summary of the SIS facilities located within the CRTPA region.

Table 5: SIS Facilities in the CRTPA Region

Facility Type	Corridor / Hub		Connector	
	SIS	Strategic Growth	SIS	Strategic Growth
Airports	-	TLH	-	-
Highway	I-10 US 319 US 19	-	-	SR 263
Rail	FGA Railroad	GFRR Railroad[13]	-	AN Railroad

Source: FDOT

12 https://www.fdot.gov/planning/systems/documents/brochures/default.shtm#maps

13 Adjacent to the region

Table 6: Strategic Intermodal Systems – Highway and Railway Mileage

Type		Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
Highway	SIS Corridor	33.51	44.61	36.08	-	114.20
	Strategic Growth Corridor	-	-	6.40	-	6.40
Rail	SIS Corridor	35.55	19.13	25.55	-	80.23
	Strategic Growth Connector	19.22	-	-	-	19.22
Total		88.28	63.74	68.03	0.00	220.05

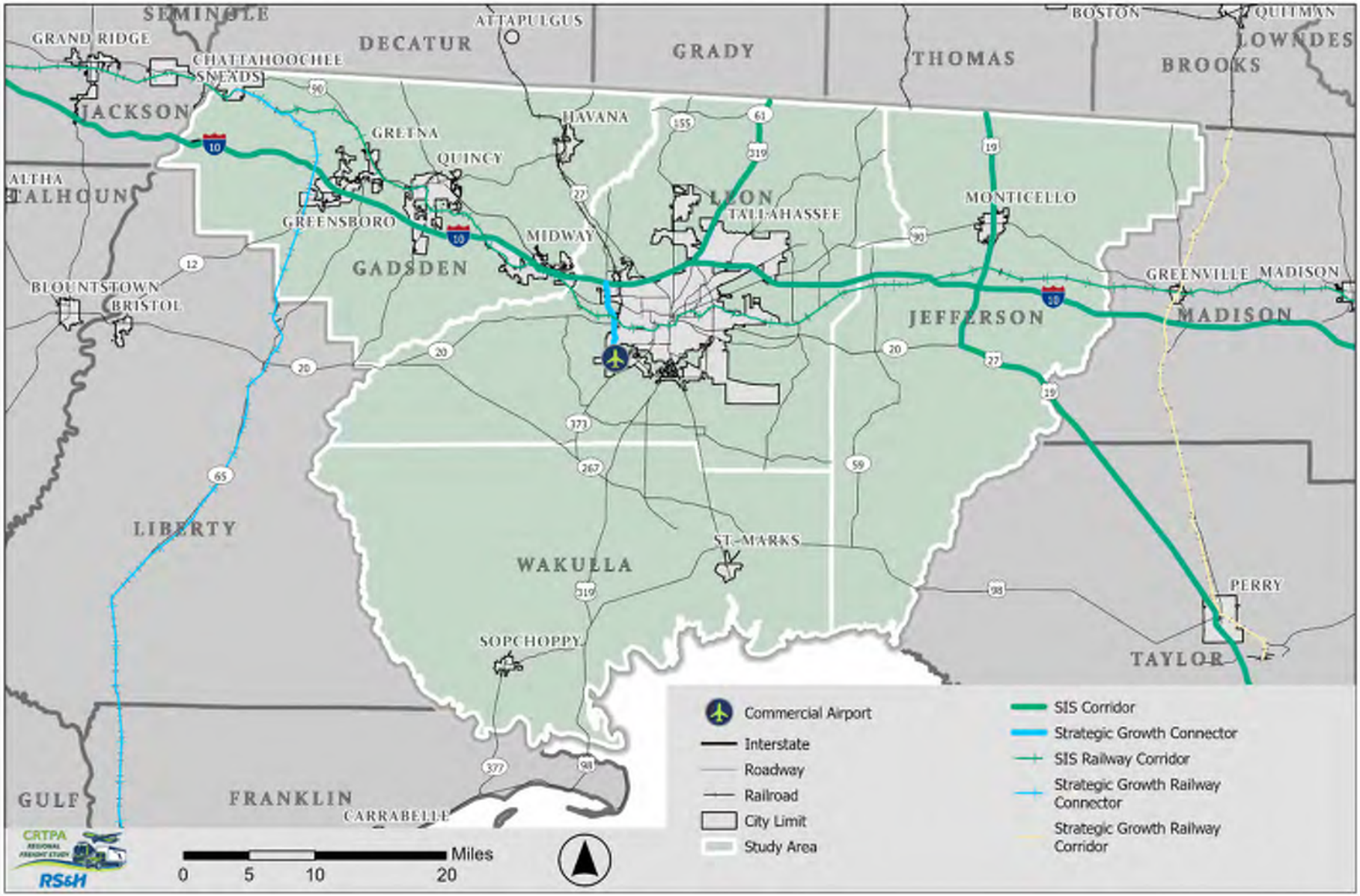
Source: FDOT

Benefits to the region: The current SIS designated facilities located in the region make the region eligible for freight project funding under the FDOT SIS. The FDOT has obligated $8,223,000 for projects located in the region for FY2022/2023 - FY2026/2027 on the SIS network.[14]

Needs and issues for the region: The region's current SIS corridor mileage is a total of 220.05 centerline miles for a total percentage of 2% of the State's SIS. When combined with the NHFN, a more comprehensive freight network is formed.

[14] FDOT SIS 1st Five Year Plan

Figure 10: Strategic Intermodal Systems (SIS)



Source: FDOT

Functional Classification

The functional classification process groups roadways and streets into classes based on the services they provide to the users. It provides a transportation planning framework for analyzing user-characteristics across a network of roadways and streets. In addition, it is instrumental in analyzing freight mobility, providing design consideration context, and serving as a decision-making support tool for transportation funding policy development.

The CRTPA functional classification network has a total of 1,933 miles. The table below shows a network distribution of 68% for local and collector roads, and 18% for arterials and 4% for interstates. From a freight mobility framework perspective, this means freight mobility is less conducive for 68% of the network which is based on roadway users' expectations, design, and funding potential of these functional categories. In contrast, 32% of the network is more conducive since arterials and interstates are designed, used, and funded for freight mobility.

Table 7: Road Mileage by Functional Classification

CRTPA Functional Class Network Distribution										
Functional Class	Gadsden		Jefferson		Leon		Wakulla		Total	
Local Rural	147	8%	156	8%	67	3%	100	5%	470	24%
Major Collector	75	4%	72	4%	190	10%	101	5%	437	23%
Minor Collector	151	8%	44	2%	72	4%	41	2%	308	16%
Minor Arterial	71	4%	59	3%	155	8%	10	1%	295	15%
Principal Arterial	13	1%	49	3%	115	6%	65	3%	242	13%
Local Urban	17	1%	0	0%	60	3%	18	1%	95	5%
Interstate	38	2%	23	1%	26	1%	0	0%	87	4%
Total	**512**	**26%**	**402**	**21%**	**685**	**35%**	**334**	**17%**	**1,933**	**100%**

Source: FDOT

Benefits to the region: The current CRTPA network has 87 centerline miles of Interstate which is part of the National Highway Freight Network (NHFN) Primary Highway Freight System (PHFS). These designated miles make the region eligible for freight project funding under the FDOT NHFP. The FDOT currently receives an estimated $60M apportionment each year.

Needs and issues for the region: The region's current functional class network distribution has a majority of local rural roads and collectors which limit or restrict freight traffic. When planning for social economic growth is considered, this constrains freight mobility and growth; and it impacts transportation safety, and community quality of life.

State Highway System

The State Highway System (SHS) is representative of the roadway network that is managed and maintained by FDOT. Much of this network is shared with the freight

and national designation discussed above, and each of these roadways is identified by a number designation in addition to any local roadway names. From a freight mobility framework perspective, most of the state roadways are not designated as freight routes on the NHFN and SIS; however, this system is primarily used by large freight vehicles since the roadways do not restrict their use.

Benefits to the region: The presence of the state highway system is beneficial to the region through cooperative maintenance and management of the network. In short, this is reassurance by the state that the SHS will be maintained to a state and federal standard which increases freight reliability. In addition, the SHS adds more capacity and increases redundancy for freight mobility and serves as the base network for the NHFN and SIS. Figure 12 highlights the location of state highways while Table 8 identifies the mileage within the region.

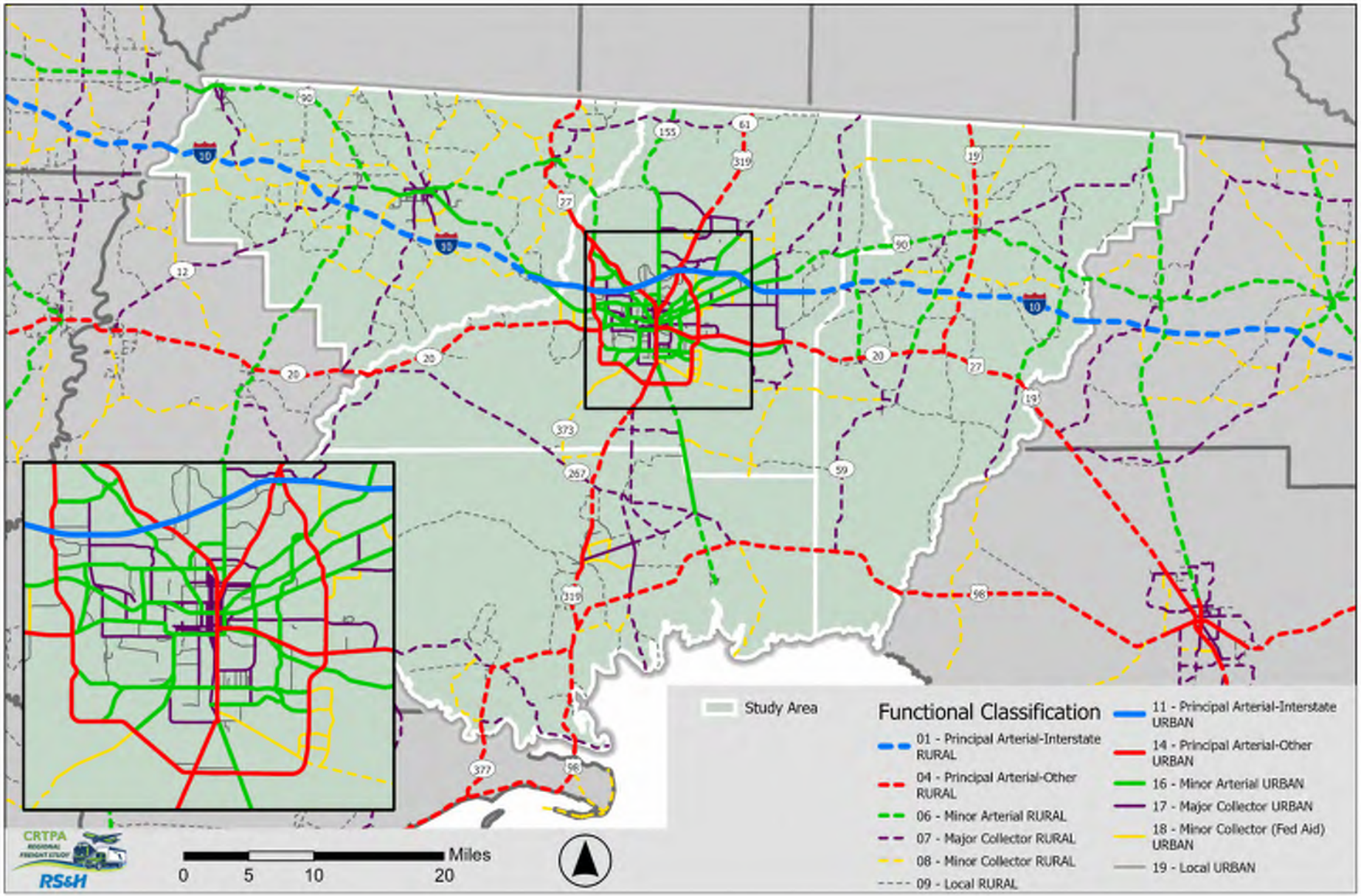
Needs and issues for the region: the current SHS offers CRTPA more options to work with the state on identifying and prioritizing reliable freight projects within the region. Additional regional level evaluation of needs and issues are further discussed in other sections of the study.

Table 8: State Highway System Mileage

Type	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
State Highway Network	146.06	111.25	200.79	90.50	548.60

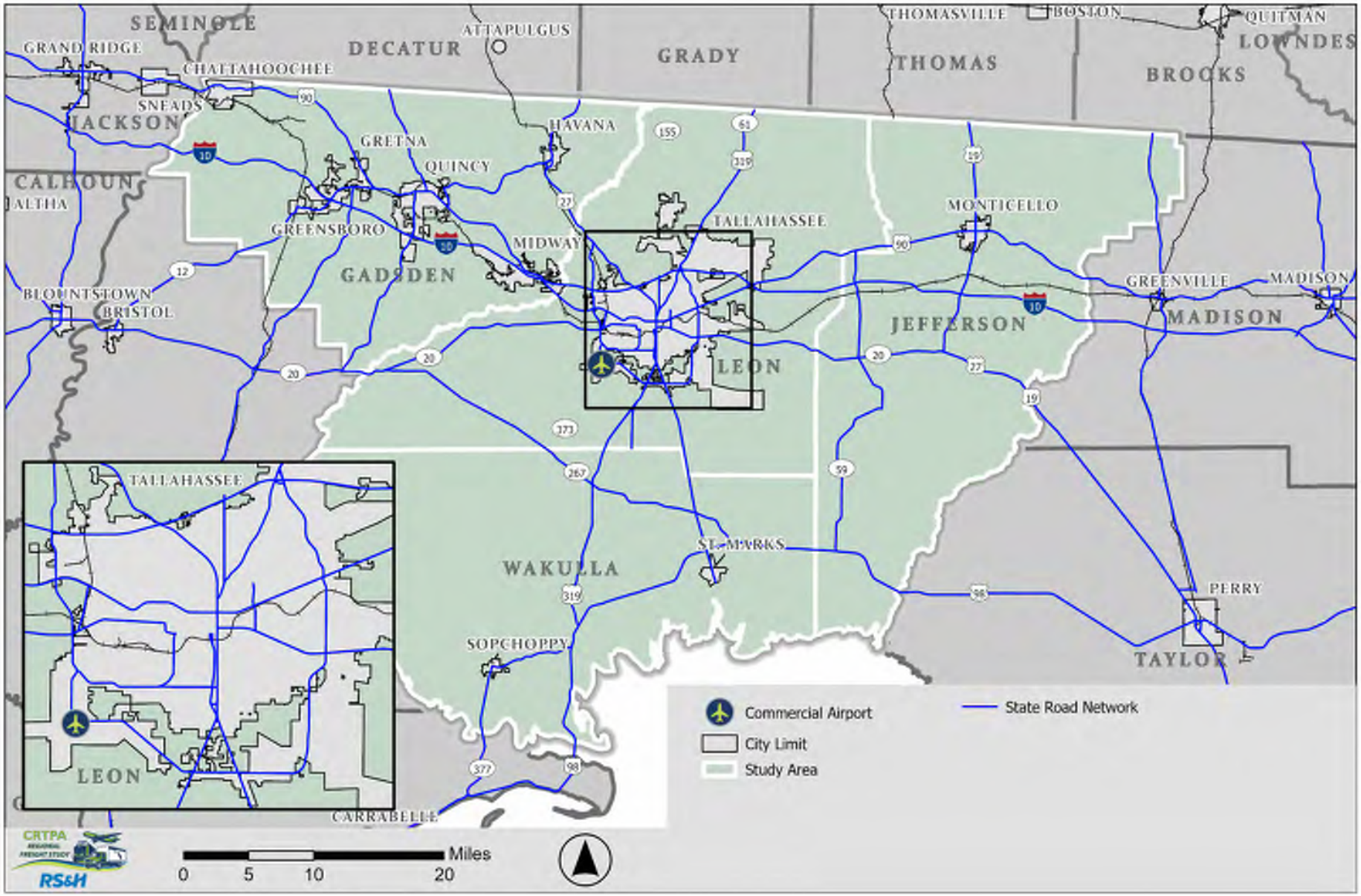
Source FDOT

Figure 11: Roadway Functional Classification



Source: FDOT

Figure 12: Florida State Highway Network



Source: FDOT

Transportation Assets

Public Roadways

Roadway Freight Volumes

Building upon the information above, the roadway network is one of the most significant movers of freight throughout the region. As such, a review of the truck volumes along the roadways has been developed. The location of truck movement is a vital element of this study that will be paired with known business location to further understand which roadways see significant freight related volumes.

Figure 13 depicts the annual average daily truck traffic (AADTT) for the major corridors throughout the region.[15] This figure compares truck volumes and shows areas with major truck movements in comparison to roadways which experience lower volumes. Within the region, the I-10 corridor has the largest truck volumes followed closely by Capital Circle (US 319) and Monroe Street (US 27) in the Tallahassee Area. Other areas of high volume are focused primarily along the US and State Routes. Overall, higher AADTT volumes are found within or adjacent to the more urbanized and downtown areas throughout the region.

Similar to Figure 13, Figure 14 depicts truck volumes as related to the percentage of total vehicle counts.[16] This metric depicts roadways with higher percentages of truck movements by mitigating the potentially skewed data caused by higher volumes depicting significantly higher truck counts (such as I-10).

The average and median truck percentages across the state network and across the region can be another indicator of truck movements through the region. Table 9 depicts that corridors throughout the region are largely similar when comparing average truck percentage but are generally lower when comparing median values. Utilizing the median value helps reduce the impact of outliers on either side of the data and may represent a more realistic figure for the general movement of trucks. Figure 14 depicts that several corridors are well above these averages: with I-10, US 98, SR 59, SR 65, and Smith Creek Road (Sopchoppy) being key highlights.

Table 9: Truck Percentage Summary

Area	Average Truck Percentage	Median Truck Percentage
Florida	8.54%	6.8%
Region	8.39%	5.9%

Source: FDOT

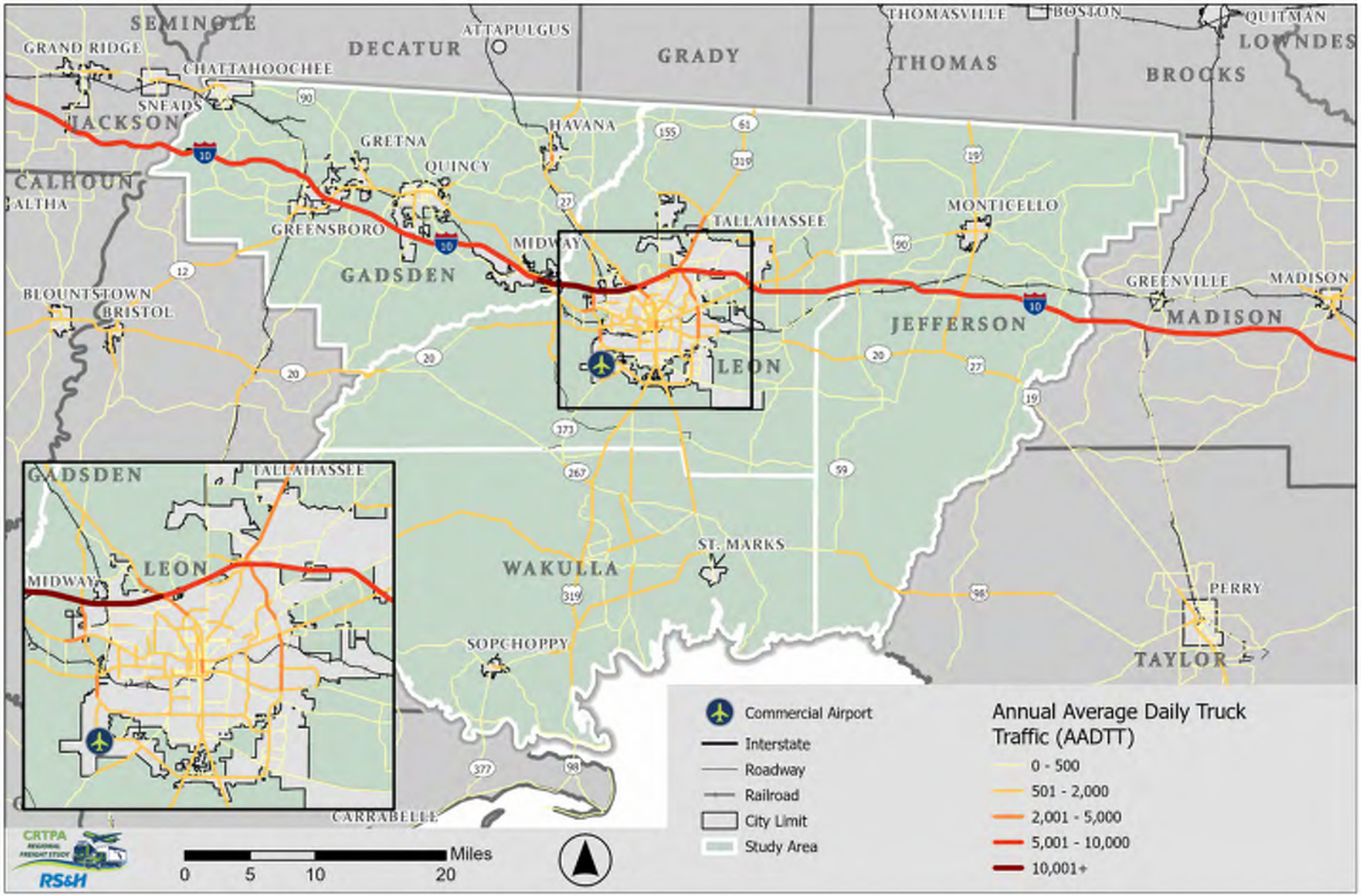
Benefits to the region: The identification of corridors with higher truck volume and percentage of volume an indication of potential increased maintenance demands due to the heavy loads associated within these movements. Effectively, these

[15] FDOT Transportation Data and Analytics
[16] FDOT Transportation Data and Analytics

figures help indicate where the “freight corridors” in the region are, even if the roadways do not carry this designation. The identification of these corridors and hotspots can be used to prioritize future roadway improvements and expenditure.

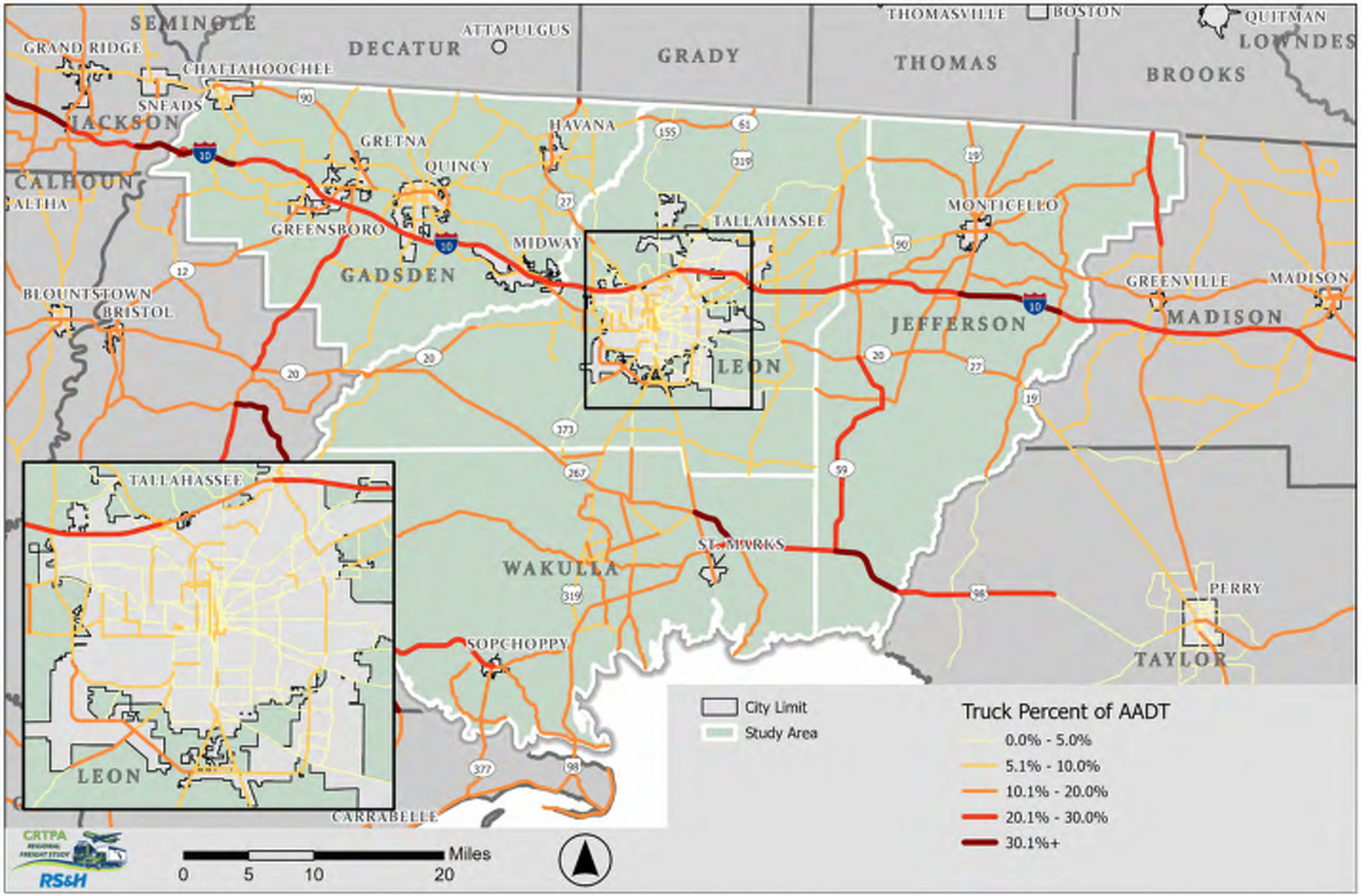
Needs and issues for the region: Similar to the benefits described above, the identification of this data aids in the identification of corridors likely to experience increased wear and tear from heavy truck movement. Recommendations developed as part of this study will consider these locations.

Figure 13: Truck AADTT



Source: FDOT (2021)

Figure 14: Truck Percent of Total AADT



Source: FDOT (2021)

Commercial Vehicle Crash Data

A crash analysis has been conducted for the four-county study area to determine conflict areas and to evaluate traffic safety trends. This analysis reviewed five years of crash data between 2018 and 2022, with a total of 65,641 crashes reported in the study area within that timeframe. Of the 65,641 crashes, nearly 6% involved Commercial Motor Vehicles (CMVs).

In the study area between 2018 and 2022, over 81% of CMV crashes did not result in any injuries and less than 3% resulted in fatal or incapacitating injuries (Table 10). During this five-year period, there were 30 fatal crashes. In 2022, there were 13 fatal crashes, a 160% increase from the 5 fatal crashes in 2021 and a 200% increase from the 3 fatal crashes in 2020. Similarly, the number of crashes resulting in incapacitating injuries peaked at 21 in 2022 (Table 10). Statewide CMV fatal accidents also experienced a surge in occurrence from 308 in 2020 to 361 in 2021.

Table 10: CMV Crashes by KABCO Severity and Year (2018-2022)

Year	(K) Fatality	(A) Incapacitating Injury	(B) Non-Incapacitating Injury	(C) Possible Injury	(O) No Injury	Non-Traffic Fatality	Total
2018	4	14	56	82	726	-	882
2019	5	10	61	73	709	-	858
2020	3	11	51	77	557	-	699
2021	5	8	37	95	639	-	784
2022	13	21	41	65	572	1	713
Total (%)	30 *(0.8%)*	64 *(1.6%)*	246 *(6.3%)*	392 *(0.8%)*	3,203 *(81.4%)*	1 *(0.0%)*	3,936

Source: FDOT Signal Four Analytics 2018-2022

Table 11: Statewide CMV Related Crashes

Year	(K) Fatality
2018	294
2019	318
2020	308
2021	361
2022	334
Total	1,615

Source: FDOT Signal Four Analytics 2018-2022

Throughout the study area, most CMV crashes occurred in the Tallahassee area or along I-10 (Figure 15). There were also clusters of CMV crashes in Monticello and Quincy. CMV crashes, and particularly those resulting in fatalities, have been less common in the southern portion of the study area, as only 2 fatal CMV crashes occurred in Wakulla County between 2018 and 2022.

These CMV crash clusters are consistent with areas of high freight volumes and are largely within areas of higher density and higher general traffic volumes. As evidenced by the clustering of the crashes, CMV related crashes trend within urban and specifically intersection areas.

Of the 30 fatal crashes involving CMVs between 2018 and 2022, nearly two-thirds followed a first harmful event with another motor vehicle in transport, and this type of crash peaked in 2022 (Table 12). In 2022, there were 7 fatal crashes following a first harm with a motor vehicle in transport, 2 fatal crashes following an overturn or rollover, 2 fatal crashes following a first harm with a pedestrian, and 2 fatal crashes following a first harm with a tree (Table 12).

Table 12: CMV Fatal Crashes First Harm

Year	Motor Vehicle in Transport	Overturn/ Rollover	Parked Motor Vehicle	Pedestrian	Tree	Total
2018	4	-	-	-	-	4
2019	4	-	-	1	-	5
2020	2	1	-	-	-	3
2021	2	-	1	-	2	5
2022	7	2	-	2	2	13
Total	19	3	1	3	4	30

Source: FDOT Signal Four Analytics 2018-2022

The specific types of CMV fatal crashes have varied across the five-year period of analysis. The most common types of fatal crashes were rear end and off road, making up 5 and 4 crashes, respectively (Table 13).

Table 13: CMV Fatal Crash Types

Year	Head-On	Left Entering	Left Leaving	Off Road	Other	Parked Vehicle	Ped	Rear End	Right Angle	Roll Over	Same Direction	Unknown	Total
2018	1	-	-	-	1	1	-	1	-	-	-	-	4
2019	-	-	-	-	-	-	1	2	2	-	-	-	5
2020	-	2	-	-	-	-	-	-	-	1	-	-	3
2021	-	1	-	2	-	-	-	2	-	-	-	-	5
2022	2	-	1	2	1	1	2	-	-	2	1	1	13
Total	3	3	1	4	2	2	3	5	2	3	1	1	30

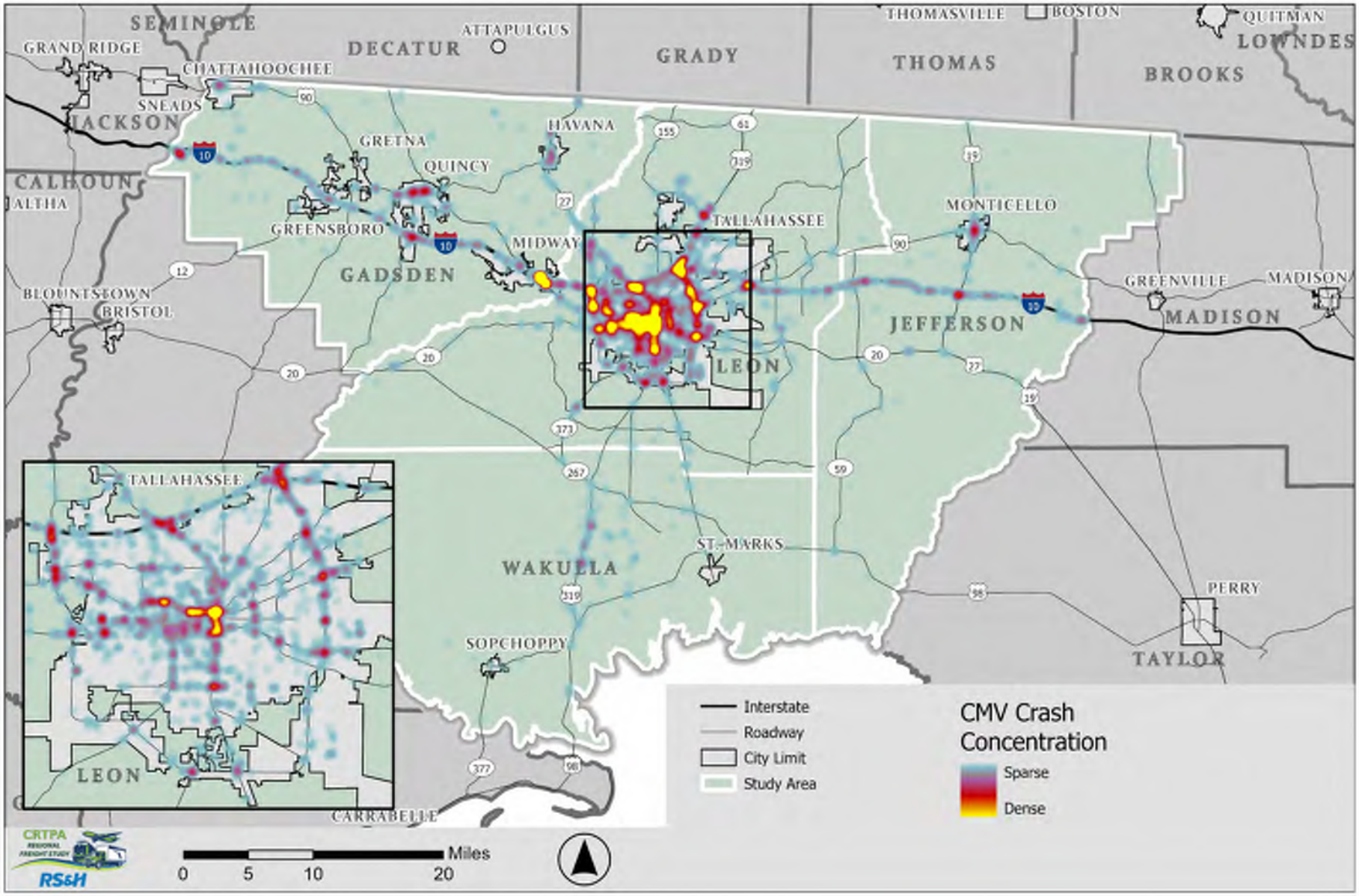
Source: FDOT Signal Four Analytics 2018-2022

Benefits to the region: The crash information gathered helps identify potential areas of concern; however, when analyzing the spike in CMV related fatal accidents, no locational trends were identified. With 77% of the crashes being related to lane

departures, possible considerations include: Unfamiliarity with the area, driver fatigue, and unclear lane markings. Though a non-answer is not typically a positive, the disbursement of these crashes and variation of crash type indicates that there is not a specific area of significant concern. Additionally, a review of statewide crashes shows a similar spike in the number of fatal incidents the year prior.

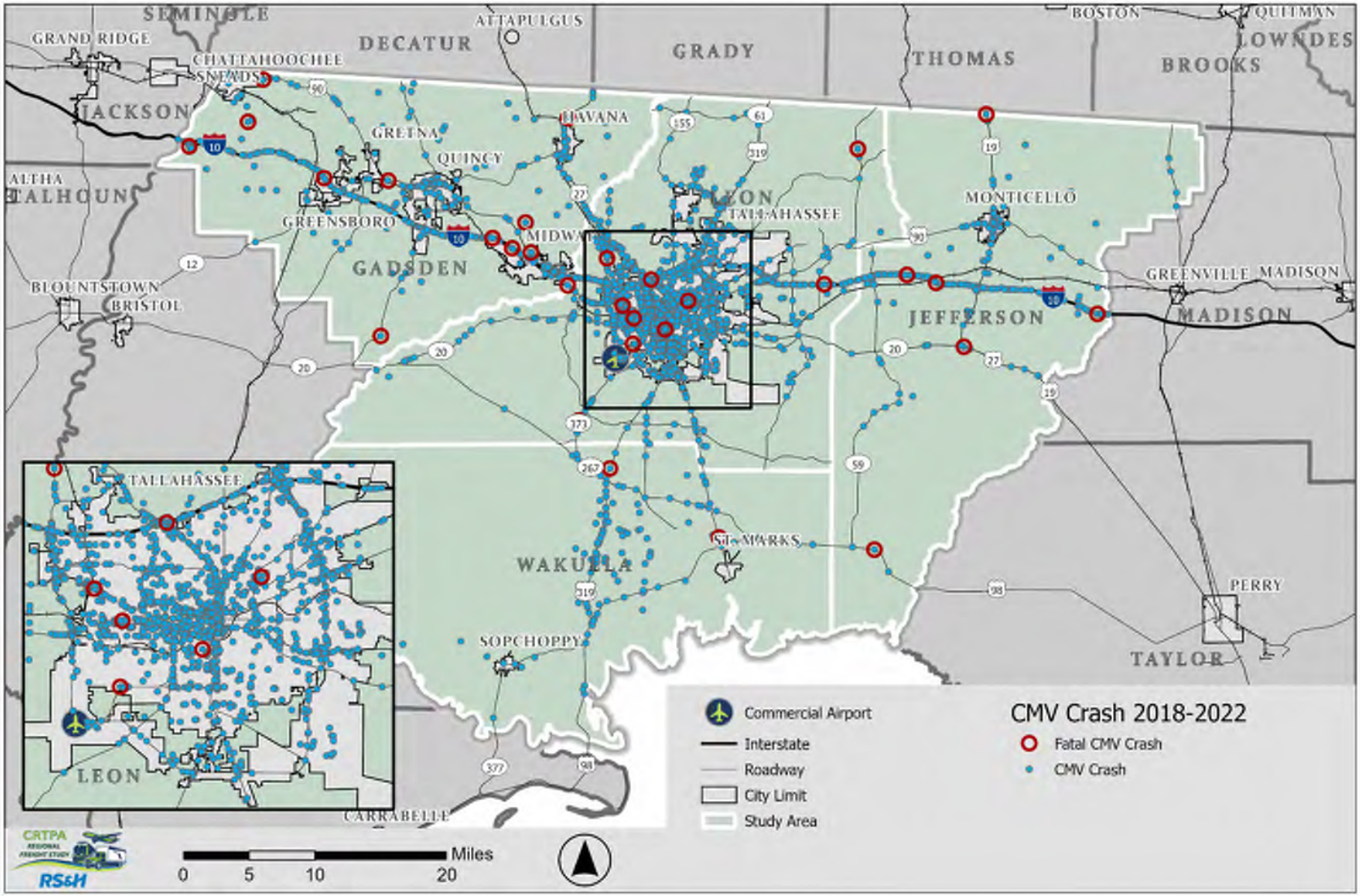
Needs and issues for the region: The region should continue to monitor the frequency of CMV related crashes within their typical planning efforts. This study will utilize this safety data for the development of future recommendations.

Figure 15: CMV Crash Hotspots (2018-2022)



Source: FDOT Signal Four Analytics 2018-2022

Figure 16: CMV Crashes (2018-2022)



Source: FDOT Signal Four Analytics 2018-2022

Bridges

There are 253 bridges within the study area that are monitored by FDOT as depicted within Figure 17. Bridges located along designated freight routes are maintained to higher standards (height, weight, width, etc.) and are vital to the movement of goods and supplies.

Special considerations for freight movement include the double stacking of train cars which is reliant on increased height clearances in the area. Coordination with freight rail stakeholders has indicated that deferred maintenance and storm damage (such as hurricanes) can pose severe limitations on their movement of supplies. Though not within the region, the Port of Port St. Joe is no longer connected via rail due to the degradation of rail bridges. The bridge infrastructure south of Telogia in Liberty County will require significant repairs prior to the potential continuation of service in that area.

Public highway bridges throughout the state are inspected and later reported to the FHWA National Bridge Inventory. The national bridge inventory maintains sufficiency ratings for each of these structures and ranks them in poor, fair, or good condition. The study area has 31 (7.8%) of the 400 monitored structures were identified in poor condition.

Table 14: Regional Bridge Summary

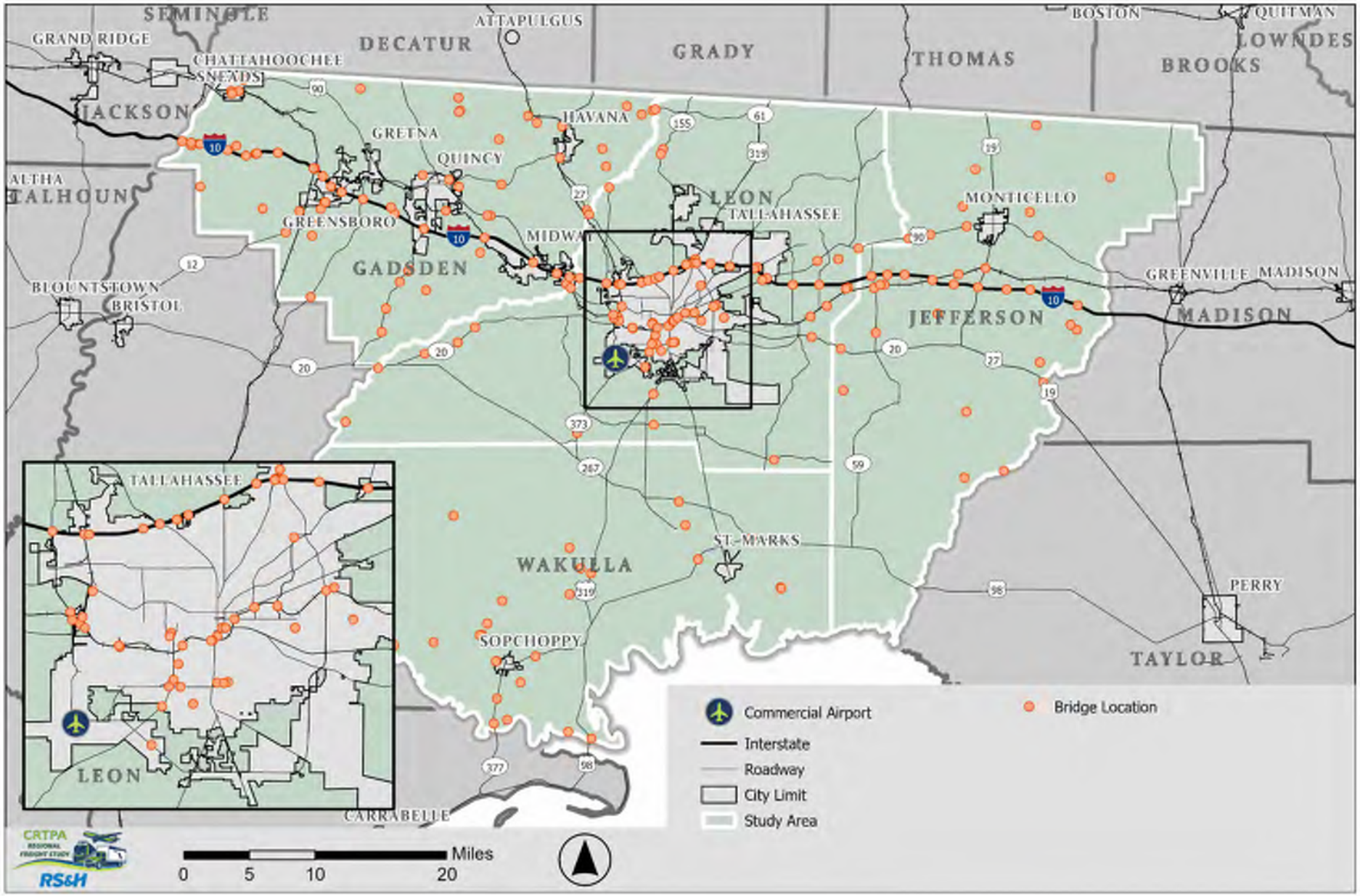
County	Bridge Counts				Bridge Area (Square Meters)			
	All	Good	Fair	Poor	All	Good	Fair	Poor
Gadsden	121	32	74	15	147,770	26,755	116,326	4,690
Jefferson	68	20	45	3	37,715	7,759	28,104	1,852
Leon	161	60	95	6	127,069	44,612	82,042	415
Wakulla	50	19	24	7	18,944	5,546	11,755	1,643
Total	400	131	238	31	331,498	84,672	238,227	400

Source: National Bridge Inventory (2022)

Benefits to the region: Higher bridge sufficiency ratings indicate a bridge network that is in a state of good repair. A well-maintained bridge infrastructure is vital to the movement of freight throughout the region.

Needs and issues for the region: Though only 7.8% of the structures received poor sufficiency ratings, that equates to 31 structures cross the region, with approximately half being in Gadsden County. Insufficient bridges will reduce the movement of freight due to weight limitations, closures, or failures.

Figure 17: Bridges



Source: FDOT

Regional Weigh Stations

There are several truck weighing facilities that help FDOT manage and track the movement of heavy vehicles along the freight network. These facilities monitor truck activity to ensure compliance with weight and safety regulations along major roadway corridors.[17]

These facilities are located at the following locations:

Virtual Weigh in Motion

- Gadsden County
  - US 27 north of Havana
- Jackson County
  - I-10 Westbound, Exit 158 off ramp
  - I-10 Eastbound, Exit 152 off ramp

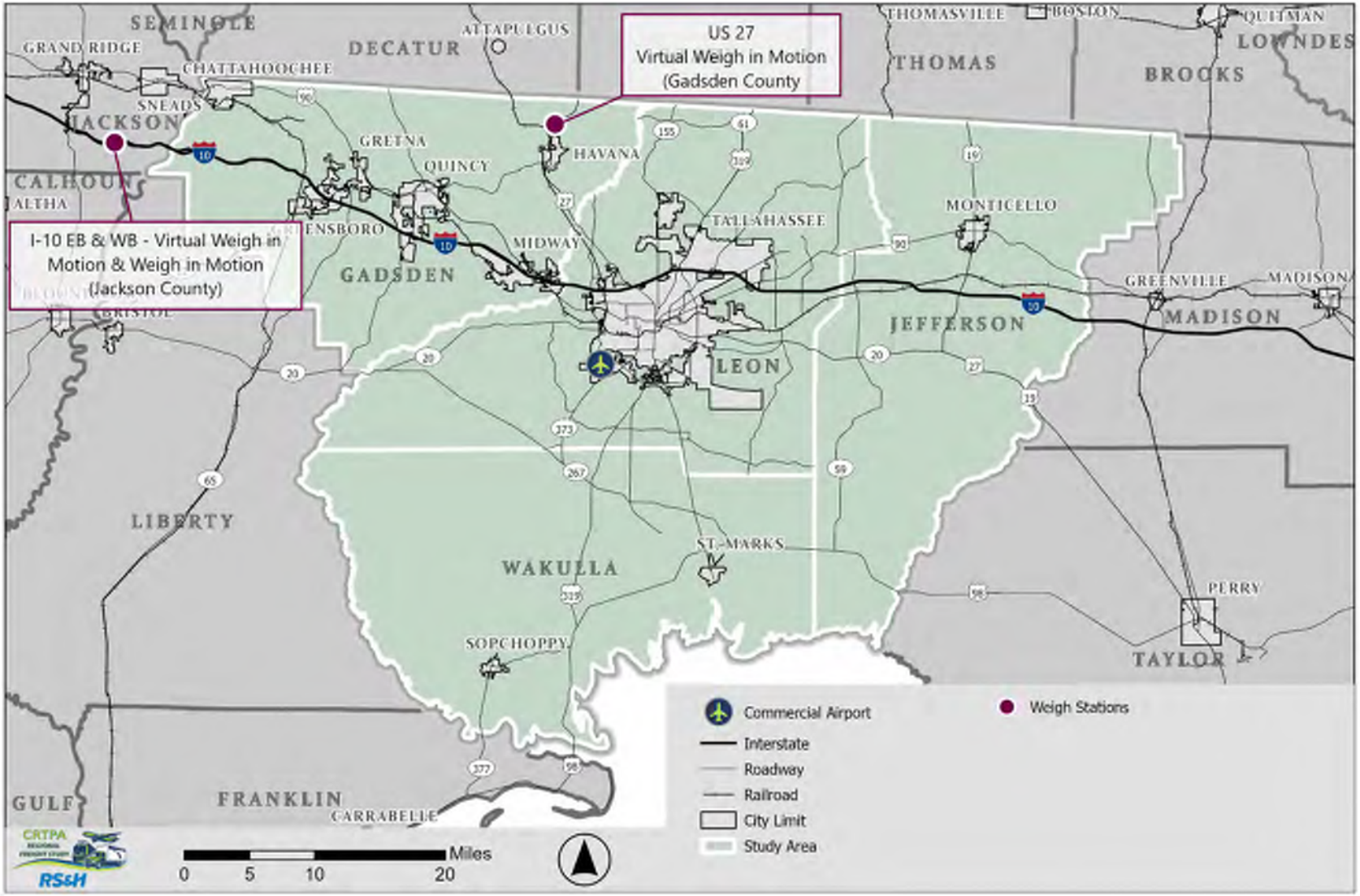
Weigh in Motion

- Jackson County
  - I-10 Westbound, Exit 155
  - I-10 Eastbound, Exit 155

Benefits to the region: The operation of weigh stations within the region helps increase general roadway safety and compliance with regulations through monitoring.

[17] FDOT- Motor Carrier Size & Weight (MCSAW) August 2022

Figure 18: Regional Weigh Stations



Source: FDOT- Motor Carrier Size & Weight (MCSAW) August 2022

Truck Parking Supply

Truck parking access and availability has been a growing concern across the nation which has been exacerbated by the increased freight demands and the introduction of electronic logging devices (ELDs). Truck drivers must adhere to Hours of Service (HOS) regulations[18] which vary based on commercial vehicle activity and these periods are actively monitored through the implementation of the ELDs. The HOS regulations determine the duration that drivers are permitted to operate their vehicles between mandated periods of rest. These periods of rest require drivers to park their vehicles for eight or more hours.

The Statewide Truck Parking Study conducted by FDOT in 2020 identified two areas within the region as truck parking areas of concern. These areas were both along I-10 near the Gadsden/Leon County line and along the Jefferson/Madison County Lines. Both of these areas have nearby public rest areas which may offer opportunities for additional truck parking availability.

Truck parking is divided into two main categories as outlined below:

- Public Parking: Areas typically maintained by FDOT such as interstate rest areas. These locations are usually free for drivers to utilize amenities and parking.
- Private Parking: Typically, businesses with the explicit intent of servicing traveler needs such as truck stops and large gas stations. These locations typically have additional services and fees are often associated with long term parking.
    - Some private parking locations are associated with larger big box stores such as Walmart which typically have large parking lots. Businesses may allow truck parking at their facilities, but this analysis has not included these locations due to the typically unofficial nature of these uses.

Truck parking opportunities within the region were identified to determine available spaces and local amenities associated with these parking areas. The region is fortunate to have five (26% of D3) public rest area facilities with a total of 146 truck spaces (23% of D3) and four private locations (32% of D3) with a total of 278 truck spaces (17% of D3). [19] Addressing some of the issues identified within the Statewide Truck Parking Study, FDOT has begun planning for the update and increasing of truck parking at their public rest facilities. Though still in the earlier phases of development, these improvements are anticipated to benefit drivers in the district.

[18] https://www.fmcsa.dot.gov/regulations/hours-of-service
[19] FDOT Truck Parking GIS Analysis

Table 15: Public Rest Areas

County	Roadway/Direction	Truck Parking Spaces	Amenities
Jefferson	I-10 Eastbound	25	Restrooms, Vending Machines, Nighttime Security
Jefferson	I-10 Westbound	29	Restrooms, Vending Machines, Nighttime Security
Leon	I-10 Eastbound	25	Restrooms, Vending Machines, Nighttime Security
Leon	I-10 Westbound	25	Restrooms, Vending Machines, Nighttime Security
Gadsden	I-10 Eastbound & Westbound	42	Restrooms, Vending Machines, Nighttime Security

Note: No public rest areas were identified in Wakulla County

Table 16: Private Truck Parking Areas

Name	County	Roadway	Truck Parking Spaces	Amenities
Fast Track	Jefferson	I-10	15	24 Hour Diesel, ATM, Convenience Store, Fast Food (Arby's), Money Orders, Lighted Area, Propane Bottles, Trailer Drop, Western Union
Flying J Travel Center #623	Gadsden	I-10	148	12 diesel lanes, 15 showers, Dump Station, Scale, Truck and Car Wash, Tire Repair Shop, Convenience Store, Fast Food Restaurants (The Burger Den, Cinnabon, Subway)
Pilot Travel Center #425	Gadsden	I-10	107	7 diesel lanes, ATM, Bulk Def, Can Wire Money Out, CAT Scales, Convenience Store, Document Scanning, Dump Station, Laundry, Load Monitor, Money Orders, NATSO Check Link, Paved Lot, Propane Bottles, Public Fax / Copier, Receive Prepaid Permits, Reserved Parking, Scales - Certified, 8 Showers, Trip Pack Locations, Western Union, WIFI, Fast Food (Dunkin', PJ Fresh Marketplace, Subway)
Savannah's Country Buffet	Wakulla	SR 363	8	Restaurant

Note: No private truck parking areas were identified in Leon County

Benefits to the region: The majority of truck travel (and freight in total) through the region is primarily using the I-10 corridor, allowing for a more focused need for truck parking facilities. The region has over 400 identified truck parking spaces but should continue to consider opportunities for improvement. Through coordination with FDOT, they are working to increase the number of truck parking spaces at their existing facilities as part of regular maintenance programs. Though the exact increase has not been identified, it is anticipated in the near future.

Needs and issues for the region: With 23% of public and 17% of private truck parking spaces within FDOT D3, there is still a need for additional spaces. Looking to the future, the region may consider favorable land use designations or modifications to existing developments to require appropriate truck staging and parking within its development.

Demographic/Business Allocation

The demographic review of the region was conducted at both the four-county level and for the individual counties.

The initial analysis began with a review of the United States Bureau of Transportation Statistics (BTS) to determine freight related data as collected regularly through their County Transportation Profiles. The data depicted within Table 17 highlights information from the most recent (2020) development of the BTS county profiles. Though this report was published in 2020, some of the data depicted is based on previous years reporting. However, this is standard when

reviewing freight data as so much is based on proprietary and limited detail. Similarly, the demographic information is sourced from the 2012-2016 5-year American Community Survey, as opposed to the more recent 2020 Census. This BTS information establishes a baseline condition for review of the freight network within the region.

Table 17: Bureau of Transportation Statistics County Transportation Profiles

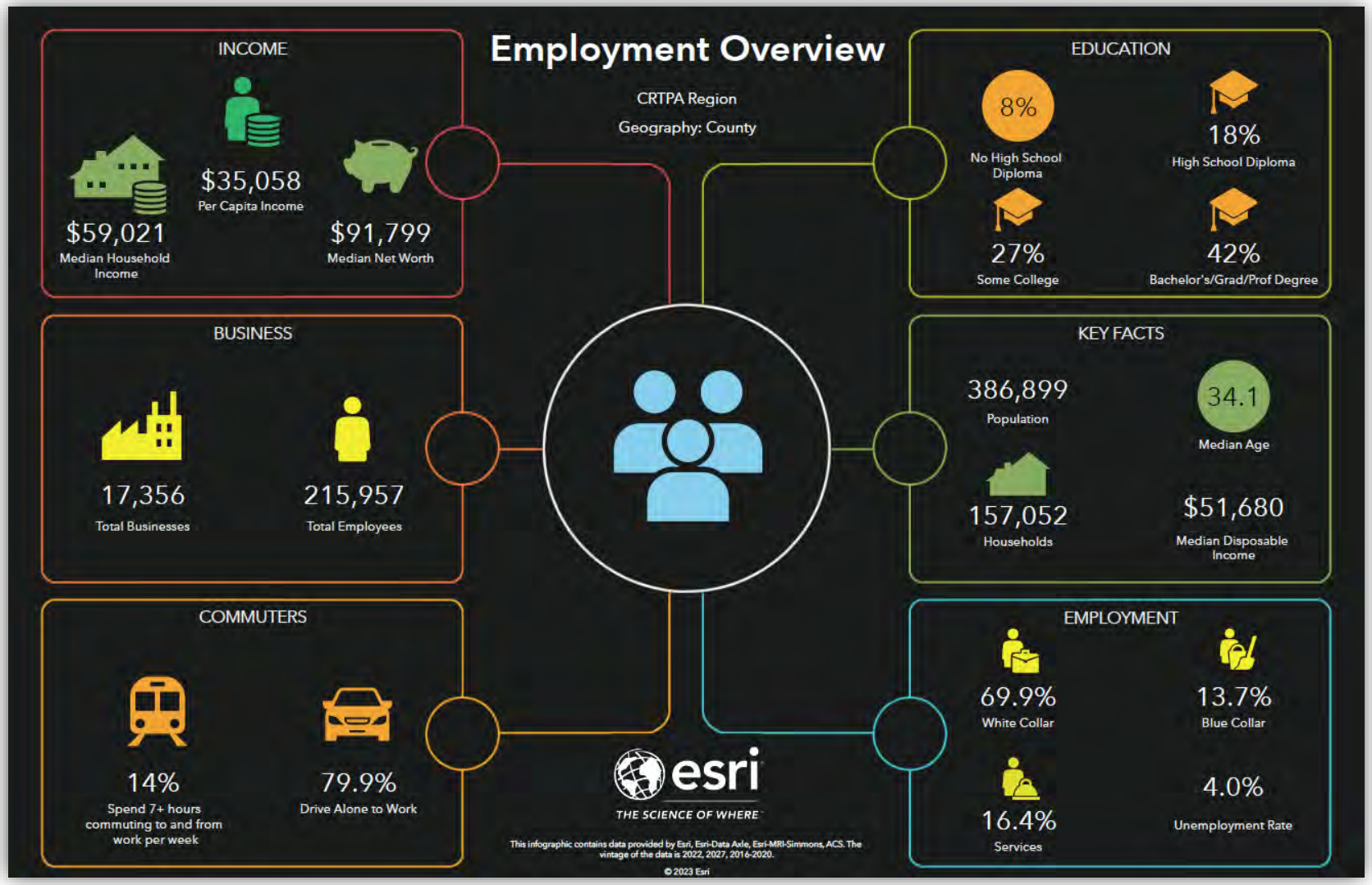
Area Name	Commercial Airports	Non-Commercial Airports or Aerodromes	# Bridges	% Poor Condition Bridges	# Businesses	# Resident Workers	# Residents	Miles Freight Railroad
CRTPA Region	1	21	401	-	9,067	173,575	376,340	122.9
Gadsden	0	8	123	11%	653	16,180	46,155	69.6
Jefferson	0	5	71	8%	256	4,720	14,080	19.1
Leon	1	7	157	3%	7,711	139,425	284,790	34.2
Wakulla	0	1	50	14%	447	13,250	31,315	0

Source: 2020 Bureau of Transportation Statistics County Transportation Profiles

Building upon the county profiles highlighted above, further analysis was conducted to determine more current demographic information for the area. Between the 2010 and 2020 census, the CRTPA region experienced an annual population growth of 0.45% to reach a total population of 384, 298. [20] Using the updated demographic information, another analysis was conducted to determine the estimated population and workforce conditions for the 2022 year. Figure 19 depicts an overall employment overview for the CRTPA region, while Table 18 displays similar data by county.

