

Georgia Statewide Transit Plan

Improving Access and Mobility in 2050

Existing Conditions and Future Trends Analysis

Part I – State Profile Report

Final Report

May 2020

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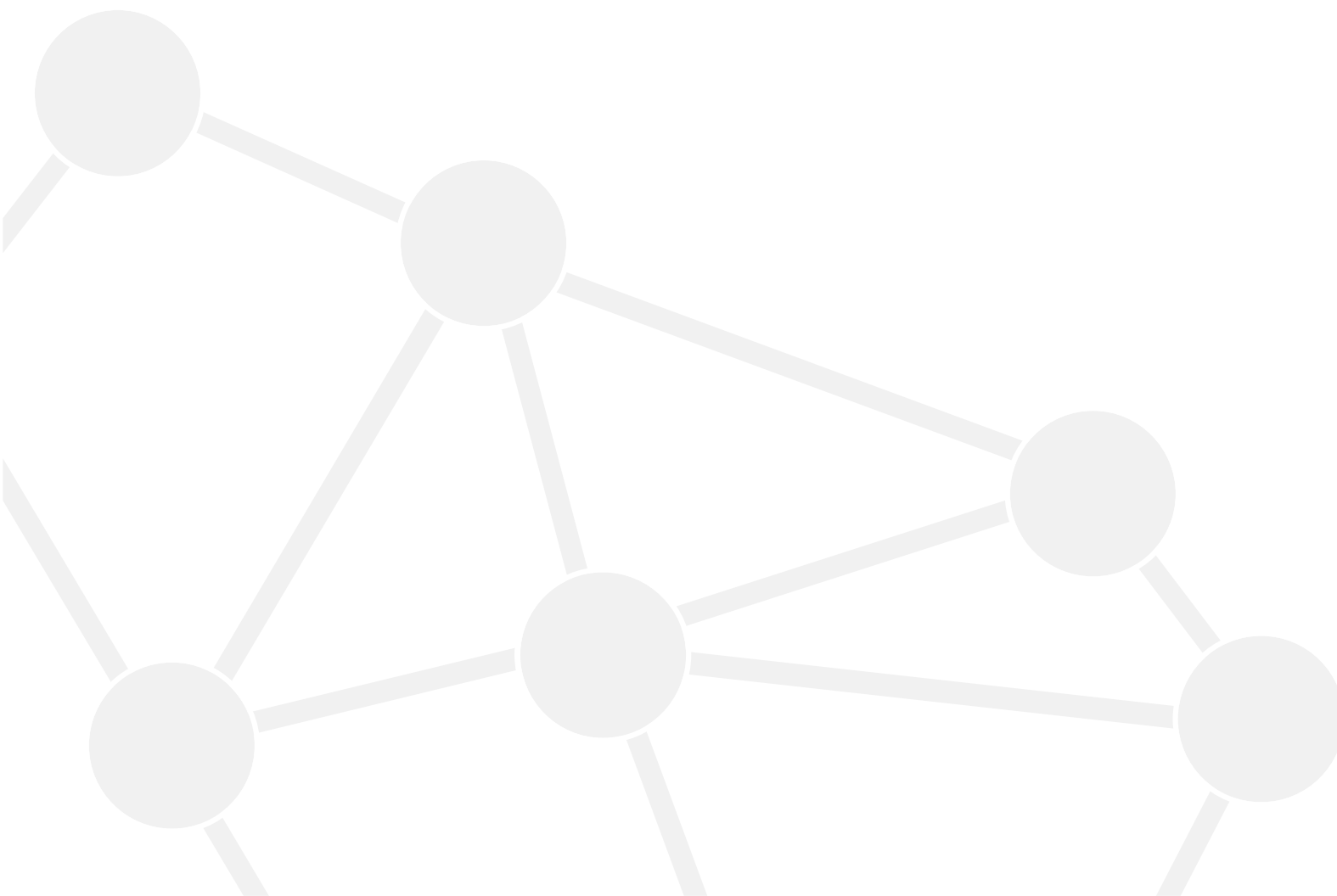


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List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials	MMIP	Major Mobility Investment Program
ADA	Americans with Disabilities Act	MPO	Metropolitan Planning Organization
APT	Athens Public Transit	MTA	Macon-Bibb County Transit Authority
ARC	Atlanta Regional Commission	NAICS	North American Industry Classification System
ART	Arterial Rapid Transit	NEMT	Non-Emergency Medical Transportation
ATL	Atlanta-region Transit Link Authority	NTD	National Transit Database
ATS	Athens Transit System	OPB	Office of Planning and Budget
BRT	Bus Rapid Transit	PIOH	Public Involvement Open House
CDC	Center for Disease Control	RC	Regional Commission
CRC	Coastal Regional Commission	RTD	Rome Transit Department
DB	Design Build	RTP	Regional Transportation Plan
DBB	Design Bid Build	RTOP	Regional Traffic Operations Program
DBF	Design Build Finance	SAC	Stakeholder Advisory Committee
DHS	Department of Human Services	SGR	State of Good Repair
EJ	Environmental Justice	SPLOST	Special-Purpose Local-Option Sales Tax
EV	Electric Vehicle	SRP	State Rail Plan
FHWA	Federal Highway Administration	SRTA	State Road and Tollway Authority
FAST Act	Fixing America's Surface Transportation Act	SSC	Statewide Steering Committee
FTA	Federal Transit Administration	SSTP	Statewide Strategic Transportation Plan
GCT	Gwinnett County Transit	STIC	Small Transit Intensive Cities
GDOT	Georgia Department of Transportation	STIP	Statewide Transportation Improvement Program
GEMA	Georgia Emergency Management Agency	SWTP	Statewide Transportation Plan
GRTA	Georgia Regional Transportation Agency	SWTRP	Statewide Transit Plan
GTFS	General Transit Feed Specification	TAC	Technical Advisory Committee
HCT	Henry County Transit	TAM	Transit Asset Management
HJAIA	Hartsfield-Jackson Atlanta International Airport	TDM	Travel Demand Model
HST	Human Services Transportation	TDP	Transit Development Plan
ICE	Internal Combustion Engine	TIA	Transportation Investment Act
LEP	Limited English Proficiency	TIP	Transportation Improvement Plan
LRTP	Long-Range Transportation Plan	TPO	Third Party Operators
MAP-21	Moving Ahead for Progress in the 21 st Century Act	TSPLOST	Transportation Special Purpose Local Option Sales Tax
MARTA	Metropolitan Atlanta Rapid Transit Authority	ULB	Useful Life Benchmark
		USDOT	United States Department of Transportation

1.0 Executive Summary

The Georgia Department of Transportation (GDOT) is developing a Statewide Transit Plan (SWTRP). Throughout this process, technical memoranda will be submitted to summarize the work completed toward the final plan. This document represents the first of such technical memoranda and is presented in three parts.

Part 1, presented here, contains a summary and analysis of Georgia's existing public transit systems, as well as the demographic and economic conditions that affect public transit demand, and related planning efforts. Part 1 also identifies and investigates emerging trends in public transit, as well as new opportunities and challenges that may affect the further development of public transit in the State of Georgia.

Part 2 contains a selection of case studies of transit systems that reflect the various transit market conditions—transit needs and demands—across the state. Part 3 provides an analysis of statewide transit system data portraying the state's travel demand profile for transit trips, including intercity bus services. Parts 2 and 3 will be published at later dates during the planning process that will result in the final plan.

1.1 Public Transit in Georgia

Public transit in Georgia typically consist of two types of systems; urban systems that primarily provide fixed-route bus service, and rural systems that provide curb-to-curb demand-response transit. Demand-response systems are flexible, but typically rely on telephone booking, requiring reservations to be made a day in advance.

The State of Georgia is currently served by 80 systems providing rural transit service. Most rural counties operate their own public transit systems, though there are five multi-county systems serving a total of 38 counties. Rural systems provided over 1.7 million trips for Georgians in 2017.¹

Urban fixed-route systems are fewer in number than the rural systems but provide a greater number of trips. Seventeen urban systems provided 142 million trips in 2017, mostly via local fixed-route bus, but also using heavy rail, express bus, vanpool, paratransit, streetcar, and ferry vehicles.

The Atlanta metropolitan area accounts for 91.75 percent of public transit trips in Georgia across various modes, including fixed-route bus, unidirectional commuter bus, and heavy rail transit. The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the state's largest public transit provider and supplied more than 126 million trips in 2017. The State's next largest provider, Chatham Area Transit, provided 3.9 million trips in the Savannah area.²

1.2 Demographic Trends

Georgia is the eighth-most-populous state and continues to grow, both in terms of population and employment. The US Census Bureau has estimated the population of Georgia to be over 10.2 million in 2017, up from 8.2 million in 2000. Much of this growth occurred in the metro Atlanta region, though northern Georgia as a whole has seen major population increases.

Georgia's growth trend is projected to continue over the next three decades. By 2050, the state is expected to grow to nearly 15 million people, up 32.7% from 2017. Rural areas of the state are projected to grow by 17%, increasing from 2.9 million to 3.4 million. The state's urban areas are expected to grow 49%, from 7.6 million to 11.3 million. Of particular interest is the growth in the population of older Georgians; the segment of the population aged 60 and older is expected to more than double, from 2.0 million in 2017 to 4.21 million in 2050.

The population of areas serviced by rural public transit systems has seen a 3.3% population increase since 2010, with areas served by urban public transit growing 7.6%. Areas without public transit service grew at a lower rate of 3.0%.

Employment opportunities in Georgia have also been increasing, with the state seeing a 14.7% increase in employment since 2010. As with population, much of this growth is seen in metro Atlanta and northern Georgia, though employment growth has been positive in every region of the state. Since 2010, areas served by either an urban or rural public transit system saw employment grow by an average of 13.1% and 12.3%, respectively. Areas not served by public transit lagged with employment growth of 11.0% over the same period.

1.3 Existing Plans

In the preparation of this report, relevant planning documents from state, regional, and local agencies were reviewed. Reviewed plans include previous state plans, such as the GDOT Statewide Transportation Plan and Statewide Transportation Improvement Program; transit development plans; long range transportation plans compiled by Georgia's 16 metropolitan planning organizations; as well as the transportation or comprehensive plans for each of Georgia's 159 counties.

Common themes in these plans include:

- Expanding local bus or rail service to meet demand;
- Coordinating regionally for greater connectivity;
- Coordinating land use, future development, and transportation;
- Promoting safe pedestrian and bike access at bus stops and facilities;
- Exploring new revenue sources to meet funding needs;
- Connecting residents to jobs and healthcare;
- Improving access and mobility for elderly and underserved populations;
- Supporting commuter or intercity transit service to meet demand;
- Utilizing transportation demand management strategies and marketing campaigns to enhance awareness of existing transit service; and
- Exploring opportunities to partner with private companies (e.g. ride-hailing services).

1.4 Emerging Trends, Opportunities, and Challenges

As Georgia grows, demand for transportation services grows as well. Public transit remains an important modal choice for Georgians, but will face new challenges associated with a growing population. Public transit is increasingly viewed as a key driver of economic development, connecting Georgians to jobs, healthcare, and educational opportunities.

As communities grow or merge with a larger urban area, the Federal regulations regarding funding assistance change. Larger communities are expected to shoulder more of the administrative and fiscal burden stemming from the operation of their public transit systems. For example, moving from a small urban (from 50,000 to 199,999 population) to a large urban system (200,000 or more in population) can restrict the Federal operating assistance for which a system is eligible, and increases the system's Federal Transit Administration (FTA) reporting responsibility.

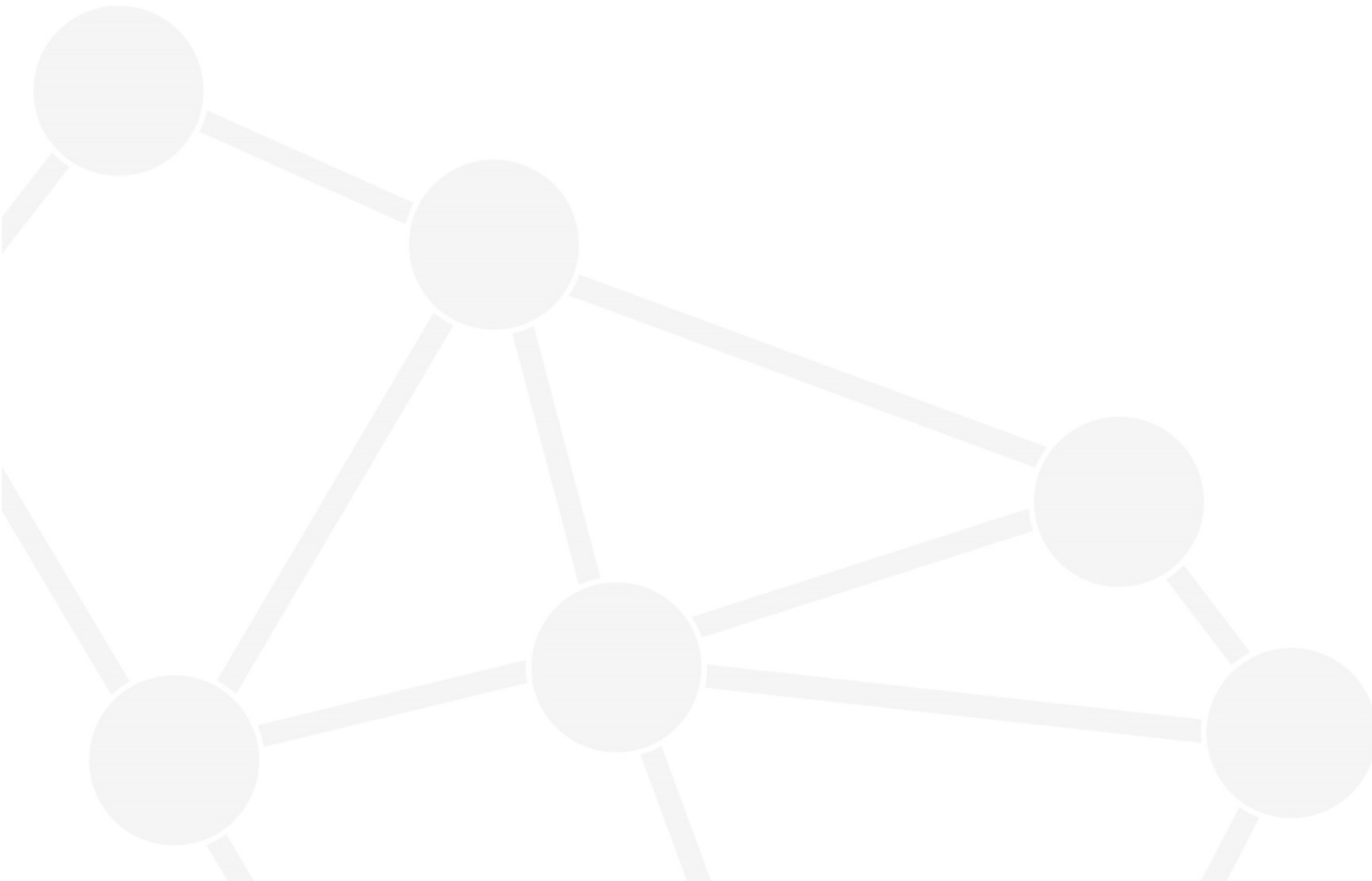
Mitigating these challenges and finding additional local funding for operating expenses will be a major concern as Georgia continues to grow. This transition previously impacted public transit systems in the state following the 2010 Census. As the large urbanized areas continue to grow in Georgia, this trend will only continue with surrounding smaller urban systems on the fringe of larger urbanized areas.

Rapid advances in technology are also changing the face of transportation in Georgia. Ride-hailing platforms like Lyft and Uber have become increasingly popular, and both supplement and compete with mass transit. Other infrastructure developments like managed lane systems can create greater capacity for public transit along major highway corridors. Interconnected digital innovations like signal priority and real-time trip scheduling will increase the speed, reliability, and convenience of public transit in both urban and rural areas. Finally, the potential for change seen in connected and automated vehicle technology is of an almost unprecedented magnitude.

¹ National Transit Database 2017

² National Transit Database 2017

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2.0 Overview of Transit in Georgia

Public transportation provides a crucial mobility option for Georgians across the state. Public transportation can be broadly divided into two classifications: public transit and human services transportation (HST). Though the two share a core purpose and have similar operational characteristics, these two types of services accommodate different populations and are funded and administered differently. Public transit provides shared vehicle service and is open to all members of the general public. Approximately 88.4% of Georgians live within the service area of at least one public transit system.³

In Georgia's rural areas, public transit is provided by demand-response service using cutaway buses or vans. To secure a ride, users contact a dispatcher in advance, who provides the rider with a scheduled pick up time. Service is available anywhere inside the system's coverage area, and most systems offer service to high traffic destinations in other jurisdictions, such as medical and economic centers. More details on public transit systems in Georgia's rural areas can be found in **Section 2.1.1 Rural Transit**.

In the state's urban centers, public transit most frequently consists of fixed-route bus service. In the Atlanta area, public transit users may also take advantage of the heavy rail transit, commuter bus, streetcar, and vanpool options. Data on Georgia's urban transit systems can be found in **Section 2.1.2 Urban Public Transit**.

Human services transportation varies from public transit in that it is focused on meeting the specialized transportation needs of specific populations. HST programs seek to help older Americans, lower-income populations, or the disabled meet their total transportation needs, including daily commutes, medical appointments, shopping trips, or visits to senior centers. In Georgia, most regulatory authority over HST is under the Georgia Department of Human Services (DHS). DHS contracts HST services to a combination of public agencies, non-profit groups, and for-profit companies. HST trips are typically provided by curb-to-curb demand-response systems and are not required to be open to the general public. However, due to overlapping operation characteristics in some rural areas, public transit and HST may be operated by a single provider, increasing efficiency for systems and patrons.

Non-Emergency Medical Transportation (NEMT) is a related program operated by the Georgia Medicaid, a division of the Georgia Department of Community Health. NEMT exclusively provides free medically necessary transportation to the state's Medicaid recipients. Riders arrange trips through one of two regional for-profit brokers. These brokers then determine the optimal transportation mode for the client, which can be through an independent transportation provider or a public transit system.

Intercity transportation, whether by bus, rail, or air, is directly complementary to public transit. Intercity bus transit in Georgia is provided by private coach companies, though GDOT provides support for capital purchases through an FTA grant program. Further detail on intercity bus service is provided in **Section 2.2 Intercity Transportation**.

Intercity rail service is provided by Amtrak, a government-owned, for-profit corporation. Amtrak serves five cities in Georgia and is discussed further in **Section 2.2.3**. The demand for increased connectivity has also driven the creation of private shuttle services, including those sponsored by employers and real estate developers offering complementary shuttle service for workers and patrons. This rapidly developing sector, sometimes called micromobility, is at the technological forefront of the transit world. Emerging technologies like app-based, on-demand transit and autonomous shuttles are currently being piloted in the state.

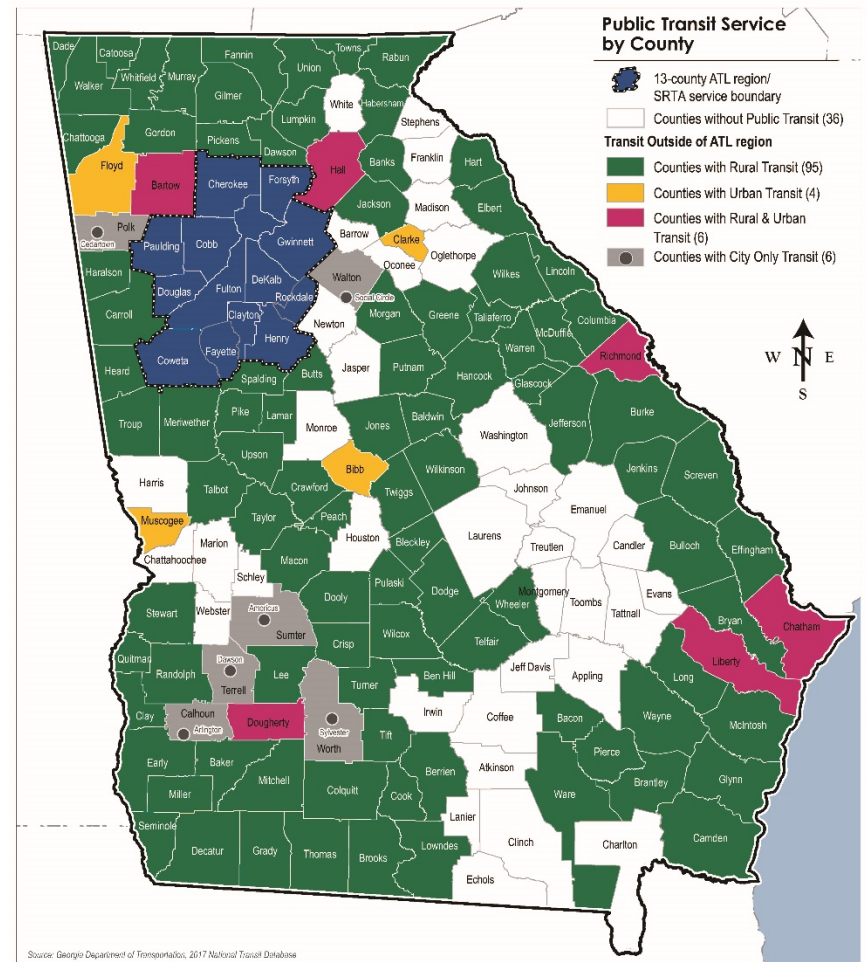
2.1 Existing Public Transit Service

There are 92 public transportation providers in the State of Georgia. As shown in **Figure 1**, 123 counties are served by public transit. For purposes of this report, a county's public transit service status is classified as either Urban, Rural, both Urban and Rural, or counties without public transit. Eight counties (Bartow, Henry, Hall, Cherokee, Richmond, Chatham, Liberty, Dougherty) are served by both Urban and Rural public transit, though not necessarily by the same provider. In the Atlanta metropolitan area, the Georgia Regional Transportation Agency's (GRTA) Xpress commuter bus service provides a long-distance service that complements and overlaps with local public transit systems.

Figure 1 shows the transit service by type throughout the state. Counties in white have no transit accessible to the general public, though HST and NEMT services may be available for specific purposes and qualified riders.

In 2017, Georgia's transit agencies provided over 144 million unlinked passenger trips. Of these trips, 1,797,212 were provided by Rural systems, 4,339,532 were in areas classified as Small Urban, and 138,607,252 were in Large Urban areas.⁴

Figure 1: Georgia Transit Service by Type



2.1.1 Rural Transit

Georgians are currently served by 80 systems providing Rural transit service. This demand-response transit is provided using cutaway buses or vans. Of these systems, 72 operate as individual counties, five systems operate Rural public transit serving regions or multiple jurisdictions, and three are operated by single municipalities. Twenty-six Rural systems contract their services to third party operators (TPOs), which can be non-profit organizations or for-profit companies.

Rural transit providers sometimes have the flexibility to operate outside their designated service boundary (e.g. county lines) when needed. Of Georgia's 80 Rural public transit providers, 67 have the ability to take their riders to limited destinations outside their boundaries when necessary and appropriate, such as trips to regional hospital or activity centers.

On average, service hours begin between 7:00 and 8:00 AM and the final pickups for passengers occur between 4:00 and 5:00 PM. Most Rural public transit systems operate weekday service only. In addition, Saturday service is provided by the systems in Macon, Dooly, Crisp, Clay, Wilcox, Quitman, Randolph, and Stewart counties, plus the City of Americus.

Table 1 shows a regional summary of FY 2017 operating statistics for Georgia's Rural public transit providers, including total operating expenses, passenger trips, and number of vehicles, as well as the average cost per trip. These statistics are summarized at the regional level here, while provider-specific data is available in **Appendix A.1 Rural Public Transportation Systems**.

Statewide, Rural transit providers completed 1,797,212 trips and spent an average of \$18.91 per trip. The average base fare for a Rural public transit trip is \$2.59; however, systems often have tiered fare structures resulting in higher fares for longer trips or trips to certain destinations.⁵

The Southwest Georgia region saw the most Rural transit trips in 2017 with 351,572. This region is home to the largest provider, the Southwest Georgia Regional Commission, which provided 267,804 passenger trips in 2017. Thomas County, the single-county system that provided the most trips, is also a part of this region.

The Three Rivers region provided transit services with the lowest cost per trip in 2017. Troup County, located in the Three Rivers region, had the state's lowest per trip cost at \$7.95 per passenger trip. Of the state's multi-county systems, the Mountain Area Transportation System (MATS), located in Northwest Georgia, had the lowest per trip cost at \$16.03 per trip provided.

Table 1. Statewide Rural Public Transit Operating Characteristics, 2017

	Operating Expenses	Passenger Trips	Cost/Trip	Number of Vehicles
Atlanta Region	\$2,454,892	128,299	\$19.13	29
Central Savannah River Area	\$3,216,291	222,441	\$14.46	50
Coastal Georgia	\$4,015,735	131,308	\$30.58	62
Georgia Mountains	\$2,028,119	103,409	\$19.61	36
Heart of Georgia Altamaha	\$1,132,984	76,667	\$14.78	24
Middle Georgia	\$1,159,912	60,801	\$19.08	22
Northeast Georgia	\$1,217,869	72,744	\$16.74	16
Northwest Georgia	\$4,340,412	262,208	\$16.50	82
River Valley	\$3,171,313	131,980	\$24.03	43
Southern Georgia	\$2,735,774	125,799	\$21.75	46
Southwest Georgia	\$6,606,081	351,572	\$18.79	92
Three Rivers	\$1,914,152	129,984	\$14.73	26
Statewide	\$33,993,539	1,797,212	\$18.91	543

Source: National Transit Database

2.1.2 Urban Public Transit

The State of Georgia currently has 17 urban public transit systems. Fifteen of these systems offer fixed-route bus service. Bartow County only offers demand-response public transit. Connect Douglas offers vanpool service and launched fixed-route bus service in June of 2019. GRTA offers commuter bus service in the Atlanta metro area; CobbLinc and Gwinnett County Transit also offer commuter service between their respective counties and major employment centers. MARTA operates the state's only heavy rail system and streetcar. Chatham Area Transit, in the Savannah metro area, operates the state's only public passenger ferry service.

Georgia's 15 fixed-route transit providers also operate Americans with Disabilities Act (ADA) compliant complementary paratransit service. This demand-response service provides transportation within 0.75 miles of a bus route or rail station. Paratransit eligibility is based on an individual's ability to practically use the system, and each agency independently determines eligibility. Decisions must be submitted to the applicant in writing, and applicants must be provided an opportunity for appeal.⁶

Table 2 provides a list of Georgia's urban public transit systems along with key operating characteristics related to operating expenses, ridership, service area population, and related efficiency ratios. The most fiscally efficient systems tend to be those that serve the largest populations, but this is not always the case. Rome Transit Department had the most efficient system in 2017 with a population served of 36,323; Rome had the second highest trip per capita ratio at 30.8, spending \$2.96 to provide a single transit trip.

The systems with the highest cost per trip tend to be ones that rely on demand-response public transit, where vehicles tend to have lower occupancy and thus higher per trip costs. GRTA's Xpress bus service also had a relatively high per trip cost. Since commuter buses offer a unidirectional service at limited times of the day, costs are often higher than in traditional fixed route service.

More detailed descriptions of each operator, ridership by mode, and vehicle inventories can be found in Small Urban Agencies

The State of Georgia currently has seven public transit agencies serving areas that are classified as Small Urban. These agencies serve Census designated areas with populations between 50,000 up to 200,000. Small Urban agencies in Georgia are subrecipients of GDOT and receive FTA funds through the Department.

2.1.2.1 Large Urban Agencies

Public transit agencies with service areas that include 200,000 or more people, as designated by the US Census Bureau, are classified as Large Urban under FTA guidelines. These agencies may not use FTA funds for operating assistance, unless that agency has fewer than 100 buses. Large Urban agencies must coordinate with their local Metropolitan Planning Organization (MPO) and have more detailed reporting responsibilities to FTA. Of Georgia's nine Large Urban systems, two are state-created regional authorities and seven are county operated systems.

