Destination2040

Gwinnett's Comprehensive Transportation Plan

EXISTING CONDITIONS

gwinnettcounty

February 2016

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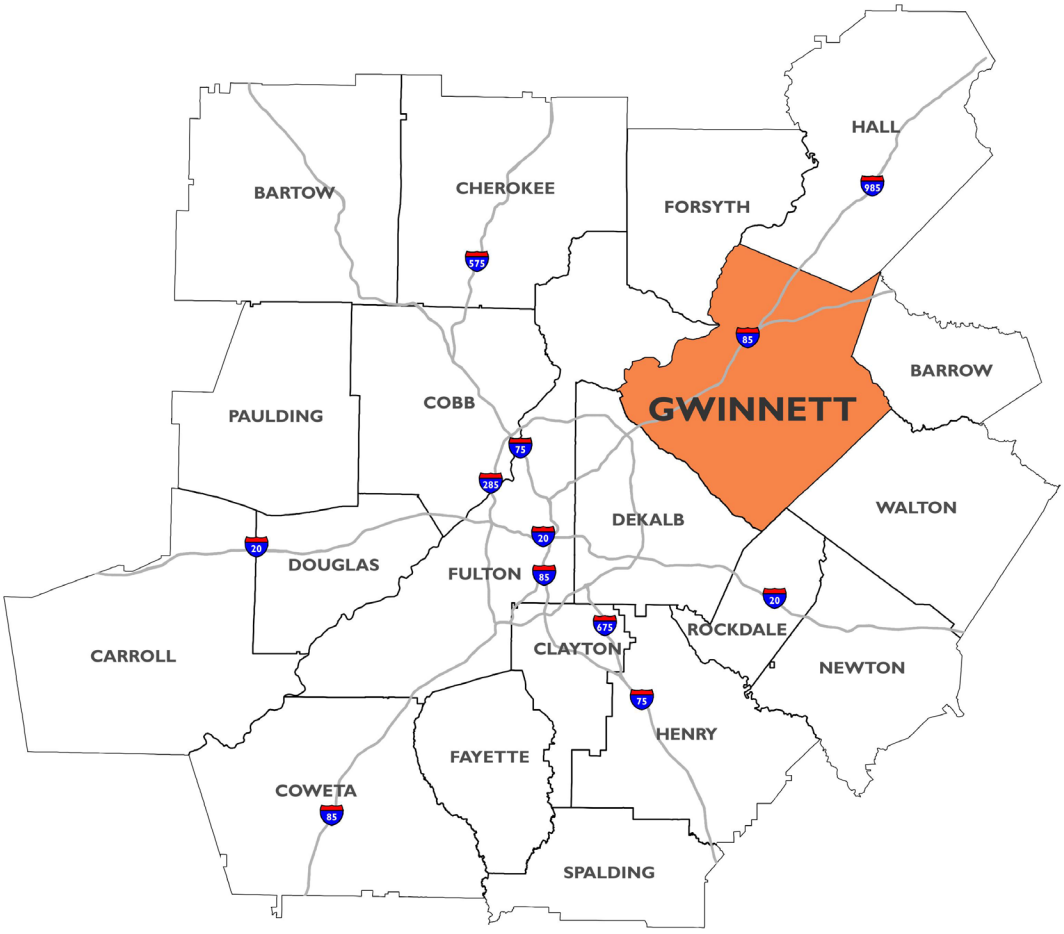
INTRODUCTION

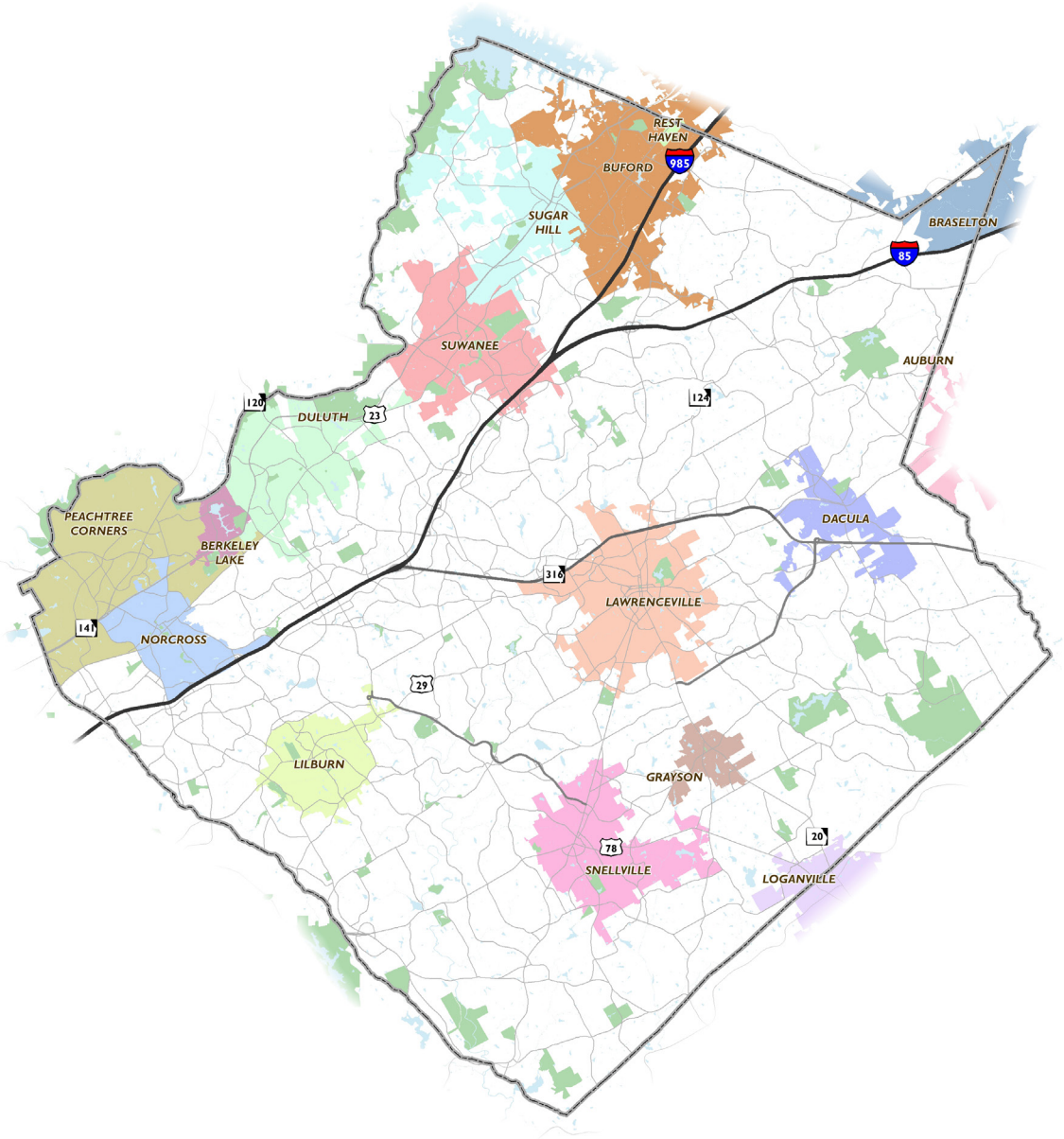
INTRODUCTION



WELCOME TO GWINNETT COUNTY!

Established by the Georgia State Legislature in 1818, Gwinnett County was named after Button Gwinnett, one of the signers of the Declaration of Independence. Gwinnett County is located approximately 30 miles northeast of Atlanta and is the second largest county in land mass (within the 10-county metro Atlanta region) at approximately 433 square miles. This includes a large amount of unincorporated lands as well as all or portions of 16 cities.

Included within this area are thousands of miles of roads, sidewalks, rail road tracks, and other transportation infrastructure that get people and goods to and from where they need to be. And, all of that infrastructure requires a lot of coordination and planning to make it run efficiently and ensure future effectiveness as the area grows and as needs evolve. That's where this document comes in!



This report is the first part of the Destination2040 plan, which is an update of the County's Comprehensive Transportation Plan.

A Comprehensive Transportation Plan, or CTP, serves as a roadmap for how a community would like to see their transportation networks develop to serve their current and future needs. Gwinnett County's CTP will focus on all modes of transportation, including roadways and bridges, transit, bicycle and pedestrian facilities, and freight as well as the Gwinnett County Airport. The resulting updated CTP, **Destination2040**, will set a direction for transportation in Gwinnett moving forward, with a horizon year of 2040.

To best prepare for our future, it is important to look at the changes that have occurred in Gwinnett County's population, employment, land use, and development since the adoption of the previous plan. Knowing what has happened or is happening can help the planning team guide the County to where it wants to be in the future, which will influence the overall development of the CTP. This evaluation is referred to as an existing conditions assessment, and this report is the documentation of those findings.

HOW TO REVIEW THIS DOCUMENT

A transportation system connects people with the places they need or want to be. Understanding transportation in Gwinnett County therefore includes understanding characteristics of the people who live and work there and the places they visit on a daily basis. The first two chapters provide introductory information about the plan as well as some relevant background information about the residents and employees of Gwinnett County, land uses and destinations within Gwinnett and the surrounding communities, and the current direction of the real estate market.

The third chapter provides some insight into where people within the County travel on a regular basis while the fourth chapter focuses specifically on the transportation network and modes studied including roadway/vehicular, transit, bicycle, pedestrian, freight, and air.

The following chapters of the report focus on related planning efforts, project implementation, and funding. Multiple previous plans from within Gwinnett County are considered in this CTP process. Likewise, the results of this CTP help to create not only short-term and long-term project lists and policies for Gwinnett specifically, but they also help the Atlanta Regional Commission, the metropolitan planning organization (MPO), determine regionally significant projects that should be included in the Atlanta Region's Plan. The Region's Plan provides opportunities for Gwinnett County to leverage local funding to gain additional state and federal funding for larger projects. With the ever-changing funding environment, it is important for us to understand what options exist and how best to position the County and its projects for those funds.

The final chapter of the Existing Conditions Report provides more detail on the process for a comprehensive transportation plan. The Existing Conditions Report lays the groundwork for the next step in the process, which is assessing the County's transportation needs, known as a Needs Assessment. Once the needs are identified, the planning team and community stakeholders can provide recommendations that will shape the County's future and will help it achieve its transportation goals. Those recommendations will make up the third installment of the CTP, which is the plan to help Gwinnett be where it wants to be in the year 2040. Hence, the name "Destination2040."

It is important to note that many of the conditions described in the Existing Conditions Report reflect a snapshot or moment in time. Some of these conditions may change significantly due to trends, policies, projects, and major investments already in place or underway. Thus, as with any quest for greatness, it's not all about the destination, and this planning process is no exception. How we get there is critical to the plan's success, so the journey is key to making sure Gwinnett plans for its transportation future in a meaningful and forward-thinking way. So, we'd like to ask you to...

WHO WE ARE

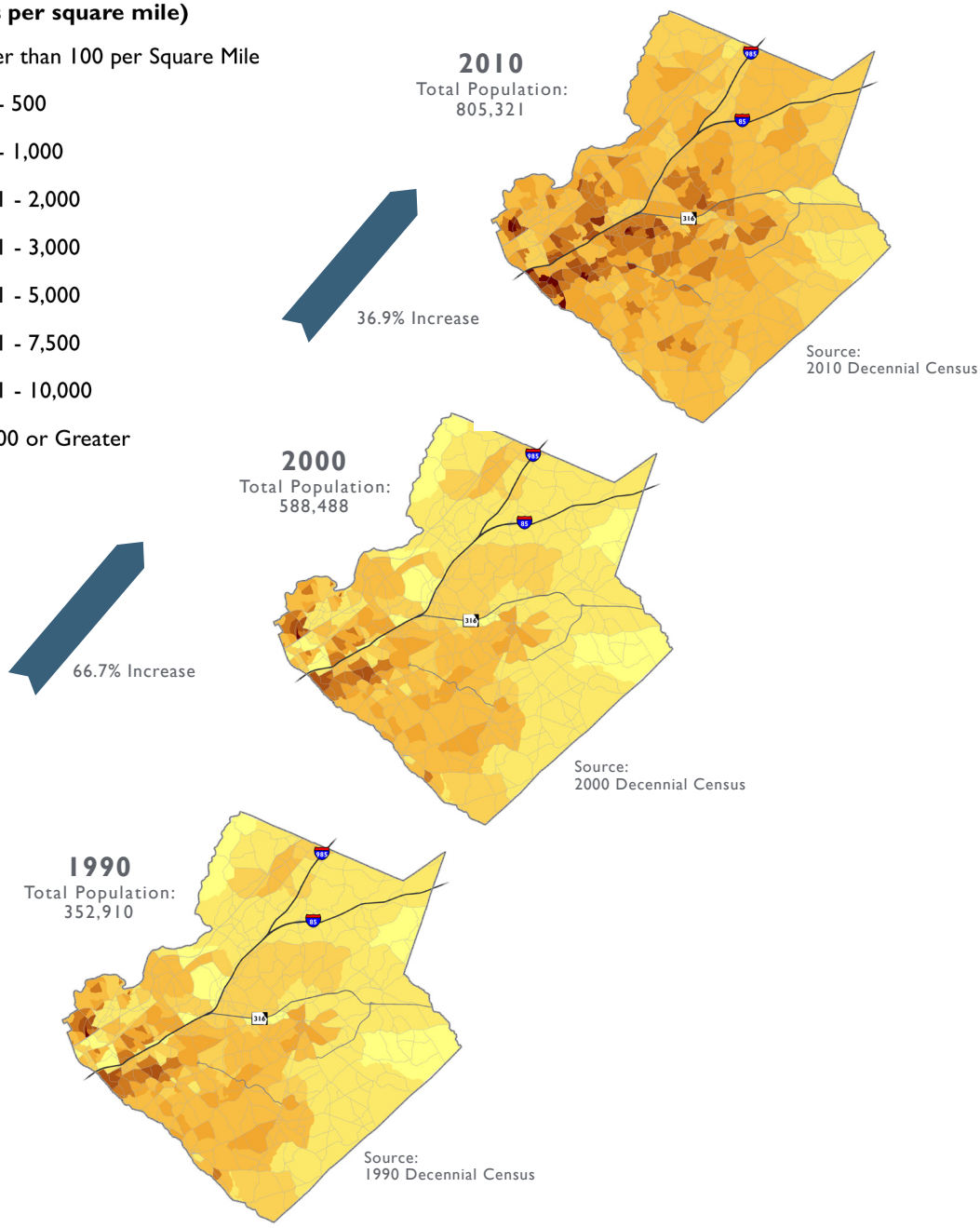
WHO WE ARE

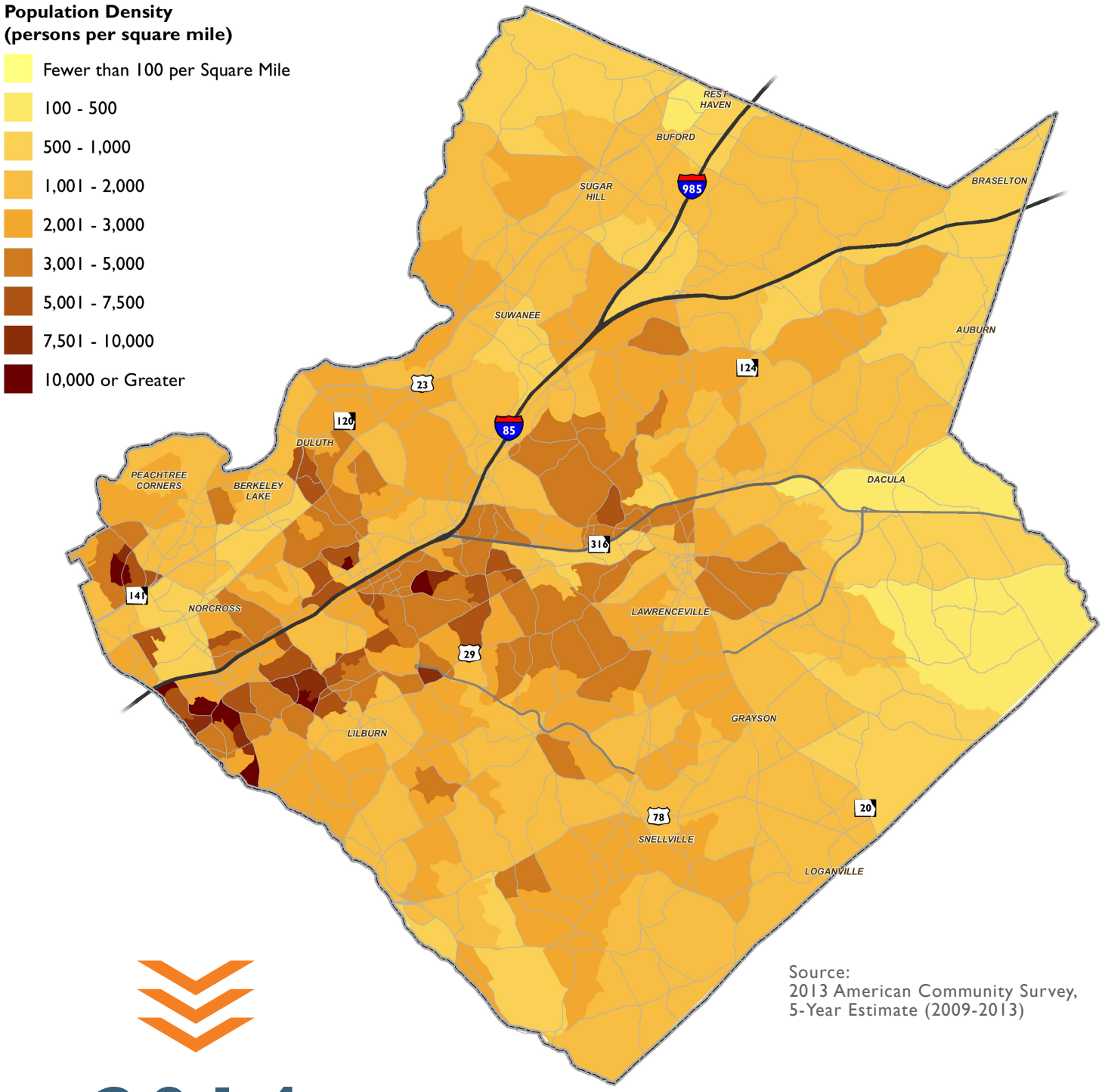
A GROWING POPULATION

Gwinnett has experienced exceptional population growth since 1990. Based on the Decennial Census, Gwinnett's population increased by 66.7% (235,538 persons) between 1990 and 2000. Between 2000 and 2010, Gwinnett's population increased yet again by 36.9% (216,873 persons). Population grew to the northeast with the highest densities predominantly along the I-85, SR 316, and SR 141 corridors.