[20] Esri Community Analyst; 2010 and 2020 Census

Figure 19: 2022 Employment Estimates



Source: Esri Community Analyst

Table 18: CRTPA Residential and Employment Summary 2022 Year

Area	Residential Population	Total # Businesses	Total # Employees
CRTPA Region	386,699	17,356	215,957
Gadsden	43,200	1,442	17,081
Jefferson	14,473	568	3,443
Leon	294,669	14,394	188,588
Wakulla	34,357	952	6,845

Source: Esri Community Analyst 2022

As shown above, Leon County is home to the majority of the population (76%), businesses (83%), and employed populations (87%).

Industries are typically categorized into two industry codes: the Standard Industrial Classification (SIC) and the North American Industry Classification System (NAICS). Although both the SIC and NAICS perform essentially the same function, the NAICS is the more current of the two classification methodologies, and it has a longer numbering code, allowing for more detailed industry classification.[21] NAICS data will be used throughout this report, as applicable, due to its additional descriptive ability and its more recent method of industry classification.

Though many industries involve freight activity throughout their operations, there are several specific industries that are commonly associated with freight movements at the regional level. All NAICS industry types are outlined in Table 19 below, and those that are associated with more freight related movements are identified.

[21] https://www.naics.com/history-naics-code/

Table 19: NAICS Industries Most Likely to Rely on Freight

NAICS Industry Type	Associated with Freight Movements
Agriculture, forestry, fishing and hunting	X
Construction	X
Manufacturing	X
Mining	X
Transportation and Warehousing	X
Utilities	X
Wholesale Trade	X
Accommodation and Food Service	
Administrative & support & Wholesale Management & Remediation	
Arts Entertainment & Recreation	
Educational Services	
Finance and Insurance	
Healthcare and Social Assistance	
Information	
Management of Companies and Enterprises	
Other Services (except Public Administration)	
Professional, Scientific & Tech Services	
Public Administration	
Real Estate, Rental and Leasing	
Retail Trade	

This review utilized NAICS data to determine employment trends and freight related businesses in the region. Table 20 provides a comprehensive summary of the 2022 business data for the region. Additionally, Figure 20 and Figure 21 visually represent the geographical distribution of all freight related businesses and employees in the region.

Across the CRTPA region, there are 2,370 freight and heavy vehicle related businesses corresponding to Table 19. Leon County serves as the hub for freight movements in the region and is home to the majority of such businesses. Over 78% of the freight related businesses are in Leon County and these 1,864 businesses collectively employ 17,522 people.

Table 20: Businesses Summary

Area	All Businesses		Freight and Heavy Vehicle Related Businesses	
	# Businesses	# Employees	# Businesses	# Employees
CRTPA Region	17,356	215,957	2,370	22,843
Gadsden	1,442	17,081	226	3,492
Jefferson	568	3,443	111	805
Leon	14,394	188,588	1,864	17,522
Wakulla	952	6,845	169	1,024

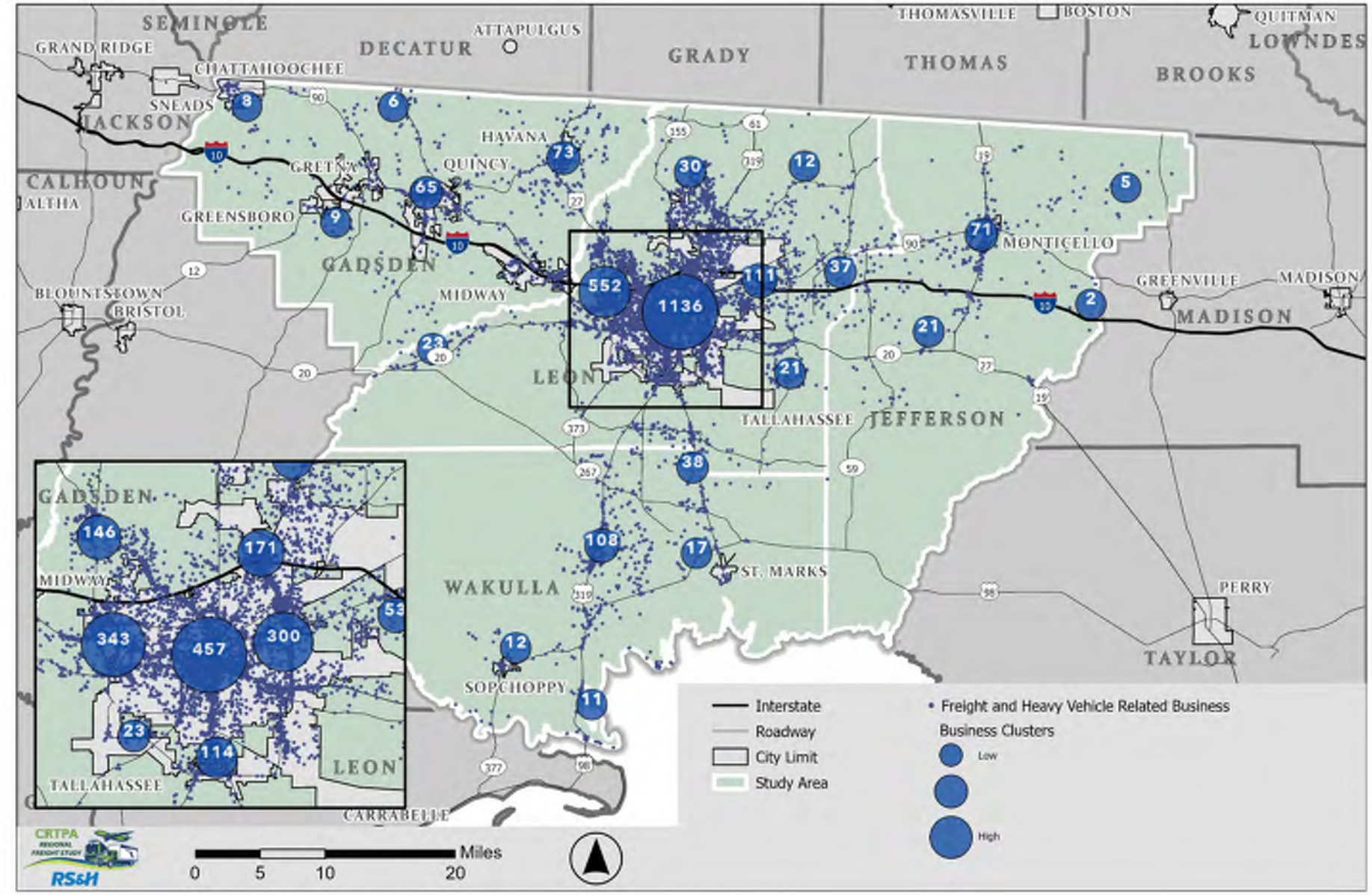
Source: Esri Community Analyst 2022

Also of note, Tallahassee has recently seen construction begin on a major Amazon robotics fulfillment center on Mahan Drive, west of I-10 and east of Thornton Road and formally known locally as Project Mango. A Traffic Impact Analysis (TIA) was prepared in 2021 for the project, proposed to open originally in 2022 but still pending completion as of this analysis (2023). The TIA estimated that the new 634,812-square foot Fulfillment Center would generate 387 new daily truck trips but found the study area intersections to be performing generally acceptably at present and in the future background and build out condition so did not recommend any improvements. Amazon has also acquired a parcel off NW Capital Circle for a 123,000 square foot "Last Mile" facility to move goods from the fulfillment center to the doorstep.

Benefits to the region: The business clustering is largely within the major urbanized areas and along State Routes allowing for a more in-depth review of potential recommendations for the future. Both the clusters of the businesses and total number of employees highlight areas of increased freight considerations for existing and future transportation needs.

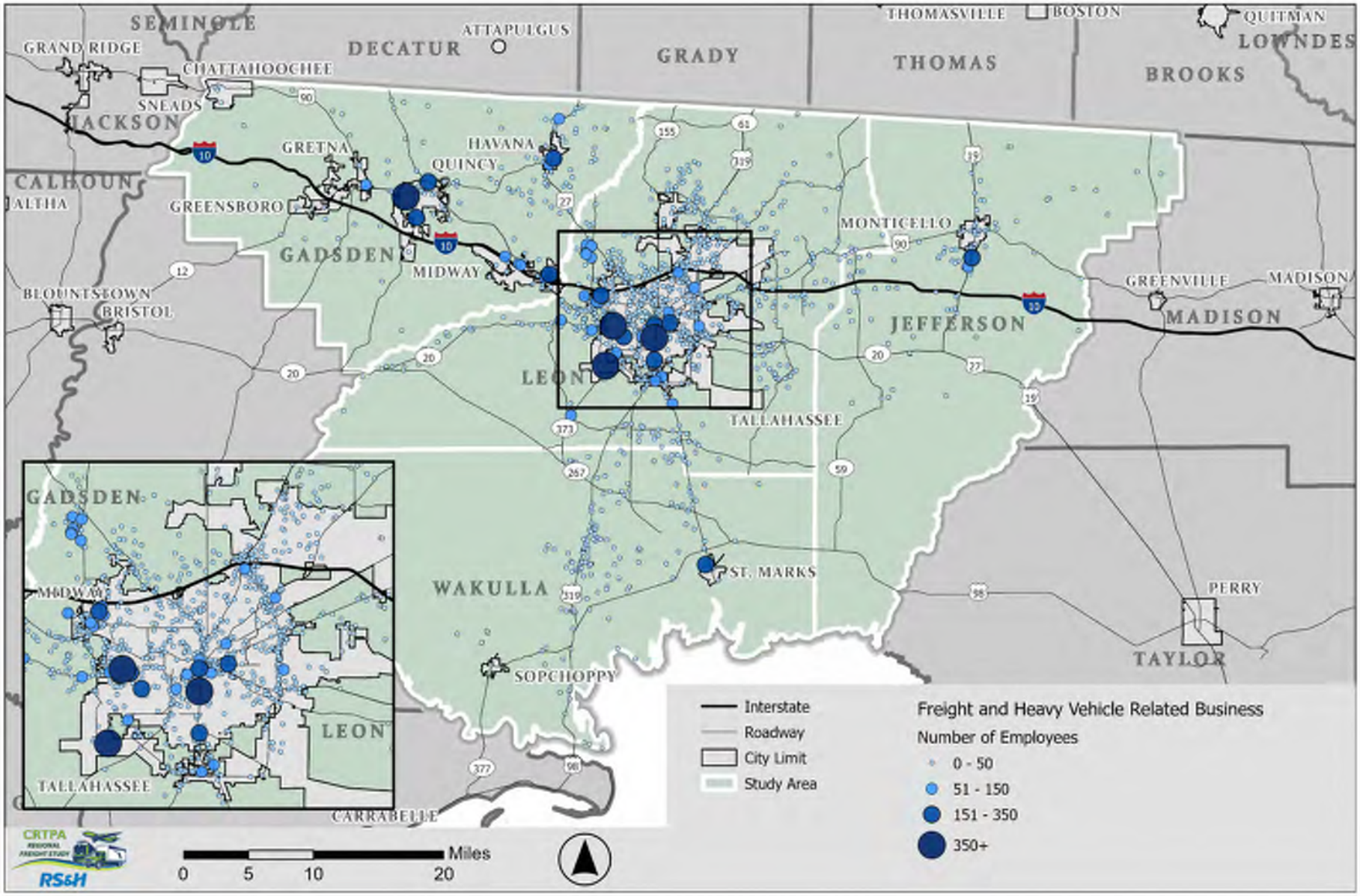
Needs and issues for the region: The identification of these business and employee clusters in coordination with freight movement data will identify focus areas for improvements.

Figure 20: Freight and Heavy Vehicle Related Businesses



Source: ESRI Community Analyst 2022

Figure 21: Freight and Heavy Vehicle Related Businesses by Employee Count



Source: ESRI Community Analyst 2022

Heavy Truck Origins and Destinations

To understand regional movement of freight, it is important to review the trends of where freight begins and ends. The following sections include a series of analyses of combined average by origin *and* destination based on census blocks. This analysis represents the cumulation of GPS related heavy truck movement data during the Spring and Fall seasons of 2021. The resultant information was processed to represent the truck movements of an average Thursday (weekday) during the 2021 year. Block groups are symbolized based on the number of trucks which traveled to or from each of the Census Blocks. This analysis was conducted within two main criteria:

- Freight with an origin or destination within the region
- Freight passing through downtown areas across the region

The figures below display the combined averages of trip origins and destinations for the region as well as for five downtown areas: Crawfordville, Havana, Monticello, Tallahassee, and Quincy. The details of each analysis are further explained below.

Regional Origin and Destination Analysis

This analysis considers the freight trips that are incoming (trips which ended within the region) and those which are outgoing (trips which began in the region). Within each analysis, an additional review of the origin and destination of the movements was conducted.

- Incoming
    - Origin of freight trips ending in the region (Figure 22)
    - Destination of freight trips within the region (Figure 23)
- Outgoing
    - Origin of the freight trips originating in the region (Figure 24)
    - Destination of the freight trips originating in the region (Figure 25)

This origin and destination analysis identified clusters of truck movement throughout the region which were generally consistent across each of the reviews. Freight movement identified in this analysis originated significantly within the CRTPA region; however, clusters outside of the region were identified along the I-10 Corridor. Those locations along the I-10 corridor depict clusters out to Marianna to the west and Live Oak to the east.

Within the region, the significant clusters are located primarily within the Tallahassee urbanized area and along major corridors in the region. The following key areas were identified.

- US 319/Capital Circle NE
- NW Tallahassee where Capital Circle NW and I-10 meet
    - Note – The rest areas located west of this interchange are also creating a significant boost in truck trips.
- SR 20 both east and west of Tallahassee

- Moderate clusters are located within the downtown/urbanized areas of each member county

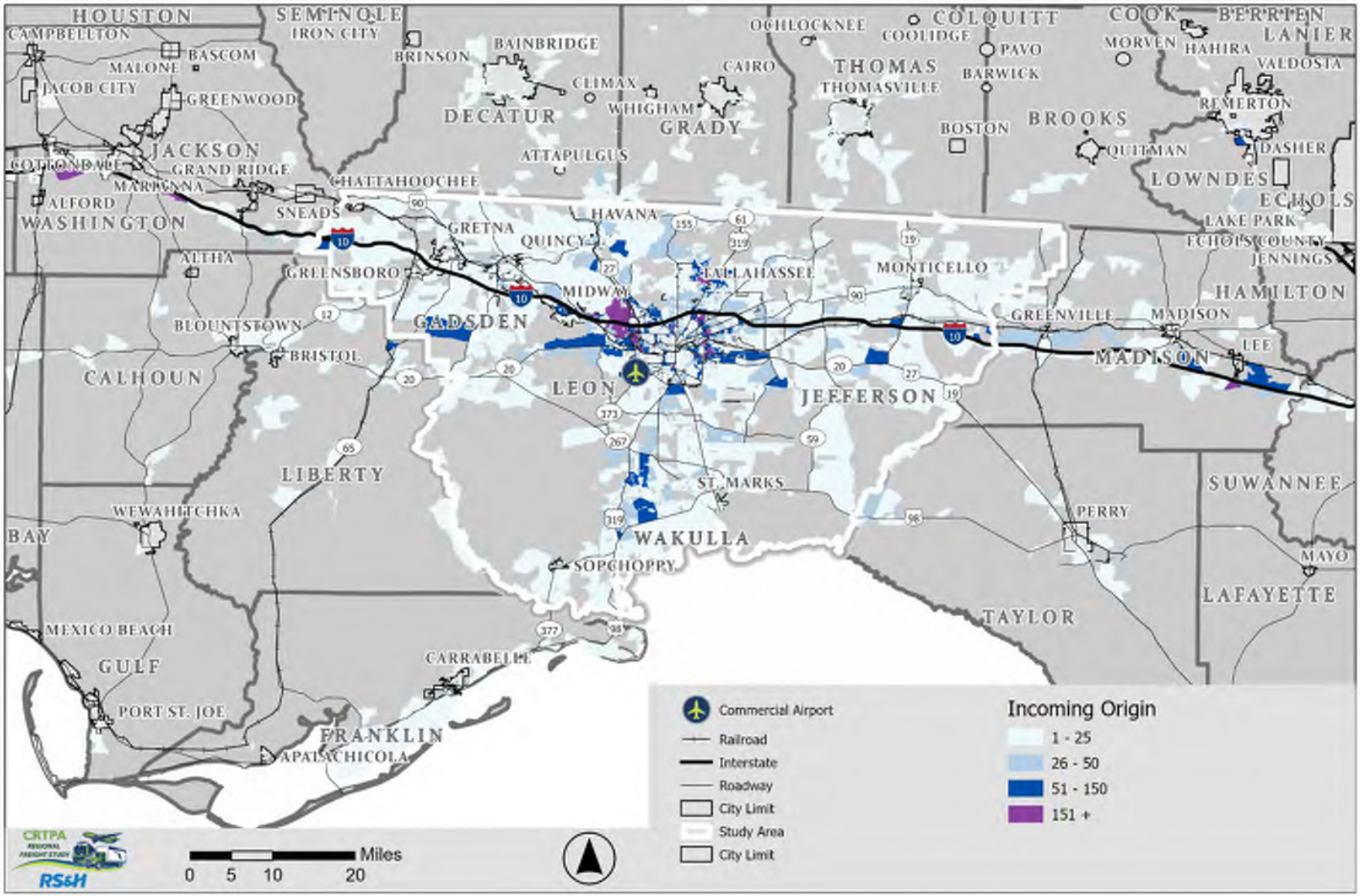
Both of these locations have significant business presence; however, the location west of Capital Circle NW is likely being highlighted due to the I-10 rest areas and associated truck parking.

Of note, the large block in Gadsden County, south of I-10 which is primarily located within a forested area is showing high truck trips due to the Tallahassee Power Plant and a local excavation and land clearing company in the area.

Benefits to the region: The identification and location of truck trips in the region helps to identify areas where truck traffic may be a concern. This analysis sheds light on truck trips within the region without the reliance on the limited FDOT traffic count system.

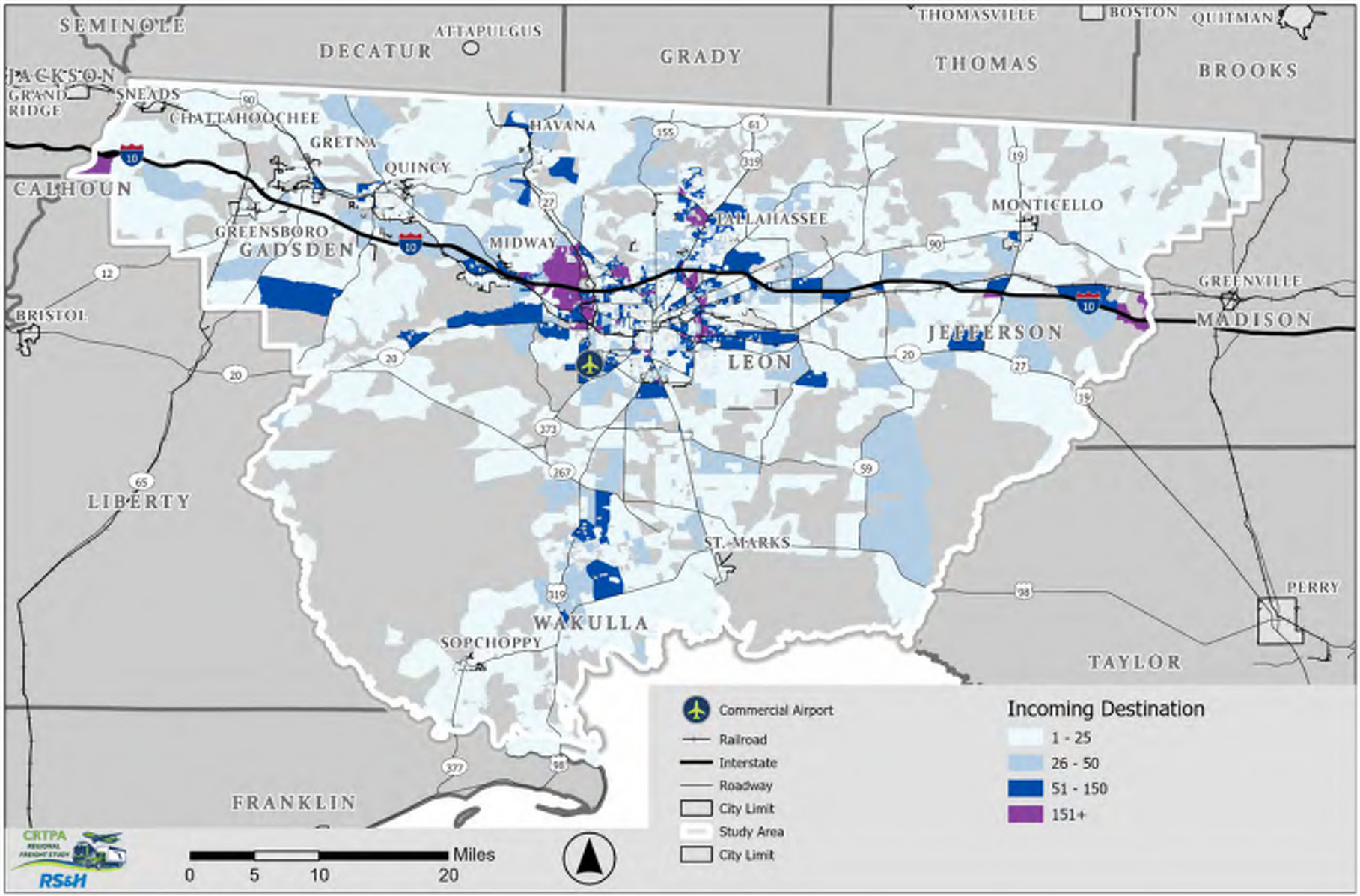
Needs and issues for the region: Trough this analysis, the Capital Circle corridor has been identified as a major corridor for truck trips associated with the region. As such, Capital Circle and other clustered areas will be further considered during the development of future conditions and recommendations.

Figure 22: Regional Incoming Freight Origin



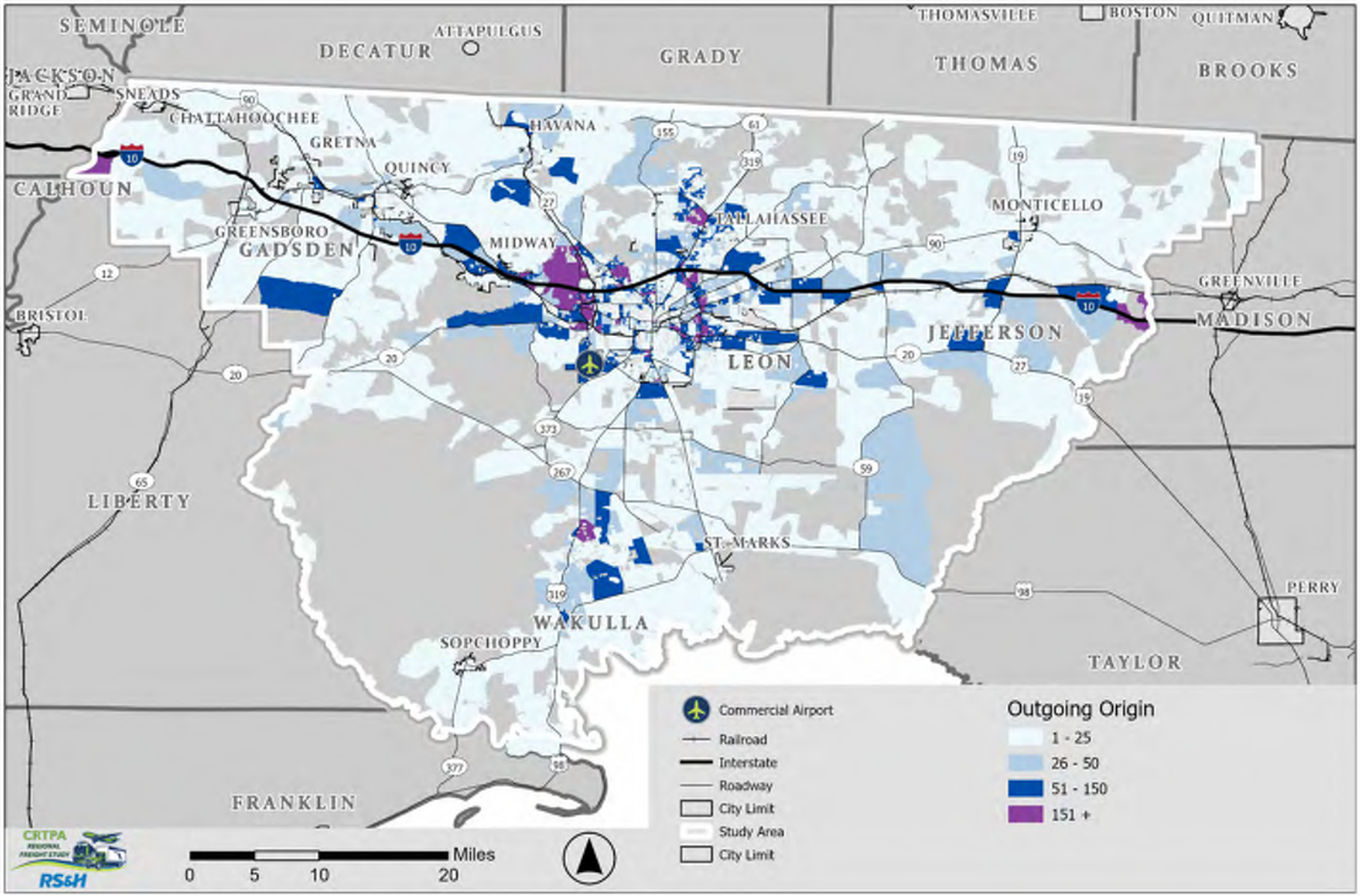
Source: Replica 2021

Figure 23: Incoming Freight Destination



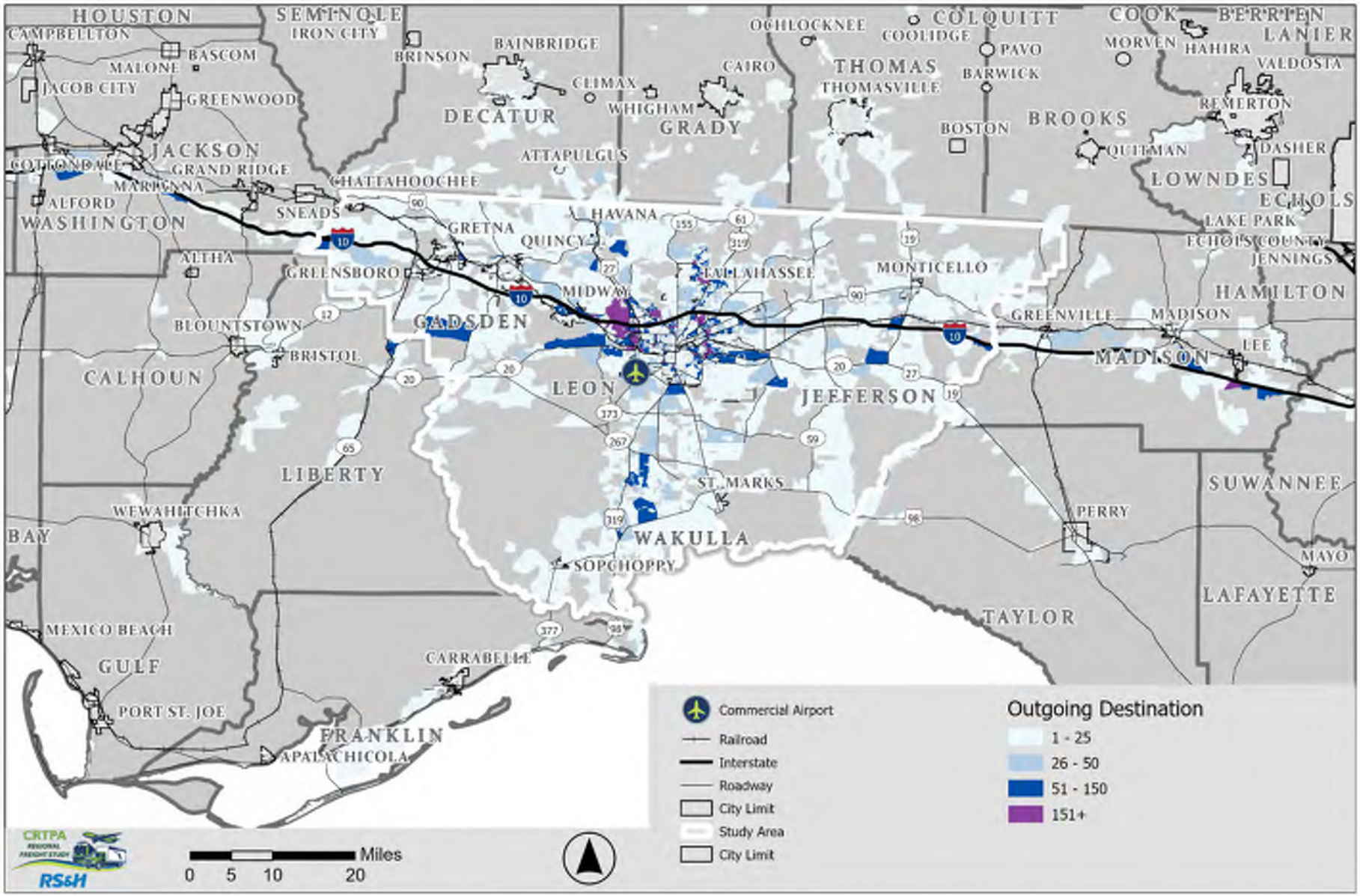
Source: Replica 2021

Figure 24: Outgoing Freight Origin



Source: Replica (2021)

Figure 25: Outgoing Freight Destination



Source: Replica (2021)

Downtown Area Origin Destination Analysis

Crawfordville – Wakulla County

Analysis of the freight patterns in the Crawfordville area was conducted along the US 319 corridor. This analysis shows the highest movements are concentrated to central areas of Crawfordville with high origins and destinations is the area. The majority of the freight travel within the region is under 32 miles (Table 21), indicating that the majority of freight is originating and traveling to areas in close proximity to Crawfordville. Figure 26 depicts the locations seeing the most significant freight movements in the area.

Table 21: Crawfordville Freight Trip Distance

Distance	Recorded Trips	Percent of Trips
Over 64mi	300	7%
32-64mi	645	15%
16-32mi	1,741	42%
8-16mi	574	14%
4-8mi	529	13%
2-4mi	223	5%
1-2mi	118	3%
0.5-1mi	29	1%
Under 0.5mi	17	0%

Source: Replica 2021

Havana – Gadsden County

Havana and the US 27 corridor is a significant connection between Tallahassee/I-10 and Georgia. Freight movements through this corridor have origins and destinations within the Havana Downtown area(Figure 27); however, the trip distances indicate that over 50% of the trips were over 32 miles from this area (Table 22). This significant trip distance is indicative of more long-distance freight movement to areas such as Bainbridge and along the I-10 corridor. This can also be an indicator that regional goods are not the most common movement through this area.

Table 22: Havana Freight Trip Distance

Distance	Recorded Trips	Percent of Trips
Over 64mi	2,129	34%
32-64mi	1,367	22%
16-32mi	1,555	25%
8-16mi	713	11%
4-8mi	192	3%
2-4mi	150	2%
1-2mi	70	1%
0.5-1mi	40	1%
Under 0.5mi	12	0%

Source: Replica 2021

Monticello – Jefferson County

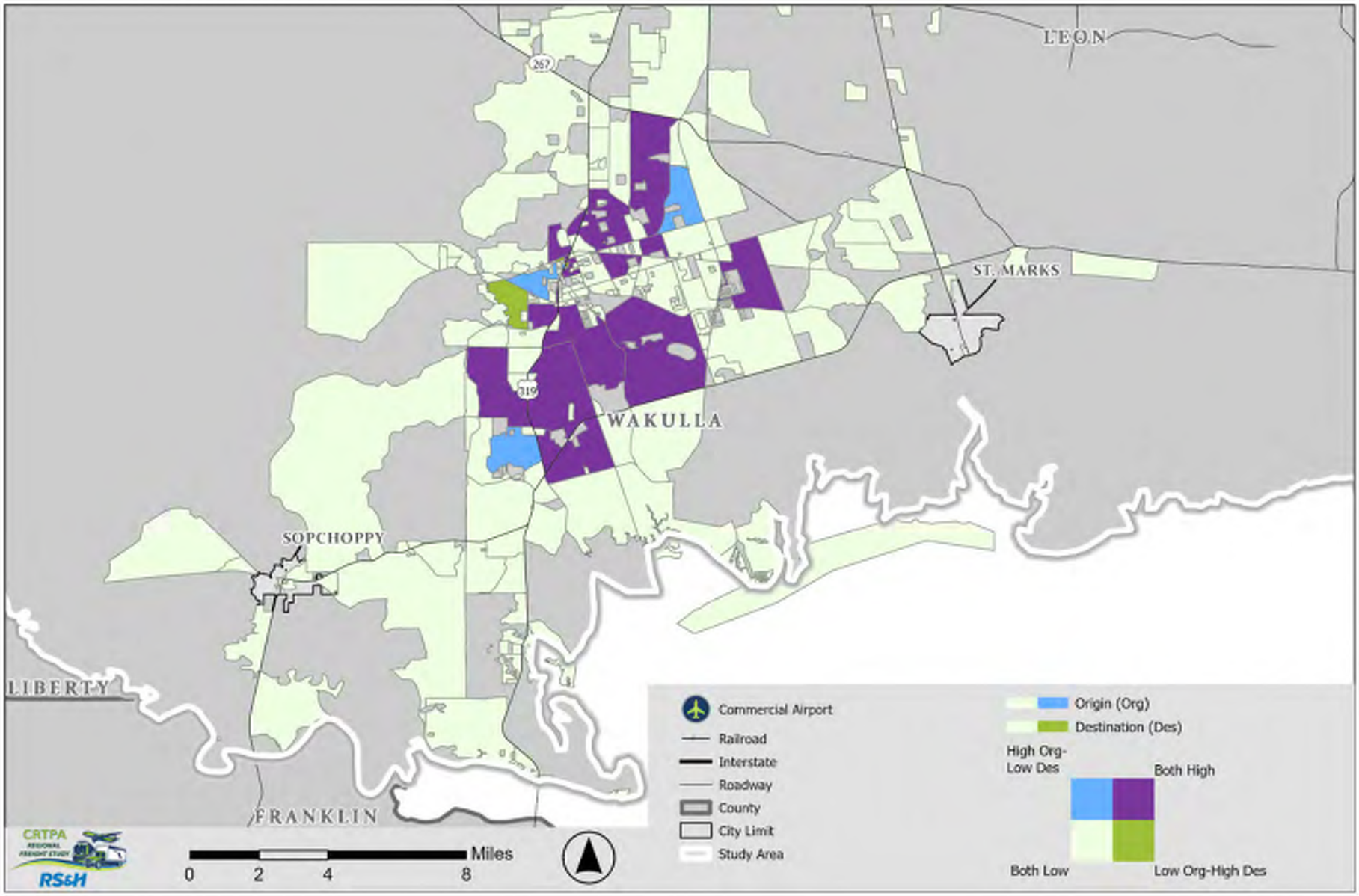
The US 90 (east/west) and US 19 (north/south) corridors intersection within the Monticello downtown area and have been reviewed as part of this analysis. As depicted in Figure 28, the majority of freight movements within this area are not originating nor are they terminating within Monticello. Review of freight movement demonstrates a consistent pattern of trips within just a few miles along the major highway corridors such as north and south along I-75, along I-10 toward Jacksonville, and north along state US 19 to Albany and its surrounding area. Over 82% of the freight trips passing through Monticello were over 32 miles in length; highlighting that regional freight is not typically servicing this area (Table 23).

Table 23: Monticello Freight Trip Distance

Distance	Recorded Trips	Percent of Trips
Over 64mi	4,711	64%
32-64mi	1,289	18%
16-32mi	560	8%
8-16mi	263	4%
4-8mi	152	2%
2-4mi	123	2%
1-2mi	85	1%
0.5-1mi	99	1%
Under 0.5mi	38	1%

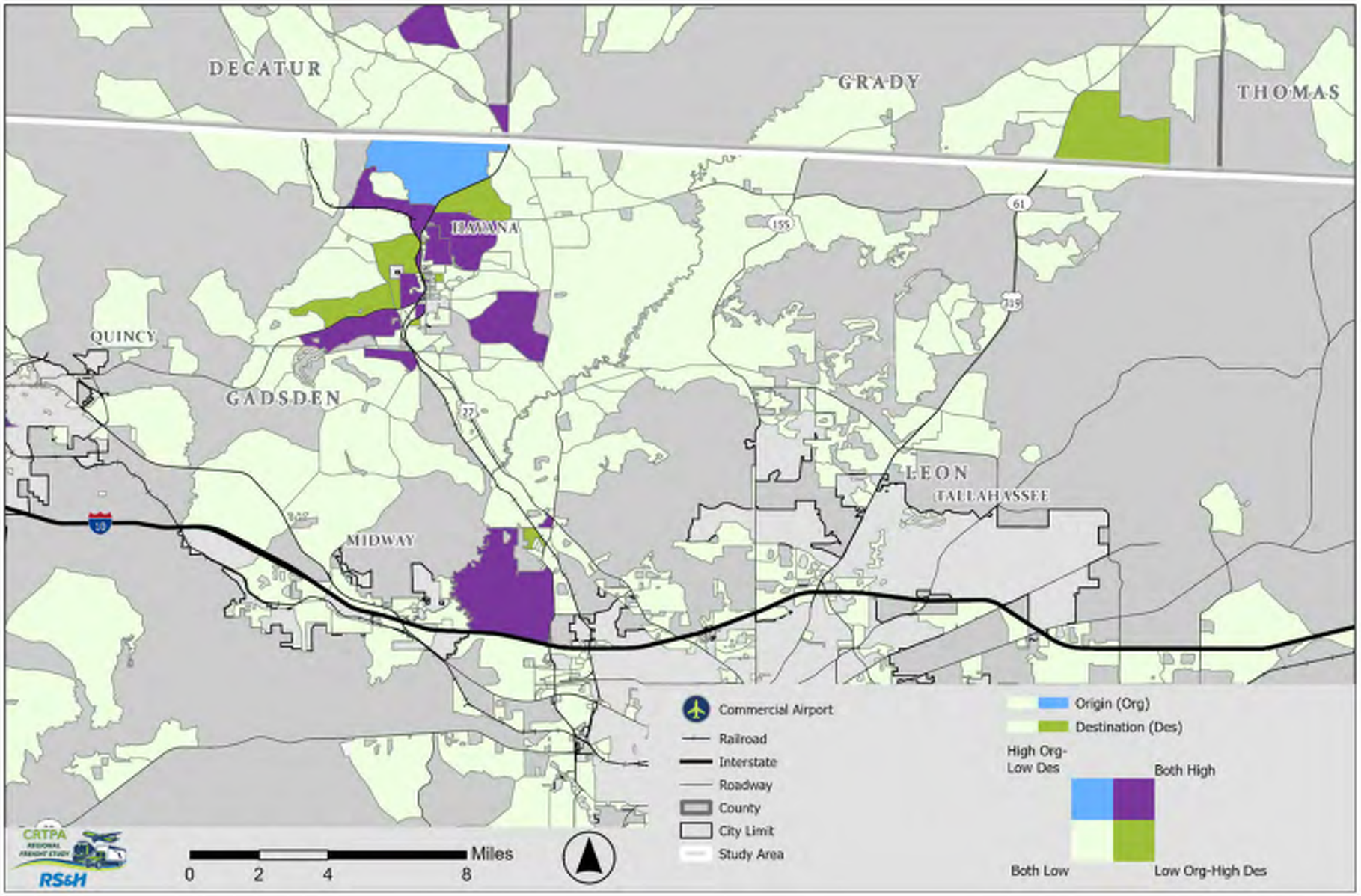
Source: Replica 2021

Figure 26: Crawfordville Origin & Destination Analysis



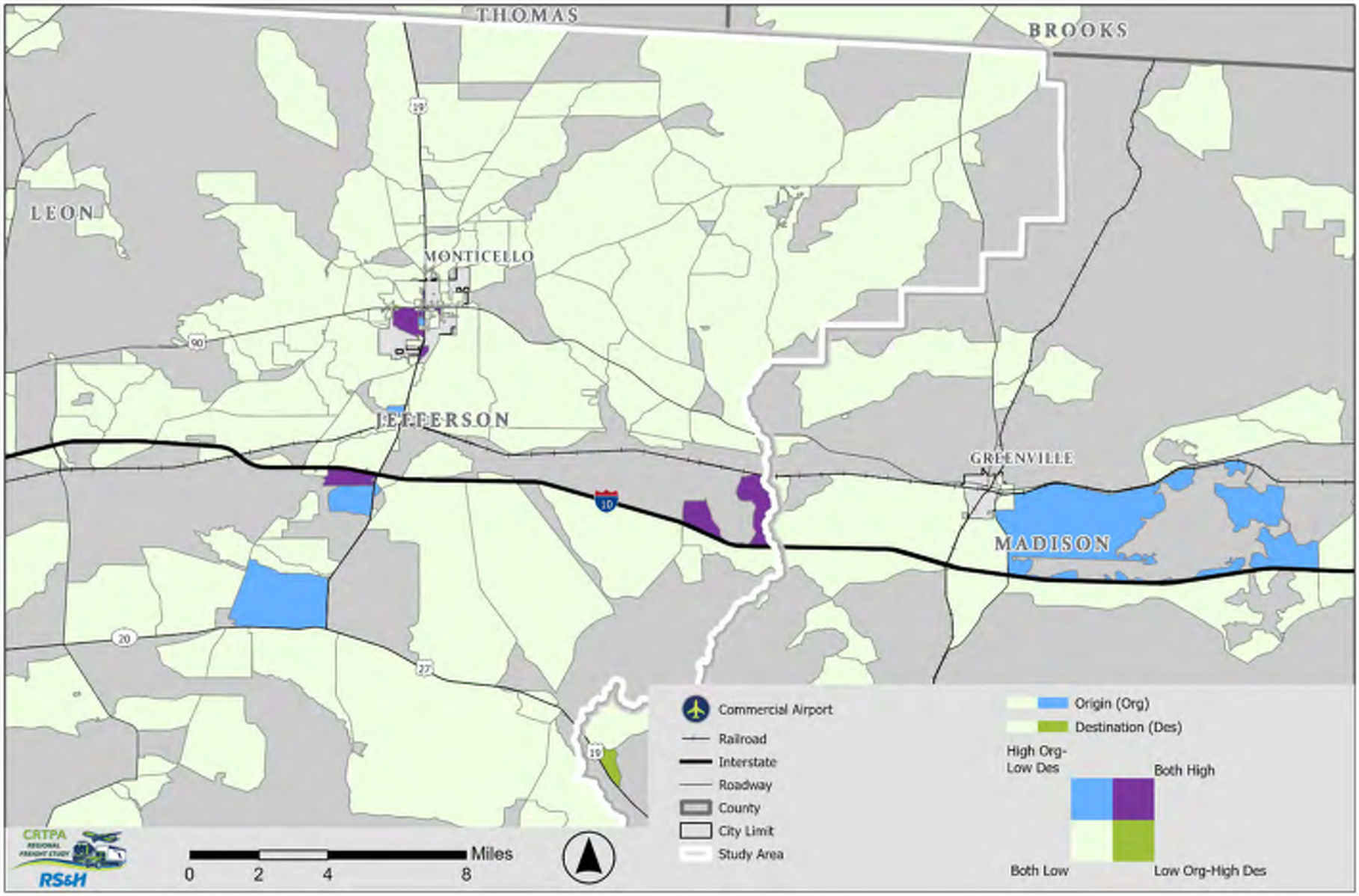
Source: Replica (2021)

Figure 27: Havana Origin & Destination Analysis



Source: Replica (2021)

Figure 28: Monticello Origin & Destination Analysis



Source: Replica (2021)

Tallahassee – Leon County

The Tallahassee downtown intersection of US 27 and US 90 were utilized to review the freight movements in the area. The freight travel utilizing these corridors is largely local in nature with 75% of the freight travel under 32 miles in length (Table 24). As depicted within Figure 29, this regional movement is largely clustered along the major roadway network throughout the city with the most significant clusters located in both eastern and western Tallahassee.

Due to the urbanized development of Tallahassee, it is most likely that these recorded freight trips are from local distribution centers and will typically be serving more of last mile freight to the urban area.

Table 24: Tallahassee Freight Trip Distance

Distance	Recorded Trips	Percent of Trips
Over 64mi	1,009	7%
32-64mi	1,047	7%
16-32mi	1,660	11%
8-16mi	4,415	29%
4-8mi	4,642	30%
2-4mi	1,926	12%
1-2mi	506	3%
0.5-1mi	168	1%
Under 0.5mi	51	0%

Source: Replica 2021

Quincy – Gadsden County

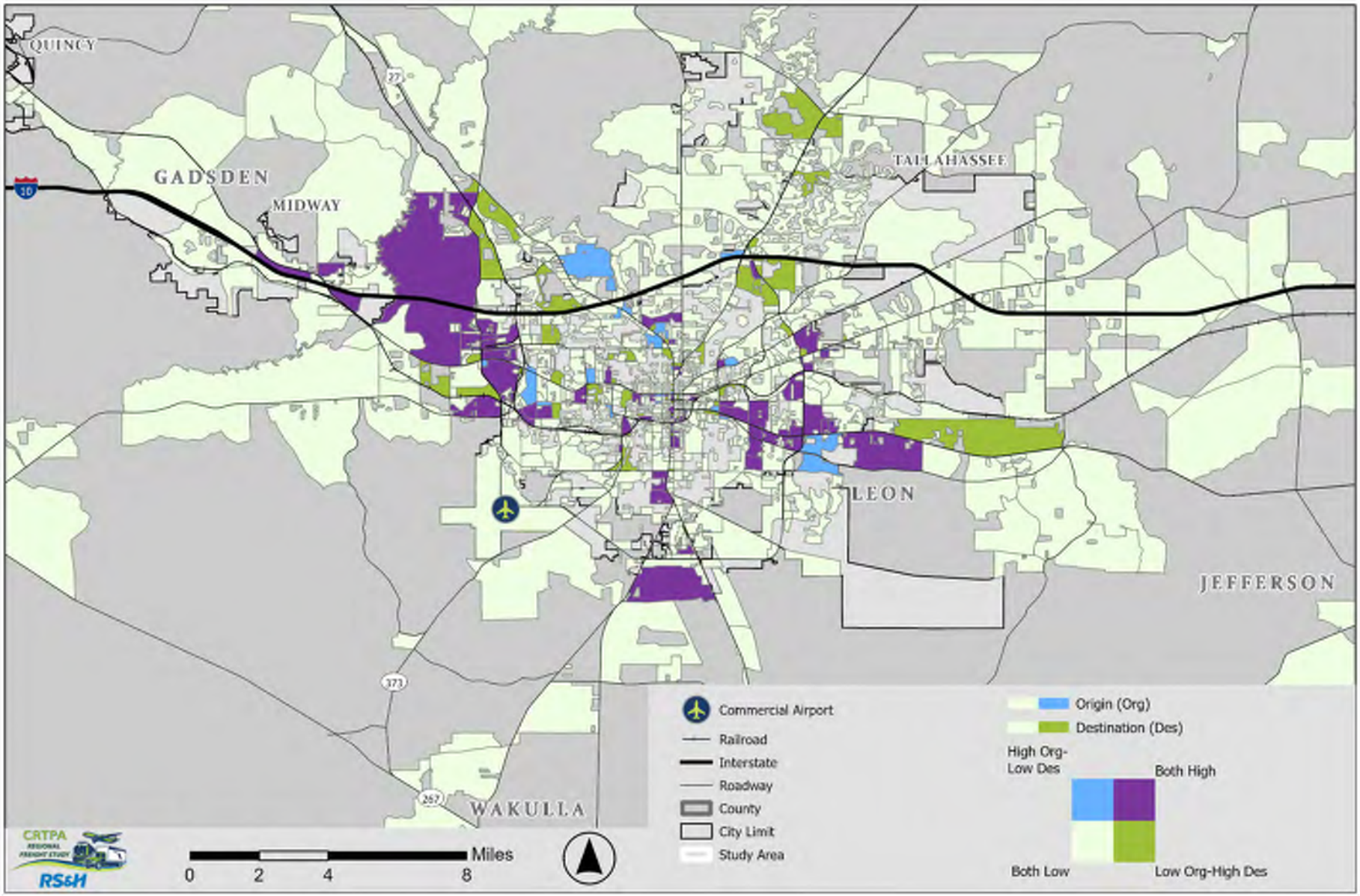
The analysis within Quincy reviewed the truck traffic utilizing US 90 through the downtown area. This analysis identified that 53% of the freight movement through the area was within 32 mile indicating that regional resources were likely significant to the movement in the area (Table 25). This is further depicted within Figure 30 which highlights origin and destination clusters in the Quincy area and the area between Midway and Tallahassee along the I-10 corridor.

Table 25: Quincy Freight Trip Distance

Distance	Recorded Trips	Percent of Trips
Over 64mi	1,957	25%
32-64mi	1,698	22%
16-32mi	1,671	22%
8-16mi	763	10%
4-8mi	315	4%
2-4mi	565	7%
1-2mi	489	6%
0.5-1mi	187	2%
Under 0.5mi	78	1%

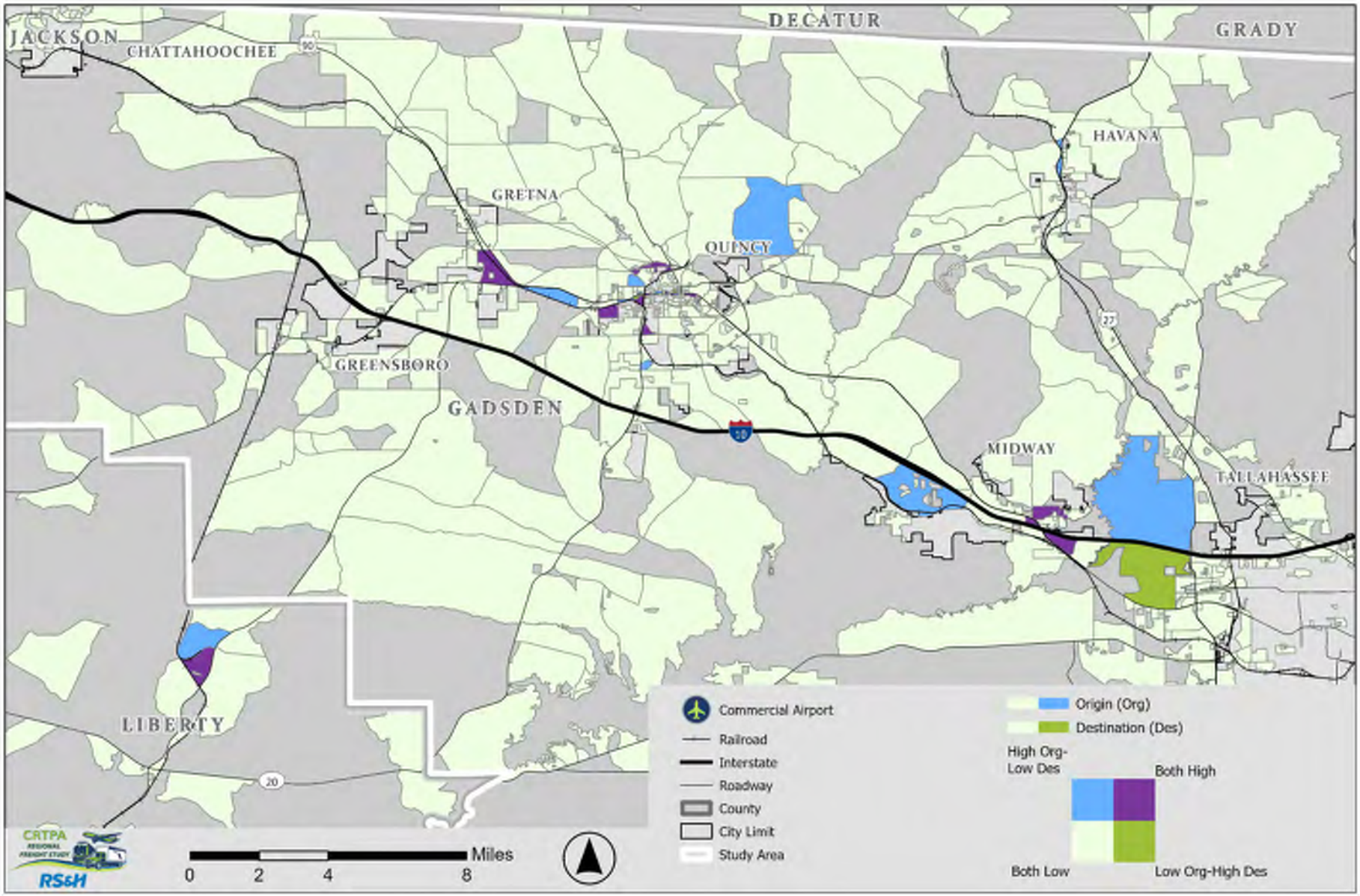
Source: Replica 2021

Figure 29: Tallahassee Origin & Destination Analysis



Source: Replica (2021)

Figure 30: Quincy Origin & Destination Analysis



Source: Replica (2021)

Rail Transportation

Rail transportation through the region is relatively limited to the Florida Gulf & Atlantic (FG&A) railroad which travels east/west, and Apalachicola Northern (AN) railroad which travels north/south.

Apalachicola Northern Railway as part of Genesee & Wyoming (G&W)

The AN operates 119 miles of rail along a north/south route between Port St. Joe (Bay County) and Chattahoochee in Gadsden County. However, the distance of operational track is currently limited to the remaining 30 miles of track between Telogia (Liberty County) and Chattahoochee. South of Telogia, the railroad is inactive primarily due to a series of bridges that are incapable of carrying freight rail service. Overall, AN has identified 44 bridges in need of repair or replacement to resume full operation. Seven of these bridges are located within Gadsden County.

The AN interchanges with the FG&A in Chattahoochee to transfer loads outside of Gadsden County. The AN typically operates one 8-15 car train each week, carrying wood products.

Florida Gulf & Atlantic Railroad as part of Gulf and Atlantic Railways

The FG&A rail travels primarily east/west through the region with termini in Baldwin (east) and Pensacola (west). Within the region, FG&A also manages a rail spur which travels north/south connecting Tallahassee, Fl with Attapulgus, GA. The FGA typically handles aggregates, fertilizers, industrial chemicals, among other items.

Passenger Rail Consideration

Though not directly related to freight rail, passenger movement along the rail network is often considered. The inclusion of passenger service along freight rail lines poses logistically, safety, and reliability concerns due to different needs, speeds, and lengths. Previously, AMTRAK provided passenger rail service from Jacksonville Florida to New Orleans Louisiana. This route was discontinued after Hurricane Katrina (2005) damaged segments of the corridor and has never been brought back online.

Passenger service has been an increasing part of the discourse when discussing rail movements and the CRTPA region is no Exception. As part of this analysis, representatives from the freight rail companies indicated that they were not against the resumption of passenger service pending infrastructure improvements and studies to better understand the feasibility of logistics and reliability on relatively limited corridors.

The former train station located in southern Tallahassee was recently renovated to serve as the Visit Tallahassee Visitor Center. If passenger rail activity were to resume, either a new station would need to be identified or the building would need to be retrofitted to serve that purpose again.

During project development, federal funds were approved to support rail enhancements within the panhandle area.[22] Though these funds in the panhandle are not specifically for passenger rail, improvements to the infrastructure are necessary and may make passenger movements more feasible in the future.

Benefits to the region: The AN's is well positioned to support potential port activity at the Port of Port St. Joe, if port development and bridge repairs are conducted. The location of the FG&A helps connect the region to other major cities and subsequent rail lines. Possible direct to rail business development would reduce the need for regional truck travel, reducing congestion on the regional road network. The presence of rail in can help promote freight growth in the region.

Needs and issues for the region: General deferred maintenance along the railroads and bridge network highlight existing and future issues across the rail network. Both railroad companies have been in contact with FDOT, local governments and private industry to expand and improve their services within the region.