Table 2: Operating Expenses and Ridership for Urban Public Transit Systems, 2017

Agency	Annual Operating Expenses	Unlinked Passenger Trips	Population Served	Trips/Capita	Cost/Trip	Cost/Capita
Albany Transit System	\$3,404,363	655,726	75,616	8.7	\$5.19	\$45.02
Athens Transit System	\$6,159,165	1,560,100	111,980	13.9	\$3.95	\$55.00
Augusta Public Transit	\$4,680,958	722,585	201,793	3.6	\$6.48	\$23.20
Bartow Transit	\$518,913	37,241	100,157	0.4	\$13.93	\$5.18
Chatham Area Transit	\$21,992,845	3,941,330	237,736	16.6	\$5.58	\$92.51
Cherokee Area Transportation System	\$911,658	71,623	235,900	0.3	\$12.73	\$3.86
CobbLinc	\$22,207,419	2,735,849	688,078	4.0	\$8.12	\$32.27
Columbus METRA	\$4,432,811	1,219,938	230,208	5.3	\$3.63	\$19.26
Connect Douglas	\$993,030	99,013	142,224	0.7	\$10.03	\$6.98
Gwinnett County Transit	\$18,485,534	1,437,131	920,260	1.6	\$12.86	\$20.09
Hall Area Transit	\$1,421,163	162,371	31,782	5.1	\$8.75	\$44.72
Henry County Transit	\$1,543,234	78,360	213,869	0.4	\$19.69	\$7.22
Liberty Transit	\$795,275	19,912	39,063	0.5	\$39.94	\$20.36
Macon-Bibb County Transit Authority	\$6,666,030	847,984	153,691	5.5	\$7.86	\$43.37
MARTA	\$557,732,552	126,428,706	1,967,468	64.3	\$4.41	\$283.48
Rome Transit Department	\$3,310,405	1,118,401	36,323	30.8	\$2.96	\$91.14
Xpress (GRTA/ SRTA)	\$28,331,195	1,626,252	1,354,871	1.2	\$17.42	\$20.91

Source: National Transit Database

2.2 Intercity Transportation

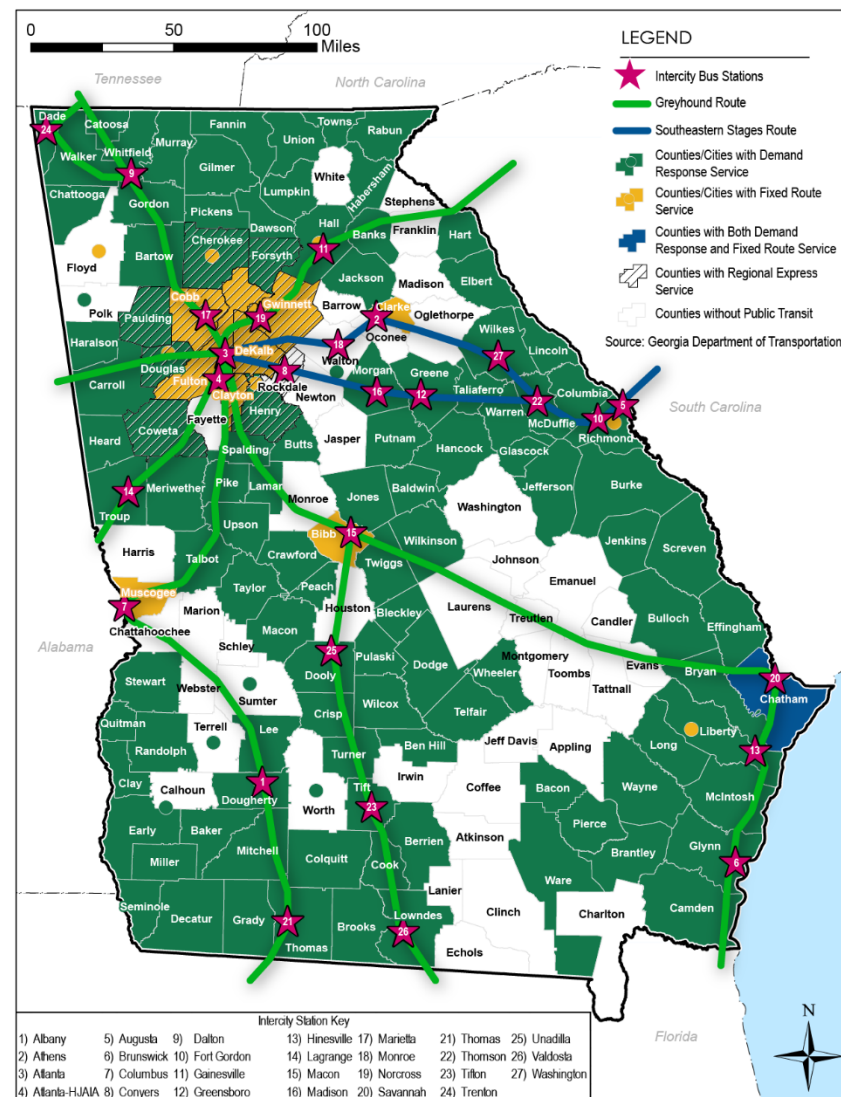
2.2.1 Intercity Bus

Intercity bus service provides an important transportation link for both rural and urban Georgians. GDOT administers intercity bus service through its Section 5311(f) program, which allocates 15% of a state's Section 5311 program funds for the development and support of intercity bus transportation. In 2017, GDOT awarded a grant for \$6.9 million to Greyhound for the purchase of 16 55-passenger buses and \$11.0 million for the construction of a new intercity bus terminal near the Garnett MARTA station in downtown Atlanta. Southeastern Stages participated in a GDOT grant for \$869,964 for the purchase of two 55-passenger buses.⁷

Of Georgia's intercity bus carriers, Greyhound provides the largest coverage area, offering service to 27 locations across Georgia. Southeastern Stages operates intercity bus service to 12 locations, mostly in northern Georgia. Southeastern Stages also provides service for Greyhound along certain routes. Megabus offers two stops in Georgia, in Athens and Atlanta.

Figure 2 shows the location of the 27 Greyhound and Southeastern Stages intercity bus stops in the State of Georgia. Of these intercity bus stops, 25 have a connection to local public transit. Stops in Atlanta, Augusta, Columbus, Savannah are collocated with multimodal public transit facilities, as is the stop at Hartsfield-Jackson Atlanta International Airport. Intercity bus stops in Albany, Brunswick, Dalton, Fort Gordon, Gainesville, Greensboro, Hinesville-Flemming, LaGrange, Madison, Savannah, Thomasville, Thompson, Tifton, Trenton, Unadilla, Valdosta, and Washington.

Figure 2: Intercity Bus Stops in Georgia

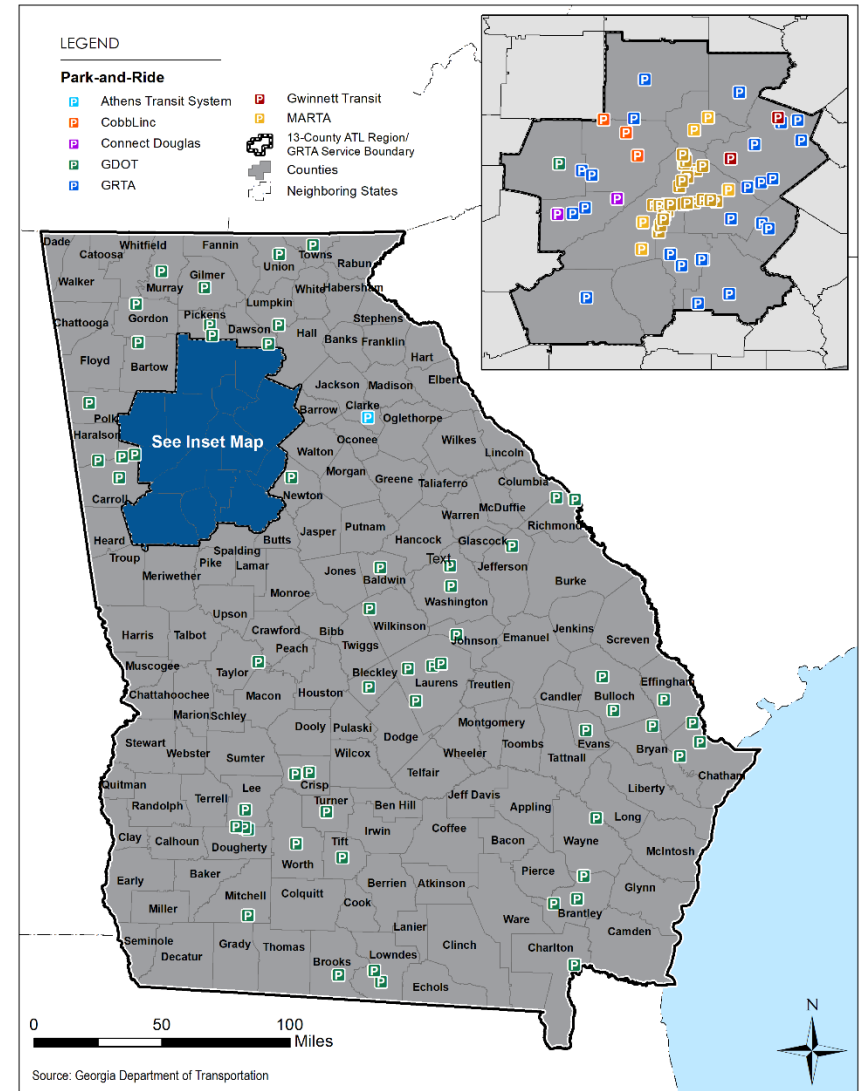


2.2.2 Park-and-Ride

Park-and-Ride offers Georgia commuters an additional option for transportation into major metropolitan areas. These lots can be used as meeting locations for carpooling or as places for car commuters to transfer to transit. There are over 120 Park-and-Ride lots across Georgia. GDOT operates 58 RideShare lots throughout the state, and GRTA operates 25 in the metro Atlanta area. Local transit services also offer Park and Ride, with Athens Transit System, CobbLinc, Connect Douglas, Gwinnett County Transit, and MARTA providing dedicated parking for transit customers.

Figure 3 shows the location and provider of Park-and-Ride lots in Georgia. Additional information on these lots is provided in **Appendix B: Park-and-Ride Lot Details**.

Figure 3: Park-and-Ride Lots in Georgia



2.2.3 Passenger Rail

Amtrak, which operates four trains in Georgia, is the sole provider of intercity passenger rail in the state. The Crescent offers daily service between New York and New Orleans; Georgia stops include Gainesville, Toccoa, and Atlanta. The Silver Service trains, the Silver Meteor and the Silver Star, offer service between New York and Miami; Georgia stops include Savannah and Jesup. The Palmetto is a day train operating between New York and Savannah that offers Business Class amenities.⁸

Table 3 shows Amtrak's recent ridership statistics in Georgia. In total, ridership declined 18.5% between 2014 and 2018. FY 2017 saw a minute increase (0.18%) in ridership from FY 2016, but the downward trend continued in FY 2018.

Table 3: Georgia Amtrak Ridership, 2016-2017

Station	FY2014	FY2015	FY2016	FY2017	FY2018
Atlanta	92,900	83,800	78,200	77,751	72,179
Gainesville	6,488	6,176	5,028	5,493	5,032
Jesup	10,636	10,280	10,076	9,648	9,461
Savannah	62,280	59,608	55,358	57,180	53,769
Toccoa	3,021	2,640	2,516	3,407	2,324
Total	175,285	162,504	151,178	153,479	142,783

Source: Amtrak Yearly Fact Sheets

2.3 Other Shared Transportation Providers

Shared-ride airport shuttles represent an additional intercity transportation mode in Georgia. These privately-operated buses offer service to-and-from Hartsfield-Jackson Atlanta International Airport (HJAIA), Savannah/Hilton Head International Airport (SVA), and other airports in Georgia. There are numerous operators and service characteristics vary. Many pick up from a central location and operate on a fixed timetable, but some offer door-to-door service. HJAIA's website provides a database of current operators and the cities they serve at <http://apps.atl.com/Passenger/GroundTransportation/RegionalShuttles.aspx>. Information for SVA can be found at <https://savannahairport.com/airport/ground-transportation/>.

Georgia businesses appreciate the importance of transportation in the lives of their employees, and use employee shuttles to meet these needs. The Coca-Cola Company, headquartered in Atlanta, offers shuttle service to their offices and other facilities in both Midtown and Downtown Atlanta via their RedBus system. This shuttle service connects with MARTA heavy rail at the Peachtree Center and Civic Center stations. Commuters can also transfer from GRTA Xpress commuter buses at the Civic Center station.

Real estate developers are also operating free shuttles as last-mile transportation, helping facilitate customer access from public transit. Atlantic Station and Ponce City Market, two major mixed-use developments in the City of Atlanta, offer free shuttles connecting to the Arts Center and North Avenue MARTA stations, respectively. Both shuttles also allow for real-time tracking via smartphone app.

Coastal Regional Coaches has also been involved in providing employment-based transit, with targeted services operating in conjunction with employers in seven counties. Participating employers include EmployAbility, the Savannah Association for the Blind, Goodwill Industries, and the United Way.⁹ Coastal Regional Coaches also offers shuttles to and from Jekyll Island, Tybee Island, and St. Simon's Island, helping both employees and visitors reach these locations that may be difficult or cost-prohibitive to reach through private transportation.¹⁰

Assembly Yards, a sizable mixed-use development adjacent to the Doraville MARTA station, will be operating autonomous electric shuttles to move employees, residents, and visitors around the area, as well as providing a connection to MARTA. The Integral Group, the developers of Assembly Yards, have taken delivery of one Navya autonomous shuttle, shown in **Figure 4**, and will take delivery of two additional shuttles soon. Internal testing has begun on site, though the service is not yet open to passengers.

Figure 4: The Navya Autonomous Shuttle at Assembly Yards Prior to a Demonstration Run



2.4 Public Transit Funding Programs

Georgia's public transit agencies rely primarily on Federal dollars for both operating and capital funding. FTA oversees two primary funding programs for public transit capital and operating assistance, Section 5307 Urbanized Area Formula Grants (Section 5307) and Section 5311 Rural Area Formula Grants (Section 5311). Eligibility for these programs depends on population density and land use criteria, as defined by the US Census Bureau. Census-designated urbanized areas with populations of 50,000 or more are eligible for the Section 5307 program. All areas outside urban areas are considered Rural by the Census and are eligible for the Section 5311 program.¹¹

Within the Section 5307 program, urbanized areas fall into two separate funding categories, Small Urban with populations between 50,000 and 200,000, and Large Urban with populations of 200,000 or greater. Typically, one public organization serves as the Designated Recipient for a given Large Urban area. The Designated Recipient is the organization that is authorized to receive and allocate funding amounts to other public transit agencies in the same large urbanized area. Those public transit agencies are typically also FTA grantees and are direct recipients of FTA, meaning they receive funding directly from FTA instead of a pass-through agency. Small Urban areas in the State of Georgia receive Federal funding through GDOT, to whom they are considered subrecipients. This model does not necessarily exist in other states; in other jurisdictions, small urbanized areas may become direct recipients and receive funding directly from FTA.¹²

Section 5311 Rural funds flow directly to the respective state department of transportation to be distributed to the public transit agencies in that state. GDOT is the recipient of all Section 5311 funds for the State of Georgia. GDOT uses a formula to allocate these funds to each respective public transit agency.

Population levels and corresponding Urban or Rural designations are updated following each decennial census. FTA's Section 5311 and 5307 programs are designed for public transit providers to periodically step up from Rural, to Small and then Large Urban, assuming incrementally more financial and reporting responsibility as the population grows in their urbanized areas.

Subrecipients of Section 5311 funds are Rural operators and tend to be smaller operators; on average, these systems operate six vehicles. These operators may use all of their allocated Section 5311 funds for operating assistance. GDOT provides certain administrative and technical assistance to these subrecipients including compiling an FTA-required group Transit Asset Management Plan (TAM Plan) for subrecipients and managing annual National Transit Database (NTD) data reporting on their behalf.¹³

Section 5307 Small Urban subrecipients are eligible for additional funding under FTA's Small Transit Intensive Cities (STIC) program. STIC funds are given to areas that have met or exceeded the industry average for a particular performance criterion like passenger miles traveled per vehicle revenue mile or passengers per capita. FTA may elect to give additional funding in the form of STIC funding to public transit agencies.

Subject to funding availability, GDOT funds up to 10% of capital project costs for its subrecipients under both the 5307 and 5311 programs. GDOT does not provide operating assistance under either program.

Large Urban public transit operators that have become Designated Recipients of FTA funds must coordinate service with their local metropolitan planning organization (MPO) and any other public transit operators in the same urbanized areas. They must also report their own NTD data. Large Urban operators are subject to FTA's "100 bus rule," which prevents systems operating more than 100 buses from using FTA funds for operating assistance. Rather, FTA funds may only be used for assistance with capital items, such as rolling stock, facility projects or preventive maintenance. Systems operating between 75 and 100 buses may use 50% of their Section 5307 allocations for operating expenses, and systems with fewer than 75 buses in operation may use up to 75% of their FTA allocation for operating costs.¹⁴ FTA publishes a special table (Table 3A) each year as part of their annual apportionment that states the maximum amount a public transit operator may use for operating expenses.

In the Atlanta Urbanized Area, MARTA historically served as the designated recipient for Section 5307 funds. This changed in 2018 to the Atlanta-Region Transit Link Authority (the ATL). Though the ATL's jurisdiction encompasses counties that operate Rural transit systems, these counties remain GDOT subrecipients for Section 5311 funding.

FTA also provides funds for populations with specific needs through Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Grants. These funds may be used to provide transportation for seniors and individuals with disabilities, or to purchase services from transportation providers. In Georgia, administrative responsibilities for Section 5310 reside with the Department of Human Services (DHS). In many areas of Georgia, Section 5311 systems also provide Section 5310 human services transportation but may share this responsibility with non-profits or private transportation operators.

³ National Transit Database 2017

⁴ National Transit Database 2017

⁵ National Transit Database 2017

⁶ FTA Circular 4710.1 2015

⁷ GDOT 2016

⁸ Amtrak 2019

⁹ CRC 2018

¹⁰ CRC 2017

¹¹ Census 2018

¹² FTA Circular 9030.1R 2014

¹³ FTA Circular 9040.1G 2014

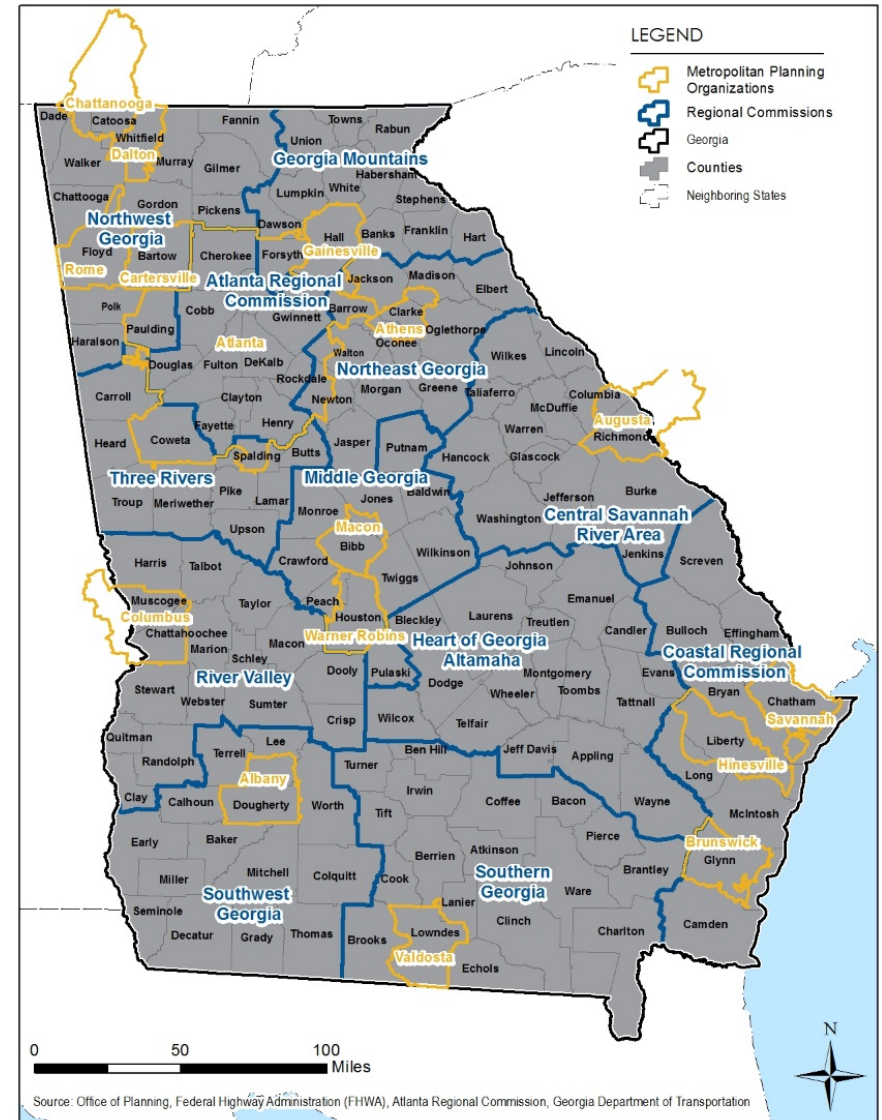
¹⁴ FTA Circular 9030.1R 2014

3.0 Existing Conditions and Future Trends

This chapter provides data and details pertaining to existing conditions and future trends affecting public transit in Georgia, including population, socioeconomic, and travel demand trends for the state. It also outlines and documents data collection and analysis methods.

Data in this chapter is collected at the county level and aggregated by region or the metropolitan planning organization (MPO) area for comparison purposes. The regions in this report follow the Georgia Regional Commission boundaries. **Figure 5** shows Georgia's 159 counties, 12 regions, and 16 MPOs.

Figure 5: Georgia Counties, MPOs, and Regional Commissions



3.1 Population Trends

The US Census Bureau estimated the State of Georgia's population to be 10,201,635 in 2017. Between 2000 and 2010, Georgia's population grew 18.3%, an average rate of 1.7% annually. Growth has slowed since 2010, but Georgia's population has continued to increase by 0.74% annually, or 5.3% in total.¹⁵ The United States also experienced steady population growth over these same periods; however, Georgia's growth rates outpaced the national average. Population trends have varied throughout Georgia, with areas like the Atlanta region and the Georgia Mountains region growing faster than others, and the Heart of Georgia Altamaha region and Southwest Georgia region showing recent population decline.

Table 4 shows these population trends for the nation and Georgia, including trends by region. The Georgia Mountains region has experienced the fastest population growth since 2000, averaging 3.1% annual growth from 2000 to 2010, or 35.6% in ten years. Growth slowed between 2010 to 2017, but this region continued to add residents at approximately 1.2% annually, totaling 9.0% during this period. Populations in two regions, Heart of Georgia Altamaha and Southwest Georgia, have declined since 2010 at rates of 1.1% and 1.6%, respectively.

Table 4 also summarizes population trends by the type of public transit service in each county. Since 2010, population growth in counties with public transit has grown 5.6%, compared to counties without public transit growing by 3.0%. Counties with Urban public transit service have grown 7.6%, outpacing the statewide average. Population growth in counties with both Rural and local Urban public transit service is 5.1%, and counties with Rural public transit service have grown at a lower rate of 3.3%.

In Georgia, the Governor's Office of Planning and Budget (OPB) uses US Census Bureau data to project population growth through 2050. OPB uses the standard cohort component demographic projection methodology, which relies on historical fertility, migration, and age data.¹⁶ **Table 5** depicts OPB's population projections for the state by region and by type of public transit service through 2050, as well as the total projected population growth from 2010 to 2050.

The population for Georgia is expected to increase 51.8% from the 2010 Census to 2050, significantly higher than the national projected growth of 28.4%. OPB projects that Georgia's counties that are currently served by public transit will grow by 52.7%, higher than the expected 45.2% growth by counties that do not have local service today. Counties with Rural and Urban public transit service are expected to grow 146.6% by 2050, compared to 54.3% growth in counties with only Urban public transit service, and 12.3% by counties with only Rural public transit service.¹⁷

Table 4: Population Trends, 2000-2017

	Number of Counties	Population			Population Change	
		2000	2010	2017	2000-2010	2010-2017
Georgia Regions						
Atlanta Region	10	3,429,379	4,107,750	4,442,004	19.8%	8.1%
Central Savannah River Area	13	419,634	454,901	471,434	8.4%	3.6%
Coastal Region	10	558,350	654,810	695,012	17.3%	6.1%
Georgia Mountains	13	455,342	617,646	673,156	35.6%	9.0%
Heart of Georgia Altamaha	17	272,894	303,199	300,012	11.1%	-1.1%
Middle Georgia	11	440,121	488,399	494,834	11.0%	1.3%
Northeast Georgia	12	438,300	574,047	603,232	31.0%	5.1%
Northwest Georgia	15	697,410	863,217	881,568	23.8%	2.1%
River Valley	16	353,274	370,887	373,606	5.0%	0.7%
Southern Georgia	18	364,925	406,583	410,921	11.4%	1.1%
Southwest Georgia	14	352,880	356,433	350,561	1.0%	-1.6%
Three Rivers	10	403,944	489,781	505,295	21.2%	3.2%
Georgia	159	8,186,453	9,687,653	10,201,635	18.3%	5.3%
United States		281,421,906	308,745,538	321,004,407	9.7%	4.0%
Counties with Urban Public Transit	10	3,538,993	4,056,163	4,362,409	14.6%	7.6%
Counties with Rural Public Transit	104	2,692,598	3,237,681	3,345,043	20.2%	3.3%
Counties with both Rural and Local Urban Public Transit	8	1,066,038	1,321,804	1,389,606	24.0%	5.1%
Counties without Local Public Transit	37	888,824	1,072,005	1,104,577	20.6%	3.0%

Source: Governor's Office of Planning and Budget, 2015 Series, 2017 Census Data Population Projections

Table 5: Population Projections, 2020-2050

	Number of Counties	Population				Population Growth
		2020	2030	2040	2050	2010-2050
Georgia Regions						
Atlanta Region	10	4,782,332	5,457,393	6,105,431	6,746,109	64.2%
Central Savannah River Area	13	494,512	535,611	574,944	619,760	36.2%
Coastal Region	10	744,825	835,760	926,827	1,025,554	56.6%
Georgia Mountains	13	735,745	879,749	1,049,426	1,256,503	103.4%
Heart of Georgia Altamaha	17	311,858	323,187	330,720	338,658	11.7%
Middle Georgia	11	518,421	546,802	567,967	586,242	20.0%
Northeast Georgia	12	652,687	756,096	866,947	995,088	73.3%
Northwest Georgia	15	926,085	1,001,873	1,067,275	1,131,755	31.1%
River Valley	16	392,371	403,026	406,578	408,198	10.1%
Southern Georgia	18	431,692	458,294	479,105	498,899	22.7%
Southwest Georgia	14	364,992	375,894	381,911	387,904	8.8%
Three Rivers	10	539,693	599,721	656,269	714,651	45.9%
Georgia	159	10,895,213	12,173,406	13,413,400	14,709,321	51.8%
United States		332,639,000	355,101,000	373,528,000	396,557,000	28.4%
Counties with Urban Public Transit	10	4,665,560	5,234,760	5,759,708	6,258,188	54.3%
Counties with Rural Public Transit	104	2,982,101	3,208,623	3,411,860	3,635,423	12.3%
Counties with both Rural and Local Urban Public Transit	8	2,067,578	2,423,598	2,814,581	3,258,968	146.6%
Counties without Local Public Transit	37	1,179,973	1,306,425	1,427,252	1,556,743	45.2%

Source: Governor's Office of Planning and Budget, 2015 Series, 2017 Census Data Population Projections

3.2 Employment Trends

Since 2000, overall employment has increased across Georgia as shown in **Table 6**. Between 2000 and 2010 statewide employment grew by just 0.3% annually, for a total of 3.2% over the decade. Since 2010, statewide employment has accelerated, growing by 14.7% total, or 2.0% annually.

The Georgia Mountains region has seen the strongest employment growth since 2010 with 23.4%, followed by metro Atlanta with 18.7%. By contrast, employment in the River Valley region grew by only 1.7% over the same period. When summarizing employment trends by public transit service status, employment in counties with public transit grew by 15.2% and counties without public transit grew by 11.0%.

3.2.1 Unemployment Rates

Table 6 presents the unemployment rates and trends for Georgia, its regions, and the country. Though the state unemployment rate is still higher than in was before the Recession began (3.1% in 2000), it has fallen from 10.1% in 2010 to 4.6% in 2017. Georgia's unemployment trends are consistent with the larger United States. The Heart of Georgia Altamaha region has had the highest unemployment rate of any region since 2000, with a 2017 rate of 6.0%. The Georgia Mountains region has consistently had the lowest rate over the same period, with a 2017 rate of 4.1%.¹⁸

When summarized by public transit service, it is difficult to discern a trend in unemployment rates. Historically, unemployment rates in counties with Urban, Rural, Rural and Urban, and no public transit service differ by less than a one percentage point.

3.2.2 Employment by Industry

The Georgia Department of Labor tracks employment by industry across the state using the North American Industry Classification System (NAICS), a method of classifying and differentiating businesses by their process of production. As of 2017, the top three statewide industry sectors by employment are:

1. Manufacturing
2. Trade, Transportation, and Utilities
3. Government

The top NAICS industries by region are shown in **Table 8**. The top industry statewide is manufacturing (NAICS supersector 30), which includes establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

The second industry is trade, transportation, and utilities (NAICS supersector 40), consisting of the wholesale trade, retail trade, transportation and warehousing, and utilities industries. The wholesale trade industry consists of establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. Retail trade includes establishments for retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The transportation and warehousing sector is comprised of industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. The utilities sector consists of establishments providing utility services including electric power, natural gas, steam supply, water supply, and sewage removal.