Population Density
(persons per square mile)

- Fewer than 100 per Square Mile
- 100 - 500
- 500 - 1,000
- 1,001 - 2,000
- 2,001 - 3,000
- 3,001 - 5,000
- 5,001 - 7,500
- 7,501 - 10,000
- 10,000 or Greater





Source:
2013 American Community Survey,
5-Year Estimate (2009-2013)

2014

Population Estimate:

877,922

Source:
2014 Census Population Estimate

Gwinnett County in relation to Metro Atlanta:

- The County's population has outpaced regional population growth by a factor of five since 1970
- Gwinnett's population has increased tenfold in the past 40 years, while the population of the metro region doubled
- Gwinnett County has increased from 4% of Metro Atlanta's population in 1970 to 15% today

A CHANGING COMMUNITY

The largest population changes in Gwinnett County have been in minority groups, similar to population changes in the region and across the nation. In the span of 20 years from 1990 to 2010 the County's minority population grew from 10.6% to more than half or 56.0%, of the total population. This growth marks the change from 37,362 persons in 1990 to 451,005 persons in 2010. The largest areas of minority concentration are along the I-85 and SR 316 corridors and in the southern tip of the County.

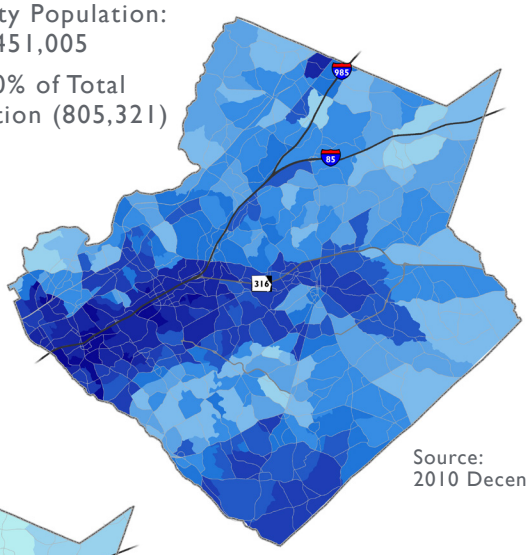
Percent Non-White, Hispanic or Latino

- Less than 10%
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40 - 50%
- 50 - 60%
- 60 - 70%
- 70 - 80%
- 80 - 90%
- Greater than 90%

2010

Minority Population: 451,005

56.0% of Total Population (805,321)

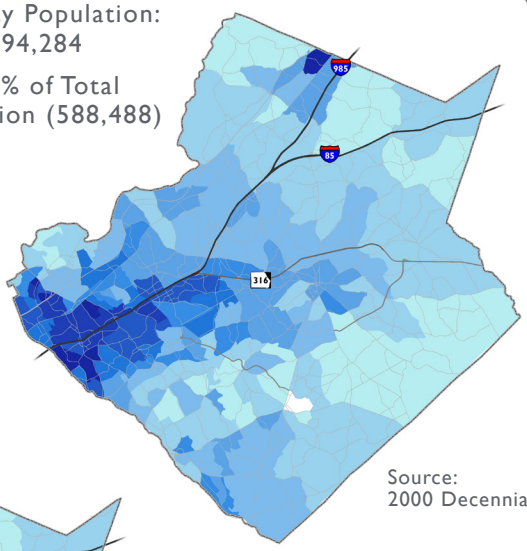


Source: 2010 Decennial Census

2000

Minority Population: 194,284

17.9% of Total Population (588,488)

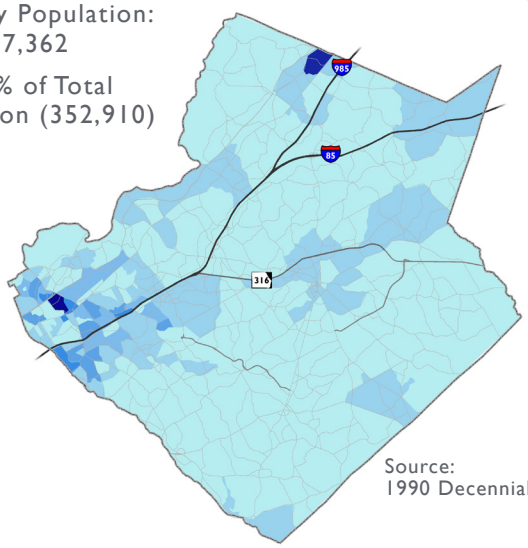


Source: 2000 Decennial Census

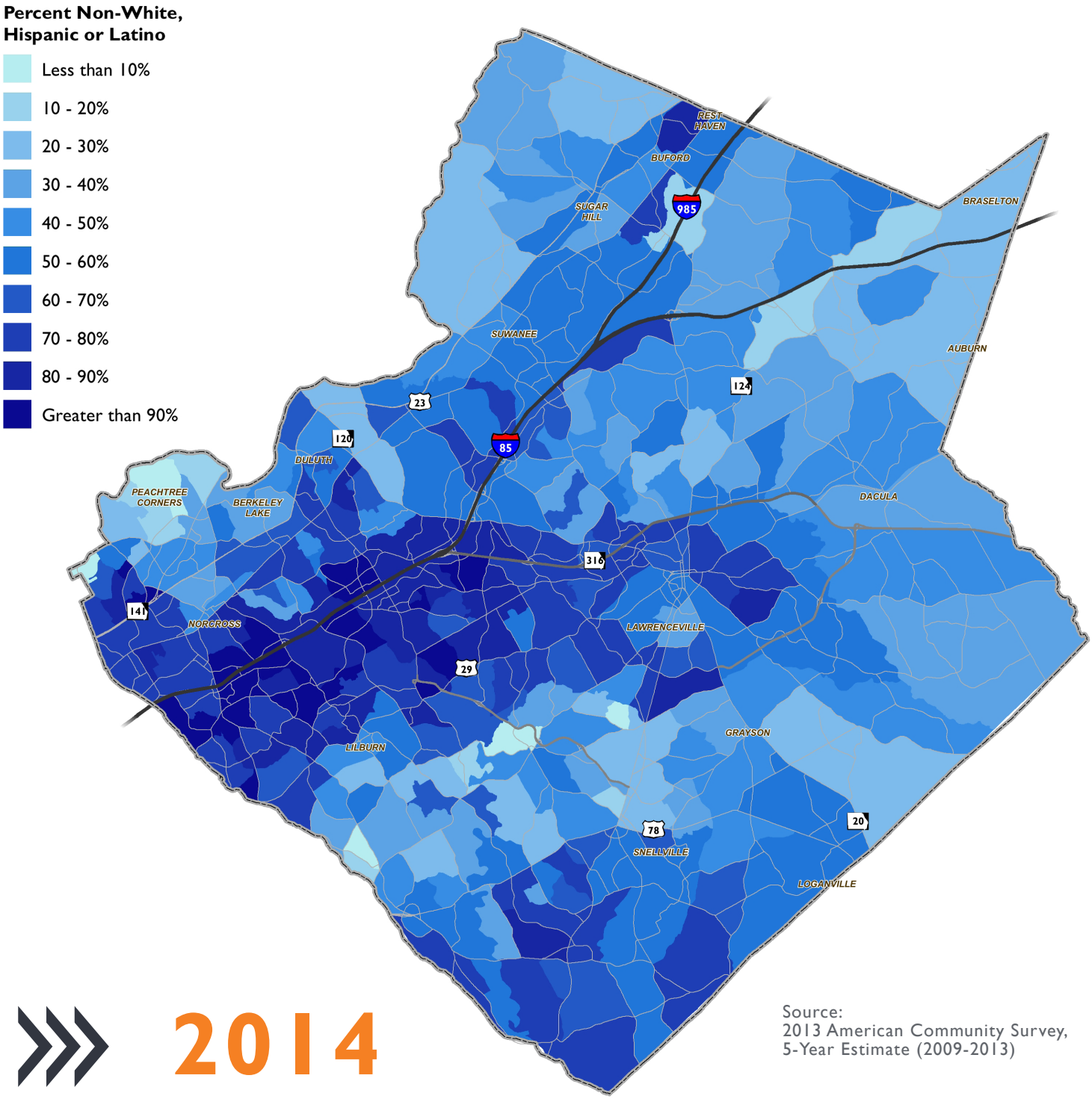
1990

Minority Population: 37,362

10.6% of Total Population (352,910)



Source: 1990 Decennial Census



Source:
2013 American Community Survey,
5-Year Estimate (2009-2013)

2014

Minority Population Estimate:

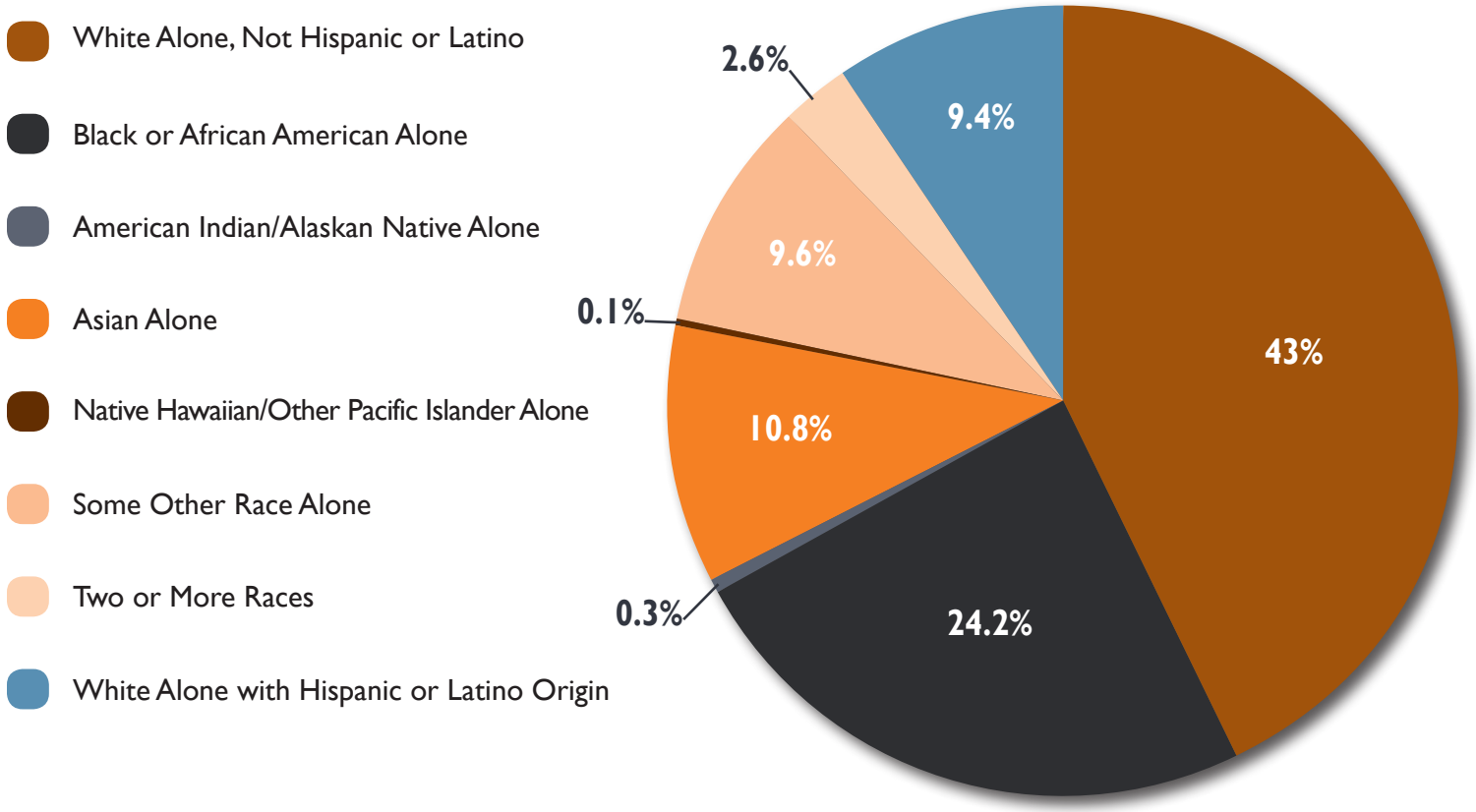
521,485

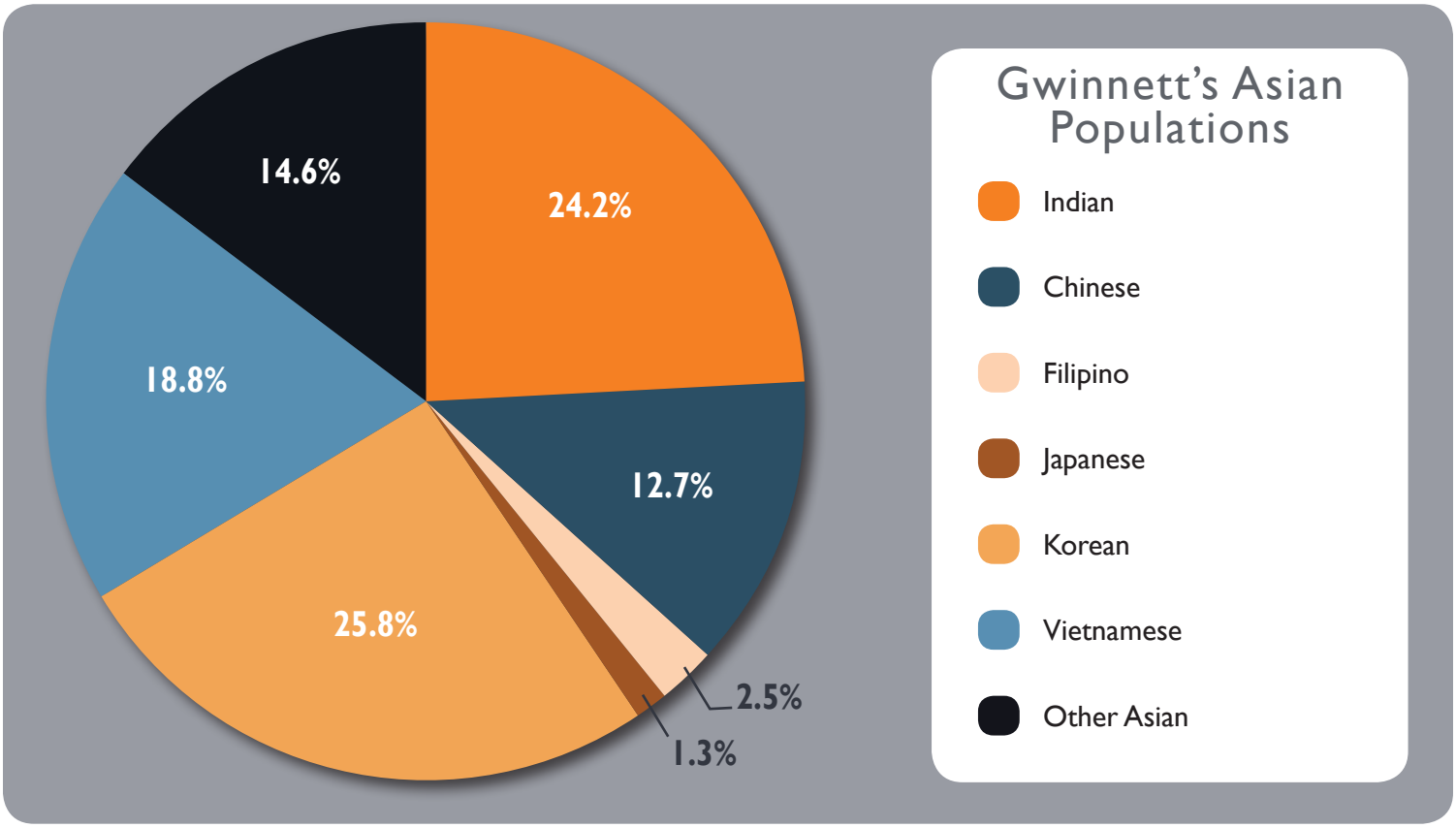
59.4% of Total Population (877,922)

Source: 2014 Census Population Estimate

Gwinnett is a racially and ethnically diverse county. As of the 2013 American Community Survey 5-year estimate, just under a quarter (24.2%) of the County's population is African American, and approximately a fifth (20.2%) of the population has a Hispanic or Latino ethnic background. Additionally, over 10% of the population is of Asian descent.