Table 26: Railroad Summary

Railroad Owner	Miles in Region	Capacity
AN	20.42	286k
FG&A	115.85	286K

Source: FDOT

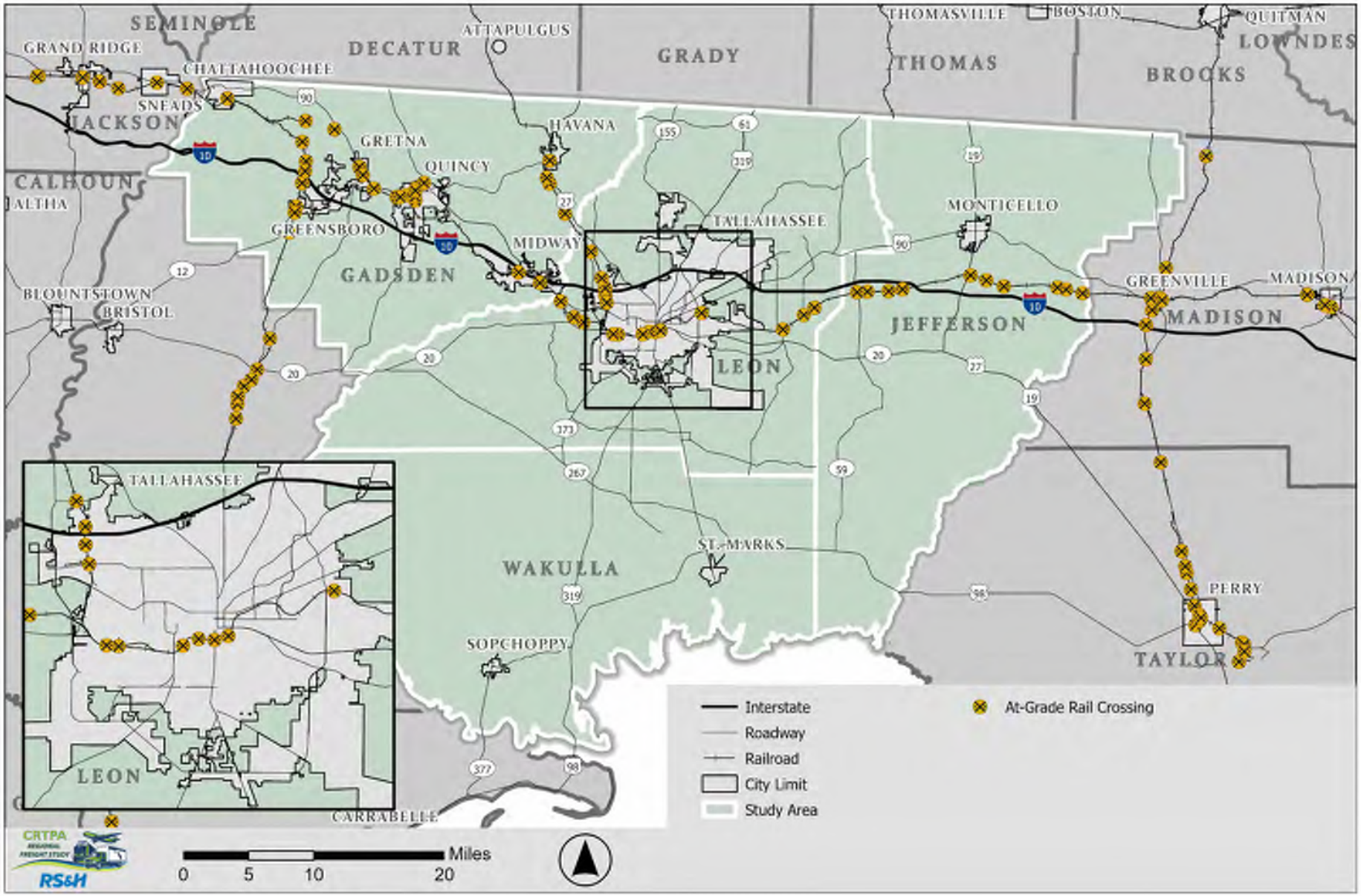
Table 27: Rail Crossings

Type	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
At Grade Rail Crossings	28	10	19	-	57

Source: FDOT

[22] Federal government to fund 5 railway projects in Florida | wtsp.com

Figure 31: Railroads and At Grade Rail Crossing



Source: FDOT

Air Transportation

Tallahassee International Airport (TLH)

Tallahassee International Airport is the only commercial airport within the CRTPA region. TLH is the largest airport in the area which also conducts General aviation activities. There are several smaller General aviation and private use airports in the within the region however their size and infrastructure are not typically conducive to the movement of freight. Though the general air movement within the area can be significant at times, the movement of air freight is conducted at TLH.

The latest BTS freight related data for TLH indicates that 4,578 tons of freight originated at the airport in 2021.[23] However, the Airport Master Plan Indicates that the total cargo movement at the airport is significantly higher and projected to increase (Table 28).

Table 28: TLH Cargo Forecasts

Year	Total Cargo (tons)*	Total Operations (Aircraft)
2015	9,523	1,370
2025	11,446	1,513
2035	12,643	1,672

*Pounds of Cargo Converted to Tons

Source: Tallahassee International Airport Master Plan Update (2019)

In May 2022, construction began on an International Passenger Processing Facility[24] (IPPF) at TLH that was described in the Master Plan Update's Terminal Alternative section. The $28 million project that will be a major economic driver for the entire region when operational, expected in 2024.

The IPPF is a key project in the City of Tallahassee's Five-Year Strategic Plan to enhance and modernize infrastructure to enable capacity for continued growth and increase the airport's annual economic impact to $1 billion.

The facility will allow TLH to accommodate international flights and give the ability for goods to be shipped to and received from worldwide destinations.

In coordination with the passenger related improvements, TLH is currently expanding their cargo apron area by over eight acres. This improvement would allow additional aircraft to utilize the airport and the associated support structures are intended to support additional freight volumes and freight types. Related to these improvements TLH is pursuing FTZ Designation to promote additional economic development.

Benefits to the region: Centrally located within the region, TLH provides commercial airport services in addition to the existing air freight movements

[23] https://www.transtats.bts.gov/Oneway.asp?Qv52ynB_Synt=D&cr4pr06_Synt=D

[24] https://www.talgov.com/airport/tlh-ipf

critical to the region. The expansion of the cargo apron, and potential FTZ designation may lead to significant freight and economic growth for the region.

Needs and issues for the region: The airport is forward-looking and is working on a myriad of improvements to better serve the region; however, these improvements will take time to complete and implement. The anticipated impact of these improvements will be further discussed within the future conditions analysis.

Freight Analysis Framework 5 (FAF5)

This study also builds upon the identification of freight volumes, estimated values and the modes in which are most heavily used. To generate this information, the Freight Analysis Framework (version 5.4.1) typically referred to as FAF5 was utilized.[25] This information has been included throughout the report as a baseline for information, to be built upon where more specific data can be provided. The FAF5 analysis groups data typically within Freight Analysis zones, which for the CRTPA region is the FAF5 Zone 129. Zone 129 covers largely the panhandle area and non-major metro areas of central FL highlighting one of the main limitations of this dataset. This data is not available at the county level for further review; however, the roadway network files are available which allow the identification of freight volume trends.

The Commodity flows throughout the Zone 129 are included in the following tables, with Table 29 depicting the volumes and estimated value originating in Zone 129, while Table 30 depicts the freight with its destination in the same area.

Table 29: 2022 Freight Movement with an Origin in the FAF5 Zone 129

	Truck	Rail	Water	Air (include truck-air)	Multiple Modes & Mail	Pipeline	Other and Unknown	Total
Tons (000s)	215,416	16,278	89	1.3	11,1823	6,302	0.004	249,268
Value (Million Dollars)	$116,425	$2,228	$27	$1,059	$30,993	$1,606	$0.018	$152,338

Source: FAF5.4.1

[25] https://www.bts.gov/faf

Table 30: 2022 Freight Movement with a Destination in the FAF5 Zone 129

	Truck	Rail	Water	Air (include truck-air)	Multiple Modes & Mail	Pipeline	Other and Unknown	Total
Tons (000s)	213,281	17,940	1,698	37.71	6,736	29,910	0.159	269,604
Value (Million Dollars)	$171,098	$2,277	$1,150	$2,262	$38,037	$6,313	$0.999	$221,138

Source: FAF5.4.1

To overcome the overall data limitations at a smaller scale with the FAF5 data sets, the roadway network and commodity flow tonnage was utilized to further understand the freight movements directly related to the CRTPA region. Figure 32 depicts the annual freight tonnage through the region's major roadway network.

This is an important metric to consider because freight tonnage along the roadway network has a direct correlation to roadway degradation and need for repair. Roadways being utilized for the movement of heavy freight are anticipated to require more frequent maintenance.

Corridors with significant freight volumes (10 million tons) are outlined in Table 31 by county and depicted across the region in Figure 32.

Table 31: FAF5 Over 10 Million Tons of Truck Freight

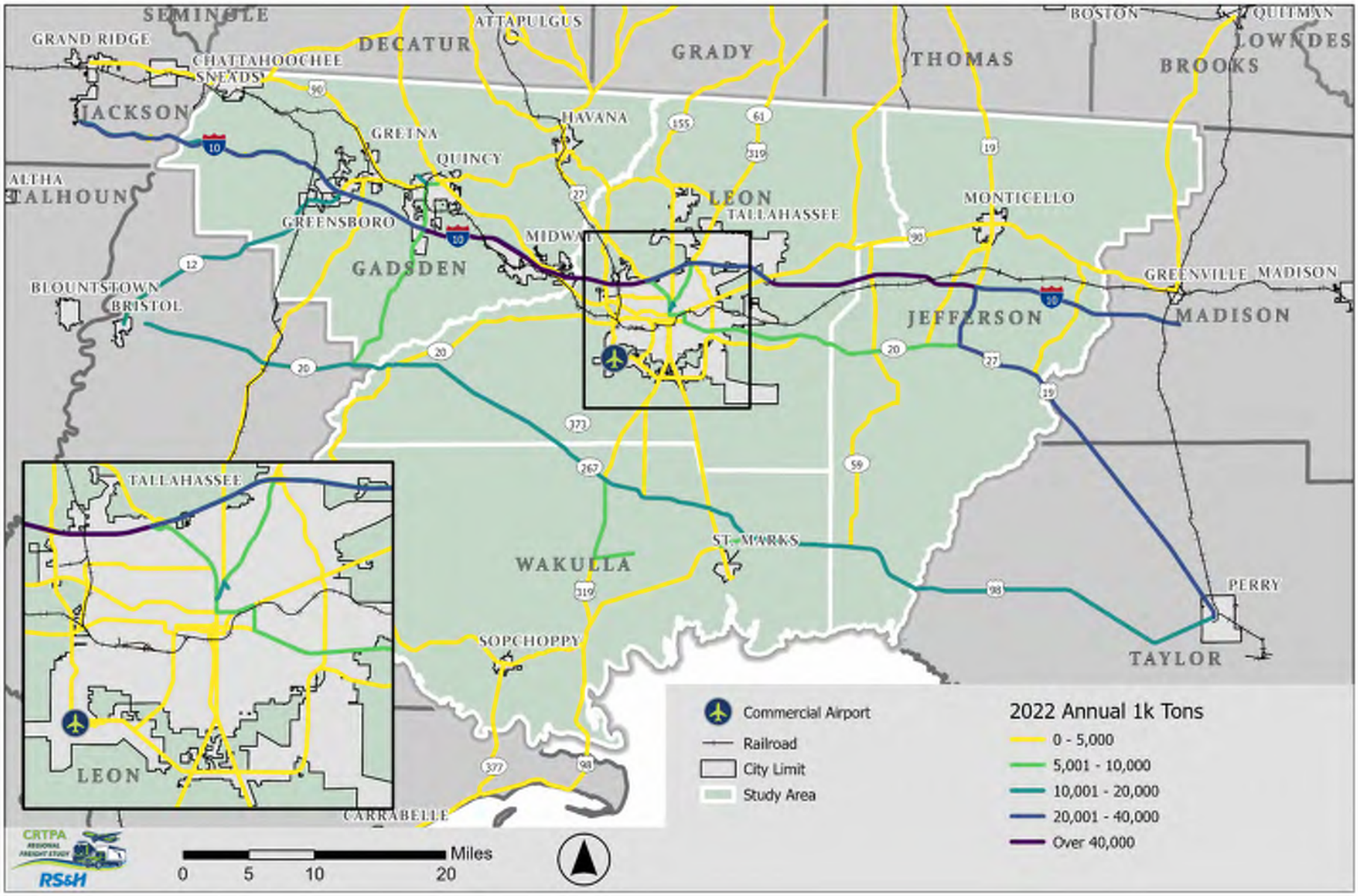
Area	Freight 1k Tons
Gadsden	-
I-10	46,435
SR 12	10,020
Jefferson	-
I-10	40,268
US 19	28,065
RAMP I-10	16,450
US 98	16,223
Leon	-
I-10	46,435
SR 20	12,680
THOMASVILLE RD	12,424
SR 267	11,149
Wakulla	-
US 98	16,223
SR 267	11,149

Source: FAF5.4.1

Benefits to the region: The FAF5 data identifies some key features of freight movement within the region, specifically the freight truck volumes. With freight truck volumes being the most prolific method of freight movement in the area, this data identifies key areas. These key areas will be considered for future improvements or identified as key corridors.

Needs and issues for the region: The freight truck volumes are indicative of areas experiencing heavy freight throughout the region and may highlight areas of increased maintenance needs.

Figure 32: FAF5 2022 Annual Freight Tonnage Estimates



Source: FAF5

Stakeholder Coordination

The project team held a series of meetings with stakeholders to discuss freight infrastructure and freight movements in the Tallahassee area. The stakeholder involvement consisted of a series of targeted individual meetings and the formation of a Freight Stakeholder Committee.

Freight Stakeholder Committee

The Freight Stakeholder Committee was composed of representatives from local/state agencies, economic development councils, and transportation industry professionals. The first committee meeting was held March 20, 2023 to introduce the project and identify key areas and features related to freight in the region.

The incorporated an interactive portion in which the attendees identified the following:

- Areas of Prioritized Growth
  - Primarily along the I-10 Corridor and within the urbanized areas
- Areas to Avoid/Concerns (None identified)
- Areas of Infrastructure Needs
  - Surrounding the Tallahassee area, Crawfordville, and in Greensboro
- Miscellaneous (None identified)

Attendees of the first meeting included:

- Agencies
  - Apalachicola Regional Planning Council
  - CRTPA
  - FDOT
  - Tallahassee/Leon County
  - Jefferson County
  - Gadsden County
- Economic Development
  - Gadsden County Economic Development Council
  - Jefferson County Economic Development Council
  - Wakulla County Economic Development Council
- Industry Professionals
  - Florida Gulf and Atlantic Railroad
  - Port of Port St. Joe
  - Tallahassee International Airport

The Stakeholder Committee will reconvene at later stages of the project to receive more information and have an additional opportunity to provide feedback.

Individual Stakeholder Meetings

Amazon

The Amazon stakeholder meeting was held on May 11, 2023 with Jeff Cleland. During the meeting, they shared information on several ongoing freight infrastructure projects in the Tallahassee area, including the fulfillment center, sortation building, and last mile site. They also discussed recent trends and opportunities with freight operations, such as an increasing interest in environmental sustainability, growth in air cargo, and the consideration of drones. The large fulfillment center location at I-10 and Mahan Drive will be largely serviced by large freight trucks coming to/from I-10. After sorting, the location will transfer materials to last mile sites, for delivery.

FDOT District Three

The FDOT District Three stakeholder meeting was held on April 25, 2023. Ray Corbitt served as the representative for FDOT District Three. Related to infrastructure needs, FDOT suggested an increase in capacity on I-10 due to issues with truck congestion after crashes. The stakeholders also discussed truck parking challenges in District Three and FDOT explained that new areas for truck parking are currently being considered in Jefferson and Leon Counties; however, these are still in the early planning stages. Additionally, the existing TPAS systems which are in place to count available truck parking are being upgraded to utilize camera identification instead of the previously considered puck counters. This modification is anticipated to reduce maintenance costs in the future.

Rail

Florida Gulf & Atlantic Railroad

The Florida Gulf & Atlantic stakeholder meeting was held on April 11, 2023. Steven Laird and Cassie Dull served as the representatives for Florida Gulf & Atlantic. During the meeting, the stakeholders discussed the high level of demand for rail frontage in the Tallahassee area and the movements of east/west freight rail in the region. Currently the railroad typically moves aggregates, and industrial chemicals in addition to other goods. The FG&A is interested in increased partnerships with businesses that require rail spurs/rail frontages within the region and is communicating with them as they are identified. Passenger rail was discussed and is something that the railroad will consider if the conditions are right, and the necessary improvements to the rail system are implemented. FG&A is currently developing their 5-year capital improvement plan to identify their upcoming needs.

Apalachicola Northern Railroad

The Apalachicola Northern stakeholder meeting was held on April 27, 2023. Representatives from Apalachicola Northern included Joe Arbona and Rob Anderson. The stakeholders explained that Apalachicola has 119 miles of rail from Port St. Joe to Chattahoochee and the primary cargo includes forest products.

Currently, their main challenge is bridge outages from previous hurricane damage south of Telogia (Liberty County). The railroad is interested in resuming service to the area; however, limited freight needs and high repair costs are limiting the feasibility of expansion into the coastal area.

Port of Port St. Joe

The Port of Port St. Joe stakeholder meeting was held on April 19, 2023. Guerry Magidson served as the representative for Port of Port St. Joe. During the meeting, the stakeholders discussed the status of the port and their future development priorities. Over the past three decades, there have not been major port activities or construction projects. Port of Port St. Joe is currently pursuing a dredging project and they have completed preliminary designs.

Tallahassee International Airport (TLH)

The TLH stakeholder meeting was held on May 23, 2023. Representatives for TLH included David Pollard, Eric Houge, and Vanessa Spaulding. During the meeting, TLH provided updates on current airport improvement projects, including a new international facility, implementation of a foreign trade zone (FTZ), and the opportunity to accommodate an additional cargo carrier. TLH representatives emphasized the value of the airport as a significant asset at both the community and regional levels. Citing the Florida Aviation Economic Impact Study, they shared that the airport had an $859 million impact in 2022, up from $529 million in 2019, and $399 million in 2014. With future improvements to the airport, TLH projects the economic impact to reach $1.2 billion in the near future.

Benefits to the region: The stakeholder engagement process builds upon existing datasets and provides more detailed information with the various freight industries which may not often be public information. The involvement of freight stakeholders also identifies future planning efforts and allows for the identification of specific issue areas or goals.

Needs and issues for the region: Each of the industry stakeholders expressed a desire to increase development within the area. and identified features which were currently limiting their development. Some key limitations within the region are as follows:

- Truck parking availability
- Bridge condition
- Railroad deferred maintenance
- Regional investment in freight activity/development

Future Conditions

CRTPA
REGIONAL
FREIGHT STUDY



RS&H

Contents

Figures 3
Tables 4
Alignment with Goals and Objectives 5
Socioeconomic Trends 6
Population 6
Freight Labor Supply 10
Freight Employment 10
Freight Employment Earnings 13
Business Environment 15
Business Establishments 15
Business Establishment by Freight Industry 19
Tourism 22
Network Performance 23
Highway Mobility 23
Annual Average Daily Traffic 23
Annual Average Daily Truck Traffic 26
Highway Level of Service 29
Rail Mobility 32
Rail Volume-To-Capacity 32
Rail Connectivity 36
Regional Rail Trade 39
Passenger Rail Considerations 40
Freight Intensive Areas 41
Future Land Use and Anticipated Growth 41
FDOT Freight Intensive Areas 43
Transportation Projects 49
Regional Truck Trade and Commodity Flows 52
Florida Shipping Trends 52
Shipping Trends by Mode 53
Florida Trading Partners 53
Key Corridors – All Commodities 54

Key Corridors – By County 56
Key Corridors – By Commodity 60
Regional Air Trade 61
Tallahassee International Airport (TLH) 61
Development Projects 61
Foreign Trade Zone 63
Expansion of FedEx Air Cargo Activity 63
Port Trade 64
Conclusion 64

Figures

Figure 1: Regional Population Projections 6
Figure 2: Regional 2022 to 2045 BEBR Population Projections 7
Figure 3: Regional Projected Population Growth (BEBR 2022-2045) 8
Figure 4: Regional Freight Industry Employment Projection (2022-2045) 11
Figure 5: Regional Freight Industry Employment Projection (2022-2045) 12
Figure 6: Freight Related Employment Earnings 14
Figure 7: Regional Business Establishments Compared to FL 2016-2020 16
Figure 8: Regional Business Establishments by County 2016-2020 18
Figure 9: Regional Business Establishment by Freight Industry Compared to FL 2016-2020 19
Figure 10: Regional Business Establishment by Freight Industry 2016-2020 21
Figure 11: Visit Tallahassee FY2022 Reasons for Visiting 22
Figure 13: Regional Top 10 Major Routes AADT 2022 25
Figure 14: Regional Major Routes – AADT Changes 2020|2022 26
Figure 15: Regional Top 10 Major Routes – Truck Counts 28
Figure 16: Regional Major Routes - Truck Percentage Changes 2020|2022 29
Figure 17: Corridors Failing to Meet LOS 31
Figure 18: CRTPA Rail Network: Apalachicola Northern Volume-to-Capacity 33
Figure 19: CRTPA Rail Network: Florida Gulf and Atlantic Volume-to-Capacity 34
Figure 20: Regional Rail Network Existing Volume-to-Capacity 35
Figure 21: Regional Rail Network Hub Locations and Functions 38
Figure 22: Regional Future Land Uses 45
Figure 23: Freight Related Future Land Uses 46
Figure 24: Freight Related Future Land Use and Existing Number of Employees 47
Figure 25: FDOT Freight Intensive Areas and FAF5 2050 Commodity Flow Data 48
Figure 26: RMP Projects Anticipated to Benefit Freight Movement 51
Figure 27: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2022) 58

Figure 28: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2050) 59

Tables

Table 1: CRTPA Projected Population Growth (2022-2045) 8
Table 2: National Freight Occupation Employment 10
Table 3: Freight Employment Projection (2022-2045) 12
Table 4: Statewide Freight Industry Employment Projection (2022-2030) 13
Table 5: Freight-Related Employment Earnings (2022-2045) 15
Table 6: Business Establishments by County 2016-2024 17
Table 7: Business Establishments by Freight Industry 2016-2024 20
Table 8: Visit Tallahassee Key Performance Indicators FY2022 23
Table 9: CRTPA Rail Network Volume-to-Capacity 32
Table 10: Freight Related Future Land Use Acreages 43
Table 11: Roadway Improvement Projects – Anticipated Freight Benefit 50
Table 12: Shipments Within, Outbound, and Inbound the state of Florida. 52
Table 13: Freight Tonnage by Mode 53
Table 14: Top 5 Trading Partners 54
Table 15: Top 10 Freight Corridors in the Region (2022) 55
Table 16: Top 10 Freight Corridors in the Region (2050) 56
Table 17: Top 5 Corridors for Freight Growth in the Region (2022-2050) 56
Table 18: Top Freight Corridors by Maximum Tonnage (2050) 57
Table 19: Top Corridors (Tonnage) by Commodity (2050) 61
Table 20: Combined Impacts of Development Projects at TLH 62
Table 21: TLH Cargo Forecasts 62

Future Conditions

Identifying future conditions of the transportation system's framework and characteristics is imperative for understanding the benefits, needs, and issues experienced by the Capital Region Transportation Planning Agency (CRTPA) region (the region). The following future conditions assessment identifies CRTPA future freight-related conditions and trends that build from the existing conditions framework relative to impacts on the region.

It analyzes factors that collectively define the regional freight mobility impact profile while providing a point of reference for impacts on the benefits, needs, or issues experienced by the region. The profile primarily includes assessment of shifts in socioeconomic and business patterns, freight network performance, land-use activities, and freight activity profiles. Equally important, the assessment will support development of the study's findings and recommendations for improving freight mobility needs.

Alignment with Goals and Objectives

The impacts identified in these future conditions assessment build on the freight mobility framework defined in the existing conditions assessment. The combined assessments will promote safe and efficient movement of freight and contribute to the economic viability for the region.

In addition, the assessment aligns with federal and state freight mobility goals, objectives, and recommendations to promote a collective freight vision, meet policy requirements, leverage funding opportunities, and foster partnerships.

The combined assessment framework follows CRTPA's six freight objectives to ensure alignment with the National Freight Strategic Plan Goals, the Florida Transportation Plan Goals, and the Florida Freight Mobility and Trade Plan Objectives:

1. Improve freight transportation safety through data driven implementation.
2. Maintain and improve the CRTPA freight system for more resiliency.
3. Improve CRTPA freight system connectivity and function to reduce congestion, bottlenecks and improve reliability.
4. Implement strategies to improve supply-chain efficiencies and last mile connections.
5. Enhance collaboration with stakeholders to improve trade and logistics partnerships.
6. Implement strategies that capitalize on emerging technologies to improve freight system performance.

Socioeconomic Trends

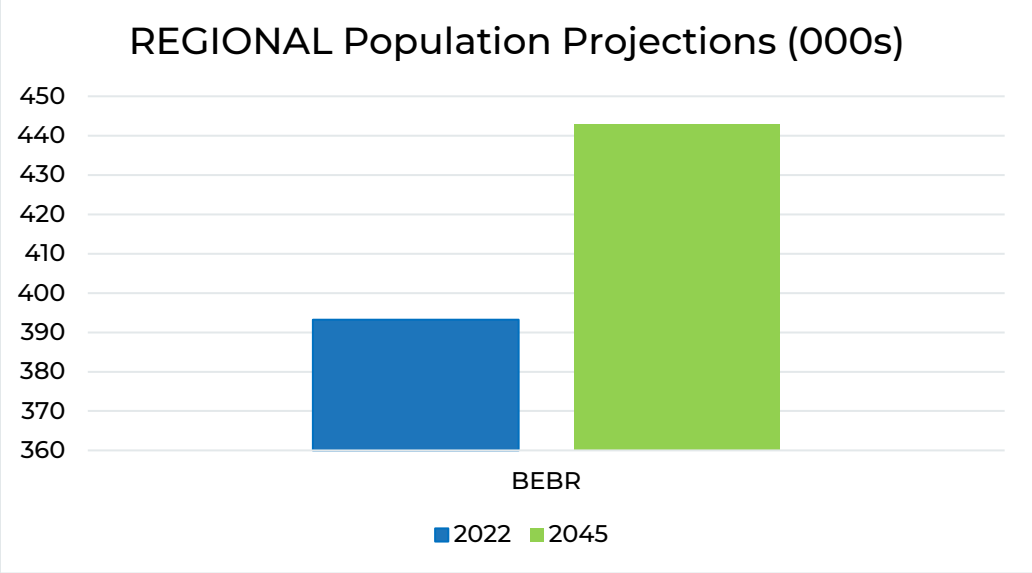
Socioeconomic factors are key indicators for characterizing growth impacts within an area. These factors account for shared cultures and norms that shape the area's social decision, activities, and policies. In the assessment of freight mobility impacts, population growth, freight labor supply changes, business environment changes, and tourism are key socioeconomic factors that influence freight mobility within an area. The following assessments analyzes the existing and future trends for CRTPA's population, freight labor, business environment, and tourism. The assessments provide a foundation for defining the freight mobility impact profile in reference to the benefits, needs, or issues experienced by the region.

Population

Population changes have a direct impact on demand for goods and services and thus is a key indicator for influencing freight mobility.

Due to the inherent variability of population projections, the Bureau of Economic and Business Research (BEBR) and Woods and Poole Projection data were compared. Though both datasets were very similar, the BEBR population projections were more conservative and therefore chosen as the preferred data source (Figure 1). A comparison of the sources and their data is included within Appendix 1.

Figure 1: Regional Population Projections

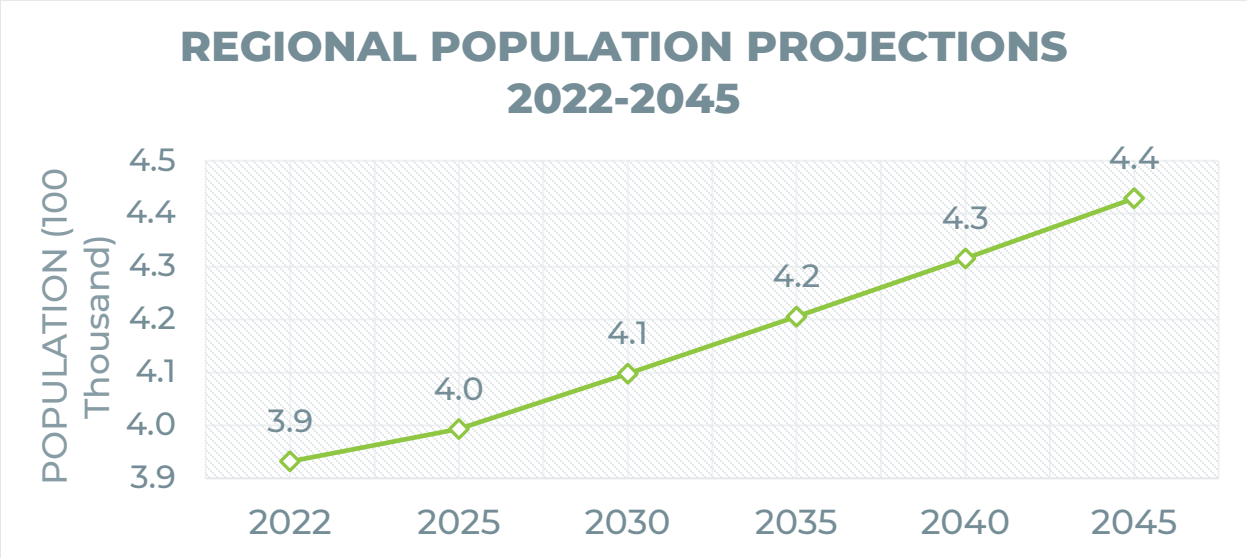


Source: BEBR Volume 56, Bulletin 195: April 2023

CRTPA's population is projected to sustain growth with the highest concentration in Leon County. The region's 2022 population was approximately 393,000 with a

projected 15% increase to reach over 442,000 by 2045[1] as shown in Figure 2. This indicates that the region will add over 56,000 new residents during this period. Both the population within the region and within the state are anticipated to grow; the state growth rate of 18.31% is anticipated to outpace the regional growth rate of 11.22%.

Figure 2: Regional 2022 to 2045 BEBR Population Projections

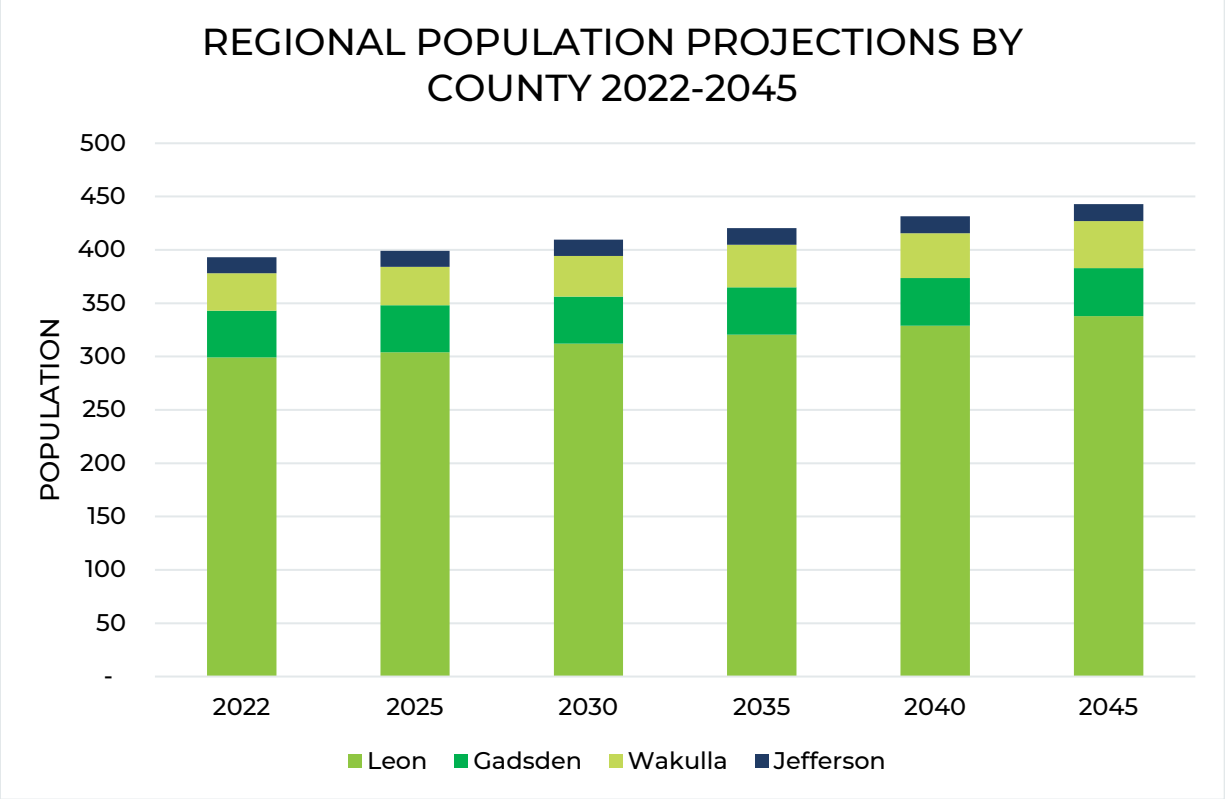


Source: BEBR Volume 56, Bulletin 195, April 2023

Leon County is projected to experience the highest absolute population growth while Wakulla County will have the highest population growth rate, increasing an average of 1% annually between 2022 and 2045. Figure 3 and Table 1 depict the predicted population growth by county in the region.

[1] BEBR Volume 56, Bulletin 195, April 2023

Figure 3: Regional Projected Population Growth (BEBR 2022-2045)



Source: BEBR

Table 1: CRTPA Projected Population Growth (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region	Florida
2022 Population (000s)	299.13	43.97	35.17	14.92	393.19	22,276.13
2045 Population Medium Projection (000s)	337.9	44.9	44.1	16	442.9	27,270.00
Total Population Change 2022-2045 (000s)	38.77	0.93	8.93	1.08	49.71	4,993.87
% Population Change 2022-2045	11.47%	2.07%	20.25%	6.75%	11.22%	18.31%
Annual Average Population Growth Rate 2022-2045	0.50%	0.09%	0.88%	0.29%	0.49%	0.80%

Source: BEBR Volume 56, Bulletin 195, April 2023

Benefits to the region: the overall CRTPA population future growth is at a slower pace than the state; however, the region can expect to have future increases in demand for goods and services that align with its population growth. Additionally, these activities and demand will create a requirement for more efficient freight mobility so that impacts are reduced.

Issues for the region: Population change is not anticipated to have a negative impact on the region; however, development can increase congestion on the roadway network.

Freight Labor Supply

Freight labor supply plays a critical role in defining the freight industry's ability to respond to demand for goods and services generated within an area. Assessing existing and future conditions for freight labor supply provides an indication of how freight mobility is impacted within an area. The following defines CRTPA's freight labor conditions through analyzing the freight industry employment and earnings.

Observing national trends, truck drivers and rail operators are experiencing staffing shortages which can reduce efficiency and create safety concerns as existing employees fill the deficit. The U.S. Bureau of Labor Statistics (BLS) 2019 and 2022 data indicates the following changes between 2019 and 2022(Table 2).[2]

Table 2: National Freight Occupation Employment

Occupation	2019	2020	2021	2022
Truck Transportation NAICS 484000	1,521,590	1,470,940	1,492,240	1,557,370
Rail Transportation NAICS 482100	233,830	213,790	219,790	183,670

Source: BLS Occupational Tables

Both rail and trucking industries saw a decline in employment beginning in 2020; however, truck transportation has seen an increase after the initial 2020 decline. Rail employment has lessened along with headlines of recent employee strikes which the Federal Government was needed to address. It is likely that these conditions will begin to stabilize, as we are recovering from the worldwide impacts of the Covid-19 Pandemic; however, the recovery times will vary by industry.

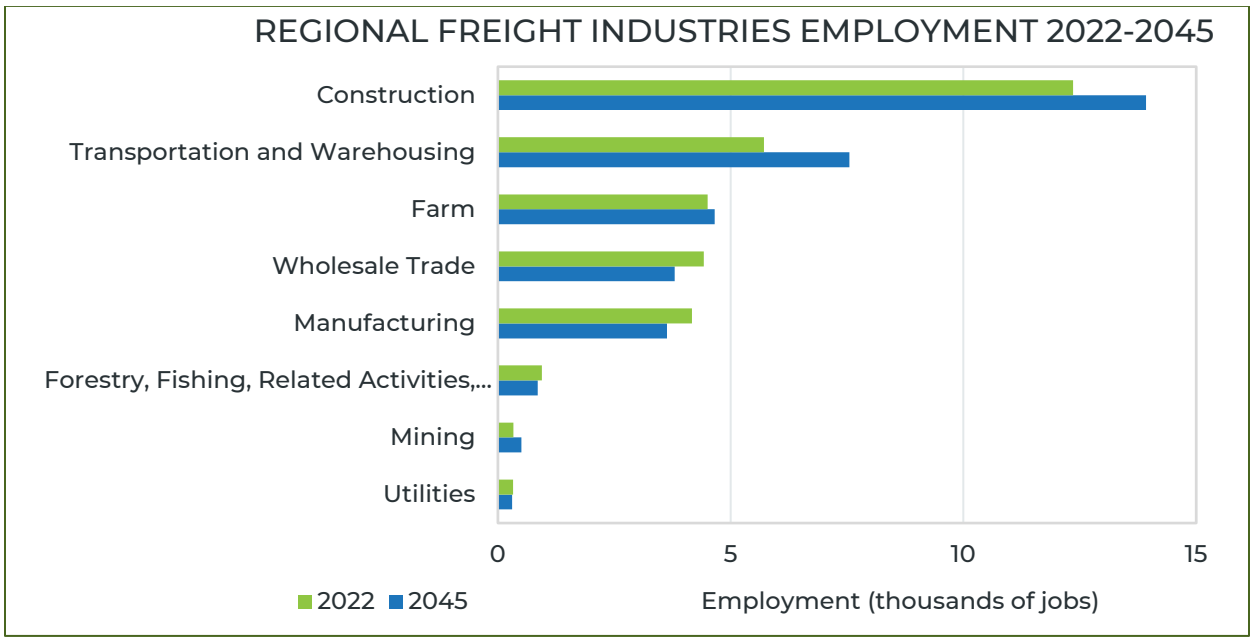
Freight Employment

An analysis of freight-related employment was conducted utilizing Woods and Poole (2022 – 2045) and Florida Department of Commerce (FDOC, 2022 - 2030) projection data sets to determine the trends in the area. Overall, the freight-related employment in the region shows a positive outlook with projections pointing towards growth over the planning horizon.

The analysis shows Construction, Transportation and Warehousing as the two largest freight-related industries currently in the region; they are expected to sustain their growth momentum in the coming years. Conversely, other industries, such as Farm, Manufacturing, Forestry, and Utilities have fewer employees and are projected to experience declines as shown in Figure 4.

[2] https://www.bls.gov/oes/tables.htm

Figure 4: Regional Freight Industry Employment Projection (2022-2045)



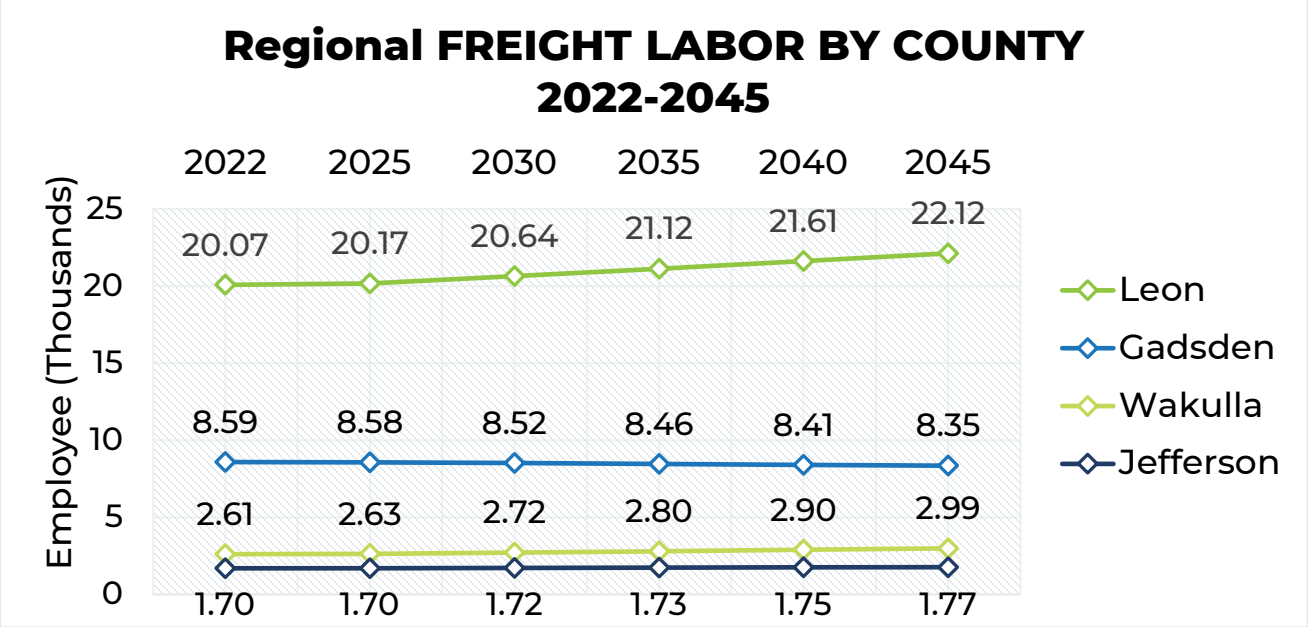
Source: Woods and Poole

In 2022, freight-related industries employed a total of 32,766 people in the region, and projections from Woods and Poole indicate that this number is expected to increase by approximately 7.5% over the time frame, reaching over 35,000 in 2045. The majority of freight-related employment is concentrated in Leon County, followed by Gadsden County, Wakulla County, and Jefferson County.

Projections from Woods and Poole indicate that Gadsden County is likely to see slight decreases in freight-related employment, while Wakulla County is likely to see the highest growth rate of nearly 0.7% per year until 2045 (Figure 5 and Table 3).

Recent development initiatives related to freight and logistics, in connection with the Apalachicola Northern (AN) Railroad and I-10, indicate that Gadsden County is actively promoting industries that rely on freight movement. These initiatives will likely contribute to continued economic growth and employment opportunities in the freight sector in the future.

Figure 5: Regional Freight Industry Employment Projection (2022-2045)



Source: Woods and Poole

Table 3: Freight Employment Projection (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region
2022 Freight Employment (000s)	19.89	8.61	2.58	1.69	32.77
2045 Freight Employment (000s)	22.12	8.35	2.99	1.77	35.03
Total Freight Employment Change 2022-2045	2.23	(0.26)	0.41	0.08	2.26
% Freight Employment Change 2022-2045	11.24%	(3.08%)	15.96%	4.78%	7.52%
Annual Average Freight Employment Growth Rate 2022-2045	0.46%	(0.12%)	0.65%	0.20%	0.32%

Source: Woods and Poole

Florida Department of Commerce (FDOC) data was also utilized to review the projections; however, this data grouped the counties together preventing a direct comparison (Table 4). Appendix 1 depicts the FDOC data which projects similar outcomes out to 2030.

FDOC projections for statewide freight employment indicate 0.79% growth. This growth rate is higher than the expected region rate of 0.32%, indicating that freight employment will be focusing on higher percentages outside of the region.

Table 4: Statewide Freight Industry Employment Projection (2022-2030)

	Florida Department of Commerce[3]
	Statewide Freight employment
2022 Freight Employment (000s)	1,812.12
2030 Freight Employment (000s)	1,972.02
Total Freight Employment Change 2022-2030	159.83
% Freight Employment Change 2022-2030	6.28%
Annual Average Freight Empl. Growth Rate 2022-2030	0.79%

Source: FDOC

Benefits to the region: Generally, freight employment is projected to grow within the region, highlighting continued opportunities within the region.

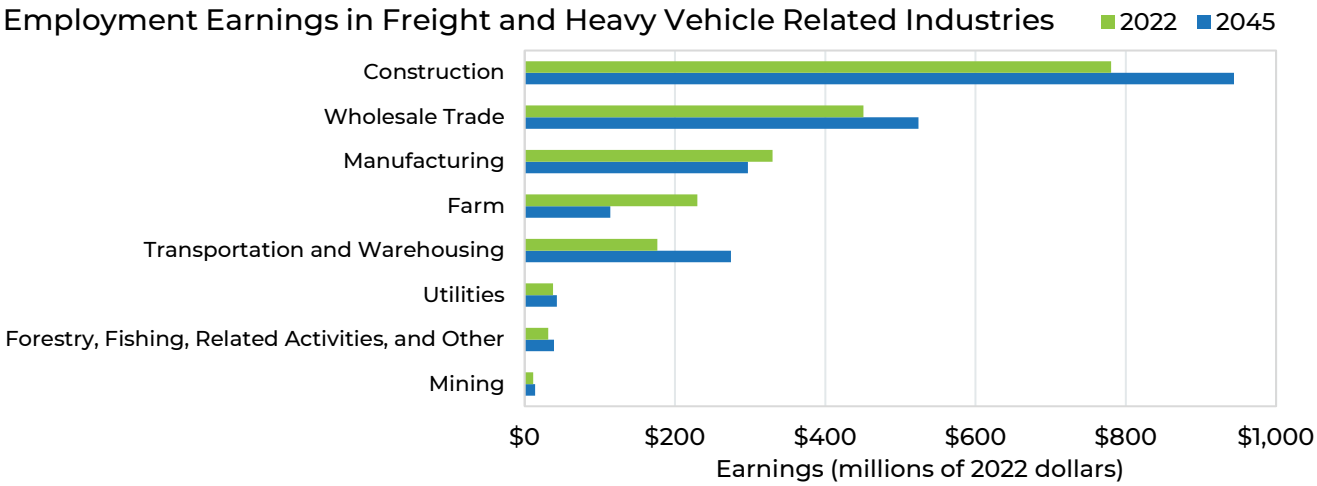
Needs and Issues for the region: Similar to population increases, freight-related employment can also represent an increased need for overall freight movement on the roadway network. These increases will likely be along major corridors and employment centers.

Freight Employment Earnings

Woods and Poole provide data on employment earnings, which represent the total earnings of all paid wages and salaries and offer a measure of the overall economic performance and prosperity of freight-related industries within the region. By 2045, most freight-related industries are projected to see increases in total employment earnings. The highest growth will be in the Transportation and Warehousing industry, where earnings are projected to increase from 2022 to 2045 (Table 5 and Figure 6). The construction industry is projected to have the most total earnings growth, and the freight-related industries seeing declines in earnings include Manufacturing and Farm.

[3] https://floridajobs.org/economic-data/employment-projections

Figure 6: Freight Related Employment Earnings



Source: Woods and Poole (note: values have been updated from 2012 to 2022 using a conversion rate of 1.2747, based on Consumer Price Index (CPI) 2022)

Similar to the total population and total freight-related employment trends, the highest total earnings increase over the next three decades will be in Leon County, but Wakulla will see the highest percent growth in freight-related employment earnings. Overall, earnings in the region are projected to increase by more than $202 million by 2045.

As discussed within the freight employment section, Gadsden County is expected to see a decline in overall freight-related earnings. The county and its Development Council are actively promoting growth in the region. These efforts are likely not represented within the projection models; therefore, it is likely that the reduction projections will be mitigated by these efforts.

Table 5: Freight-Related Employment Earnings (2022-2045)

	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
2022 Freight Earnings (million $2022)	$578.11	$68.84	$1,261.86	$138.06	$2,046.87
2045 Freight Earnings (million $2022)	$529.19	$82.09	$1,456.27	$181.97	$2,249.52
Total Freight Earnings Change 2022-2045	$(48.92)	$13.25	$194.41	$43.91	$202.65
% Freight Earnings Change 2022-2045	(8.46%)	19.25%	15.41%	31.80%	9.90%
Annual Average Freight Earnings Growth Rate 2022-2045	(0.30%)	0.77%	0.63%	1.21%	0.42%

Source: Woods and Poole (note: values have been updated from $2012 to $2022 using a conversion rate of 1.2747, based on CPI 2022)

Benefits to the region: Increasing earnings are indicative of healthy industries and economic growth in the region. This healthy economy can promote growth outside of just freight considerations.

Needs and Issues for the region: Projection data indicates that Gadsden County is expected to see a decrease in employment and earnings over the planning horizon. Though it is possible that a decline will happen, county staff and representatives are actively pursuing freight related development and promoting growth. Overall, the region is susceptible to tropical storm activity which can shift population and business projections, impacting projections. For example, Gadsden County experienced population decline between 2010 and 2020 Census counts[4], which coincides with hurricane Michael impacts to the community.

Business Environment

Business environments directly influence freight mobility by both generating demand for goods for customers and product development, and by employing workers who generate demand for goods. Increasing in the number of establishments means an increase in demand for goods by both the industry and the general consumer. This section analyzes the changes (increases) in CRTPA's business establishments and the impacts and compares the changes with the State as a point of reference.

Business Establishments

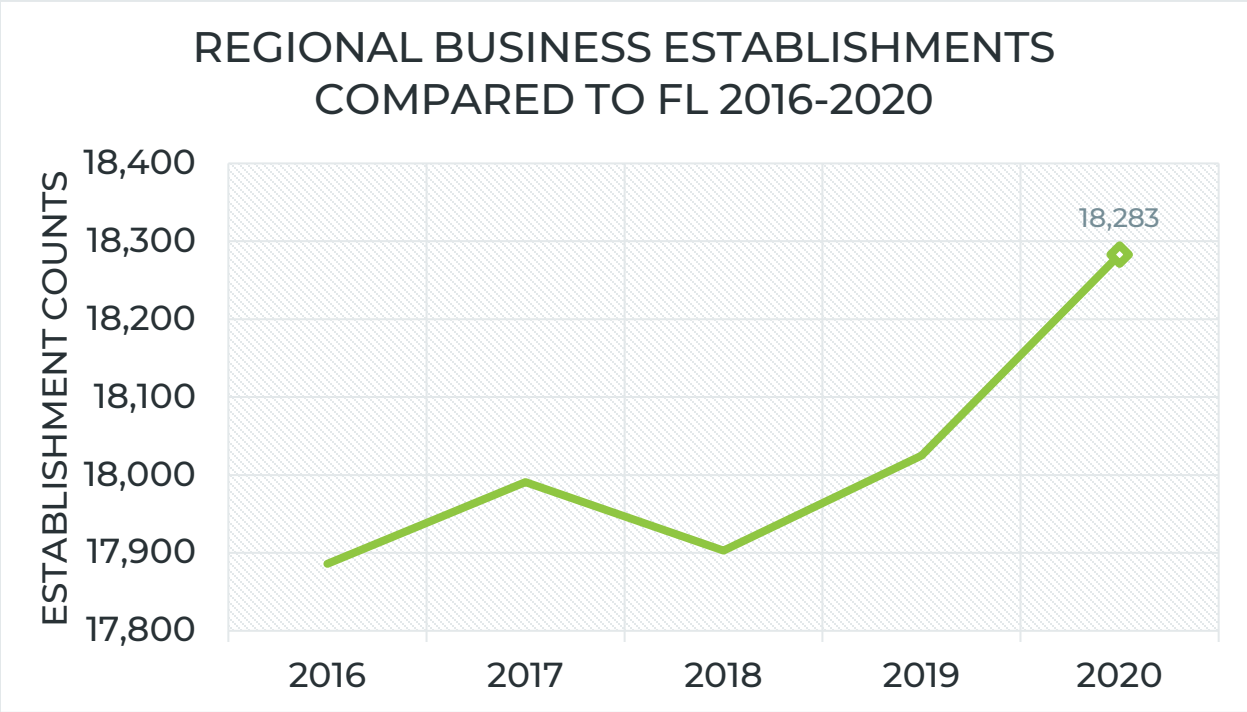
The region's business establishments have grown 2% (14,886 to 18,283) between 2016 and 2020 (Figure 7) indicating a low level of growth in comparison to the state which

[4] https://data.census.gov/

experienced 8% growth (1,089,950 to 1,176,855). This means that small changes in business establishments are expected in the region though not at the same rate as the state.

Business establishment for the counties show a range of -2% to 3%; these changes fall below CRTPA and have small impact for growth and decline. Table 6 and Figure 8 depict the business establishment figures by county.

Figure 7: Regional Business Establishments Compared to FL 2016-2020



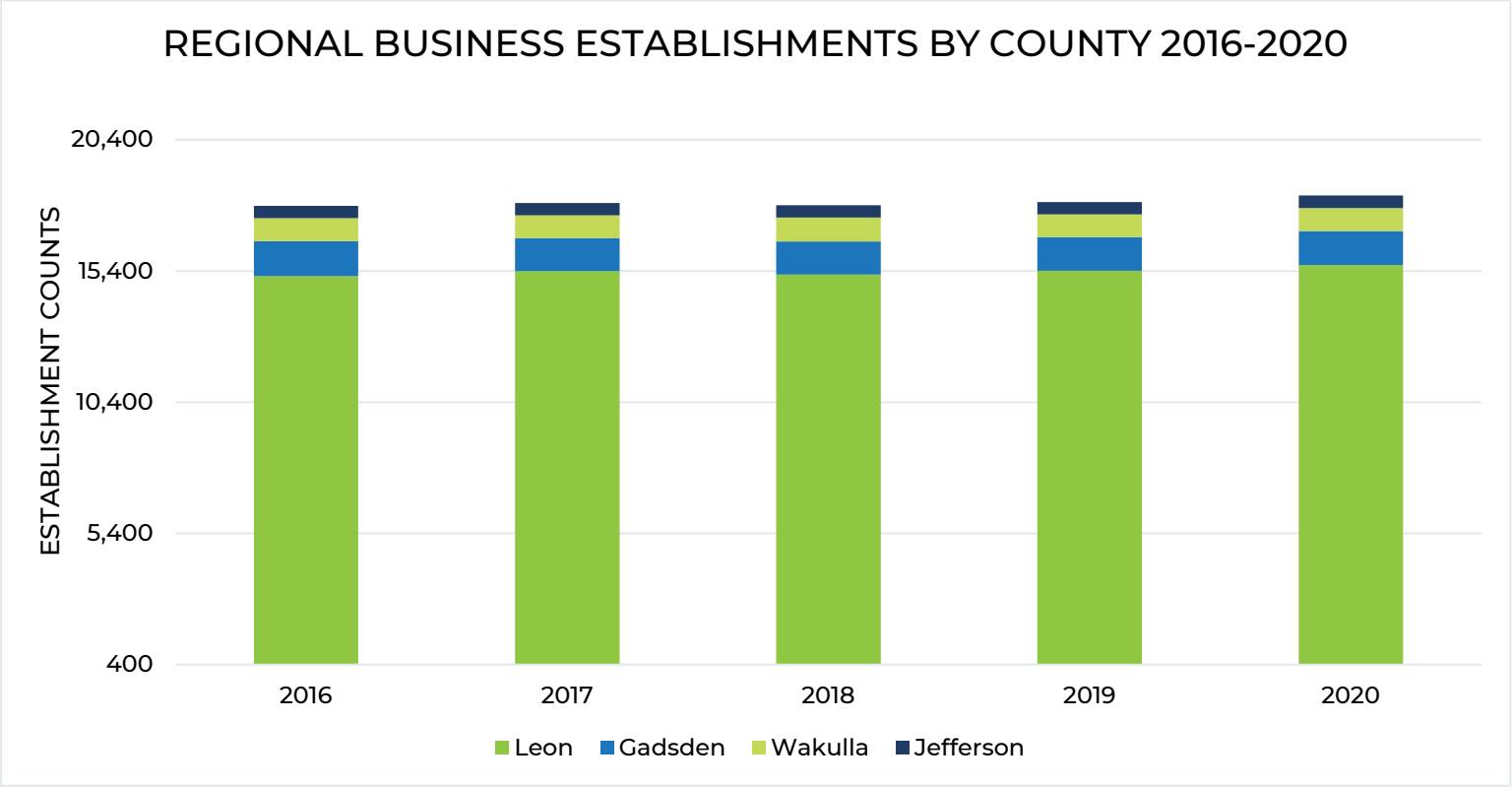
Source: US Census Bureau County Business Patterns

Table 6: Business Establishments by County 2016-2024

Geography	2016	2017	2018	2019	2020	Change 2016-2020
Florida	1,089,950	1,109,725	1,128,716	1,143,739	1,176,855	0.08
CRTPA	17,886	17,991	17,903	18,025	18,283	0.02
Leon	15,206	15,401	15,259	15,409	15,619	0.03
Gadsden	1,328	1,259	1,270	1,278	1,298	(0.02)
Wakulla	880	856	904	874	880	-
Jefferson	472	475	470	464	486	0.03

Source: US Census Bureau County Business Patterns

Figure 8: Regional Business Establishments by County 2016-2020



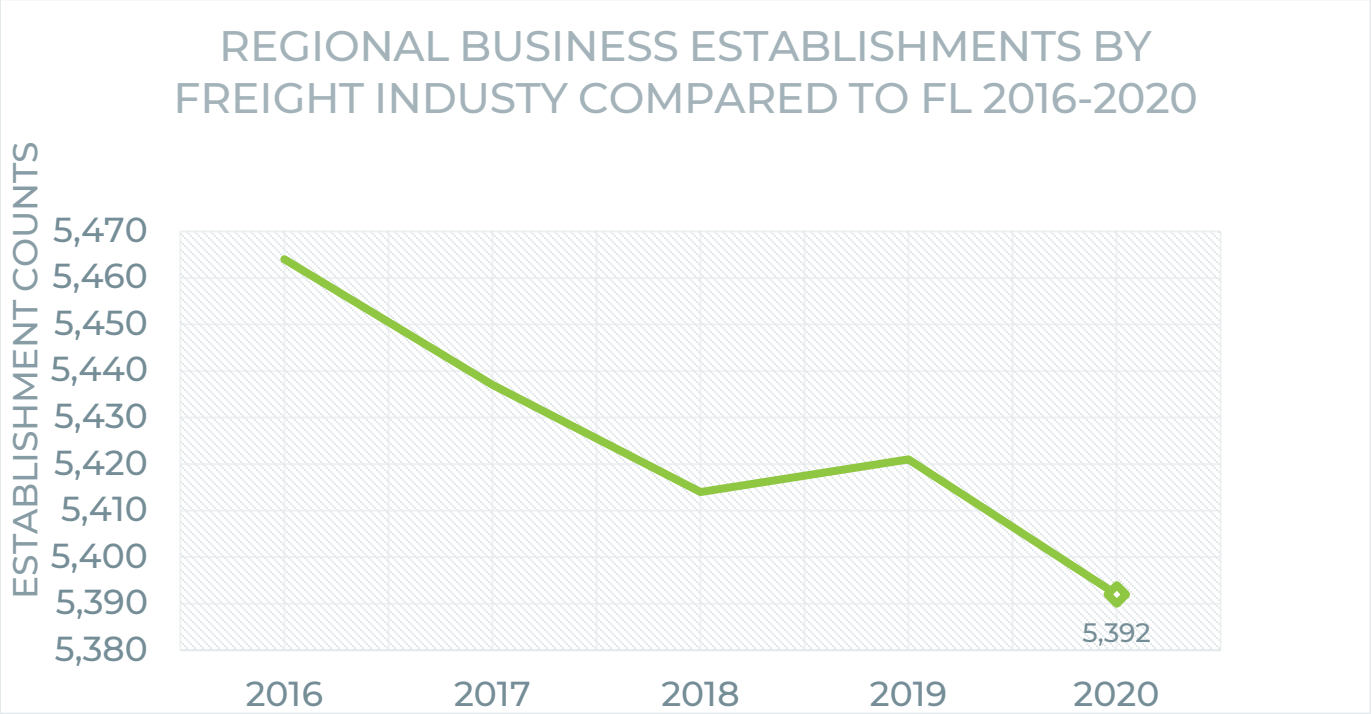
Source: US Census Bureau County Business Patterns

Business Establishment by Freight Industry

An additional analysis of the freight industry business establishments was conducted to determine if there was a freight-focused impact by changes in the business environment. These industries included retail trade, construction, wholesale trade, manufacturing, transportation and warehousing, agriculture, and mining.