Table 6: Employment Trends, 2000-2017

	Number of Counties	Employed Residents			Employment Growth	
		2000	2010	2017	2000-2010	2010-2017
Georgia Regions						
Atlanta Region	10	1,871,582	1,929,165	2,290,603	3.1%	18.7%
Central Savannah River Area	13	176,645	177,374	194,498	0.4%	9.7%
Coastal Region	10	256,406	281,111	320,043	9.6%	13.8%
Georgia Mountains	13	234,260	265,161	327,269	13.2%	23.4%
Heart of Georgia Altamaha	17	113,906	108,910	111,241	-4.4%	2.1%
Middle Georgia	11	196,853	197,883	209,072	0.5%	5.7%
Northeast Georgia	12	218,631	243,731	283,594	11.5%	16.4%
Northwest Georgia	15	348,338	361,401	396,042	3.8%	9.6%
River Valley	16	146,541	139,046	141,397	-5.1%	1.7%
Southern Georgia	18	161,393	156,010	169,838	-3.3%	8.9%
Southwest Georgia	14	151,181	138,190	143,308	-8.6%	3.7%
Three Rivers	10	195,826	204,079	234,722	4.2%	15.0%
Georgia	159	4,071,562	4,202,061	4,821,622	3.2%	14.7%
United States		136,891,000	139,064,000	153,337,000	1.6%	10.3%
Counties with Urban Public Transit	10	1,883,453	1,876,666	2,202,085	-0.4%	17.3%
Counties with Rural Public Transit	104	1,265,880	1,317,566	1,479,392	4.1%	12.3%
Counties with both Rural and Local Urban Public Transit	8	505,247	567,345	651,150	12.3%	14.8%
Counties without Local Public Transit	37	416,982	440,484	489,000	5.6%	11.0%

Source: Georgia Labormarket Explorer - Yearly Civilian Labor Force Estimates

Table 7: Unemployment Trends, 2000-2017

Georgia Regions	Number of Counties	Unemployed Residents and Rates			
		2000		2010	
					2017
Atlanta Region	10	59,743	3.1%	217,840	10.1%
Central Savannah River Area	13	8,132	4.4%	21,135	10.6%
Coastal Region	10	9,953	3.7%	30,947	9.9%
Georgia Mountains	13	7,519	3.1%	28,644	9.7%
Heart of Georgia	17	6,497	5.4%	14,971	12.1%
Altamaha					
Middle Georgia	11	8,356	4.1%	24,259	10.9%
Northeast Georgia	12	7,705	3.4%	29,458	10.8%
Northwest Georgia	15	12,371	3.4%	45,698	11.2%
River Valley	16	7,188	4.7%	16,573	10.6%
Southern Georgia	18	7,735	4.6%	20,611	11.7%
Southwest Georgia	14	7,497	4.7%	17,550	11.3%
Three Rivers	10	7,999	3.9%	26,945	11.7%
Georgia	159	150,696	3.6%	494,631	10.5%
United States		5,692,000	4.0%	14,825,000	9.6%
Counties with Urban Public Transit	10	65,082	3.3%	220,150	10.3%
Counties with Rural Public Transit	104	51,097	3.9%	161,830	10.9%
Counties with both Rural and Local Urban Public Transit	8	18,858	3.6%	64,384	10.2%
Counties without Local Public Transit	37	15,659	3.9%	48,267	10.7%

Source: Georgia Labormarket Explorer - Yearly Civilian Labor Force Estimates

Table 8: Top Industries by Region, 2017

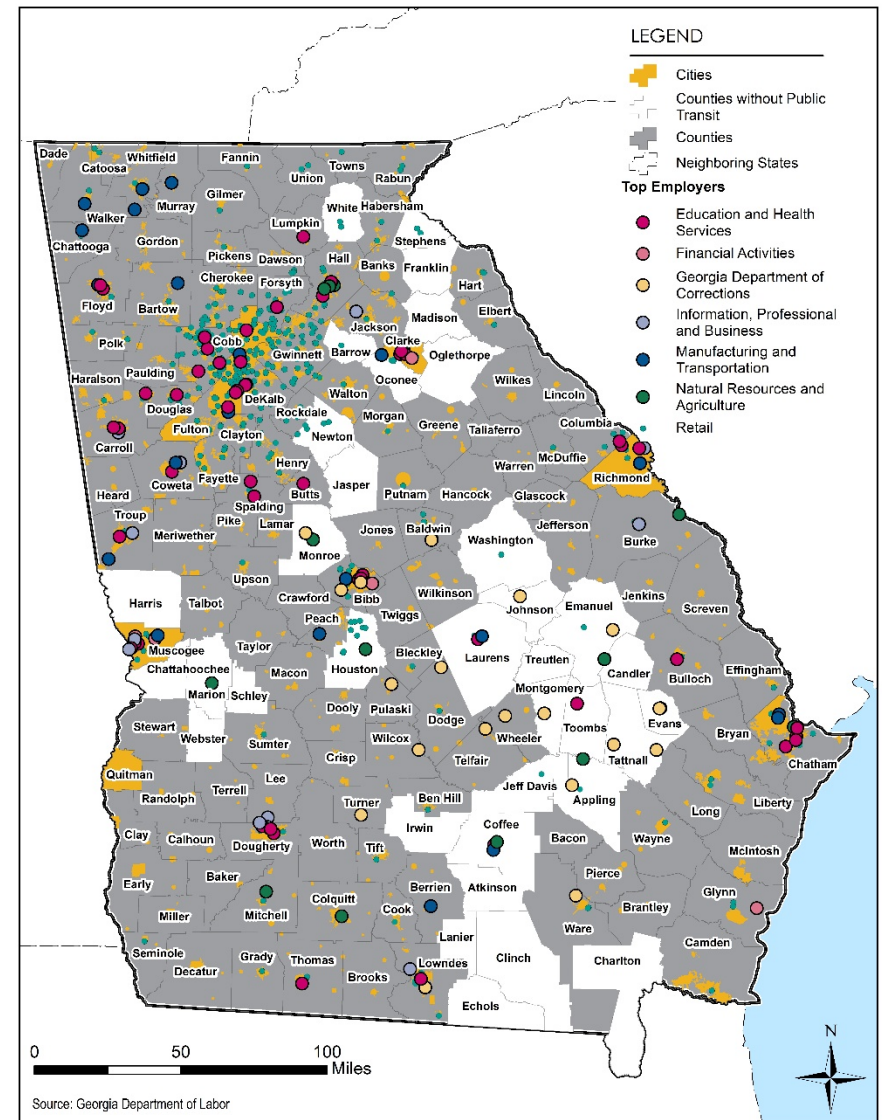
Georgia Regions	Number of Counties	Industry Ranking		
		1	2	3
Atlanta Region	10	Trade, Transportation and Utilities	Professional and Business Services	Education and Health Services
Central Savannah River Area	13	Government	Trade, Transportation and Utilities	Education and Health Services
Coastal Region	10	Trade, Transportation and Utilities	Government	Leisure and Hospitality
Georgia Mountains	13	Trade, Transportation and Utilities	Manufacturing	Government
Heart of Georgia	17	Government	Trade, Transportation and Utilities	Manufacturing
Altamaha	11	Government	Trade, Transportation and Utilities	Education and Health Services
Middle Georgia	12	Trade, Transportation and Utilities	Government	Manufacturing
Northeast Georgia	15	Manufacturing	Trade, Transportation and Utilities	Government
Northwest Georgia	16	Government	Trade, Transportation and Utilities	Education and Health Services
River Valley	18	Trade, Transportation and Utilities	Government	Manufacturing
Southern Georgia	14	Government	Trade, Transportation and Utilities	Education and Health Services
Southwest Georgia	10	Manufacturing	Trade, Transportation and Utilities	Government

Source: Georgia Department of Labor – Area Labor Profile, 3rd Quarter of 2017

Government (or Public Administration) (NAICS supersector 90) consists of Federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area.¹⁹

Figure 6 shows the top employers in each region. Twenty of the 37 counties without local public transit are home to at least one of the ten largest employers in their respective regions. Of the counties that do not, most are located in Northeast Georgia, River Valley, and Southern Georgia regions. In the Heart of Georgia Altamaha region, the top employer for counties without public transit are state prisons operated by the Georgia Department of Corrections. Among the remaining counties without public transit, the top employers are grocery and retail stores, manufacturing, poultry/farm, and medical companies.

Figure 6: Location of Top Employers by Industry Type



3.3 Socioeconomic Conditions

Certain socioeconomic factors are known to be associated with an individual's likelihood of using or relying on transit. Federal and state planning requirements also require transit planners to consider the impacts of public transit service to vulnerable or disadvantaged populations. Socioeconomic conditions considered for this report include racial minority status, income, limited English proficiency (LEP) populations, age, disability status, and zero-car households. Data for these populations are displayed in **Figures 7-13**.

For these criteria, counties with percentages above the state average may be considered to have a greater need for public transit, pending further analysis. These percentages are displayed in **Table 9**.

In mapping these populations, counties were classified into groups. Group 1 consists of counties below the state average for each socioeconomic factor. The remaining counties are divided into groups based on the percentage of population over the state average: up to 25% greater than the statewide average (Group 2), 25 to 50% greater (Group 3) than the state average, and more than 50% higher than the statewide average (Group 4).

These groupings are displayed in the following sections along with regional boundaries. The following sections also summarize socioeconomic data for counties without public transit and counties with Urban transit, Rural transit, and both Urban and Rural transit.

Table 9: Socioeconomic Statewide Averages and Assessment Groups

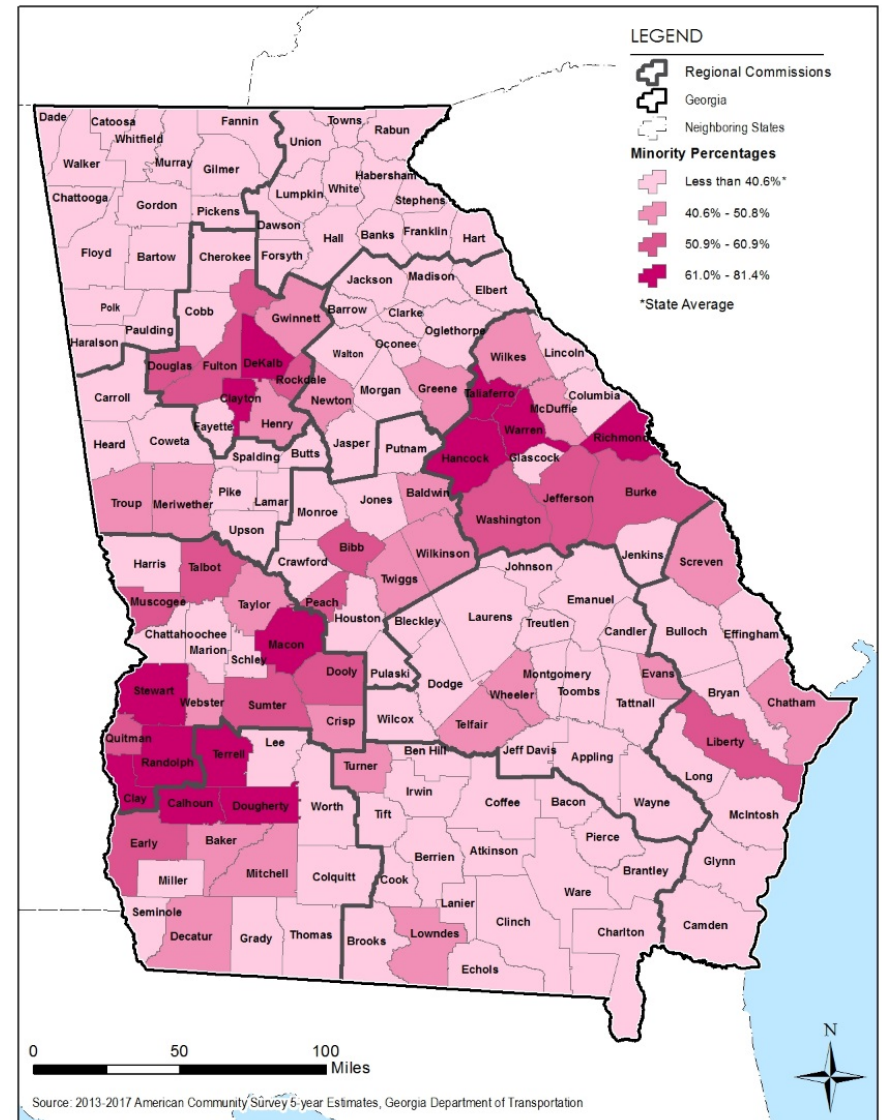
Statewide Average							
	Minority	Low-Income	LEP	Disabilities	Zero-Car	Elderly (60+)	Youth (15-19)
State Percentage	40.6%	16.9%	5.7%	12.4%	6.7%	18.3%	7.0%
Assessment Groups	Minority	Low-Income	LEP	Disabilities	Zero-Car	Elderly (60+)	Youth (15-19)
Group 1	0.0% - 40.6%	0.0% - 16.9%	0.0% - 5.7%	0.0% - 12.4%	0.0% - 6.7%	0.0% - 18.3%	0.0% - 7.0%
# of counties	107	41	139	25	73	32	102
Group 2	40.7% - 50.8%	17.0% - 21.1%	5.8% - 7.1%	12.5% - 15.5%	6.8% - 8.4%	18.4% - 22.9%	7.1% - 8.8%
# of counties	24	35	7	35	29	60	49
Group 3	50.9% - 60.9%	21.2% - 25.4%	7.2% - 8.6%	15.6% - 18.6%	8.5% - 10.1%	23.0% - 27.5%	8.9% - 10.5%
# of counties	15	43	3	67	24	46	3
Group 4	61.0% - 81.4%	25.5% - 41.5%	8.7% - 18.1%	18.7% - 27.1%	10.2% - 21.2%	27.5% - 42.7%	10.6% - 12.5%
# of counties	13	40	10	32	33	21	5
Source: 2013 – 2017 American Community Survey							

3.3.1 Minority Populations

Figure 7 displays the minority population share by county. Statewide, 40.6% of the population identifies as a minority. Minority populations include individuals that, for the US Census, identify as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, some other race, or two or more races. The top three regions with counties in Groups 3 and 4 are: River Valley (10 counties), the Atlanta Region (7 counties), and Central Savannah River Area (7 counties).

In counties with public transit 41.5% of the population identifies as minority, while 33.4% identifies as minority in counties without public transit. Urban transit counties have the highest minority percentage with 53.5%, followed by Rural and Urban transit counties (39.2%), and Rural transit counties (26.7%).

Figure 7: Percent Minority by County



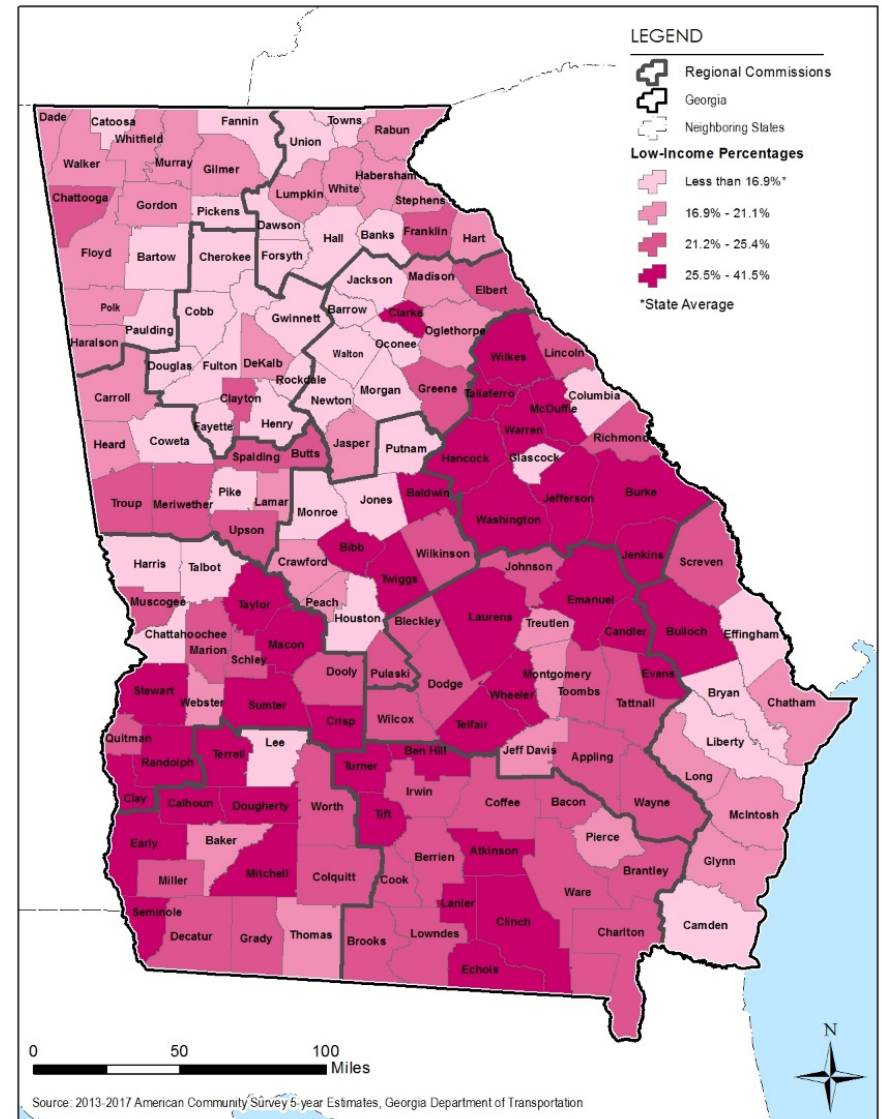
3.3.2 Low-Income Populations

Low-income population shares by county are shown in **Figure 8**. Low-income populations are comprised of individuals with incomes that are below the poverty line. For a Georgia family of four in 2017, this is defined as an annual income of \$24,600.²⁰ Poverty is not isolated to any specific region in Georgia. There are counties in each region with low-income population shares higher than the state average of 16.9%. The three regions with the most counties in Group 4, are: Central Savannah River Area (10 counties), River Valley (7 counties), and Southern Georgia (7 counties).

In counties with public transit, 16.8% of the population is classified as low-income, whereas in counties without public transit 17.5% of the population is classified as low-income. Rural transit counties have the highest low-income population share, 18.0%, followed by Urban transit counties and Rural and Urban transit counties with 16.1% and 16.4% respectively.

The median household income in the state is \$52,977.²¹ Only the Atlanta region has a higher median household income than the state average with \$63,642. Counties with public transit have a \$48,650 median income; counties without public transit have a median income of \$44,135. The counties with both Rural and Urban public transit service have the highest median income with \$52,240, followed by Urban transit counties with \$51,923, and Rural transit counties with an average income of \$41,787.

Figure 8: Percent Low Income by County

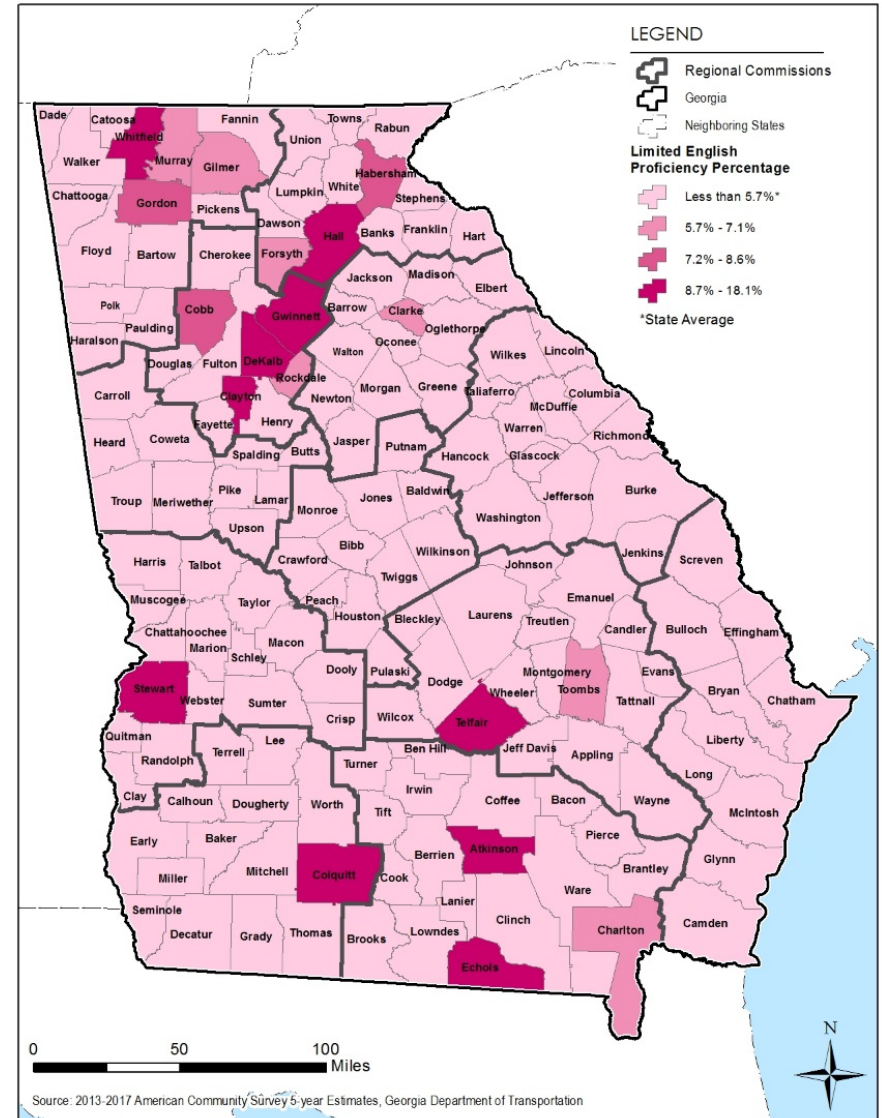


3.3.3 Limited-English Proficiency Populations

The US Census Bureau defines LEP individuals as “[individuals] 5 years or older who self-identify as speaking English less than ‘very well’.”²² Statewide, 5.7% of Georgians are classified as LEP according to the US Census Bureau. After English, the most common language spoken in counties with high LEP population percentages is Spanish.

The distribution of LEP populations is presented in **Figure 9**. LEP populations are more concentrated in metro Atlanta, Southern Georgia, and Georgia Mountains. In counties with public transit, 6.0% of the population identifies as LEP, compared to 3.4% for counties without public transit.

Figure 9: Percent LEP by County



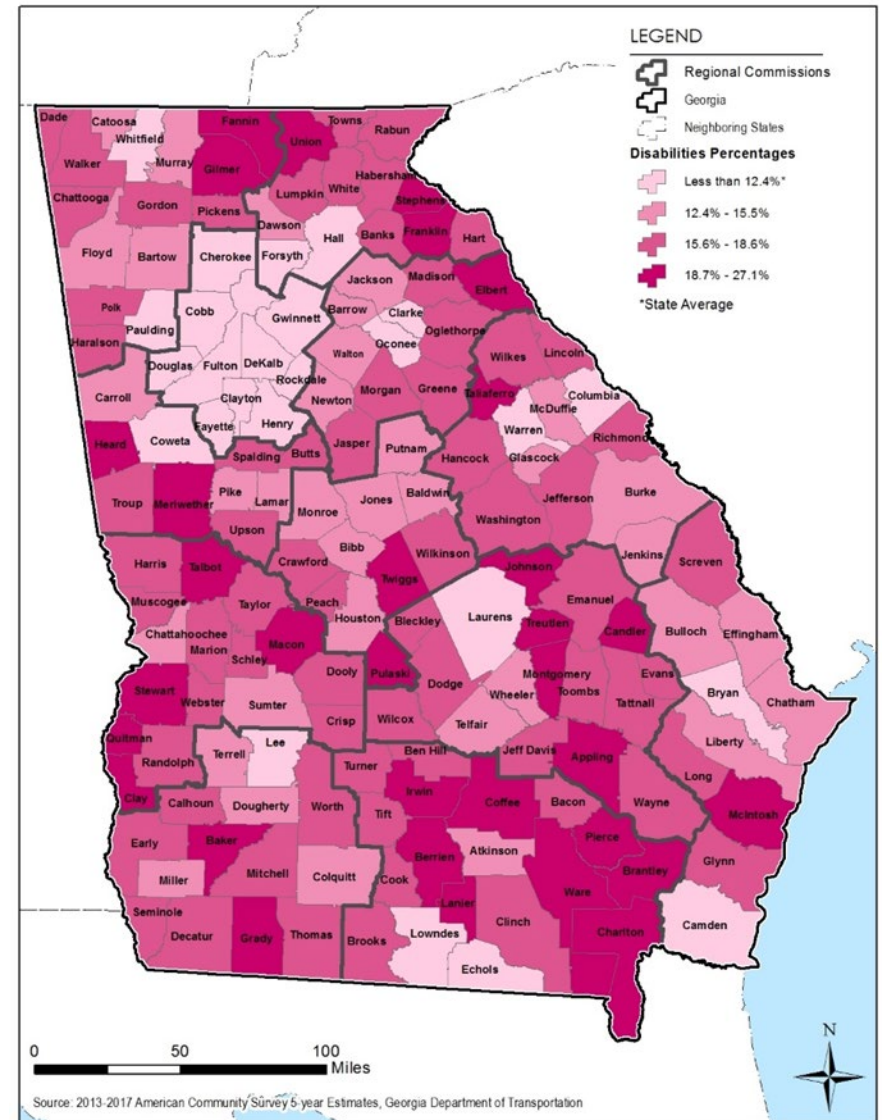
3.3.4 Populations with Disabilities

Populations with disabilities include those that are hearing, vision, cognitive, ambulatory, self-care, and independently living impaired. Over 12.4% of Georgia's population qualifies as disabled. As shown in **Figure 10**, areas outside metro Atlanta generally have greater concentrations of disabled populations.

The disabled population in counties with public transit matches the state average of 12.4%, compared to counties without local public transit, with 14.5% of their population having a disability.

Counties with Rural public transit service have the highest share of their population with disabilities at 14.6%. In counties with both Rural and Urban transit service, 12.7% of the population has a disability. In counties with only Urban transit service, 10.0% of the population has a disability.

Figure 10: Percent of Population with a Disability by County

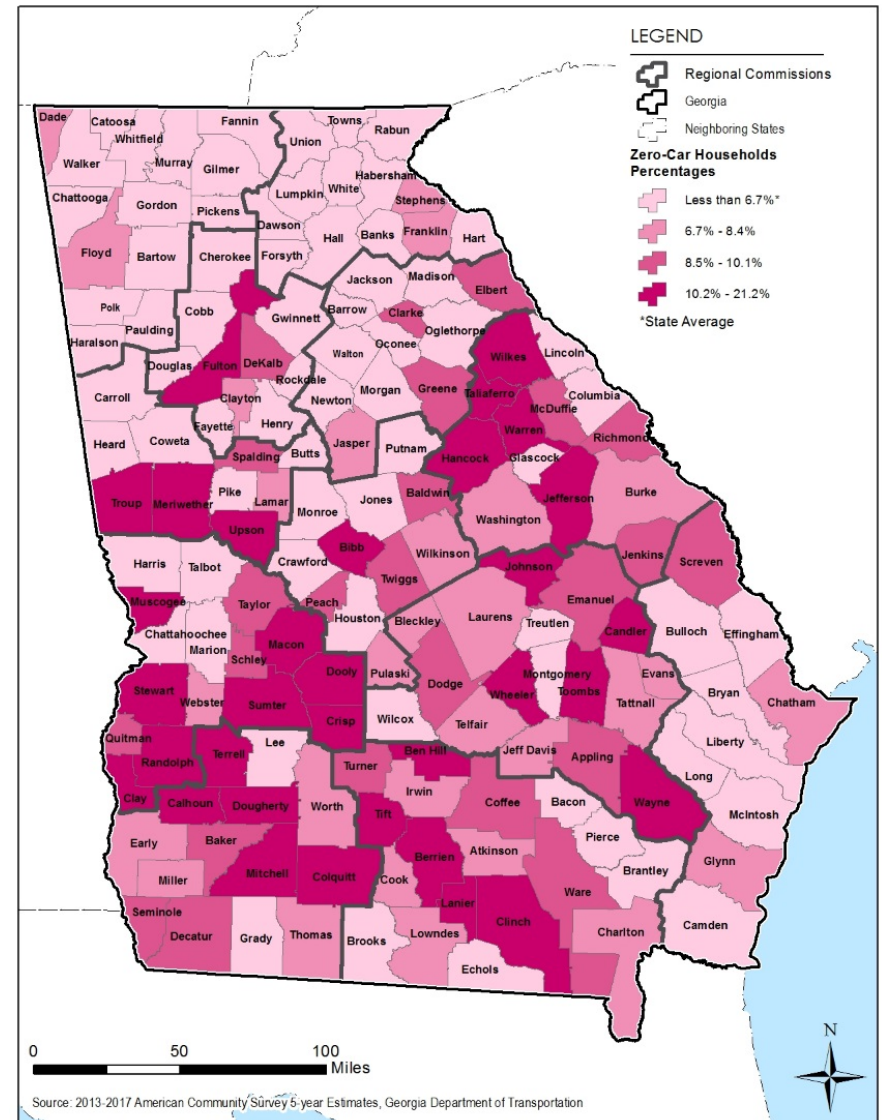


3.3.5 Zero-Car Households

Zero-car households are defined as households in which no one has access to a personal vehicle. Statewide, 6.7% of Georgians reside in a zero-car household.²³ The highest concentrations of zero-car households, shown in **Figure 11**, are located in the River Valley region, where 12 out of 16 counties exceed the state average, with a regional average of 10.4%.

In counties with public transit, 6.9% of households are classified as zero-car while 5.5% of households in counties without public transit are similarly classified. Counties with Urban transit have the highest share of zero-car households at 7.5%, followed by counties with Rural transit at 6.2%, and counties with both Rural and Urban transit at 6.3%.

Figure 11: Percent Zero-Car Households by County

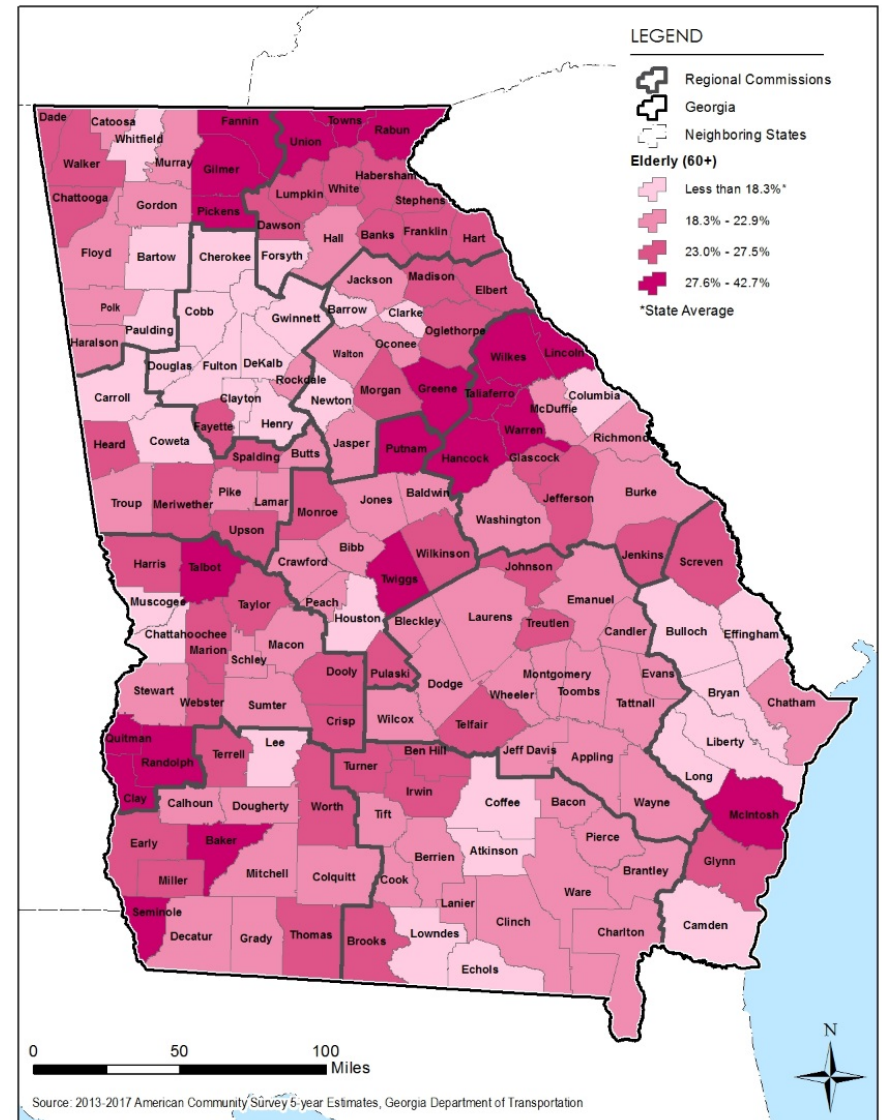


3.3.6 Elderly Populations

For this study, elderly people are defined as those age 60 and older. Statewide, 18.3% of the population is classified as elderly. The concentration of elderly populations by county is shown in **Figure 12**.