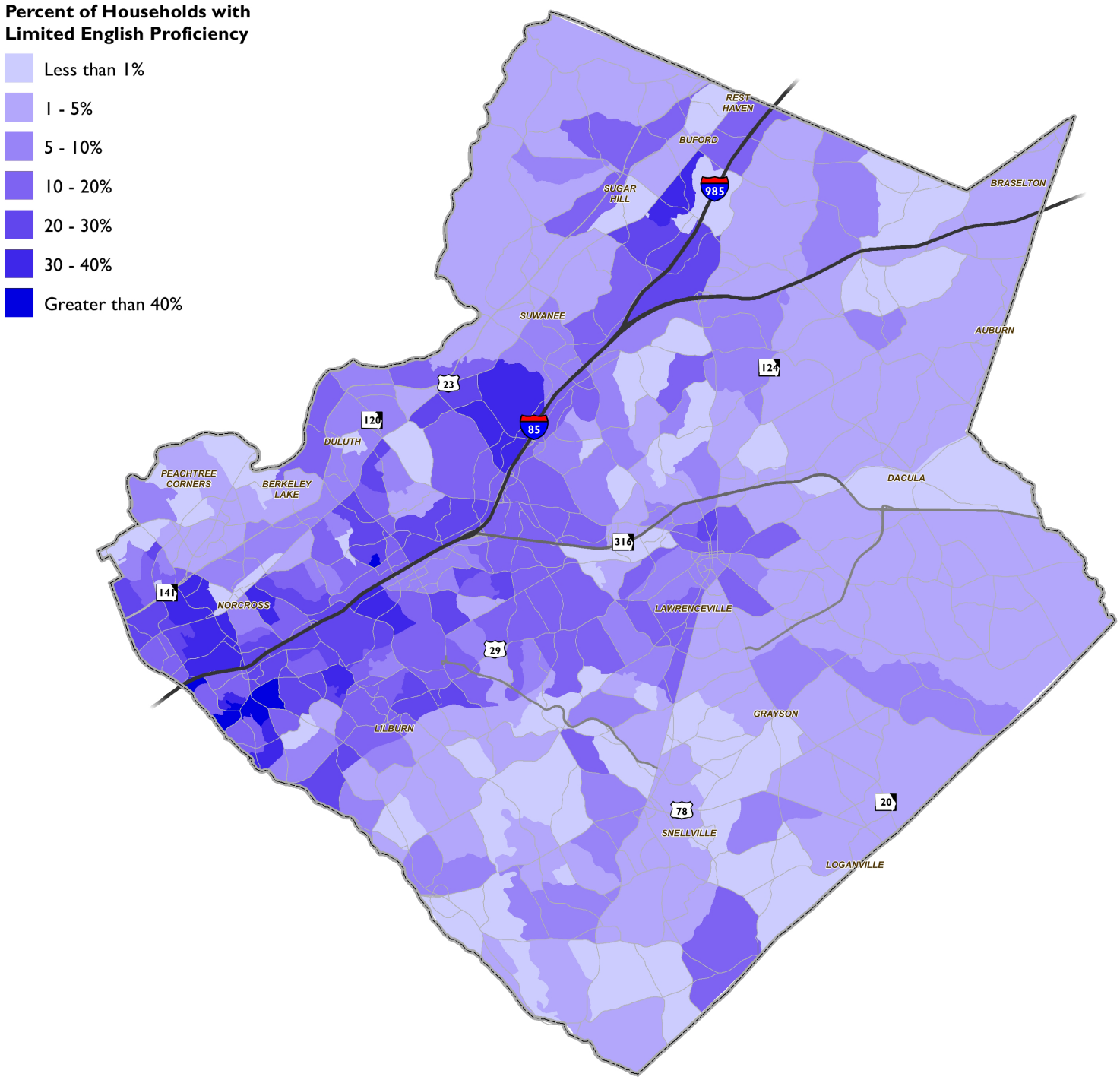
Race, Ethnicity, and Minority Populations





Limited English Proficiency

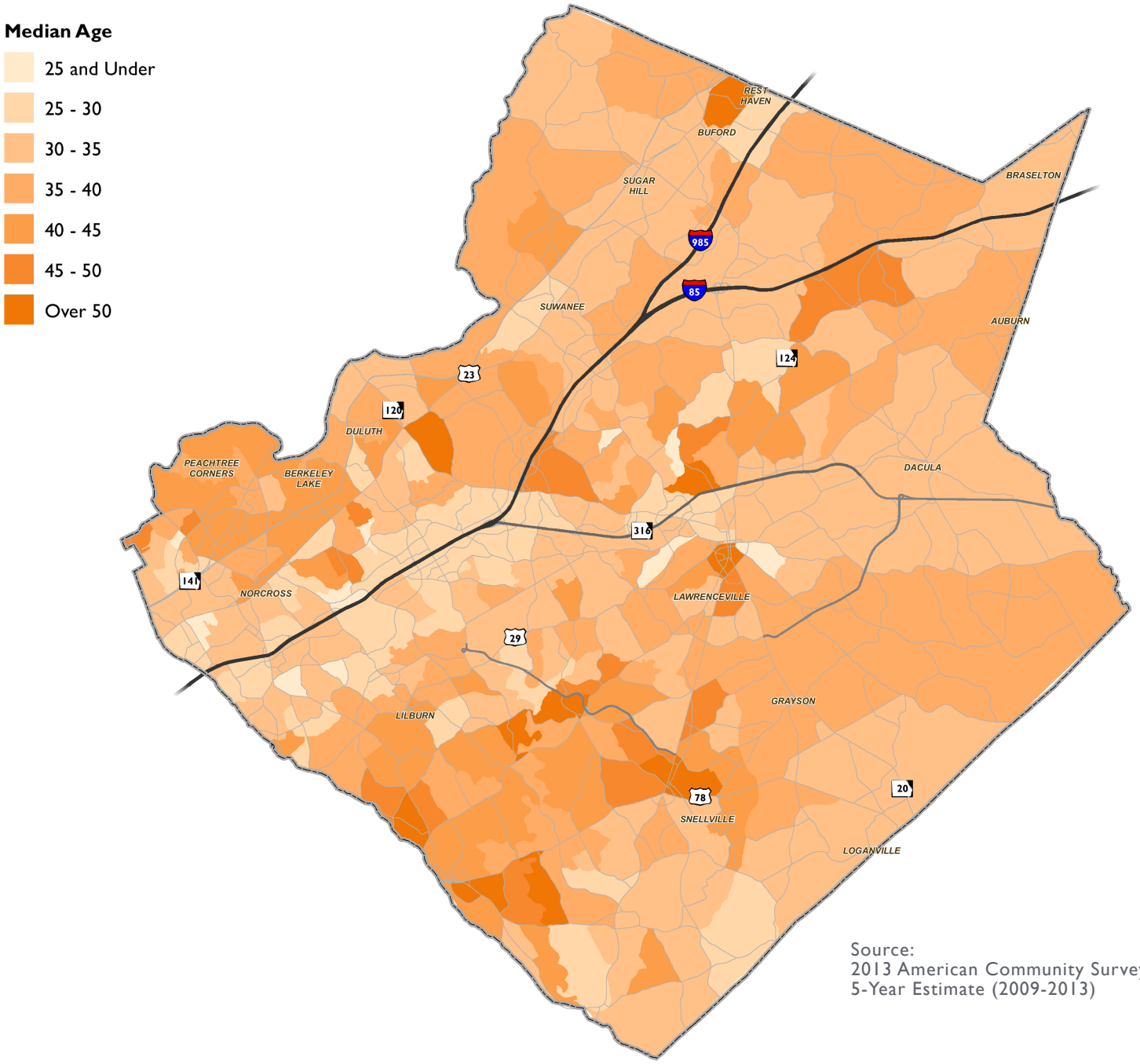
Populations with diverse ethnic and cultural backgrounds have grown tremendously since 1990, as noted in the previous section. The population ages 5 years and older with limited English proficiency who speak English less than "very well" includes approximately 15.2% of the total Gwinnett population. Areas with high concentrations of households that have limited English proficiency include geographies that flank the I-85 corridor in the southwest corner of the County and continue along I-85 to I-985.



TAKING A CLOSER LOOK

Age

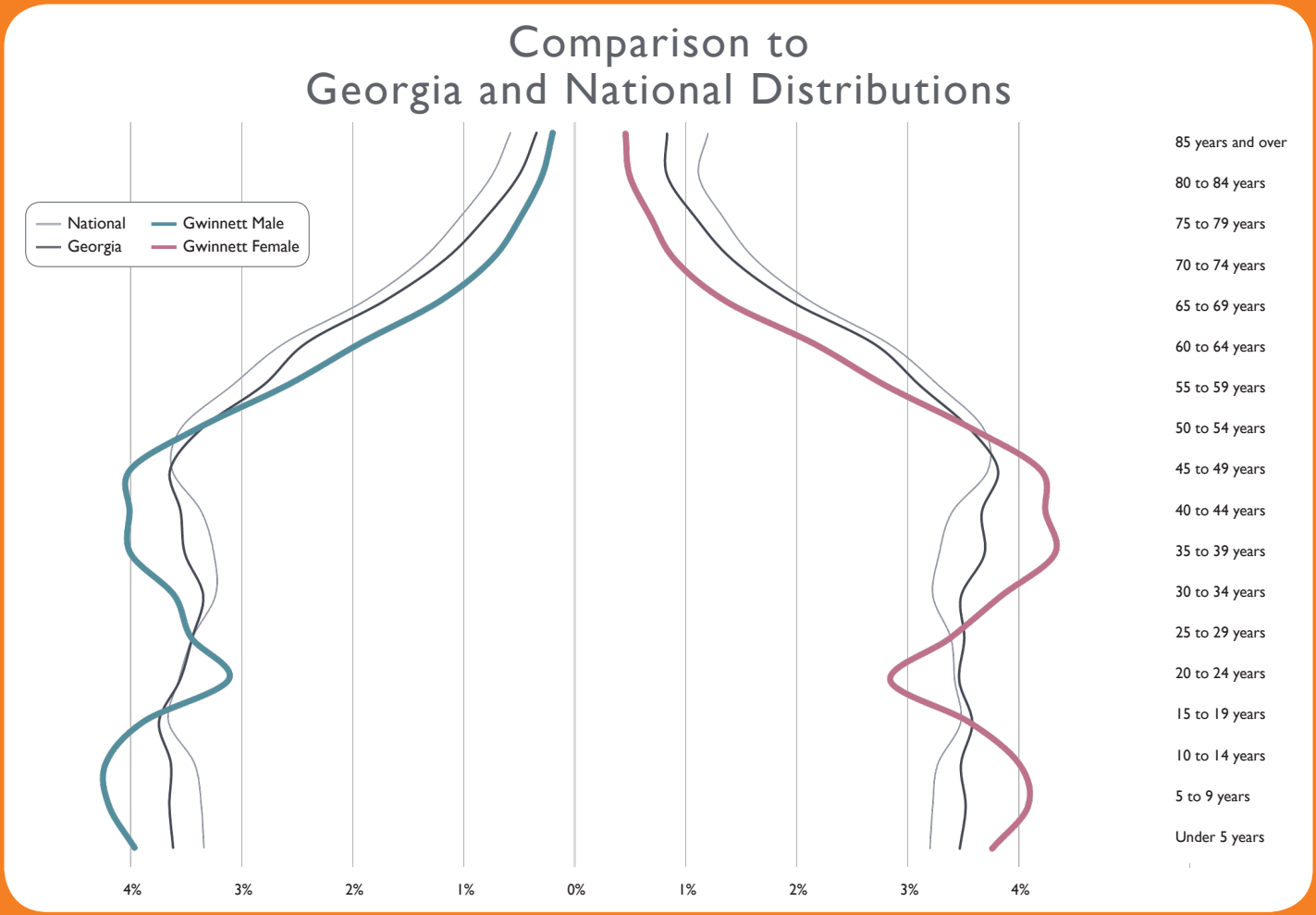
Gwinnett County had a median resident age of 34 in 2013, which was younger than the Metro Atlanta median age of 35.2 years old. Since 1990, when the median resident age was closer to 30 years old, the average age in Gwinnett County has been growing. In 2000, the median resident age was nearly 32 years old and it was just over 33 years old in 2010. Throughout the County, the distribution of persons by median age shows a concentration of persons under the age of 35 approximately along the I-85 and SR 316 corridor. Areas with a larger proportion of established adults exist to the southwest of the County near US 78 and along the western corner near SR 141.



Source:
2013 American Community Survey,
5-Year Estimate (2009-2013)

Nationwide, the older population is experiencing considerable growth. In 1990, Gwinnett County residents over the age of 65 accounted for 4.8% of the total County population. That percentage increased to 5.4% in 2000 and 6.8% in 2010. As of 2010, Gwinnett had a smaller population over age 65 than the national average (13.0%) and also the Georgia average (10.7%).

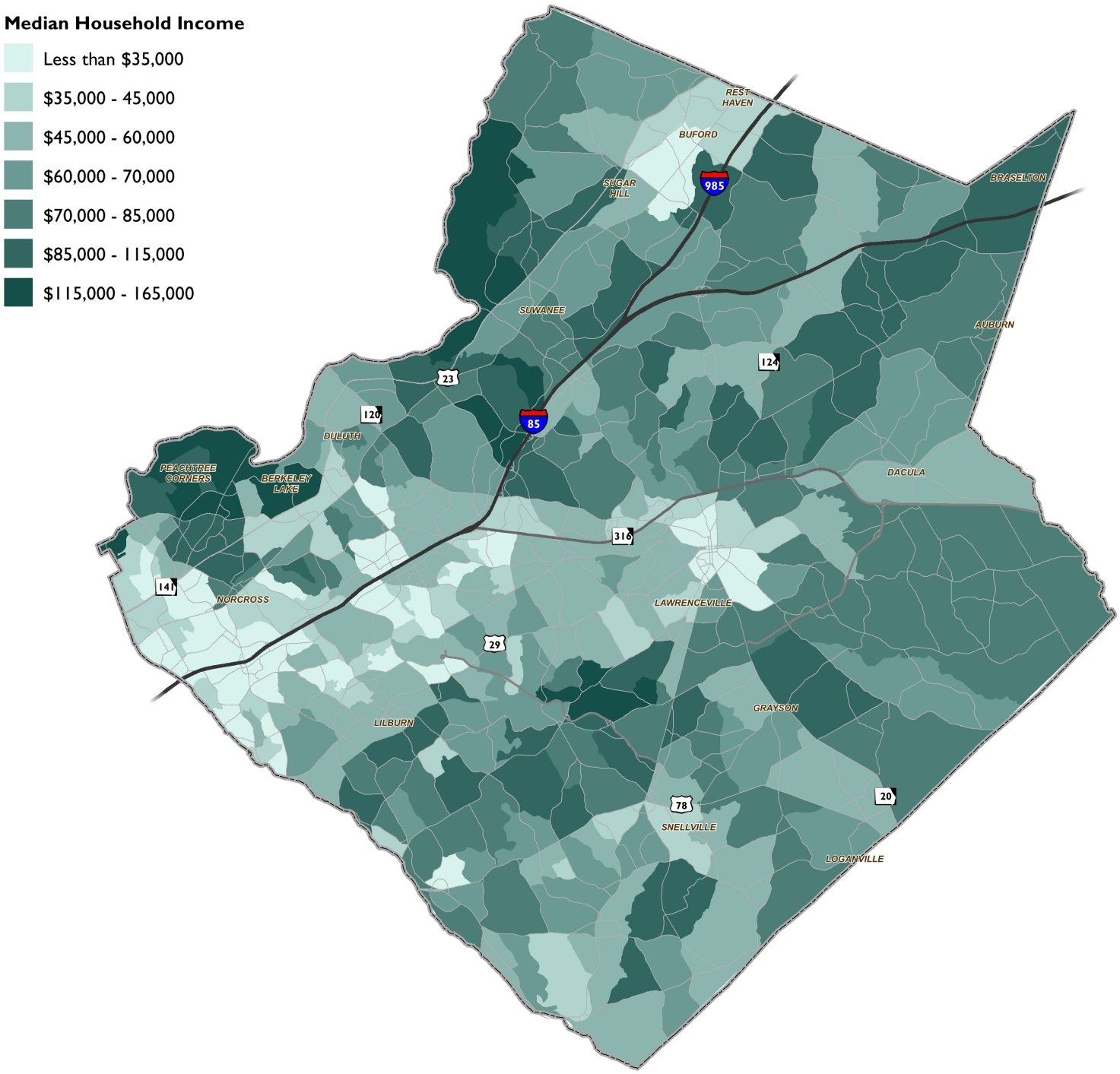
Population by Age and Gender

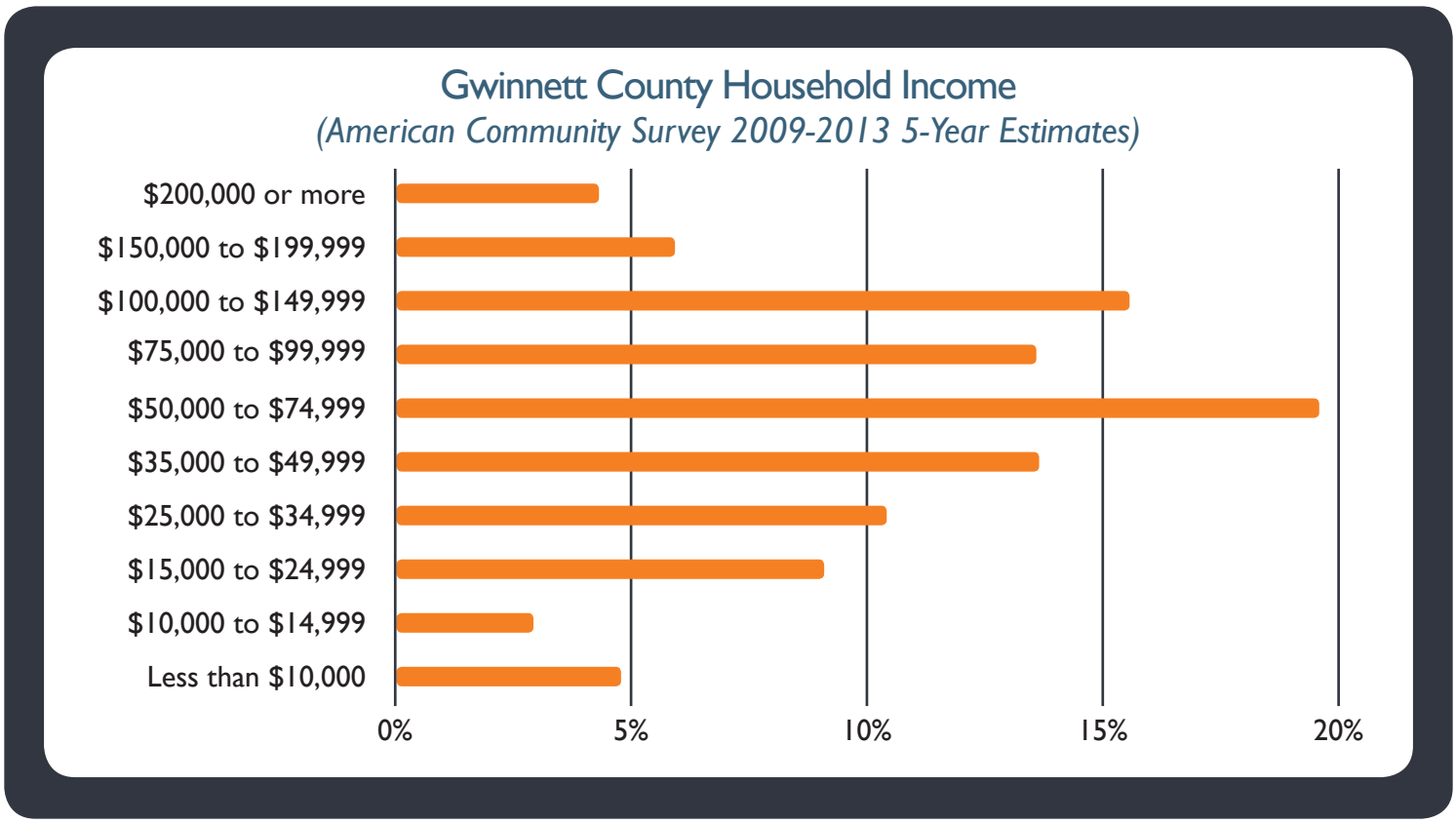


Source: 2010 Decennial Census

Income/Poverty

The median household income in Gwinnett County in 2013 was $60,445. The largest income group for households in Gwinnett included incomes in the range of $50,000 to $74,999. Lower income populations are generally concentrated along the southwestern section of I-85 and south of SR 316 in the central part of the County.