CRTPA freight industry business establishments declined 1.3% (5,464 to 5,292) over the 2016-2020 period (Figure 9); while the state experienced a 49% increase (37,2974 to 392,269) 5%. This means that changes in freight industry business establishments are expected to slightly decline in the region opposite to the state.

Figure 9: Regional Business Establishment by Freight Industry Compared to FL 2016-2020



Source: US Census Bureau County Business Patterns

Business establishment by freight industry show a range of -100% to 11%; there is a 10% gap between construction at 11% and all the other industries that fall below 0% change. Construction has the highest expected growth for CRTPA's freight industry business establishments. Table 7 and Figure 10 depict this data.

Benefits to the region: Understanding the growth and industry sectors will be an important feature in future land use and policy planning. Industry clustering and encouragement can be prioritized throughout the region.

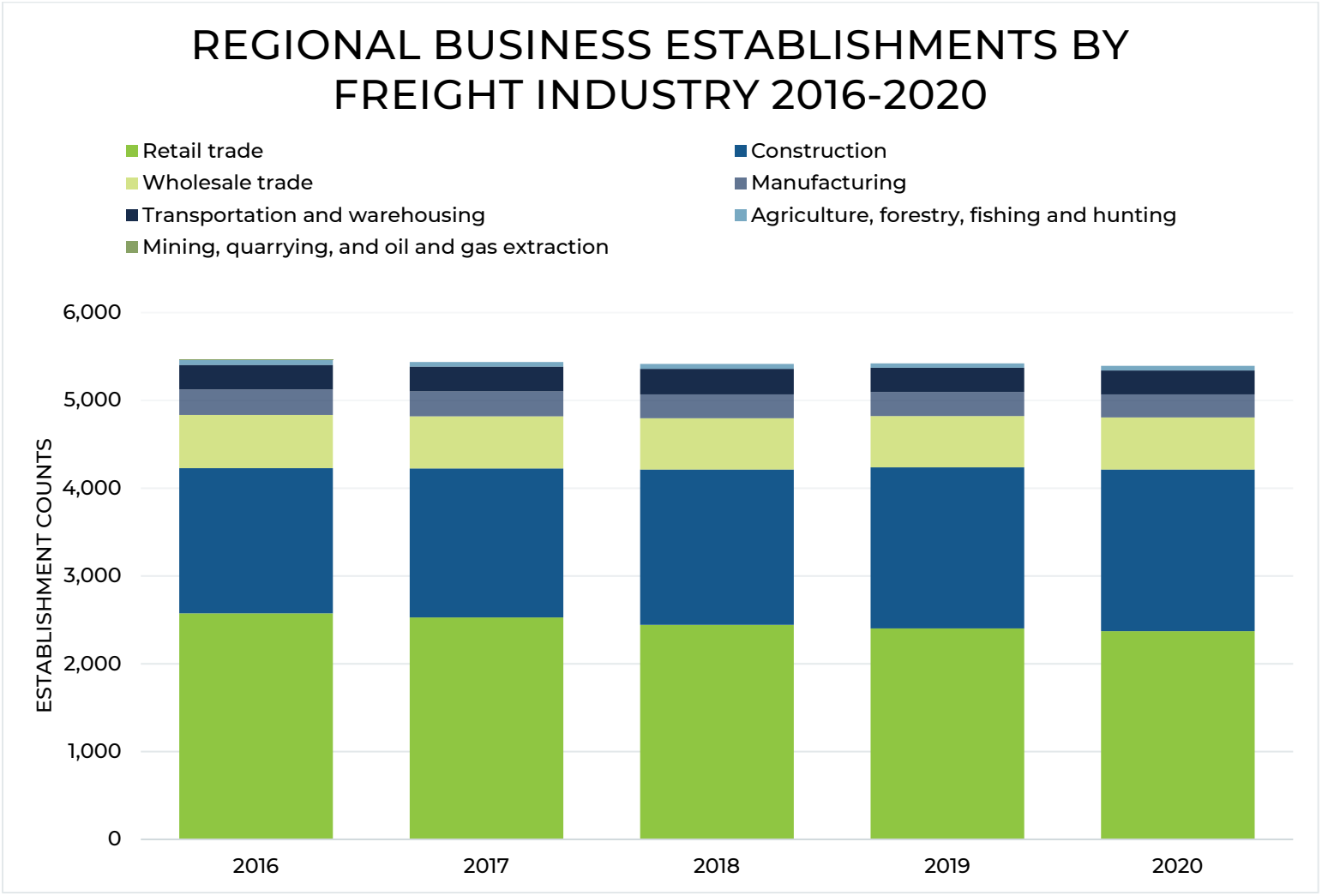
Needs and Issues for the region: The region is not anticipated to keep pace with the state's growth, highlighting the possible need for targeted development efforts.

Table 7: Business Establishments by Freight Industry 2016-2024

Industry	2016	2017	2018	2019	2020	Change 2016-2020
Florida Freight Industry	372,974	377,741	383,179	385,811	392,269	0.05
CRTPA Freight Industry	5,464	5,437	5,414	5,421	5,392	-0.01
Retail trade	2,574	2,528	2,444	2,404	2,372	-0.08
Construction	1,654	1,698	1,768	1,833	1,840	0.11
Wholesale trade	606	594	585	586	593	-0.02
Manufacturing	292	282	270	273	265	-0.09
Transportation and warehousing	278	283	293	276	271	-0.03
Agriculture, forestry, fishing and hunting	56	52	54	49	51	-0.09
Mining, quarrying, and oil and gas extraction	4	-	-	-	-	-1.00

Source: US Census Bureau County Business Patterns

Figure 10: Regional Business Establishment by Freight Industry 2016-2020



Source: US Census Bureau County Business Patterns

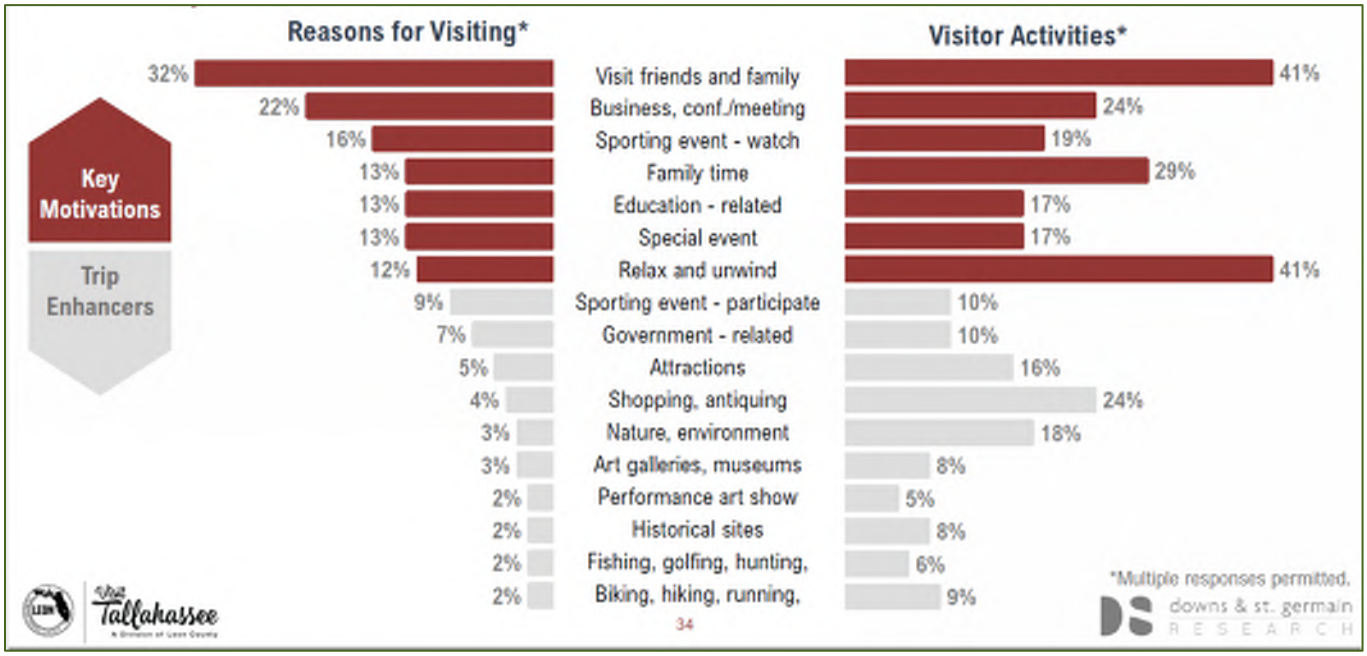
Tourism

Tourism directly influences freight mobility by both generating more vehicle traffic from attracting traveling visitors; and by generating more freight traffic from the traveling visitors demanding more goods. Therefore, increases in the number of visitors represent an increased impact on freight mobility. This section analyzes CRTPA's tourism and the expected impacts on freight mobility.

Each CRTPA county has organized offices for promoting tourism; however, only Visit Tallahassee (Leon) has an identified process for researching and documenting the impacts tourism has on the county. Visit-Tallahassee data source used social marketing methodologies to capture and estimate tourism supply components along with analyzing key economic performance indicators including the number of visitors, the mode of travel, and origins. Notably, Tallahassee is the principal urban core for CRTPA; in addition, there was limited data available to conduct tourism analyses for Gadsden, Wakulla, and Jefferson counties. Therefore, CRTPA tourism profile is based on visitor motivators for Tallahassee-Leon area and used as an indicator benchmark for regional impact overall.

Reasons for visits: Research shows visits to friends and family, business meetings, and sporting events were the key motivations for visiting up to 70% of the FY 2022 trips (Figure 11). These trips were enhanced by related activities including participation in attractions, shopping, and other recreational activities.

Figure 11: Visit Tallahassee FY2022 Reasons for Visiting



Source: Visit Tallahassee Economic Impact of Tourism Report Fiscal Year 2022

Number of Visitors: Tallahassee-Leon area had a 34% increase resulting in total economic impact of nearly $1.2 billion (Table 8).

Table 8: Visit Tallahassee Key Performance Indicators FY2022

Economic Indicators	FY 2021	FY 2022	% Change
Visitors	1,740,900	2,333,400	34.0%
Direct Expenditures	$559,099,200	$728,969,400	30.4%
Total Economic Impact	$883,376,800	$1,151,771,700	30.4%
Room Nights Generated	1,243,480	1,442,543	16.0%
Jobs Created	12,868	14,708	14.3%
Wages Paid	$341,6147,100	$414,123,500	21.2%
Taxes Paid	$62,159,100	$89,874,900	44.6%
Tourist Development Tax	$5,310,178	$7,886,542	48.5%

Source: Visit Tallahassee Economic Impact of Tourism Report Fiscal Year 2022

Benefits to the region: the 34% increase of visitors and $1.2 billion impact for CRTPA's urban core mean more vehicle and freight traffic from the traveling visitors demanding more goods, and also mean an increased impact on freight mobility.

Needs and Issues for the region: additional evaluation of the tourism impact is needed to capture a more complete regional profile of the tourism influence on freight demand.

Network Performance

Network performance indicators help to define the network's ability to support efficient freight mobility within an area. The following assessment takes a strategic approach for defining network performance by measuring connectivity and reliability of the multimodal network. Along with safety, connectivity, and reliability are freight mobility indicators important to industry operators. This assessment defines CRTPA's highway and rail multimodal network performance through analyzing connectivity and reliability. See the Existing Conditions Section for the safety analysis.

Highway Mobility

The highway network is the primary link for the freight network; it includes the first and last mile and the connection with all other modal nodes. Reliable highway mobility is a direct indication for reliable freight mobility and can be measured through AADT, truck percentage, level of service.

Annual Average Daily Traffic

The Average Annual Daily Traffic (AADT) is a good indicator for mobility conditions of vehicle traffic. The AADT values used in this section are based on observed data

captured by telemetered traffic monitoring sites (TTMS) and accounts for all highway vehicle classifications. As such, freight traffic is influenced by traffic conditions created from passenger, utility, and freight vehicles.

Top Ten Major Routes by AADT

CRTPA has an extensive network of highways segments that vary in functionality to serve a full range of traffic demand. However, it's important to focus on highway segments that generally carry more traffic. These higher traffic values relate to commonly used segments which become major routes when a pattern and frequency-of-use is identified. Additionally, these commonly used segments influence policy and investments for improving these segments which then shape travel pattern and frequency to become major routes for freight mobility. This section identifies CRTPA's existing and future top ten major routes to show where the highest AADT values occur (and expected to occur) and the conditions of travel pattern and frequency-of-use.

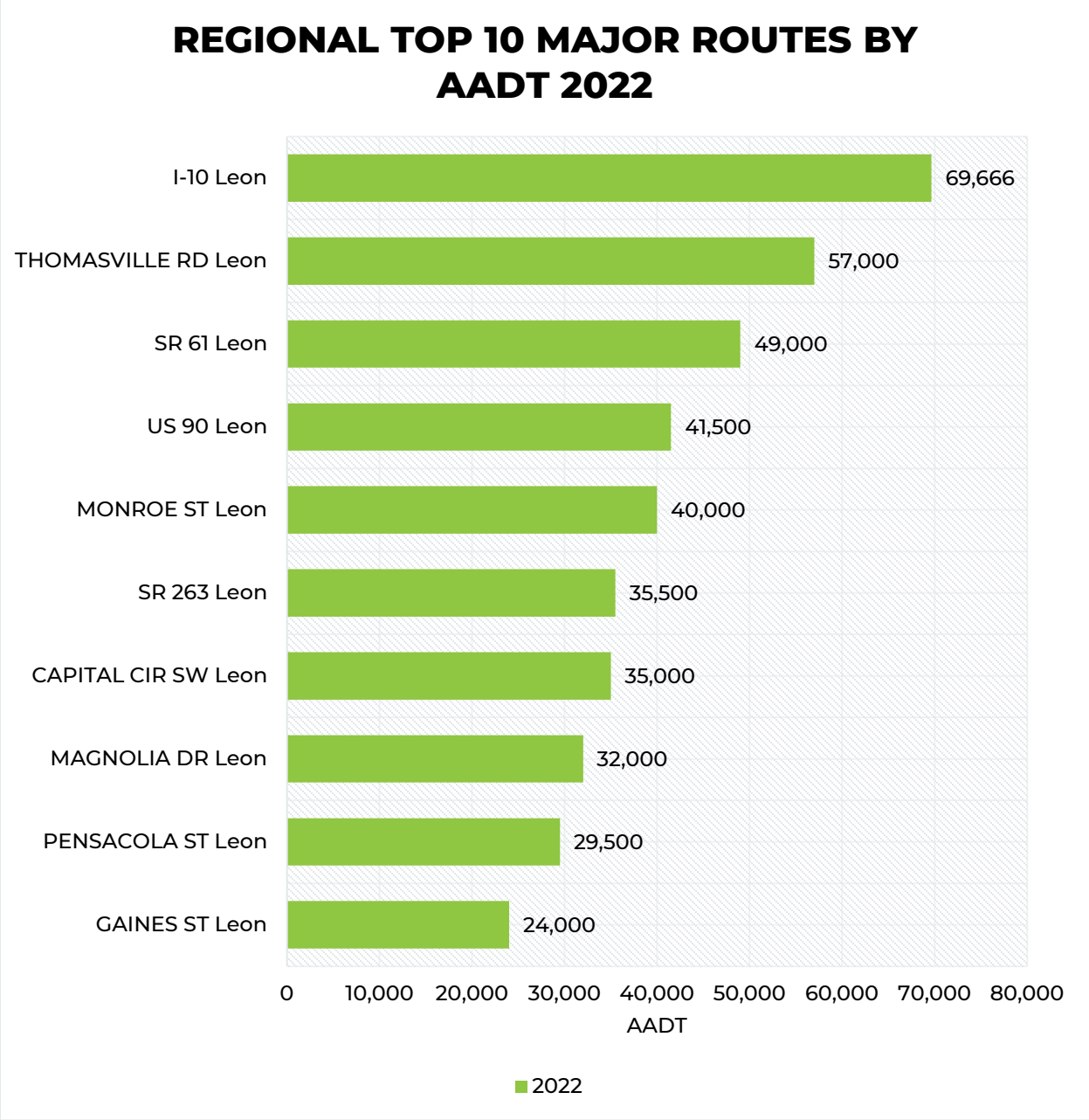
Figure 12 depicts Leon County has all of the top ten routes based on AADT values. These routes are mostly interstate and principal arterial which are generally designed to carry more volume (capacity), commonly known and used, and consistently maintained and improved. The capacity and upkeep of the identified routes will serve as an indicator for reliability of highway mobility and thus for reliability of freight mobility.

Major Routes by AADT Changes

Equally important for identifying the top ten major routes for highest volumes is to also identify the major routes for volume changes. Identifying the AADT changes over a period provides an indication of how the conditions of the travel patterns and frequency-of-use are shifting. The shifts shape policy and investments which influence shifts in maintenance and improvements and shifts in reliability of highway mobility and freight mobility. AADT changes are depicted in Figure 13.

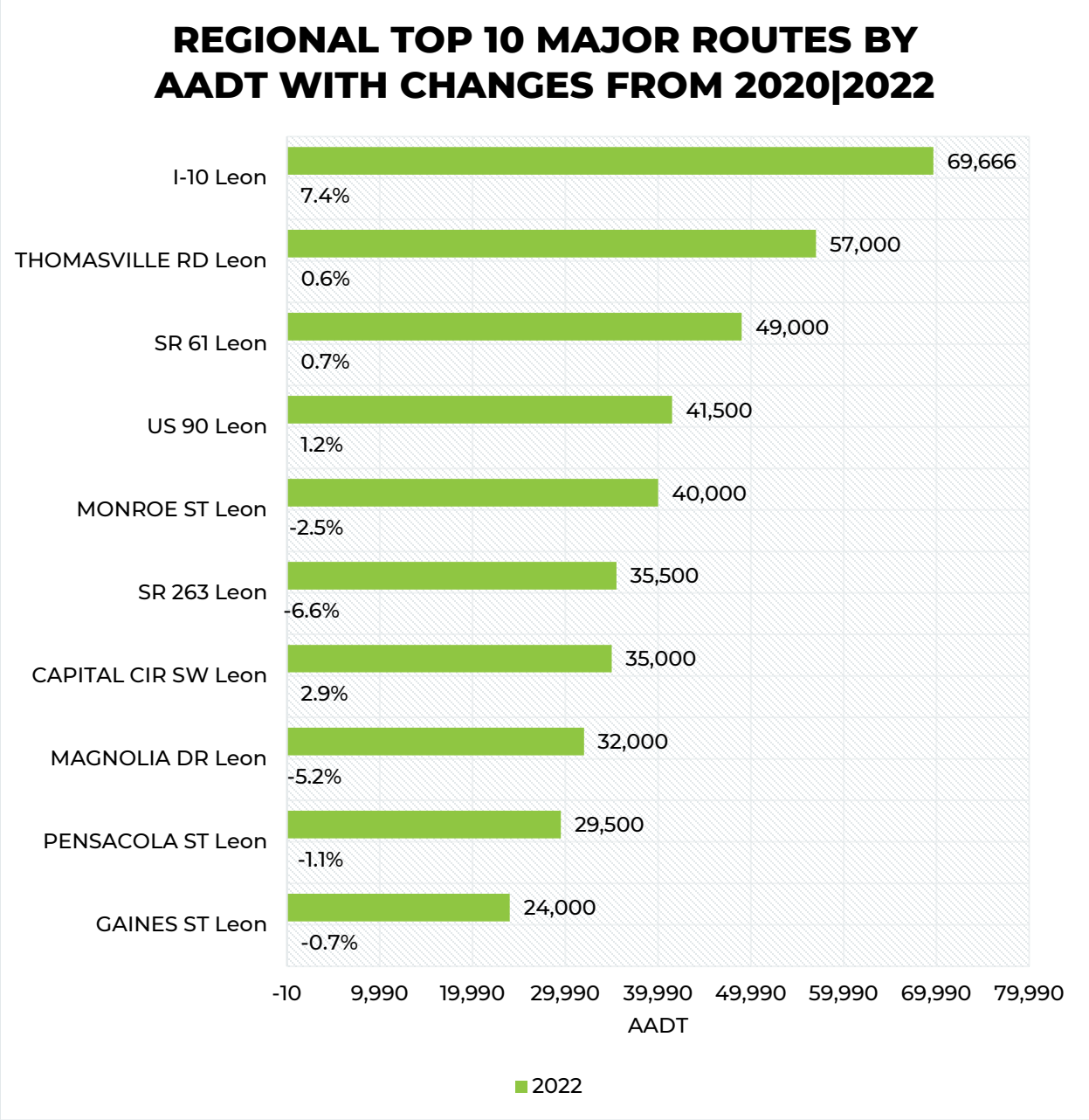
The following chart shows distribution of all the counties major routes based on AADT changes. These routes are State roads which are commonly known and used, and consistently maintained and improved. Similar to the top ten major routes, the change value of the identified routes along with the upkeep will serve as an indicator for reliability of highway mobility and thus for reliability of freight mobility.

Figure 12: Regional Top 10 Major Routes AADT 2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Figure 13: Regional Major Routes – AADT Changes 2020|2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Annual Average Daily Truck Traffic

The annual average daily truck traffic (AADTT), as a percentage of AADT, is a great indicator for mobility conditions of freight traffic. The truck percentage values used

in this section are based on observed data captured by Telemetered Traffic Monitoring Sites[5] and accounts for vehicle classifications 8 and above[6].

Top Ten Major Routes by AADTT

This section identifies CRTPA's top ten major routes to show where the highest truck percentage values occur (and expected to occur) and the conditions of travel pattern and frequency-of-use. Figure 14 shows all counties except Leon have top ten routes based on truck percentage values.

These routes are State roads which are commonly known and used, and consistently maintained and improved. The percentage values upkeep of the identified routes will serve as an indicator for reliability of freight mobility.

Major Routes by AADTT Changes

Equally important for identifying the top ten major routes for highest TFCTR is to also identify the major routes for TFCTR changes. As with AADT changes, TFCTR changes indicate how the conditions of the travel patterns and frequency-of-use are shifting. This influences investment policies and reliability of freight mobility. AADTT changes are depicted in Figure 15.

Figure 15 depicts distribution of all the counties' major routes based on TFCTR changes. These routes are State roads which are commonly known and used, and consistently maintained and improved. Similar to the top ten major routes, the change value of the identified routes along with the upkeep will serve as an indicator for reliability of freight mobility.

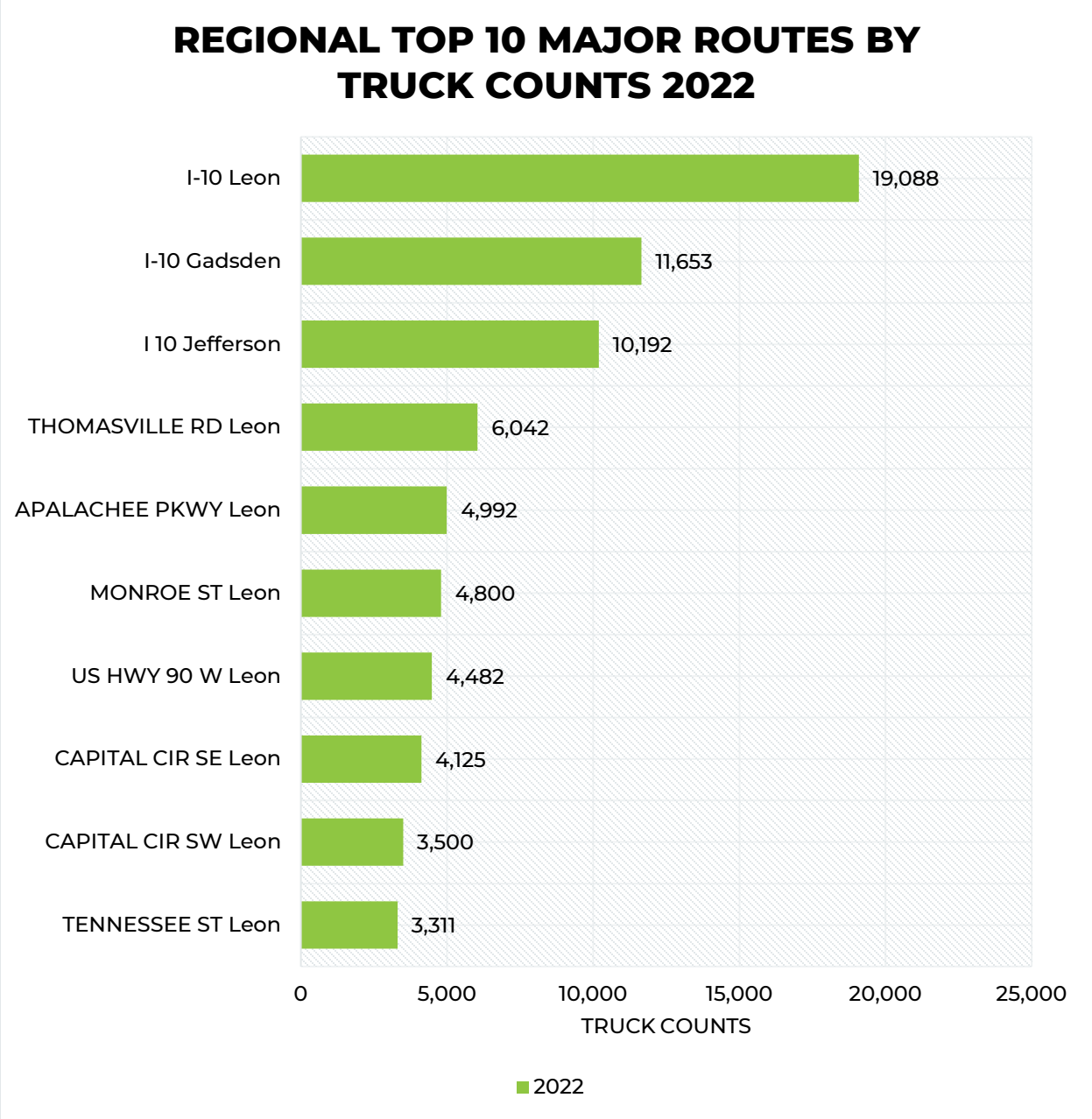
Benefits to the region: The identification of AADT and AADTT changes provide an indication of impact to the corridors that are important to the freight network. Equally, it will help CRTPA stay abreast of the shaping of policy and investments which are influenced by the shifts in reliability of highway mobility and freight mobility.

Needs and Issues for the region: High volume corridors represent significant routes throughout the region. Higher volumes often have a direct correlation to maintenance costs which may highlight increased funding needs along these corridors. Additionally, these routes should be prioritized for the safe and efficient movement of people and goods.

[5] Telemetered Traffic Monitoring Sites (TTMS) - A continuous traffic monitoring site that transmits traffic data to the Transportation Data & Analytics Office via telephone or wireless communications.

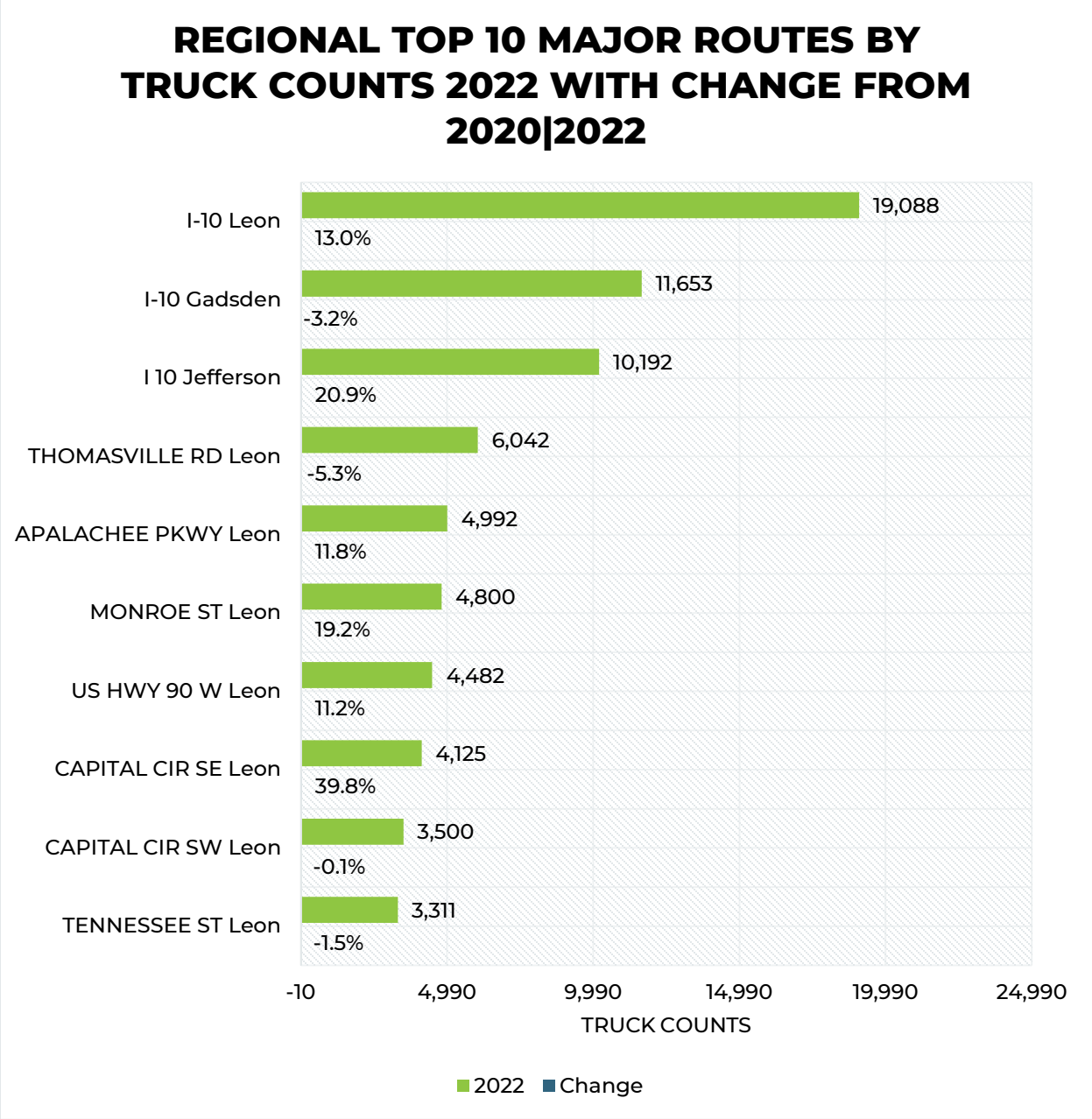
[6] Office of Highway Policy Information - Policy | Federal Highway Administration (dot.gov)

Figure 14: Regional Top 10 Major Routes – Truck Counts



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Figure 15: Regional Major Routes - Truck Percentage Changes 2020|2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Highway Level of Service

Building upon CRTPA's Congestion Management Plan (CMP) ongoing update, Level of Service (LOS) data has been included within this analysis. LOS is a generalized review of typical roadway congestion, ranging from A (no traffic) to F (gridlock traffic). As part of the CMP, corridors within the region which failed to meet LOS Standards were identified and have been included within Figure 16.

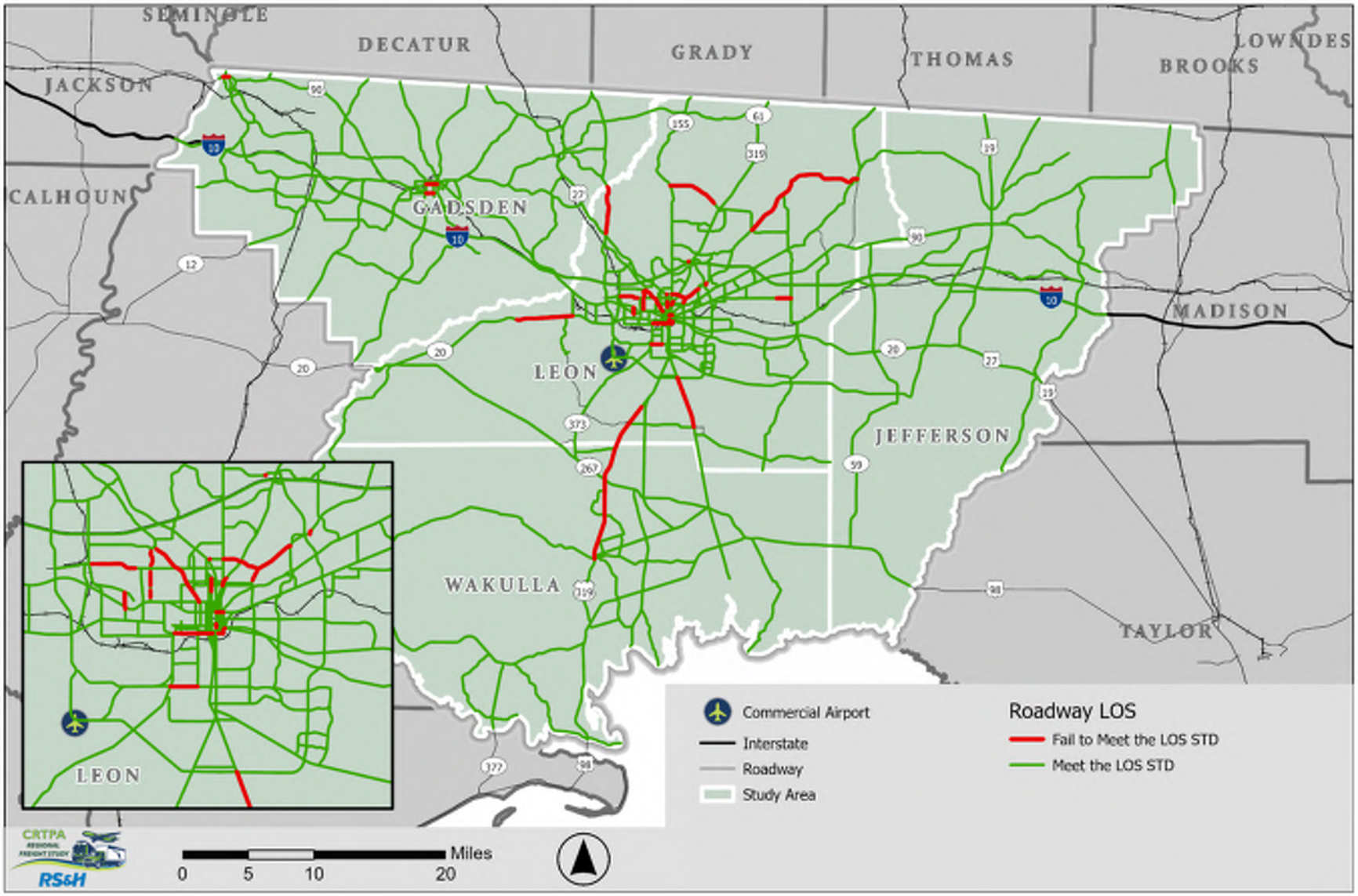
The majority of the failing corridors are located within Leon County, closest to the urbanized areas where higher congestion is anticipated. However, significant corridors outside of this area have also been identified.

Benefits to the region: The identification of failing LOS has a direct correlation to the movement of roadway freight movement. It is anticipated that local freight delivery will be impacted within the urban areas of Tallahassee and Quincey; however, several corridors are likely to impact regional freight movement.

Needs and Issues for the region: The failing LOS corridors represent areas for improvement across the region. Though all of the identified corridors represent opportunities for improvement, the following corridors should be prioritized for freight related movements:

- US 319 – Wakulla and Leon Counties
- SR 363 – Wakulla County
- SR 20 – Leon County

Figure 16: Corridors Failing to Meet LOS



Source: CRTPA CMP

Rail Mobility

In conjunction with the highway network, the rail network also serves as a primary link for the freight network which includes the first and last mile and the connection with other modal nodes. Reliable and connected rail operations indicate fluid intermodal freight mobility and can be measured through volume-to-capacity ratios, and standard rail operational practices.

Rail Volume-To-Capacity

Rail volume-to-capacity (V/C) measures reliability of freight rail mobility and is calculated using factors from standard operational practices including average train length, train speeds, trains per day per segment, and segment lengths. The region has two railroad operators: Florida Gulf and Atlantic Railroad (FG&A) and Apalachicola Northern Railroad (AN) with a total of 128.84 track miles across fifty-nine segments. FG&A lines travel 108 miles from Jefferson County's east boundary through Gadsden County to a connection with AN in Chattahoochee and has a short branch from Tallahassee through Havana. AN line travels from southeast Gadsden County boundary through Greensboro and connects with FG&A in Chattahoochee.

Rail Volume-To-Capacity

The combined network train speeds range from 12 to 41 miles-per-hour and has an average of seven trains (volume) moving through the network per day. The combined network also can service (capacity) an average of 190 trains per day; both volume and capacity are based on an average train length of 5,400 feet. Under these existing conditions, CRTPA rail V/C ratios range from .01 to .03 which means there is 74% to 99% available existing capacity on average if there are no changes to operations (speed) or infrastructure (sections and miles) occur. See Table 9, Figure 17, and Figure 18. For a depiction of the V/C and their locations. Figure 19 and further expand upon the data by rail provider.

Table 9: CRTPA Rail Network Volume-to-Capacity

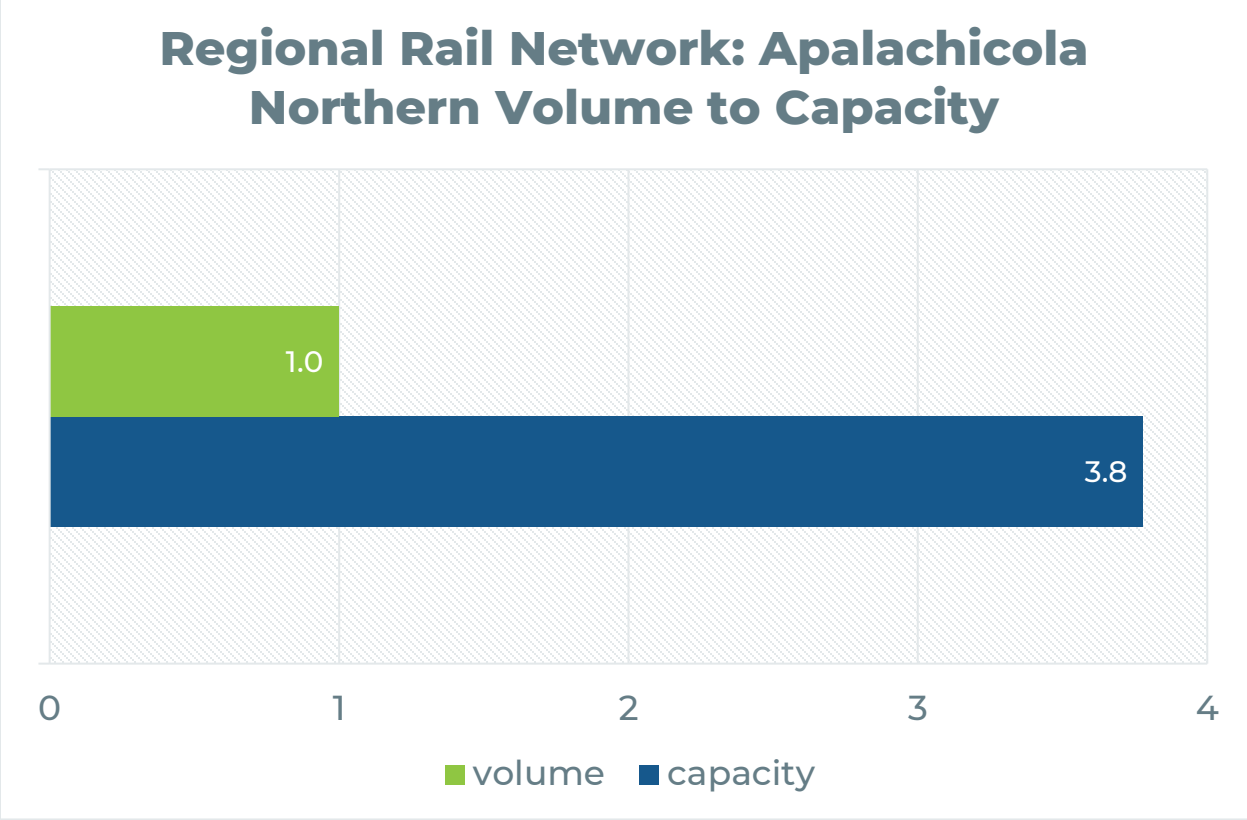
Railroad	County	Miles	Maximum Speed	Capacity	Existing Volume	Existing V/C
AN	Gadsden	20.40	12	4	1	0.26
FGA	Gadsden	51.75	26	64	0.36	0.01
FGA	Jefferson	21.92	40	52	3	0.06
FGA	Leon	34.77	41	70	2	0.03

Source: FDOT; RS&H Analysis

Apalachicola Northern Railroad Volume-To-Capacity

The AN rail network only runs through Gadsden County (in the region), connects with FG&A in Chattahoochee, and has an existing V/C of .26. The network has available capacity to service 74% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur. See Figure 17.

Figure 17: CRTPA Rail Network: Apalachicola Northern Volume-to-Capacity



Source: RS&H Analysis

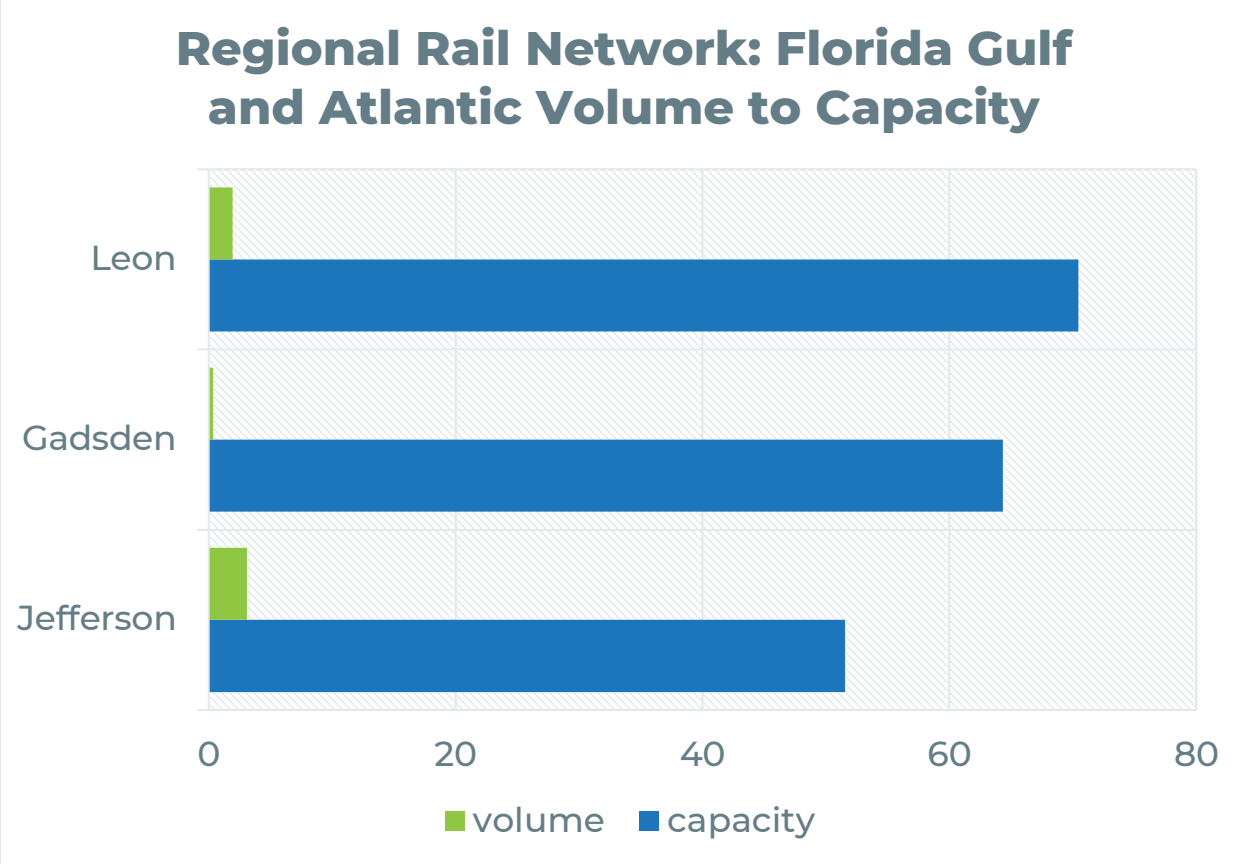
Florida Gulf and Atlantic Volume-To-Capacity

FG&A rail network runs through Leon, Gadsden, and Jefferson Counties, and connects with AN in Chattahoochee with short branch running from Tallahassee through Havana. Figure 18 depicts the existing FG&A V/C.

- Leon County has an existing V/C of .03. The network has available capacity to service 97% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.

- Gadsden County has an existing V/C of .01. Similar to Leon, the Gadsden rail network has available capacity to service 99% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.
- Jefferson County has an existing V/C of .06. The network has available capacity to service 93% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.

Figure 18: CRTPA Rail Network: Florida Gulf and Atlantic Volume-to-Capacity

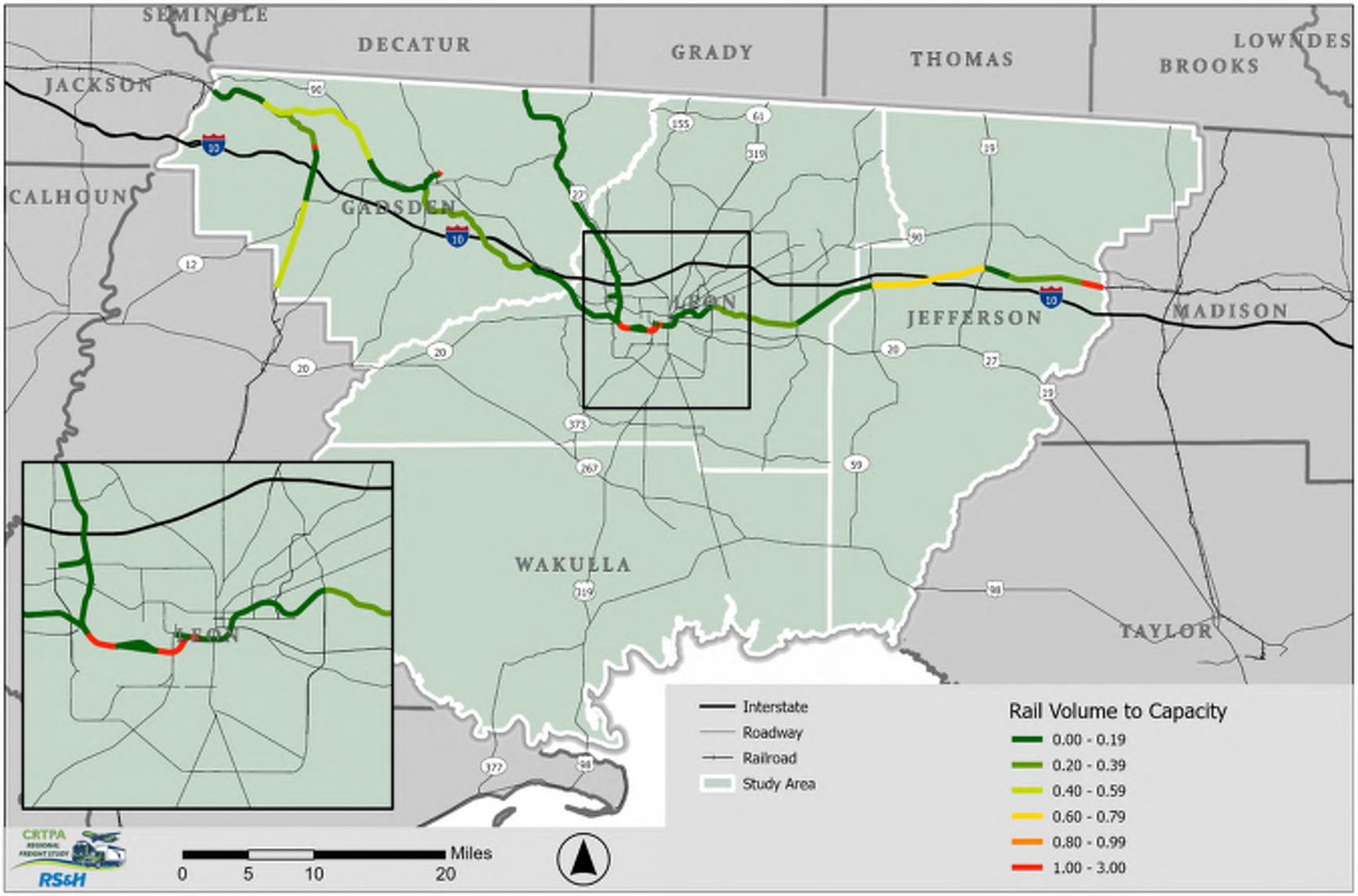


Source: RS&H Analysis

Regional Rail Network V/C Maps

The following maps show the impact of the V/C intensity across the rail network. The map shows the expected rate of volume to capacity consumption when speed, miles, and capacity are held constant over time.

Figure 19: Regional Rail Network Existing Volume-to-Capacity



Source: FDOT; RS&H Analysis

Rail Connectivity

Rail network connectivity is an indication of fluid intermodal freight mobility that also serves as a primary link for the freight network in conjunction with rail operations reliability. Rail network connectivity analysis focuses on the amount of infrastructure used in operations, along with the infrastructure locations, functions, and conditions. These factors can be measured through the number of crossings, number of hubs and their functions, rail traffic signal locations and functions, and infrastructure conditions.

Rail Crossings

Rail at-grade crossings (crossings) simultaneously inhibit and add value to rail-highway connectivity and reliability. Crossings that are maintained and safe promote fluidity and interoperability between the two modes, and thus reduce the chances of traffic flow disruption. Additionally, crossings are synonymous with intermodal highway connectors which must also remain maintained and safe to promote fluidity and interoperability. Safety can be a challenge as the number of crossings increases; it is important to balance the operational requirements with an effective number of crossings.

CRTPA rail network has 134 open-active crossings, and two that are open-inactive; this is a density of approximately one crossing per mile across the CRTPA rail network which can increase the chances of incidents and reduce connectivity and reliability.

Rail Hubs and Operational Facilities

Similar to crossings, rail hubs can simultaneously inhibit and add value to rail-highway connectivity and reliability. Rail hubs generally are located with intermodal highway connectors and function as a first and last mile node for a commodity supply-chain. These locations and functions produce additional traffic for the location and the regional network as well as increasing chances for safety incidents. Effective transportation design of the intermodal infrastructure balanced with effective operational functions offset the impact of the hub's location and functions. The following maps show CRTPA rail network hub locations and functions for Leon, Gadsden, and Jefferson counties. Figure 20 depicts the location of these hubs on the rail network.

Rail Yards: the CRTPA rail network has two FG&A identified hub locations that function as yards or interchanges; these locations support rail logistics operations for train building, repair, and safety, and provide interoperability between rail lines.

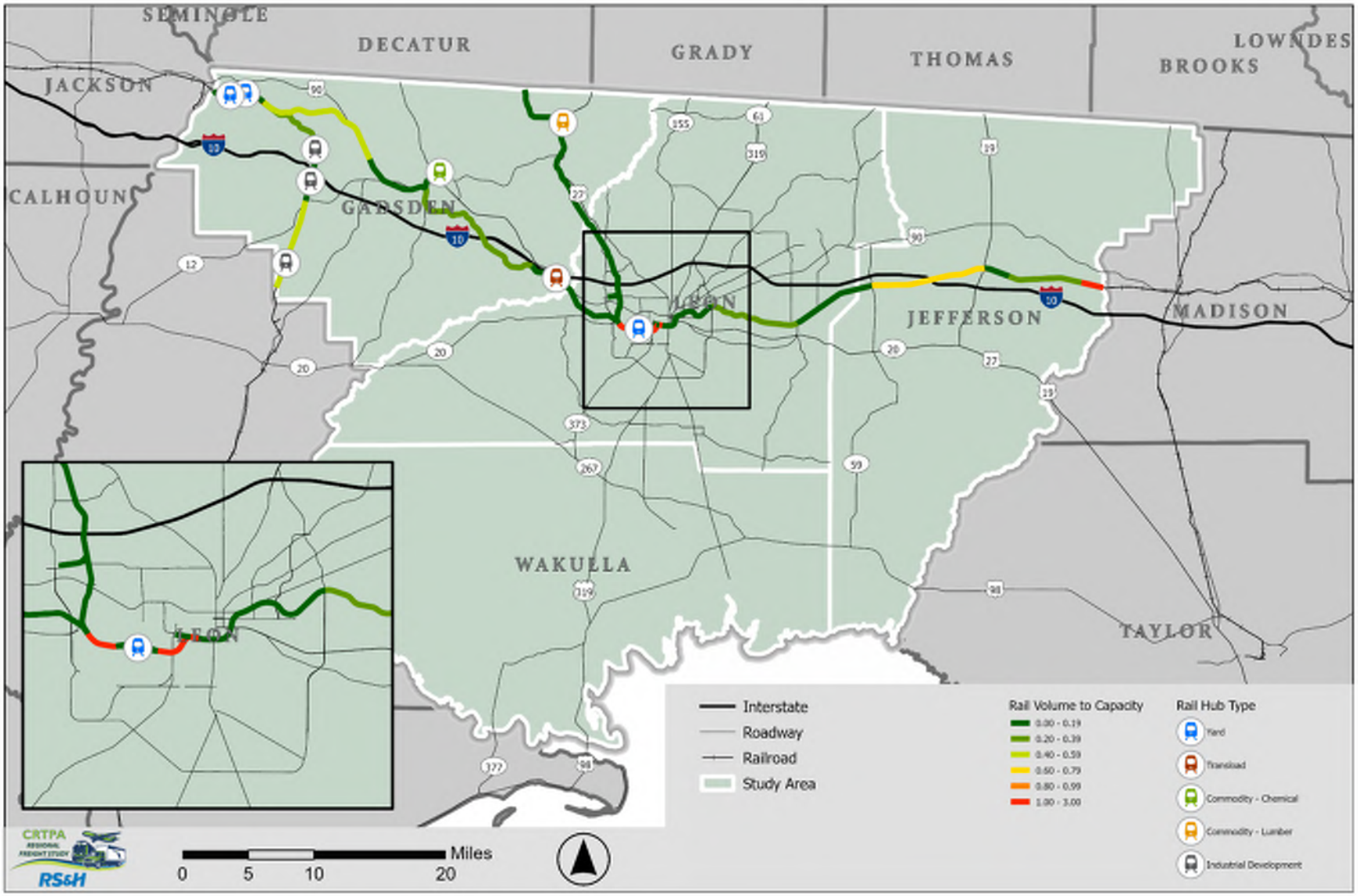
Transload: the network has one FG&A identified transload facility that supports rail-truck logistics operations.

Commodity: the network has two FG&A identified commodity hubs that serve as a first/last mile for chemical and lumber commodity supply-chains.

Industrial Development: the network has three AN identified industrial development sites that are ready to serve as a hub location for a commodity supply-chain first/last mile.

These locations and functions are expected to continue supporting connectivity and reliability for the network and commodity supply-chain when analyzed with V/C impact.

Figure 20: Regional Rail Network Hub Locations and Functions



Source: FDOT; RS&H Analysis

Rail Traffic Control

Rail traffic signal control operations along with crossings and hub operations work as a system to ensure fluidity and safety across the network, and thus increase connectivity and reliability by reducing the chances of traffic flow disruption. The CRTPA rail network has a combination of both automation and manual traffic signal control operations.

The FG&A network has centralized traffic control (CTC) from Tallahassee through Jefferson County; CTC allows dispatchers to remotely control the signals and switches for crossovers and sightings for this territory. In contrast, FG&A network has no rail traffic control signals from Tallahassee through Gadsden County; trains generally operate using track warrant controls (TWC) in this territory. TWC operations consist of the train crew stopping the train short of the siding, and getting off to manually align the switch while the other train approaching must call dispatch to request a track warrant for continuing moving. Likewise, AN network also uses the TWC operations throughout the Gadsden County territory.