Counties without public transit have a higher share of elderly residents (20.2%) than counties with public transit (20.4%). Similarly, counties with Rural transit have a higher proportion of elderly residents (20.9%) than counties with both Rural and Urban transit (18.1%), and counties with only Urban transit (15.8%).

Figure 12: Percent Elderly by County



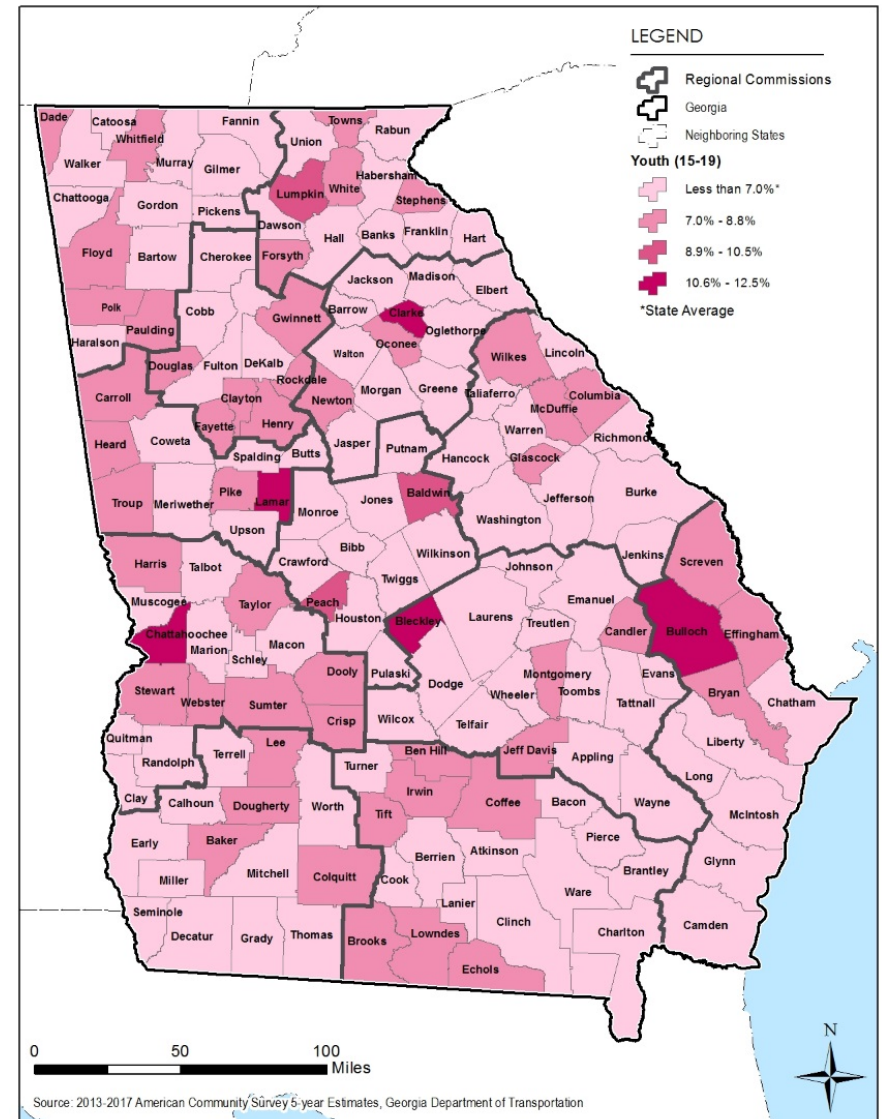
3.3.7 Youth Populations

In this study, youth are classified as residents ages 15 to 19. In total, 7.0% of Georgia's population is classified as youth. Youth populations are relatively evenly distributed throughout Georgia's regions, as shown in **Figure 13**.

Counties with public transit and counties without public transit both have youth populations of approximately 7.0%. Similarly, youth populations are evenly distributed among counties with Rural, Urban, and both Rural and Urban transit service.

A handful of counties around the state have relatively high youth populations (Group 4), however, most of those counties are also home to major colleges or universities, including Clarke County, home to the University of Georgia, and Bulloch County, home to Georgia Southern University.

Figure 13: Percent Youth by County

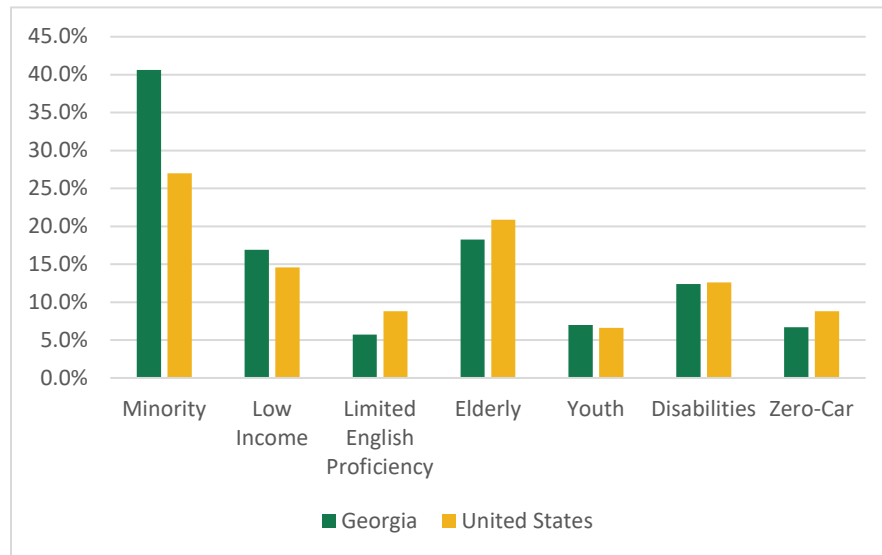


3.3.8 National Socioeconomic Conditions

Figure 14 compares socioeconomic conditions in the State of Georgia against the overall U.S. in 2017. Georgia was higher in both minority and low-income populations. Georgia's 40.6% minority population was 12.7% higher than the U.S. average of 27.9%.

Also, Georgia's share of LEP and elderly populations, and zero-car households was lower than the national average. Disabled and youth populations in Georgia were consistent with national averages.

Figure 14: State and National Socioeconomic Conditions



Source: 2013-2017 American Community Survey 5-year Estimates

3.4 Travel Demand

GDOT's statewide travel demand modeling tool estimates that 35% of Home-Based Work (HBW) trips cross county boundaries and 9.0% of HBW trips cross regional boundaries. By 2050, the number of county-to-county HBW trips is projected to increase by 25%, while the number of region-to-region HBW trips is projected to grow at an even faster rate of 35%. Current and future public transit services must be equipped to help meet this demand, as trips to jobs and activity centers in Georgia often fall across jurisdictional boundaries.

GDOT's Travel Demand Model (TDM) approximates daily travel patterns across Georgia. Using base year 2015 data, it is calibrated to both model existing conditions and to project travel demand in 2050. The TDM is a high-level planning tool most appropriate for assessing statewide and county-to-county travel, not a tool for analyzing localized travel patterns. For this analysis, TDM model outputs were summarized in terms of county-to-county trips for the years 2015 and 2050. HBW trips were the focus of this analysis, a key indicator for potential public transit service need.

Maps depicting the daily statewide travel demand patterns for years 2015 and 2050 are shown in **Figure 15** and **Figure 16**, respectively, and are color-coded to distinguish counties where public transit service exists today. To ensure readability of the maps, travel demand lines of less than 500 daily trips were omitted, and all travel demand lines from one county to any county within the ATL Region/GRTA Service Area were consolidated.

In comparing travel demand between 2015 and 2050, four trends emerge:

- Strong correlation between travel demand and location of the top employers presented in **Section 3.2.2** of this report, particularly in the Education and Health Services and Manufacturing and Transportation fields. Examples include higher population counties such as Clarke and Chatham and lower population counties such as Laurens and Troup.
- Significant growth in travel demand between Athens-Clarke County and neighboring counties without public transit, with number of trips to and from Clarke County growing 51% between 2015 and 2050.
- Continued growth in travel demand between the ATL Region/GRTA Service Area and adjacent counties, with a 98% increase in number of trips to/from Jackson, 64% to/from Barrow, 58% to/from Bartow, 46% to/from Hall, and 44% to/from Newton.
- Increased demand for travel crossing regional boundaries, particularly among Coastal Region, Heart of Georgia Altamaha, and Southern Georgia counties. Examples include between Liberty and Tattnall counties and between Wayne and Ware counties.

A closer analysis was given for counties currently without public transit service, shown in **Figure 17, 18 and 19**.

Figure 15: Daily County-to-County Home-Based Work Trips, 2015

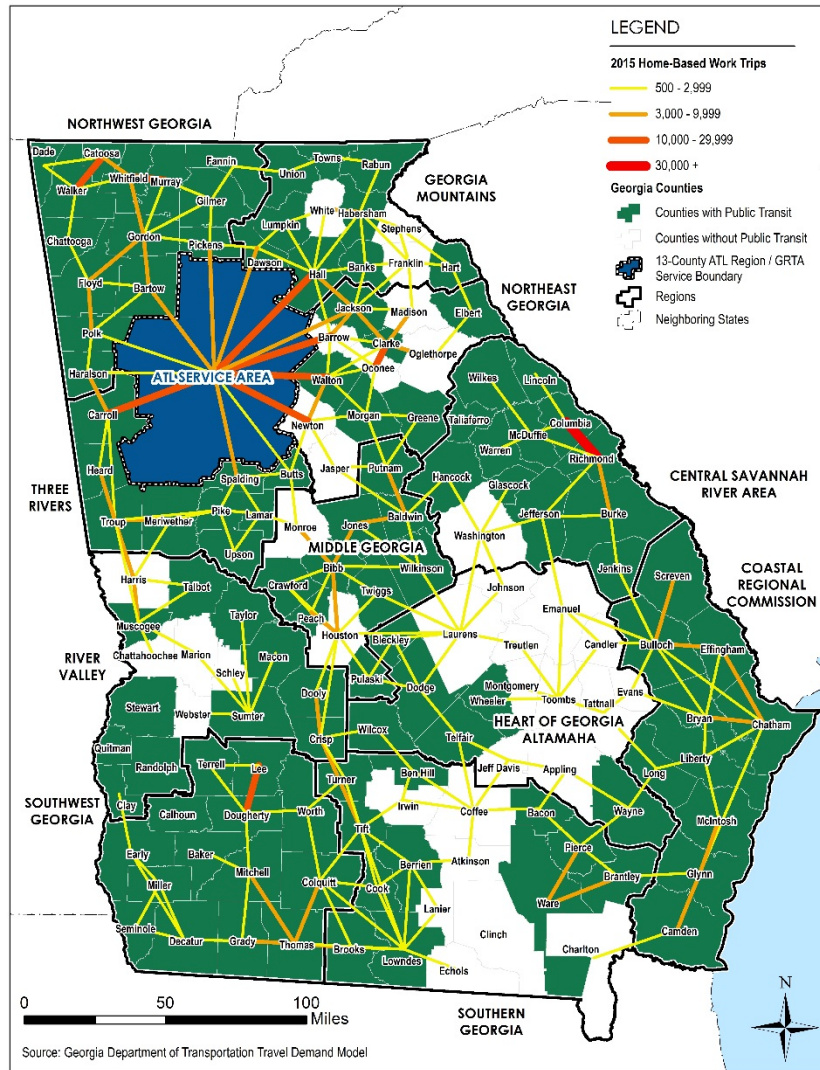
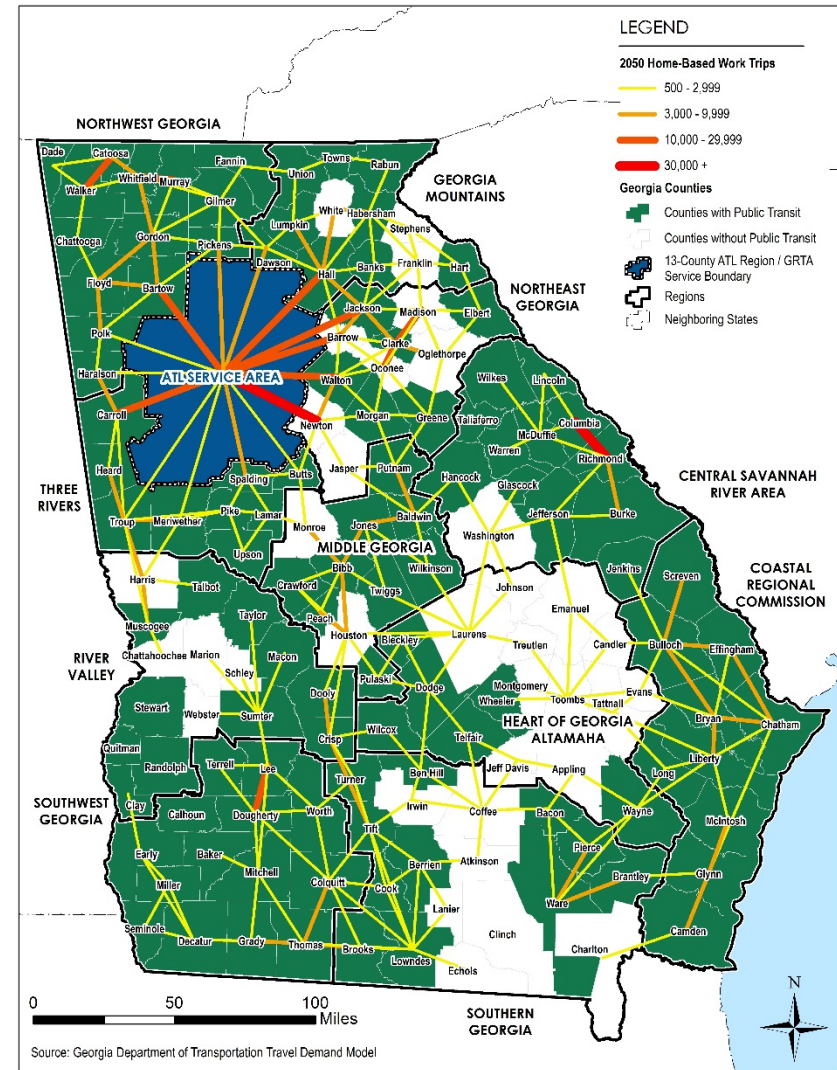


Figure 16: Daily County-to-County Home-Based Work Trips, 2050

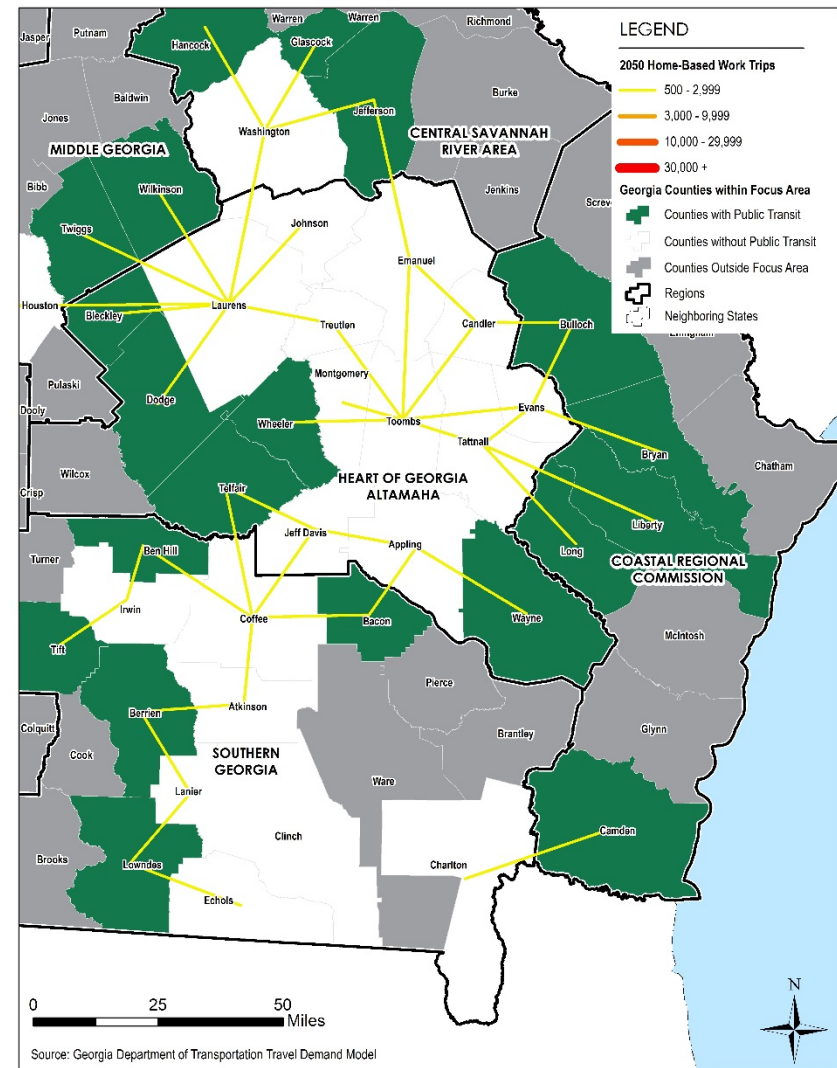


Further analysis of projected county-to-county HBW travel demand is provided for counties that do not currently have public transit service. Three sample area maps in **Figures 17, 18, and 19**, show contiguous counties without public transit and illustrate projected 2050 travel demand to and from neighboring counties.

Sample Area 1, shown in **Figure 17**, consists of nineteen contiguous counties across the Southern Georgia, Heart of Georgia Altamaha, and Central Savannah River regions. Seventy-five percent of county-to-county HBW trips in this sample area are projected to begin and/or end in a county without public transit. Travel demand in this area tends to reflect a decentralized pattern in which jobs and activity centers are spread across multiple counties.

Laurens, Toombs, and Coffee counties appear to yield the greatest number of projected trips in this sample area, accounting for 21% among all counties without public transit in the area. Laurens and Coffee counties are home to at least two of the state's top employers, likely attracting workers from neighboring counties.

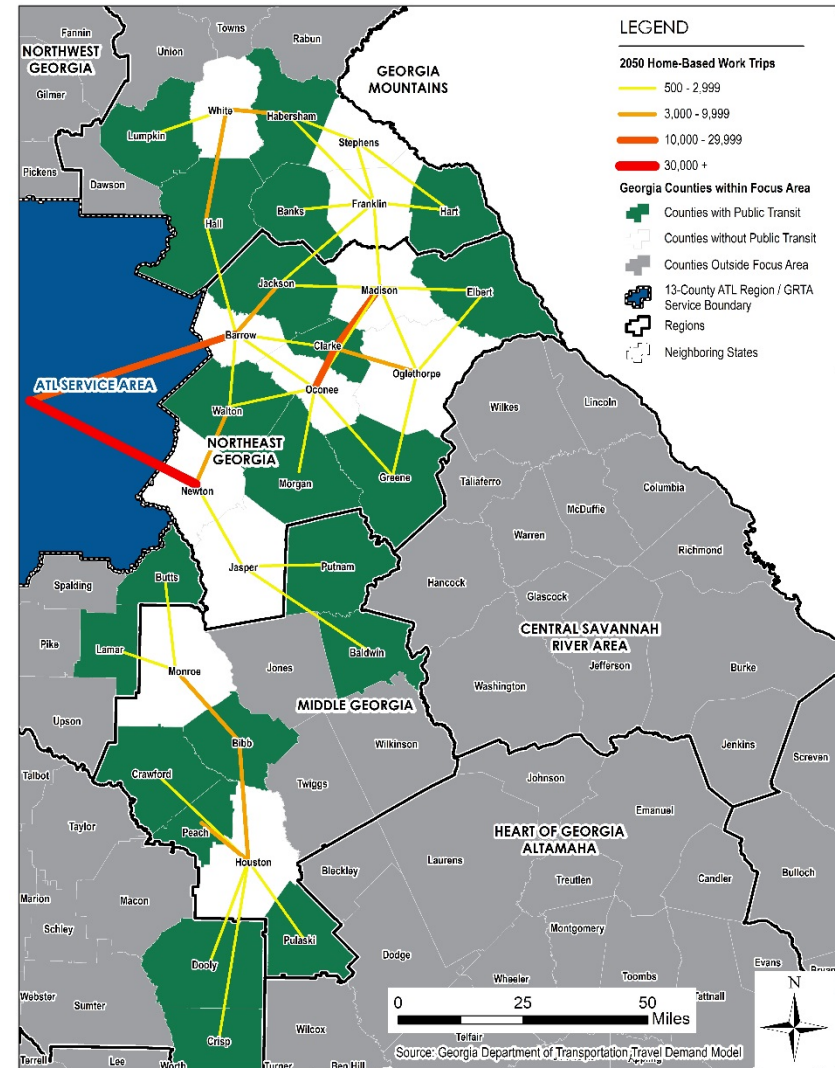
Figure 17: Sample Area 1 – Daily County-to-County HBW Trips in Counties without Public Transit



Sample Area 2, shown in **Figure 18**, consists of 11 counties without transit across the Georgia Mountains, Northeast Georgia, and Middle Georgia regions. This map displays projected 2050 daily county-to-county HBW trips to and from the 11 counties without transit. Ten percent of the projected trips in this area begin and/or end in a county without public transit.

This area borders the ATL Region and contains four metropolitan areas Macon, Athens, Warner-Robins, and Gainesville, each with at least four of the state's top employers. As a result, the greatest number of trips are forecasted to and from the ATL Region in addition to Bibb, Clarke, Houston, and Hall counties, respectively.

Figure 18: Sample Area 2 – Daily County-to-County HBW Trips in Counties without Public Transit

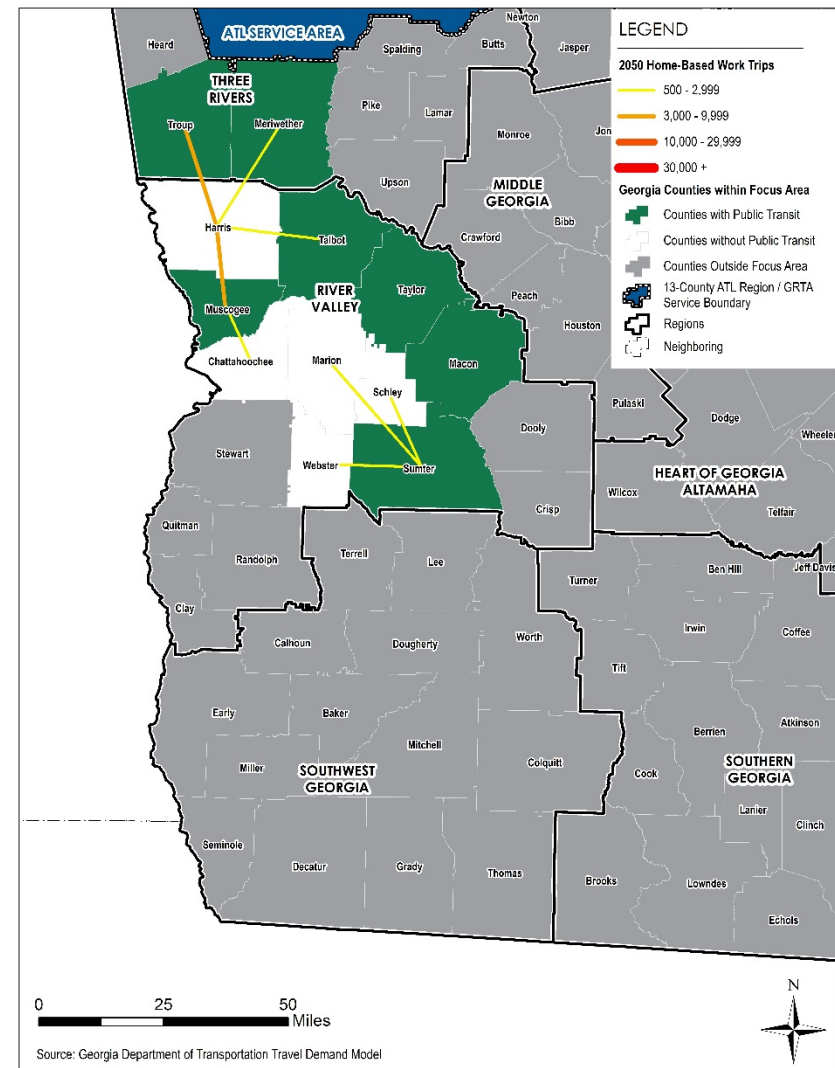


Lastly, Sample Area 3, shown in **Figure 19**, consists of five counties in the River Valley region. Twenty-one percent of projected 2050 trips in this area begin or end in a county without public transit, and the area contains one major metropolitan area in its boundaries, Columbus in Muscogee County. Another job center, Troup County, is located at just north of Harris County.

Projected travel demand to/from Harris County tends to be highest for counties without transit in this sample area, yielding over 9,000 daily trips to/from and Troup County and almost 7,000 daily trips to/from Muscogee County. Sumter County functions as a secondary job center in the area, attracting trips from three counties without public transit.

As Georgia continues to grow, the need to connect transit users across county and regional boundaries will become even more pronounced. In the year 2050, 35% of all HBW trips in the state are forecasted to cross county boundaries, while one in ten trips are forecasted to cross regional boundaries. As workers need to be connected to their jobs, students connected to their schools, consumers connected to their activity centers, and patients connected to their healthcare providers; any current and future public transit services must target these trip generators and travel patterns.

Figure 19: Sample Area 3 – Daily County-to-County HBW Trips in Counties without Public Transit



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- ¹⁵ US Census 2017
¹⁶ Office of Planning and Budget 2019
¹⁷ Governor's Office of Planning and Budget 2015
¹⁸ Georgia Labor Market Explorer 2017
¹⁹ Georgia Department of Labor 2017

- ²⁰ American Community Survey 2017
²¹ American Community Survey 2017
²² US Census Bureau 2019
²³ 2013 – 2017 American Community Survey

4.0 Transportation Plan Review

4.1 GDOT State Plans

GDOT has several existing plans relevant to the development of the Statewide Transit Plan. Some are required by Federal law, whereas others, such as the Statewide Strategic Transportation Plan, were created to comply with state laws and regulations. These plans are updated on a four-year or five-year cycle to comply with Federal and state law; some are currently in the update process.

4.1.1 2040 Statewide Transportation Plan

Georgia's Statewide Transportation Plan (SWTP), last published January 2016, provides guidance for transportation investments in Georgia with a planning horizon of 2040. The plan examines seven aspects of transportation under the purview of GDOT: highways, bridges, transit, rail, airports, bike/pedestrian, and marine ports. By examining growth trends and projected budget funding, the plan recommends investment levels needed to achieve performance measure targets, as mandated by the Fixing America's Surface Transportation (FAST) Act.

SWTP projects a total of \$65 billion to be available for transportation funding during the plan horizon. This amount includes projected FTA funding and state dollars to be contributed after the passage of the 2015 Transportation Funding Act. The plan recommends \$5.1 billion of this be invested in public transit. Transit priorities listed in the plan, which is not fiscally constrained, include:

- Support for fixed-route service in urbanized areas not currently served and expanded/improved transit to underserved portions of urbanized areas;

- Continued support for expansion of rural transit to counties without rural public transportation; and,
- Support transit enhancements for existing service, e.g. new park-and-ride facilities statewide, and express bus expansion in Atlanta.

The 2040 SWTP is combined with the 2016 Statewide Strategic Transportation Plan (SSTP). GDOT last updated the biennial SSTP in 2018, reviewed below. At the time of this report, a complete update to the combined SWTP and SSTP document is underway with completion targeted for late 2020.

4.1.2 2018 Statewide Strategic Transportation Plan

As required by Georgia state law, the SSTP identifies “specific investment strategies...to advance economic growth in the state.” The projects and programs highlighted in this plan all advance the “business case” for transportation investment, a necessary requirement for state funding in Georgia.

The SSTP revolves around six established goals, all of which are complimentary to both the Governor's goals and Federal requirements established in MAP-21 and the FAST Act. These goals are to:

- Improve safety,
- Maintain and preserve the system,
- Improve reliability,
- Relieve congestion,
- Improve freight and economic development, and
- Improve the environment.

Regarding public transit, the SSTP highlights the Georgia Express Lanes, which allow public transit vehicles (as well as toll-paying private vehicles) to use barrier separated express lanes. Also mentioned is the North Avenue Smart Corridor, a collaborative project with Renew Atlanta to add smart detection and signaling systems along Atlanta's North Avenue, which could benefit surface transit through signal priority and reduced traffic congestion.

4.1.3 Statewide Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) is GDOT's fiscally constrained development program covering four years of investment. The program includes allocations for \$5.1 billion in Federal funds, \$1.92 billion in state funds, and \$1.32 billion in local funds. The STIP reports an anticipated \$247.6 million in Federal, state, and local funds for transit projects, with \$128.9 million allocated to MPO areas and \$118.8 million allocated to rural areas.

Figure 20: Projected Transit Allocations 2018-2022

The STIP anticipates \$247.6 million in Federal, state, and local funds for transit for 2018 to 2021 including...