Poverty thresholds are considered by income and the number of persons in a household. As of 2013, 13.9% of individuals had incomes below the poverty level in the County, and 11.4% of households were determined to have incomes below the poverty level. As noted on the previous page, individuals with incomes at or below the poverty level were located primarily in the western corner of the County along the I-85 and SR 316 corridors.

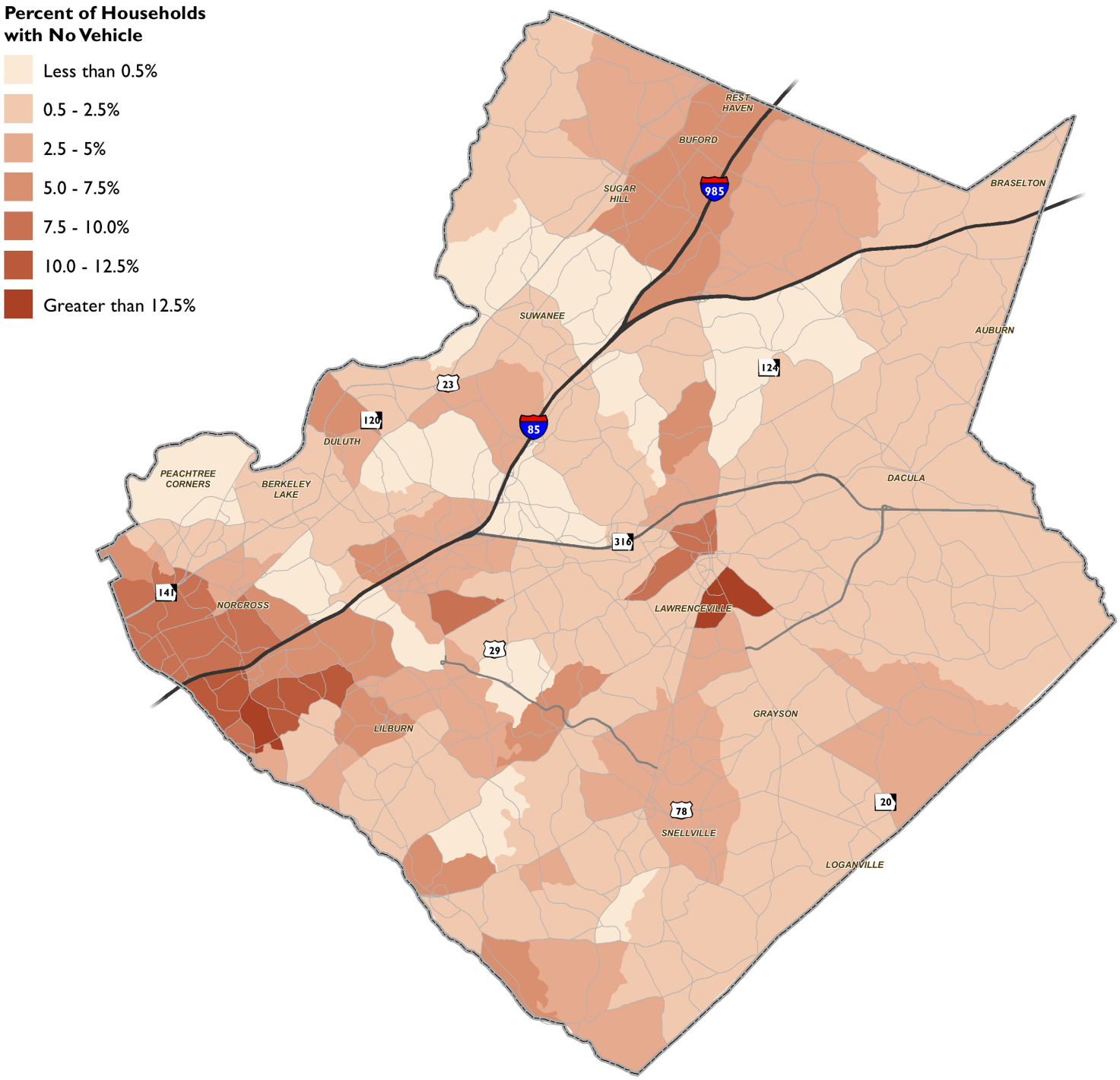
Persons in Household	2013 Federal Poverty Level (Threshold 100% FPL)
1	$11,490
2	$15,510
3	$19,530
4	$23,550
5	$27,570
6	$31,590
7	$35,610
8	$39,630

Most of Gwinnett County's households tend to fall into moderate income ranges, commensurate with or slightly above regional averages with two distinct differences:

- **Significantly higher income households tend to be concentrated in the far northern edge of the County.**
- **The I-85 corridor on the west side of the County is the center of a significant concentration of lower-income households.**

No-Vehicle Households

Transportation options are limited for some of the Gwinnett County population. Overall, approximately 2.9% of households did not have a vehicle available for use in 2013. Yet, there are some areas in the County where nearly a quarter of the households (23.8%) have no personal vehicle to use on a regular basis. Transportation alternatives to vehicular use are essential to ensure that County residents can travel to work, and reach essential services and amenities.

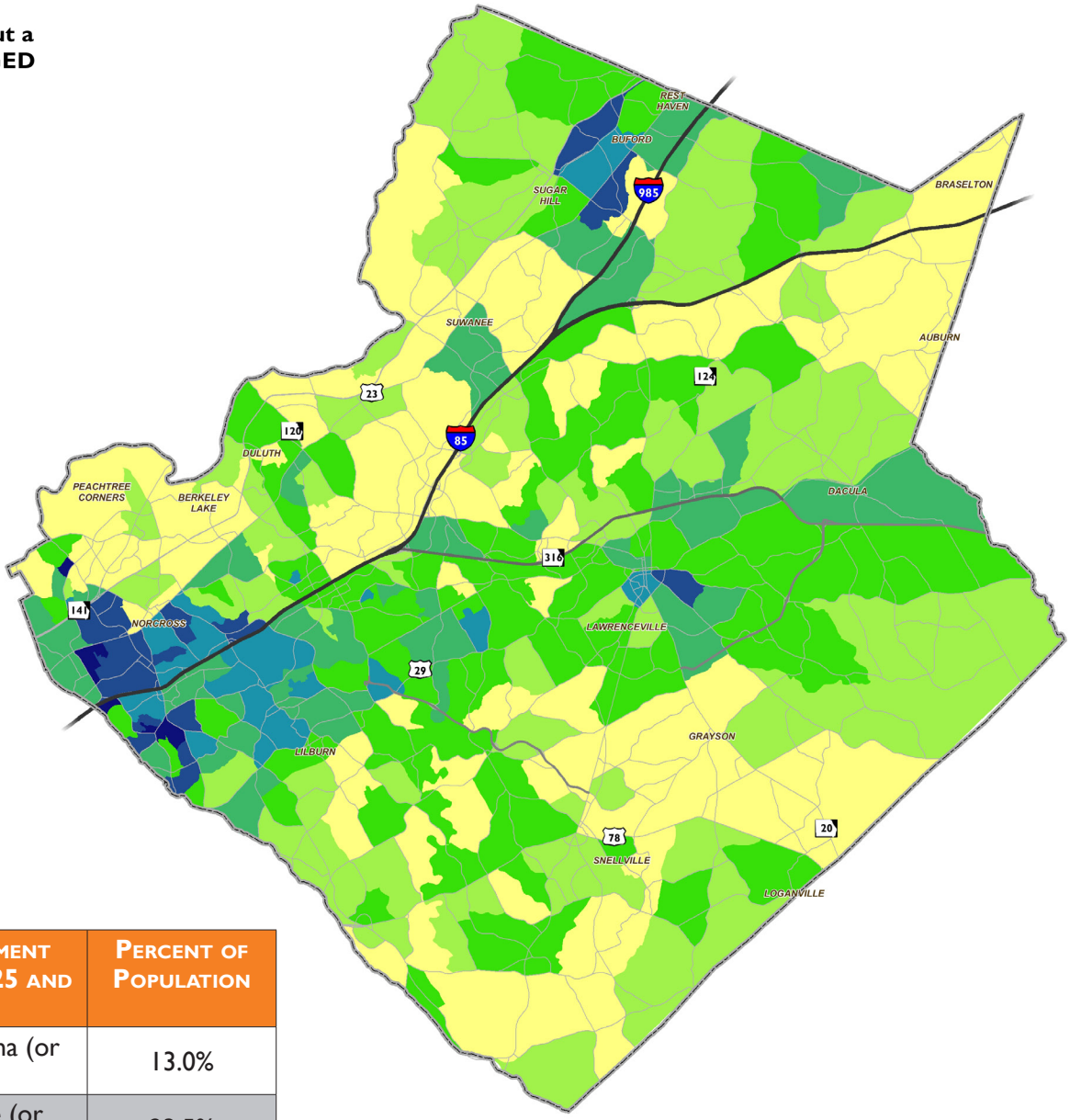


Education

As of 2013, nearly two-thirds of adults in the County (63.5%) have completed some college education while a mere 13.0% of residents over the age of 25 lack a high school diploma, or equivalent. Over one third of the population (34.0%) has a bachelor's degree or higher level of education. An additional 9.0% of the population has an associate's degree. Still, there are some areas in the County where over 50% of the population over age 25 have not attained a high school diploma or equivalent.

Population Age 25+ without a High School Diploma or GED

- Less than 5%
- 5 - 10%
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40 - 50%
- Greater than 50%



Educational Attainment for Population Ages 25 and Older	Percent of Population
No High School Diploma (or Equivalent)	13.0%
High School Graduate (or Equivalent)	23.5%
Some College, No Degree	20.5%
Associate's Degree	9.0%
Bachelor's Degree	23.1%
Graduate or Professional Degree	10.9%

OUR COMMUNITY

OUR COMMUNITY

EXISTING LAND USE

Contemplating existing land use is an important component to understanding current travel behavior. Factors related to land use such as density, zoning, connectivity to adjacent uses, and many other considerations affect how and why we travel. For example, in Gwinnett County areas with more intensive and varietal land uses, such as the I-85 and SR 316 corridors, have higher levels of travel demand. Understanding why this demand exists provides County staff, city staff, elected officials, and other decision makers with information that can affect the overall transportation system.

Over the years, Gwinnett County has evolved from an area of highly suburban growth in the 1970s and 1980s into an area today rich with revitalization, industry, and research and development. Development during the 1970s and 1980s was centered around I-85 and

Below is a summary of key existing land uses throughout Gwinnett County:

- **Commercial/Retail** land uses are scattered across the County but mainly along highly travelled corridors such as I-85, US 78, SR 316, Buford Highway, Peachtree Industrial Boulevard, and others. There are serval areas of intense commercial activity which surround many of the shopping malls such as Sugarloaf Mills, Gwinnett Place Mall, and the Mall of Georgia. Additionally, many city central business districts have concentrated areas of commercial and retail space.
- **Office/Professional** spaces are primarily centered in the southwestern and central portions of the County. Areas of notable intensity are near Peachtree Industrial Boulevard/SR 141 and surrounding the Gwinnett Place Mall and Sugarloaf Mills.
- **Institutional/Public** areas are scattered throughout the County primarily in city centers. A heavier concentration of these uses are centered around the County seat in Lawrenceville.
- **Low Density Residential** land use is the most predominant land use type within the County spread out across the County but not readily adjacent to heavily traveled corridors like I-85, I-985, or SR 316.
- **Medium Density/High Density Residential and Multifamily Residential** areas are primarily located in the southwestern and central portion of the County.
- **Agricultural/Undeveloped Land** are mostly prevalent in the eastern and northern portions of the County.

US 78 through the southern and western parts of the County. Growth in the late 1980s and 1990s extended out along the I-85 and US 78 corridors to include many parts of Duluth, Snellville, and Lawrenceville. In the late 1990s and through the mid-2000s, growth and suburbanization continued north and eastwards with areas of Suwanee, Buford, Lawrenceville, Grayson, Dacula, and Loganville experiencing a dramatic change from primarily rural areas to suburban communities. The mid 2000s also saw the emergence of the town center concept as many of Gwinnett County's communities began to revitalize their historical downtowns or create entirely new town centers as greenfield developments.

With the recession of the late 2000s, building and development activity slowed down despite ongoing increases in population. By the mid-2010s, increased development activity was evident again with many new residential subdivisions appearing in the northern and eastern parts of the County.

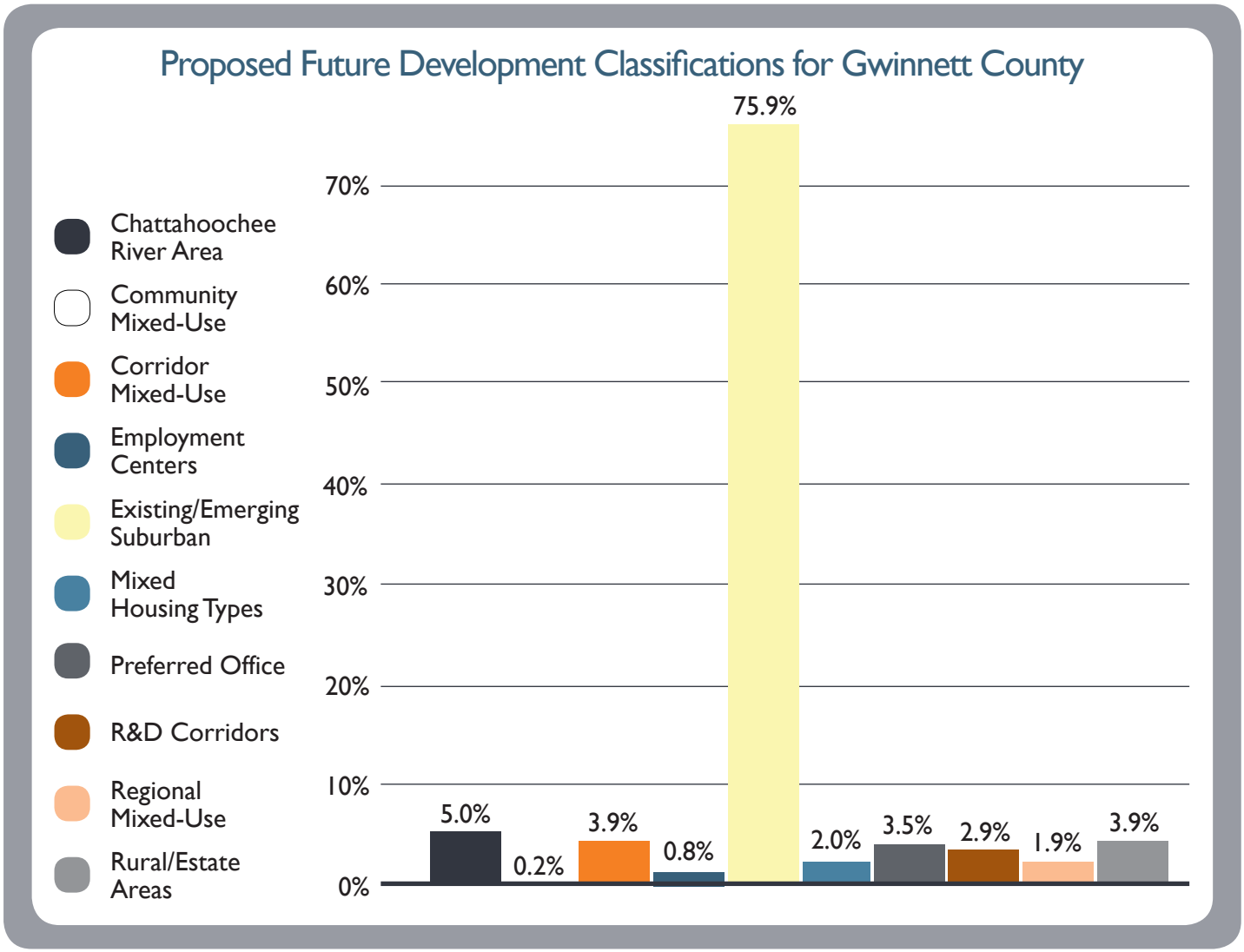
FUTURE LAND USE

In 2009, Gwinnett County prepared its most recent Comprehensive Plan as a unified effort with its previous Comprehensive Transportation Plan. Currently (early 2016), the County is finalizing an update to the comprehensive planning elements of that effort with significant emphasis on changes to future land use. These changes can be seen in the draft Future Development map. While the process is not yet complete, the map identifies intended character areas as a reflection of the existing character.

The southern part of the I-85 corridor is reemphasized as an "Employment Center" and the County's commitment to the "Research and Development" corridor along SR 316 is reaffirmed. These designations will place increased emphasis on the I-85 and SR 316 corridors for providing connectivity to the Atlanta region and beyond.