Regional Rail Trade

The region is served by the Florida Gulf and Atlantic (FG&A) and the Apalachicola Northern (AN) rail companies and it is anticipated that future efforts will be geared toward the improvement of infrastructure conditions rather than major system expansion. Due to the limited number of providers and competitive nature of the industry, tonnage and value of commodities or their growth were not specifically identified. However, stakeholder coordination with the rail providers offered insight into the future conditions of rail within the region.

Through stakeholder coordination, the providers indicated a desire to increase their operations in the area; however, significant stretches of new rail lines were unlikely. This coordination highlighted the following information regarding the rail systems in the area:

- Maintenance of existing infrastructure are shared concerns
    - Track conditions can lead to weight and speed reduction
- Increase in freight local/regional businesses is desired
    - Rail stakeholders indicated that direct to rail operations would be beneficial but require specific businesses and infrastructure improvements to make a possibility
    - Some county stakeholders have expressed interest in pursuing this type of industry growth
- Access to the Port of Port St. Joe is desired but currently cost prohibitive
    - The number of bridges requiring repair will require significant investment
        - 2022 Cost estimates indicate that $3.5 million in track repair and over $22 million in bridge repair

    - This is representative of a "chicken or the egg" (which came first?) scenario in which industry growth toward the coast may encourage rail expansion, while improved rail access may encourage that industry growth.

Specific improvements within the region were not provided by the rail service providers; however, the following improvements have been identified and are anticipated.

- Bridge rehabilitation and improvements
    - Maintenance of bridge conditions is vital to the continued (or expanded) service in the region
- Rail capacity expansions and speed improvements
    - Freight rail can be limited to 10mph in some parts of the region, instead of the possible 40mph
        - Reducing the overall speed of goods movement and presents logistics issues
            - Can also increase vehicular delay at crossing locations due to longer clearing times
- Switch and rail yard expansion and improvements
    - Potential to improve movement of trains, offer repair space, and transload opportunities

Federal funds have recently been approved for use by the FG&A in the Panhandle area. These funds totaling over $23 million represent a significant opportunity to improve the freight rail infrastructure in the panhandle area. The funds were awarded through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program for track, bridge, safety, and expansion improvements.[7]

Benefits to the region: An increase in freight related and freight connected businesses in the region will improve economic conditions while also reducing stress on the roadway network. Direct rail connections and improved rail through the region will help reduce the reliance on freight trucks, potentially improving congestion conditions.

Needs and Issues for the region: Improvements and maintenance of the rail network are vital to the continued flow of freight through the region. Rail and bridge condition improvements will increase the safety of rail operations while supporting economic growth.

Passenger Rail Considerations

Passenger Rail service was discontinued through the panhandle due to damage caused during the 2005 Hurricane Katrina. Though it is possible that passenger rail

[7] https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/consolidated-rail-infrastructure-and-safety-2

service will be restored in the future, the infrastructure and logistics limitations of the area will hinder this development. Similar to the issues related to freight rail, the infrastructure of the rail network in the region will be a limiting factor and the cohabitation of passenger and freight rail will also require improved logistical support and infrastructure due to the differing needs of each use. The rail providers in the region have indicated that they are not unsupportive of passenger rail; however, significant improvements to the network and studies would be necessary to make that a reality.

The FDOT Rail System Plan indicates that the expansion of the Sunset Limited Route east of New Orleans was considered and referenced as an "Other Potential Improvement" (beyond its Long-Range Improvements) three options that Amtrak Identified which were then studied again in 2015. This new analysis identified 5 alternatives that would enhance connections along the Sunset Limited route. Through this analysis a combination of preferred alternatives was identified that would connect Los Angeles with Orlando; however, a funding source was not developed.

Generally, the infrastructure improvements to the rail corridors for passenger rail would simultaneously benefit freight movements through the corridors; however, passenger rail movements would require increased coordination between the providers and may negatively impact the flow of freight trains.

Freight Intensive Areas

Future Land Use and Anticipated Growth

Each of the four member counties maintain a comprehensive plan that outlines the projected growth patterns and desires of the community. As part of the comprehensive plan development, the future land use element is created to outline where growth is anticipated and desired within the community. Future Land Use Maps (FLUMs) are generated with descriptions highlighting the appropriate development within the areas and what should be considered. These FLUMs are typically updated on a regular basis as the needs of the community or development patterns change.

As each County maintains their own FLUM, the land uses described within each County can have very specific descriptions; however, assumptions have been made to group them into 10 specific land uses for this analysis as outlined below:

Most Freight Related Land Uses:

- Commercial
    - These sites typically receive regular freight deliveries while serving the general public
- Industrial

    - These sites typically have more significant freight movements and may represent freight generators such as manufacturing or warehouse locations
- Mining
    - These sites are freight generators, and users of heavy freight vehicles
- Agriculture
    - These sites are freight generators, and users of heavy freight vehicles
- Mixed Use
    - Commercial sites will be developed along with residential, highlighting potential areas with freight deliveries

Other Typical Land Uses:

- Rural
    - Typically, these sites are light residential uses with some agricultural and commercial
- Residential
    - These sites are mostly serviced by medium to light freight vehicles through e-commerce
- Park/Conservation
    - These sites are not freight generators
- Institutional/Public
    - These are governmental uses and institutional sites
- Incorporated
    - Incorporated areas that do not share the same land use planning as the County Level.

Figure 21 depicts the 10 land uses described above.

Focusing on Commercial, Industrial, Mining, Agricultural and Mixed-Use Land Uses allows a more pointed view of where freight-related use is planned for the future. Notably, Jefferson and Gadsden counties have significant areas of freight related land uses with 288,545 and 245,542 acres respectively. However, these numbers are heavily skewed by the agricultural lands within these counties. Table 10 below depicts the overall acreage identified for these land use types. Gadsden and Wakulla Counties have dedicated larger land areas to Industrial and Mining uses. Gadsden County has allocated over 11,000 acres to mining land use, indicating a significant future for mining in the area. Figure 22 depicts the freight related land uses.

Table 10: Freight Related Future Land Use Acreages

County	Agriculture	Commercial	Industrial	Mining	Mixed Use
Gadsden	229,161	1,595	1,695	11,664	1,427
Jefferson	280,981	803	432	181	6,148
Leon	29,575	-	498	12	65,580
Wakulla	73,239	108	1,921	-	9,658
Total	612,956	2,506	4,546	11,857	82,813

Source: Leon County; ARPC; Gadsden County; Wakulla County

Building upon this review, existing employment locations have been compared to the Future Land Uses (Figure 23). This analysis highlights that the majority of existing employment locations are consistent with planned development patterns. The majority of employment clusters are within the Tallahassee urban area; but other clusters are closely aligned with the identified freight land uses.

FDOT Freight Intensive Areas

Through statewide analysis, FDOT has identified two freight intensive areas within the CRTPA area (Figure 24). These sites are located in Northwest Tallahassee near the I-10 corridor and within the Quincy area of Gadsden County.[8] FDOT Identified the following attributes of these sites:[9]

- Tallahassee Area
  - This Freight Intensive Area is in District 3 and includes 0.92 square miles of total freight parcel floor area (Ranked 41 in the state) and 1,140 employees (Ranked 56 in the state) in the freight industry.
- Quincy Area
  - This Freight Intensive Area is in District 3 and includes 8.16 square miles of total freight parcel floor area (Ranked 2 in the state) and 889 employees (Ranked 64 in the state) in the freight industry.

These two areas identified by FDOT are representative of freight clustering and correlate to the existing development and future land uses of the region. Notably, both of these areas are adjacent to the I-10 corridor, likely reducing the impact of freight on other roadway networks.

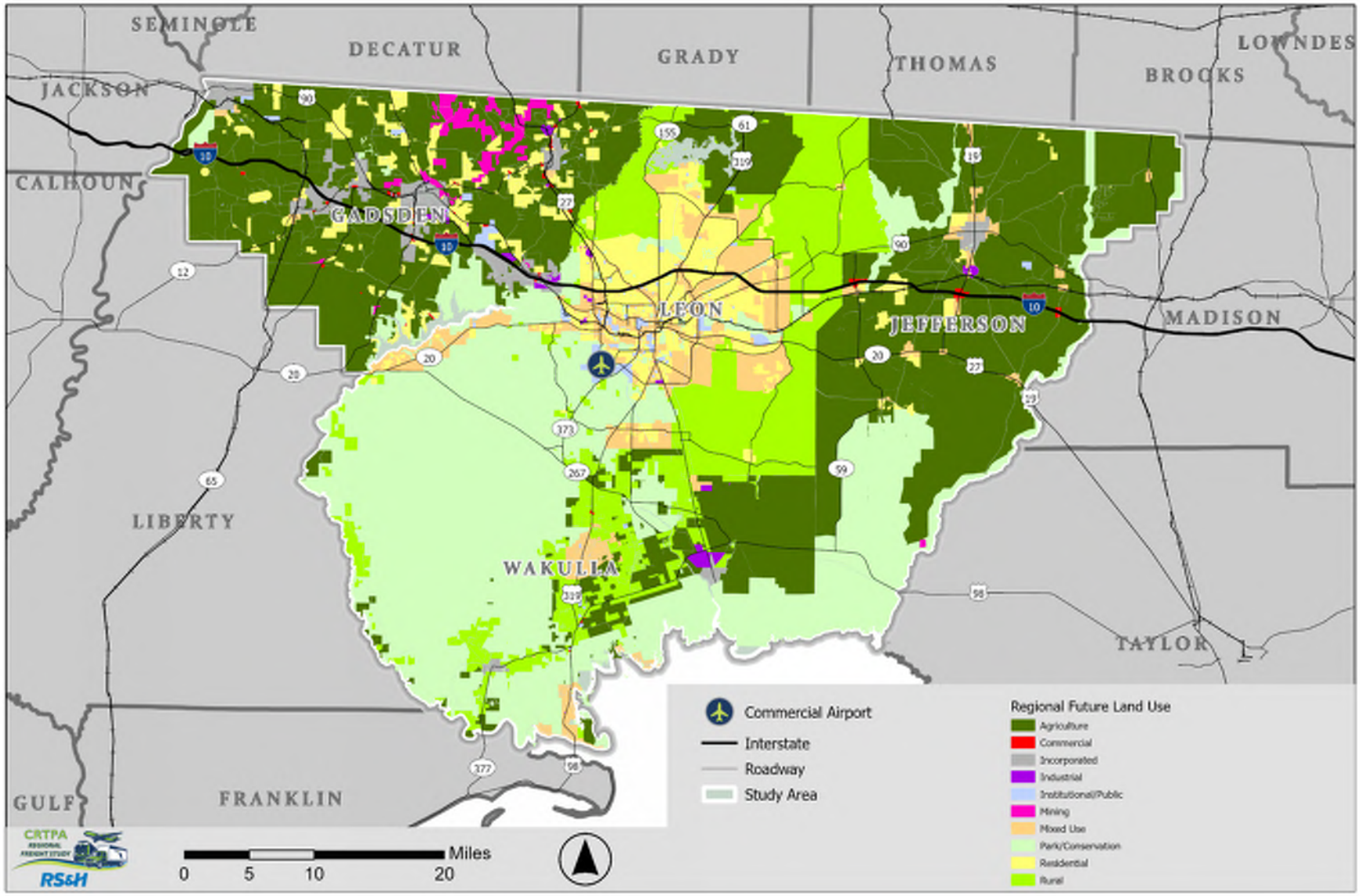
Benefits to the region: The identification of freight supportive and related land uses indicate areas in which the community prioritizes this type of growth. Agricultural land uses are the most significant within the region. Both Gadsden and Jefferson counties have dedicated significant areas of land to freight related land uses, indicating favorable conditions for continued use. Leon and Wakulla Counties have significant clusters of Mixed-Use development patterns which are consistent with a more urban and suburban style of development.

[8] Freight Intensive Areas (arcgis.com)

[9] Freight Intensive Areas (Points) - Overview (arcgis.com)

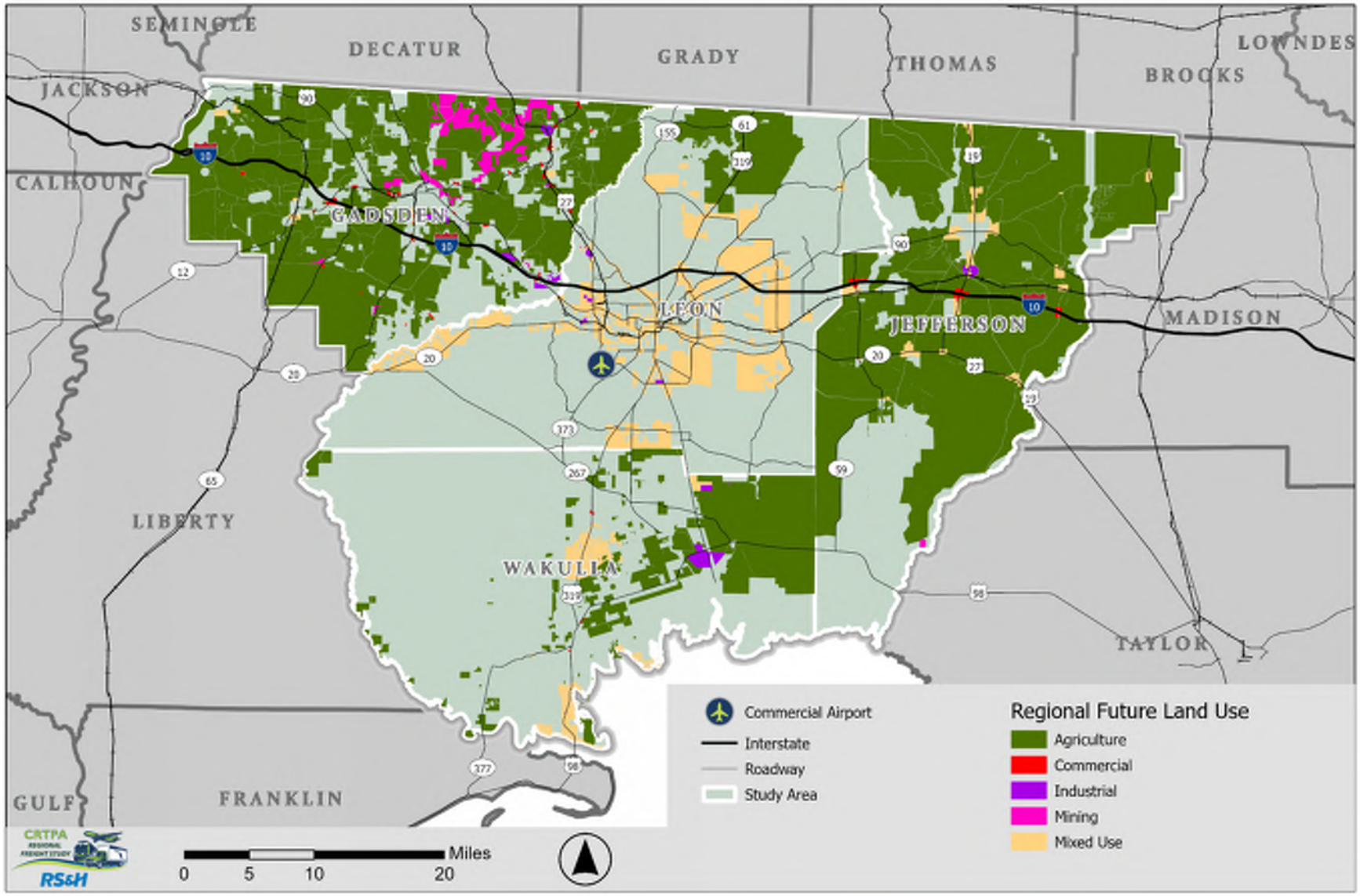
Needs and Issues for the region: It is anticipated that major freight generators will remain within Gadsden, Jefferson, and Wakulla Counties, while the development of major freight areas appears to be less denoted within Leon County. Significant portions of Leon, Wakulla and Jefferson counties are also undevelopable due to state and federal conservation lands.

Figure 21: Regional Future Land Uses



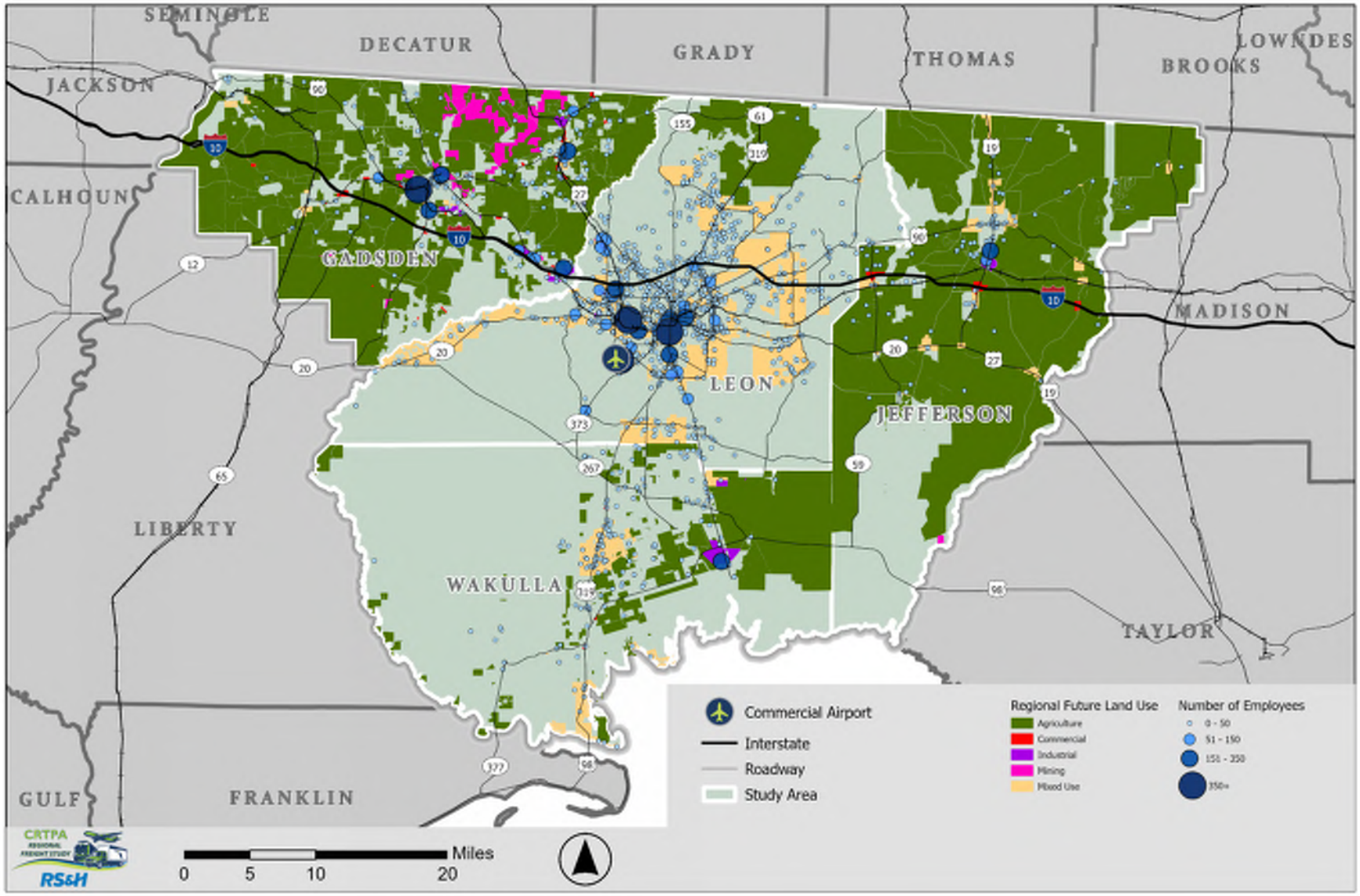
Source: Counties and ARPC

Figure 22: Freight Related Future Land Uses



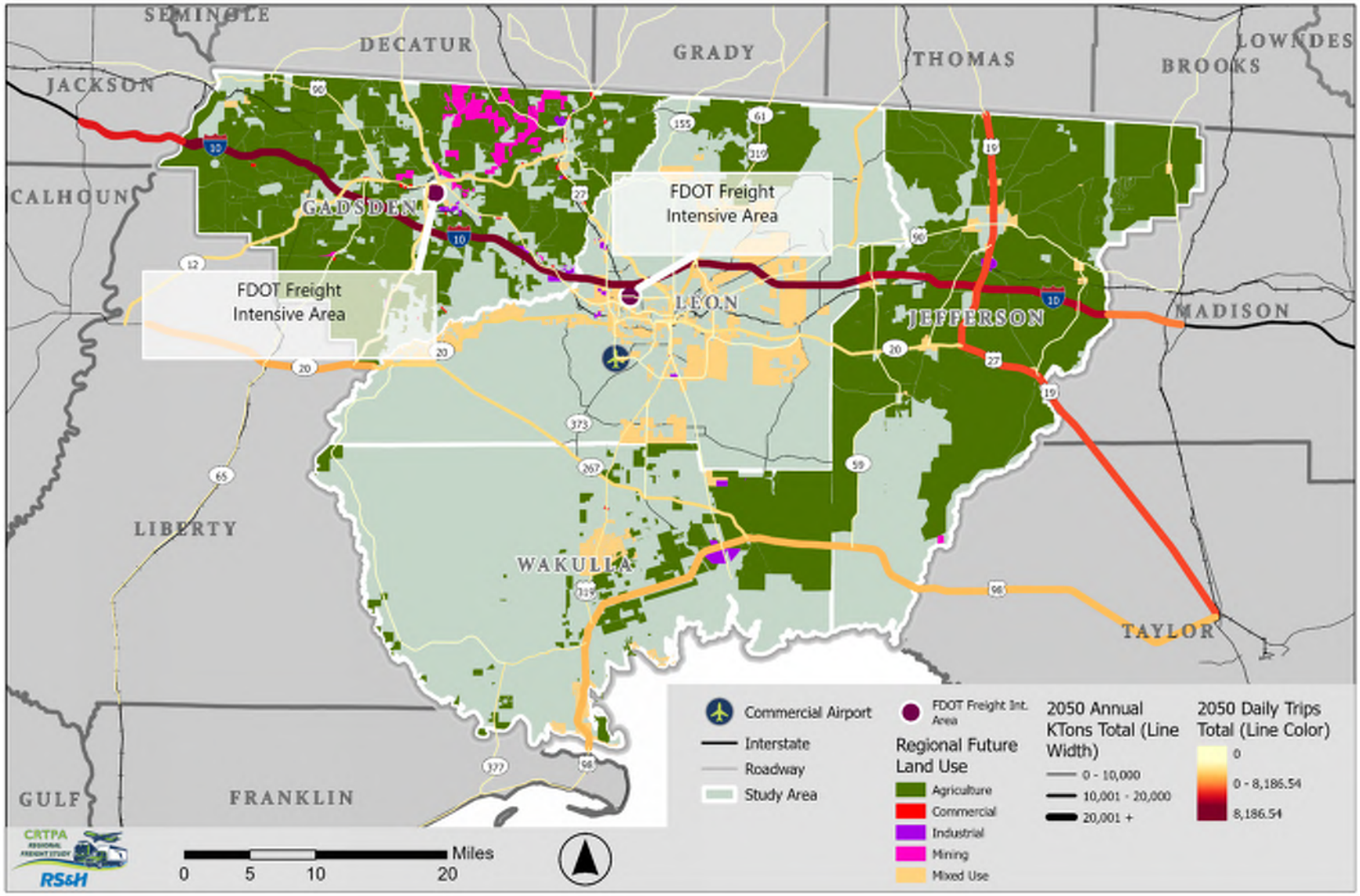
Source: Counties and ARPC

Figure 23: Freight Related Future Land Use and Existing Number of Employees



Source: Counties, ARPC, ESRI/Data Axel

Figure 24: FDOT Freight Intensive Areas and FAF5 2050 Commodity Flow Data.



Source: Counties, ARPC, FDOT, FAF5

Transportation Projects

The Connections 2045 Regional Mobility Plan (RMP)[10] has identified and prioritized several transportation projects throughout the region. These projects represent those of high enough importance to be included within the cost feasible plan, many of which are anticipated to impact future freight movements in the region. The cost feasible plan is developed to prioritize limited transportation funds on the projects with the most benefit to the region's mobility and safety. Table 11 provides an overview of the roadway projects expected to positively benefit freight, including roadway widenings, access management, and intersection reconfigurations. Figure 25 depicts the location of these projects throughout the region. Three of these projects are on roadways designated as official freight routes, including I-10 and US 90 (Mahan Drive).

Excluded from this list are the planned multi-modal improvements along the Thomasville Road corridor. This project is intended to represent the development of a multi-modal trail along Thomasville Road, which may benefit freight through the reduction of vehicular traffic due to increased pedestrian and cyclist use; however, this benefit is likely minor.

Benefits to the region: These projects are intended to improve transportation and will inherently benefit the movement of freight. An improved transportation network will mitigate future congestion and improve safety throughout the region.

Needs and Issues for the region: The projects within the cost feasible plan highlight those which are of the highest priorities for limited transportation funding.

[10] https://crtpa.org/documents/connections-2045-regional-mobility-plan/

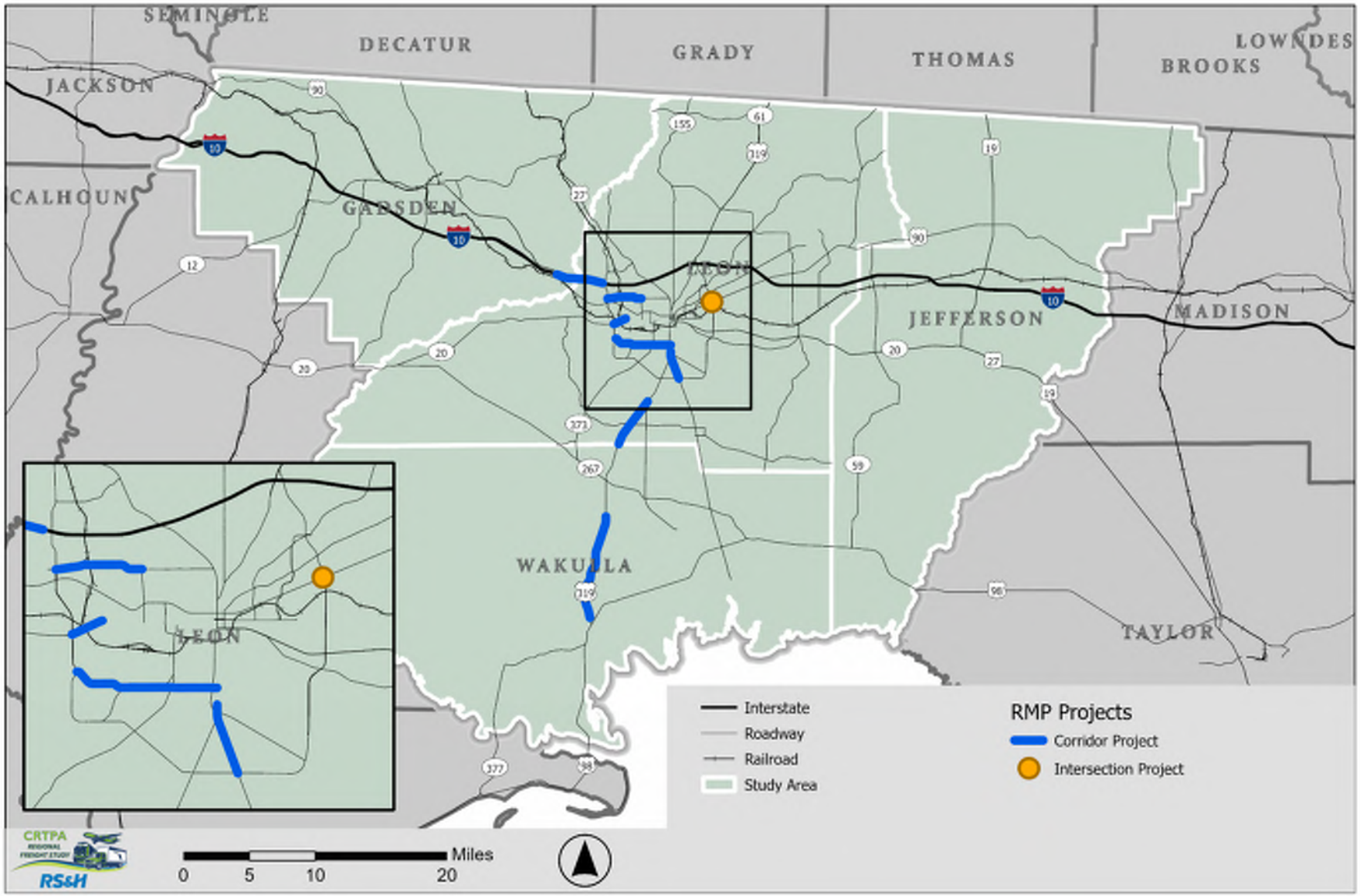
Table 11: Roadway Improvement Projects – Anticipated Freight Benefit

Roadway	From	To	Project Priority List No. (1 – 15)	Strategy	County	Horizon Year
Woodville Highway	*Capital Circle SE*	*Paul Russell Rd*	1	2 to 4 Lanes	Leon	2026-2030
Crawfordville Road	*East Ivan Rd*	*Wakulla Arran Rd*	3	2 to 4 Lanes	Wakulla	2031-2035
Orange Avenue	*Capital Circle SW*	*South Lake Bradford Rd*	4	Access Mgmt. and Multimodal Improvements	Leon	2031-2035
Orange Avenue	*South Lake Bradford Rd*	*Lake Bradford Rd*	4	2 to 4 Lanes	Leon	2031-2035
Orange Avenue	*Lake Bradford Rd*	*Monroe St*	4	2 to 4 Lanes	Leon	2031-2035
Crawfordville Road	*Wakulla County Line*	*LL Wallace Rd*	5	2 to 4 Lanes	Leon	2036-2045
Crawfordville Road	*LL Wallace Rd*	*Wakulla Springs Rd*	5	2 to 4 Lanes	Leon	2026-2030
US 90 (Mahan Drive) at Capital Cir NE*	---	---	6	Major Intersection Reconfiguration	Leon	2026-2030
Pensacola Street	*Capital Circle SW*	*Appleyard Dr*	7	2 to 4 Lanes	Leon	2031-2035
Crawfordville Road	*Wakulla Arran Rd*	*Lost Creek Bridge*	9	2 to 4 Lanes	Wakulla	2036-2045
Crawfordville Road	*Lost Creek Bridge*	*North of Alaska Way*	10	2 to 4 Lanes	Wakulla	2036-2045
Tharpe Street	*Capital Circle NW*	*Ocala Rd*	11	2 to 4 Lanes	Leon	2031-2035
Interstate 10*	*(Midway) US 90 Interchange*	*Gadsden/Leon County Line*	15	4 to 6 Lanes	Gadsden	2036-2045
Interstate 10*	*Gadsden/Leon County Line*	*West of Capital Circle NW*	15	4 to 6 Lanes	Leon	2036-2045

Source: CRTPA Connections 2045 RMP; Project Priority List 2025-2029

* Roadway is designated as a Freight Route.

Figure 25: RMP Projects Anticipated to Benefit Freight Movement



Source: CRTPA Connections 2045 RMP

Regional Truck Trade and Commodity Flows

The road network within the region supports freight movements for a variety of commodities and enables connections to other regions across the national freight network. The FHWA Freight Analysis Framework (FAF5) was used to analyze the existing and projected movement of goods on roadway corridors throughout the region. Since data is provided at the network link scale and not aggregated by corridor, the maximum values for each corridor were utilized in this analysis. Overall, data from FAF5 indicates that the region will see a substantial increase in freight movement between 2022 and 2050.

Florida Shipping Trends

Review of the FAF5 data indicates that Florida is anticipated to maintain over 40% of freight shipments within the state.[11] The 2045 projections for shipments within, outbound, and inbound Florida show a significant increase in freight tonnage. The percentage share of within, outbound, and inbound show a slight increase in outbound shipments, from 26.75% to 27.45%. Of note is the increase in raw tons of outbound shipments, which shows a 103% increase between 2022-2045 whereas shipments within show a 42% increase and inbound a 37% increase (Table 12).

Table 12: Shipments Within, Outbound, and Inbound the state of Florida.

*Tonnage measured in thousands	*Tonnage moved within the state	Percent total within State	Tonnage Outbound	Percent total Outbound	Tonnage Inbound	Percent Total Outbound
2022	617,613	43.41%	58,684	26.75%	162,615	29.85%
2045 Projection	876,670	42.97%	1119,386	27.45%	223,575	29.58%

Source: FAF5

When considering freight movements within the region, it is important to consider external factors as well as internal. The region does not currently nor is it anticipated to be a significant freight generator; however, it does provide throughway for other major generators.

Benefits to the region: Though the overall tonnage moving throughout the state will be increasing, the division of intrastate, inbound and outbound movements are anticipated to remain very similar. This is indicative of an increasing freight need and presence, consistent with the current development patterns.

[11] Freight Analysis Framework (FAF) (ornl.gov)

Needs and Issues for the region: The region benefits from the I-10 corridor which serves as a significant east-west corridor throughout the state. As freight tonnages increase, maintenance needs of this and other major corridors will also be increased. Continued coordination with FDOT and local roadway management officials will continue to be a concern as future funds are required for maintenance activities.

Shipping Trends by Mode

The Florida shipping trends by freight mode highlight how the majority of freight is moved within, inbound to the state or exported leaving the state. As depicted in Table 13, trucking moves the most significant amount of freight in 2022 at 78.35% of the total movement with pipeline as the second highest with 8.11%.[12] In 2045 these modal choices are anticipated to remain similar, with trucking still representing the vast majority of movement throughout the state at 78.51%.

Table 13: Freight Tonnage by Mode

Freight Mode	2022 Tonnage 000s	2022 Percent of Total	2045 Tonnage 000s	2045 Percent of Total
Air (include truck-air)	703.7	0.08%	1,090.9	0.09%
Multiple modes & mail	39,368.4	4.69%	72,511.0	5.95%
Pipeline	68,048.2	8.11%	92,873.1	7.61%
Rail	52,247.8	6.23%	74,994.7	6.15%
Truck	657,256.7	78.35%	957,532.1	78.51%
Water	21,137.9	2.52%	20,218.0	1.66%
Other & Unknown	149.6	0.02%	412.6	0.03%

Source: FAF5

Note: Multiple modes & mail represents the movement of goods that utilized multiple freight modes such as the movement of cargo from ship to truck or rail. This mode also includes cargo moved via courier (under 150 pounds).

Benefits to the region: The region services the three modes anticipated to increase between 2022 and 2050 (air, multiple modes, and truck). Planned roadway, and Tallahassee International Airport (TLH) improvements will increase the region's ability to serve these modes into the future.

Needs and Issues for the region: Though the other modes are decreasing, they remain important features of the freight transportation system. Notably, rail movements through the region will remain significant, highlighting the need for infrastructure improvements.

Florida Trading Partners

Florida's top trading partners for the tonnage of goods originating (or having been imported into the state) in the state are Florida (91.3%) Georgia (2.1%) and Alabama

[12] Freight Analysis Framework (FAF) (ornl.gov)

(0.8%) is 2022. The tonnage trade partner projections for 2045 show that North Carolina is likely to overtake Alabama as one of the state's top trading partners.[13] In addition, the data shows a slight rise in the export of goods as intra-state trade is accounting for 88% of the projected total tonnage in 2045 compared to 91.3% in 2022. Notably, the majority of trade is anticipated to remain within Florida as depicted by 88% or more of the total tonnage (Table 14).

Table 14: Top 5 Trading Partners

Top 5 Trading Partners (2022)	Tonnage 000s (2022)	Percentage of total tonnage (2022)	Top 5 Trading Partners (2045)	Tonnage 000s (2045)	Percentage of total tonnage (2045)
Florida	617,613.1	91.3%	Florida	876,670.6	88.0%
Georgia	14,178.8	2.1%	Georgia	24,707.1	2.5%
Alabama	5,167	0.8%	North Carolina	13,163.7	1.3%
Texas	5,078	0.8%	Alabama	10,429.3	1.0%
South Carolina	3,280	0.5%	Texas	8,333.7	0.8%

Source: FAF5

Note: This table represents the movement of goods domestically from the State, but also includes the cargo that has been imported then shipped domestically.

Benefits to the region: The presence of Alabama as a top 5 trading partner for the state both in 2022 and 2045 and the addition of Texas in 2045 indicate that the region and the I-10 corridor will remain a significant gateway for freight movement.

Needs and Issues for the region: A reduction in internal consumption of freight indicates increased export movements. This increase in freight movements is likely to increase maintenance needs of the roadway network.

Key Corridors – All Commodities

Table 15 presents a summary of the top ten roadway corridors for all freight commodities in 2022, by volume (maximum annual thousand tons) and trips (maximum daily trips) and presents the same information for 2050. As shown in Table 15, I-10 is the top freight corridor in the region, carrying a maximum of 67.5 million tons in 2022, and increasing to a maximum of 107.3 million tons by 2050 (Table 16). I-10 also has the highest maximum level of daily freight trips, with 7,744 trips in 2022 and 12,569 projected trips in 2050. Additional key freight corridors in the region include US 19, SR 20, and US 98.

[13] Freight Analysis Framework (FAF) (ornl.gov)

Figure 26 and Figure 27 emphasize the key freight corridors and show where volume (line color) and trips are highest across the region.

Table 15: Top 10 Freight Corridors in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	67,482	7,744
US 19	28,065	3,245
SR 20	18,372	2,130
US 98	16,223	1,850
Thomasville Rd	12,424	1,480
SR 267	11,149	1,245
SR 12	10,020	1,136
US 27	9,273	1,088
Apalachee Pkwy	6,850	769
Mahan Dr	6,376	715

Source: FHWA Freight Analysis Framework Version 5.5

Table 16: Top 10 Freight Corridors in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	107,312	12,569
US 19	44,957	5,272
SR 20	27,538	3,238
US 98	24,849	2,858
Thomasville Rd	18,500	2,269
SR 267	16,881	1,904
SR 12	15,178	1,729
US 27	14,155	1,670
Apalachee Pkwy	10,473	1,194
Mahan Dr	9,835	1,127

Source: FHWA Freight Analysis Framework Version 5.5

Table 17 presents a summary of the top five roadway corridors for all freight commodities, by projected growth between 2022 and 2050. As shown in Table 17, SR 309 (SR 309 in Decatur County; Salem Rd in Gadsden County) is projected to see an 85.9% increase in freight volume and an 86.9% increase in daily trips. Though SR 309 is just north in Decatur County, it's adjacency to the region highlights its relevance. Importantly, many of the corridors projected to see the most significant growth are state and local roads.

Table 17: Top 5 Corridors for Freight Growth in the Region (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 309 (GA)	85.9%	2.2%	86.1%	2.2%
N Meridian Rd	80.6%	2.1%	83.9%	2.2%
NW Capital Cir	78.9%	2.1%	79.5%	2.1%
C 157	77.5%	2.1%	80.3%	2.1%
Orchard Pond Pkwy	76.1%	2.0%	79.0%	2.1%

Source: FHWA Freight Analysis Framework Version 5.5

Key Corridors – By County

In addition to the analysis of the region as a whole, the top five corridors by maximum tonnage moved by county were also reviewed. For the 2050 year. This analysis

identifies key freight truck corridors within each of the counties based on the projected freight tonnage (Table 18). Overall, I-10 is the most significant freight route through the region (and counties where it is located); however, the secondary corridors highlight other priorities. Wakulla County's major freight corridor is US 98 (east/west) followed by SR 267 and US 319 which make north/south connections with the Tallahassee Urban area and subsequently I-10.

Table 18: Top Freight Corridors by Maximum Tonnage (2050)

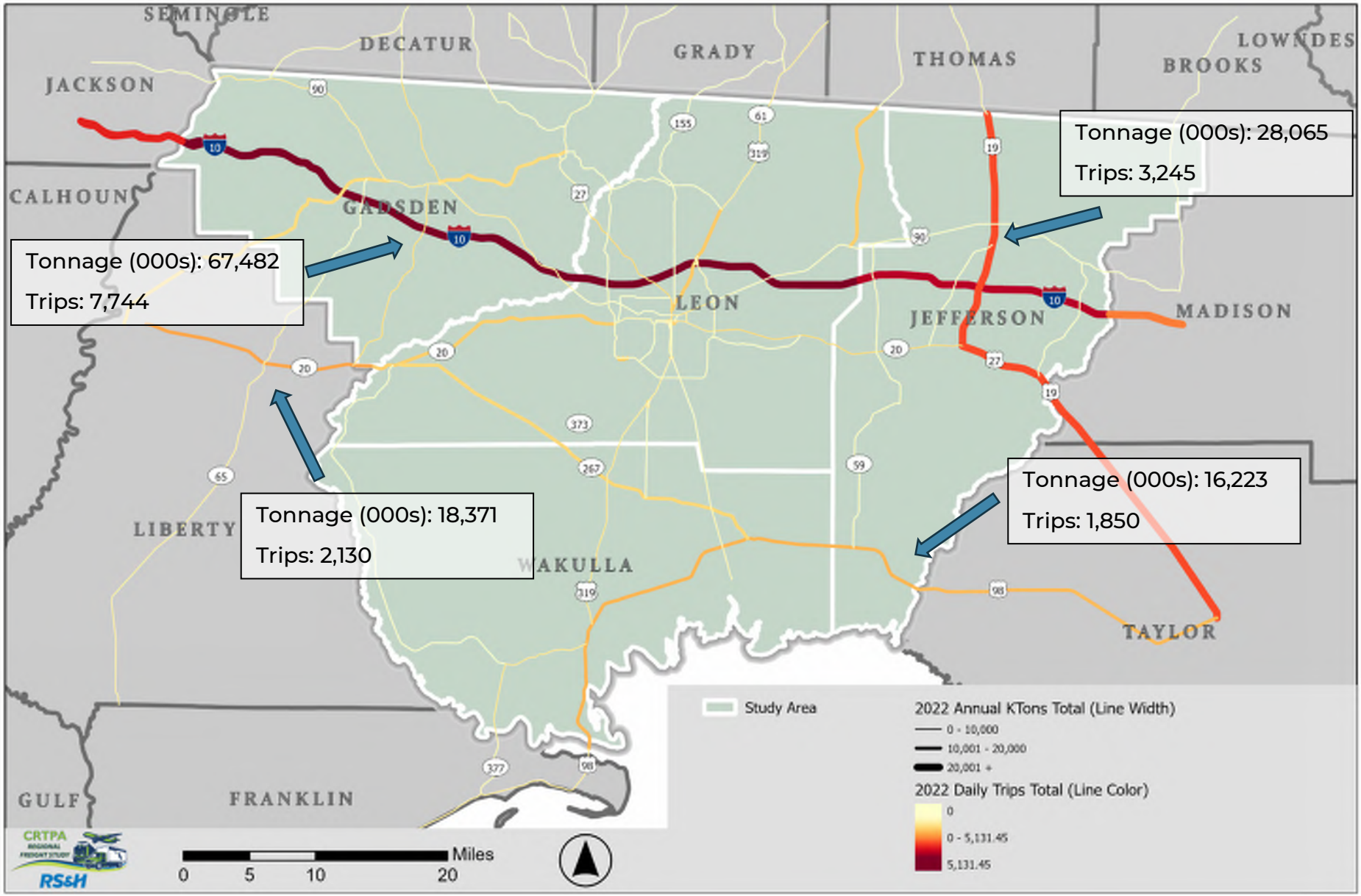
County	Corridor 1	Corridor 2	Corridor 3	Corridor 4	Corridor 5
Gadsden	I-10	SR 12	SR 267	US 90	US 27
Jefferson	I-10	US 19	US 98	US 27	SR 59
Leon	I-10	SR 20	THOMASVILLE RD (SR 61)	SR 267	US 27
Wakulla	US 98	SR 267	US 319	SR 363	C61

Source: FAF5

Benefits to the region: These corridors represent some of the most significant freight movements throughout the region and their identification highlights the need for freight considerations if/when improvements and development are planned.

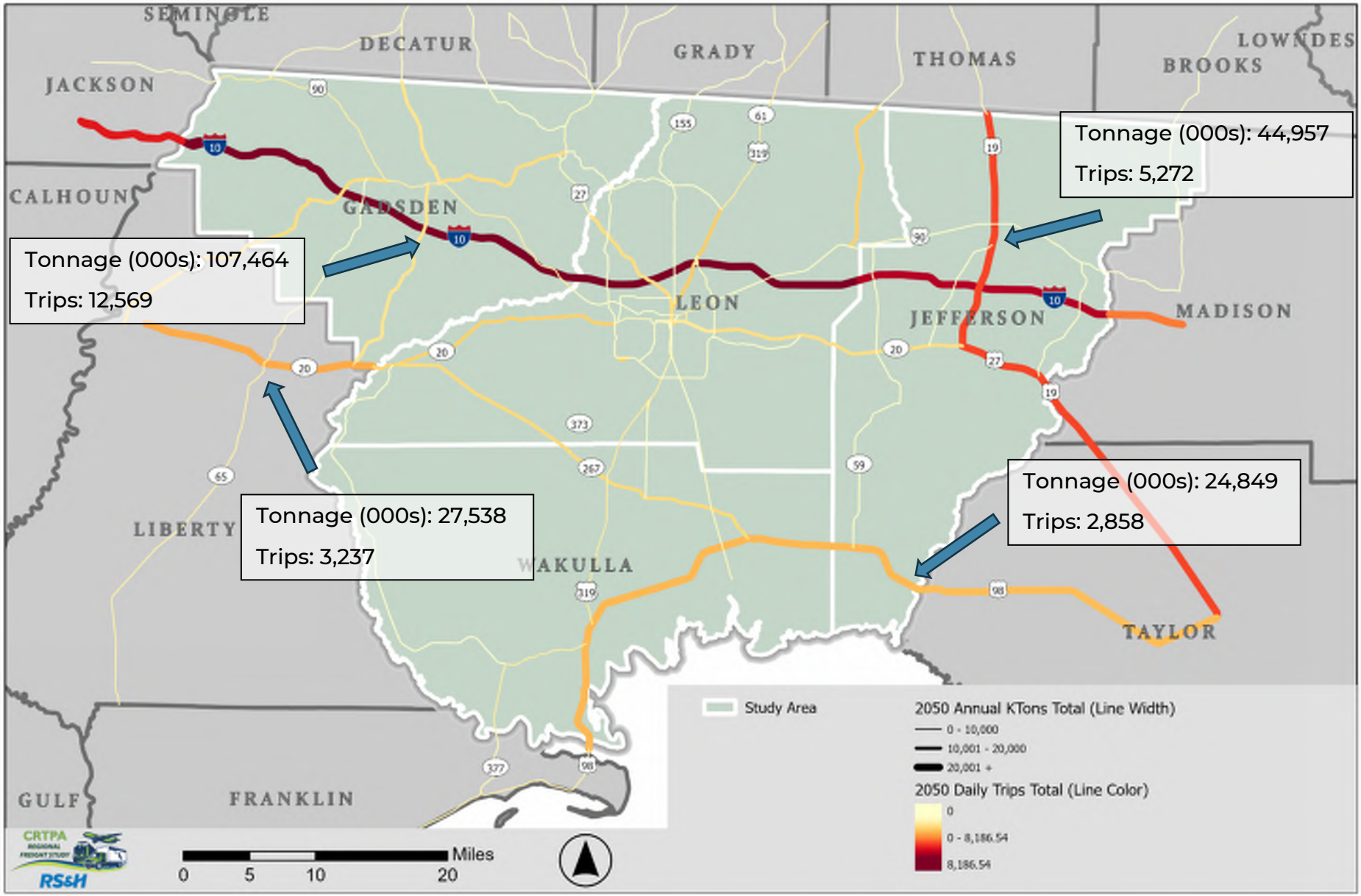
Needs and Issues for the region: This information does not identify issues; however, the identification of these corridors provides the region with the opportunity to prioritize freight along these corridors. Operational, and infrastructure related improvements along these corridors are likely to have direct freight benefits.

Figure 26: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2022)



Source: FHWA Freight Analysis Framework Version 5.5 (Note I-10 data is divided into 2 lines within the source FAF5 dataset, as such the line with the largest tonnage and trips was utilized for symbolization.)

Figure 27: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2050)



Source: FHWA Freight Analysis Framework Version 5.5; (Note I-10 data is divided into 2 lines within the source FAF5 dataset, as such the line with the largest tonnage and trips was utilized for symbolization.)

Key Corridors – By Commodity

Table 19 identifies the top three corridors in 2050 for transporting each commodity group included in FAF5. I-10 is the top corridor for all commodities; however, SR 20 is one of the top three corridors for farm products, chemicals, waste and scraps, and other motor vehicles. Thomasville Road, connecting downtown Tallahassee to the northeastern part of the region, is one of the top three corridors for several commodity groups, including food, beverage, & tobacco products, liquid & gases, durable manufactured goods, and mixed freight.

All commodities other than liquid and gases are projected to see growth in roadway freight in the region between 2022 and 2050. While overall freight movement for liquids and gases is projected to increase in the coming years as domestic power generation shifts toward natural gas, this commodity group is primarily moved by pipeline and rail, as opposed to truck. Chemicals and mixed freight are projected to experience the highest growth in the region, with the top corridors seeing over 100% increases in tonnage over the next 30 years. This growth in chemical freight is in-line with national trends, which reflect the growing investments in chemical manufacturing.

Benefits to the region: This data identifies the types of commodities and the projected growth of their movements throughout the region. Though similar to the overall freight movements, this data can be used to understand the types of industries utilizing the roadway network. This data shows that I-10 is the primary route for all commodities with the exception of Logs and other wood which is anticipated to utilize SR 20 and US 19 more than I-10.

Needs and Issues for the region: The increase in freight movements along these corridors indicate areas of focus for potential improvements. Increased freight volumes are correlated with increased need for maintenance and potential congestion concerns into the future.

Table 19: Top Corridors (Tonnage) by Commodity (2050)

Commodity	#1 Corridor		#2 Corridor		#3 Corridor	
	Name	% Change 2022-2050	Name	% Change 2022-2050	Name	% Change 2022-2050
Farm Products	I-10	34.8%	SR 20	17.5%	US 98	25.5%
Food, Bev., Tobacco	I-10	60.7%	US 19	62.2%	Thomasville Rd	69.0%
Stone, Sand, Gravel, Ores	I-10	54.5%	US 19	55.6%	US 98	77.0%
Liquid and Gases	I-10	(10.1%)	US 319	(8.6%)	Thomasville Rd	(17.1%)
Chemicals	I-10	157.3%	US 19	160.1%	SR 20	152.0%
Logs and Other Wood	SR 20	55.4%	US 19	57.2%	I-10	56.0%
Waste and Scraps	I-10	24.3%	SR 20	24.5%	US 19	24.2%
Consumer Manuf. Goods	I-10	91.5%	US 19	90.3%	US 98	79.2%
Durable Goods (High-Tech)	I-10	56.4%	US 19	54.6%	Thomasville Rd	57.6%
Durable Goods (Low-Tech)	I-10	82.7%	US 19	73.7%	Thomasville Rd	98.8%
Motor and Other Vehicles	I-10	64.7%	US 19	60.3%	SR 20	65.1%
Mixed Freight	I-10	104.0%	US 19	104.3%	Thomasville Rd	88.5%

Source: FAF5

Regional Air Trade

Tallahassee International Airport (TLH)

The Tallahassee International Airport (TLH) is poised for significant growth and development in the near future. These efforts aim to elevate TLH as a vital transportation hub, foster economic growth in the region, and respond to the increasing demand for air cargo services.

Development Projects

Several development projects are underway at TLH, enhancing the airport's capabilities in serving the intermodal, global freight system and contributing to the region's economic growth (Table 20).

Table 20: Combined Impacts of Development Projects at TLH

	Aero Center Tallahassee	Burrell Aviation	International Processing Facility/ Foreign Trade Zone	Total Impacts
Airport Property Under Development (acres)	8	19	1	28
Capital Investment	$10M	$20M	$30M	$60M
Revenue 30-Year Term	$9M	$8M	TBD	$17M
Permanent Jobs	29	291	1,600	1,920
Total Annual Economic Impact	$19M	$60M	$300M *(at maturity)*	$379M

Source: Tallahassee International Airport

The most relevant takeaway to the regional Freight Study may be the discussion of current and forecast cargo. The cargo apron area contains cargo facilities for Delta, DHL, FedEx, and USPS. Most cargo activity at TLH is conducted by FedEx on regularly scheduled flights between TLH and FedEx's hub at Memphis International Airport (MEM) using Boeing 757- 200 freighter jets. FedEx also conducts feeder routes using Cessna 208 Caravan turboprops through airports like Orlando International, Jacksonville International, and Mobile Downtown. Delta carries some belly cargo on its scheduled flights.

In addition to the planned expansions, the 2019 Airport Master Plan indicated the that the airport would continue to manage increased cargo. Between 2025 and 2035 TLH is expected to move approximately 10.5% more cargo operations over the same period. The anticipated cargo and operations at the airport are included within Table 21.

Table 21: TLH Cargo Forecasts

Year	Total Cargo (lbs.)	Total Operations (Aircraft)
2025	22,891,341	1,513
2035	25,286,281	1,672

Source: Tallahassee International Airport Master Plan Update (2019)

TLH has also indicated that it is exploring the improvement of its airport approaches from CAT II to CAT III in order to increase its operational capacity. These improvements would benefit freight movement and passenger operations at the airport.

In addition to the support of existing and future growth, TLH has been engaged and remained informed of emerging trends such as urban air mobility[14] and drone

[14] https://www.faa.gov/sites/faa.gov/files/Urban-Air-Mobility-Concept-of-Operations-2.0.pdf

delivery services. These modes are not active in the region at this time, though they may become more common as technology continues to improve.

Benefits to the region: The anticipated growth of the airport facilities and services will lead to both employment and economic benefits within the region. As the most significant airport in the area, improvements to TLH directly benefit the region. The continued growth of TLH is complementary to roadway and corridor projects being developed within the region such as the Airport Gateway and widening of SR 263/Capital Circle.

Needs and Issues for the region: Growth at the airport is consistent with regional planning and nearby roadway corridors; therefore, its growth is anticipated to benefit the region.

Foreign Trade Zone

TLH is taking steps to establish a fully operational Foreign Trade Zone (FTZ) in support of Florida's Freight Mobility and Trade Plan (FMTP). Serving up to nine surrounding counties from I-75 to Port St. Joe, the FTZ aims to address the growing freight logistics demands of the state. The main benefit of this designation is that manufacturers involved in importing and exporting goods will enjoy substantial cost reductions concerning customs, duties, taxes, and tariffs within the FTZ. Consequently, the implementation of the FTZ will lead to streamlined supply chains and optimized movement of goods. As a significant catalyst for economic growth, the FTZ is expected to create 1,664 jobs over the next decade and generate an impressive $304.7 million in annual economic impact once it reaches full maturity in 2034.[15]

Benefits to the region: The creation of the FTZ would be the first within the region and has the potential to promote significant employment and economic growth for the airport and the region as a whole.

Needs and Issues for the region: The development and designation of FTZ is reliant on an application process which TLH is actively pursuing. The continued efforts of TLH staff and diligence in the process will be required to achieve designation.

Expansion of FedEx Air Cargo Activity

In response to the growing demand for air cargo movement and increased delivery needs, FedEx plans to expand air cargo facilities at TLH. This expansion aims to bolster the facility's ability to handle larger volumes of freight efficiently, especially with the increases in demand for overnight delivery. The primary focus of the expansion includes additional apron capacity, allowing for more aircraft to be

[15] https://www.talgov.com/airport/tlh-ipf

accommodated. By investing in these critical improvements, TLH and FedEx are working together to meet the evolving needs of the global freight landscape.

Benefits to the region: The expansion of this facility has the potential for increased employment opportunities and economic growth for the region.

Needs and Issues for the region: The increase in freight movements will increase the reliance of freight trucks on the nearby roadway network; however, ongoing widening of SR 263/Capital Circle should mitigate potential congestion concerns.

Port Trade

The Port of Port St. Joe (the Port) has expressed an interest in the continued coordination with rail and freight providers throughout the Panhandle. Stakeholders have gone through a series of coordination efforts with the goals and anticipation of additional development coming to the Port St. Joe area. These developments are expected to increase the effectiveness of rail expansion back into the area.

The road network offers efficient access to I-10 via SR 71 and the parallel SR 73. This provides a multimodal connection to the rail access and expands the potential for effective seaport cargo transload movements through the region.

Benefits to the region: Though outside of the region, expansion and development of industry near the Port may act as a regional generator for economic activity.

Needs and Issues for the region: Regional representatives should continue coordination with Port officials on development(s) which may be regionally beneficial.

Conclusion

The future and existing conditions assessments define the freight mobility framework for the region. Over the planning horizon, it is anticipated that business development will continue to increase in the region; however, the number of freight related businesses within the area has been declining. Regional comprehensive planning efforts highlight a limited emphasis on the development of industrial and freight related businesses which may limit this growth. These limitations provide communities with the tools to guide this development into desired areas while maintaining the character of the overall region. It is anticipated that future freight related growth will largely be clustered adjacent to major corridors (especially I-10).