\$118.8 million for Rural public transit



\$128.9 million for Urban public transit

The STIP also includes detailed information for planned projects outside the boundaries of Georgia's 16 MPO areas. Each individual project is listed, along with the Federal, state, and local shares of costs. Public transit projects receiving Federal and state funds inside MPO boundaries are listed in the Transportation Investment Program (TIP) of the relevant MPO and incorporated in the STIP by reference. An overview of these plans is provided in **Section 4.2 MPO Long Range Transportation Plans**.

4.1.4 State Rail Plan

GDOT develops the State Rail Plan (SRP), last updated in 2015, to guide investment and development in both passenger and freight rail throughout the state. The SRP lays out six goals for Georgia's rail network:

- Enhance safety and security;
- Provide for a reliable, enhanced, and interconnected passenger rail system;
- Promote and expand intermodal connectivity;
- Develop an energy efficient and environmentally sustainable rail system;
- Preserve and improve the existing infrastructure; and,
- Enhance economic development and competitiveness.

The SRP contains an overview of current intercity passenger rail service, including service information for the Amtrak routes serving Georgia, station locations, and total boardings and alightings for each station.

The SRP also incorporates analysis from previous studies involving the expansion of intercity rail service. Short-range improvements to current Amtrak service are analyzed, as well as longer range investments including the construction of a multi-modal passenger terminal in downtown Atlanta and establishing additional intercity routes connecting through Atlanta. Potential destination cities include Columbus, Savannah, Macon, Athens, and Augusta, as well as interstate connections to Birmingham, Charlotte, Chattanooga, and Jacksonville.

GDOT is in the process of updating the SRP with completion targeted for 2020.

4.1.5 Complete Streets Design Policy

In Georgia, all MPO Long Range Transportation Plans, along with many County Comprehensive Plans, identified a need to promote pedestrian and bicycle infrastructure in connection to transit stops and facilities, linking such infrastructure to safety, ridership, and success of transit in the state. Findings of the SWTRP could be used to further inform and refine the existing Complete Streets Design Policy published by GDOT as it relates to transit and to bicycle and pedestrian infrastructure connections to transit stops and facilities.

GDOT's Complete Streets Design Policy is a context-sensitive document that seeks to ensure all potential transportation users are accommodated along state roadways. The Guide provides varying levels of design guidance for transit accommodation on state roadways. The guidance specifies transit accommodation in line with the following three principles:

- Transit Facilities – “Accommodations for transit should be integrated into roadway construction projects through design features appropriate for the context and function of the roadway, and associated transit facility (e.g., transit stops, stations, or park-and-ride lots).”
- Pedestrian Access to Transit Facilities – “The design of roadways and intersections should address the need of pedestrians to safely walk along and across roadways, to access nearby transit facilities.”
- Applicability of Future Transit Accommodation – “The design of new and reconstructed roadways should not preclude the accommodation of transit facilities (e.g., for light rail, street cars, and bus rapid transit) planned and funded for construction within the design life of the roadway project.”²⁴

The policy requires that transit facilities be accommodated on roadways served by existing fixed-route transit and pedestrian facilities be accommodated on roadways within 0.75 miles of an existing fixed-route transit service. In addition, it suggests (but does not require) that high-capacity transit facilities be accommodated provided they are programmed and funded to start construction before roadway project design year, that bicycle facilities be designed within three miles of an existing fixed-route transit service, and that pedestrian and bicycle facilities be considered between transit stops and local destinations.²⁵

Guidance pertaining to transit remains general in the policy. Specifically, language regarding accommodation for emerging high-capacity transit such as Light Rail Transit (LRT) and BRT remain vague, as no such transit currently exists in Georgia. Changes are underway, however, with both LRT and BRT projects funded in the City of Atlanta, and additional BRT projects planned or proposed in Fulton, Clayton, Gwinnett, DeKalb, and Cobb counties. Updates to the Complete Streets Policy, in coordination with the final SWTRP document, could further define design standards and specifications for these new modes.

4.1.6 Transit Asset Management Plans

Enacted in July 2012, provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21) require all public transit agencies operating capital assets and receiving Federal funding to prepare a Transit Asset Management (TAM) Plan every four years, documenting all public transit assets to aid in the prioritization of funding allocations. A thorough and accurate TAM plan allows an agency to focus Federal funds where they are needed most, helping maintain an overall State of Good Repair (SGR) throughout public transit systems.

The TAM planning process aims to define asset management policy, increase transparency in public transit, and support future system planning. TAM planning improves efficiency in an agency's asset management. FTA provides resources to assist agencies in the TAM Plan development process, which can be accessed at <https://www.transit.dot.gov/TAM>.

In terms of asset management, FTA divides public transit agencies into two tiers. Tier II providers are smaller agencies with reduced requirements. Tier I agencies either operate more than 100 buses or operate any amount of rail transit. All TAM plans must include an inventory of all assets (rolling stock, equipment, facilities, and infrastructure), a condition assessment of these assets, a decision support tool, and a prioritized list of investments. Tier I plans must also include a defined, executive-level TAM strategy, an implementation strategy, a list of key annual TAM activities, an identification of resources to assist in the TAM process, and an evaluation plan to help continually improve the TAM process. Three TAM plans are profiled herein.

4.1.6.1 GDOT 2019-2022 Group Transit Asset Management Plan

GDOT's TAM plan was finalized in September 2018 and covers 92 total providers: 82 Rural Section 5311 subrecipients, 8 Small Urban Section 5307 providers, and two Large Urban Section 5307 providers. The TAM plan inventories all rolling stock, equipment, and facility assets operated by these providers and catalogs over \$41 million in equipment. GDOT uses the Group TAM to support data driven decision making regarding capital funding.

Among revenue vehicles included in the plan, 12.4% were found to have exceeded their Useful Life Benchmark (ULB) and will be targeted for replacement. Additionally, seven facilities were found to be in poor condition and targeted for replacement or reinvestment.

4.1.6.2 Chatham Area Transit (CAT) Transit Asset Management Plan

CAT published their TAM plan on July 1, 2018. CAT qualifies as a Tier II system and is therefore only held to the reduced requirements put forth by FTA. However, CAT has opted to include the additional aspects from the Tier I requirements, including a State of Good Repair policy, TAM plan implementation strategy, and a schedule of key TAM plan activities to occur during the plan horizon years.

CAT manages assets valued at over \$57.8 million, including revenue vehicles valued at over \$27.9 million and facility assets valued at over \$29.3 million. Approximately 29% of buses, 82% of cutaways, 80% of vans, and 100% of maintenance equipment were assessed to have exceeded their ULB. Due to planned capital investment, including \$18 million in FY 2019 alone, CAT expects substantial improvement in these scores during the plan horizon, with all categories of revenue vehicles except cutaways under their ULB by 2022. These goals will be accomplished through the planned purchase of 60 new revenue vehicles, including 25 new cutaways and three electric buses.

4.1.6.3 CobbLinc Transit Asset Management Plan

CobbLinc, a Tier II provider, issued their TAM plan in September of 2018. The plan outlines CobbLinc's three-pointed Asset Management Strategy, which is to:

- Maintain the asset inventory so that CobbLinc has a clear picture of the assets that it owns;
- Monitor and improve asset condition to ensure the assets are maintained in a state of good repair; and
- Strive towards data-driven decision making to ensure CobbLinc is optimizing its investment for every dollar spent.²⁶

CobbLinc operates 56 buses, 37 over-the-road buses, and 30 cutaways. All of the buses and over-the-road buses are within their ULB, and 10 of the cutaways are also under this benchmark. CobbLinc has secured funding and plans to replace the 20 cutaways exceeding their ULB in FY 2019.

The plan also outlines CobbLinc's analytical processes and their decision and investment prioritization methods. During the five-year plan horizon, FY 2019 priorities are focused on returning to pre-2008 levels of service, when the system made cutbacks due to the decline in the American economy. By FY 2021, programmed projects will include rehabilitation of aging facilities and the expansion of service to more areas of the county. FY 2023 investments will be oriented toward purchasing and developing the software and technologies that will carry CobbLinc into a more connected and data-driven future.

4.2 MPO Long Range Transportation Plans

The Federal law that outlines the core functions of MPOs includes requirements to prepare and maintain a long-range transportation plan (LRTP) that supports improved mobility access for people and goods and supports a good quality of life. Georgia's MPOs have all updated their LRTPs within the last five years; all 16 LRTPs were reviewed for this report.

All of Georgia's MPOs have demand-response transit providers operating within their boundaries, and 11 also have fixed-route bus service. Generally, the MPOs identified similar challenges and needs in their LRTPs. The primary challenge, noted by 10 MPOs, was funding constraints. Nine identified challenges related to limited service areas, and six highlighted challenges related to multiple service operators. Five MPOs discussed the challenges of limited service hours. Other key challenges included first and last mile connectivity, high operating costs, and the transition from Rural to Urban public transit service.

All 16 LRTPs identified the need for the creation or expansion of fixed-route bus services as well as a general need for public transit and multimodal transportation improvements to meet demand in their area. Additionally, all highlighted coordination with bike and pedestrian paths or general upgrades of the public transit facilities, including public transit stops. Seven of the LRTPs noted a need to improve regional connectivity, and coordinate transportation with future land use and development. Five of the MPOs found the need to expand public transit service hours, and a need for commuter or intercity buses. With nearly 13% of the state over the age of 60, five LRTPs found increased need to serve the elderly populations, including a need for connections to healthcare services.

Figure 21: Priorities Identified in MPO Plans



4.3 County Comprehensive Plans

Of Georgia's 159 counties, 123 currently have some form of public transit service. Each of these counties have local comprehensive plans, transportation plans, and/or transit development plans which serve as the guiding documents for outlining future growth and investment. Elements and projects identified from these local plans form the basis for MPO plans, GDOT statewide plans, and local capital improvement programs. Strengths, weaknesses, needs, and opportunities as they relate to public transit were identified across the 123 counties. As with the MPO plan review, challenges and needs were accounted for in this discussion if they were specifically called out in the plan, and do not necessarily represent a comprehensive list.

Among the local plans, the most common identified challenge was the limitation of public transit to certain geographic areas of a county, followed by funding constraints and a general lack of resources. Other challenges noted were limited service hours or frequencies, high operating costs, first and last mile connectivity, the fact that multiple service operators serve the same areas, and, in some cases, the anticipated transition of the public transit system from Rural to Urban, as defined by the FTA.

Nearly two-thirds of county plans identified a general need for multimodal transportation improvements, including public transit. Other commonly cited needs, in order of frequency, include:

- Expanding local bus or rail service to meet demand;
- Coordinating regionally for greater connectivity;
- Coordinating land use, future development, and transportation;
- Promoting safe pedestrian and bike access at bus stops and facilities;

- Exploring new revenue sources to meet funding needs;
- Connecting to jobs and healthcare;
- Improving access and mobility for elderly and underserved populations;
- Supporting commuter or intercity service to meet demand;
- Utilizing transportation demand management strategies and marketing campaigns to enhance awareness of existing public transit service; and,
- Exploring opportunities to partner with private companies (e.g. ride-hailing services).

4.4 Transit Development Plans

GDOT encourages each agency to prepare a Transit Development Plan (TDP) to support the development of effective public transit. Typically, these strategic plans have a ten-year planning horizon, and are to be updated every five years. TDP scopes can be customized to meet the needs of each system, but they all typically include an overview of an area's demographics and existing transportation network, a projection of future needs, including a budget, and a series of recommendations to enhance public transit.

GDOT supports the use of TDPs for areas of the state that do not have public transit as a useful tool for documenting the needs, benefits, and potential investment required for launching a new system. Regional Commissions often partner with GDOT and local jurisdictions to develop TDPs in their region.

There are 50 TDPs in Georgia identified in the development of this report. Included below are example summaries of a recent TDP for a Rural public transit system and an Urban public transit system, Peach County and Athens-Clarke County, respectively.

4.4.1 Rural TDP Example: Peach County

Prepared by the Middle Georgia Regional Commission in 2018, the Peach County Rural Transit Development Plan analyzes population and economic trends in Peach County and the surrounding areas and makes recommendations for expanding and improving the county's demand-response public transit system.

Peach County is experiencing some of the same demographic trends facing rural Georgia in general, namely an increase in the proportion of elderly residents. Peach County also has an above-average number of persons with disabilities and 21% of the population lives below the poverty line. As all of these groups are more likely to depend on public transit, the TDP looks to identify enhancements that could improve connectivity for these populations.

Of the 11,292 workers residing in Peach County, 59.5% are employed outside of the county. The most common destination for these workers is Warner Robins, in nearby Houston County, to work at Robins Air Force Base or in various industries supporting this facility. Peach County Transit does not currently travel to Robins AFB; such service is identified as a potential expansion opportunity in the TDP, either through a limited fixed-route service or a vanpool system.

The TDP includes an implementation timeline for the five-year plan horizon. Near term activities include using surveys and public input to quantify unmet public transit needs and promoting bicycle and pedestrian projects in the county. Mid-range activities (two to three years) include establishing a ride sharing system and pursuing new sources of funding for public transit. In the long range, defined as four to five years out, the plan calls for the implementation of new public transit alternatives and for the feasibility evaluation of a regional or multi-county coordinated transit system.

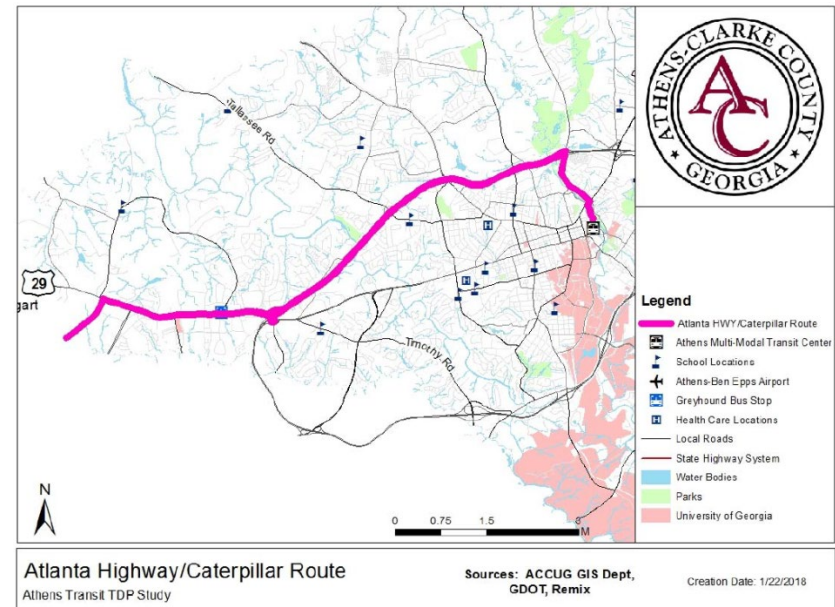
4.4.2 Urban TDP Example: Athens-Clarke County

Athens Transit System finalized updates to its TDP in May 2018. The plan analyzes existing conditions, including pertinent demographic information, details on current routes and fare structures, and a current transit vehicle inventory. The transit analysis considers other relevant transportation plans, such as the Athens-Clarke County Comprehensive Plan, the Downtown Bicycle and Pedestrian Plan, and plans prepared by the University of Georgia, such as the Campus Transportation Plan, Bike Master Plan, and Campus Parking Study.

Current and future public transit demands are assessed using demographic propensities, population and employment densities, and other factors. Clusters and corridors with the highest demand for public transit services are identified. The plan also profiles the public and stakeholder involvement process, which included two stakeholder committee meetings, and two public meetings which were advertised on both social and traditional media. The first public meeting focused on providing information on the planning process and conducting goals-prioritization exercises.

The TDP recommends a Five-Year Implementation Plan, considering future revenue and expenditure forecasts. Several potential system improvements were identified during this process, including changes to service hours and frequency, accommodations for disabled passengers, service expansions including new routes running northeast of the city to southern Madison County along Danielsville Road, and west from the Athens city limits to the Caterpillar plant, as shown in **Figure 22**.

Figure 22: Route Map for Proposed ATS Bus to Caterpillar Plant



Of note, Athens-Clarke County's population is projected to surpass 200,000 in the longer term, which would make them eligible for FTA's Large Urban category. This category of urban areas has some restrictions on the use of Federal funds for operating expenses. The TDP explores several options for supplementing the loss of this funding, including leveraging TSPLOST or instituting a parking tax in downtown Athens.

²⁴ GDOT “Complete Streets Design Policy” 2018

²⁵ GDOT “Complete Streets Design Policy” 2018

²⁶ CobbLinc 2018

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5.0 Emerging Transit Trends, Opportunities, and Challenges

5.1 The Growing Need for Workforce Connections and Economic Opportunity

As stated in GDOT's SSTP, "Georgia's transportation system drives Georgia's economy, the success of our communities, and our quality of life. Continued investment in improving transportation and mobility within the State is essential to improving and maintaining Georgia's economic standing and retaining our high quality of life."²⁷

Investing in transportation infrastructure could provide potentially numerous economic benefits, both by directly creating and sustaining jobs and through the multiplier effects of opening access to new markets and improving the productivity of individuals and businesses.

Increasingly, large employers want to locate in areas with public transit access for their employees and customers. Research shows that additional investment in public transportation provides both short term stimulus and long-term economic productivity impacts. A report by the Economic Development Research Group and the American Public Transportation Association shows that over a 20-year period, every \$1 billion invested in public transit results in \$3.7 billion in additional gross domestic product (GDP) and 50,000 jobs. Nearly half of these benefits are the result of positive productivity effects of transit, including household savings, reduced congestion costs, and improved employer labor access.²⁸

Transportation options are critical for low-income, elderly, and other vulnerable populations for access to healthcare, education, and employment opportunities. This is particularly true in rural parts of the state, where distances to job centers and health and education facilities can be greater.

As previously discussed in **Section 3.3 Socioeconomic Conditions**, low-income, disabled, or elderly individuals, particularly in rural areas of Georgia, are less likely to have reliable access to a personal vehicle or other mode of transportation, impacting their access to healthcare, jobs, and education or workforce development opportunities. Public transit operators provide that critical access in rural areas across the state, assisting riders and boosting the local economy in the process.

Where transportation options are limited, some employers are pursuing alternative options for their workforce. For example, Coastal Regional Commission (CRC), which provides regional rural demand-response transit service across 10 counties and 35 municipalities, also has contracts with three private businesses on Jekyll Island.²⁹ CRC shuttles workers from mainland Georgia to their places of employment on the island, reducing congestion on the island and providing businesses with access to a quality, reliable workforce.³⁰ This innovative and privately funded transit model may be replicable to enhance mobility in some other areas of the state.

Research by the U.S. Department of Transportation found that congestion costs are multifaceted, and include travel time, increased fuel consumption, and lost productivity, among others.³¹ Statewide, the annual cost of congestion in Georgia tops \$4.1 billion.³² As Georgia's population continues to grow, public transit can help meet the growing travel demand, while also expanding economic opportunities. Public transit is increasingly viewed as a critical link to connect businesses with both their workforce and new markets. By reducing congestion, transit service benefits transit users and non-users alike, while also expanding economic opportunities for both rural and urban populations throughout Georgia.

5.2 Trending Urban³³

With Georgia's steadily growing population, following the 2020 Census, six areas of the state (identified below) currently classified as Rural may be re-classified by FTA as eligible for Small or Large Urban programs. The reclassification could be due to population growth, or absorption into a nearby urbanized area (e.g. Atlanta, Savannah). Each area impacted will need to decide whether or not to apply for funding and operate Urban transit service, considerations for such a decision are described below.

In partnership with GDOT, researchers at the Georgia Institute of Technology (Georgia Tech) are modeling population growth across the state to identify potential trending urban areas in anticipation of the 2020 Census. While the research is ongoing, population forecasts point to the following potential outcomes:

- The urban clusters in Rincon and Buckhead (Bryan County) could transition to Large Urban through absorption with the Savannah urbanized area.

- The following urban clusters and Small Urban areas could transition to Large Urban through absorption with Atlanta: Winder (Barrow County), Monroe (Walton County), Jefferson (Jackson County), Bremen (Haralson County), and Carrollton (Carroll County).
- The urban clusters in Winder (Barrow County) and Carrollton (Carroll County), could transition to Small Urban through population growth.
- Cartersville and Gainesville, currently Small Urban areas, could further transition to Large Urban through absorption with Atlanta. The southern-most portion of the Cartersville MPO is currently within the Atlanta urbanized area, but the Atlanta urbanized area could grow to encompass more of the Cartersville MPO along with Gainesville as well.*
- Macon and Warner-Robins could merge to become one Large Urban area.*

**The U.S. Census' "Grandfathering Clause" may prevent merging of existing urbanized areas.*

Under current FTA regulations, Rural and Small Urban operators may use all of their federal funding for operating assistance. By contrast, Large Urban federal funds can be restricted to capital expenditures, depending on the size of the system. The use of Large Urban funding for operating expenses is prohibited except when the public transit agency has fewer than 100 buses and appears on a particular table (Table 3A) in the FTA annual apportionments.

The transition from either Rural or Small Urban to Large Urban has the potential to create a funding challenge due to greater local match requirements and the limit on the amount of funds eligible for operating assistance. This poses the largest potential funding deficit for public transit agencies during this transition period. A jump from Rural directly to Large Urban will also subject affected providers to NTD reporting requirements for the first time. Urban providers submit their own data to NTD while GDOT manages all NTD reporting for Rural providers.

FTA's Table 3A identifies all public transit agencies nationwide that are eligible to use Large Urban federal funding for operating costs. Small public transit agencies that are absorbed into a large urbanized area must appear on this table to continue the utilization of federal funds for operating expenses. To appear on Table 3A, the public transit agency must report, and certify, their own service data to NTD. FTA derives Table 3A directly from NTD data.

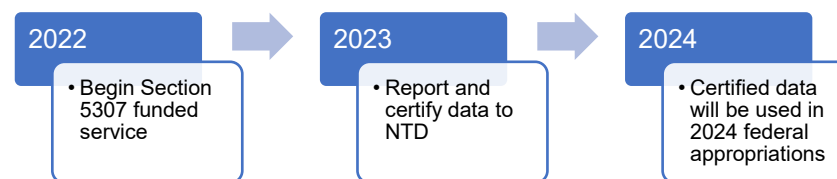
To minimize the funding deficit impacts, public transit operators within trending urban areas should begin exploring Small or Large Urban service and may begin the process of reporting their own service data to NTD. The providers should also begin coordination with their MPO to plan for future funding amounts.

The Small Urban operators that may be trending to Large Urban may begin planning now to prevent future funding gaps for operational expenditures. These agencies may identify all potential capital expenditures that are currently being funded with local dollars.

These capital expenditures (following the transition to Large Urban) may be funded with federal dollars thus freeing local funding that may be used for operational costs. Furthermore, capital expenditures will be funded with federal dollars at a higher match ratio (80% federal/20% non-federal) vs. operating costs (50% federal/50% non-federal). Any capital costs currently being funded locally may be identified and plan to be transitioned to federally funded in the future. This will allow transit agencies to identify the magnitude of the funding gap and plan accordingly by having discussions with their City Councils/Board of Commissioners, GDOT, and their MPO.

One final consideration is the two-year lag from the beginning of the reporting of data to NTD and appearing on Table 3A. For instance, if a public transit agency begins service using Section 5307 dollars in FY 2022, then reports and certifies data to the NTD in FY 2023, the certified data will be used in the FY 2024 appropriations. **Figure 23** demonstrates the two-year lag from the start of Section 5307 funded service to the use of NTD data in the federal appropriations.

Figure 23: Sample Timeline of NTD Data Reporting to FTA Funding



5.3 Technology

Rapid technological advances are impacting longstanding transportation systems, infrastructure, and service models. Many of the most touted advances improve safety, including automated braking and collision-detection-and-avoidance systems. Others, like Global Positioning Systems (GPS) and automated vehicle locators (AVLs), have improved trip planning, routing, and dispatch systems. Advances in communications and connected vehicle technology enable more efficient and reliable public transit service through traffic signal coordination and preemption for public transit vehicles. Improvements in battery technology allow for low-emission, hybrid and fully battery-electric buses.

These emerging technological trends present new challenges and opportunities for public transit providers, many of which are identified in the following sections. Operators should consider the issues discussed in the following sections when making decisions regarding the future of their public transit systems. The challenges and opportunities identified below will also help to shape investment strategies in the final SWTRP.

5.3.1 Connected Vehicles

Connected vehicle (CV) technology enables wireless communication both between vehicles, and from vehicles to surrounding infrastructure. GPS and CV technology equipped transit vehicles allow for real-time location monitoring and communications, benefiting both transit riders and system operators. The CV technology enables safer, more responsive, and more efficient transit service.

While the potential and opportunities for CV technology are numerous, the technology also presents challenges for transit providers. Multiple types of communications technology exist, including cellular and Dedicated Short Range Communication (DSRC). Cellular-based CV technology relies on privately licensed cellular networks for communication, and typically requires ongoing subscription services. By contrast, DSRC relies on unlicensed wireless spectrum that is set aside exclusively for transportation uses. However, DSRC technology also requires the installation and maintenance of fixed roadside equipment. Each type of technology has its own strengths and weaknesses. Public transit operators should carefully consider what is appropriate for their individual system.

To improve safety and mobility, GDOT has begun deploying roadside DSRC units at intersections along Regional Traffic Operations Program (RTOP) routes. RTOP is a congestion mitigation project dedicated to applying advanced signal-timing to the busiest corridors in the Atlanta metro area. RTOP corridors are actively managed from GDOT's Traffic Management Center.

The first DSRC units were deployed in 2018 with further deployments planned through 2020. As currently deployed, GDOT's roadside units offer signal phase and timing and are able to monitor traffic conditions, which can influence improved signal phasing. The roadside units are signal priority capable, allowing for future transit use cases.³⁴

5.3.2 Transit Signal Priority and Preemption

Among the primary benefits of CV technology is the ability to improve transit efficiency through traffic signal priority and preemption. Such systems allow buses, streetcars, or other transit vehicles to communicate with upcoming traffic signals. Traffic signals in transit priority systems can automatically extend a green phase by a few seconds to ensure an approaching bus makes it through an intersection without stopping.

Preemption systems are more common for emergency vehicles but are also deployed with streetcars or BRT. They are programmed to preempt existing signal timing and ensure traffic signals always turn green for an approaching transit or emergency vehicle.

Transit priority and preemption systems typically rely on either DSRC or cellular technology, though some systems use infrared sensors. They are designed to improve transit efficiency and on-time performance. However, priority and preemption systems can be difficult to implement on a regional scale and may affect traffic flow on intersecting corridors.

The City of Marietta and DeKalb County are two jurisdictions in Georgia to have deployed emergency vehicle preemption or limited transit signal priority systems. DeKalb County, in partnership with MARTA and GDOT, has deployed transit signal priority systems on a select number of corridors. DeKalb's transit signal priority system uses GPS and cellular based technology, and is in use on Buford Highway, with expansions underway for Candler Road.

The City of Marietta in partnership with CobbLinc and their local fire department also rely on GPS and cellular technology to preempt signals for emergency vehicles and provide priority for transit vehicles in certain conditions."³⁵

GDOT has begun to lay the groundwork for transit priority and preemption through its DSRC deployments, as mentioned in **Section 5.3.1 Connected Vehicles**. As this network of connected signals expands, GDOT will be able to coordinate with local transit providers and first responders to offer signal priority capabilities along GDOT corridors.

5.3.3 Scheduling and Dispatching

Most CV equipped transit vehicles are capable of providing real-time vehicle location data. Such data allows demand-response transit operators to more efficiently schedule and dispatch trips by connecting riders with the closest available vehicle. Routing algorithms can also guide demand-response vehicle operators on the most efficient route based on traffic conditions, or by coordinating multiple passenger pickups. Challenges exist integrating CV technology with diverse vehicle fleets and existing scheduling and dispatch systems.

GDOT supports dispatching software purchases for Rural transit providers. Most of Georgia's Rural demand-response systems require trips to be scheduled 24 hours in advance.

In 2018, GDOT subrecipients began the transition to new dispatching software known as QRYde. The system offers standard trip scheduling capabilities, tracks all data required for NTD reporting, and offers route optimization capabilities. The dispatching platform also tracks trips by funding source and purpose, and interfaces with human service transportation systems for GDOT subrecipients that offer coordinated HST and transit services. The QRYde system relies in-part on in-vehicle cellular-connected tablets paired with cloud-based software.

Various types of scheduling and dispatching software systems are in place across the state. For example, from September 2018 to April 2019 Gwinnett County Transit piloted an on-demand microtransit bus service.³⁶ Users scheduled rides in real-time using the system's Microtransit App, shown in **Figure 24**.

Figure 24: Gwinnett Microtransit App



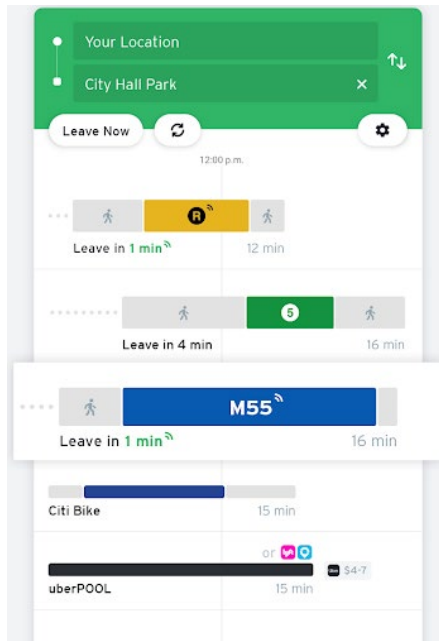
The app functions similar to private ride-hailing apps, allowing riders to select their pickup/dropoff locations, and providing real-time estimates of vehicle locations. The system's dispatching software, provided by TransLoc, routed the closest vehicle to each passenger pickup while minimizing disruption to other riders. The average wait time for each pickup during the pilot was 23 minutes.³⁷

5.3.4 Trip Planning Apps/Software

The popularity of trip planning apps has increased in recent years with services like Google Maps and Apple Maps. The platforms enable users to compare trips across numerous modes (e.g. cost, time, route), including driving, transit, and private ride-hailing services. The Transit App, shown in **Figure 25**, even offers transit trip planning with connections to bikeshares and scooter services. Many transit agencies also develop their own trip planning apps to assist riders, though their functionality is usually more limited than privately developed platforms.