Many mixed use designations are proposed to encourage commercial and denser uses along major surface street corridors such as I-85, US 78, Buford Highway, Lawrenceville Highway, Loganville Highway, Athens Highway, and other heavily traveled corridors. Additionally, there is an expansion of "Existing and Emerging Suburban Character Area" into the eastern and southeastern parts of the County.

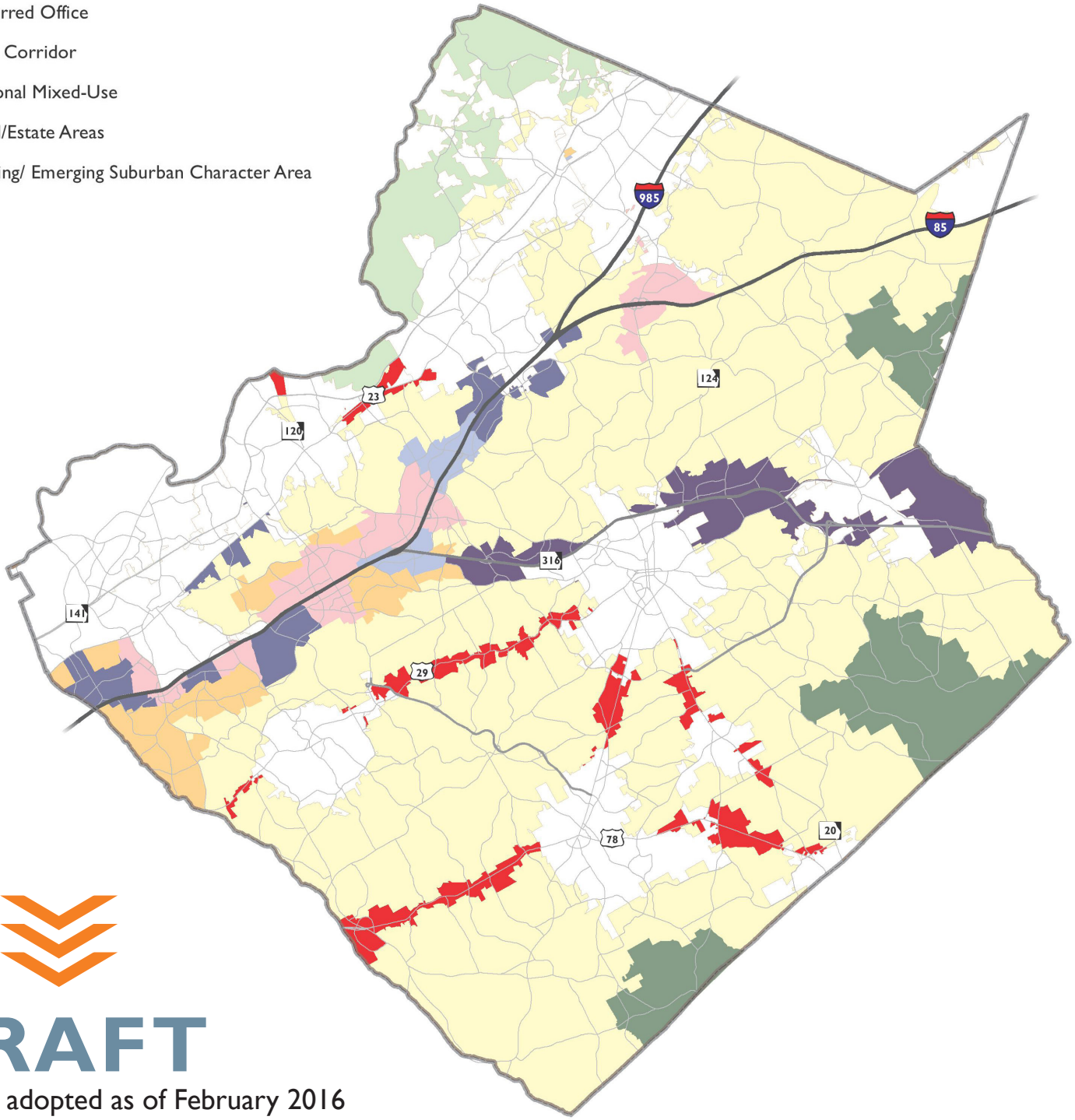
Below is a summary of proposed future development classifications for Gwinnett County.



Proposed Future Development

DRAFT Future Development Classifications (2016)

- Chattahoochee River Area
- Corridor Mixed-Use
- Employment Center
- Mixed Housing Type
- Preferred Office
- R&D Corridor
- Regional Mixed-Use
- Rural/Estate Areas
- Existing/ Emerging Suburban Character Area



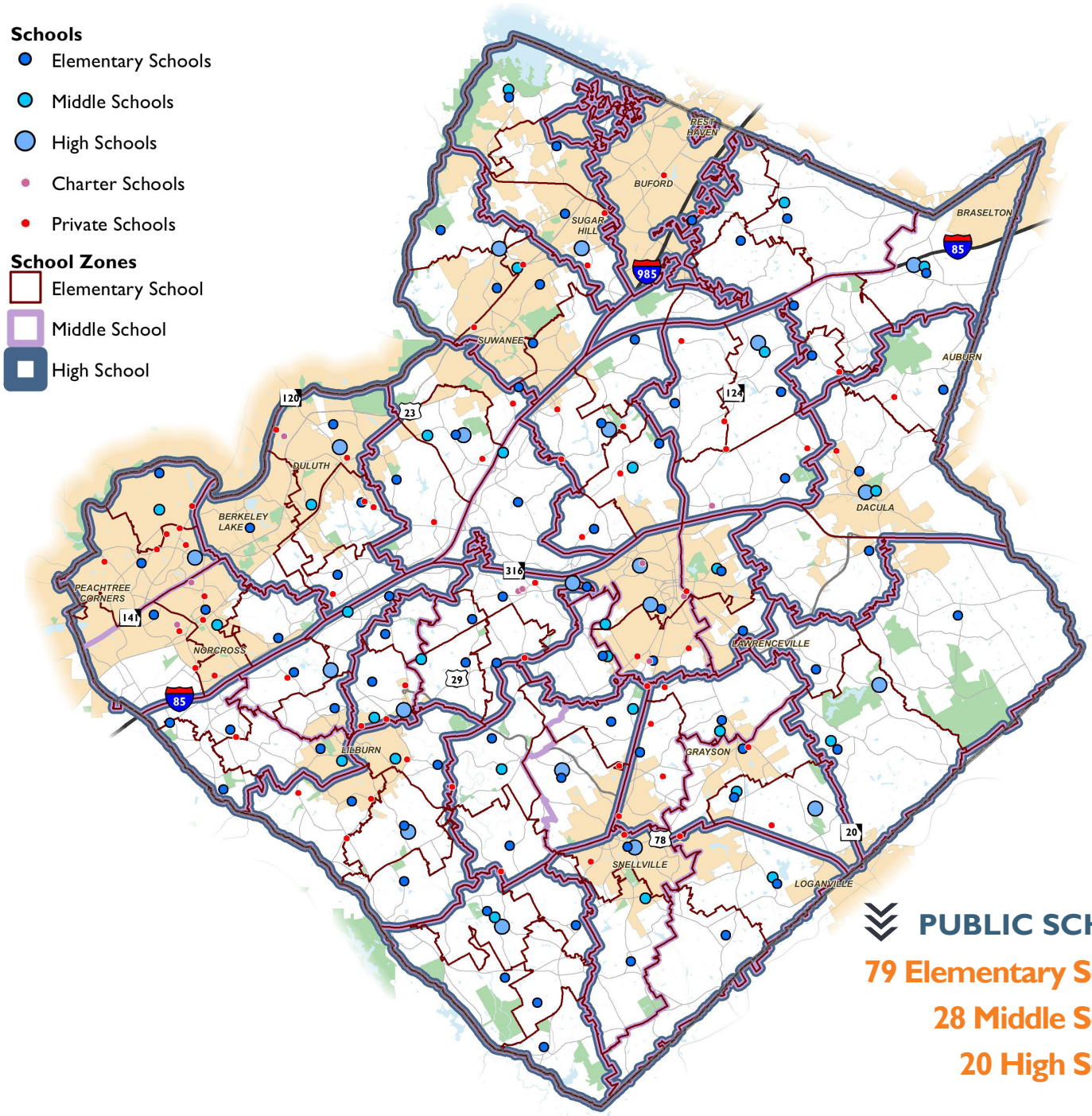
DRAFT

not yet adopted as of February 2016

COMMUNITY FACILITIES

Schools

Children and teenagers travel to and from school 180 days a year. Whether by school bus, carpool, personal vehicle, on foot, or on bike, transportation plays a critical role in the daily lives of families throughout Gwinnett County. Based on an inventory of schools, there are approximately 200 public, private, and charter schools located within Gwinnett County. The Gwinnett County Public Schools (GCPS) system operates within five Board of Education districts and consists of 79 elementary schools, 28 middle schools, and 20 high schools. Additionally, there are 64 private schools and 9 charter schools located in Gwinnett County, not including Buford City Schools.



PUBLIC SCHOOLS

79 Elementary Schools

28 Middle Schools

20 High Schools

There are 11 colleges or universities with campuses located within Gwinnett County. The largest among them are Georgia Gwinnett College with approximately 11,000 students and Gwinnett Technical College with approximately 10,000 students.

Georgia Gwinnett College and Gwinnett Tech are two of

11 colleges or universities

in Gwinnett County.

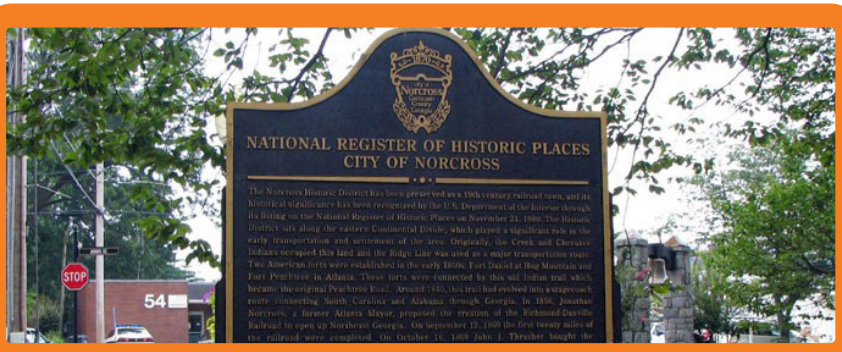
Georgia Gwinnett College • University of Georgia Gwinnett Campus • **Gwinnett College** • Gwinnett Technical College • **Philadelphia College of Osteopathic Medicine – Georgia Campus** • Gwinnett Hall Baptist College • **DeVry University – Duluth** • Saint Leo University • **Ashworth College** • Everest Institute – Norcross • **Atlanta Institute of Music and Media**

History and Culture

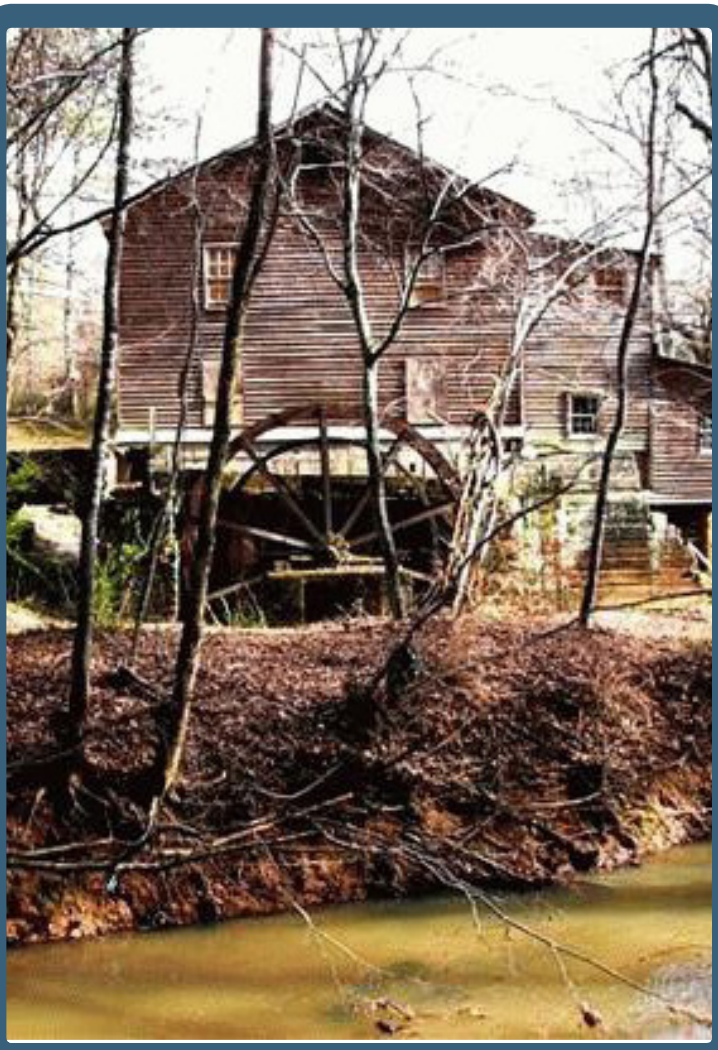
Gwinnett County is rich in culture and history, with historical districts and locations on the National Register of Historic Places. These sites are important to consider as we develop our transportation plan for two reasons: we want to create opportunities to connect to and enhance these historic sites and we also want to ensure that we protect and preserve them as we develop transportation projects.

HISTORIC DISTRICTS

- Alcovy Road Grist Mill
- Robert Craig Plantation
- Hudson-Nash House and Cemetery
- Norcross Historic District



City of Norcross Historic Marker



Alcovy Road Grist Mill

HISTORIC SITES

- Adair-Hughes House
- Alcovy Road Grist Mill
- Bona Allen House
- John Quincy Allen House
- Bona Allen Shoe and Horse Collar Factory
- Buford Public School Auditorium
- Robert Craig Plantation
- Gwinnett County Courthouse
- Hudson-Nash House and Cemetery
- Mechanicsville School
- Norcross Historic District
- Lawrenceville Female Seminary
- Parks-Strickland Archeological Complex
- The Superb
- William Terrell Home place
- Clarence R. Ware House
- Elisha Winn House
- Thomas Wynne House

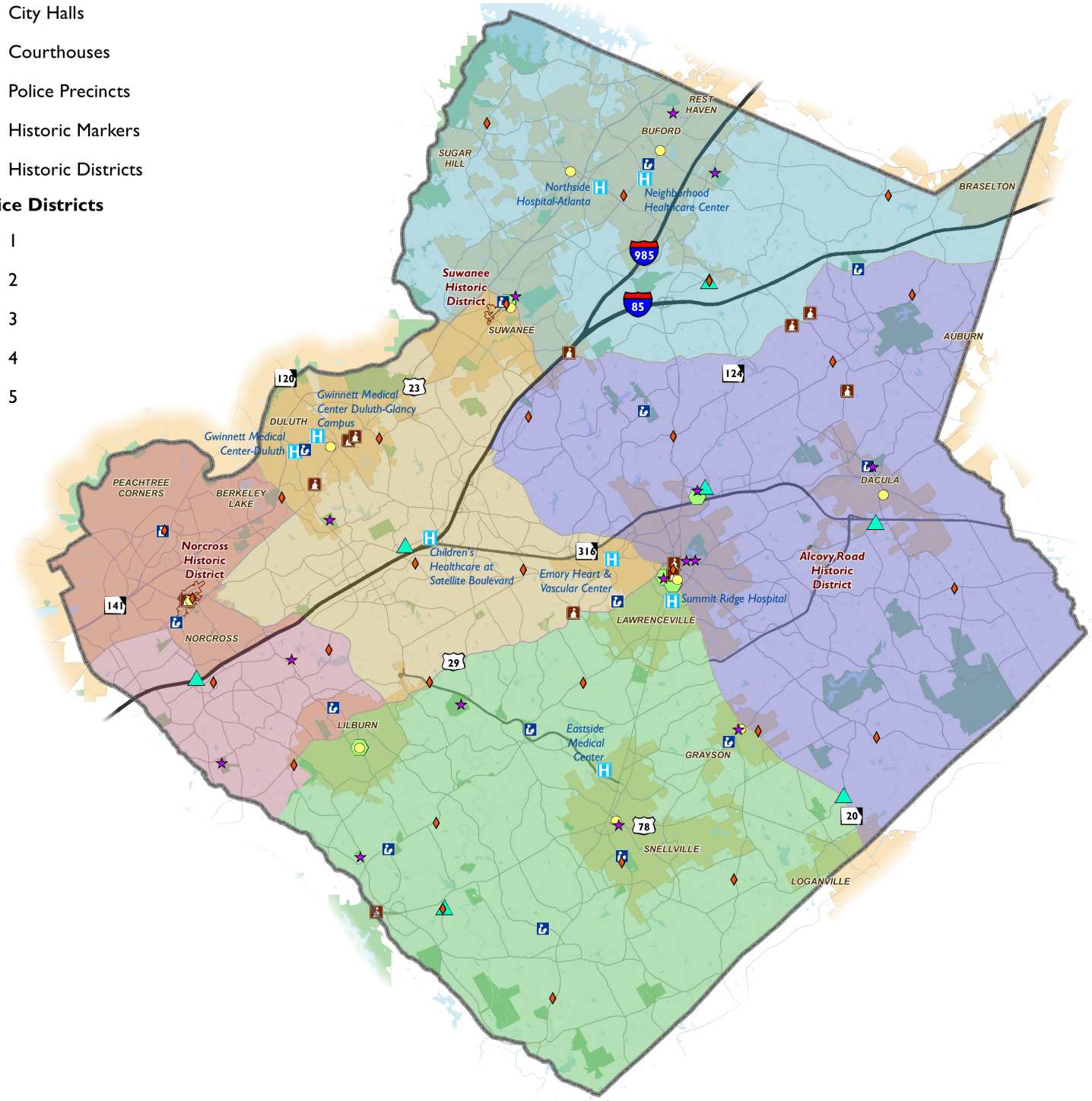
Community Facilities

Community Facilities

- Senior Citizen Facilities
- Hospitals
- Libraries
- Fire Stations
- City Halls
- Courthouses
- Police Precincts
- Historic Markers
- Historic Districts

Police Districts

- 1
- 2
- 3
- 4
- 5



Access to community facilities is an important part of transportation planning. Public health and safety depends on police and fire teams being able to reach people and places in distress and ambulances to reach hospitals efficiently. Other community amenities, such as libraries, city halls, and senior facilities should be accessible to people of all ages and mobility levels.