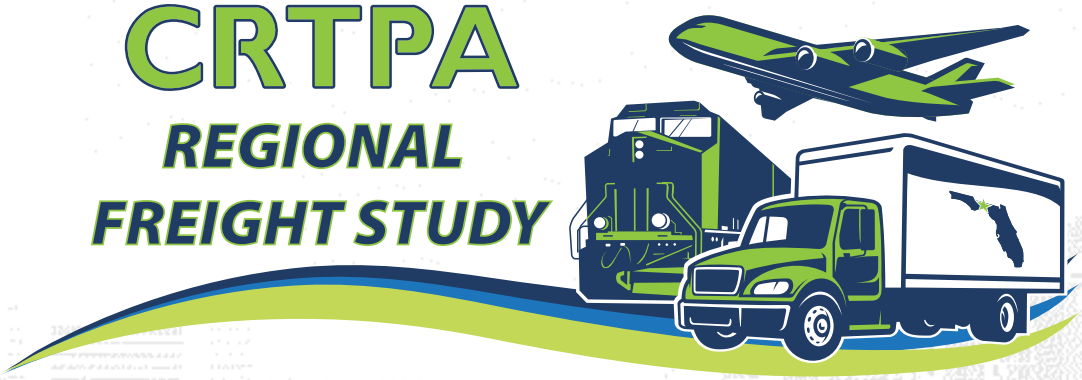
The movement of cargo through the region is expected to increase along the major freight corridors and major freight modes in the area. The presence of I-10, other major roadways, rail lines, and TLH will continue to move cargo through the region and beyond. The TLH infrastructure and policy improvements are anticipated to improve cargo modal options while having a significant and positive economic

impact on the region. Likewise, the rail providers in the region have identified improvements to the corridors and are pursuing business partnerships across the state.

Future Conditions Appendix

CRTPA

REGIONAL FREIGHT STUDY



RS&H

Appendix 1: Socioeconomic Comparison Materials

Population Projections

Population Projection Comparison between the Bureau Business and Economic Business Research (BEBR) and Woods and Poole.

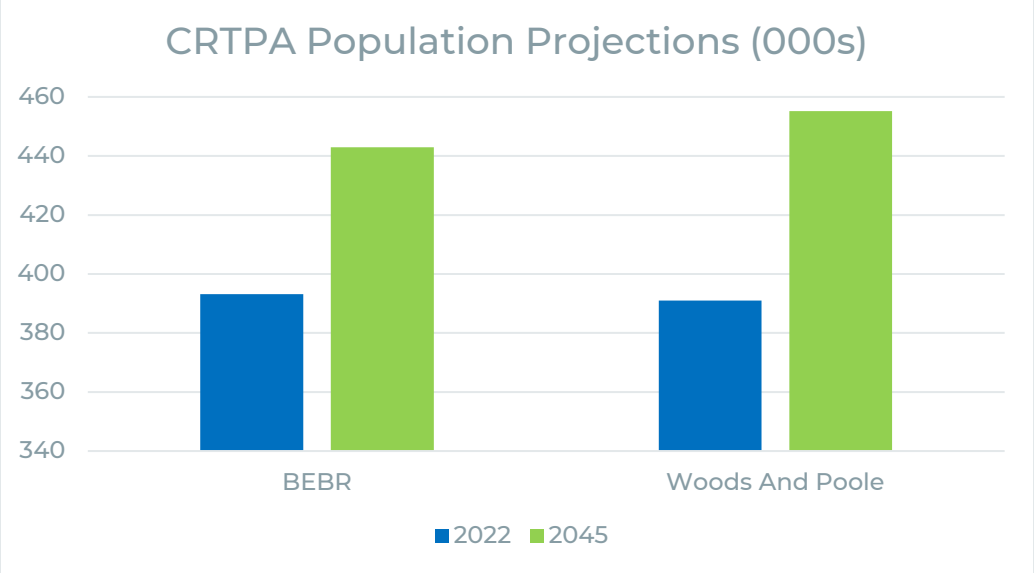
A review of two projection sources was conducted to assess the validity of the projections. When considering the results, the BEBR population projections were reviewed within the report due to the more conservative totals.

Table 1: 2022 and 2045 Population Projections

Year	BEBR	Woods And Poole
2022	393.19	390.99
2045	442.9	455.17

Source: Bureau of Economic and Business Research (BEBR) Volume 56, Bulletin 195, April 2023 and Woods and Poole

Figure 1: 2022 and 2045 Population Projections



Source: BEBR Volume 56, Bulletin 195, April 2023 and Woods and Poole

Table 2: BEBR Population Projections by County (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region	Florida
2022 Population (000s)	299.13	43.97	35.17	14.92	393.19	22,276.13
2045 Population Medium Projection (000s)	337.9	44.9	44.1	16	442.9	27,270.00
Total Population Change 2022-2045 (000s)	38.77	0.93	8.93	1.08	49.71	4,993.87
% Population Change 2022-2045	11.47%	2.07%	20.25%	6.75%	11.22%	18.31%
Annual Average Population Growth Rate 2022-2045	0.50%	0.09%	0.88%	0.29%	0.49%	0.80%

Source: BEBR Volume 56, Bulletin 195, April 2023

Figure 2: Woods and Poole Population Projections by County (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region	Florida
2022 Population (000s)	297.37	43.40	35.18	15.04	390.99	22,244.82
2045 Population (000s)	348.59	44.27	46.03	16.29	455.17	28,459.88
Total Population Change 2022-2045 (000s)	51.22	0.87	10.85	1.24	64.18	6215.06
% Population Change 2022-2045	17.22%	2.00%	30.85%	8.26%	16.42%	21.84%
Annual Average Population Growth Rate 2022-2045	0.69%	0.09%	1.18%	0.35%	0.66%	0.95%

Source: Woods and Poole

Employment Projections

Freight related employment projections underwent a similar review as the population data. Given the variability of projections, the Woods and Poole data was most available at the county level and was therefore used within the report.

Table 3: Freight Employment Projection (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region
2022 Freight Employment (000s)	19.89	8.61	2.58	1.69	32.77
2045 Freight Employment (000s)	22.12	8.35	2.99	1.77	35.03
Total Freight Employment Change 2022-2045	2.23	(0.26)	0.41	0.08	2.26
% Freight Employment Change 2022-2045	11.24%	(3.08%)	15.96%	4.78%	7.52%
Annual Average Freight Employment Growth Rate 2022-2045	0.46%	(0.12%)	0.65%	0.20%	0.32%

Source: Woods and Poole

Table 4: Freight Industry Employment Projection (2022-2030) – FDOC

	*Florida Department of Commerce[1]			Gadsden County Development Council[2]
	Leon	"Capital Region" – Gadsden & Wakulla	"North Florida" – Hamilton, Jefferson, Lafayette, Madison, Suwannee, Taylor	Gadsden
2022 Freight Employment (000s)	13.06	5.34	5.6	11.41
2030 Freight Employment (000s)	13.54	5.56	5.81	---
Total Freight Employment Change 2022-2030	0.48	0.22	0.21	---
% Freight Employment Change 2022-2030	3.7%	4.2%	3.8%	---
Annual Average Freight Empl. Growth Rate 2022-2030	0.45%	0.53%	0.47%	---

[1] https://floridajobs.org/economic-data/employment-projections
[2] https://www.gadsdenfldev.com/economic-data/industry-spotlight/

Source: FDOC

*Note: Employment projections from the Florida Department of Economic Opportunity separate Leon County's employment figures, while grouping Gadsden, Leon, and Wakulla Counties together into a single region ("The Capital Region")[3] Additionally, Jefferson County was grouped in the "North Florida" Area which prevented a direct comparison of their projections. In this analysis, Leon was subtracted from "The Capital Region" to measure Gadsden and Wakulla together. Jefferson County is grouped with the "North Florida" counties.

[3] https://careersourceflorida.com/wp-content/uploads/2022/05/CareerSource-Florida-LWDB-Map.pdf

Appendix 2: Top Corridors by Maximum Annual Freight Tonnage

In each of the tables below, an analysis was conducted to identify the top five freight corridors within each of the four counties. Each table first identifies the corridors with the highest maximum freight tonnage total and then proceeds to the commodity categories. The top five corridors are identified by the maximum freight annual freight tonnage (000s) and supplemented by the maximum number of daily trips along the same corridor. The I-10 corridor moves the most significant freight volumes through the region, while Wakulla County (without I-10) has US 98 with the most significant movements.

Table 5: Gadsden County Top 5 Corridors by Maximum Freight Tonnage (000s)

Commodity	Corridor 1			Corridor 2			Corridor 3			Corridor 4			Corridor 5		
	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips
Total	I-10	107,312	12,569	SR 12	15,178	1,729	SR 267	13,421	1,379	US 90	8,950	961	US 27	2,226	315
Farm Products	I-10	13,993	1,648	SR 12	3,288	390	SR 267	2,514	301	US 90	879	108	US 27	426	53
Food, Bev., Tobacco	I-10	8,647	1,225	SR 12	729	112	SR 267	388	61	US 90	357	56	US 27	290	46
Stone, Sand, Gravel, Ores	I-10	21,546	1,904	SR 267	5,369	459	SR 12	3,992	349	US 90	3,583	308	US 27	150	14
Liquid and Gases	I-10	2,319	257	SR 267	290	37	US 90	126	19	SR 12	42	5	US 27	27	3
Chemicals	I-10	7,764	932	SR 267	228	31	US 90	366	47	SR 12	577	72	US 27	170	22
Logs and Other Wood	I-10	8,841	955	SR 12	3,400	371	SR 267	1,858	206	US 27	162	17	US 90	152	16
Waste and Scraps	I-10	3,590	386	SR 12	816	89	US 90	275	32	SR 267	222	25	SR 65	6	1
Consumer Manuf. Goods	I-10	12,701	1,853	SR 12	655	102	US 90	318	52	SR 267	266	43	US 27	241	38
Durable Goods (High-Tech)	I-10	19,546	2,033	SR 267	3,835	335	US 90	2,377	210	SR 12	1,360	128	US 27	255	31
Durable Goods (Low-Tech)	I-10	1,801	330	SR 12	84	19	US 90	77	18	US 27	40	8	SR 267	33	8
Motor and Other Vehicles	I-10	1,524	215	SR 12	139	21	US 27	20	3	SR 267	18	3	US 90	17	3
Mixed Freight	I-10	5,144	849	US 90	659	122	SR 12	605	107	SR 267	497	91	US 27	439	80

Source FAF5 2050

Table 6: Jefferson County Top 5 Corridors by Maximum Freight Tonnage (000s)

Commodity	Corridor 1			Corridor 2			Corridor 3			Corridor 4			Corridor 5		
	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips
Total	I-10	93,284	10,994	US 19	44,957	5,272	US 98	24,849	2,858	US 27	14,155	1,666	SR 59	908	128
Farm Products	I-10	14,267	1,680	US 98	5,005	586	US 19	4,194	498	US 27	1,876	224	SR 59	140	18
Food, Bev., Tobacco	I-10	7,572	1,060	US 19	3,416	476	US 98	1,392	202	US 27	1,149	171	SR 59	163	24
Stone, Sand, Gravel, Ores	I-10	17,870	1,604	US 19	8,487	763	US 98	6,414	569	US 27	2,942	263	SR 59	69	6
Liquid and Gases	I-10	1,608	172	US 19	856	96	US 98	805	88	US 27	364	42	SR 59	30	3
Chemicals	I-10	6,603	786	US 19	3,693	435	US 98	1,089	129	US 27	788	99	US 221	35	5
Logs and Other Wood	I-10	7,770	841	US 19	5,696	626	US 98	3,269	360	US 27	2,040	226	US 221	89	9
Waste and Scraps	I-10	2,928	313	US 19	1,238	132	US 98	1,113	120	US 27	388	42	SR 59	26	3
Consumer Manuf. Goods	I-10	10,805	1,570	US 19	4,674	686	US 98	2,115	305	US 27	1,048	159	SR 59	274	39
Durable Goods (High-Tech)	I-10	16,545	1,731	US 19	9,003	953	US 27	2,534	255	US 98	2,222	249	US 221	476	62
Durable Goods (Low-Tech)	I-10	1,531	274	US 19	798	142	US 98	119	25	US 27	85	18	SR 59	6	1
Motor and Other Vehicles	I-10	1,420	201	US 19	505	70	US 98	147	22	US 27	34	5	SR 59	5	1
Mixed Freight	I-10	5,193	860	US 19	2,398	395	US 98	1,158	205	US 27	907	161	SR 59	128	23

Source FAF5 2050

Table 7: Leon County Top 5 Corridors by Maximum Freight Tonnage (000s)

Commodity	Corridor 1			Corridor 2			Corridor 3			Corridor 4			Corridor 5		
	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips
Total	I-10	107,464	12,587	FL 20	19,094	2,182	THOMASVILLE RD	18,500	2,269	SR 267	16,881	1,904	US 27	13,842	1,670
Farm Products	I-10	14,057	1,656	FL 20	3,225	380	SR 267	2,775	325	US 27	1,736	206	THOMASVILLE RD	1,142	143
Food, Bev., Tobacco	I-10	8,579	1,219	THOMASVILLE RD	2,309	369	US 27	1,415	224	FL 61	1,351	207	US 319	1,309	195
Stone, Sand, Gravel, Ores	I-10	21,546	1,904	THOMASVILLE RD	5,751	493	US 27	4,442	377	FL 20	3,968	350	SR 267	3,834	339
Liquid and Gases	I-10	2,388	264	THOMASVILLE RD	1,073	143	US 319	1,003	134	FL 20	784	85	SR 267	769	84
Chemicals	I-10	7,781	934	FL 20	1,013	124	SR 267	954	114	US 27	755	104	US 319	668	81
Logs and Other Wood	I-10	8,886	960	FL 20	4,279	476	SR 267	3,269	360	US 27	2,040	226	APALACHEE PKWY	1,602	179
Waste and Scraps	I-10	3,590	386	FL 20	1,129	122	SR 267	1,023	111	THOMASVILLE RD	651	73	US 27	563	63
Consumer Manuf. Goods	I-10	12,719	1,855	US 319	1,679	246	THOMASVILLE RD	1,677	246	FL 61	1,663	243	FL 20	975	151
Durable Goods (High-Tech)	I-10	19,550	2,033	THOMASVILLE RD	3,991	395	US 27	3,459	335	MAHAN DR	2,524	244	APALACHEE PKWY	2,361	230
Durable Goods (Low-Tech)	I-10	1,798	329	THOMASVILLE RD	199	49	US 319	187	33	FL 61	186	33	US 27	168	40
Motor and Other Vehicles	I-10	1,526	215	FL 20	134	20	SR 267	131	19	US 319	115	16	THOMASVILLE RD	115	16
Mixed Freight	I-10	5,268	876	THOMASVILLE RD	1,746	328	FL 61	1,267	236	US 27	1,260	236	US 319	1,237	225

Source FAF5 2050

Table 8: Wakulla County Top 5 Corridors by Maximum Freight Tonnage (000s)

Commodity	Corridor 1			Corridor 2			Corridor 3			Corridor 4			Corridor 5		
	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips	Name	Tons	Trips
Total	US 98	24,849	2,858	SR 267	16,881	1,904	US 319	7,972	1,034	SR 363	3,261	395	C61	44	6
Farm Products	US 98	5,005	586	SR 267	2,867	334	US 319	1,248	155	SR 363	620	74	C61	9	1
Food, Bev., Tobacco	US 98	1,392	202	US 319	809	130	SR 267	581	83	SR 363	236	33	C61	3	1
Stone, Sand, Gravel, Ores	US 98	6,414	569	SR 267	3,910	348	US 319	1,605	141	SR 363	596	52	C61	9	1
Liquid and Gases	US 319	1,681	207	US 98	805	88	SR 267	769	84	SR 363	370	39	C61	7	1
Chemicals	US 98	1,089	129	SR 267	954	114	US 319	358	55	SR 363	159	18	--	--	--
Logs and Other Wood	US 98	3,269	360	SR 267	3,269	360	--	--	--	--	--	--	--	--	--
Waste and Scraps	US 98	1,113	120	SR 267	1,023	111	US 319	467	52	SR 363	62	7	--	--	--
Consumer Manuf. Goods	US 98	2,115	305	SR 267	916	139	SR 363	898	120	US 319	436	75	C61	6	1
Durable Goods (High-Tech)	US 98	2,222	249	SR 267	1,884	196	US 319	498	53	SR 363	300	48	C61	5	1
Durable Goods (Low-Tech)	US 98	119	25	SR 267	99	21	US 319	37	8	SR 363	13	3	--	--	--
Motor and Other Vehicles	US 98	147	22	SR 267	131	19	US 319	12	2	SR 363	6	1	--	--	--
Mixed Freight	US 98	1,158	205	US 319	821	156	SR 267	660	114	SR 363	15	3	--	--	--

Source FAF5 2050

Appendix 3: Regional Trade and Commodity Flows

*Note: Key Corridors by Commodity (Tables) are on 8.5” x 14” size paper.

Additionally, I-10 data is divided into 2 lines within the source FAF5 dataset, as such the line with the largest tonnage and trips was utilized for symbolization.

The following sections expand on the Commodity Flows chapter in the main report. Each commodity group, as defined in the FHWA Freight Analysis Framework (FAF5), is summarized separately in three tables and two maps.

For each commodity, the first table identifies the top ten corridors in the Region that transport the given commodity in 2022, and the second table presents the same information for 2050. These tables provide data on corridors with the maximum volume and maximum daily trips across the Region. The third table highlights the top ten corridors experiencing freight growth for the given commodity between 2022 and 2050.

Additionally, the following sections include two maps per commodity to visually represent freight movement patterns by commodity. The first map illustrates the flows of the given commodity in 2022 and the second map presents the projected commodity flows in 2050, providing insight into potential shifts in the freight network over the next 30 years.

Key Corridors by Commodity (Tables)

Farm Products

Table 9: Top 10 Freight Corridors for Farm Products in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	11,189	1,316
SR 20	4,876	583
US 98	3,987	467
US 19	3,358	397
SR 12	2,786	331
SR 267	2,437	284
US 27	1,537	184
US 319	1,025	128
Apalachee Pkwy	876	104
Thomasville Rd	875	109

Source: FHWA Freight Analysis Framework Version 5.5

Table 10: Top 10 Freight Corridors for Farm Products in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	14,267	1,680
SR 20	5,727	683
US 98	5,005	586
US 19	4,194	498
SR 12	3,288	390
SR 267	2,867	334
US 27	1,876	224
US 319	1,248	155
Thomasville Rd	1,142	143
SR 61	1,112	137

Source: FHWA Freight Analysis Framework Version 5.5

Table 11: Top 10 Corridors for Farm Freight Growth in the Region (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
C 61	79.7%	2.1%	79.9%	2.1%
SR 363	79.6%	2.1%	79.7%	2.1%
SR 309	78.6%	2.1%	78.8%	2.1%
NW Capital Cir	69.7%	1.9%	69.9%	1.9%
SR 159	60.8%	1.7%	63.2%	1.8%
Franklin Blvd	55.0%	1.6%	55.6%	1.6%
C 157	44.6%	1.3%	44.9%	1.3%
C 153	44.6%	1.3%	44.9%	1.3%
Orchard Pond Pkwy	41.7%	1.3%	41.7%	1.3%
SR 93	41.6%	1.3%	42.5%	1.3%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 3: Farm Products Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2022)

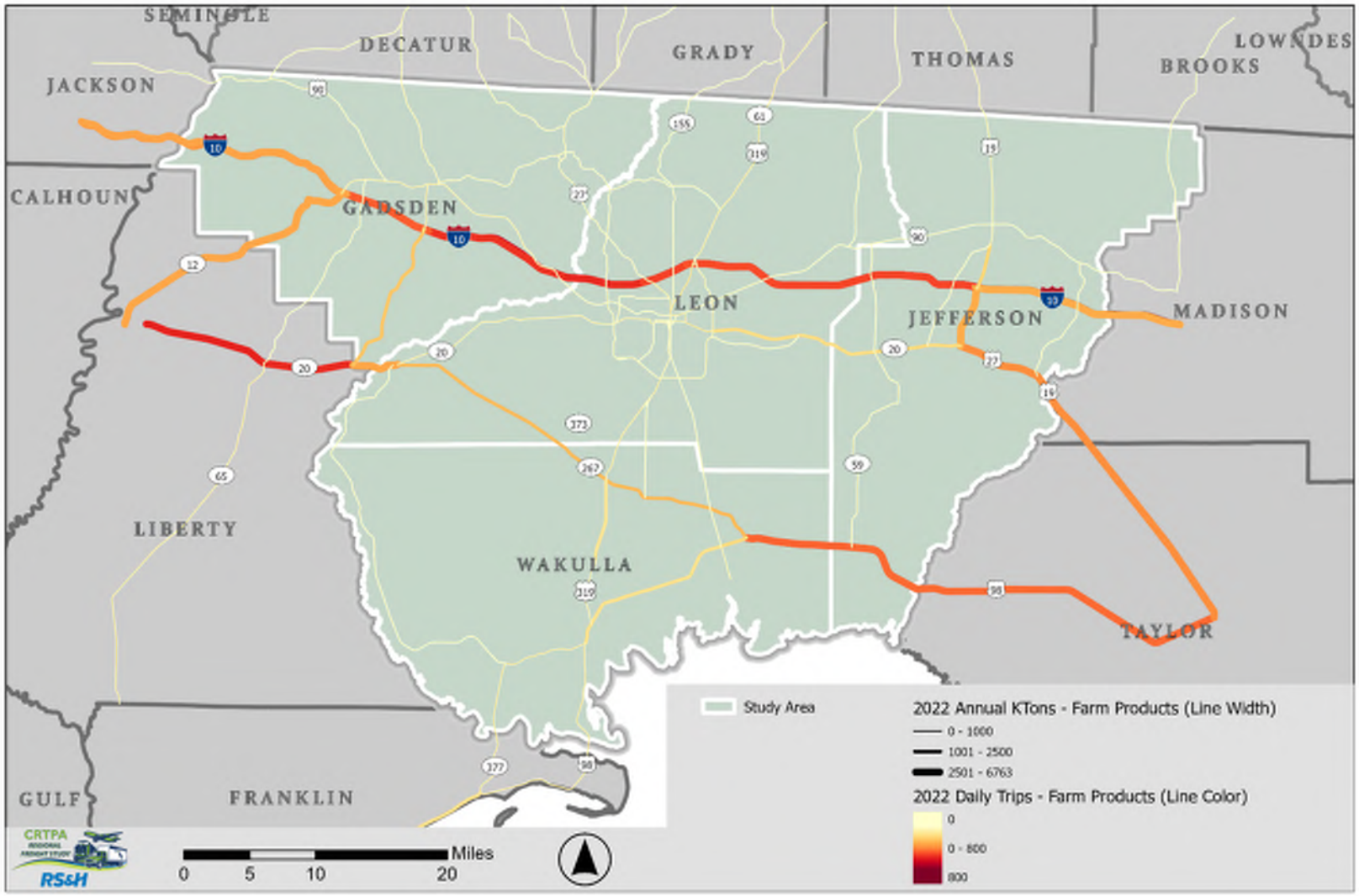


Figure 4: Farm Products Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2050)



Food, Beverage, and Tobacco

Table 12: Top 10 Freight Corridors for Food, Beverage, and Tobacco Products in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	5,320	748
US 19	2,107	291
Thomasville Rd	1,366	217
US 98	873	126
US 27	845	133
SR 61	807	122
US 319	794	116
SR 20	776	114
Mahan Dr	474	72
SR 12	474	72

Source: FHWA Freight Analysis Framework Version 5.5

Table 13: Top 10 Freight Corridors for Food, Beverage, and Tobacco Products in Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	8,647	1,225
US 19	3,416	476
Thomasville Rd	2,309	369
US 27	1,415	224
US 98	1,392	202
SR 61	1,351	207
US 319	1,309	195
SR 20	1,237	184
Mahan Dr	801	122
SR 12	729	112

Source: FHWA Freight Analysis Framework Version 5.5

Table 14: Top 10 Corridors for Food, Beverage, and Tobacco Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
N Meridian Rd	96.4%	2.4%	98.7%	2.5%
Orchard Pond Pkwy	96.1%	2.4%	96.7%	2.4%
Meridian Rd	95.6%	2.4%	98.8%	2.5%
C 153	95.3%	2.4%	95.9%	2.4%
C 157	95.3%	2.4%	95.9%	2.4%
SR 309	84.0%	2.2%	87.0%	2.3%
Duval St	78.5%	2.1%	78.3%	2.1%
C 259	77.7%	2.1%	82.8%	2.2%
SR 93	76.8%	2.1%	80.3%	2.1%
C 61	75.5%	2.0%	75.6%	2.0%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 5: Food, Beverage, and Tobacco Annual Freight Volume (thousand tons) and Daily Trips (2022)

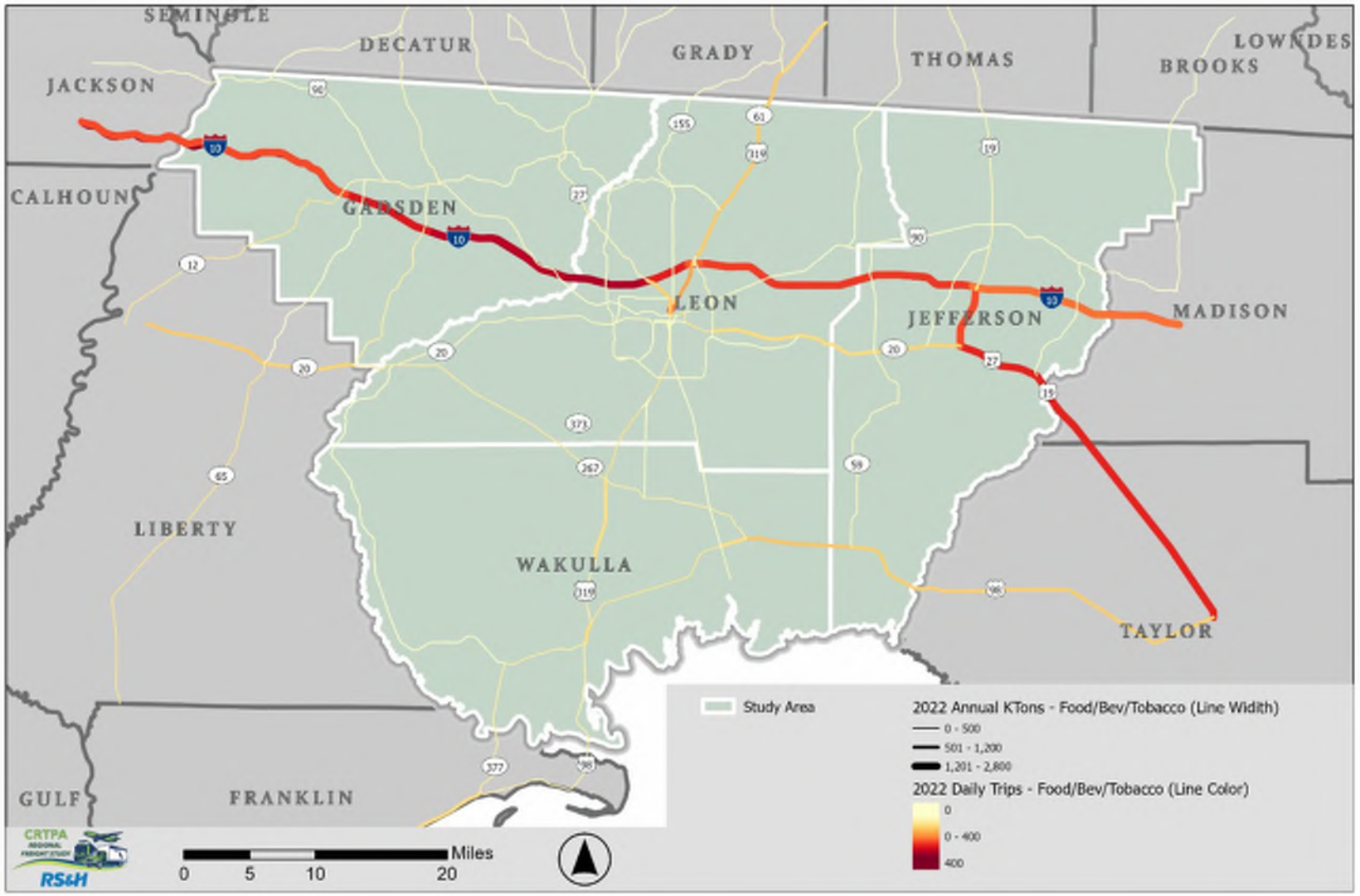
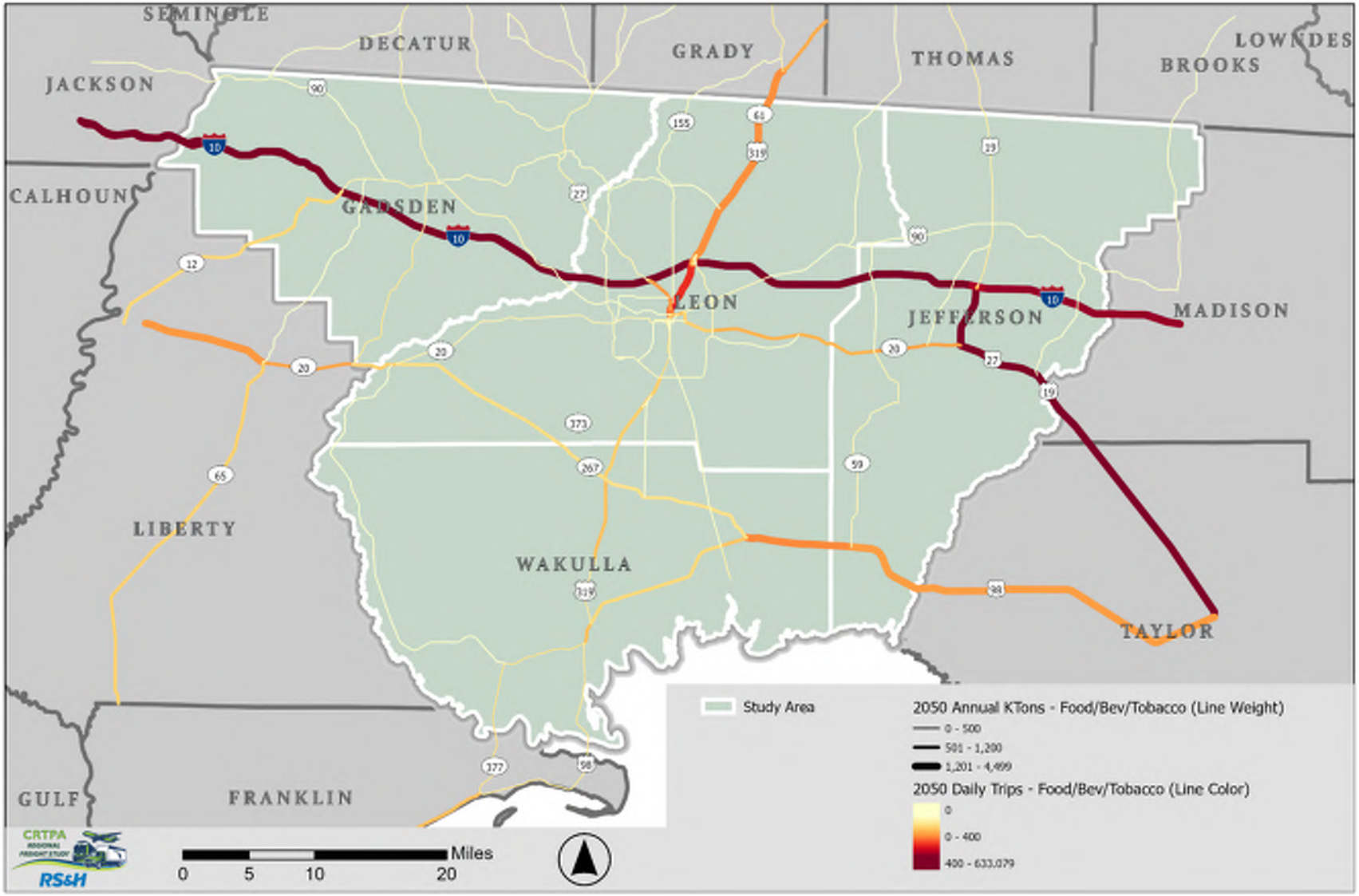


Figure 6: Food, Beverage, and Tobacco Annual Freight Volume (thousand tons) and Daily Trips (2050)



Stone, Sand, Gravel, & Ores

Table 15: Top 10 Freight Corridors for Stone, Sand, Gravel, & Ores in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	13,886	1,230
US 19	5,455	492
Thomasville Rd	3,984	342
US 98	3,624	323
SR 267	3,600	308
US 27	3,043	259
SR 20	2,763	243
US 90	2,367	204
SR 12	2,350	206
Mahan Dr	1,880	168

Source: FHWA Freight Analysis Framework Version 5.5

Table 16: Top 10 Freight Corridors for Stone, Sand, Gravel, & Ores in Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	21,546	1,904
US 19	8,487	763
US 98	6,414	569
Thomasville Rd	5,751	493
SR 267	5,369	459
SR 20	4,582	403
US 27	4,442	377
SR 12	3,992	349
US 90	3,583	308
Mahan Dr	2,779	248

Source: FHWA Freight Analysis Framework Version 5.5

Table 17: Top 10 Corridors for Stone, Sand, Gravel, & Ores Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 363	200.3%	4.0%	200.4%	4.0%
C 61	200.3%	4.0%	200.5%	4.0%
SR 59	136.8%	3.1%	137.7%	3.1%
Franklin Blvd	124.6%	2.9%	124.5%	2.9%
NW Capital Cir	102.3%	2.5%	102.1%	2.5%
NE Capital Cir	85.3%	2.2%	81.9%	2.2%
US 221	81.4%	2.2%	81.8%	2.2%
US 98	77.0%	2.1%	76.2%	2.0%
SR 97	75.2%	2.0%	74.9%	2.0%
SR 302	74.9%	2.0%	74.7%	2.0%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 7: Stone, Sand, Gravel, and Ores Annual Freight Volume (thousand tons) and Daily Trips (2022)

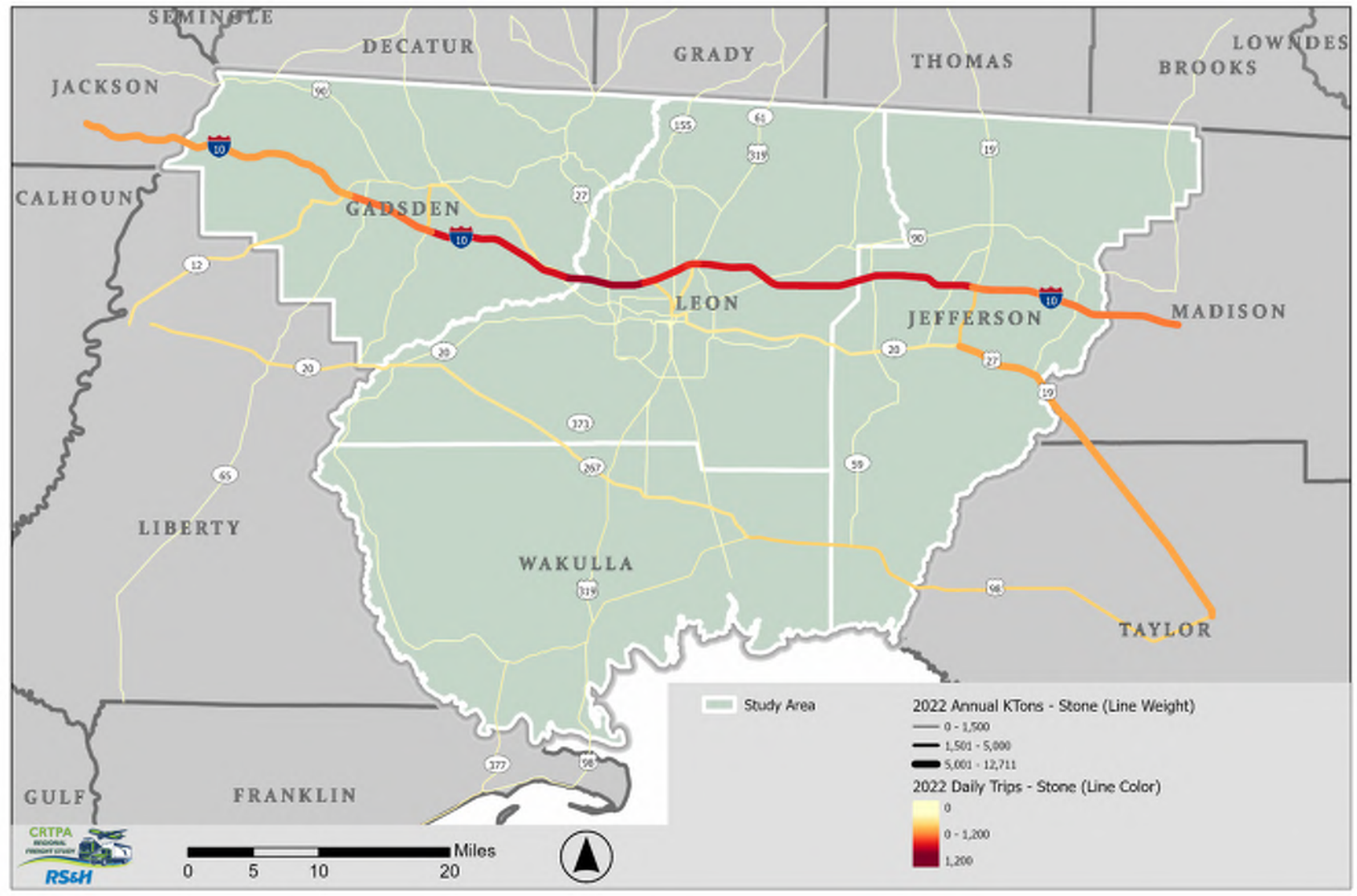
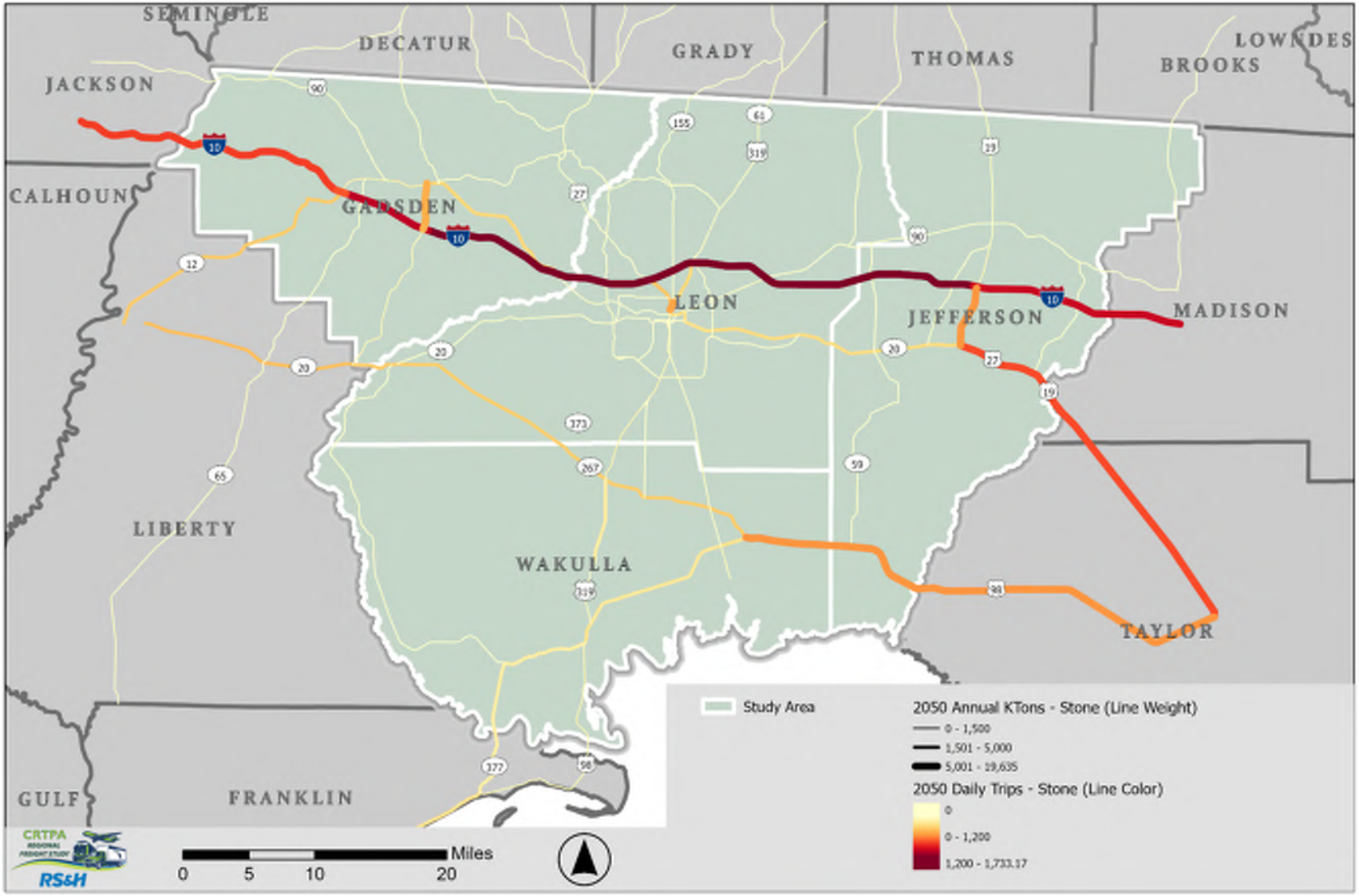


Figure 8: Stone, Sand, Gravel, and Ores Annual Freight Volume (thousand tons) and Daily Trips (2050)



Liquid and Gases

Table 18: Top 10 Freight Corridors for Liquid and Gases in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	2,602	274
US 319	1,838	224
Thomasville Rd	1,294	171
US 98	1,036	113
US 27	906	127
US 19	879	97
SR 20	736	77
SR 267	719	75
Crawfordville Rd	668	98
SR 363	492	52

Source: FHWA Freight Analysis Framework Version 5.5

Table 19: Top 10 Freight Corridors for Liquid and Gases in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	2,388	264
US 319	1,681	207
Thomasville Rd	1,073	143
US 19	856	96
US 98	805	88
SR 20	784	85
SR 267	769	84
US 27	743	105
Crawfordville Rd	536	80
SR 363	370	39

Source: FHWA Freight Analysis Framework Version 5.5

Table 20: Top Corridors for Liquid and Gases Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
US 90	15.3%	0.5%	19.3%	0.6%
SR 159	9.5%	0.3%	9.4%	0.3%
SR 267	6.9%	0.2%	11.3%	0.4%
SR 20	6.4%	0.2%	10.7%	0.4%
NW Capital Cir	5.1%	0.2%	10.6%	0.4%
SW Capital Cir	5.1%	0.2%	10.6%	0.4%

Source: FHWA Freight Analysis Framework Version 5.5

* Note: The six corridors shown are the only corridors that are projected to increase freight movement for liquids and gases.

Figure 9: Liquid and Gases Annual Freight Volume (thousand tons) and Daily Trips (2022)

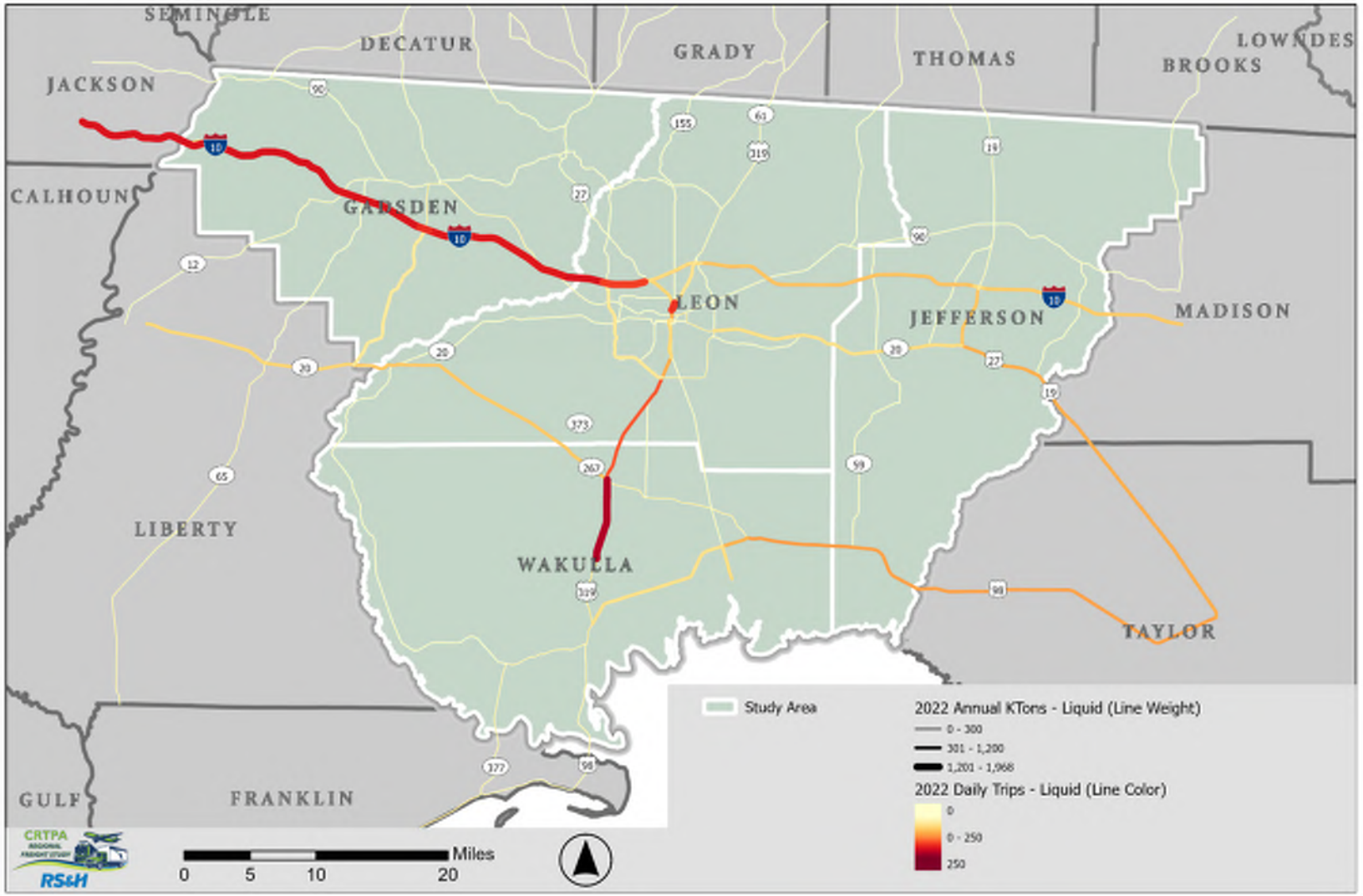
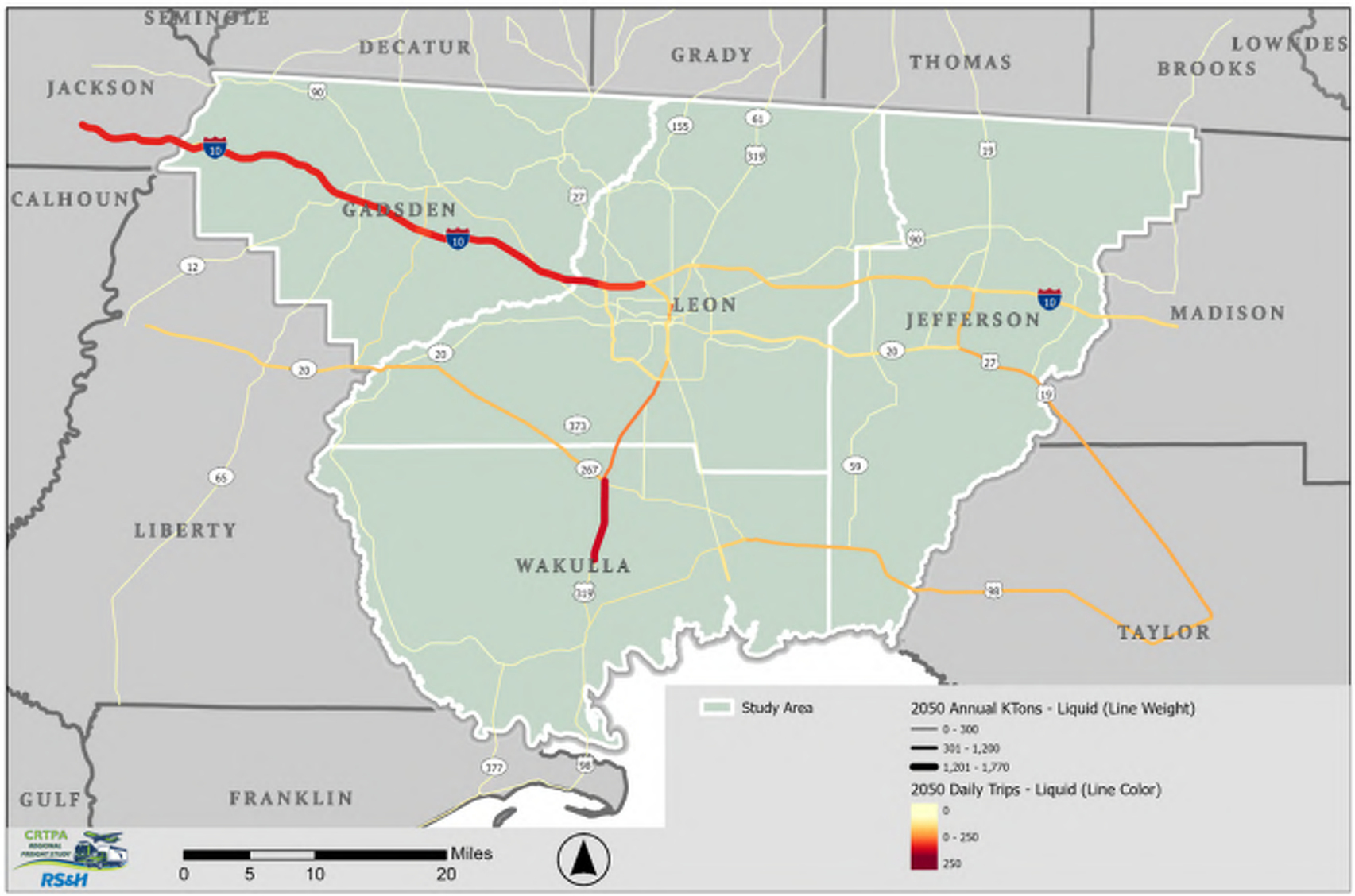


Figure 10: Liquid and Gases Annual Freight Volume (thousand tons) and Daily Trips (2050)



Chemicals

Table 21: Top 10 Freight Corridors for Chemicals in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	2,964	352
US 19	1,420	166
SR 20	541	67
US 98	451	53
SR 267	383	45
US 27	322	41
US 319	260	31
Thomasville Rd	259	41
SR 61	257	31
Apalachee Pkwy	243	30

Source: FHWA Freight Analysis Framework Version 5.5

Table 22: Top 10 Freight Corridors for Chemicals in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	7,781	934
US 19	3,693	435
SR 20	1,363	171
US 98	1,089	129
SR 267	954	114
US 27	788	104
US 319	668	81
Thomasville Rd	667	110
SR 61	660	80
Apalachee Pkwy	588	74

Source: FHWA Freight Analysis Framework Version 5.5

Table 23: Top 10 Corridors for Chemical Product Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
Stadium Dr	197.0%	4.0%	198.3%	4.0%
Bannerman Rd	186.2%	3.8%	186.4%	3.8%
NW Capital Cir	183.3%	3.8%	184.5%	3.8%
SR 309	178.9%	3.7%	180.2%	3.7%
SR 159	175.3%	3.7%	177.7%	3.7%
Lake Bradford Rd	173.7%	3.7%	180.6%	3.8%
US 221	171.8%	3.6%	174.5%	3.7%
Crawfordville Rd	169.4%	3.6%	180.0%	3.7%
Pensacola St	166.0%	3.6%	178.9%	3.7%
N Meridian Rd	165.3%	3.5%	168.2%	3.6%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 11: Chemicals Annual Freight Volume (thousand tons) and Daily Trips (2022)

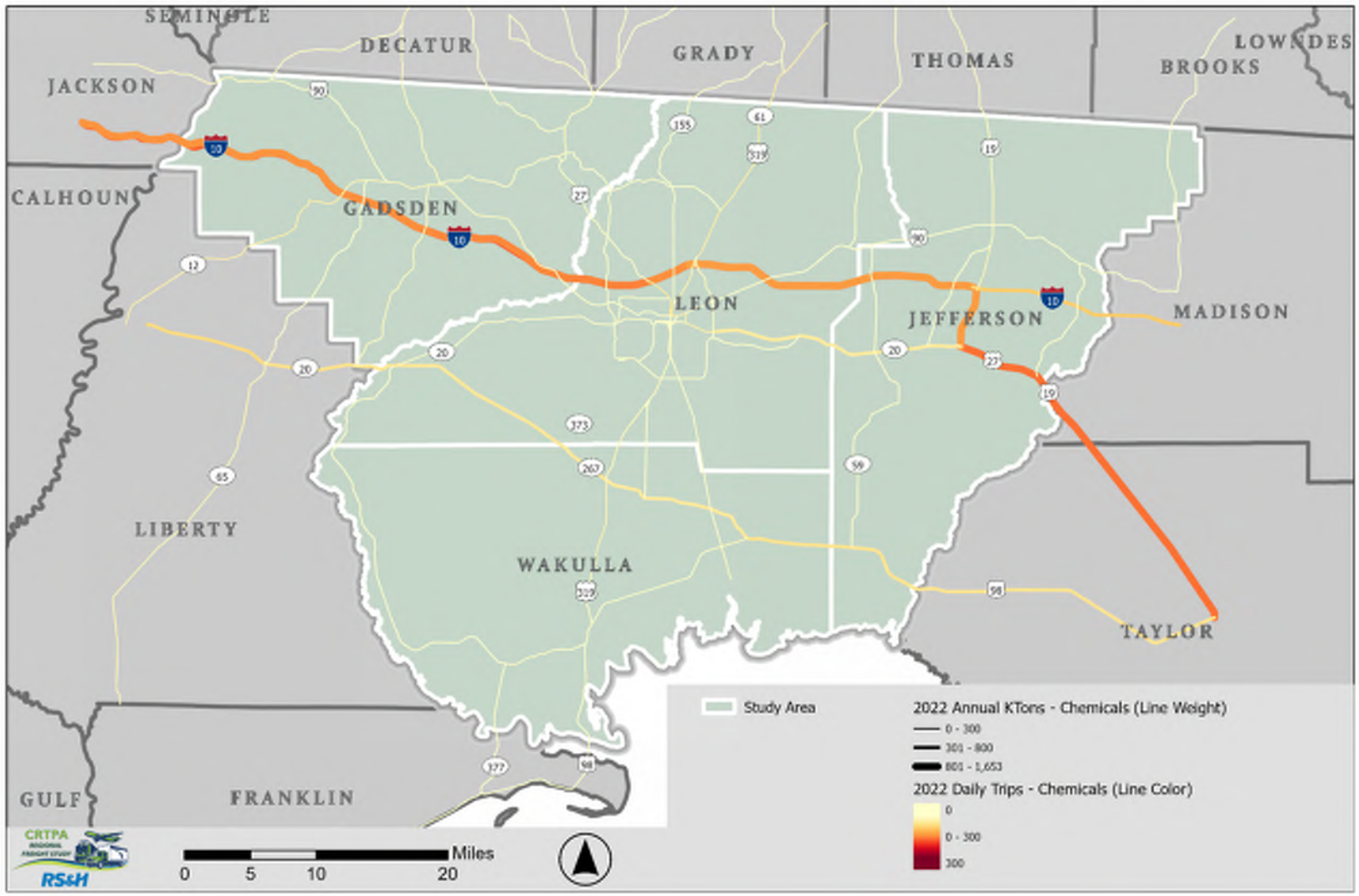
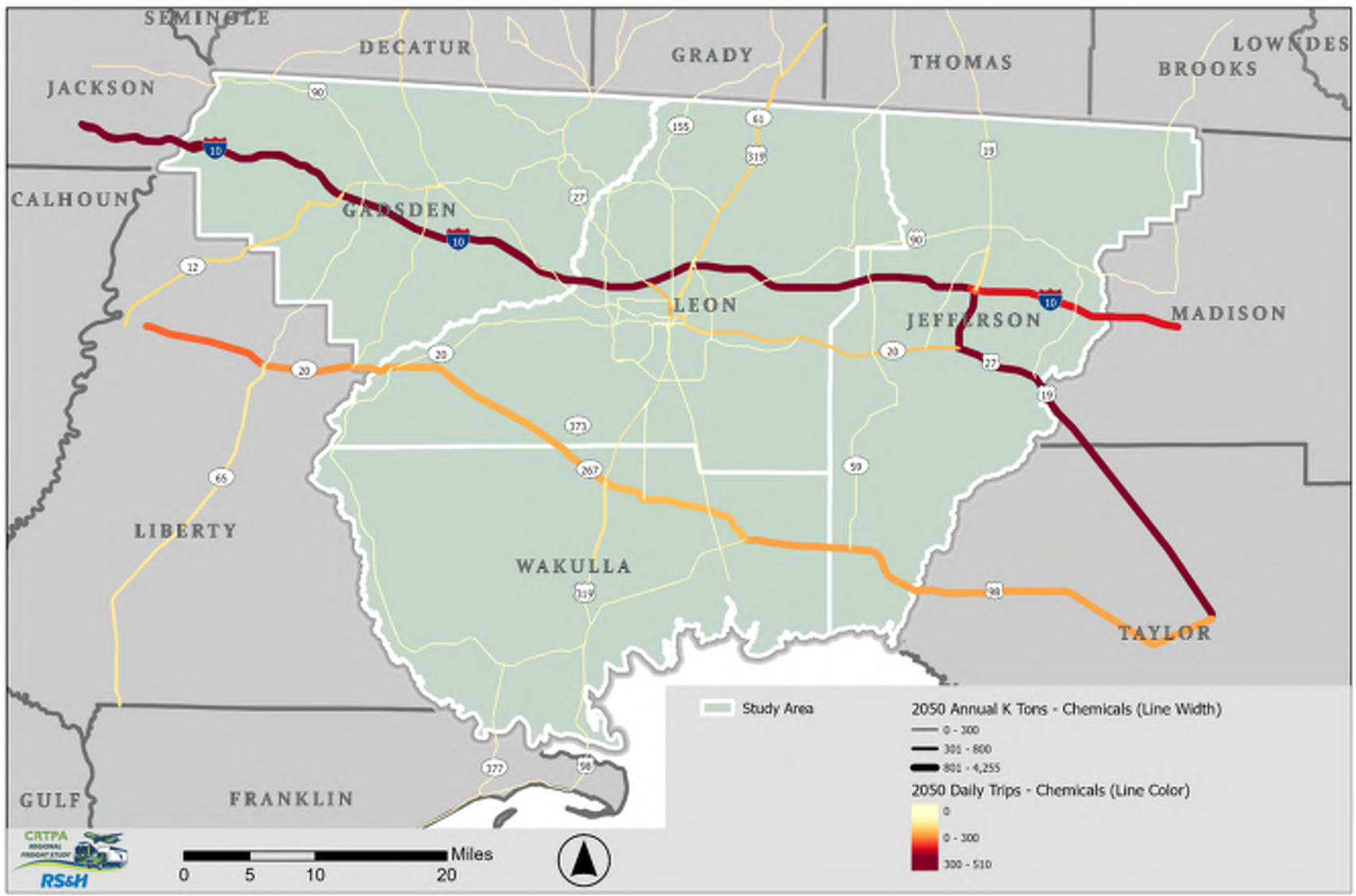