The foundation for each of these transit trip planning platforms is General Transit Feed Specification (GTFS) data. GTFS is a standardized format for transit schedules and route mapping information. GTFS data is a prerequisite for transit app development and accurate trip planning.

GTFS data is classified as either static or real-time. Static data includes station or stop locations, routes, and planned schedules. Static data does not change unless a route or schedule changes. Real-time GTFS data relies on GPS equipped transit vehicles to track movements in real-time. Real-time GTFS feeds can then be incorporated into transit apps or websites, keeping riders informed of next bus or train arrival times and any delays.

Figure 25: Transit App Trip Planning Interface

Real-time GTFS feeds can be challenging to implement but can significantly improve the rider experience by enabling more accurate trip planning. For example, riders can time their departures and more accurately predict whether they will make a connection.

Real-time GTFS feeds also provide valuable data for public transit operators, allowing them to automatically calculate on-time performance, travel times, cumulative delay, and more. Transit planners may use GTFS data for project evaluations and equity measures, for example estimating the number of jobs or disadvantaged populations within a designated service area.

GTFS data provides substantial benefits for both transit riders and operators, but it can be labor intensive to prepare and update. Many transit systems make their GTFS data publicly available, allowing it to be integrated by third-party app developers and accessible to a wider pool of potential riders.

5.3.5 Payment Systems

Transit providers are increasingly adopting mobile payment systems. Rather than relying on cash or reloadable fare cards, mobile apps on smart phones now allow riders to preload funds and scan their phone for payment at the fare box. These mobile payment systems are particularly helpful to bus or demand-response public transit users, who may not have cash or easy access to a transit station where they can reload a fare card.

Mobile payment systems also have the potential for greater interoperability between transit systems, allowing regional riders to transfer from one provider to another. However, since not all riders have smartphones, legacy fare collection systems remain in service. Transit systems can face challenges operating and maintaining multiple payment systems simultaneously.

5.3.6 TNCs

Recent technology advances have resulted in new modal options for transportation consumers. Mobile app-based transportation network companies (TNCs) offer private on-demand rides, providing an additional travel option, and in some cases providing first and last mile connections for public transit users. Similarly, new on-demand electric scooters and bicycles replace public transit trips for some users in urban centers, while providing valuable public transit connections for others. Some individual public transit systems are working to coordinate service with these new private modal options.

5.3.7 Hybrid and Electric Transit Vehicles

Improvements in battery technology and storage capacity have enabled the development of newer and more fuel-efficient hybrid and electric transit vehicles. Hybrid vehicles pair an electric motor with a small internal combustion engine (ICE) to power the vehicle. Fully electric vehicles (EVs) rely only on electricity for propulsion. Most EV buses are powered by a large rechargeable battery that stores its electricity, although some operate by drawing power from overhead electric cables.

Due to the inherent energy efficiency of electric propulsion as compared to ICEs, EVs and hybrid transit vehicles can offer agencies significant fuel savings. Unlike ICE vehicles, EVs do not produce any emissions while operating, resulting in air quality improvements. EVs can offer other operational advantages as well. EV motors have far fewer moving parts than typical ICEs, lowering long term maintenance costs. They are also quieter, resulting in less noise pollution.

Despite the numerous benefits of EVs, challenges also exist. The historical rarity of EVs means little supporting infrastructure currently exists. Large EV batteries require high voltage chargers, which can be costly to install. Transit agencies seeking to deploy EVs typically need to strategically plan charging locations and routes, accounting for the vehicle's range, charge time, and desired service area. Mechanics and other agency staff must also be trained on proper vehicle maintenance.

In Georgia, multiple agencies have begun purchasing electric buses. GDOT worked with Macon-Bibb County Transit Authority to procure two battery-electric buses, which will begin operations in 2019.³⁸ The University of Georgia ordered 20 electric buses for its campus transit system. Energy costs per bus are expected to be less than \$10 per day, compared to \$90 per day of their diesel-powered buses.³⁹

The Center for Transportation and Environment, a Georgia-based non-profit organization, is also working the State Road and Tollway Authority (SRTA) and other transit providers to procure and deploy additional battery electric buses and charging systems.⁴⁰ As previously discussed in **Section 2.3 Other Shared Transportation Providers**, smaller electric and autonomous shuttles are also being introduced in Georgia as a first and last mile transit solution.

5.4 Data Driven Decision Making

MAP-21, and later the FAST Act, broadly shifted the focus to a performance-driven and outcome-based approach to project planning and development. Performance measures relating to safety, infrastructure condition, congestion, system reliability, emissions, and freight movement must be developed by each state and MPO for inclusion into their transportation plans, and targets must be consistent with overall planning objectives. As a result of MAP-21 and the FAST Act, states and MPOs must also coordinate with each other to the maximum practical extent to achieve consistency in these performance measures and targets.

To comply with these new regulations, fiscally constrained planning documents such as STIPs and TIPs must link investment priorities to the improvement of performance metrics in safety, congestion, emissions, and more.

FTA is currently in the process of developing performance measures for these various aspects of transit operation and management. Currently, performance measure Final Rules have been issued for Transit Asset Management and Safety Management Systems.

Recent advances in transit technologies and the availability of ‘Big Data’ may allow for the tracking of new performance measures and more informed decision making into the future. This SWTRP will consider the availability of new performance data and identify performance metrics to guide investment decisions that meet or exceed federal requirements.

5.5 Bus Rapid Transit and Managed Lanes

Bus Rapid Transit (BRT) is a type of high-capacity transit service typically operating in fixed guideway and sharing operating characteristics similar to rail-based transit. A relatively new service in the United States, BRT commonly features exclusive or semi-exclusive guideway, traffic signal priority, off-board fare collection, high frequencies, greater stop spacing, unique branding, and premium vehicle design resulting in a passenger experience similar to light rail service.

Bidirectional guideway of BRT services most often runs within the median or in the outermost lanes of an arterial road but can be designed in other applications as well such as in bus-only or managed lanes on freeways or in exclusive off-street bus-only right-of-way.

While BRT has not yet been implemented in any Georgia jurisdiction, five BRT lines have been partially funded and approved within the City of Atlanta, Clayton County, and Fulton County.

In the City of Atlanta, three BRT lines are envisioned to run along Capitol Avenue (Summerhill BRT), Northside Drive and Metropolitan Parkway, and North Avenue and Donald Lee Hollowell Parkway. These services have been funded locally by the More MARTA Program and are expected to undergo environmental review process beginning in 2019.

In Clayton County, BRT is proposed to run along SR 85 connecting College Park, Riverdale, Morrow, and Jonesboro. BRT as the locally preferred alternative was approved by the MARTA Board in December 2018 and is expected to commence environmental review in 2019. Finally, in Fulton County, BRT is proposed to run along SR 400 between North Springs MARTA Station and Windward Parkway in Alpharetta, utilizing GDOT’s proposed Managed Lanes along the corridor.

Other counties including Fulton, DeKalb, Cobb, and Gwinnett are in earlier stages of planning potential BRT lines. **Table 10** summarizes these potential lines.

Depending on their design and application, managed lanes can potentially be configured for enhanced or high-capacity transit services in Georgia, including BRT. GDOT completed construction of the state’s first managed lanes project in 2011, providing one tolled lane in each direction along I-85 North in DeKalb and Gwinnett counties. This effort was based on recommendations from the Atlanta Regional Managed Lanes System Plan, written in 2010, which called for a comprehensive system of managed lanes serving major highways throughout the Atlanta Region.⁴¹ Since then, GDOT’s Major Mobility Investment Program (MMIP) has been funding, planning, and constructing similar projects throughout the Atlanta Region on I-85 North, I-75 North, I-575 North, I-285, I-75 South, and SR 400.⁴²

These projects have resulted in two types of managed lane systems: unidirectional and bidirectional. Unidirectional lane systems, such as those on I-75 and I-575, are designed to be reversible with the direction depending on the traffic volume and time of day. A similar concept is planned for I-20 East. These unidirectional lanes are useful for commuter bus services during morning and evening peak periods but are not practical for traditional bidirectional transit service.

Bidirectional lane systems such as those on I-85 North operate in both directions regardless of the time of day. These systems are currently under design along SR-400 and I-285 and expected to open in five to nine years. A similar concept is also planned for I-20 West as well as an extension of the I-285 system.

While bidirectional systems are highly useful for commuter bus services, with certain design considerations they can also be very practical for traditional bidirectional BRT transit service. For example, SR-400 managed lanes will incorporate a series of bulb-outs for future BRT stations to be constructed by MARTA and up to four bus-only interchanges in addition to multiple managed lanes-only interchanges. In contrast, on smaller-scale systems, like those on I-85 North, most users must exit the system into the general-purpose lanes ahead of local exits, as few managed lane-only interchanges exist.

Momentum for BRT services along managed lanes has continued to increase in Georgia in recent months. In 2018, then-Governor Nathan Deal announced a \$100 million contribution from the State for BRT facilities along SR-400, the largest state contribution toward public transit in Georgia history.⁴³ Mayors of seven Atlanta-area cities also recently completed a feasibility study for a similar public transit line along the planned I-285 managed lanes. The line is envisioned to connect Smyrna, Cumberland, Perimeter Center, Doraville, and Tucker along the busiest section of I-285.⁴⁴

The continued focus on managed lane systems throughout metro Atlanta could provide major opportunities for BRT lines to connect suburban population and employment centers.

Table 10: Other Planned or Potential BRT Projects

County	Project	Plan	Status
Clayton	Riverdale BRT - SR 85	Clayton LPA	Funded- In planning phase
Fulton	Summerhill BRT	More MARTA	Funded - In planning phase
Fulton	Northside Drive – Metropolitan Parkway BRT	More MARTA	Funded - In planning phase
Fulton	North Avenue – Donald Lee Hollowell Parkway	More MARTA	Funded - In planning phase
Fulton	Georgia 400	Fulton County Transit Master Plan	Partially funded – Pending SPLOST vote
Fulton	Holcomb Bridge Road – Cobb County Line to Gwinnett County Line	Fulton County Transit Master Plan	On Hold – Pending SPLOST vote
Fulton	South Fulton Parkway	Fulton County Transit Master Plan	On Hold – Pending SPLOST vote
Fulton	US 29 – College Park MARTA Station to Palmetto	Fulton County Transit Master Plan	On Hold – Pending SPLOST vote
DeKalb	I-20 East Bus Rapid Transit	MARTA Planning, DeKalb County Transit Master Plan	In Consideration for prioritization in upcoming DeKalb County Transit Master Plan
DeKalb	Memorial Drive – Kensington MARTA Station to Gwinnett County Line	DeKalb County Transit Master Plan	In Consideration for prioritization in upcoming DeKalb County Transit Master Plan
DeKalb	Buford Highway – Lindbergh Center MARTA Station to Doraville MARTA Station	DeKalb County Transit Master Plan	In Consideration for prioritization in upcoming DeKalb County Transit Master Plan
DeKalb, Fulton, Cobb	I-285 Top End Bus Rapid Transit	I-285 Top End Transit Feasibility Study	DeKalb portion in consideration for prioritization in upcoming DeKalb County Transit Master Plan
Gwinnett	Route 700 – Jimmy Carter/Multimodal Hub – Sugarloaf Mills BRT	Connect Gwinnett Transit Plan	On Hold – Pending SPLOST or MARTA vote
Gwinnett	Route 701 – Lawrenceville – Peachtree Corners	Connect Gwinnett Transit Plan	On Hold – Pending SPLOST or MARTA vote
Gwinnett	Route 702 – Snellville – Indian Creek	Connect Gwinnett Transit Plan	On Hold – Pending SPLOST or MARTA vote

Sources: MARTA, Fulton County Government, DeKalb County Government, Gwinnett County Transit

5.6 Diversification of Funding

Historically, the largest share of transit funding at the federal level has been derived from federal fuel taxes. Federal motor fuel taxes include 18.3 cent per gallon tax on gasoline and a 24.3 cent per gallon tax on diesel fuel. Of the fuel tax revenue collected, 2.86 cents per gallon are dedicated to funding federal transit programs.⁴⁵ It is estimated that each cent added to Federal motor fuel taxes provides \$1.5-1.7 billion in annual revenue to the HTF.⁴⁶

However, in recent years Federal fuel taxes revenues have declined as the fuel efficiency of conventional vehicles continues to improve, and alternatively powered vehicles (e.g. hybrid, battery-electric) gain popularity. Additional or alternative revenue sources are needed at the federal, state, and local level to fund transit programs into the future. This section identifies potential transit funding sources considered in Georgia or other states.

5.6.1 Fuel Tax Revenues

Similar to federal fuel taxes, some states dedicate a portion of state collected fuel taxes to funding public transportation. Florida, for example, dedicates at least 15% of its state motor fuel taxes to public transportation.⁴⁷

In Georgia, 2019 state motor fuel tax rates are set at 30.8 cents per gallon for diesel, and 27.5 cent per gallon for gasoline and other motor fuels.⁴⁸ According to the Georgia Budget and Policy Institute, the state's "2019 budget includes \$1.83 billion in motor fuel revenue, an increase of about \$32 million over the 2018 budget."⁴⁹

Georgia's State Constitution requires that state motor fuel taxes be used only on roads and bridges, preventing the funds from being used on transit operations or capital projects.

5.6.2 TSPLOSTs

In Georgia, the need for long term transportation funding has resulted in increasing popularity of special-purpose local-option sales taxes (SPLOST). Transportation SPLOSTs impose a sales tax increase within a specific jurisdiction, with the revenues dedicated toward specific transportation projects. The City of Atlanta, as well as Fulton, DeKalb, and Clayton counties have each passed transit specific SPLOSTs to fund MARTA operations.

While not specifically dedicated to transit, many counties and regions of Georgia have passed transportation SPLOSTs that funded individual transit projects. For example, the Central Savannah River Region's TSPLOST funded two transit projects in Augusta and Richmond counties.⁵⁰ Clarke County's 2018 TSPLOST project list includes two transit projects.⁵¹

State law allows two or more counties to partner in the formation of a SPLOST to fund transit service. The state legislature has explored new funding streams, including legislation that would permit any single county to form such a SPLOST, eliminating the requirement that two or more counties must partner.

5.6.3 Other Funding Sources

Other potential state-level transit funding sources include a sales tax on private for-hire ground transportation services, including taxis and ride-hailing services like Uber and Lyft, and a tax on airport concessions. During the 2019 Legislative Session, Georgia lawmakers proposed and considered a tax or fee on for-hire ground services. Previous legislative sessions have considered the tax on airport concessions.

Community Improvement Districts (CIDs) are quasi-governmental entities with the power to self-tax commercial property owners for public improvement projects, including public transportation projects.⁵² CIDs have become an increasingly popular way to finance local transportation planning and infrastructure enhancements. Although the projects are typically smaller scale and limited to CID boundaries.

Proposals for privately financed transit alternatives have garnered media attention however, most rely on unproven technologies still under development (e.g. “robotaxis”). In the U.S., privately financed and operated public transit systems have not proved sustainable since the early 1900s. Privately financed transit does exist abroad. Japanese railways, for example, were privatized in 1987 and remain privately owned and operated. In addition to providing transit service, these companies also own and densely develop the real estate surrounding transit stations, providing additional sources of revenue.⁵³

5.7 Alternative Project Delivery Methods

Historically, most major capital infrastructure projects in Georgia have followed the traditional delivery model, or Design-Bid-Build (DBB). In DBB projects, the designer and the constructor are typically independent firms, the full design is completed before being put out to bid, and the project is awarded to the constructor offering the lowest bid. However, as of late, Alternative Project Delivery methods have aimed to expedite delivery of complex capital infrastructure projects.

In Georgia, the Atlanta Streetcar project, opened in 2014, utilized the Design-Build (DB) delivery method, awarding the designer and constructor roles to one central firm, expediting project schedule. GDOT’s Northwest Corridor Express Lanes project, opened in 2018, utilized the Design-Build-Finance (DBF) delivery method, providing the project access to private capital up front, to be paid back with tolling revenue after the project opened. GDOT’s 11 MMIP projects all seek alternative delivery methods as well.

In general, large capital transit and rail projects in Georgia can benefit from Alternative Delivery Methods in the following ways:

- Accelerated project delivery timeline;
- Decreased risk of cost and schedule overruns on the transit agency;
- Incentives for the constructor to innovate in project materials, construction processes, and management techniques;
- Access to private capital before public funds become available; and,
- Potential operation and/or maintenance guarantees.

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- | | | | |
|----|----------------------------------------------------|----|-------------------------------------------------------|
| 27 | GDOT 2018 | 41 | GDOT “Atlanta Regional Managed Lane System Plan” 2010 |
| 28 | Weisbrod 2014 | 42 | GDOT “Major Mobility Investment Program,” 2018 |
| 29 | CRC 2018 | 43 | CBS46 2018 |
| 30 | Jekyll Island Authority 2016 | 44 | Kass 2019 |
| 31 | US DOT 2009 | 45 | Kirk 2018 |
| 32 | Inrix & TTI 2015 | 46 | Kile 2015 |
| 33 | Garrow 2018 | 47 | Florida Department of Transportation 2017 |
| 34 | GDOT (Davis) 2018 | 48 | Georgia Department of Revenue 2018 |
| 35 | Applied Information 2017 | 49 | Tharpe 2018 |
| 36 | Gwinnett County Transit 2019 | 50 | GA-TIA 2019 |
| 37 | Gwinnett County Transit 2019 | 51 | Athens-Clarke County Unified Government 2018 |
| 38 | Macon.com 2017 | 52 | Kuhn 2016 |
| 39 | Brannen 2019 | 53 | Jaffe 2012 |
| 40 | Center for Transportation and the Environment 2019 | | |

6.0 Concurrent Planning Efforts

6.1 More MARTA

More MARTA is a collaboration between the City of Atlanta and MARTA to develop and implement a program of public transit enhancement projects that will improve city-wide connectivity. Following two years of technical assessments and public input, the MARTA board approved More MARTA's program of projects in October 2018. The projects include 22 miles of light rail expansion, 14 miles of bus rapid transit, 26 miles of arterial rapid transit, and two new public transit centers, among other projects.⁵⁴

The More MARTA program is partially funded by a half-cent dedicated sales tax within the city limits of Atlanta, which is expected to generate \$2.7 billion over 40 years. Additional public and private funds will also be sought. Since the new sales tax went into effect in early 2017, 14 new MARTA bus routes began operations, and numerous others expanded service hours. The full program of projects has a 40-year implementation timeframe.⁵⁵

6.2 House Transit Funding and Governance Commission

The Georgia House of Representatives passed House Resolution 848 during the 2017 legislative session, creating the House Commission on Transit Governance and Funding. The Commission was tasked with assessing the public transit needs in Georgia and determining the most effective state models for public transit system planning, funding, and oversight. The Commission embarked on a two-part study and evaluation of Georgia's public transit needs.

The first phase focused primarily on existing public transit systems in metro Atlanta, while the second phase assessed public transit systems and needs in rural Georgia and other metropolitan areas outside Atlanta.⁵⁶

Following phase one, the Commission recommended a new governing and planning body for metro Atlanta public transit systems, and new public transit funding options for the region. The Commission's recommendations for a consolidated public transit governance structure for metro Atlanta were included in House Bill 930, which the legislature passed and Governor Nathan Deal signed into law on May 3, 2018.⁵⁷

House Bill 930 created the ATL, a new state-level entity tasked with coordinating public transit planning and funding throughout metro Atlanta. The bill also established a new transit funding mechanism for metro Atlanta, allowing counties to implement a transit sales tax (TSPLOST) of up to 1% for up to 30 years.⁵⁸

Phase two assessed transit governance and funding needs in Georgia, outside metro Atlanta. The Commission identified the need for more consistent approaches and dedicated funding for transit planning and coordination, particularly in rural areas. The Commission also highlighted areas for improved regional transit and a desire to provide access to all Georgians who require transit for education, employment, or health purposes.⁵⁹

In December 2018, the Commission presented recommendations, including:⁶⁰

- Consolidating transit policy, planning, coordination, and funding in Georgia under a single new state agency.
- Establishing "Mobility Zones" to develop regional transit plans and coordinate with local operators.
- Establishing new dedicated state source of transit funding while encouraging private sector involvement.⁶¹

6.3 The Atlanta-region Transit Link Authority

Established in May 2018 by House Bill 930, the ATL is a new entity attached to the Georgia Regional Transportation Authority (GRTA). The ATL's governance board is comprised of both state and local representation, and the Authority is tasked with overseeing and coordinating public transit throughout the metro Atlanta region. Specifically, the ATL has five core functions⁶²:

- Regional Governance;
- Regional Transit Plans;
- Regional Transit Funds;
- Regional Unified Branding; and
- Interaction with Existing Transit Operators.

In May 2019, the ATL Board adopted a method for prioritizing and selecting projects for funding. The method relies on 14 criteria, such as population projections and density, employment, and local funding. It also accounts for the cost effectiveness of each proposed project. Local transit agencies will begin submitting projects during summer of 2019. The ATL expects to adopt a final transit plan by the end of the year.⁶³

6.4 Georgia Emergency Management Agency

The Georgia Emergency Management Agency (GEMA) develops and maintains planning documents used for disaster response and recovery. The GEMA's state Emergency Operations Plan (GEOP) highlights the additional disaster assistance needs of the elderly, children, non-English speakers, and the transportation disadvantaged.⁶⁴

GEOP designates GDOT as the state's Emergency Support Function Coordinator for transportation, making GDOT the primary agency responsible for coordinating multi-modal transportation resources in an emergency. The plan also identifies numerous transit providers within the state as designated support agencies, responsible for providing personnel and vehicles as needed to support emergency response operations. Designated support agencies include universities and technical colleges, the Department of Human Services, and GRTA.⁶⁵

⁵⁴ MARTA 2018

⁵⁵ MARTA 2018

⁵⁶ House Commission 2019

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ ATL 2019

⁶¹ Ibid.

⁶² ATL 2019

⁶³ Wickert 2019

⁶⁴ GEMA 2017

⁶⁵ GEMA 2018

7.0 Next Steps

With Georgia's population expected to surpass 14.7 million by 2050, demand for transportation services will reach an all-time high, surpassing 5.4 million home-based work trips per day. 1.8 million of those trips are expected to cross county lines. Though new technologies and modes may change the appearance or characteristics of shared transportation systems, public transit will remain a proven and critical modal option to mitigate congestion increases and ensure all Georgians have access to healthcare, education, and employment opportunities.

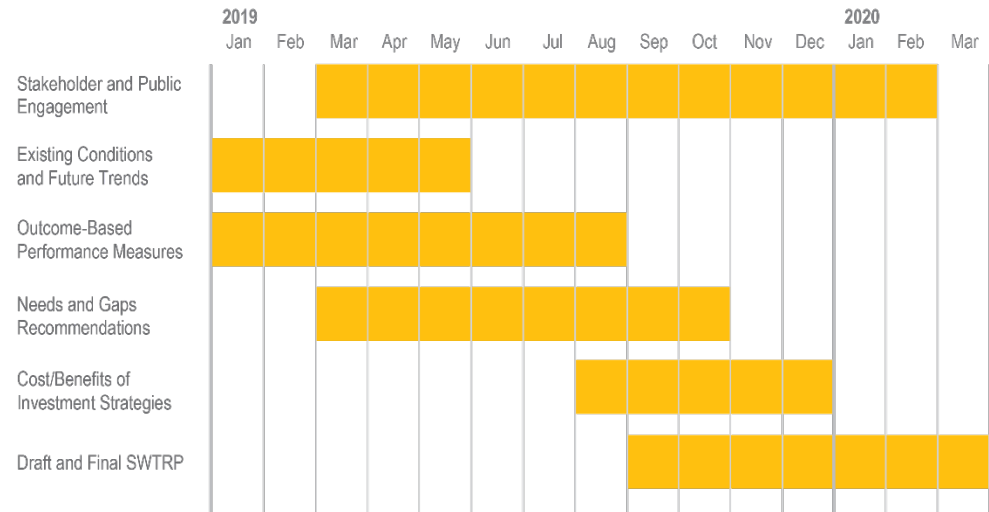
Georgia's Rural public transit providers will face new challenges as their service areas grow or are absorbed into a larger urban area, including changes in federal funding, shifting travel patterns, and new travel demand. Georgia's elderly population is increasing and expected to grow 175% by 2050, with much of the growth occurring in rural communities. As the proportion of older Georgians grows, public transit services will need to expand and evolve to meet the rising number of Georgians who can no longer drive.

This report represents the first step in understanding and interpreting these issues surrounding transit in Georgia. The issues and challenges presented will be further analyzed and potential solutions will be considered as the SWTRP planning process continues. **Figure 26** shows the SWTRP project schedule.

Moving forward, the planning process will rely on stakeholder interviews and extensive public engagement to identify additional public transit needs, challenges, and service gaps. The project team will develop clear and understandable outcome-based performance metrics that can be used to evaluate future public transit scenarios.

The final SWTRP will include implementation strategies for efficient, effective, and forward-thinking public transit service that meets the needs of all Georgians.

Figure 26: Project Schedule Summary



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Appendix A: Georgia Public Transit System Details

A.1 Rural Public Transit Systems

A.1.1 Northwest Georgia

Every rural county in Northwest Georgia has a public transit provider, with the exception of Polk County. Within Polk County, the City of Cedartown offers demand-response public transit. Data for Bartow County, which provides both Section 5307 Urban and Section 5311 Rural public transit, is included in **Appendix A.2 Small Urban Systems**. Gilmer, Gordon, Fannin, and Pickens County are served by the consolidated Mountain Area Transportation System, though each county owns their own rolling stock and operates their own dispatch centers.

Table 11: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Northwest Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Bartow County Transit	\$518,913	37,241	\$13.93	9
Catoosa County	\$542,345	20,827	\$26.04	9
Chattooga County Transit	\$160,760	11,459	\$14.03	4
City of Cedartown	\$55,795	5,846	\$9.54	1
Dade County Transit	\$307,355	20,023	\$15.35	4
Haralson County Transit	\$187,342	6,320	\$29.64	3
Mountain Area Transportation System	\$992,359	61,907	\$16.03	18
Murray County Transportation System	\$293,375	20,947	\$14.01	7
Paulding County	\$254,338	14,546	\$17.49	5
Walker County	\$560,310	28,336	\$19.77	12
Whitfield County W.T.S.	\$678,187	34,756	\$19.51	10

Source: National Transit Database, GDOT Group Transit Asset Plan

A.1.2 Georgia Mountains

Three counties in the Georgia Mountains Regional Commission area have no public transit services: White, Stephens, and Franklin. All other counties have Rural demand-response public transit. Data for Hall County is provided in the **Appendix A.2 Small Urban Systems**.

Table 12: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Georgia Mountains Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Banks County Transit	\$101,693	3,499	\$29.06	2
Dawson County Transit	\$248,302	13,343	\$18.61	4
Forsyth County Public Transit	\$398,884	19,615	\$20.34	6
Habersham County Transit	\$110,126	8,048	\$13.68	2
Hall Area Transit	\$616,360	24,962	\$24.69	8
Hart County Public Transit	\$120,727	9,413	\$12.83	2
Lumpkin County	\$165,462	5,025	\$32.93	2
Rabun County	\$181,389	10,412	\$17.42	4
Towns County	\$96,592	3,904	\$24.74	2
Union County Transit	\$67,031	5,188	\$12.92	2
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.3 Atlanta Region

Henry and Cherokee counties offer rural demand-response transit in the Atlanta region.

Table 13: Operating Expenses, Ridership, and Revenue Vehicle Inventory for the Atlanta Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Cherokee County Transportation System	\$911,658	49,939	\$18.26	9
Henry County Transit	\$1,543,235	78,360	\$19.69	20
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.4 Northeast Georgia

Jackson, Elbert, Morgan, and Green counties offer demand-response public transit to residents and visitors. In Walton County, Social Circle operates a Dial-a-Ride system that offers weekday transportation within the city limits. Barrow, Jasper, Madison, Newton, Oconee, and Oglethorpe counties do not offer transit services to the general public. Transit in Athens-Clarke County is provided by Athens Transit System, covered in the **Appendix A.2 Small Urban Systems**.

Table 14: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Northeast Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Elbert County	\$244,640	8,228	\$29.73	4
Greene County Commission Transit	\$352,786	20,238	\$17.43	4
Jackson County	\$236,077	14,612	\$16.16	2
Morgan County Transit	\$360,688	21,488	\$16.79	4
Social Circle Area Transit	\$96,422	8,178	\$11.79	2
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.5 Three Rivers

In the Three Rivers area, demand-response public transit is provided by Coweta, Heard, and Troup counties. Carroll County, in conjunction with the Three Rivers Regional Commission, launched its Carroll Connection service on July 2, 2018; data for this system was not available at the time this report was compiled. General demand-response public transit for Butts, Carroll, Lamar, Meriwether, Pike, Spalding, and Upson counties is administered by the Three Rivers Regional Commission.

Table 15: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Three Rivers Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Coweta County Transit	\$477,598	28,778	\$16.60	5
Heard County Transit	\$122,931	3,758	\$32.71	2
Three Rivers Regional Commission	\$1,226,093	70,089	\$17.49	13
Troup County Transit	\$217,514	27,359	\$7.95	6
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.6 Middle Georgia

Baldwin, Crawford, Jones, Peach, Pulaski, Twiggs and Wilkinson counties all operate demand-response transit systems. Macon-Bibb County is served by the Macon-Bibb County Transit Authority, covered in the **Appendix A.2 Small Urban Systems**. Monroe and Houston counties have no public transit available.