10 City Halls

6 Police Precincts

30 Fire Stations

15 Libraries

16 Senior Citizen Centers

5 Courthouses

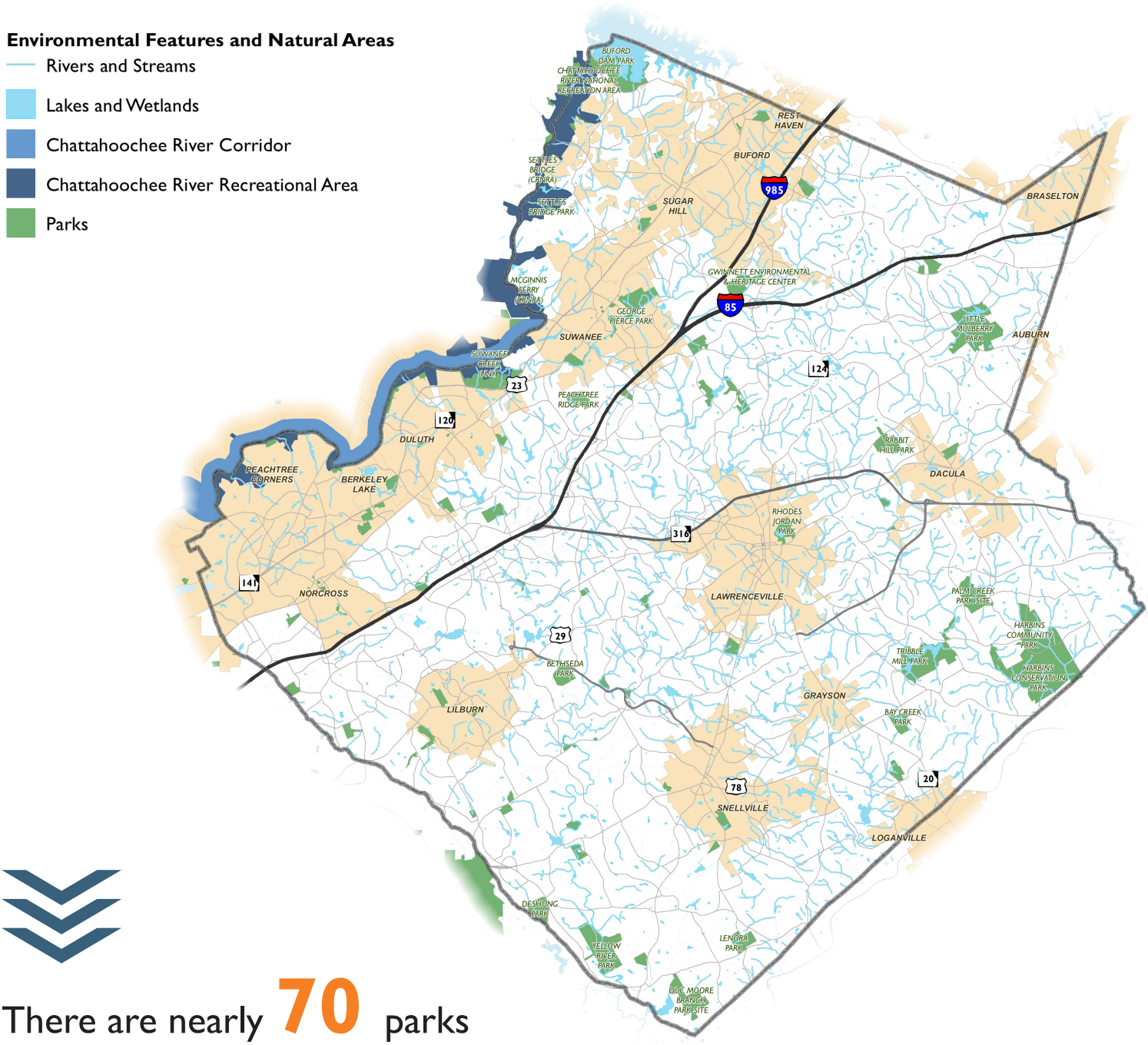
8 Hospitals

Gwinnett Medical Center

- **Top Large Hospital in the State**
  - Georgia Trend
- **One of America's Safest Hospitals**
  - Forbes
- **Ranks in the top 5% in the nation for clinical quality**

ENVIRONMENTAL FEATURES

Gwinnett County has a wealth of natural environmental resources spread throughout. Within the County boundaries, there are over 700 miles in length of streams and rivers and more than 6.5 square miles of lakes and wetlands. Bordered to the west by the Chattahoochee River, the Chattahoochee River Corridor is over 150 miles in length, providing over 10 square miles for the Chattahoochee River Recreational Area within the County. Similar to the historic sites previously discussed, it is important that this transportation plan connect valuable environmental assets like parks and the Chattahoochee Recreational Area while protecting them from transportation projects that would diminish their value.



There are nearly **70** parks and greenspaces in Gwinnett.

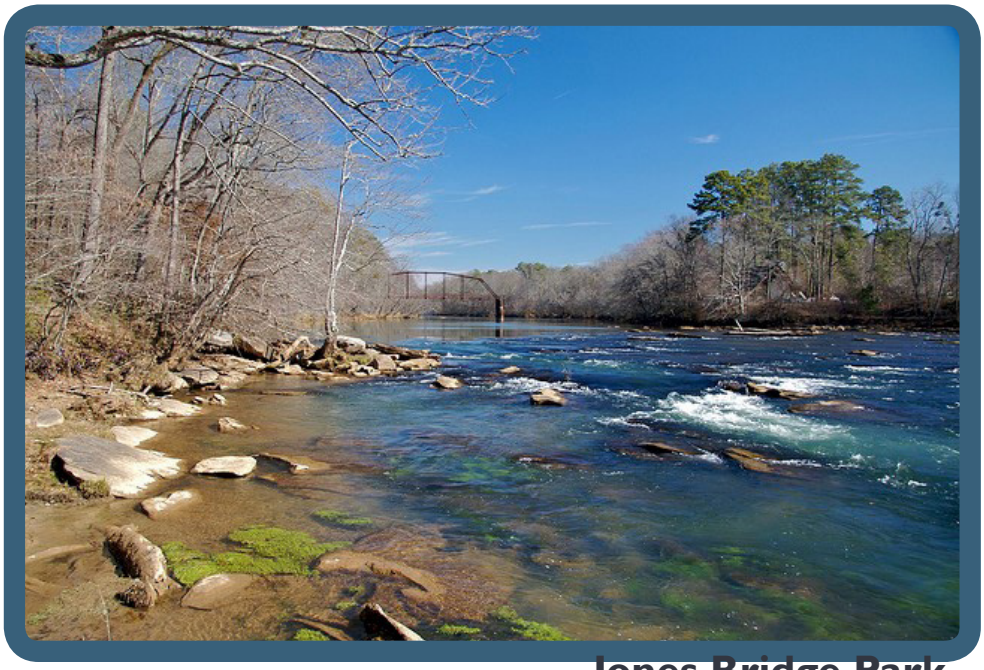
36

County Parks

35,061.93

Acres of Lakes

Gwinnett Environment and Heritage Center



Jones Bridge Park

703.31

miles (in length)

of Rivers and Streams

Suwanee Town Center

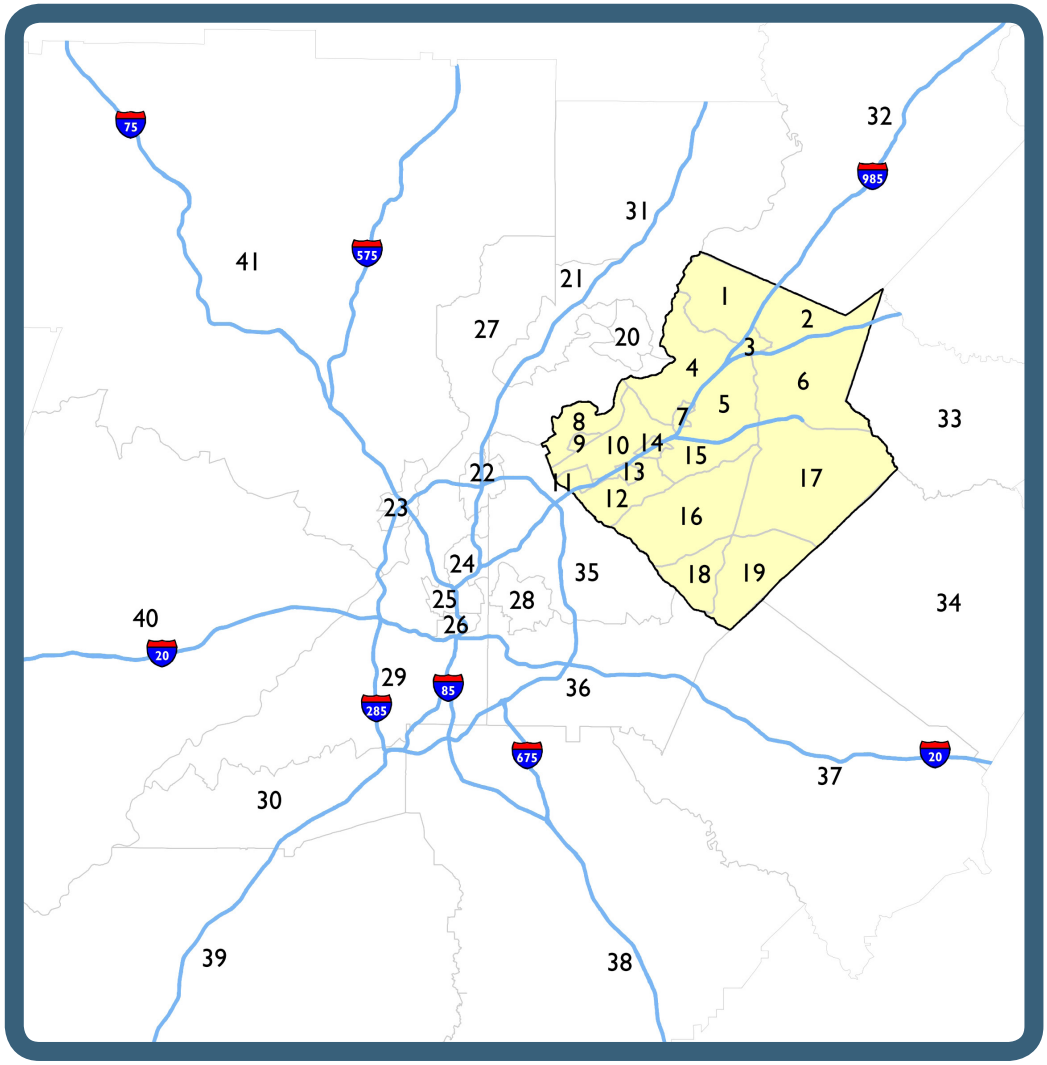
STATE OF THE MARKET

Subareas

To perform elements of the existing conditions assessment, Gwinnett County was divided into subareas (1 through 19) based on average income, development density, and general character (regional employment and commercial centers or areas that are primarily residential). Additionally, areas outside of Gwinnett in the greater Atlanta metropolitan area were similarly identified and are shown below in subareas 20 through 41. These subareas will be referenced in both the market assessment as well as the discussion of origins and destinations.

1 Buford/NW Gwinnett
2 NE Gwinnett
3 Mall of Georgia
4 Suwanee/Duluth
5 Central Gwinnett
6 Auburn/East Central Gwinnett
7 Sugarloaf Mills
8 Berkeley Lake/Outer Peachtree Corners
9 Central Peachtree Corners
10 Norcross
11 Doraville-Gwinnett
12 North Lilburn
13 Gwinnett Village/ Norcross-Lilburn- I-85 Corridor
14 Gwinnett Place
15 West Lawrenceville
16 SW Lawrenceville/West Snellville/Mountain Park
17 Snellville/Grayson
18 SW Snellville/ Rockbridge
19 SE Snellville/ SW Loganville

Evaluation Subareas



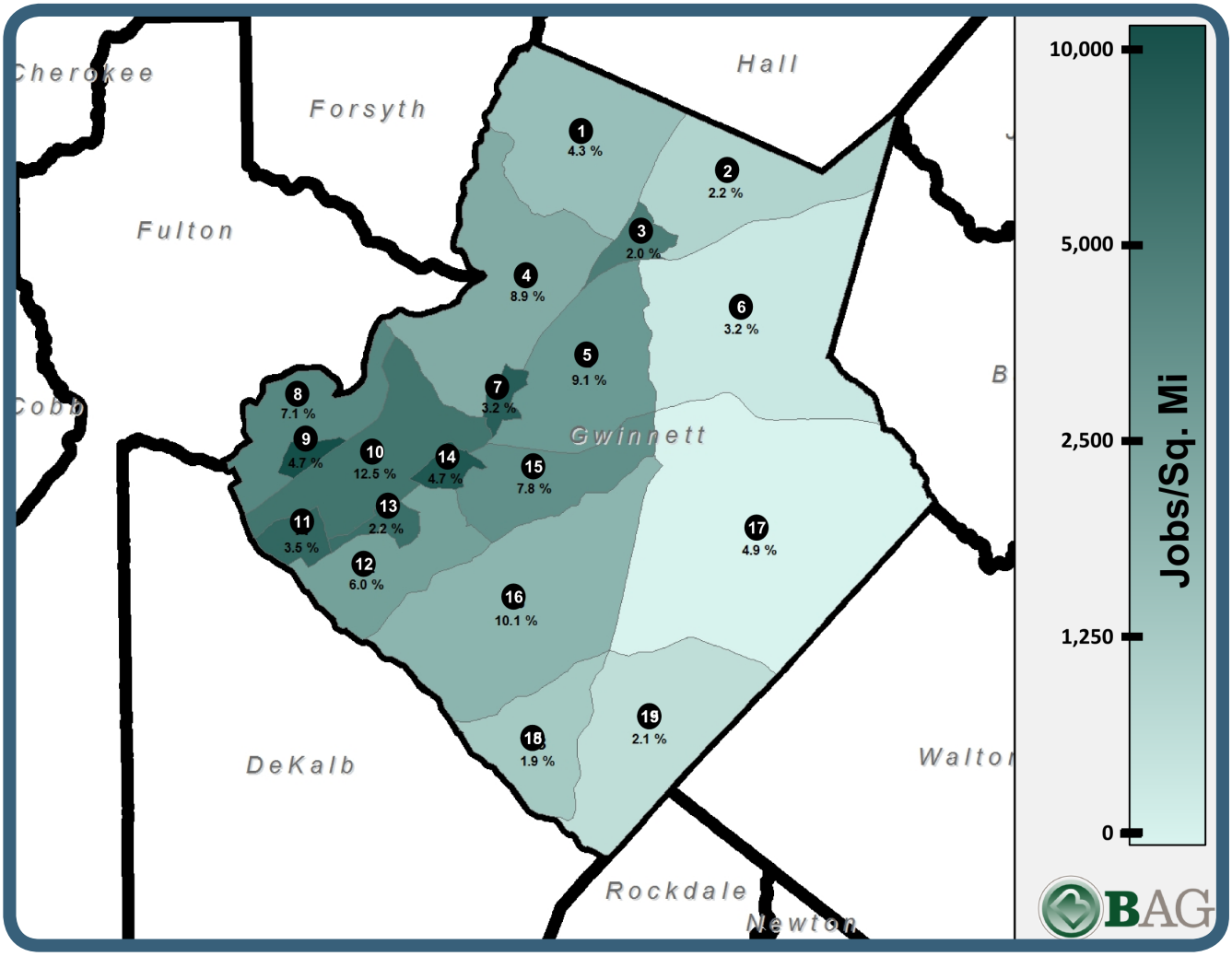
Patterns and Trends

An assessment of employment, demographic and real estate patterns and trends in Gwinnett County underlines several dominant themes:

- Gwinnett County **experienced rapid population growth over a relatively short period of time.** The rapid growth and uneven development pattern has resulted in a county with geographic distinctions in terms of its demographics, economic patterns, and real estate market. Growth and **development generally started in the west and south portions** of the County, moving over time to the north and east.
- The **I-85 corridor is the economic spine of the County**—the focus of most of the County's employment and economic activity.
- Gwinnett County has evolved into multiple wide-area geographic conglomerations of buildings and land uses that are similar in use, design, and age. This affects shifts in economic trends, obsolescence, or even the passage of time, which **all have the potential to impact large areas** of the County.

As mentioned, areas of similar land use types were grouped together as sub areas for further evaluation.