Figure 12: Chemicals Annual Freight Volume (thousand tons) and Daily Trips (2050)



Logs & Other Wood Products

Table 24: Top Freight Corridors for Logs & Other Wood Products in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	5,668	612
SR 20	3,948	438
US 19	3,623	399
SR 12	2,182	238
US 98	2,107	232
SR 267	2,107	232
US 27	1,306	145
Apalachee Pkwy	1,027	115
Lake Bradford Rd	650	75

Source: FHWA Freight Analysis Framework Version 5.5

Table 25: Top Freight Corridors for Logs & Other Wood Products in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	8,886	960
SR 20	6,137	681
US 19	5,696	626
SR 12	3,400	371
US 98	3,269	360
SR 267	3,269	360
US 27	2,040	226
Apalachee Pkwy	1,602	179
Lake Bradford Rd	1,010	116

Source: FHWA Freight Analysis Framework Version 5.5

Table 26: Top 10 Corridors for Logs & Other Wood Products Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 309	106.1%	2.6%	105.8%	2.6%
NW Capital Cir	102.2%	2.5%	101.8%	2.5%
N Meridian Rd	98.1%	2.5%	98.1%	2.5%
Orchard Pond Pkwy	94.8%	2.4%	94.5%	2.4%
C 153	93.8%	2.4%	93.4%	2.4%
C 157	93.8%	2.4%	93.4%	2.4%
SR 179	82.0%	2.2%	82.3%	2.2%
Dorsey Calvary Rd	80.9%	2.1%	81.0%	2.1%
SR 111	80.9%	2.1%	81.0%	2.1%
US 90	69.8%	1.9%	70.1%	1.9%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 13: Logs and Other Wood Annual Freight Volume (thousand tons) and Daily Trips (2022)

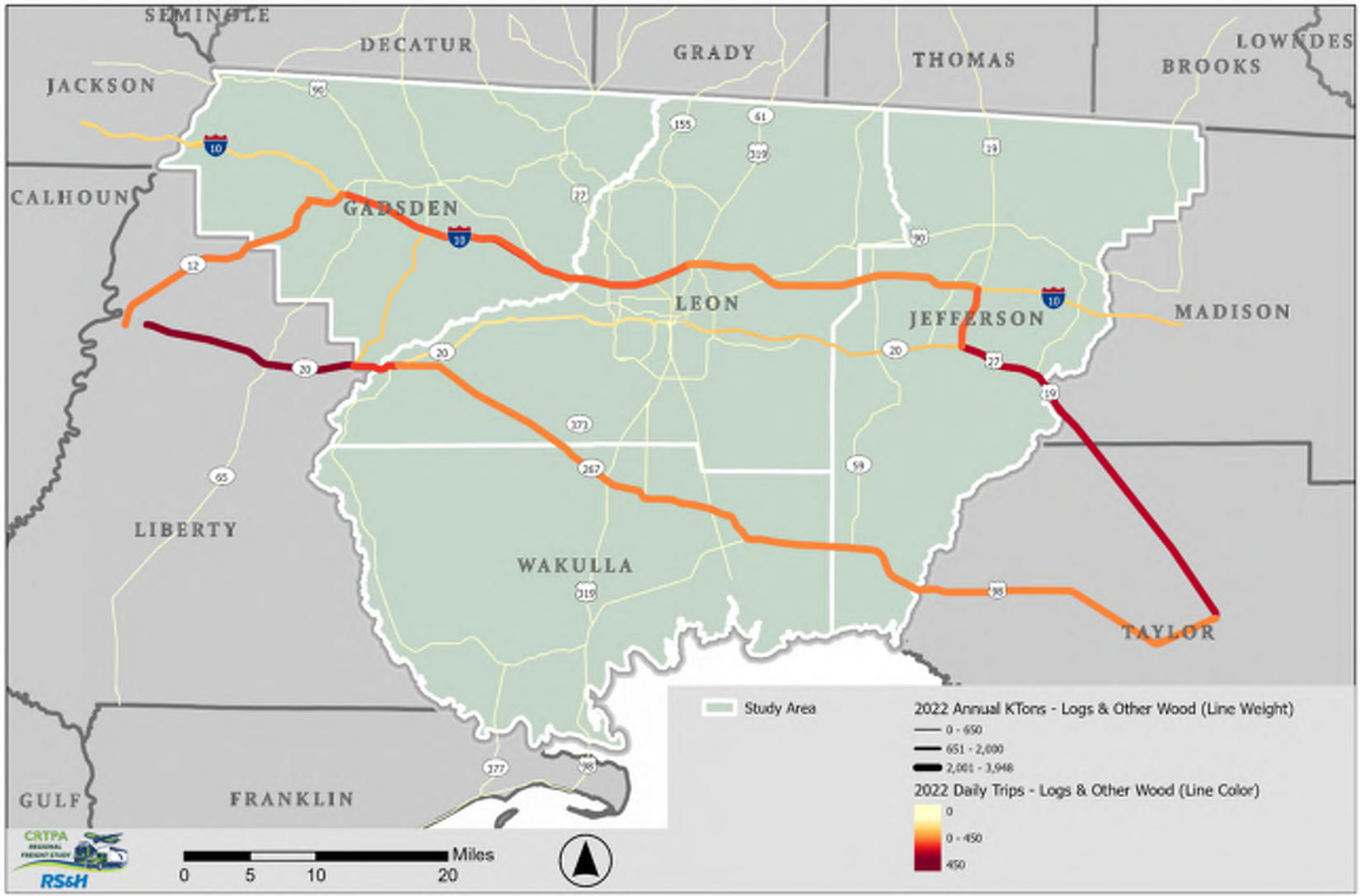
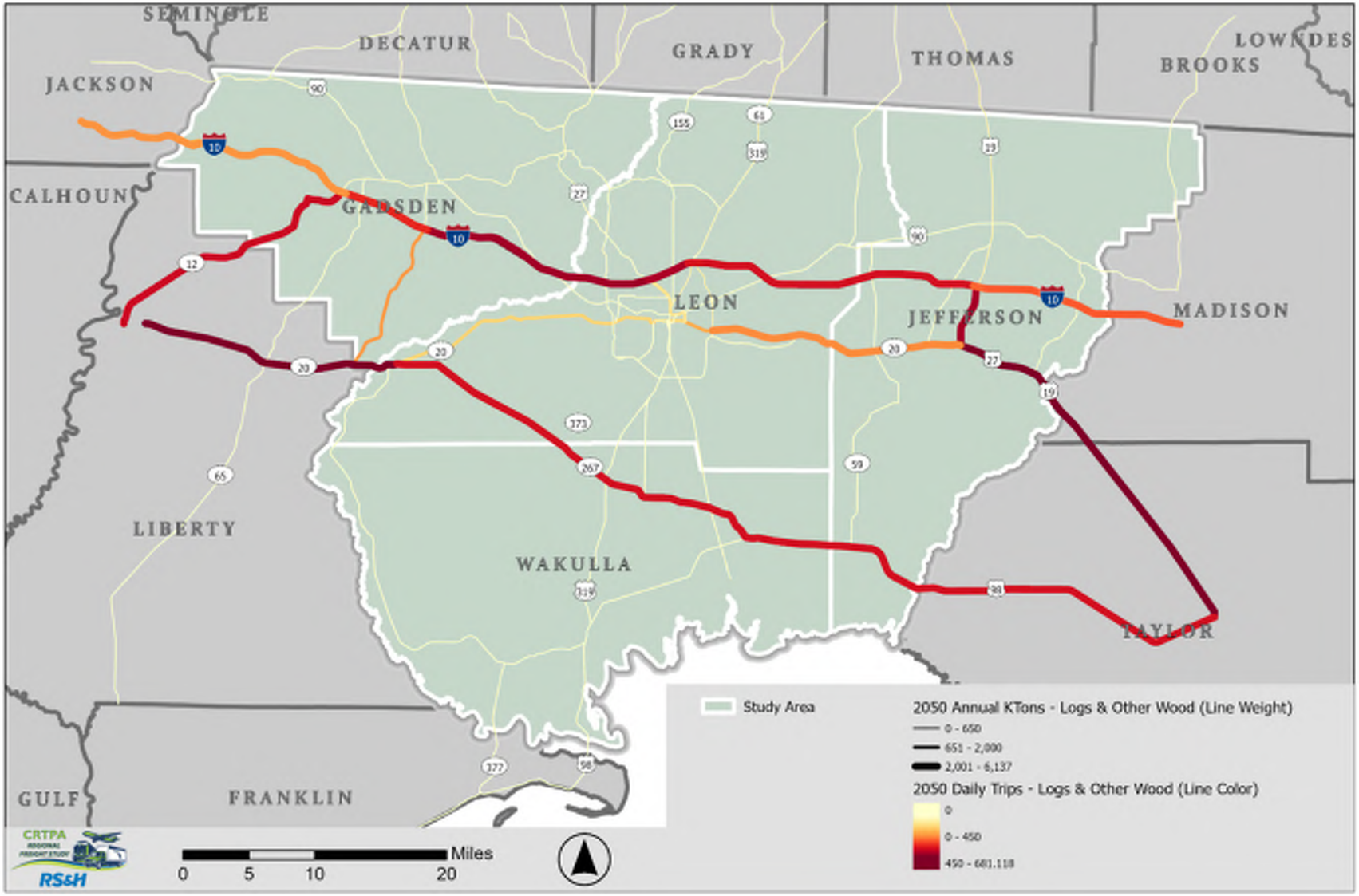


Figure 14: Logs and Other Wood Annual Freight Volume (thousand tons) and Daily Trips (2050)



Waste & Scraps

Table 27: Top 10 Freight Corridors for Waste & Scraps in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	32,408	3,474
SR 20	1,251	138
US 19	997	107
US 98	876	94
SR 267	816	88
SR 12	657	72
Thomasville Rd	522	59
US 27	452	50
US 319	380	42
SR 65	283	32

Source: FHWA Freight Analysis Framework Version 5.5

Table 28: Top 10 Freight Corridors for Waste & Scraps in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	3,590	386
SR 20	1,558	171
US 19	1,238	132
US 98	1,113	120
SR 267	1,023	111
SR 12	816	89
Thomasville Rd	651	73
US 27	563	63
US 319	467	52
SR 65	346	39

Source: FHWA Freight Analysis Framework Version 5.5

Table 29: Top 10 Corridors for Waste & Scraps Freight Growth (2022-2050)

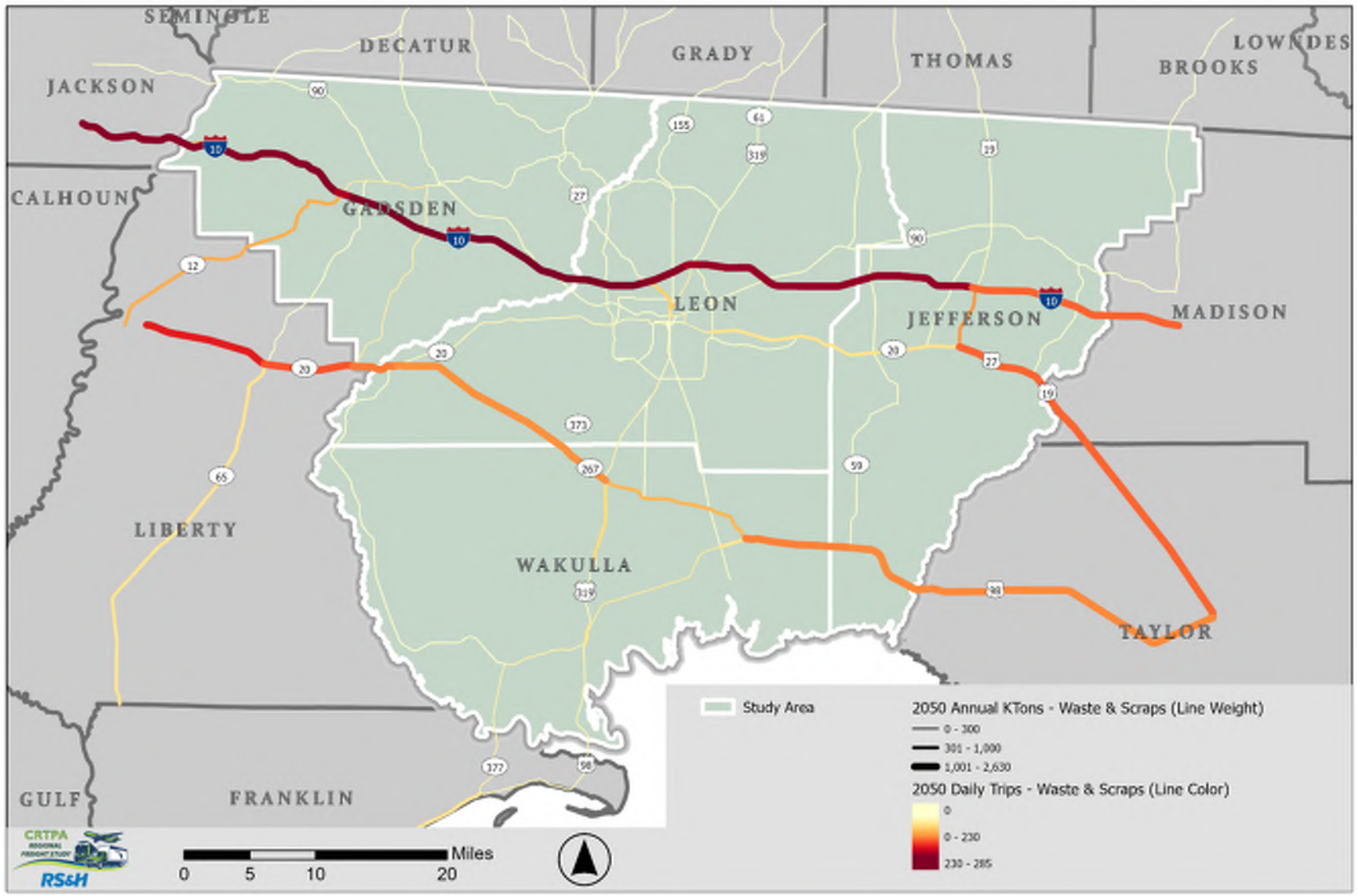
Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 363	72.3%	2.0%	72.2%	2.0%
C 61	66.2%	1.8%	66.2%	1.8%
Raymond Diehl Rd	52.7%	1.5%	51.2%	1.5%
SR 159	35.5%	1.1%	35.5%	1.1%
N Meridian Rd	34.7%	1.1%	34.7%	1.1%
S Meridian Rd	34.7%	1.1%	34.7%	1.1%
NE Capital Cir	32.4%	1.0%	32.2%	1.0%
I-10	31.0%	1.0%	30.8%	1.0%
Magnolia Dr	30.7%	1.0%	30.5%	1.0%
Apalachee Pkwy	30.3%	0.9%	30.1%	0.9%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 15: Waste and Scraps Annual Freight Volume (thousand tons) and Daily Trips (2022)



Figure 16: Waste and Scraps Annual Freight Volume (thousand tons) and Daily Trips (2050)



Consumer Manufacturing

Table 30: Top 10 Freight Corridors for Consumer Manufacturing in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	6,589	950
US 19	2,457	356
US 98	1,180	168
US 319	866	126
Thomasville Rd	865	126
SR 61	857	125
SR 20	792	123
SR 363	541	72
US 27	541	82
SR 267	505	75

Source: FHWA Freight Analysis Framework Version 5.5

Table 31: Top 10 Freight Corridors for Consumer Manufacturing in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	12,719	1,855
US 19	4,674	686
US 98	2,115	305
US 319	1,679	246
Thomasville Rd	1,677	246
SR 61	1,663	243
SR 20	1,465	231
US 27	1,048	159
SR 267	916	139
SR 363	898	120

Source: FHWA Freight Analysis Framework Version 5.5

Table 32: Top 10 Corridors for Consumer Manufacturing Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
NW Capital Cir	116.6%	2.8%	108.7%	2.7%
NE Capital Cir	113.9%	2.8%	115.4%	2.8%
C 257	111.4%	2.7%	108.8%	2.7%
SR 309	108.6%	2.7%	106.4%	2.6%
Franklin Blvd	103.1%	2.6%	104.3%	2.6%
SW Capital Cir	101.0%	2.5%	102.8%	2.6%
SE Capital Cir	99.2%	2.5%	98.1%	2.5%
SR 61	94.1%	2.4%	95.3%	2.4%
Thomasville Rd	94.0%	2.4%	95.1%	2.4%
US 319	93.9%	2.4%	95.1%	2.4%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 17: Consumer Manufacturing Annual Freight Volume (thousand tons) and Daily Trips (2022)

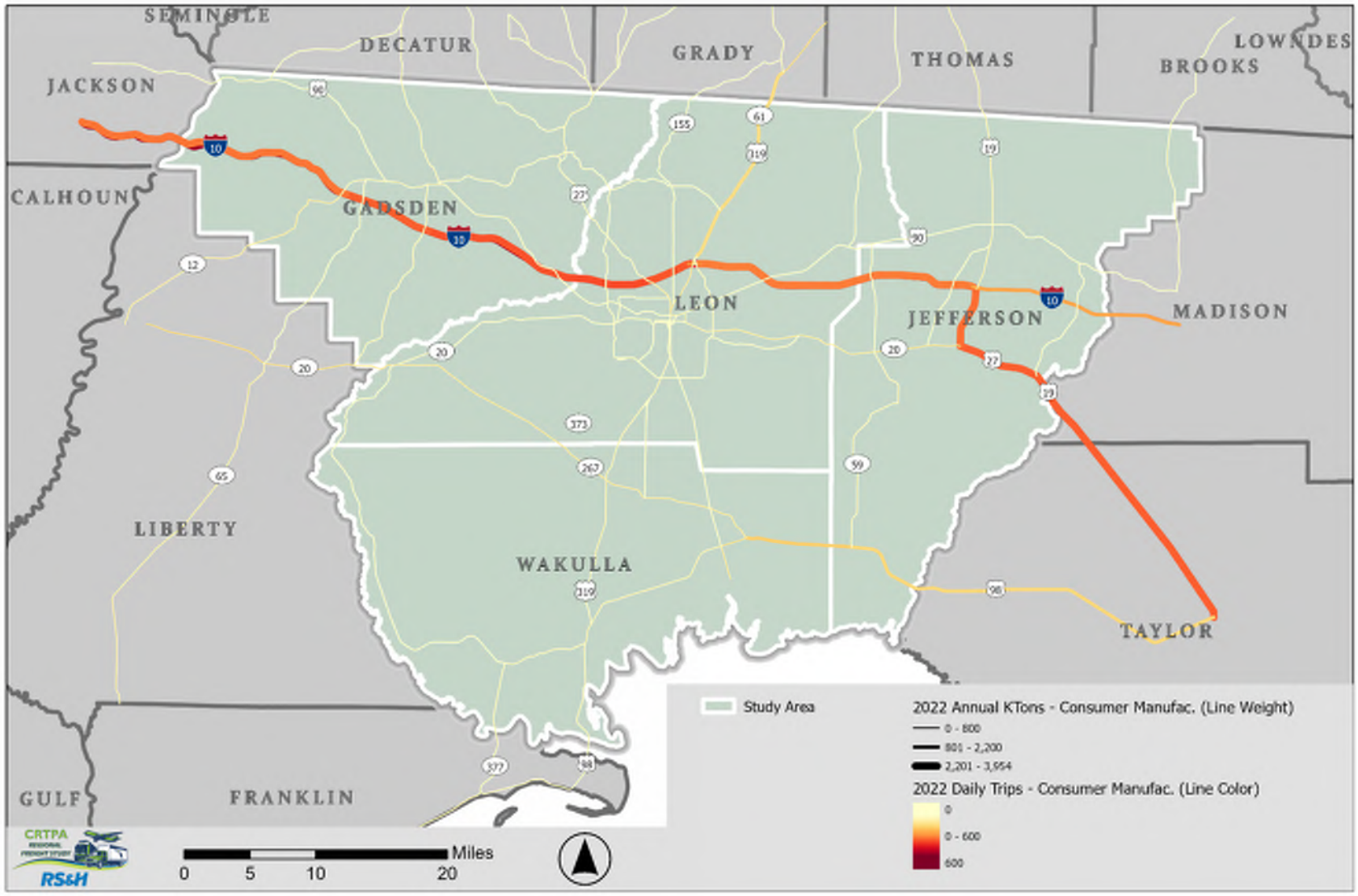
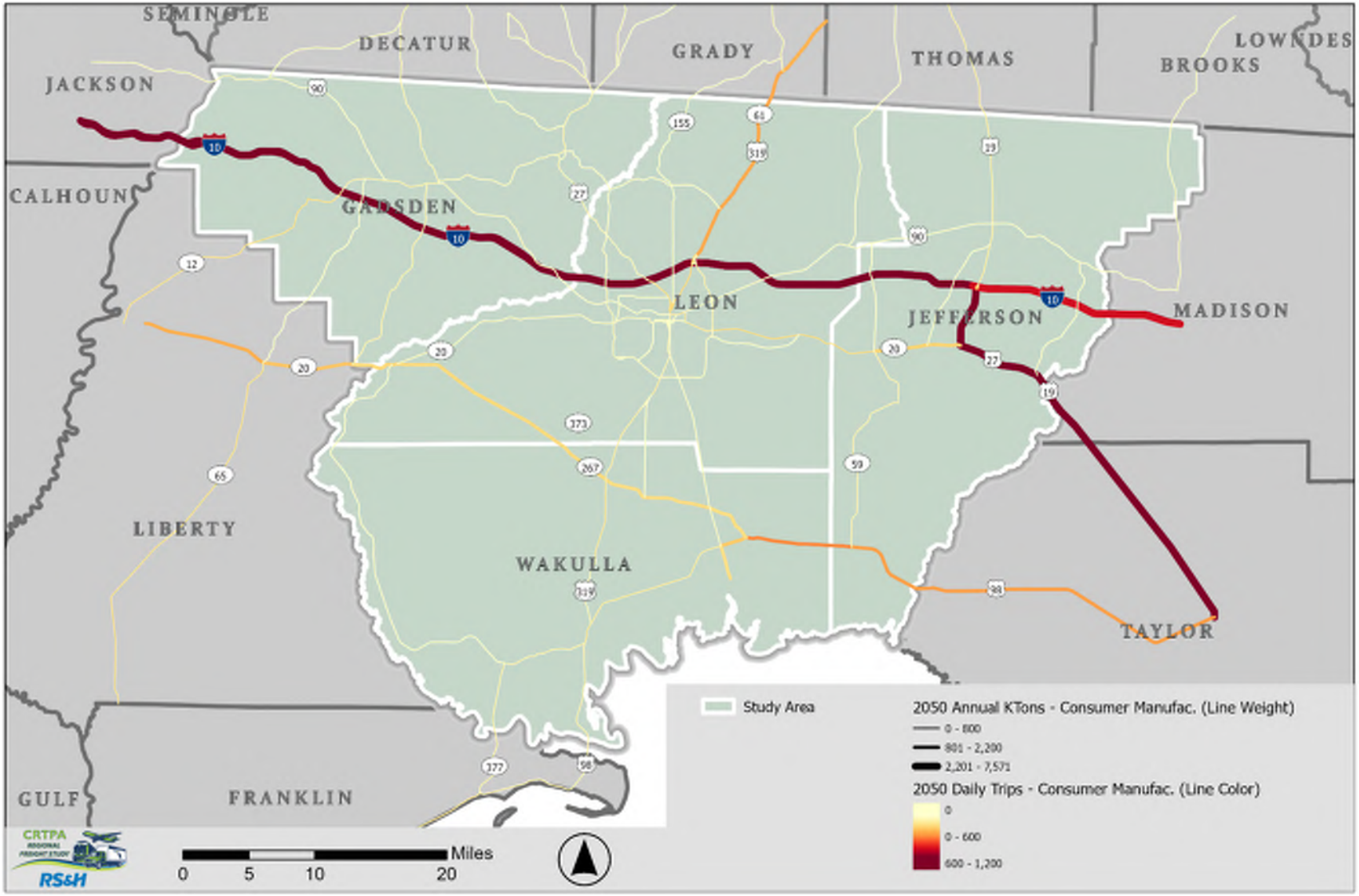


Figure 18: Consumer Manufacturing Annual Freight Volume (thousand tons) and Daily Trips (2050)



Durable Manufacturing (High-Tech)

Table 33: Top 10 Freight Corridors for Durable Manufacturing (High-Tech) in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	12,537	1,301
US 19	5,822	623
Thomasville Rd	2,532	248
SR 267	2,468	215
US 27	2,218	215
SR 20	1,873	190
Mahan Dr	1,636	158
Apalachee Pkwy	1,535	149
US 90	1,525	135
Magnolia Dr	1,506	146

Source: FHWA Freight Analysis Framework Version 5.5

Table 34: Top 10 Freight Corridors for Durable Manufacturing (High-Tech) in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	19,550	2,033
US 19	9,003	953
Thomasville Rd	3,991	395
SR 267	3,835	335
US 27	3,459	335
SR 20	2,941	301
Mahan Dr	2,524	244
US 90	2,377	210
Apalachee Pkwy	2,361	230
Magnolia Dr	2,316	224

Source: FHWA Freight Analysis Framework Version 5.5

Table 35: Top 10 Corridors for Durable Manufacturing (High-Tech) Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
Duval St	92.8%	2.4%	91.1%	2.3%
C 61	91.9%	2.4%	89.5%	2.3%
SR 363	88.5%	2.3%	84.5%	2.2%
C 257	84.9%	2.2%	87.5%	2.3%
C 259	82.8%	2.2%	87.1%	2.3%
SR 59	76.2%	2.0%	74.2%	2.0%
Stadium Dr	72.1%	2.0%	75.8%	2.0%
N Meridian Rd	69.4%	1.9%	71.2%	1.9%
S Meridian Rd	69.4%	1.9%	71.2%	1.9%
Orchard Pond Pkwy	69.1%	1.9%	70.9%	1.9%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 19: Durable Manufacturing (High-Tech) Annual Freight Volume (thousand tons) and Daily Trips (2022)

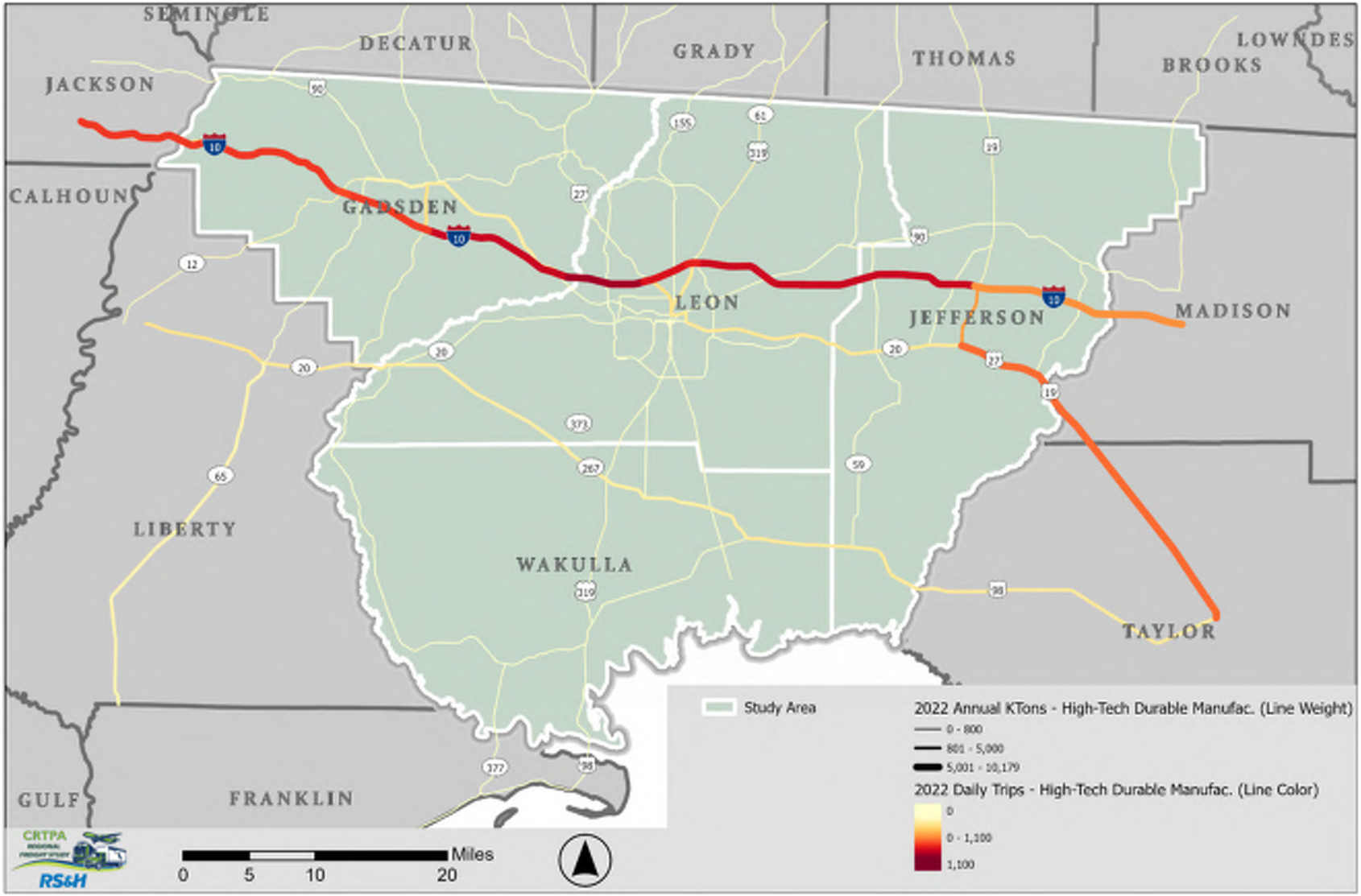
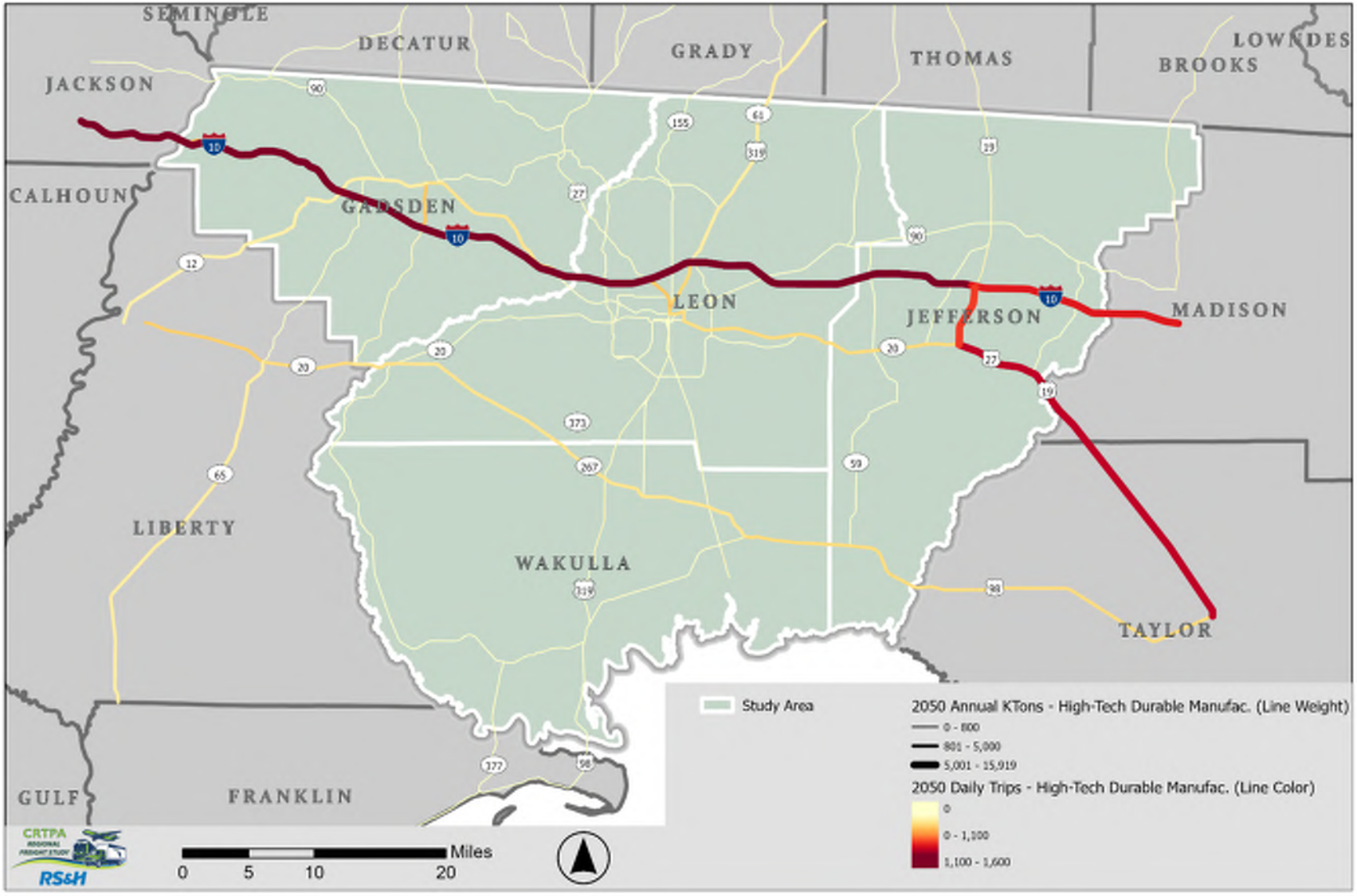


Figure 20: Durable Manufacturing (High-Tech) Annual Freight Volume (thousand tons) and Daily Trips (2050)



Durable Manufacturing (Low-Tech)

Table 36: Top 10 Freight Corridors for Durable Manufacturing (Low-Tech) in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	959	174
US 19	459	81
Thomasville Rd	100	24
US 319	93	16
SR 61	92	16
US 27	85	20
SR 20	84	18
US 98	60	12
SR 267	50	11
SR 12	42	9

Source: FHWA Freight Analysis Framework Version 5.5

Table 37: Top 10 Freight Corridors for Durable Manufacturing (Low-Tech) in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	1,801	330
US 19	798	142
Thomasville Rd	199	49
US 319	187	33
SR 61	186	33
US 27	168	40
SR 20	163	36
US 98	119	25
SR 267	99	21
SR 12	84	19

Source: FHWA Freight Analysis Framework Version 5.5

Table 38: Top 10 Corridors for Durable Manufacturing (Low-Tech) Freight Growth (2022-2050)

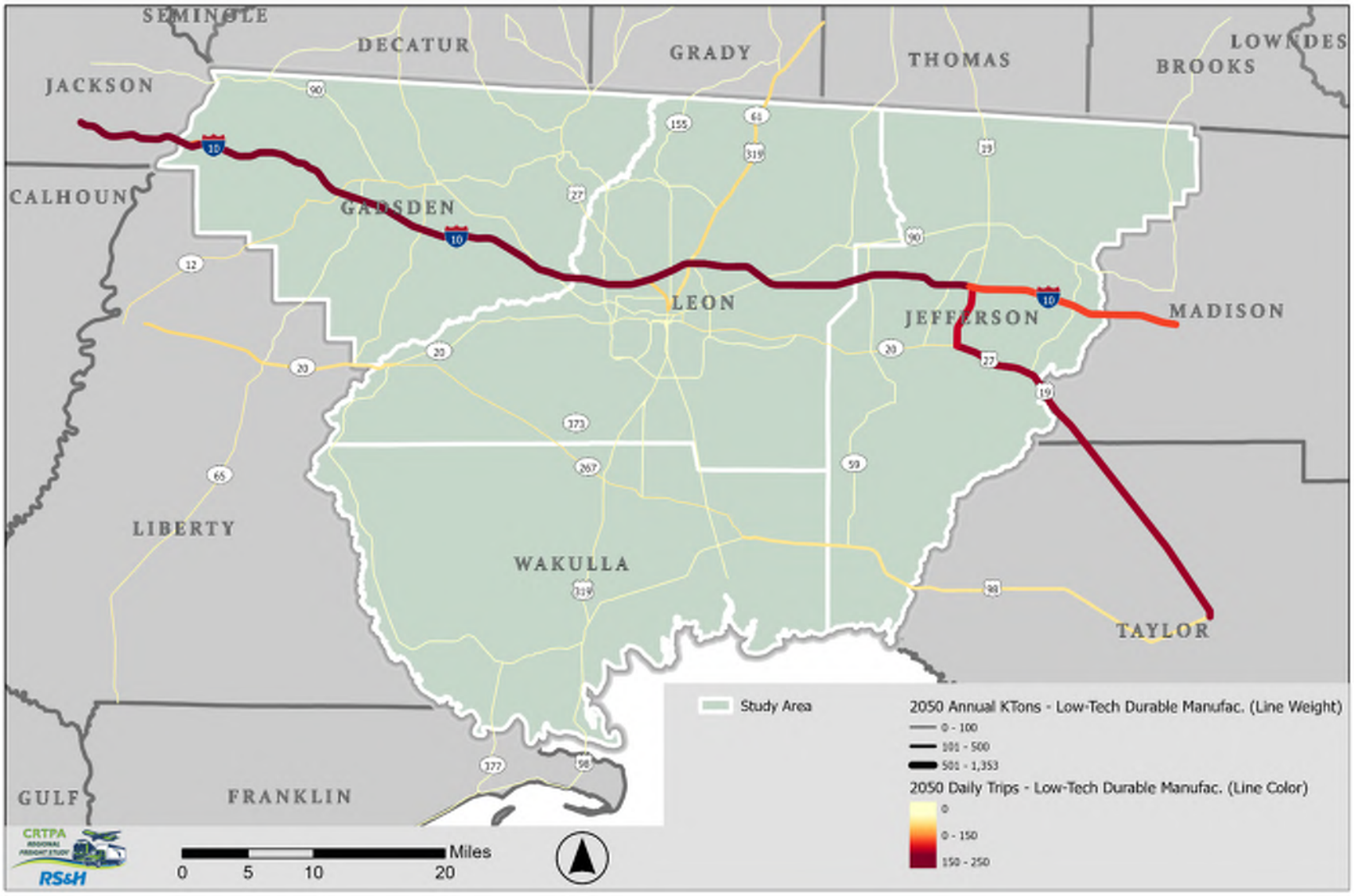
Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
C 61	134.7%	3.1%	135.2%	3.1%
C 259	129.5%	3.0%	131.6%	3.0%
Duval St	128.0%	3.0%	131.7%	3.0%
SR 363	122.2%	2.9%	125.8%	3.0%
Meridian Rd	119.3%	2.8%	120.9%	2.9%
N Meridian Rd	112.9%	2.7%	113.3%	2.7%
Orchard Pond Pkwy	111.1%	2.7%	111.4%	2.7%
C 153	111.1%	2.7%	111.4%	2.7%
C 157	111.1%	2.7%	111.4%	2.7%
NE Capital Circle	109.3%	2.7%	110.5%	2.7%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 21: Durable Manufacturing (Low-Tech) Annual Freight Volume (thousand tons) and Daily Trips (2022)



Figure 22: Durable Manufacturing (Low-Tech) Annual Freight Volume (thousand tons) and Daily Trips (2050)



Motor and Other Vehicles

Table 39: Top 10 Freight Corridors for Motor and Other Vehicles in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	885	125
US 19	315	44
SR 20	95	14
US 98	87	13
SR 267	80	12
SR 12	78	12
US 319	61	8
Thomasville Rd	61	8
SR 61	61	8
US 27	19	3

Source: FHWA Freight Analysis Framework Version 5.5

Table 40: Top 10 Freight Corridors for Motor and Other Vehicles in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	1,526	215
US 19	505	70
SR 20	156	23
US 98	147	22
SR 12	139	21
SR 267	131	19
US 319	115	16
Thomasville Rd	115	16
SR 61	115	16
US 27	34	5

Source: FHWA Freight Analysis Framework Version 5.5

Table 41: Top 10 Corridors for Motor and Other Vehicles Freight Growth (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 363	162.0%	3.5%	161.9%	3.5%
C 259	161.9%	3.5%	161.9%	3.5%
C 61	161.6%	3.5%	161.7%	3.5%
SR 363	161.6%	3.5%	161.6%	3.5%
Raymond Diehl Rd	132.7%	3.1%	132.3%	3.1%
Duval St	122.3%	2.9%	121.5%	2.9%
NE Capital Cir	102.9%	2.6%	102.9%	2.6%
SR 59	96.7%	2.4%	96.9%	2.4%
Stadium Dr	92.2%	2.4%	91.9%	2.4%
SR 61	88.7%	2.3%	88.1%	2.3%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 23: Motor and Other Vehicles Annual Freight Volume (thousand tons) and Daily Trips (2022)

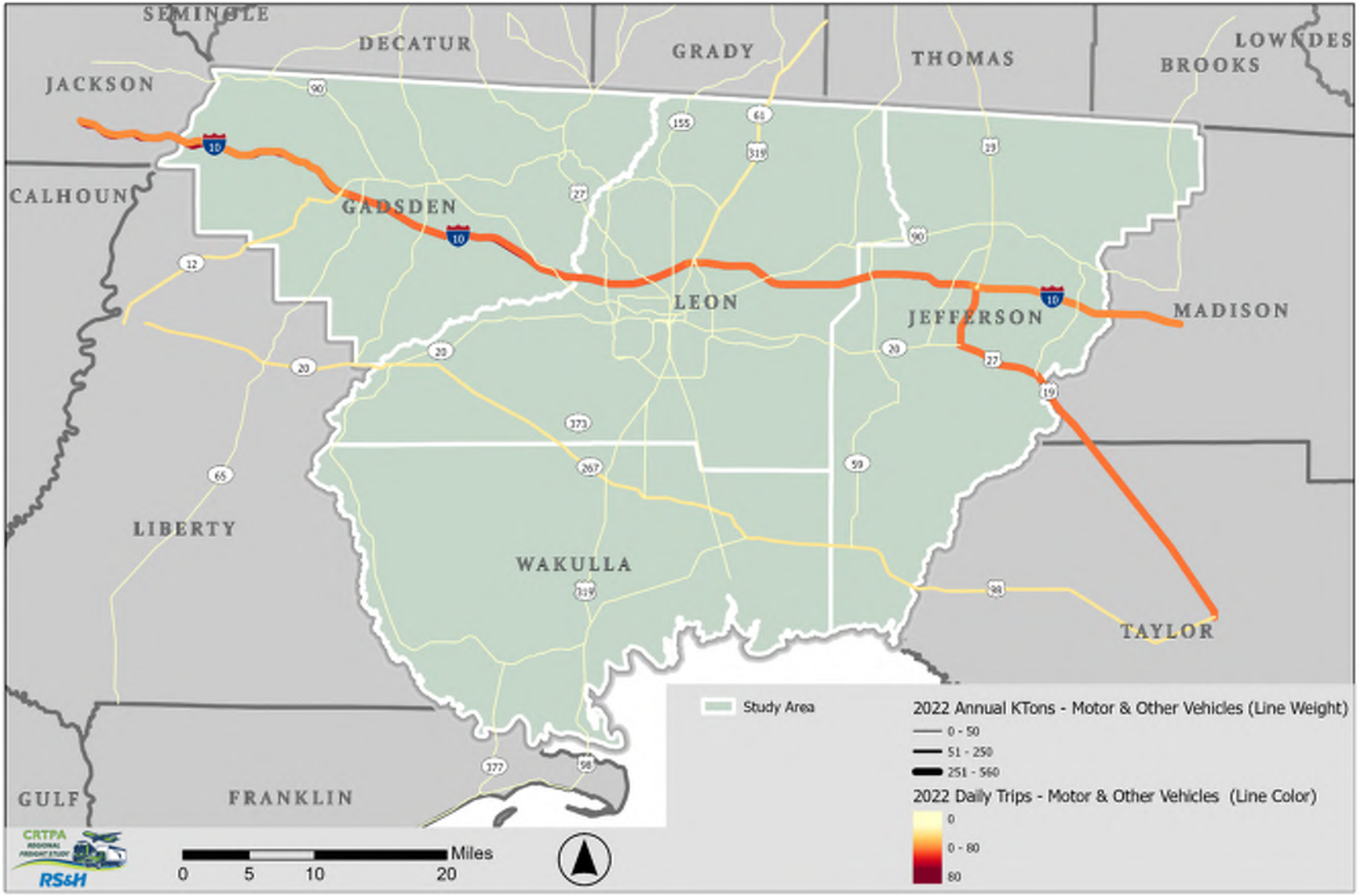
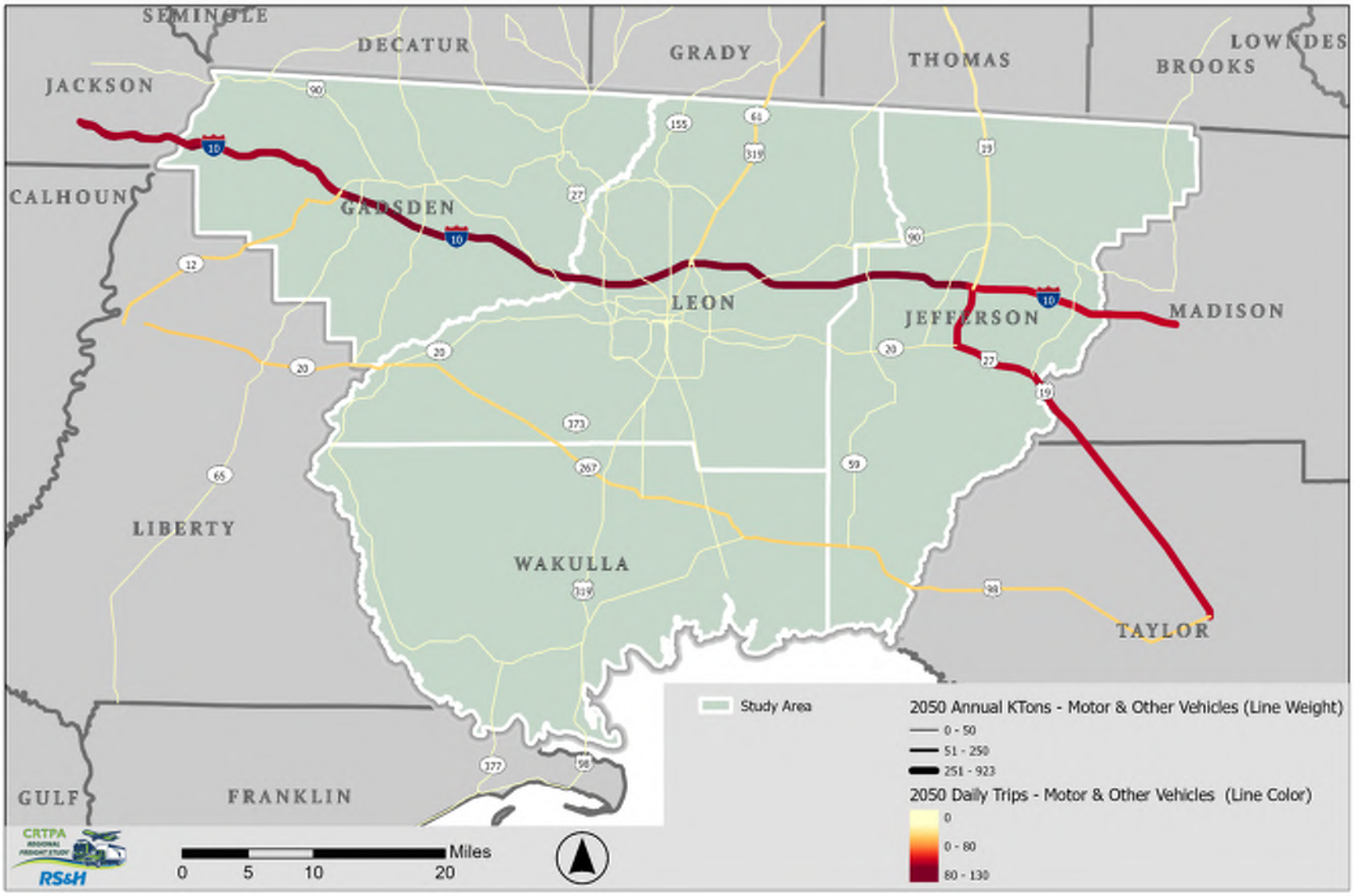


Figure 24: Motor and Other Vehicles Annual Freight Volume (thousand tons) and Daily Trips (2050)



Mixed Freight

Table 42: Top 10 Freight Corridors for Mixed Freight in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	2,552	425
US 19	1,173	193
Thomasville Rd	926	174
SR 20	795	142
SR 61	661	123
US 27	651	122
US 319	647	118
SR 65	623	112
US 98	546	96
Mahan Dr	386	70

Source: FHWA Freight Analysis Framework Version 5.5

Table 43: Top 10 Freight Corridors Mixed Freight in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	5,268	876
US 19	2,398	395
Thomasville Rd	1,746	328
SR 20	1,615	288
SR 61	1,267	236
US 27	1,260	236
US 319	1,237	225
SR 65	1,227	222
US 98	1,158	205
Mahan Dr	750	136

Source: FHWA Freight Analysis Framework Version 5.5

Table 44: Top 10 Corridors for Mixed Freight Growth (2022-2050)

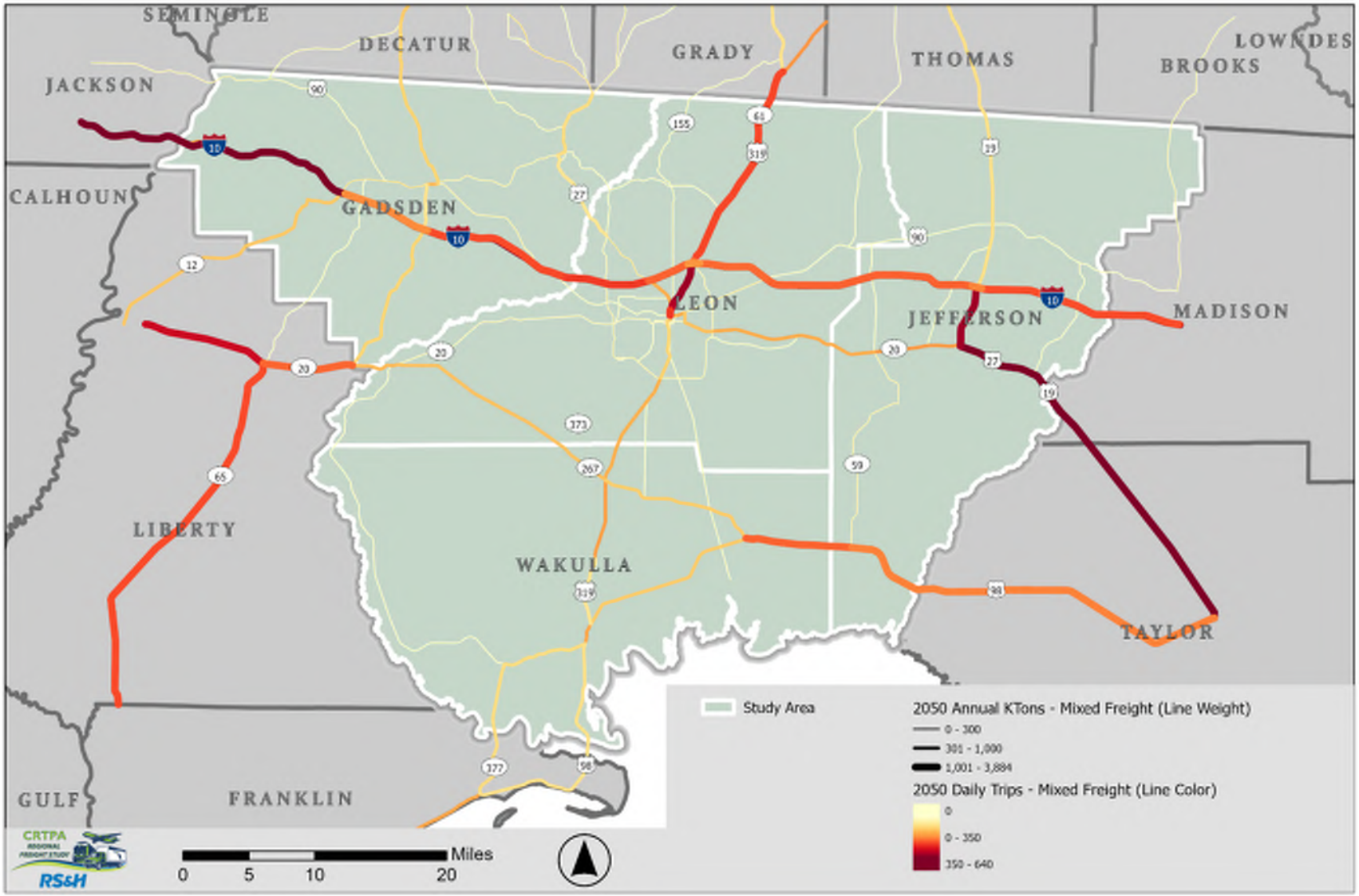
Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
Stadium Dr	124.1%	2.9%	123.8%	2.9%
Lake Bradford Rd	121.2%	2.9%	121.3%	2.9%
E St Augustine St	116.6%	2.8%	117.2%	2.8%
Madison St	116.6%	2.8%	117.2%	2.8%
US 98	112.3%	2.7%	113.7%	2.7%
NE Capital Cir	110.8%	2.7%	110.6%	2.7%
I-10	109.1%	2.7%	109.2%	2.7%
SR 267	107.6%	2.6%	107.8%	2.6%
SR 12	106.4%	2.6%	107.0%	2.6%
US 19	104.3%	2.6%	104.4%	2.6%

Source: FHWA Freight Analysis Framework Version 5.5

Figure 25: Mixed Freight Annual Freight Volume (thousand tons) and Daily Trips (2022)



Figure 26: Mixed Freight Annual Freight Volume (thousand tons) and Daily Trips (2050)



Needs and Recommendations

CRTPA
REGIONAL
FREIGHT STUDY



RS&H

Contents

Findings 4
Existing Conditions Assessment 4
National Highway System 4
National Highway Freight Network 5
Strategic Intermodal System (SIS) 5
State Highway System 5
Commercial Vehicle Crash Data 6
Bridges 6
Truck Parking Supply 6
Heavy Truck Origins and Destinations 7
Future Conditions Assessment 7
Population 7
Freight Labor Supply 7
Business Establishments 8
Tourism 8
Highway Network Performance 8
Rail Mobility and Connectivity 9
Truck Commodity Flows 9
Air Cargo 10
Sea Port 10
Performance Management 11
Performance Measure 11
Performance Measures Targets 12
Needs 14
Land Use and Policy 14
System Capacity and Efficiency 14
System Safety 15
Recommendations 17
Infrastructure Recommendations 17
Roadway 17
Rail 20

Air 20
Policy Recommendations 21
Roadway 21
Air 22
Sea 22
Multi-modal 22
Technology Recommendations 23
Roadway 23
Rail 24
Air 25
Conclusion 25

Figures

Figure 1: CRTPA Freight Objectives 11
Figure 2: Needs Analysis Results 16

Tables

Table 1: Connectivity Measures 12
Table 2: Reliability Measures 13
Table 3: Safety Measures 13

Needs and Recommendations

The needs and recommendations section is the most essential part of the freight study. It culminates the freight mobility profile derived from the conditions assessments that collectively define the freight mobility impacts profile. It highlights the findings of the condition assessments as part of identifying the freight mobility impacts profile. It also identifies a performance management framework using freight-focused performance measures guided by CRTPA Freight Objectives. The needs and recommendations are constructed with a data-driven approach by applying the performance management framework to the findings. The needs and recommendations serve as references and tools for promoting safe and efficient movement of freight that contributes to economic viability.

Findings

The following findings are derived from the existing and future conditions assessments, and are the bases for the needs and recommendations development. The importance of the conditions assessments findings are highlighted by impact factors that define the benefits, needs, or issues experienced by the region. There are a total of seventeen impact factors summaries to include eight for the existing conditions and nine for the future conditions.

Existing Conditions Assessment

The following eight impact factor summaries include a reference page from the Existing Conditions Assessment section of the Study.

National Highway System

Page 13

The National Highway System (NHS) is used by a large number of freight vehicles, and is managed and maintained by Federal Highway Administration (FHWA) in collaboration with Florida Department of Transportation (FDOT). This makes the system a critical facility for freight mobility, reliability, and safety across the supply chain in and out of the state. U.S. roads account for 33% of managed roadways in the region.

Needs and issues for the region: The percentage of U.S. roads in good condition throughout the network increases the chances for freight mobility and reliability. CRTPA stakeholders should continue to coordinate with FHWA and FDOT to prioritize project development and pursue grant opportunities for highway performance improvements and maintenance. In addition, stakeholders should continue to foster and plan for freight-inclusive developments to offset potential future freight mobility impacts.