Table 16: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Middle Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Baldwin Count Transit	\$133,333	9,516	\$14.01	2
Crawford County Transit	\$125,071	3,218	\$38.87	3
Jones County Transit	\$168,098	4,063	\$41.37	4
Peach County Transit	\$168,652	8,536	\$19.76	4
Pulaski County Transit	\$68,582	4,651	\$14.75	1
Putnam County Commission Transit	\$241,688	17,268	\$14.00	3
Twiggs County Transit	\$125,185	5,492	\$22.79	2
Wilkinson County Commission Transit	\$190,104	8,057	\$23.59	3
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.7 Central Savannah River Area

Wilkes, Lincoln, Taliaferro, McDuffie, Columbia, Hancock, Warren, Glascock, Jefferson, Burke, and Jenkins counties all operate demand-response public transit. Demand-response public transit in the rural areas of Richmond County is provided by the Richmond County Transit System, a branch of Augusta Public Transit. Figures for Richmond County are included in the data for Augusta in **Appendix A.5 Large Urban Systems**. No transit services are provided for the general public in Washington County.

Table 17: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Central Savannah River Area

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory	
				Cutaways	Vans
Richmond County Transit	\$1,054,320	26,440	\$39.88	7	-
Burke County Transit	\$278,586	16,990	\$16.40	8	-
Columbia County Commission Transit	\$649,141	58,774	\$11.04	10	-
Glascock County Transit	\$84,538	5,434	\$15.56	2	-
Hancock County Transit	\$171,023	17,124	\$9.99	2	1
Jefferson County Transit	\$362,930	28,265	\$12.84	5	-
Jenkins County Transit	\$55,616	2,216	\$25.10	1	-
Lincoln County Transit	\$95,430	9,833	\$9.71	1	2
McDuffie County Commission Transit	\$281,363	34,578	\$8.14	5	-
Taliaferro County Board of Commissioners	\$67,899	4,541	\$14.95	2	-
Warren County Commission Transit	\$112,126	4,866	\$23.04	2	-
Wilkes County Commission Transit	\$199,320	13,380	\$14.90	3	-

Source: National Transit Database, GDOT Group Transit Asset Plan

A.1.8 River Valley

In the River Valley area, demand-response public transit is provided by Dooly, Crisp, and Clay counties. Service in Quitman, Randolph, and Stewart counties is provided by the Lower Chattahoochee Regional Transit Authority. In Sumter County, the City of Americus offers public transit within its city limits. All of these systems contract their operations with RMS, Inc. Harris, Marion, Chattahoochee, Schley, and Webster counties have no transit available to the general public.

Table 18: Operating Expenses, Ridership, and Revenue Vehicle Inventory for River Valley Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
City of Americus	\$202,918	12,201	\$16.63	3
Clay County	\$297,374	10,055	\$29.57	4
Crisp County Transit	\$457,881	21,218	\$21.58	6
Dooly County	\$556,661	23,238	\$23.95	6
Lower Chattahoochee Regional Transit Authority	\$961,984	34,565	\$27.83	13
Macon County Transit	\$192,381	6,514	\$29.53	2
Talbot County Transit	\$406,246	14,186	\$28.64	5
Taylor County Transit	\$227,848	10,003	\$22.78	4
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.9 Heart of Georgia Altamaha

Wayne, Telfair, Wilcox, Dodge, Wheeler, and Bleckley counties offer public transit in the Heart of Georgia Altamaha area. Public transit in Wilcox County is operated by RMS, Inc. No public transit is provided in Laurens, Johnson, Emanuel, Treutlen, Candler, Evans, Montgomery, Toombs, Tattnall, Jeff Davis, or Appling counties.

Table 19: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Heart of Georgia Altamaha Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory	
				Cutaways	Vans
Bleckley County Transit	\$111,860	4,243	\$26.36	2	1
Dodge County Transit	\$188,624	8,372	\$22.53	3	-
Telfair County Transit	\$147,710	13,224	\$11.17	2	-
Wayne County Transit	\$448,241	42,345	\$10.59	10	1
Wheeler County Transit	\$154,007	4,841	\$31.81	2	-
Wilcox County Transit	\$159,209	3,642	\$43.71	3	-

Source: National Transit Database, GDOT Group Transit Asset Plan

A.1.10 Southern Georgia

Turner, Ben Hill, Tift, Bacon, Pierce, Brantley, Ware, Berrien, Cook, Brooks, and Lowndes counties all offer demand-response public transit. Ben Hill County's system is operated by RMS, Inc. No transit services are available to the general public in Irwin, Coffee, Atkinson, Lanier, Clinch, Echols, and Charlton counties.

Table 20: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Southern Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory	
				Cut-aways	Vans
Bacon County	\$105,140	2,871	\$36.62	2	-
Ben Hill County Transit	\$407,329	11,600	\$35.11	6	-
Berrien County	\$134,948	6,006	\$22.47	2	-
Brantley County	\$60,502	1,089	\$55.56	1	-
Brooks County Transit	\$286,550	13,793	\$20.78	4	-
Cook County Transit	\$388,323	22,743	\$17.07	5	1
Lowndes County	\$495,525	27,035	\$18.33	7	1
Pierce County Transit	\$325,101	9,163	\$35.48	6	1
Tift Transit System	\$236,195	11,201	\$21.09	2	-
Turner County	\$176,391	10,584	\$16.67	3	-
Ware County	\$245,569	9,714	\$25.28	5	-
Source: National Transit Database, GDOT Group Transit Asset Plan					

A.1.11 Southwest Georgia

Public transit for most of Southwest Georgia is provided by the regional commission through a contract with RMS, Inc. Service is provided to Baker, Colquitt, Decatur, Dougherty, Early, Grady, Lee, Miller, Mitchell, and Seminole counties, plus the cities of Arlington, Dawson, and Sylvester. Additionally, Thomas County operates their own demand-response system.

Table 21: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Southwest Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Southwest Georgia Regional Commission	\$5,753,845	267,804	\$21.49	76
Thomas County Transit	\$1,203,808	83,768	\$14.37	16
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.1.12 Coastal Georgia

Public transit in Coastal Georgia is provided by the regional commission's Coastal Regional Coaches program. Coastal Regional Coaches provide demand-response public transit within a rider's county of residence, or to any Coastal Georgia county for an increased fare. Service is offered Monday – Friday from 7:00 AM to 5:00 PM. CRC currently operates a Savannah to Tybee Island shuttle service on a six-month trial basis. The service departs from Savannah at 8 AM, 1PM, and 6PM, seven days a week, with a \$10 fare each way.

Table 22: Operating Expenses, Ridership, and Revenue Vehicle Inventory for Coastal Georgia Region

System	Annual Operating Expenses	Unlinked Passenger Trips	Cost/Trip	Vehicle Inventory (Cutaways)
Coastal Regional Commission	\$4,015,735	131,308	\$30.58	62
Source: National Transit Database, GDOT Group Transit Asset Plan				

A.2 Small Urban Systems

A.2.1 Athens Transit System

Athens Transit System (ATS) operates 20 bus routes throughout the city and University of Georgia campus. Service runs seven days a week, from 6:00 AM to 10:00 PM on weekdays and 7:00 AM to 10:00 PM on weekends, offering numerous connections with UGA Campus Transit.⁶⁶ Routes serving the campus are shortened or suspended during summer and other times when demand for university-based trips is reduced. ATS also operates a Park-and-Ride lot serviced by an express bus.

A.2.2 Rome Transit Department

The Rome Transit Department (RTD) operates five fixed routes. Additionally, buses will make small detours to pick up passengers from Berry College or the Harbin Clinic Heart Center with an advanced request. Service runs hourly between 5:30 AM and 6:30 PM on weekdays. There is no weekend service. RTD also operates the Tripper service, a peak hour feeder system that also serves as the City's school transportation system.⁶⁷

A.2.3 Macon-Bibb County Transit Authority

The Macon-Bibb County Transit Authority (MTA) operates nine city bus routes. Service runs from 5:30 AM to 9:00 PM on weekdays. Saturday hours are reduced and vary between routes. No Sunday services is offered on the fixed-route system. MTA also operates the Mercer Bear Downtown Shuttle on behalf of Mercer University. This evening and late-night circulator takes students from campus to entertainment destinations in downtown Macon from Wednesday to Saturday.⁶⁸

A.2.4 Albany Transit System

The Albany Transit System operates 11 city bus routes, as well as the Ram Rush, a dedicated shuttle that moves students between the East and West Campuses of Albany State University. Most routes run hourly between 5:00 AM and 7:00 PM during weekdays, with service starting at 6:00 AM on Saturdays. The Ram Rush operates every 45 minutes from 6:45 AM to 9:40 PM. There is currently no Sunday service.⁶⁹

A.2.5 Hall Area Transit

Hall Area Transit operates the Gainesville Connection, a fixed-route bus system offering weekday service along six routes. Buses run hourly from 6:00 AM to 6:00 PM. In addition to their Mobility Plus ADA complementary service, Hall Area Transit uses Section 5311 funds to operate a Dial-a-Ride service, offering the general public curb-to-curb service within Hall County.⁷⁰

A.2.6 Bartow County Transit

Bartow Transit offers weekday demand-response public transit throughout Bartow County and will also transport passengers to Rome in Floyd County or Acworth in Cobb County for a slight fare increase. Riders may transfer to CobbLinc or Rome Transit. Reservations must be made one day in advance. Service expansions are being considered for three fixed-route bus lines, along with a commuter bus service offering residents transportation to Midtown and Downtown Atlanta, plus a route to Hartsfield-Jackson Atlanta International Airport.⁷¹

A.2.7 Liberty Transit

Liberty Transit offers three fixed-routes serving Hinesville, Ft. Stewart, Walthourville, and Flemington. Buses run weekdays from 6:00 AM to 7:40 PM. Weekend service is not currently offered. Liberty Transit also offers curb-to-curb paratransit service.⁷²

A.3 Small Urban Ridership

Table 23 shows the FY 2017 ridership by mode for Georgia's Small Urban Systems.

Table 23: Ridership by Mode for Small Urban Systems, 2017

Agency	Bus	Demand Response	Total
Albany Transit System	642,719	13,007	655,726
Athens Transit System	1,553,282	6,818	1,560,100
Bartow Transit	-	37,241	37,241
Hall Area Transit	137,409	-	137,409
Liberty Transit	19,912	-	19,912
Macon-Bibb County Transit Authority	816,194	31,790	847,984
Rome Transit Department	1,094,830	23,571	1,118,401

Source: National Transit Database

A.4 Small Urban Vehicle Inventory

Table 24 shows the FY 2017 revenue vehicle inventory totals for Georgia's Small Urban Systems.

Table 24: Revenue Vehicle Inventory for Small Urban Systems, 2017

Agency	Buses	School Buses	Cutaways
Albany Transit System	13	-	-
Athens Transit System	31	-	6
Bartow Transit	-	-	10
Hall Area Transit	-	-	15
Liberty Transit	8	-	1
Macon-Bibb County Transit Authority	18	-	24
Rome Transit Department	15	33	7

Source: National Transit Database

A.5 Large Urban Systems

A.5.1 MARTA

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the state's largest public transit operator. The MARTA service area reaches over 2 million people in Fulton, DeKalb, and Clayton counties. MARTA operates over 91 bus routes, covering more than 1,000 route-miles. Buses run from 5:00 AM to 1:00 AM on weekdays and from 6:00 AM to 1:00 AM on weekends. In 2017, MARTA buses provided more than 57 million unlinked passenger trips. The bus system also serves five MARTA-operated Park-and-Ride lots.⁷³

MARTA's heavy rail system contains 38 stations and 47.6 miles of track. Service runs from 4:45 AM to 1:00 AM on weekdays and 6:00 AM to 1:00 AM on weekends. During peak service, trains run every ten minutes. In 2017, MARTA provided over 68 million unlinked heavy rail trips.

MARTA uses the Breeze Card fare collection system, a stored value system that is interoperable with other metro-Atlanta public transit systems.

A.5.2 Chatham Area Transit

Chatham Area Transit (CAT), serving the metropolitan Savannah area, is Georgia's second largest public transit provider. CAT offers fixed-route bus service between 5:00 AM and 1:00 AM Monday through Saturday, and 6:00 AM to 9:00 PM on Sundays. CAT operates 15 local bus routes and an express shuttle to Savannah-Hilton Head International Airport. The "dot" is a free circulator operating on two routes in historic Downtown Savannah.⁷⁴ CAT provided 3,168,439 unlinked bus trips in 2017.

In addition to fixed-route buses, CAT operates Georgia's only passenger ferry service. Four ferryboats operate between downtown Savannah and the Savannah International Trade and Convention Center on Hutchinson Island. This free service provided 665,162 trips in 2017.

A.5.3 Cherokee Area Transportation System

The Cherokee Area Transportation System (CATS) provides countywide demand-response transit, as well as fixed-route bus service within the City of Canton. Both demand-response and the Canton fixed-route service operate Monday to Friday from 8:00 AM to 4:00 PM. Adult fares are \$1.25 for fixed-route and \$1.50 for demand-response, with discounted fares available for seniors and children. In 2017, CATS provided 21,684 fixed-route trips and 49,939 demand-response trips.

A.5.4 CobbLinc

CobbLinc provides fixed-route bus service within Cobb County, as well as commuter service to Downtown and Midtown Atlanta.⁷⁵ CobbLinc uses the Breeze card system, integrating their fare system with that of MARTA and other metro Atlanta providers. CobbLinc operates eight local bus routes and three FLEX zone routes, which offer curb-to-curb service with an advance reservation.

CobbLinc's six commuter bus routes use over-the-road buses to provide peak-direction transportation to and from Downtown and Midtown Atlanta. In 2017, CobbLinc provided 333,287 commuter trips.

A.5.5 Xpress

Georgia's State Road and Tollway Authority (SRTA) and the Georgia Regional Transportation Authority (GRTA) jointly operate the Xpress system of commuter buses, offering peak-direction service in the Metro Atlanta area. Xpress buses serve Clayton, Cherokee, Cobb, DeKalb, Douglas, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale counties.

Of the 25 Xpress routes, most serve Downtown or Midtown Atlanta, though four routes terminate at Perimeter Center in Sandy Springs, one route terminates at the Chamblee MARTA heavy rail station, and another finishes its route at the Lindbergh Center MARTA station.⁷⁶ Xpress buses provided 1,626,252 trips in 2017. Xpress uses the shared Breeze Card system.

As a commuter-oriented system, GRTA offers supplementary service to the Xpress bus network, such as the Guaranteed Ride Home program. By eliminating the worry of getting stranded if the workday runs long, this program increases the flexibility of the Xpress service and encourages commuters to use the service.

A.5.6 Gwinnett County Transit

Gwinnett County Transit (GCT) operates six fixed-route bus lines, which provided 1,035,561 trips in 2017. Four of these routes provide service within Gwinnett County itself, while two provide a connection to the Doraville MARTA heavy rail station in DeKalb County. Most bus routes operate weekdays from 5:30 AM to 10:00 PM, with a reduced schedule on Saturdays. There is no Sunday service.

GCT also operates five weekday commuter bus routes. Three provide service to downtown Atlanta from various Gwinnett locations; one provides service to the Center for Disease Control (CDC) and Emory University Campus in DeKalb County. Finally, GCT operates a "reverse commute" route from downtown Atlanta to the Sugarloaf Mills Park and Ride. GCT uses the Breeze Card system and offers real-time bus tracking through their website or the My Stop app. These commuter buses provided 376,517 trips in 2017.

GCT recently completed a demand-response microtransit pilot in Snellville. This free pilot service provided door-to-door, demand-response service through a mobile app. Unlike traditional demand-response public transit, appointments do not need to be made a day in advance, greatly increasing the flexibility of the service.⁷⁷

Gwinnett County voters recently defeated a referendum aimed at joining the MARTA system. GCT will continue operation for the immediate future.

A.5.7 Columbus METRA Transit System

METRA operates ten bus routes in the Columbus-Muscogee County area, providing service throughout the city and to Fort Benning. Buses run Monday through Saturday from 6:00 AM to 9:00 PM. METRA also operates paratransit in this area.⁷⁸ METRA provided 1,219,938 unlinked passenger trips in 2017.

A.5.8 Augusta Public Transit

The consolidated government of Augusta-Richmond County operates Augusta Public Transit (APT). Nine bus routes serve the urbanized Augusta area. Service time varies for each route, but weekday service is generally offered from around 6:00 AM to 8:00 PM. Eight routes offer Saturday service, and one route also offers Sunday service on a reduced timetable.⁷⁹ In 2017, APT provided 722,585 passenger trips. In the rural parts of Richmond County, Augusta Public Transit operates Section 5311 demand-response transit.

A.5.9 Connect Douglas

Formerly Douglas Rideshare, Connect Douglas operates commuter vanpools serving 37 locations in the metro Atlanta area, plus vanpools to Carrollton and Anniston, Alabama.⁸⁰ Connect Douglas also offers a carpool matching service and curb-to-curb paratransit for senior and disabled individuals. Connect Douglas is in the process of launching fixed-route bus service in Douglasville that will also offer connections to CobbLinc and MARTA. Service is projected to begin in 2019.

A.5.10 Henry County Transit

Henry County Transit (HCT) operates curb-to-curb demand-response service inside Henry County from 6:00 AM to 6:00 PM on weekdays. HCT also operates a single weekday fixed-route that runs between the Fairview Library and the GRTA/SRTA Xpress Park and Ride at John Alexander Memorial Park.⁸¹ Because HCT operates fewer than 30 vehicles in full service, the agency qualifies as an NTD Reduced Reporter.

⁶⁶ Athens Transit System 2019
⁶⁷ Rome Transit Department 2019
⁶⁸ Macon-Bibb County Transit Authority 2019
⁶⁹ Albany Transit System 2019
⁷⁰ Hall Area Transit 2019
⁷¹ Bartow County Transit
⁷² Liberty Transit 2019
⁷³ MARTA 2019

⁷⁴ Chatham Area Transit 2019
⁷⁵ CobbLinc 2019
⁷⁶ GRTA 2019
⁷⁷ Gwinnett County Transit
⁷⁸ METRA 2019
⁷⁹ Augusta Public Transit 2019
⁸⁰ Connect Douglas 2019
⁸¹ Henry County Transit

A.6 Large Urban Ridership

Table 25 shows the FY 2017 ridership by mode for Georgia's Large Urban Systems. Demand-response numbers represent trips made by ADA-comparable paratransit services. For Augusta Transit, Cherokee Area Transportation System, and Henry County Transit, these numbers also include ridership for demand-response transit offered in these areas.

Table 25: Ridership by Mode for Large Urban Systems, 2017

Agency	Bus	Demand Response	Commuter Bus	Heavy Rail	Ferry Boat	Vanpool
Augusta Transit	696,145	-	-	-	-	-
Chatham Area Transit	3,168,439	980,468	-	-	665,162	-
Cherokee Area Transportation System	21,684	-	-	-	-	-
CobbLinc	2,637,771	64,653	333,287	-	-	-
Columbus METRA	1,164,199	55,739	-	-	-	-
Connect Douglas	-	18,246	-	-	-	80,767
Gwinnett County	1,035,561	25,059	376,517	-	-	-
MARTA	57,460,309	687,537	-	68,280,860	-	-
Xpress (GRTA/ SRTA)	-	-	1,626,252	-	-	-

Source: National Transit Database

A.7 Large Urban Vehicle Inventory

Table 26 shows the FY 2017 revenue vehicle inventory totals for Georgia's Large Urban Systems.

Table 26: Revenue Vehicle Inventory for Large Urban Systems, 2017

Agency	Buses	Cutaways	Over-the-Road Buses	Articulated Buses	Vans	Heavy Rail EMUs	Streetcars	Ferry-boats
Augusta Public Transit	18	-	-	-	-	-	-	-
Chatham Area Transit	65	28	-	-	15	-	-	4
Cherokee Area Transportation System	-	16	-	-	-	-	-	-
CobbLinc	62	30	34	-	-	-	-	-
Columbus METRA	29	10	-	-	4	-	-	-
Connect Douglas	-	4	-	-	66	-	-	-
Gwinnett County	43	-	32	-	-	-	-	-
Henry County Transit	-	24	-	-	-	-	-	-
MARTA	713	117	-	18	-	338	4	-
Xpress (GRTA/ SRTA)	-	-	151	-	-	-	-	-

Source: National Transit Database

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Appendix B: Park-and-Ride Lot Details

Table 27 provides a list of active Park-and-Ride lots in the State of Georgia. *ND* indicates that no data was available for that lot's number of parking spaces.

Table 27: Active Park-and-Ride Lots in Georgia

County	City	Lot Name / Location	Parking Spaces	Park-and-Ride Provider
Baldwin	Milledgeville	Williams Park	20	GDOT
Bartow	Adairsville	SR 3 & MP 29	20	GDOT
Bleckley	Cochran	SR 87 Bypass	70	GDOT
Brantley	Hoboken	SR 15 & SR 50	19	GDOT
Brantley	Hortense	SR 32 & SR 23	15	GDOT
Brantley	Nahunta	Brantley County Senior Citizen Center	40	GDOT
Brooks	Quitman	Farmer's Market, SR 38	25	GDOT
Bryan	Ellabell	I-16 & SR 30	35	GDOT
Bulloch	Brooklet	SR 67 & SR 47	24	GDOT
Bulloch	Statesboro	SR 26	30	GDOT
Carroll	Carrollton	SR 166 & Northside	65	GDOT
Carroll	Temple	I-20 & SR 21	15	GDOT
Carroll	Villa Rica	I-20 & SR 61	160	GDOT
Charlton	Folkston	Charlton County Courthouse	<i>ND</i>	GDOT
Chatham	Port Wentworth	I-95 & SR 21	33	GDOT
Chatham	Savannah	Savannah Amtrak	<i>ND</i>	GDOT
Chatham	Savannah	I-95 & SR 204	28	GDOT
Cherokee	Canton	Bolling Park	<i>ND</i>	GRTA
Cherokee	Woodstock	Woodstock	<i>ND</i>	GRTA
Clarke	Athens	US 78/10 & Lexington Rd - Oconee Street Park and Ride	225	Athens Transit System
Clayton	Jonesboro	8488 Tara Blvd	588	GRTA

Clayton	Riverdale	6842 Lamar Hutchinson Pkwy	271	GRTA
Cobb	Acworth	Acworth	ND	CobbLinc
Cobb	Kennesaw	3019 George Busbee Kennedy	646	CobbLinc
Cobb	Marietta	800 South Marietta Pkwy	ND	CobbLinc
Cobb	Powder Springs	510 0 Powder Springs Rd	271	GRTA
Coweta	Newnan	Newnan Park and Ride	712	GRTA
Crisp	Cordele	SR 300 & S-0944	19	GDOT
Crisp	Cordele	SR 300 & I-75	19	GDOT
Dawson	Dawsonville	SR 53 & SR 400	30	GDOT
DeKalb	Atlanta	East Lake Station	611	MARTA
DeKalb	Atlanta	Edgewood/Candler Park Station	679	MARTA
DeKalb	Chamblee	Chamblee Station	1713	MARTA
DeKalb	Decatur	Avondale Station	823	MARTA
DeKalb	Decatur	Kensington Station	1946	MARTA
DeKalb	Doraville	Doraville Station	1231	MARTA
DeKalb	Lithonia	Panola Station	630	GRTA
DeKalb	Sandy Springs	Dunwoody Station	1048	MARTA
DeKalb	Stone Mountain	Indian Creek Station	2350	MARTA
DeKalb	Stone Mountain	Goldsmith	ND	MARTA
Dougherty	Albany	US-19/Liberty Expressway and SR-91	16	GDOT
Dougherty	Albany	US 82 & US 19/Slappeg Blvd	30	GDOT
Douglas	Douglasville	7500 Douglas Blvd	545	GRTA
Douglas	Douglasville	Douglas Multi Modal Center	ND	GRTA
Douglas	Lithia Springs	I-20 West & Thornton Road	116	Connect Douglas
Douglas	Winston	I-20 West & Post Road	78	Connect Douglas
Effingham	Guyton	City of Guyton	20	GDOT
Evans	Claxton	Courthouse St	28	GDOT
Forsyth	Cumming	Cumming 400	486	GRTA

Fulton	Alpharetta	GA 400 North Windward Parkway	502	MARTA
Fulton	Atlanta	Lindbergh Center Station	2907	MARTA
Fulton	Atlanta	Inman Park/Reynolds Town Station	366	MARTA
Fulton	Atlanta	Ashby Station	159	MARTA
Fulton	Atlanta	Hamilton E. Holmes Station	1436	MARTA
Fulton	Atlanta	West Lake Station	391	MARTA
Fulton	Atlanta	Brookhaven / Oglethorpe Station	1252	MARTA
Fulton	Atlanta	West End Station	537	MARTA
Fulton	Atlanta	Oakland City Station	337	MARTA
Fulton	Atlanta	Lakewood/Ft Mcpherson Station	1134	MARTA
Fulton	Atlanta	Vine City Station	27	MARTA
Fulton	Atlanta	Lenox Station	321	MARTA
Fulton	Atlanta	Medical Center Station	200	MARTA
Fulton	Atlanta	Barge Road Park & Ride	265	MARTA
Fulton	Atlanta	I-285 & Campbellton Rd	255	MARTA
Fulton	College Park	College Park Station	1971	MARTA
Fulton	East Point	East Point Station	927	MARTA
Fulton	Roswell	SR 400 & Mansell Rd	418	MARTA
Fulton	Sandy Springs	Sandy Springs Station	1050	MARTA
Fulton	Sandy Springs	North Springs Station	2325	MARTA
Fulton	Union City	Union City Park and Ride	420	MARTA
Gilmer	Ellijay	Craig St & SR 515	30	GDOT
Gordon	Resaca	US 41 & SR 136	6	GDOT
Gwinnett	Buford	Hamilton Mill	917	GRTA
Gwinnett	Buford	I-985 & SR 20	714	Gwinnett County Transit
Gwinnett	Buford	Mall of Georgia	ND	GRTA
Gwinnett	Dacula	Dacula Park & Ride - Hebron Baptist Church	ND	GRTA

Gwinnett	Lawrenceville	Sugarloaf Mills	768	GRTA
Gwinnett	Norcross	I-85 & Indian Trail Rd	494	Gwinnett County Transit
Gwinnett	Snellville	US 78 & Hewatt Rd	163	GRTA
Gwinnett	Snellville	Snellville	ND	GRTA
Gwinnett	Stone Mountain	East Park Place	ND	GRTA
Haralson	Waco	I-20 & Hub Dr	26	GDOT
Henry	Hampton	Hampton Park and Ride	ND	GRTA
Henry	McDonough	McDonough Park and Ride	ND	GRTA
Henry	Stockbridge	Stockbridge Park and Ride (SR 138 & I-75)	402	GRTA
Henry	Stockbridge	BrandsMart Park and Ride	ND	GRTA
Jefferson	Wrens	US 1	24	GDOT
Johnson	Unincorporated Johnson County	SR 31 & Tucker Grove Church Rd	10	GDOT
Laurens	Cadwell	City of Cadwell	10	GDOT
Laurens	Dublin	US 80 & Rice Avenue	31	GDOT
Laurens	Dudley	I-16 & SR 338	13	GDOT
Laurens	East Dublin	SR 29 & US 319	20	GDOT
Lee	Albany	Ledo Rd & SR 50	30	GDOT
Lee	Leesburg	SR 32 & SR 19	15	GDOT
Lowndes	Valdosta	I-75 & SR 31	15	GDOT
Lowndes	Valdosta	I-75 & SR 38	26	GDOT
Lumpkin	Dahlonega	SR 115 & SR 60	110	GDOT
Mitchell	Pelham	Pelham City Lot	20	GDOT
Murray	Chatsworth	Market & 4th	29	GDOT
Newton	Covington	I-20 & US 278	107	GDOT
Paulding	Dallas	SR 61 & SR 120	167	GDOT
Paulding	Hiram	79 Metromount Road	300	GRTA
Pickens	Jasper	SR 53 & Mary St	160	GDOT
Pickens	Jasper/Tate	SR 108 & SR 515	22	GDOT
Polk	Cedartown	Philpot & Alpha	31	GDOT

Richmond	Augusta	I-520 & Wheeler Rd	20	GDOT
Richmond	Augusta	Broad St & Gordon Highway	44	GDOT
Rockdale	Conyers	West Conyers Park and Ride - Green Zone	419	GRTA
Rockdale	Conyers	East Conyers Park and Ride - Springfield Baptist Church	ND	GRTA
Rockdale	Conyers	I-20 East & West Ave	58	GDOT
Taylor	Reynolds	City of Reynolds	18	GDOT
Tift	Tifton	I-75 & SR 50	24	GDOT
Towns	Hiwassee	SR 2 & SR 288	27	GDOT
Turner	Ashburn	I-75 & SR 112	15	GDOT
Union	Blairsville	US 129 & US 76	49	GDOT
Washington	Sandersville	SR 24 & Jordan Mill Road	10	GDOT
Washington	Warthen	SR 15 & SR 102	11	GDOT
Wayne	Jesup	US 301 North	40	GDOT
Wilkinson	Gordon	SR 18 & SR 57	20	GDOT
Worth	Sylvester	City of Sylvester	15	GDOT
Sources: GDOT, GRTA, MARTA				

Appendix C: Transit Projects from Local and Regional Plans

C.1 Transit Projects Identified in MPO Plans

Table 28 shows planned or potential projects documented in Long Range Transportation Plans from MPOs across the state.