2013 Employment Density



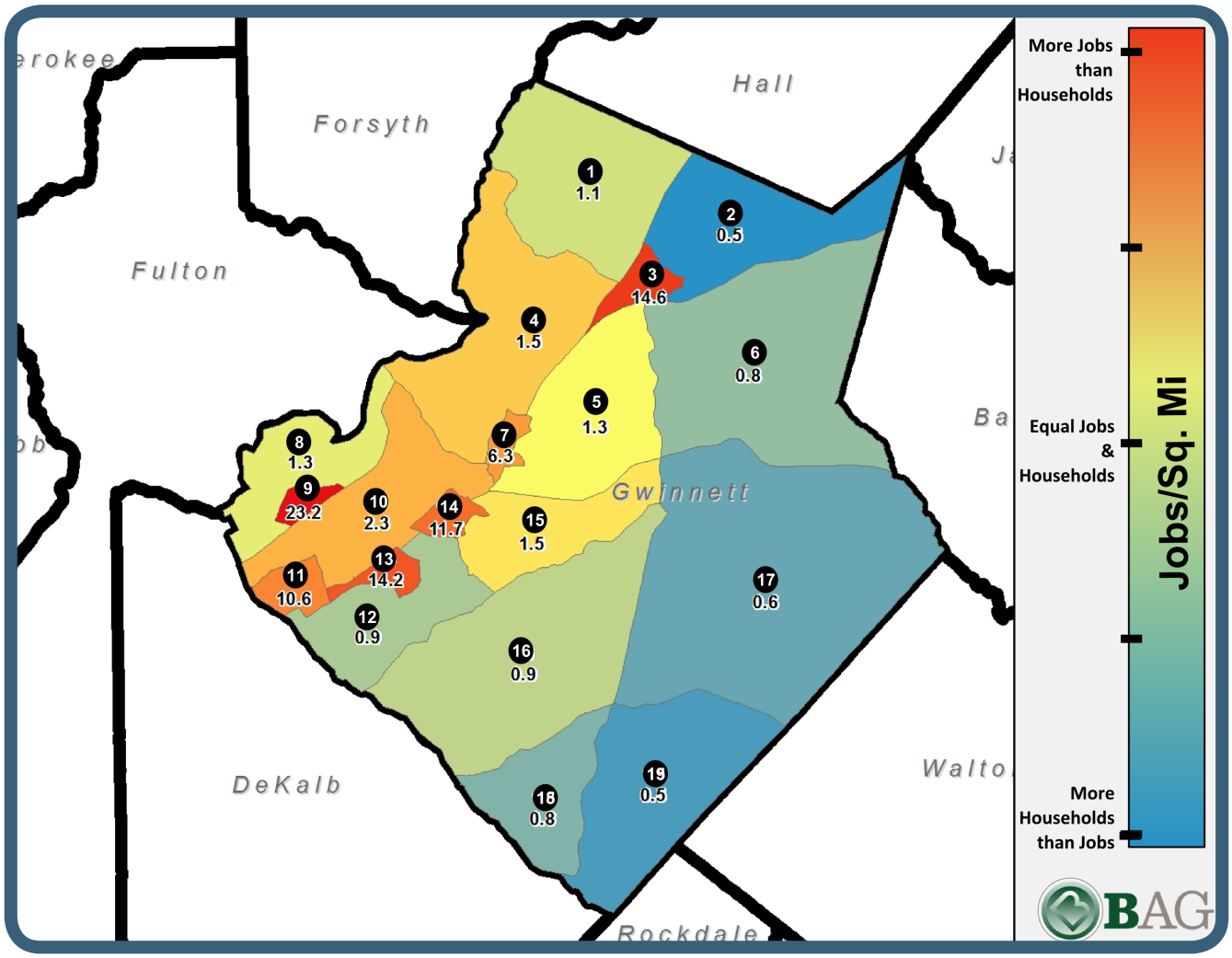
Employment Characteristics

Gwinnett County's job base is tightly concentrated along the I-85 corridor, with additional concentrations around Lawrenceville and Peachtree Corners.

Jobs to Households Ratio

Gwinnett County has a jobs-to-household ratio of 1.3, meaning that there are 1.3 jobs for every household. The districts with a jobs-to-household ratio greater than 1 are all concentrated along the I-85 corridor, led by Peachtree Corners, Sugarloaf Mills, Gwinnett-Village-Norcross, the Mall of Georgia, and Gwinnett Place. The districts forming a crescent at the eastern half of the County all have ratios below 1, meaning they are predominantly residential.

2013 Ratio of Jobs to Households

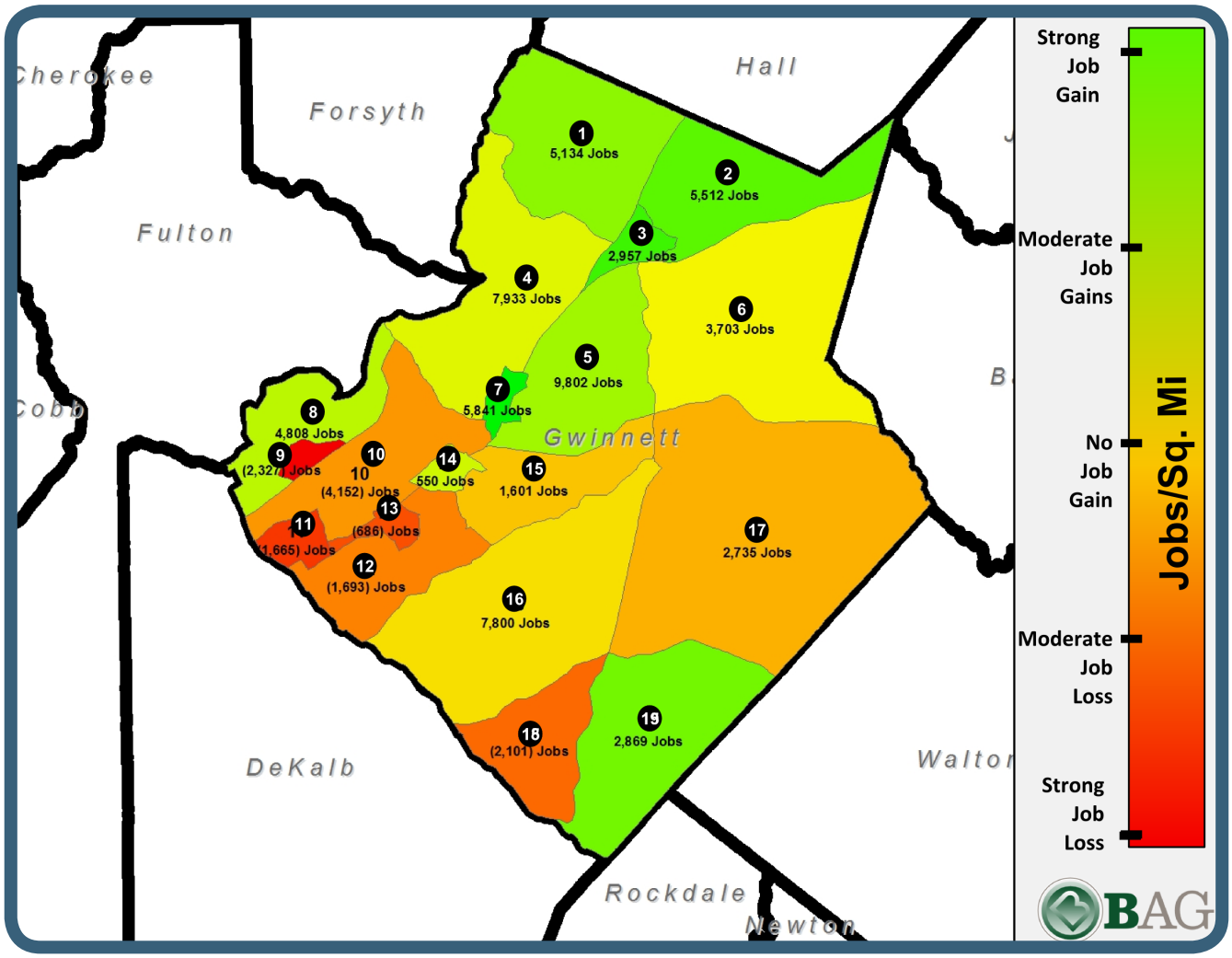


Changes in Employment, 2003-2013

Countywide employment increased at a relatively modest compound annual growth rate of 1.2% between 2003 and 2013, largely set back by a reduction in jobs and employment following the Great Recession in 2008. That overall growth, however, has not been experienced evenly around the County. Some districts, particularly those in the north of the County, saw sharp increases in employment, while nearly half of the districts, all in the west or south sides of the County saw job declines over the last ten years.

- Total employment in Districts 2 (NE Gwinnett) and 7 (Sugarloaf Mills) increased dramatically, with ten-year increases of 374% and 135%, respectively.
- Districts 9, 10, 11, 12, 13, and 18 all showed overall employment losses for the same period.
- The districts with the largest net increase in jobs from were District 5 (Central Gwinnett) with 9,800 new jobs and District 4 (Suwanee/Duluth) with 7,900.

Net Change in Employment, 2003-2015



Countywide Employment by Sector

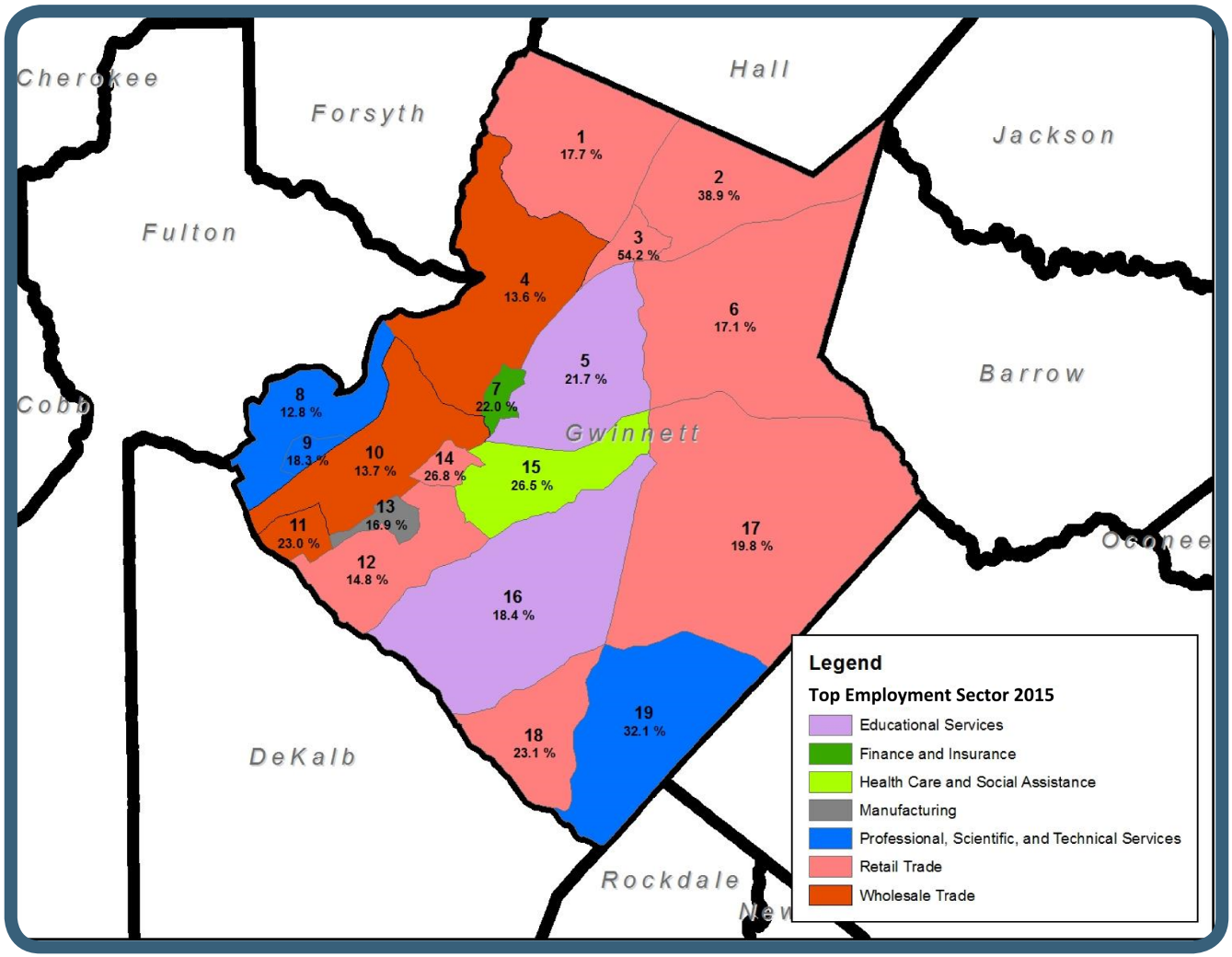
Gwinnett County's top employment sector is retail trade, with 14.7% of all jobs in the County, followed by wholesale trade, administrative support, educational services, and manufacturing.

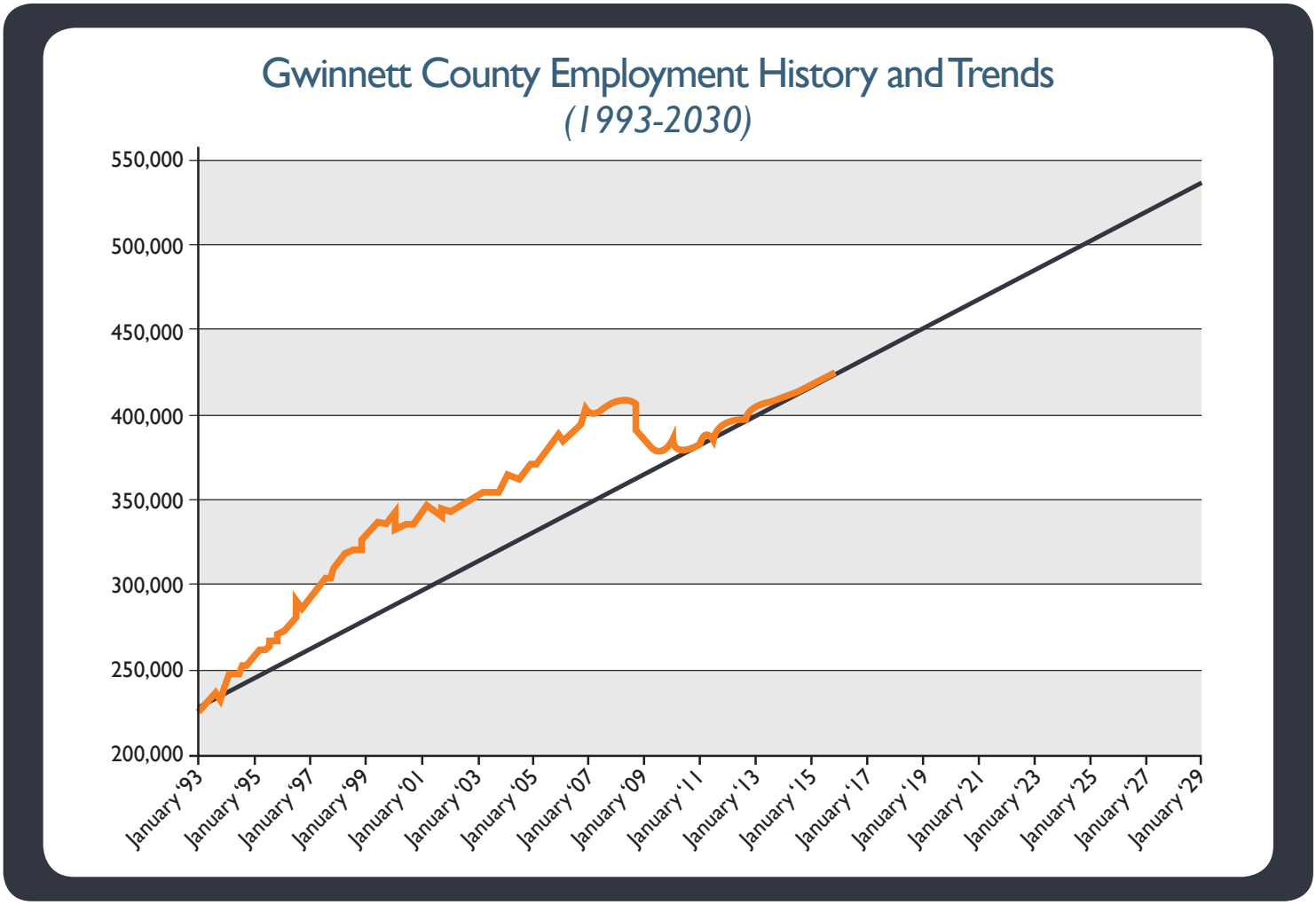
- The sectors with the largest gains between 2003 and 2015 were education, healthcare, professional and scientific, retail, accommodations and food services, public administration, and information.
- Declining sectors include utilities, construction, wholesale trade, and manufacturing.

TOP EMPLOYMENT SECTORS

Retail Trade
Wholesale Trade
Administrative Support
Educational Services
Manufacturing

Top Employment Sectors, 2003-2015





Employment Trends and Growth Forecast

Employment in Gwinnett County has grown modestly over the past 15 years, adding an average of 8,700 jobs annually since 1993

- The recent past was dominated by the Great Recession of 2008, which led to a significant and sharp decline in employment. Over the last ten years, county-wide employment growth averaged 3,700 new jobs year.
- Since 2010, employment has been steadily increasing, returning to the long-term average growth trend of 8,700 new jobs annually.
  - This employment growth trend, if continued, would suggest the addition of 120,000 new jobs in Gwinnett between now and 2030.

If continued, the employment trend suggests the addition of

120,000 new jobs

in Gwinnett County between now and 2030.

Real Estate Characteristics

Gwinnett County's real estate characteristics largely mirror overall economic patterns in the County, as the real estate and development history in Gwinnett County has been driven by those same demographic and employment trends.

- Rapid suburbanization beginning in the 1970s led to real estate and development patterns characterized by broad areas with similar land uses and building types constructed over a short period of time. As buildings age, and the needs of commercial tenants evolve, areas from similar time periods are facing similar challenges.
- As a case in point, much of the inner I-85 corridor (Districts 12 and 13) is dominated by warehousing and flex-industrial space built in the 1970s and 1980s, conceived to serve trucking, manufacturing and logistics uses based on proximity to the interstate and regional distribution hubs. Several concurrent trends have caused disruptions or changes to that business model:
  - Increasing congestion due to regional population growth has made I-85 and its feeder arterials less attractive to industries that rely on transportation.
  - The growth of interstates and roads in outer counties, such as Henry, Barrow, and Spalding, combined with inexpensive, undeveloped land make those locations relatively attractive to new developments and businesses.
  - Containerized shipping growth has shifted the shipping business model and the shape of regional distribution networks.
  - Changes in trucking, container, and warehousing technology have led to a preference for larger buildings with different physical characteristics than those constructed in the 1980s.
  - Increased globalization and inexpensive shipping has led to the decline of small "jobber" type distribution and manufacturing customers, who typically use the flex-industrial space that is prevalent in the area.
  - While these changes within the warehousing industry have resulted in higher vacancy rates and decreases in employment, they provide an opportunity for reimagining and redeveloping the inner I-85 area.