National Highway Freight Network

Page 15

The National Highway Freight Network (NHFN) is part of the National Highway Freight Program (NHFP) that designates freight-specific federal funding to improve freight mobility. This program helps transportation managers leverage freight-focused funding opportunities without competing for funds under non-freight programs. FDOT Freight and Rail Office (FRO) manages Florida's NHFP and has established sections of the NHFN in the region that are eligible for federal funding under the NHFP. The region has a total of 95 NHFN centerline miles for a total percentage of 4.42% of the State's NHFN.

Needs and Issues for the region: The low percentage of NHFN miles occurring on the state transportation network decreases the chances for leveraging freight-focused initiatives to improve reliable freight mobility. CRTPA stakeholders should continue to coordinate with FDOT to acquire a higher percentage of the NHFN and identify NHFN/Strategic Intermodal System (SIS) project development opportunities. In addition, stakeholders should continue to consider freight-focused funding and improvements to offset potential future freight mobility impacts.

Strategic Intermodal System (SIS)

Page 25

The SIS establishes criteria for managing-jurisdictions to access high priority transportation funding within Florida. The program targets capacity improvement investments that operate across jurisdictional boundaries which adds value to supply-chains operations not restricted by jurisdictional boundaries. The region has a total of 220 SIS centerline miles for a total percentage of 2% of the State's SIS.

Needs and issues for the region: The low percentage of SIS miles occurring on the state transportation network decreases the chances for leveraging capacity-targeted initiatives that improves supply chain operations. CRTPA stakeholders should continue to coordinate with FDOT to acquire a higher percentage of the SIS and identify NHFN/SIS project development opportunities.

State Highway System

Page 28

Similar to NHS, the State Highway System (SHS) is used by a large number of freight vehicles, and is managed and maintained by FDOT. This makes it a key part of freight mobility, reliability, and safety across the network. State roads account for 56% of managed roadways in the region.

Needs and issues for the region: The high percentage of state roads occurring on the transportation network increases the chances for more reliable freight mobility. CRTPA stakeholders should continue to coordinate with FDOT to prioritize project development opportunities for highway performance improvements and

maintenance. In addition, stakeholders should continue to foster and plan for freight-inclusive developments to offset potential future freight mobility impacts.

Commercial Vehicle Crash Data

Page 36

Commercial vehicle safety directly influences freight mobility; freight mobility reliability is inhibited with the increase and severity of crashes. There was a total of 65,641 regional crashes reported 2018 and 2022 with nearly 6% involving Commercial Motor Vehicles (CMVs). A large amount of these CMV crashes occurred along I-10 in Leon, Gadsden, and Jefferson counties. CMV crashes also experienced less than 3% fatal or incapacitating injuries with thirty of those crashes being fatal.

Needs and issues for the region: The low percentage of CMV crashes still has the potential to reduce future freight mobility and safety. CRTPA stakeholders should continue to work with FDOT to address safety concerns along commonly used heavy truck routes to improve and maintain standards.

Bridges

Page 41

Effective bridge development and maintenance play an important role in freight mobility and safety; inadequate bridge ratings and performance limit route planning options for heavy trucks and rail. There are 253 highway bridges within the study area that are monitored by FDOT. These bridge locations are also along designated freight routes that are maintained to higher standards; however, there are 7.8% of the bridges that were identified as poor conditions.

Needs and issues for the region: The low percentage of insufficient bridges still has the potential to reduce future freight mobility and safety. These bridges may require increased maintenance, load restrictions or diversions which would further disrupt freight movements. CRTPA stakeholders should continue to work with FDOT to identify and improve the bridge conditions.

Truck Parking Supply

Page 45

Truck parking and staging is a critical node in the supply chain; it enhances highway safety and mobility by reducing consumption of capacity and conflicts to traffic operations. However, truck parking availability continues to be a challenge for freight mobility across the nation. The regional truck parking available supply includes five public rest area facilities with a total of 146 truck spaces; these facilities and spaces accounts for 26% and 23% of FDOT District Three supply respectively. Likewise, the available supply includes four private locations with a total of 278 truck spaces; these facilities and spaces accounts for 32% and 17% of FDOT District Three supply respectively.

Needs and issues for the region: The continued challenges of truck parking facility and capacity availability will increase the potential for freight mobility impacts as freight demand grows. CRTPA stakeholders should continue working with FDOT to identify opportunities for improvements and maintenance, and should identify freight-inclusive land use opportunities to foster a proactive response for increased truck parking shortage.

Heavy Truck Origins and Destinations

Page 55

Regional truck trips analysis identified truck traffic origin and destination locations that created concern for freight mobility impacts on the transportation network. Regional incoming destinations experienced the highest amount of clustering along the Leon/Gadsden county boundaries; patterns of clusters across the region along I-10, SR-20, SR-61, US-219, and US-98; and generally consistent locations across the region.

Needs and issues for the region: Increased clustering along primary corridors will increase impacts to traffic operations and freight mobility across the transportation network. CRTPA stakeholders should continue to evaluate changes in truck trips to identify and reduce potential traffic operations and freight mobility impacts.

Future Conditions Assessment

The following nine impact factor summaries include a reference page from the Future Conditions Assessment section of the Study.

Population

Page 6

Population changes have a direct impact on demand for goods and services that leads to freight mobility impacts. Regional population is projected to sustain growth between 2022 to 2045 at a regional growth rate of 11.22%; in comparison, the state of Florida growth rate is anticipated to be 18.31% over the same period. Though lower, the region can still expect to have future increases in demand for goods and services that align with its population growth.

Needs and Issues for the region: Population change is not anticipated to have a negative impact on the region. CRTPA stakeholders should continue to evaluate changes in population growth patterns to identify potential freight mobility impacts.

Freight Labor Supply

Page 10

Freight labor supply is a critical element for the freight industry that directly correlates with the industry's ability to respond to freight demand. The industry is currently experiencing staffing challenges for truck drivers and rail operators based on nationwide trends. In light of this challenge, freight employment is projected to grow within the region with freight-related employment expecting to increase by

approximately 7% by 2045, reaching over 35,000. Comparably, Florida's freight-related employment will increase by approximately 22% by 2045, reaching over 27 million.

Needs and Issues for the region: Regional freight labor supply challenges and changes represent an increased need for overall freight mobility and lead to additional challenges in responding to the demand for freight land uses and mobility. CRTPA stakeholders should collaborate with industry stakeholders to identify champions for policy opportunities that will help offset impacts to the regional economy.

Business Establishments

Page 15

Business establishment changes directly represents changes in demand for goods by both the industry and the general consumer. These changes also provide an indication for industry growth, and for changes in land use patterns that help shape transportation policy planning. The region's business establishments have grown 2% (14,886 to 18,283) between 2016 and 2020. In comparison, the state of Florida experienced 8% growth (1,089,950 to 1,176,855) during the same period.

Needs and Issues for the region: Low changes in regional business establishments presents challenges for industry growth which leads to an imbalance for freight mobility across the transportation network. CRTPA stakeholders should continue collaboration with industry stakeholders to promote business cases for economic development.

Tourism

Page 22

Traveling visitors to the region generate vehicle traffic and freight traffic derived from their demand for goods and services; therefore, increases in the number of visitors lead to an increased impact on freight mobility. Based on data generated mostly from Tallahassee/Leon, the regional number of visitors has increased 34% with a $1.2 billion impact between 2021 and 2022.

Needs and Issues for the region: A more comprehensive evaluation across all four counties is needed to capture a more complete regional profile of the tourism influence on freight demand.

Highway Network Performance

Page 23

The highway network is the primary intermodal link for the freight network and includes the first and last mile of the supply chain. The connection with all other modal nodes and volume of freight carried promote fluid multimodal freight mobility across the network. Therefore, changes in highway network performance are vital to the reliability of freight mobility. Regional annual average daily traffic

(AADT) had an average change of 7.6% between 2020 and 2022 with an average volume of 18,911 vehicles. In comparison, the annual average daily truck traffic (AADTT) had an average change of 20.4% during the same period with an average volume of 2,061 trucks. Interstate 10 along Leon, Gadsden, and Jefferson counties account for the highest volume of vehicles and trucks at 144,000 and 40,933 respectively. Additionally, the regional roadway network had 24% of roadways that failed to meet the standard for ideal operating conditions at a level of service (LOS) D, E, or F.

Needs and Issues for the region: The imbalance of increases to truck traffic and vehicle traffic coupled with route-level substandard operating conditions will impact the reliability of freight mobility. CRTPA stakeholders should continue to coordinate and prioritize project development opportunities for highway performance improvements and maintenance. In addition, stakeholders should continue to promote business cases for freight-inclusive developments to foster a proactive response to potential freight mobility impacts.

Rail Mobility and Connectivity

Page 32

The rail network serves as a primary intermodal link in conjunction with the highway network. It promotes fluid intermodal freight mobility, reliability, and connectivity for the first and last mile and across the network with other modal nodes. The region's rail network currently has 74% to 99% available existing capacity on average considering if there are no significant changes to operations or infrastructure. This capacity availability could help to optimize freight infrastructure utilization by shifting freight mobility demand from truck to rail which also could reduce roadway congestion and maintenance costs. CRTPA rail network also has 134 open-active crossings, and two that are open-inactive for a density of approximately one crossing per mile which increases the chances of incidents and reduces connectivity and reliability.

Needs and Issues for the region: Large amounts of available freight-lane capacity reduces freight mobility efficiency, reduces optimization opportunities, and increases freight costs throughout the entire multimodal network. CRTPA stakeholders should continue to coordinate and prioritize project development opportunities for rail infrastructure improvements and maintenance. In addition, stakeholders should continue to promote business cases for truck-to-rail modal shifts to promote optimization and cost savings.

Truck Commodity Flows

Page 52

Truck freight plays the primary role in consumer-level freight mobility and multimodal connectivity including mobility and connection on the first and last miles of the supply-chain. Truck commodity flows across the state currently account for 78.51% of the freight movements by mode. As a part of these commodity flows,

the region's top ten corridors will experience an increase in truck tonnage movements of 55.5% by year 2050 including I-10 at the top of the list that will increase from 67K tons to over 107K tons annually.

Needs and Issues for the region: The increase in commodity flows will lead to an increased impact on roadway maintenance and traffic operations. CRTPA transportation stakeholders should continue to coordinate, prioritize, and capitalize on existing and future roadway projects being developed that will address the tonnage impacts.

Air Cargo

Page 61

As the primary air transportation asset for the region, Tallahassee International Airport (TLH) has significant planning efforts for growth and development. They are expected to move approximately 10.5% more in their cargo operations between 2025 and 2035. Additionally, these efforts are supported by goals of making TLH a more vital transportation hub that fosters regional economic growth.

Needs and Issues for the region: The plans to create a Free Trade Zone (FTZ) and expansion of cargo facilities would potentially spur employment and economic growth and generate more highway traffic. TLH should continue to capitalize on roadway projects being developed in the area and future project development opportunities complementary to the growth planning efforts.

Sea Port

Page 64

The Port of Port St. Joe (the Port) activity influences the regional freight network though it's not located within the CRTPA boundary. The Port's coordination with rail and freight providers throughout the Panhandle will potentially increase the impact to highway and rail corridors that serve the Region.

Needs and Issues for the region: Regional representatives should continue coordination with Port officials to identify development opportunities with regional benefit.

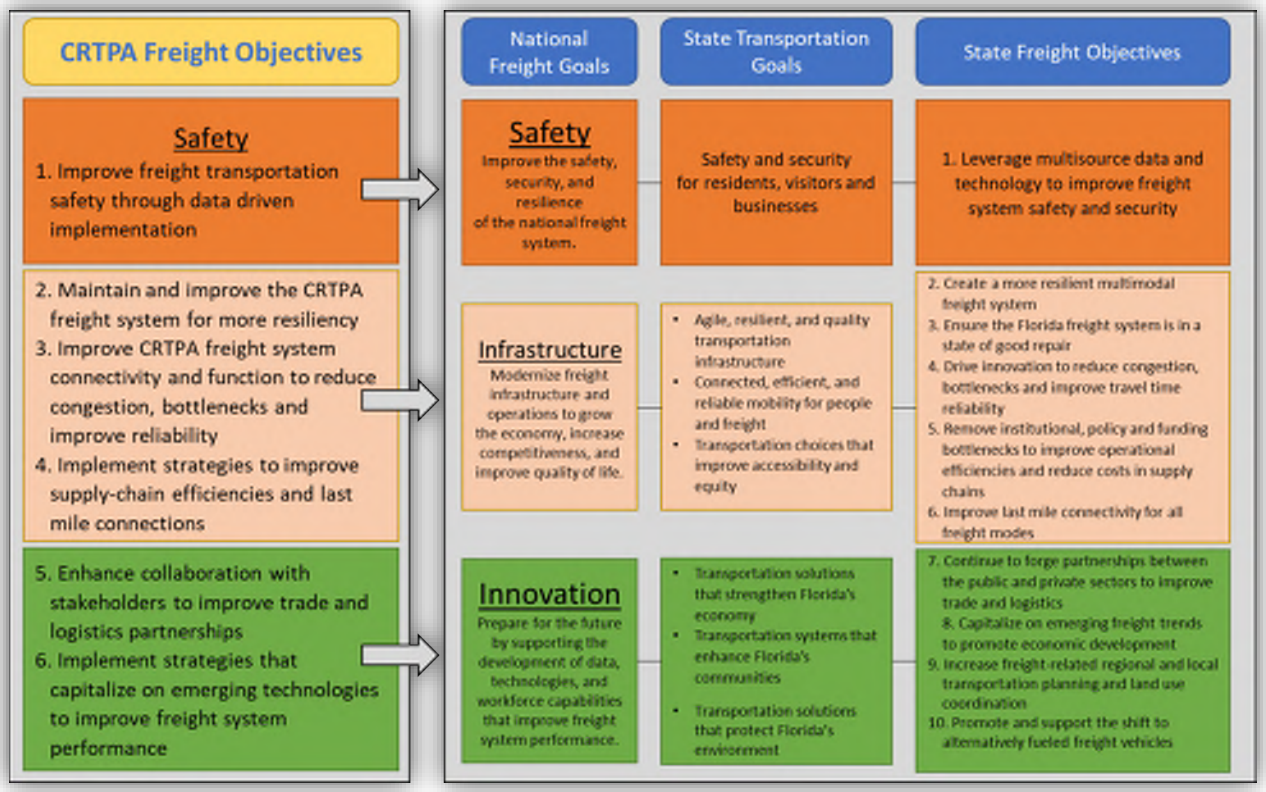
Performance Management

Performance management is used for identifying and defining existing impacts, evaluating future impacts, and facilitating results-driven improvements. The following performance management methodology includes applying freight-focused performance measures to the results of the conditions assessment findings.

Performance Measure

Development of the freight-focused performance measures included using CRTPA Freight Objectives to guide selection and analysis of common transportation performance factors. The freight objectives ensures performance management aligns with National and Florida freight goals and objectives. These national and Florida freight goals and objectives use strategies that focus on the connectivity, reliability, and safety performance of freight mobility.

Figure 1: CRTPA Freight Objectives



Performance Measures Targets

The following freight-focused performance measures were used to measure the impacts based on the conditions assessment findings, and follow the strategies that focus on the connectivity, reliability, and safety performance of freight mobility. There were no benchmarks assigned to the performance measures given the uniqueness and variations of conditions per study areas. The approach is to initiate the performance management evaluation starting from this study and outline annual milestones for evaluation output review. CRTPA can review the annual outputs of the evaluation and determine the performance measurement targets that best serve the region.

Connectivity: focuses on the intermodal and multimodal interoperability factors of freight mobility and supply chain linkage.

Table 1: Connectivity Measures

Measure	Description	Results Objectives
Population Density	People per square mile	Higher = Higher Freight Generation
Transportation Infrastructure Density - State Roads	State roads per square mile	Higher = Higher Freight Mobility Facilitation
Transportation Infrastructure Density - SIS Roads	SIS roads per square mile	Higher = Higher Freight Mobility Facilitation
Transportation Infrastructure Density - NHFN Roads	NHFN roads per square mile	Higher = Higher Freight Mobility Facilitation
Transportation Infrastructure Density - Bridges	Bridges per square mile	Higher = Higher Freight Mobility Facilitation
Transportation Infrastructure Density - SIS Rail	SIS rail per square mile	Higher = Higher Freight Mobility Facilitation
All Traffic Impact Density	AADT per square mile	Higher = Higher Freight Mobility Activity
Truck Traffic Impact Density	AADTT per square mile	Higher = Higher Freight Mobility Activity

Reliability: focuses on fluidity factors across the complete multimodal network and supply chain.

Table 2: Reliability Measures

Measure	Description	Results Objectives
Truck Miles Traveled Density	Annual truck miles traveled per census tract	Higher = Higher Freight Mobility
Ton-Miles Delay Density	Delay per ton-mile traveled per census tract	Higher = Lower Freight Mobility
Lift Capacity Density	Annual truck volume per census tract	Higher = Higher Freight Mobility
Freight Mobility Index Density	Ton-miles of travel times average speed per census tract	Higher = Higher Freight Mobility
Truck Miles Traveled Reliability Density	Truck VMT at LOS D or above per census tract	Higher = Lower Freight Mobility

Safety: focuses on factors that inhibits freight mobility and creates additional costs to supply chain operations.

Table 3: Safety Measures

Measure	Description	Results Objectives
Crash Per Million Vehicle Miles Traveled Density	Crash Per Million Vehicle Miles Traveled per census tract	Higher = Lower Freight Mobility
Fatal Crash Per Million Vehicle Miles Traveled Density	Fatal Crash Per Million Vehicle Miles Traveled per census tract	Higher = Lower Freight Mobility

Needs

The section identifies the needs derived from the performance management process as a quantitative approach with stakeholders' input incorporated as added qualitative values. The quantitative prioritization was completed by capturing the performance measurement outputs, aggregating the outputs within each census tract boundary, and placing them into one of the three general needs categories. The aggregated values were then ranked with the higher values receiving a higher ranking. Figure 2 below depicts the results of the needs analysis in which darker blue census tracts where deemed to have higher value to the freight mobility in the region. The clustering of these areas is largely bordering I-10 and within the more urban areas. The following are the identified needs by category; see Appendix 1 For the complete Needs and Recommendations List.

Land Use and Policy

Land use and policy category covers strategies that offset spatial impacts that limit freight-related operations due to suitability or availability of the spatial assets.

- Air Travel Expansion
- Encourage Intermodal Development
- Freight Origin/Destination
- Freight parking/staging
- Introduce freight friendly zoning and land use descriptions
- Regional cooperation beyond municipal boundaries

System Capacity and Efficiency

System capacity and efficiency category is closely related to land use; it covers strategies that offset traffic operations and mobility impacts. It also accounts for interoperability of physical system characteristics with spatial and temporal factors.

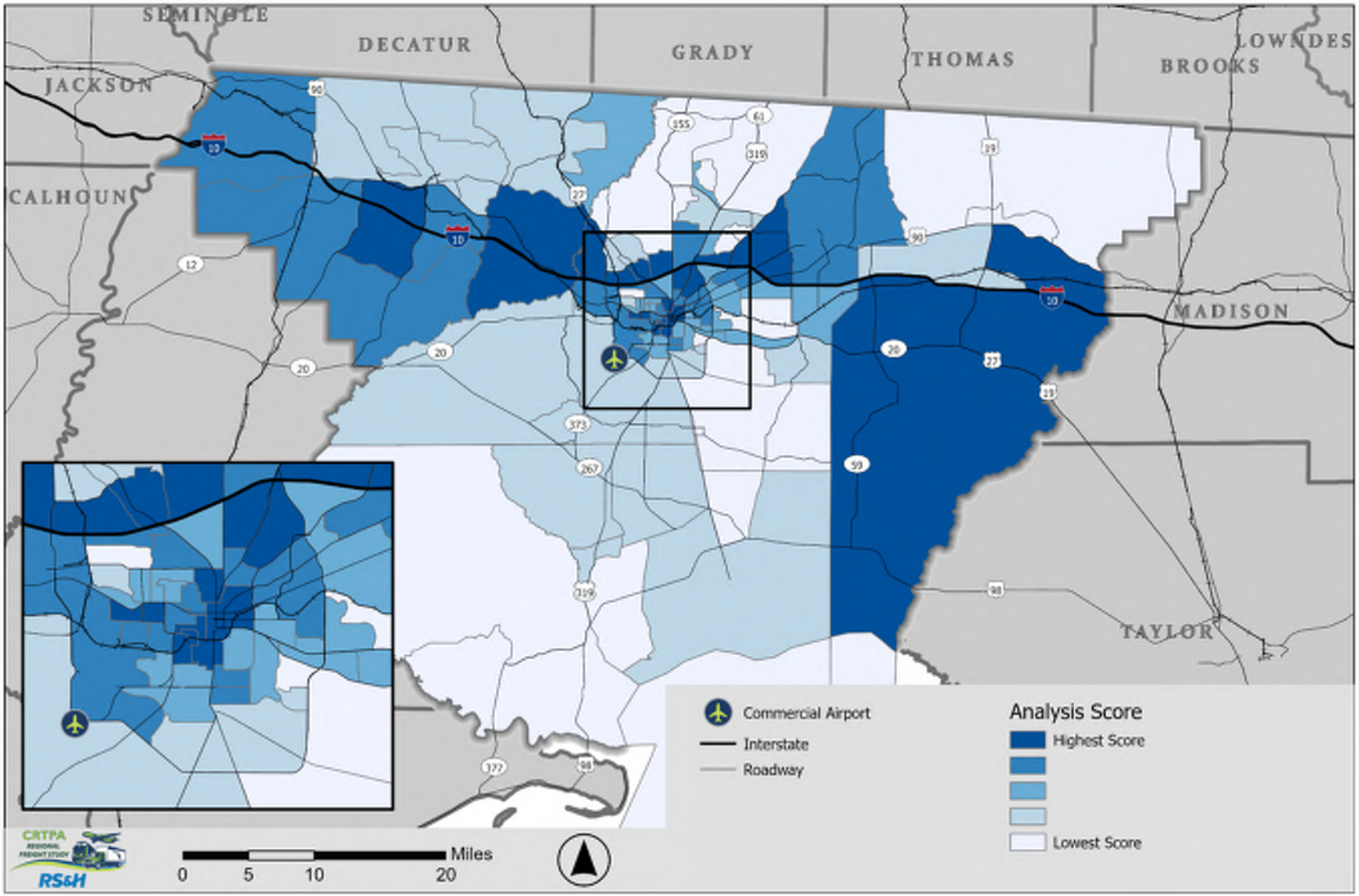
- Bottleneck (top 10 for 2022)
- Bridge rehabilitation and improvements
- Continued Industry Development
- Efficient flow of traffic
- Failing LOS
- Increased capacity to manage and store cargo
- Main line track improvements for capacity expansion and train speed Improvements
- Port/airfield access
- Regional Mobility Plan projects
- System redundancy
- Top ten Planning Time Index (PTI) roadway
- Top ten 2050 freight corridors
- Travel time reliability
- Truck parking availability and awareness
- Truck routing
- Yard, track, and operation equipment improvements for capacity expansion and train speed Improvements

System Safety

System safety category is closely related or influenced by land use, and system capacity and efficiency; it covers strategies that offset transportation operations impacts that inhibit fluidity and increase transportation cost across the network.

- Roadway and Intersection Crash Hotspots
- Rail Crossing Modification

Figure 2: Needs Analysis Results



Source: RS&H Analysis

Recommendations

These recommendations are actions identified based on the needs generated by the difference between the findings and the ideal performance management output. The recommendations are intended to provide CRTPA and regional stakeholders with solutions to the needs, identify areas of emphasis, and for use in decision making. The recommendations are grouped into Policy, Infrastructure, and Technology categories; however, many can be implemented across these categories. The Three categories and recommendations types are explained below. See Appendix 1 For the complete Needs and Recommendations List. Where applicable, known projects and existing efforts across the region and from previous planning efforts have been identified if they are anticipated to improve the freight system.

In addition, each recommendation has an identified implementation phase approach to promote cost and time effective delivery; this includes short-term, mid-term, and long-term phases.

- Short-Term: cost less | 1-5 years delivery
- Mid-Term: cost more than Short-Term | 5-10 years delivery
- Long-Term: higher capital investments | 10+ years delivery

Using the quantitative prioritization analysis described in the needs section above, construction development type recommendations were geospatially aligned with the corresponding prioritized census tracts and objectively ranked. Higher ranked census tracts represent areas that are more conducive for freight mobility. As such, recommendations aligned with higher ranked census tracts are likely to create more opportunities for improving freight mobility within the region. This process also considers the possibility of resource constraints so that prioritization can provide decision support for funding recommendation implementation.

Infrastructure Recommendations

Infrastructure recommendations consider implementation of construction projects or studies of the network to determine specific improvements by transportation management entities. The recommendations span from changes at a site or area to throughout the system.

Roadway

Access Management and Multimodal Improvements

This recommendation is closely tied to the Orange Avenue improvements in southern Tallahassee. Portions of Orange Avenue occur on the State Highway network and connects with major freight corridors in the region. Improvements to the efficiency and safety along this corridor will increase system redundancy and reduce general congestion in the area.

Consider the development of a planning study along the corridor to assess potential improvement

This recommendation is tied to the corridors and roadways across the region which were identified with specific congestion or LOS concerns. Each corridor was identified within this metric due to failing LOS, top 10 bottleneck locations, or high planning time index (PTI).

Potential Major Intersection Reconfiguration

This recommendation was developed specifically to address the US 90/Mahan Drive intersection with US 319/Capital Circle. This intersection is one of the top 10 bottleneck locations within the region and has been prioritized within the 2045 Regional Mobility Plan (RMP).

Consider safety, design and operational improvements.

CRTPA recently completed its Congestion Management Plan (CMP) which specifically identified crash hotspots throughout the region. Since those closely related to major roadway, they can have the most significant impact on freight movements, and should be considered for safety improvements throughout the region.

Continue to monitor progress of the Quincy Bypass discussions. Encourage municipal partners to consider freight favorable land use and zoning based on community desires.

The Quincy Bypass has been a consideration within the area for some time. Engagement with County representatives identified that the county is targeting growth along its major corridors with connections to I-10 and is still in favor of the bypass implementation. Continued monitoring of the bypass consideration will be beneficial and may provide opportunities for targeted freight related growth for the region.

Continued coordination with rail providers, port operator, and economic development agencies to secure funding for rail repair.

The rail providers and the Port of Port St. Joe remained engaged stakeholders throughout the process and were interested in continued coordination within the region. Both groups were interested in funding opportunities which may improve or expand the existing rail network. Currently, the Port of Port St. Joe has no rail access due to damaged rail bridges; however, as the region grows, the feasibility of bridge and track repair may increase.

Coordination with the FDOT oversize load permitting office to remove US19/Jefferson Avenue in Jefferson County from their routing maps or consider a geometry update of the intersection to allow oversize loads.

The central intersection of Monticello (US 90 and US 19) has been identified as an issue area for oversize truck loads. The current intersection geometry may need to be reviewed to ensure it is appropriately designed to meet the needs of the large vehicles which travel this route. Additionally, if the intersection design is a limiting

factor, coordination with the FDOT oversize permitting office should be conducted to reclassify the routing.

Consider moderate design and operations changes.

Each of the projects with this recommendation were identified as a top ten PTI roadway and many either had an existing FDOT project along the corridor, or a previous planning analysis. Given the high PTI of these areas, it is recommended that design changes be considered to improve operations.

Support FDOT efforts for redevelopment and consideration of truck parking enhancements.

The FDOT is currently working toward the development of additional truck parking spaces at their rest areas. This is being achieved primarily by restriping and reconfiguring the existing parking areas. Continued coordination should be held with FDOT to facilitate the addition of these parking areas. Safe and available truck parking is a key metric in a healthy freight network. Currently, there are two projects which are planned to increase truck parking in the region:

- Design and construction funding committed: Project 452230-1
- Design funds programmed but not adopted: Project 452335-1

Roadway Widening

Where applicable, roadway widening projects along or likely to benefit the freight network have been identified. These projects have the potential to increase the efficiency of freight movement throughout the region by addressing general congestion.

Rail

Improve critical track and bridge improvements identified across the rail network within the region.

This project focuses on improving the condition of rail systems in the region to promote rail speed enhancements to increase efficiency and safe speeds. The mainline has several areas with deferred maintenance track conditions; this effectively reduces the allowable speed from 40mph to 10 or 25 mph on multiple sections of track. With 373-mainline miles, each crew must traverse up to 214 miles per day. Because of the distances FG&A crews travel, the speed restrictions severely reduce their effectiveness and limit their workload. This impacts the capacity of the line and overall cargo transit times.

Improve critical capacity points identified for siding rehabilitation and transload upgrades.

Lake Jackson and Capital Circle siding enhancement which will rehab of existing 5,200' and 850' (respectively) double-ended siding for railcar storage, plus preparation of adjacent ROW to facilitate truck ingress/egress for rail to truck transloading. This gives off-rail customers an inbound rail option, reducing or eliminating long haul truck miles, leaving final delivery for local trucking entities.

Work with roadway managers and railroad providers on the identification of rail crossing elimination opportunities. Consider the joint development of grants to supplement funding.

At-grade rail crossings pose safety concerns and can often lead to a decrease in efficiency for both train and automobile traffic. Where feasible, the elimination of rail crossings through grade separation or rerouting should be considered to improve freight rail operations into the future. Specific grant opportunities such as the Rail Crossing Elimination (RCE) grant may provide much needed funding for these efforts.

Air

TLH is currently undergoing redevelopment of both sections of its terminal area and its cargo management space. This includes increases in the cargo apron size and the development of a larger cargo management area. These improvements will increase the airport's ability to process freight. In addition to specific airport improvements, Capital Circle SW is being widened from two to six lanes. This increase should improve access to the airport and further benefit both passengers and freight using the facility. Continued coordination will be important to ensure TLH's transportation-related needs are being met and to identify additional opportunities for improvement.

Policy Recommendations

Policy recommendations consider systemic or institutional administrative actions that may be implemented by governing entities. The actions are designed to create official authorization and social adoption for changes at a regionwide scale or higher.

Roadway

Consider the development of truck routing within the region to direct non-local freight movements.

Through coordination with municipalities, the development of delineated truck routes or exclusion zones may be beneficial. Communities may wish to route trucks away from narrow roadways that don't accommodate their size. The study did not identify major areas where routing or exclusion should be developed at this time; however, the Monticello Roundabout (US 90 and US 19) should be reviewed for design limitations due to reports of oversize loads having issues in the area.

Continue to monitor the conditions along these corridors and work with agency partners as any issues are identified.

The top 10 corridors moving truck born freight through the region should be monitored for issues or further opportunities for improvement.

- I-10
- US 19
- SR 20
- US 98
- Thomasville Rd
- SR 267
- SR 12
- US 27/North Monroe
- US 27Apalachee Pkwy
- US 90/Mahan Dr

Coordinate and stay informed on public/private opportunities for truck parking improvements throughout the region.

The provision of truck parking spaces is largely being provided through private businesses such as Flying J and Pilot near Midway. These facilities often offer safe parking within amenities such as showers and restaurants for truck drivers. Though FDOT is working to add spaces to its existing rest areas, it is anticipated that the nationwide truck parking shortage will continue. Opportunities for public and private partnerships may efficiently generate additional truck parking without either group bearing the sole responsibility. Coordination on truck parking development and the possibility of partnerships is encouraged.

Coordinate with county and municipal staff on the development of freight parking and staging standards to accommodate truck needs. Coordination with law enforcement will be key to discouraging unauthorized parking.

As the nation continues to experience a truck parking shortage it is important to consider additional options for the development and safe parking of large trucks. Coordination with municipalities to development truck-driver friendly considerations is recommended. The development of zoning/design requirements

which mandate the development of adequate internal truck parking for freight related businesses may help reduce unauthorized parking in the area.

Additionally, the coordination with law enforcement officials on the enforcement of unauthorized parking may be beneficial to increase driver safety. Trucks parked in dark areas and or along active roadways pose safety issues for both the drivers and other travelers.

Air

Continue coordination with TLH on the development of their Foreign trade zone development.

As TLH continues to grow and increase the cargo movement through the area, continued coordination on their foreign trade zone will be beneficial. The development of a foreign trade zone may have far-reaching impacts that could provide significant economic benefit to the entire region.

Sea

Consider continued coordination with the Port. Development at or near the Port may impact the CRTPA region.

Though the closest port, Port of Port St, Joe is not within the region, it's future development may greatly impact the area. Increases in industry or freight movements supporting increased activity at the port will likely utilize major through routes in the region such as US 98 and I-10.

Multi-modal

Continue coordination with municipal partners and encourage the development of intermodal or transload opportunities to encourage multimodal freight movements.

Similar to seaports, transload or intermodal facilities help transfer freight from one mode to another. I.e. from freight train to freight truck. Though largely a land use and private sector industry driven condition, the region is encouraged to consider these development styles to support freight in the region. Other States are finding success in the development of "inland port" facilities which function to transition freight rail (often leaving seaports) onto trucks. The region's proximity to seaports, location along I-10, and existing rail network may provide opportunities for this development in the future.

Coordinate with county and municipal staff on the development of freight inclusive zoning and land use descriptions.

Currently, the future land use plans for each of the CRTPA member counties have prioritized limited locations for the specific development of industries or freight centric businesses. Though the communities may not desire to encourage these development types, coordination with municipal partners in the future will help guide the development of freight related growth into desired areas. Management of

this growth pattern will also allow for increased planning for the transportation network.

Promote the identification of freight clusters throughout the region by economic development and municipal staff. This identification can help guide development of comprehensive planning and future zoning/land use decisions.
Working with municipalities on the development of freight clusters may help further improve safety and efficiency within the region. By clustering freight uses, more opportunities to reduce conflict and promote rapid access to vital networks will be available.

Coordinate with neighboring municipal partners for project cohesion and cooperative opportunities.
Coordination related to freight development should not be limited to municipal or MPO boundaries. Freight related movements are boundary agnostic and often traverse significant distances and as such broad communication and awareness are key to continuing to understand trends and needs of the great area.

Encourage the continued involvement of FDOT staff in conversations related to freight movements within the area. Coordinate with FDOT on freight related project funding opportunities.
Continued and cooperative engagement with FDOT Freight and Rail Office may help identify funding opportunities for the transportation network. Additionally, the pursuit of freight specific funding sources may increase project feasibilities into the future.

Technology Recommendations

Technology recommendations consider the pursuit and capitalization of innovative products or processes that may not be conventional for the study area. The advancements are used to offer changes at a regionwide scale with more effectiveness of time, cost, production, or safety.

Roadway

Continue coordination with FDOT on the implementation of truck parking counting technologies signage and applications
The provision and availability of truck parking is an important aspect of the freight network. The region should continue to support FDOT's efforts to optimize and maintain the Truck Parking Availability Systems (TPAS) along the I-10 corridor.

Continue to promote the development of Intelligent Transportation Systems (ITS) throughout the four-county region. Engage with the Tallahassee-Leon County Regional Transportation Management Center and the ITS Master Plan for opportunities to improve general movement throughout the region.
When feasible, planned and programmed transportation improvements should include and or maintain ITS infrastructure to increase the connectivity of the

network in the region. The continued implementation of ITS technologies will allow the region to continue to manage congestion rapidly.

I-10 Dynamic Messaging Signage and Trailblazer signage. Promote the development and implementation of the trailblazer signage system to guide drivers during detour and incident management events

The implementation of dynamic messaging signs (DMS) allows for the rapid dissemination of information to aide in routing, safety issues, travel times or other important information such as Amber and Silver alerts. The implementation of trailblazer DMS is more specifically intended to aid in the rerouting of drivers in the case of closure or issues on I-10. These signs would guide drivers through established detour routes and back to the interstate when safe to do so. DMS and trailblazer signs provide important information to drivers and promote efficiency along major corridors or detour routes.

Promote the development and implementation of Adaptive Traffic Signal Control.

The ITS Master plan identified that both US 27 and US 90 would be good candidates for the implementation of adaptive signal control. These modifications would allow the signal network to communicate more effectively and more appropriately manage traffic flow through the region. The implementation of this technology has the potential to greatly improve freight efficiency in the region.

Promote the development and implementation of the equipment necessary for the travel time reliability system.

Network of improvements along the arterial roadways will improve both freight and general traffic movement through the implementation of traffic speed counters which can quickly identify areas of congestion. If paired with other management technologies, actions can be taken via signal timing to alleviate the congestion along the corridors.

Rail

Coordinate with rail providers on the implementation of autonomous freight rail technology testing in the region.

Genessee and Wyoming Railroad is working with a technology company on the development of autonomous and battery powered rail cars.[1] They are currently pursuing authorization for pilot programs and testing of the technologies in Georgia which may improve rail freight into the future. Encouraging the development of pilot programs may help promote region's freight growth.

[1] Parallel (moveparallel.com)

Air

Coordinate with TLH on the implementation of autonomous passenger and freight technology testing in the region.

TLH is staying aware of the improvements and advancement of autonomous air, battery powered, and Vertical Take Off and Landing (VTOL) aircraft technologies and has participated with FDOT on an Air Compatibility Considerations study[2]. Though these technologies are not yet in place in the region, it is encouraged that TLH remain engaged with FDOT and the technology providers to further promote the region's air mobility. The development of these technologies is still largely in the pilot phases of development and the region may prove to be an adequate testing site.

Conclusion

This study was initiated to provide insight of CRTPA's freight transportation impacts brought on by the onset of on-demand consumption increases, expansion of local freight movements, and stressed supply-chains. It assessed national-to-local level freight conditions and related them to the underlying impacts of the region. The study incorporated qualitative value from governmental policies, transportation systems, and stakeholder operations. As a result, needs and recommendations were derived that were shaped by goals and objectives, and responded to the assessment findings. Overall, evaluation of the region's freight mobility shows profiles with areas that are both good, and are open for growth and improvement opportunities based on connectivity, reliability, and safety performance measurement strategies.

Profiles for U.S. and state-maintained roads show good connectivity performance including U.S. roads at 33% and state roads at 56% of the managed roadways. These roadway networks carry a large number of freight vehicles, and are maintained by FHWA in collaboration with FDOT which increases the chances for more reliable freight mobility. In contrast, other connectivity performance profiles show growth opportunities for NHFN, SIS, and truck parking. Within the region the NHFN is 4.42% of the State's system, SIS is 2% of the State's system, and public truck parking availability is 23% of the FDOT D3's total supply. Capturing growth opportunities for these facilities increases the chances for leveraging freight-focused initiatives and improving freight mobility.

Reliability performance profiles show improvement opportunities for highway traffic operations, rail capacity, commodity flows, and air cargo. There are improvement opportunities for the imbalance of changes between total traffic volumes at 7.6% and truck volumes at 20.4%; and sub-standard operating conditions at 24% of the highway network. Implementing improvement opportunities for these highway traffic operations increases the chances for more reliable freight mobility. Reliability performance profiles also show improvement opportunities for a large amount of

[2] https://www.fdot.gov/aviation/fdot-advanced-air-mobility-airport-compatibility-considerations

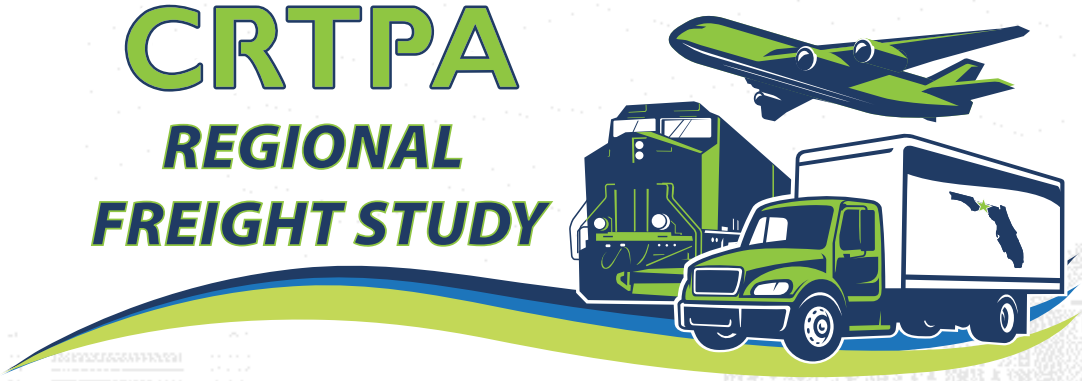
available freight rail capacity at 74% to 99%, and large increases of commodity flows at 55% across the network. Creating opportunities to shift commodity flow volumes for more consumption of rail capacity increases the chances for more freight mobility efficiency. Likewise, air cargo reliability performance profile shows development opportunity with air cargo set to increase at 10.5% between 2025 and 2035. Implementing more development opportunities increases the chances for economic growth and freight mobility. Profiles for CMV crashes show good safety performance including low percentage of CMV total crashes and fatal crashes at 6% and 3% respectively; this performance increases the chances to improve future freight mobility and safety.

From an evaluation perspective, the region's freight mobility is good for its conditions highlighted by impact factors that define the benefits, needs, or issues experienced by the region. Increases in population, industry expansion, and freight demand is expected to continue, which will lead to an increase in demand on the transportation system. Similarly, freight-related development is expected to continue clustering along major corridors; the interstate will remain the primary freight mobility corridor; and the region will remain largely a consumer versus a producer of freight goods. However, this study, in conjunction with persistent performance management, will provide an evaluation tool and solution resources for the region per its set purpose.

Needs and Recommendations Appendix

CRTPA

REGIONAL FREIGHT STUDY



RS&H

Appendix 1: Needs and Recommendations, Planning Level Cost Estimates, Table, and Map

Within this appendix, the needs and recommendations identified within this analysis are included in a tabular format. Table 1 identifies the planning level costs estimates that were utilized when existing project estimates were not available. Table 2 contains the Infrastructure recommendations, Table 3 contains the policy recommendations, and Table 4 contains the technology recommendations.

Those recommendations with specific geographies or areas of interest have been mapped in Figure 1.

Planning Level Cost Estimates

Where applicable, known or programmed costs for existing projects were included within the analysis. Costs were increased yearly by 3% to account for inflation from the initial year of cost estimate. In addition to known costs, the following Table 1 lists a series of planning level cost estimates by unit value.

Table 1: Planning Level Cost Estimates

Planning Analysis Estimates	Unit	Cost Per Unit
Corridor Analysis	Mile	$20,000 to $40,000
Intersection Improvement Study	Intersection	$20,000 to $35,000
Intersection Improvement Study and New Signal	Intersection	$240,000
Design/Engineering	Varies	Assume Additional 10-15% of Infrastructure Cost
Infrastructure Cost Estimates*	**Unit**	**Cost Per Unit**
Mill and Resurface 4 Lane Urban Roadway	Mile	$1,500,000
Mill and Resurface 6 Lane Urban Arterial	Mile	$2,500,000
Widen 2 to 4 Lane Urban Arterial	Mile	$10,000,000
Widen 4 to 6 Lane Urban Arterial	Mile	$9,000,000
Widen 4 to 6 Lane Urban Interstate	Mile	$15,000,000

*Source: FDOT Cost Per Mile Reports with rounding applied

Note: Costs do not include utilities, contingency, or right of way acquisition

Table 2: Infrastructure Recommendations

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
I4	1	Highway	S Bronough St	SR 366/SR 371/W Madison St/W Gaines St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I39	1	Highway	Truck Parking Infrastructure	Regional Rest Areas	Leon-Jefferson	Land Use and Policy	Freight parking/staging	Support FDOT efforts for redevelopment and consideration of truck parking enhancements.	FDOT Projects: 452230-1, 452335-1	Mid	$15,554,285
I30	1	Highway	US 90/Washington St	US 19/Jefferson St	Jefferson	System Capacity and Efficiency	System Redundancy	Coordination with FDOT oversize load permitting to remove this route from their accepted maps OR Consider a geometry update of the intersection to allow oversize loads.	-	Short	$20,000 to $35,000
I11	2	Highway	SR 61/Thomasville Rd	US 319/Capital Circle	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I12	2	Highway	US 319 N/Thomasville Rd	Killarney Way/Maclay Rd	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I45	4	Highway	I-10	Gadsden/Leon County Line to West of Capital Circle NW	Leon-Gadsden	System Capacity and Efficiency	Regional Mobility Plan Projects	Widen from 4 to 6 Lanes.	Identified within the RMP Number: 9	Long	$89,628,374
I46	4	Highway	I-10	(Midway) US 90 Interchange to Gadsden/Leon County Line	Leon-Gadsden	System Capacity and Efficiency	Regional Mobility Plan Projects	Widen from 4 to 6 Lanes.	Identified within the RMP Number: 8	Long	$59,864,305
I5	5	Highway	SR 371/Gaines St	Lake Bradford Rd to Apalachee Pkwy	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$40,000-$80,000
I6	5	Highway	SR 61/ S Monroe St	SR 371/CR 1555/Gaines St	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I7	5	Highway	US 27/Apalachee Pkwy	SR 265 Magnolia Dr	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I8	5	Highway	US 27/S Monroe St	Apalachee Pkwy to E Jefferson St	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000
I9	5	Highway	US 27/SR 61/Monroe St	US 90/SR 10/E Tennessee St	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I10	5	Highway	US 90/E Tennessee Street	SR61/N Monroe St to N Meridian St	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000
I3	5	Highway	SR 265/Magnolia Dr	SR 61/S Monroe St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$20,000 to $35,000
I24	8	Highway	Railroad Ave	SR 371/W Gaines St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$20,000 to $35,000
I25	8	Highway	SR 371/Gaines St	Railroad Ave	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$20,000 to $35,000
I23	10	Highway	Railroad Ave	SR 366/W St Augustine St	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$20,000 to $35,000
I13	12	Highway	SR 263/Capital Circle	US-27/N Monroe St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
I37	15	Highway	SR 366/Stadium Dr	W Pensacola St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider moderate design and operations changes.	CRTPA Traffic and Operations Analysis	Long	$20,000 to $35,000
I14	17	Highway	SR 61/Thomasville Rd	E 9th Ave to E 6th Ave	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000
I15	17	Highway	US 27/Monroe St	SR 61/Thomasville Rd	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I36	18	Highway	Appleyard Dr	US-90/W Tennessee St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider moderate design and operations changes.	Partial FDOT Resurfacing (US 90) - 426937-3	Mid	$11,886,624
I20	20	Highway	US 90/W Jefferson St	S Pat Thomas Pkwy to S Adams St	Gadsden	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Short	$20,000 to $40,000
I28	20	Highway	Quincy Bypass	North and South Bypass Routes	Gadsden	System Capacity and Efficiency	System Redundancy	Continue to monitor progress of this development. Encourage municipal partners to consider freight favorable land use and zoning based on community desires.	Former FDOT Project	Mid	Variable based on route and distance
I19	23	Highway	Martin Luther King Blvd	S Pat Thomas Pkwy to S Stewart St	Gadsden	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000
I17	27	Highway	Miccosukee Rd	US-319/Capital Cir Ne	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I1	28	Highway	Orange Avenue	Capital Circle SW to SR 61/S Monroe St	Leon	System Capacity and Efficiency	Regional Mobility Plan Projects	Access mgmt. and multimodal improvements.	Identified within the RMP Number: 21.1, 21.2, and 21.3	Short	$68,823,738
I43	28	Highway	SR 363/Woodville Highway	Capital Circle SE to Paul Russell Rd	Leon	System Capacity and Efficiency	Regional Mobility Plan Projects	Widen from 2 to 4 Lanes.	Identified within the RMP Number: 12	Short	$50,578,114.90
I41	30	Highway	SR 20/SR366/Pensacola St	Capital Circle SW to Appleyard Dr	Leon	System Capacity and Efficiency	Regional Mobility Plan Projects	Widen from 2 to 4 Lanes.	Identified within the RMP Number: 22.1 and FDOT 219820-2 Capacity Adding and Safety Improvements	Mid	$22,138,758.29
I16	30	Highway	SR 20/Blountstown St	US-90/SR-10/W Tennessee St	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$20,000 to $35,000
I42	31	Highway	Tharpe St	Capital Circle NW to Ocala Rd	Leon	System Capacity and Efficiency	Regional Mobility Plan Projects	Widen from 2 to 4 Lanes.	Identified within the RMP Number: 23	Mid	$86,257,869.69
I38	32	Highway	E Park Ave	US 319/Capital Circle SE	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider moderate design and operations changes.	Partial FDOT Resurfacing (Capital Circle) - 428739-2	Mid	$5,102,027
I26	34	Highway	US 319 S/Capital Circle NE	US 90/SR 10/Mahan Dr	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022) Regional Mobility Plan Projects	Consider the development of a planning study along the corridor to assess potential improvement. Potential Major Intersection Reconfiguration.	Identified within the RMP Number: 45	Mid	$2,971,343.26

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
I31	39	Air	TLH	Capital Circle SW/ Spring Hill Road	Gadsden-Wakulla-Jefferson	System Capacity and Efficiency	Increased capacity to manage and store cargo	Support continued growth at TLH. -Development of an increased Cargo Management Apron. -Development of a Cargo operations facility. -Improvement to aircraft approach infrastructure. -Development of a Foreign Trade Zone.	Ongoing TLH Development	Short	$30,000,000
I47	39	Highway	SR 263/Capital Circle SW and NW	Springhill Road to SR 371 Orange Ave	Leon	System Capacity and Efficiency	Port/Airfield Access	Widen from 2 to 6 Lanes.	FDOT - Widening Project 415782-9	Mid	$6,862,601
I29	41	Highway	Connection to Port of Port St. Joe	South of Telogia	Connecting Area	System Capacity and Efficiency	Port/Airfield Access	Continued coordination with rail providers, port operator, and economic development agencies to secure funding for rail repair.	-	Long	$30,500,000
I22	48	Highway	US 27/Apalachee Pkwy	US 319/Capital Circle SE	Leon	System Capacity and Efficiency	Bottleneck (top 10 for 2022)	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$20,000 to $35,000
I18	65	Highway	SR 363/Woodville Highway	Capital Circle SE to Oak Ridge Rd E	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Mid	$100,000-$200,000
I44	66	Highway	US 319/Crawfordville Highway	Wakulla Springs Rd to North of Alaska Way	Leon-Wakulla	System Capacity and Efficiency	Failing LOS Regional Mobility Plan Projects	Widen from 2 to 4 Lanes. Continue coordination with municipal and FDOT partners on the design and implementation of the planned widening along this corridor.	Identified within the RMP Number: 4.1, 4.2, 5, 6, 7. FDOT Widening Project 219881-4, 220495-3	Mid	$255,682,061.47
I21	67	Highway	SR 20/Blountstown Highway	Geddie Rd to Coe Landing Rd	Leon	System Capacity and Efficiency	Failing LOS	Consider the development of a planning study along the corridor to assess potential improvement.	-	Long	$80,000-$160,000
I40	75	Highway	Orange Ave	US 319/Capital Circle SE	Leon	System Capacity and Efficiency	Top 10 PTI Roadway	Consider moderate design and operations changes.	-	Mid	$20,000 to $35,000
I2	N/A	Highway	Highway	Region Wide	All	System Safety	Crash Hotpots	Consider safety, design and operational improvements.	-	Mid	N/A
I32	N/A	Rail	Rail Bridges	Region Wide	Leon-Gadsden-Jefferson	System Capacity and Efficiency	Bridge rehabilitation and improvements	Consider critical bridge improvements identified on main line from Gadsden to Baker County, encompassing the rail network within CRTPA.	-	Long	$599,388.08
I33	N/A	Rail	Railroad	Region Wide	Leon-Gadsden	System Capacity and Efficiency	Main line track improvements for capacity expansion and train speed Improvements	Improve critical capacity points identified on the main line track across rail network within CRTPA.	-	Long	$ 4,667,704
I34	N/A	Rail	Railroad	Region Wide	Leon-Jefferson	System Capacity and Efficiency	Main line track improvements for capacity expansion and train speed Improvements	Improve critical capacity points identified on the main line track across rail network within CRTPA.	-	Long	$2,945,000

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
I35	N/A	Rail	Railroad	Region Wide	Leon	System Capacity and Efficiency	Yard track, and operation equipment improvements for capacity expansion and train speed Improvements	Improve critical capacity points identified for siding rehabilitation and transload upgrades.	-	Mid	$190,000
I48	N/A	Rail	Rail Crossings	Region Wide	All	System Capacity and Efficiency	Rail Crossing Modification	Work with roadway managers and railroad providers on the identification of rail crossing elimination opportunities. Consider the joint development of grants to supplement funding.	-	Mid	N/A

Table 3: Policy Recommendations

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
P52	N/A	Air	TLH	Region Wide	All	Land Use and Policy	Air Travel Expansion	Continue coordination with TLH on the development of their Foreign Trade Zone development.	TLH is actively pursuing the development of a Foreign Trade Zone in support of their planned facility expansions	Mid	N/A
P50	N/A	Highway	Highway	Region Wide	All	System Capacity and Efficiency	Truck Routing	Consider the development of truck routing within the region to direct non-local freight movements.	-	Short	N/A
P53	N/A	Highway	Highway	Region Wide	All	System Capacity and Efficiency	Top Ten 2050 Freight Corridors	Continue to monitor the conditions along these corridors and work with agency partners as any issues are identified. I-10 US 19 SR 20 US 98 Thomasville Rd SR 267 SR 12 US 27/ N. Monroe St US 27/Apalachee Pkwy Mahan Dr	-	Short	N/A
P54	N/A	Highway	Parking Areas and Freight Land Uses	Region Wide	All	Land Use and Policy	Freight parking/staging	Coordinate and stay informed on public/private opportunities for truck parking improvements throughout the region.	-	Long	N/A
P55	N/A	Highway	Parking Areas and Freight Land Uses	Region Wide	All	Land Use and Policy	Freight parking/staging	Coordinate with county and municipal staff on the development freight parking and staging standards to accommodate truck needs. Coordination with law enforcement will be key to discouraging unauthorized parking.	-	Long	N/A
P51	N/A	Multimodal	-	Region Wide	All	Land Use and Policy	Encourage Intermodal Development	Continue coordination with municipal partners and encourage the development of intermodal or transload opportunities to encourage multimodal freight movements.	-	Short	N/A
P56	N/A	Multimodal	-	Region Wide	All	Land Use and Policy	Introduce freight friendly zoning and land use descriptions	Coordinate with county and municipal staff on the development of freight inclusive zoning and land use descriptions.	-	Short	N/A

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
P57	N/A	Multimodal	-	Region Wide	All	Land Use and Policy	Regional Cooperation beyond municipal boundaries.	Coordinate with neighboring municipal partners for project cohesion and cooperative opportunities.	-	Short	N/A
P58	N/A	Multimodal	FDOT District and Central Office Coordination	Region Wide	All	Land Use and Policy	Regional Cooperation beyond municipal boundaries.	Encourage the continued involvement of FDOT staff in conversations related to freight movements within the area. Coordinate with FDOT on freight related project funding opportunities.	-	Short	N/A
P59	N/A	Multimodal	-	Region Wide	All	Land Use and Policy	Freight Origin/Destination	Promote the identification of freight clusters throughout the region by economic development and municipal staff. This identification can help guide development of comprehensive planning and future zoning/land use decisions.	-	Short	N/A
P49	N/A	Sea	Port of Port St. Joe	Region Wide	All	Land Use and Policy	Regional Cooperation beyond municipal boundaries.	Consider continued coordination with the Port. Development at or near the Port may impact the CRTPA region.	-	Short	N/A

Table 4: Technology Recommendations

Recommendation ID	Census Tract Rank	Mode	System Feature	Termini/ Crossroads	Location	Needs Category	Identified Needs	Recommendation(s)	Existing Project	Term	Estimated/Planned Cost
T65	5	Highway	US 27/Apalachee Pkwy	SR 61/ S Monroe St to Conner Blvd	Leon	System Capacity and Efficiency	Efficient Flow of Traffic	Promote the development and implementation of Adaptive Traffic Signal Control.	ITS Master Plan	Long	$1,260,569.87
T66	5	Highway	US 90/Tennessee St/ Mahan Dr	US 27/SR 61/N Monroe St to Capital Circle NW	Leon	System Capacity and Efficiency	Efficient Flow of Traffic	Promote the development and implementation of Adaptive Traffic Signal Control.	ITS Master Plan	Short	$1,609,477.60
T63	N/A	Air	Technology	TLH	All	System Capacity and Efficiency	Continued Industry Development	Coordinate with TLH on the implementation of autonomous passenger and freight technology testing in the region.	TLH is actively tracking and considering these technologies as they become available.	Short	N/A
T60	N/A	Highway	I-10	Region Wide	Leon-Gadsden-Jefferson	System Capacity and Efficiency	Truck Parking Availability and awareness	Continue coordination with FDOT on the implementation of truck parking counting technologies signage and applications	Truck parking counters and notification methods are in place along I-10 but must be maintained and upgraded in the future	Mid	N/A
T61	N/A	Highway	Regional ITS equipment	Region Wide	All	System Capacity and Efficiency	Efficient Flow of Traffic	Continue to promote the development of Intelligent Transportation Systems (ITS) throughout the four-county region. Engage with the Tallahassee-Leon County Regional Transportation Management center and the ITS Master Plan for opportunities to improve general movement throughout the region.	ITS Master Plan	Short	N/A
T64	N/A	Highway	Tallahassee-Leon County	Region Wide	Leon	System Capacity and Efficiency	Efficient Flow of Traffic	I-10 Dynamic Messaging Signage and Trailblazer signage. Promote the development and implementation of the trailblazer signage system to guide drivers during detour and incident management events.	ITS Master Plan	Mid	$3,677,037.28
T67	N/A	Highway	Tallahassee-Leon County	Region Wide	Leon	System Capacity and Efficiency	Travel Time Reliability	Promote the development and implementation of the equipment necessary for the travel time reliability system.	ITS Master Plan	Mid	$416,438.26
T62	N/A	Rail	Technology	Region Wide	All	System Capacity and Efficiency	Continued Industry Development	Coordinate with rail providers on the implementation of autonomous freight rail technology testing in the region.	AN - Pilot programs ongoing just north of the region in GA	Short	N/A

Figure 1: Recommendation Map