Table 28: Transit Projects Identified in MPO Plans

Service Area/Transit Provider	Project
Albany (DARTS)	Albany Multimodal Transportation Center Bus AVL, arrival information, and onboard cameras
Augusta Regional Transportation Study (ARTS)	Expand August weekday service (10 new buses) Upgrade transfer centers Regional express transit service
Brunswick Area Transportation Study	Three fixed bus routes
Cartersville-Bartow	Maintain transit service through 2040
Chattanooga Hamilton County RPA	CARTA Transit Center and Regional Transit Call Center/Mobility management
	CARTA bus and incline car replacements and additions
	Route 9 extension into North Georgia
	New local bus service through North Georgia to Eastgate Town Center and airport
	New local bus service connecting Fort Oglethorpe, GA to Downtown Chattanooga
	New local bus service connecting East Ridge to Downtown
Coastal Region (CORE)	New premium express route connecting Ringgold, GA with Downtown Chattanooga
	Vehicle Replacement / Expansion – Fixed Route
	Vehicle Replacement / Expansion – Paratransit
	Upgraded Farebox and Payment System

	Electric Vehicle Infrastructure
	Passenger Amenities
	Facility Improvement Project – ITC
	Facility Improvement Project – Gwinnett
	Vanpool Capital
	Park and Ride Capital
	Facility Construction – Ferry Dock
	Ferry Boat Construction
	Facility Construction – Ferry Maintenance
Dalton MPO	Maintain service levels, add paratransit, M-F 6:00 AM to 7:00 PM service, 30 minute service frequencies, five flex routes
Gainesville-Hall MPO	Transit service through 2040
Hinesville Area MPO	<i>No specific transit projects identified</i>
Macon-Bibb County Planning and Zoning	Purchase eight electric buses for Second St and Eisenhower Parkway Corridors
Madison Athens-Clarke Oconee Regional Transportation Study	Maintenance and Storage Facility for Athens Transit System Commuter rail between Athens-Atlanta
Rome/Floyd CPC	<i>No transit projects identified after FY2019</i>
Valdosta Lowndes MPO	Urban transit system through 2040 Rural transit through 2040
Warner Robins Area Transportation Study	Implement a transit system (no operations/capital breakdown provided)

Appendix D: Additional Employment Data

Table 29 shows Georgia's employment figures by industry for 2017. The figures are summarized by region of the state.

Table 29: Employment by Industry, 2017

Employment by Industry												
Industry	Atlanta Region	Central Savannah River Area	Coastal Georgia	Georgia Mountains	Heart of Georgia Altamaha	Middle Georgia	Northeast Georgia	Northwest Georgia	River Valley	Southern Georgia	Southwest Georgia	Three Rivers
Construction	93,742	7,434	10,267	13,468	3,538	5,836	9,982	9,653	4,246	5,767	4,321	7,461
Education and Health Services	280,737	26,313	36,208	32,225	10,161	28,968	22,798	31,200	18,085	13,448	16,647	22,446
Financial Activities	150,132	4,449	9,322	7,360	2,598	11,864	7,672	6,953	12,624	4,405	4,434	4,349
Information	86,419	2,092	2,778	2,339	570	1,926	1,522	1,937	1,345	2,303	992	1,964
Leisure and Hospitality	249,533	19,214	43,602	28,193	6,979	21,149	22,174	27,677	15,404	15,640	10,591	17,557
Manufacturing	112,829	15,850	24,927	41,092	12,287	16,843	26,360	66,763	13,101	17,787	14,763	31,598
Natural Resource, Mining, and Agriculture	1,568	2,049	797	1,950	2,684	3,051	1,770	1,350	2,150	4,735	5,428	570
Other Services	59,767	4,315	7,517	5,193	1,375	3,600	4,343	5,536	3,299	3,102	3,583	3,270
Professional and Business Services	428,156	24,162	25,852	26,726	5,849	18,896	18,613	17,906	13,802	9,956	12,909	18,153
Trade, Transportation and Utilities	496,082	30,812	58,892	48,631	18,197	33,979	43,924	53,544	21,793	31,280	25,307	31,440
Unclassified	4,960	159	389	494	85	197	291	387	144	129	121	261
Government	255,152	38,999	50,071	33,175	21,244	47,119	40,659	38,174	27,739	31,218	26,707	26,834
Total	2,219,089	174,556	270,624	240,850	85,570	193,430	200,113	261,079	131,448	140,990	125,802	165,902
Source: Georgia Department of Labor – Area Labor Profile, 3rd Quarter of 2017												

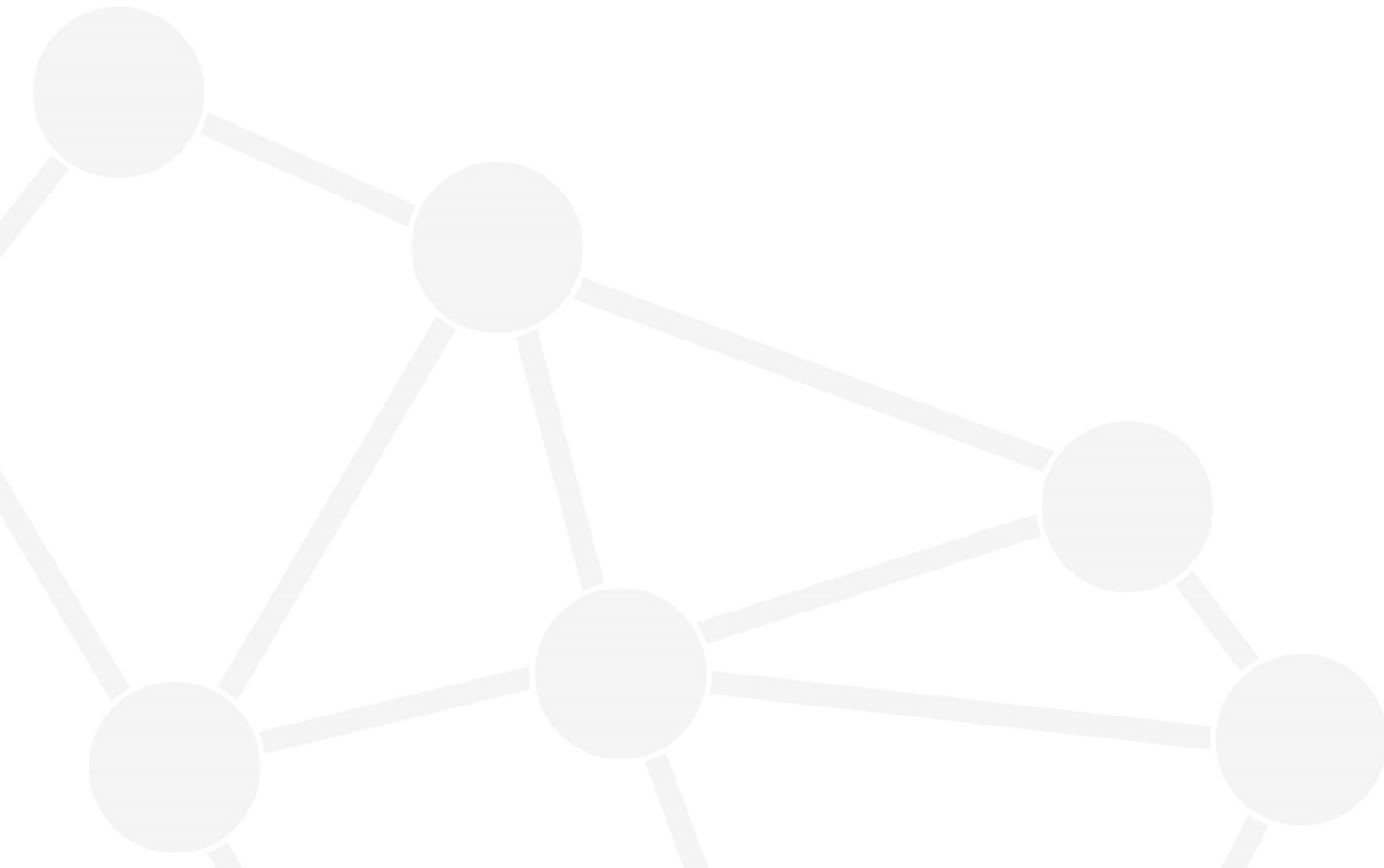
Table 30 shows the ten largest employers in each region, listed alphabetically. Of the largest employers, medical industry employers account for 26% of the top employers, manufacturing/supplier firms comprise 14%, followed closely by Walmart/Retail companies with 13%.

Table 30: Largest Employers by Region, 2018

Ten Largest Employers by Region											
Atlanta Region	Central Savannah River Area	Coastal Georgia	Georgia Mountains	Heart of Georgia Altamaha	Middle Georgia	Northeast Georgia	Northwest Georgia	River Valley	Southern Georgia	Southwest Georgia	Three Rivers
Childrens Healthcare of Atlanta	Bechtel Power Corp	Candler Hospital	Fieldale Farms Corporation	Claxton Poultry	Blue Bird Body Company	(Piedmont) Athens Regional Medical Center	Engineered Floors	AFLAC	Chaparral Boats	Albany State University	Home nurse
Delta Air Lines	Doctors Hospital of Augusta	Georgia Southern University	Ingles Markets, Inc.	Crider	Frito-Lay	Bed Bath and Beyond	Floyd Medical Center	Columbus State University	Coffee Regional Medical Center	Ambassador Personnel	Kia Motors Manufacturing Georgia
Emory Healthcare, Inc.	Fluor Maintenance Services	Southeast Georgia Health System	Northeast Georgia Medical Center	Fairview Park Hospital	GEICO	Caterpillar	Mohawk Carpet Distribution	Pratt & Whitney Aircraft	Data Software Services	Archibold Medical Center	Piedmont Newnan Hospital
Emory University	Georgia Regents University	Gulfstream Aerospace Corp	Northside Hospital	Georgia Department of Corrections	Georgia Department of Corrections	Hire Dynamics	Mount Vernon Mills	St Francis Health	Georgia Department of Corrections	Equity Group	Southwire Company
Northside Hospital	Management Analysis & Utilization	Gulfstream Services Corporation	Pilgrim's Pride Corporation	Meadows Regional Medical Center	Coliseum Health System	Pilgrim's Pride Corporation	Redmond Regional Medical Center	Staffing Connection	Home Depot	Integra Business Alternatives	Surge Staffing
Publix Super Markets	Augusta University Medical Center	Savannah Marine Terminal	Publix Super Markets, Inc.	Rayonier Performance Fibers	Mercer University	St. Mary's Hospital	Roper Corporation	The Medical Center	Lowe's Home Centers	Phoebe Physician Group	Tanner Medical Center
The Kroger Company	Southern Nuclear	Savannah College of Art and Design	The Kroger Company	Southern Home Care Services	Perdue Farms Incorporated	The Kroger Company	Shaw Industries Group	TSYS Campus	Pcc Airfoils	Phoebe Putney Memorial Hospital	University of West Georgia
United Parcel Service	Textron	Savannah Health Services	University of North Georgia	Southern Nuclear	The Kroger Company	University of Georgia	Shaw Industries	Tyson Farms	Pilgrim's Pride Corporation	Sanderson Farms	Walmart

Walmart	University Home Health in Augusta	Sea Island Acquisitions	Victory Foods	Trane U.S.	Medical Center Navicent Health	Walmart	Toyo Tire, Inc.	Walmart	Valdosta State University	Tele-performance USA	Wellstar Health System
Wellstar Health System	Walmart	Walmart	Walmart	Walmart	Walmart	Anthem Blue Cross Blue Shield	Walmart	Anthem Blue Cross Blue Shield	Walmart	Walmart	Yamaha Motors

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Appendix E: List of References

Applied Information. 2017. "See the Marietta Connected Vehicle Preemption & Priority System in Action." August 31, 2017. <https://appinfoinc.com/video-see-marietta-connected-vehicle-preemption-priority-system-action/>

Albany Transit System. 2019. "Routes and Maps". Accessed February 27, 2019. <https://www.albanyga.gov/about-us/city-departments/albany-transit-system/routes-and-maps>

Amtrak. 2019. "State Fact Sheets." Accessed March 19th, 2019. <https://www.amtrak.com/state-fact-sheets>

Athens-Clarke County Unified Government. 2018. "TSPLOST 2018 Projects." Accessed May 20, 2019. <https://www.accgov.com/7440/TSPLOST-2018-Projects>

Athens Transit System. 2018. "Athens-Clarke County Transit Development Plan Update. 2018." RS&H. Accessed March 3, 2019. <https://www.accgov.com/DocumentCenter/View/45752/Athens-Clarke-County-Transit-Development-Plan?bidId=>

Athens Transit System. 2019. "Services and Hours." Accessed February 27, 2019. <https://www.athensclarkecounty.com/6136/Service-Hours>

Atlanta-region Transit Link Authority. 2019. "The ATL in 5 Parts." Accessed February 28, 2019. <https://atltransit.ga.gov/#76576>

Atlanta-region Transit Link Authority. 2018. "Atlanta-Region Transit Link Authority (ATL) Holds First Board Meeting: Board Adopts Bylaws and New Agency Logo." December 14, 2018. https://atltransit.ga.gov/wp-content/uploads/2018/12/ATL-Board-Press-Release_BoardMeeting.pdf

Augusta Public Transit. 2019. "Routes." Accessed February 27, 2019. <https://www.augustaga.gov/262/Routes>

Bartow County Transit. 2019. "Bartow County Transit." Accessed February 27, 2019. <http://www.bartowga.org/departments/transit/>

Brannen, Allison. 2019. "Electric buses to arrive on UGA campus." UGA Today. April 3, 2019. <https://news.uga.edu/electric-buses-to-arrive-on-campus/>

Cartersville-Bartow Metropolitan Planning Organization. 2017. "Bartow County Transit Development Plan: New Services Recommendations." AECOM. Accessed February 27, 2019. <http://www.bartowga.org/Bartow%20TDP%20New%20Services%20Memo.pdf>

CBS46. 2018. "Gov. Nathan Deal announces new \$100 million infrastructure plan as part of SR 400 Express Lanes project." CBS46. Accessed March 15, 2019. https://www.cbs46.com/traffic/gov-nathan-deal-announces-new-million-infrastructure-plan-as-part/article_d6aa406d-aa06-557f-a706-332506b94c51.html

Center for Transportation and the Environment. 2019. "Georgia State Road Tollway Authority (SRTA) Electric Bus Deployment." Accessed May 20, 2019. <http://www.cte.tv/project/srta-electric-bus-deployment/>

Jaffe, Eric. 2012. "The Secret to Tokyo's Rail Success." Citylab.com. May 18, 2012. <https://www.citylab.com/transportation/2012/05/secret-tokyos-rail-success/2044/>

Chatham Area Transit. 2019. "Current Schedules". Accessed February 27, 2019. <http://www.catchacat.org/maps-and-schedules/current-schedules/>

Chatham Area Transit. 2018. "Transit Asset Management Plan". Chatham Area Transit. Accessed March 3, 2019. <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/asset-management/118266/cattamplan.pdf>

Coastal Regional Commission. 2017. "2017 Annual Report & 2018 Personal Planner". Accessed July 1st, 2019. <http://www.crc.ga.gov/publications/annual/annualreport2017colorversion.pdf>

Coastal Regional Commission. 2018. "2018 Annual Report & 2019 Personal Planner". Accessed July 1st, 2019. <http://www.crc.ga.gov/publications/crccouncil/annual%20report%202018%20final.pdf>

Coastal Regional Commission. 2018. "Transportation Services." Coastal Regional Commission of Georgia. Accessed March 3, 2019. <http://www.crc.ga.gov/departments/trans/trans.html#>

CobbLinc. 2018. "Transit Asset Management Plan." WSP.

CobbLinc. 2019. "Routes and Schedules". Accessed February 27, 2019. <https://www.cobbcounty.org/transportation/cobblinc/routes-and-schedules>

Connect Douglas. 2019. "Connect Douglas: All Things Transportation". Accessed February 27, 2019. http://www.celebratedouglascounty.com/view/departments/view_dept/&cdept=11&department=Connect%20Douglas:%20All%20Things%20Transportation

Georgia Department of Transportation. 2018. "Statewide Connected Vehicles: Deployment Experience and Future Plans." 2018. Alan Davis, PE. Georgia Department of Transportation Accessed May 20, 2019.

<https://www.georgia.ashe.pro/ann/Tech%20Session%206B%20-GDOT%20Connected%20Vehicles-Plans%20&%20Progress.pdf>

DeKalb County. May 10, 2019. "Project Status Update." Atlanta-region Transit Link Authority. Accessed May 29, 2019. <https://atltransit.ga.gov/wp-content/uploads/2019/05/Combined-Committee-PowerPoint-5.10.19.pdf>

Florida Department of Transportation. 2017. "Florida's Transportation Tax Solutions, a Primer." Office of Comptroller. January 2017. https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/comptroller/pdf/gao/revmanagement/tax-primer.pdf?sfvrsn=f1eadaf7_0

Fulton County. February 2018. "Fulton County Transit Master Plan." Access May 28, 2019. http://www.fultoncountyga.gov/images/stories/2018-03-05_Fulton_County_Transit_Master_Plan_v2_For_Web_Viewing.pdf

GA-TIA.com. 2018. "Transportation Investment Act: Central Savannah River Project List." Accessed May 20, 2019. <http://www.ga-tia.com/Project/List/csra>

Garrow, Laurie Ph.D., Douthat, Thomas Ph.D., Nord, Anna, and Sara Douglass. 2018. "Funding Trends: Moving to New Funding Designations Based on Population Trends/Changes." Georgia Transit Association Conference presentation. December 6, 2018. Jekyll Island, GA.

Georgia Department of Labor. 2019. "Georgia Labormarket Explorer - Yearly Civilian Labor Force Estimates". Accessed March 23, 2019.

<https://explorer.gdol.ga.gov/gsipub/index.asp?docid=418>

Georgia Department of Revenue. 2016. "House Bill 170 Motor Fuel Changes." Georgia Department of Revenue. Accessed March 3, 2019. https://dor.georgia.gov/house-bill-170-motor-fuel-changes#field_related_links-486-1

Georgia Department of Revenue. 2018. "Georgia Department of Revenue Excise Tax Bulletin: State Excise Tax on Motor Fuel Sales Effective: January 1, 2019." Georgia Department of Revenue. November 30, 2018.

https://dor.georgia.gov/sites/dor.georgia.gov/files/related_files/document/LATP/Policy%20Bulletin/Bulletin%20-%20State%20Excise%20Tax%20Rate%20-%20Effective%20January%202019.pdf

Georgia Department of Revenue. "State Hotel-Motel – FAQ." Georgia Department of Revenue. Accessed March 15, 2019.

<https://dor.georgia.gov/state-hotel-motel-faq>

Georgia Department of Transportation. 2018. "Group Transit Asset Management Plan." AECOM. Accessed February 27, 2019.

<http://www.dot.ga.gov/InvestSmart/Transit/Documents/TAMP.pdf>

Georgia Department of Transportation. 2016. "2040 Statewide Transportation Plan / 2015 Statewide Strategic Transportation Plan". Planning Division, Georgia Department of Transportation. Accessed March 3, 2019.

<http://www.dot.ga.gov/InvestSmart/Documents/SSTP/SWTP-SSTP%20Reports/SWTPSSTP%20FINAL%20REPORT-00.pdf>

Georgia Department of Transportation. 2018. "2018 Statewide Strategic Transportation Plan". Planning Division, Georgia Department of Transportation. Accessed March 3, 2019.

<http://www.dot.ga.gov/InvestSmart/Documents/SSTP/Plan/2018SSTP-Final.pdf>

Georgia Department of Transportation. 2018. "Complete Streets Design Policy." In Design Policy Manual, edited by Michelle Pate, 9-1 to 9-36. Atlanta: Georgia Department of Transportation. Accessed March 15, 2019.

<http://www.dot.ga.gov/PartnerSmart/DesignManuals/DesignPolicy/GDOT-DPM.pdf>

Georgia Department of Transportation. 2015. "Georgia State Rail Plan". Planning Division, Georgia Department of Transportation. Accessed March 3, 2019.

<http://www.dot.ga.gov/InvestSmart/Rail/Documents/StateRailPlan/2015GeorgiaStateRailPlan-1-26-16.pdf>

Georgia Department of Transportation. 2018. "Group Transit Asset Management Plan." AECOM. Accessed February 27, 2019.

<http://www.dot.ga.gov/InvestSmart/Transit/Documents/TAMP.pdf>

Georgia Department of Transportation. 2018. "Statewide Transportation Improvement Program FY 2018-2021". Planning Division, Georgia Department of Transportation. Accessed March 3, 2019.

<http://www.dot.ga.gov/InvestSmart/Documents/STIP/FY18-21/FinalSTIP-FY18-21.pdf>

Georgia Department of Transportation. 2018. "2018 Statewide Strategic Transportation Plan." Planning Division, Georgia Department of Transportation. Accessed March 3, 2019.

<http://www.dot.ga.gov/InvestSmart/Documents/SSTP/Plan/2018SSTP-Final.pdf>

Georgia Department of Transportation. “Atlanta Regional Managed Lane System Plan.” Atlanta: Planning Division, Georgia Department of Transportation, 2010. Accessed March 15, 2019.

<http://www.dot.ga.gov/BuildSmart/Studies/ManagedLanesDocuments/FINALREPORT.pdf>

Georgia Department of Transportation. “Major Mobility Investment Program.” Accessed March 15, 2019.

<http://www.dot.ga.gov/IS/MMIP>

Georgia Department of Transportation. “SR 400 Express Lanes Fact Sheet.” Atlanta: Georgia Department of Transportation, 2019. Accessed March 21, 2019.

<http://www.dot.ga.gov/BuildSmart/Projects/Documents/MMIP/Projects/SR%20400%20Express%20Lanes/StateRoute400ExpressLanes.pdf>

Georgia Emergency Management Agency. 2017. “Georgia Emergency Operation Plan.” Page 8. Accessed February 28, 2019.

https://gema.georgia.gov/sites/gema.georgia.gov/files/related_files/document/ESF%201%20Transportation%20Annex%20Final.pdf

Georgia Emergency Management Agency. 2018. “Emergency Support Function 1 Annex Transportation.” Accessed February 28, 2019.

https://gema.georgia.gov/sites/gema.georgia.gov/files/related_files/document/ESF%201%20Transportation%20Annex%20Final.pdf

Georgia General Assembly. House. HB 511, 2018-2019 Regular Session. Introduced in House February 27, 2019.

<http://www.legis.ga.gov/legislation/en-US/Display/20192020/HB/511>

Georgia General Assembly. House. HB 930, 2017-2018 Regular Session. Introduced in House February 13, 2018.

<http://www.legis.ga.gov/legislation/en-us/display/20172018/hb/930>

Georgia Regional Transportation Authority. 2017. “Georgia Regional Transportation Authority.” Accessed February 28, 2019. <https://www.srta.ga.gov/georgia-regional-transportation-authority/>

Governor’s Office of Planning and Budget. 2019. “Population Projections.” Accessed March 20, 2019.

<https://opb.georgia.gov/population-projections>

Gwinnett County. July 2018. “Connect Gwinnett Transit Plan: Comprehensive Transit Development Plan Recommendations Report”. Accessed May 29, 2019.

https://www.gwinnettcounty.com/static/departments/transportation/pdf/Connect_Gwinnett_Recommendations_Report_102518.pdf

Gwinnett County Transit. 2019. “Test program for microtransit bus service concluded April 30.” Gwinnett County Transit. Accessed May 20, 2019.

<https://www.gwinnettcounty.com/web/gwinnett/home/stories/viewstory?story=Testprogramformicrotransitbusserv>

Hall Area Transit. 2019. “Hall Area Transit Bus Services.”

Accessed February 27, 2019. <https://www.gainesville.org/hall-area-transit>

Henry County Transit. 2019. “Transit – Henry County”. Accessed February 27, 2019. <http://www.co.henry.ga.us/Departments/S-Z/Transit-Department>

Horadam, Nathaniel. 2019. “Only transit investment—not tech hype—can solve Gwinnett’s transportation woes.

House Commission on Transit Governance and Funding. 2019. "Report of the Georgia House of Representatives: House Commission on Transit Governance and Funding (Draft)." January 2019 Draft. Georgia House of Representatives.

Huffman, Mark. "Georgia seeks sales tax revenue from Uber." Consumer Affairs, December 10, 2018. Accessed March 15, 2019. <https://www.consumeraffairs.com/news/georgia-seeks-sales-tax-revenue-from-uber-121018.html>

Inrix & TTI. 2015. "2015 Urban Mobility Scorecard." August 2015. David Schrank, Bill Eisele, Tim Lomax, Jim Bak. Inrix & Texas A&M Transportation Institute. Accessed May 20, 2019. <https://static.tti.tamu.edu/tti.tamu.edu/documents/mobility-scorecard-2015.pdf>

Jekyll Island Authority, 2016. "Jekyll Island Island-Wide Transportation System Feasibility Report." Jekyll Island Authority, The Carl Vinson Institute of Government. October 2016. Accessed May 20, 2019. <https://www.jekyllisland.com/jekyllislandwp/wp-content/uploads/2016/08/Jekyll-Island-Transportation-Report.pdf>

Kass, Arielle. "North metro Atlanta mayors propose east-west transit plan." Atlanta Journal-Constitution, February 14, 2019. Accessed March 15, 2019. <https://www.ajc.com/news/local-govt-politics/north-metro-atlanta-mayors-propose-east-west-transit-plan/SxJCXOuSvhPPX4chKLwRdM/>

Kile, Joseph. 2015. "Testimony: The Status of the Highway Trust Fund and Options for Paying for Highway Spending," Congressional Budget Office, June 18, 2015, p. 9, <https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/50297-TransportationTestimony-Senate.pdf>

Kirk, Robert, and William Mallett. 2018. "Funding and Financing Highways and Public Transit." Congressional Research Service. January 11, 2018. <https://fas.org/sqp/crs/misc/R44674.pdf>

Kuhn, Lindsay. 2016. "Georgia's Community Improvement Districts (CIDs)." Kuhn, Lindsay, Larson, Sarah, Bourdeaux, Carolyn. The Center for State and Local Finance, Georgia State University. June 24, 2016. https://gmanet.com/getmedia/5fdcc047-8efc-4221-aba3-4dc8315bae48/Georgias-Community-Improvement-Districts_June-2016.aspx

Liberty Transit. 2019. "Liberty Transit System Map." Accessed February 27, 2019. <https://www.cityofhinesville.org/DocumentCenter/View/2517/Transit-System-Map>

Macon.com. 2017. "You will barely hear these new buses as they travel Macon streets." Stanley Dunlap. October 4, 2017. <https://www.macon.com/news/local/article176928906.html>

Macon-Bibb County Transit Authority. 2019. "Schedules". Accessed February 27, 2019. <https://www.mta-mac.com/schedules.html>

MARTA. 2018. "More MARTA Board Vote." Accessed February 28, 2019. <https://www.itsmarta.com/more-marta-board-vote.aspx>

MARTA. 2019. "Bus Routes and Schedules". Accessed February 27, 2019. <https://www.itsmarta.com/bus-schedules.aspx>

MARTA. 2019. "Train Stations and Schedules". Accessed February 27, 2019. <https://www.itsmarta.com/train-stations-and-schedules.aspx>

METRA. 2019. "Bus Route Schedules". Accessed February 27, 2019. <https://www.columbusga.gov/metra/schedules.htm>

More MARTA. 2018. "Frequently Asked Questions." Accessed February 28, 2019.

[https://www.itsmarta.com/uploadedFiles/MARTA_101/Why_MA RTA/More_MARTA_FAQ%20\(1\).pdf](https://www.itsmarta.com/uploadedFiles/MARTA_101/Why_MA RTA/More_MARTA_FAQ%20(1).pdf)

Peach County. 2019. "Rural Transit Development Plan 2018-2022." Middle Georgia Regional Commission.

Rome Transit Department. 2019. "Main Line Transit Guide". Accessed February 27, 2019.

<https://www.romefloyd.com/departments/transit-department>

State Road and Tollway Authority. 2017. "About SRTA." Accessed February 28, 2019. <https://www.srta.ga.gov/about-srta/>

Tharpe, Wesley. 2018. "Georgia State Budget Overview for Fiscal Year 2019." Georgia Budget and Policy Institute. June 29, 2018. <https://gbpi.org/2018/georgia-state-budget-overview-fiscal-year-2019/#general-and-motor-fuel-funds>

U.S. Census Bureau. "2000 Census." Accessed March 3, 2019. <https://www.census.gov/data.html>

U.S. Census Bureau. "2010 Census." Accessed March 3, 2019. <https://www.census.gov/data.html>

U.S. Census Bureau, "2013-2017 American Community Survey 5-Year Estimates." Accessed March 24, 2019. <https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2017/5-year.html>

U.S. Census Bureau. "2006-2010 American Community Survey 5-Year Estimates." Accessed, March 23, 2019. <https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2010/5-year.html>

U.S. Census Bureau. "2008-2012 American Community Survey 5-Year Estimates." Accessed March 22, 2019.

<https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2012/5-year.html>

U.S. Census Bureau. "2017 North American Industry Classification System Manual." Accessed April 11, 2019.

https://www.census.gov/eos/www/naics/2017NAICS/2017_NAICS_Manual.pdf

U.S. Census Bureau "Geography Program: Urban and Rural" 2018. Accessed June 29, 2019.

<https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html>

U.S. Department of Transportation. 2009. "Assessing the Full Costs of Congestion on Surface Transportation Systems and Reducing Them through Pricing." Office of Economic and Strategic Analysis, U.S. Department of Transportation. February 2009.

<https://www.transportation.gov/sites/dot.gov/files/docs/Costs%20of%20Surface%20Transportation%20Congestion.pdf>

Weisbrod, Glen, Cutler, Derek, and Chandler Duncan. 2014. "Economic Impact of Public Transportation Investment | 2014 Update." Economic Development Research Group, Inc. (EDRG), American Public Transportation Association. May 2014.

<https://www.apta.com/resources/reportsandpublications/Documents/Economic-Impact-Public-Transportation-Investment-APTA.pdf>

Wickert, David. "Bill could mean transit expansion across metro Atlanta." Atlanta Journal-Constitution, February 13, 2018.

Accessed March 15, 2019. <https://www.ajc.com/news/state--regional-govt--politics/bill-could-mean-transit-expansions-across-metro-Atlanta/T6xNBUIuNXjb8nYCeeGPsm/>

Wickert, David. 2019. "Bill would boost Georgia transit spending by up to \$60 million." Atlanta Journal Constitution. February 27, 2019. <https://www.ajc.com/news/state--regional-govt--politics/bill-would-boost-georgia-transit-spending-million/ZvMd4BB0jCoh0yTuw6cz7I/>

Wickert, David. 2019. "Metro Atlanta Transit Plan Takes a Step Forward." The Atlanta Journal Constitution. May 23, 2019. <https://www.ajc.com/news/local-govt--politics/metro-atlanta-transit-plan-takes-step-forward/6WP8B8UnFSqmLKxix354NM/>

Xpress. 2019. "Routes." Accessed February 27, 2019. <https://www.xpressga.com/routes/>

Xpress. 2018. "Who we are." Accessed February 28, 2019. <https://www.xpressga.com/about/>