Rapid Development

Gwinnett County's development occurred earliest in the west and south portions of the County, rapidly expanding to the north and east at relatively low densities, leaving few tracts undeveloped. The maps below show how development patterns in Gwinnett County have shifted since 1970.

- As land was filled in, development momentum moved north and east, leading to lower levels of investment in previously developed areas.
- Real estate in the western and southern districts of the County generally exhibits higher vacancies, lower average rents, and greater potential for reinvestment.

Commercial Real Estate

Gwinnett County's commercial real estate inventory is vast, with 225 million square feet of commercial space, of which 27% is retail space, 15% is office space, and 58% is industrial and flex space.

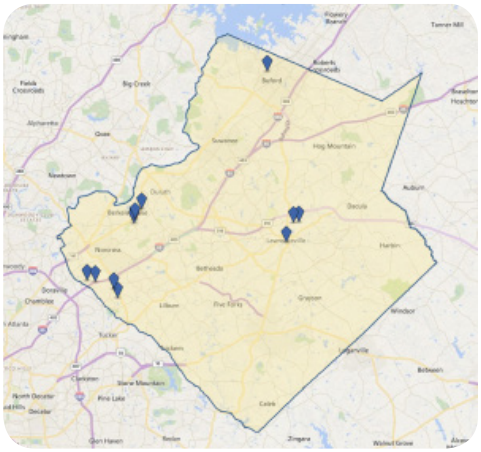
- Currently 8.2% of the total space is vacant, with the highest rate in District 9 (Peachtree Corners)—21.7%—and the lowest in District 2 (NE Gwinnett)—6.9%.
- Over the past five years, the County has absorbed an average of just under 3.0 million square feet of commercial real estate annually. The County's absorption in 2015 absorption was 4.7 million square feet.

The following maps show the distribution of four key real estate statistics, averaged by district, for the office sector. Data for other commercial sectors, including retail, industrial, and flex-industrial tend to follow the same geographic patterns, with some variation.

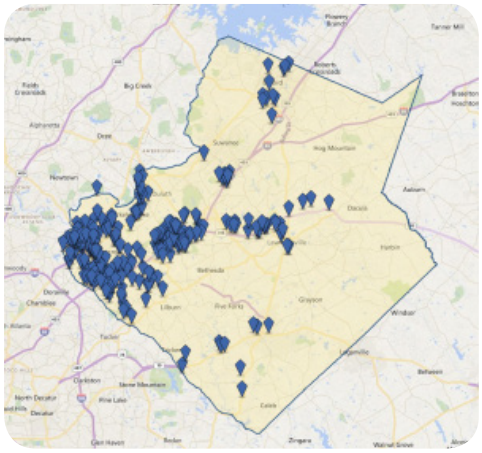
Major Commercial Development (>100,000 SF)

BUILT DURING

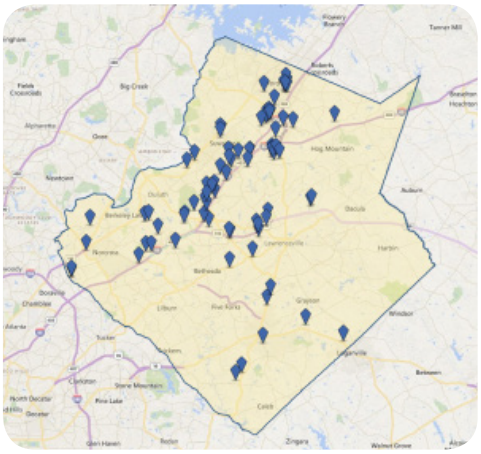
Pre-1970



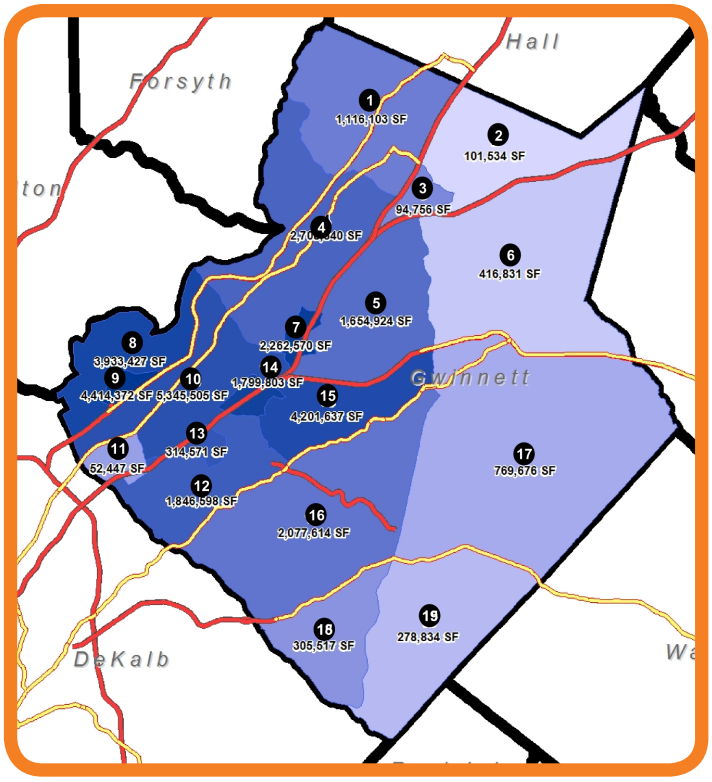
1970-1990



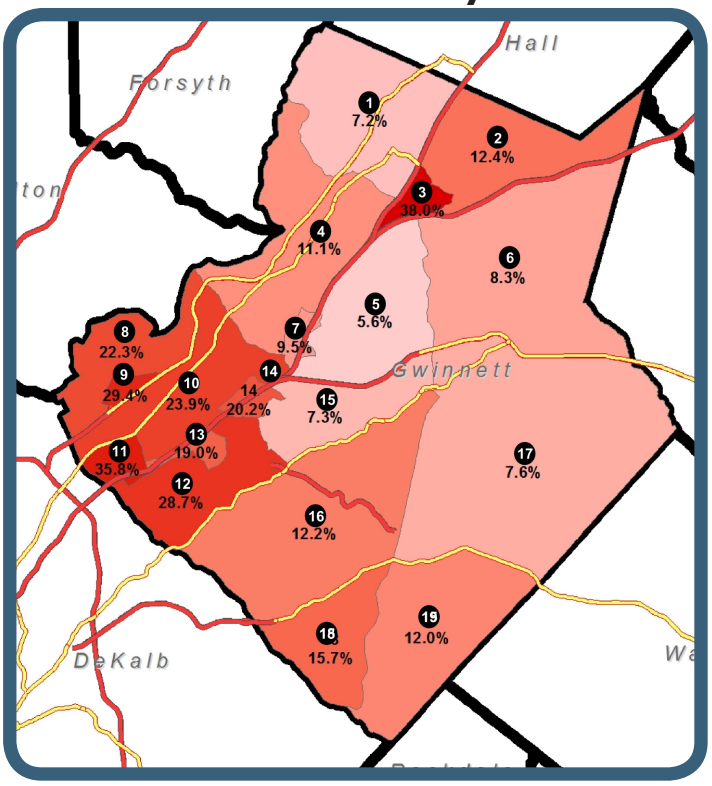
2005-2015



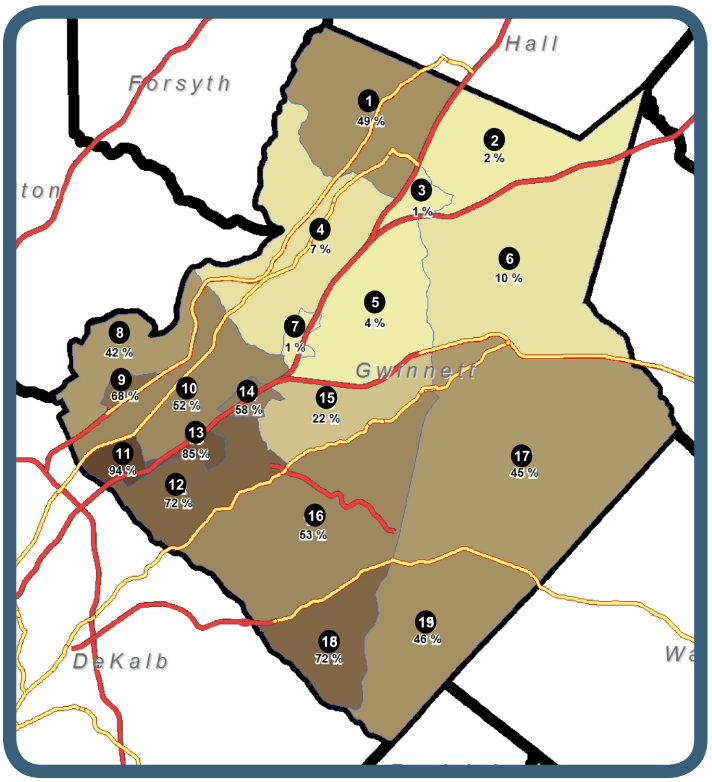
2016 Distribution of Office Space
in Square Feet



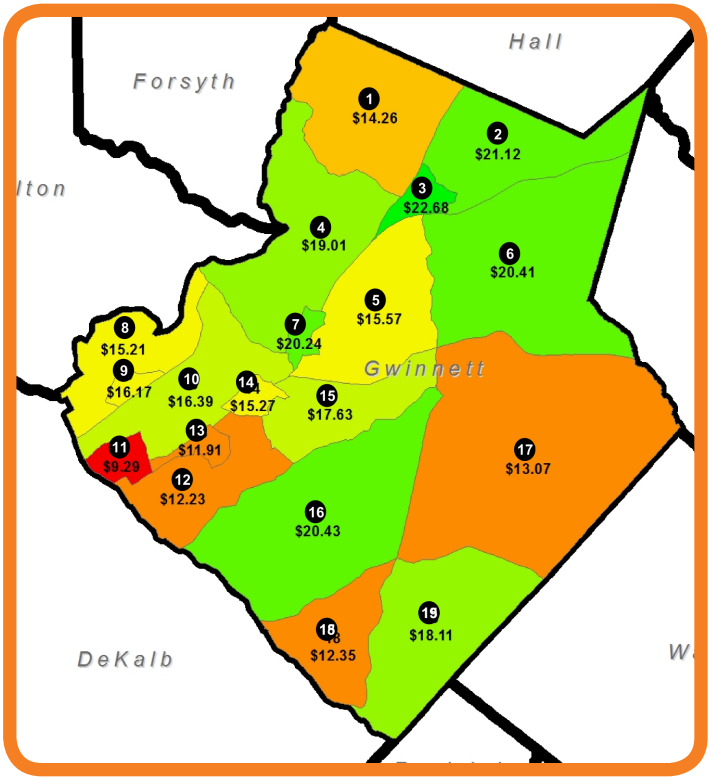
2016 Average Office Vacancy



2016 % of Office Buildings 25 Years or Older



2016 Average Office Rent

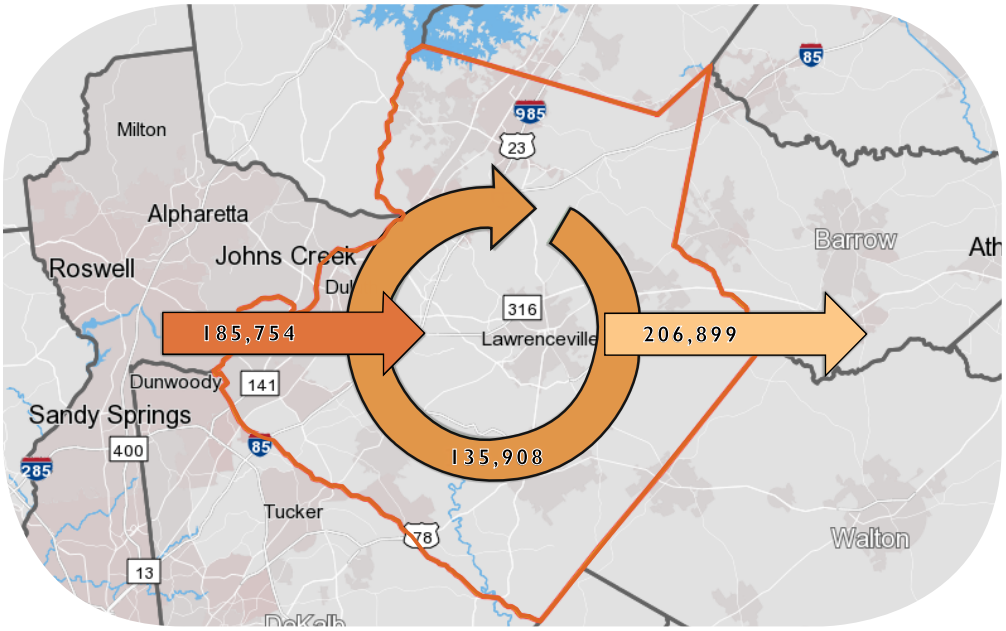


WHERE WE TRAVEL

WHERE WE TRAVEL

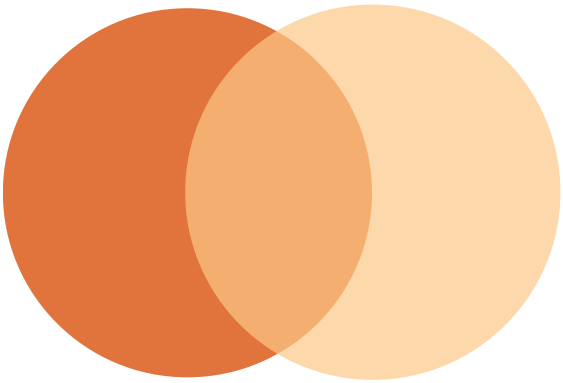
CENSUS ONTHEMAP

OnTheMap uses a dataset that incorporates age, earnings, and industry profiles compiled by the Census Bureau from individual state's records. Data is supplemented with other Census data and is confidentially compiled to incorporate information about employer locations and workers' residence locations using data from multiple Federal agencies.



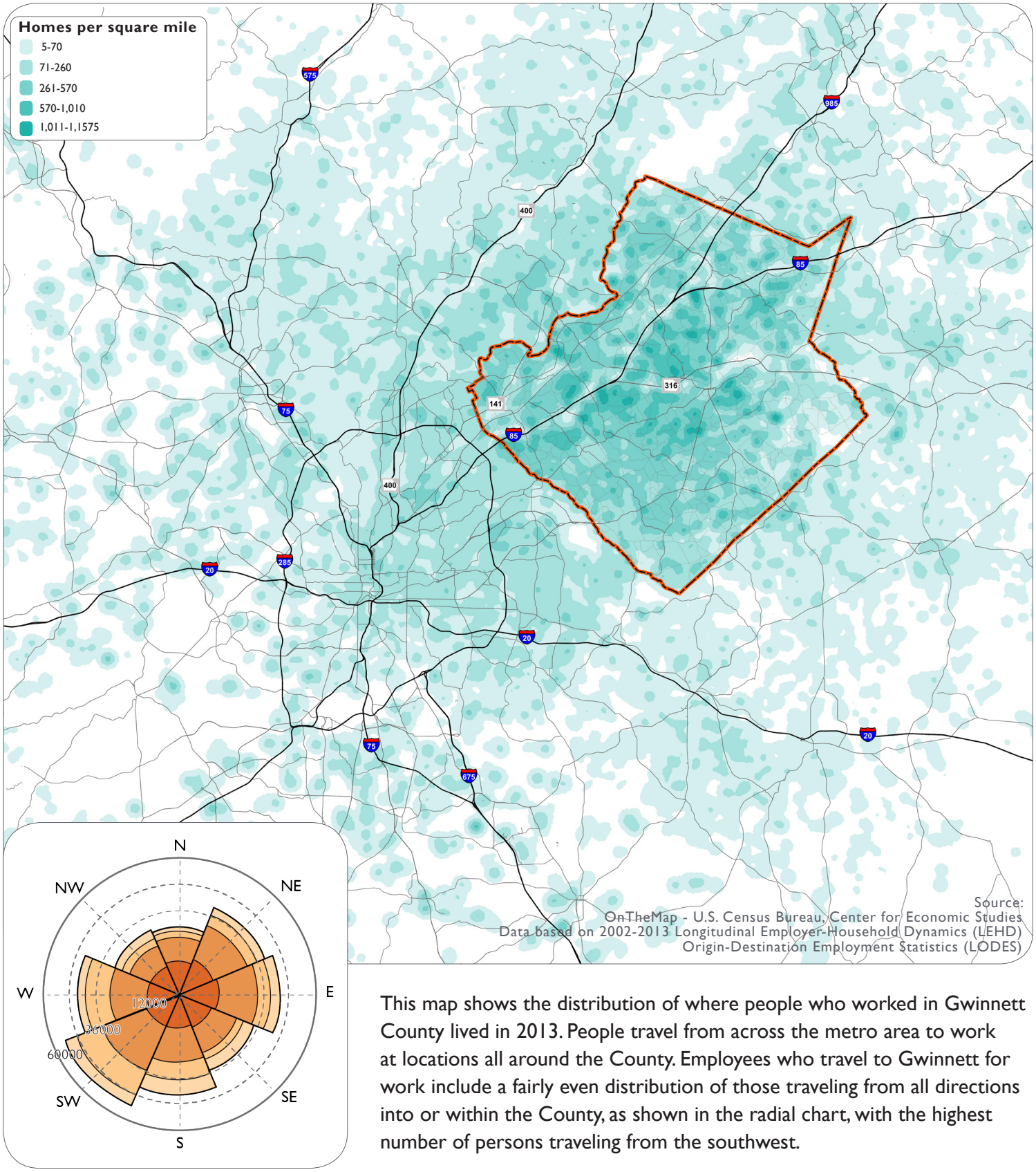
US Census data estimates that in 2013 Gwinnett County had 303,949 primary jobs, along with 323,426 working residents. This means that Gwinnett is nearly evenly matched in jobs and workers, with an outflow of 19,000 workers. An estimated 128,403 residents, or 40% of Gwinnett's working residents also work in the County, with the remainder leaving the County to work in other counties, primarily in Fulton or DeKalb.

Inflow/Outflow Job Counts in 2013



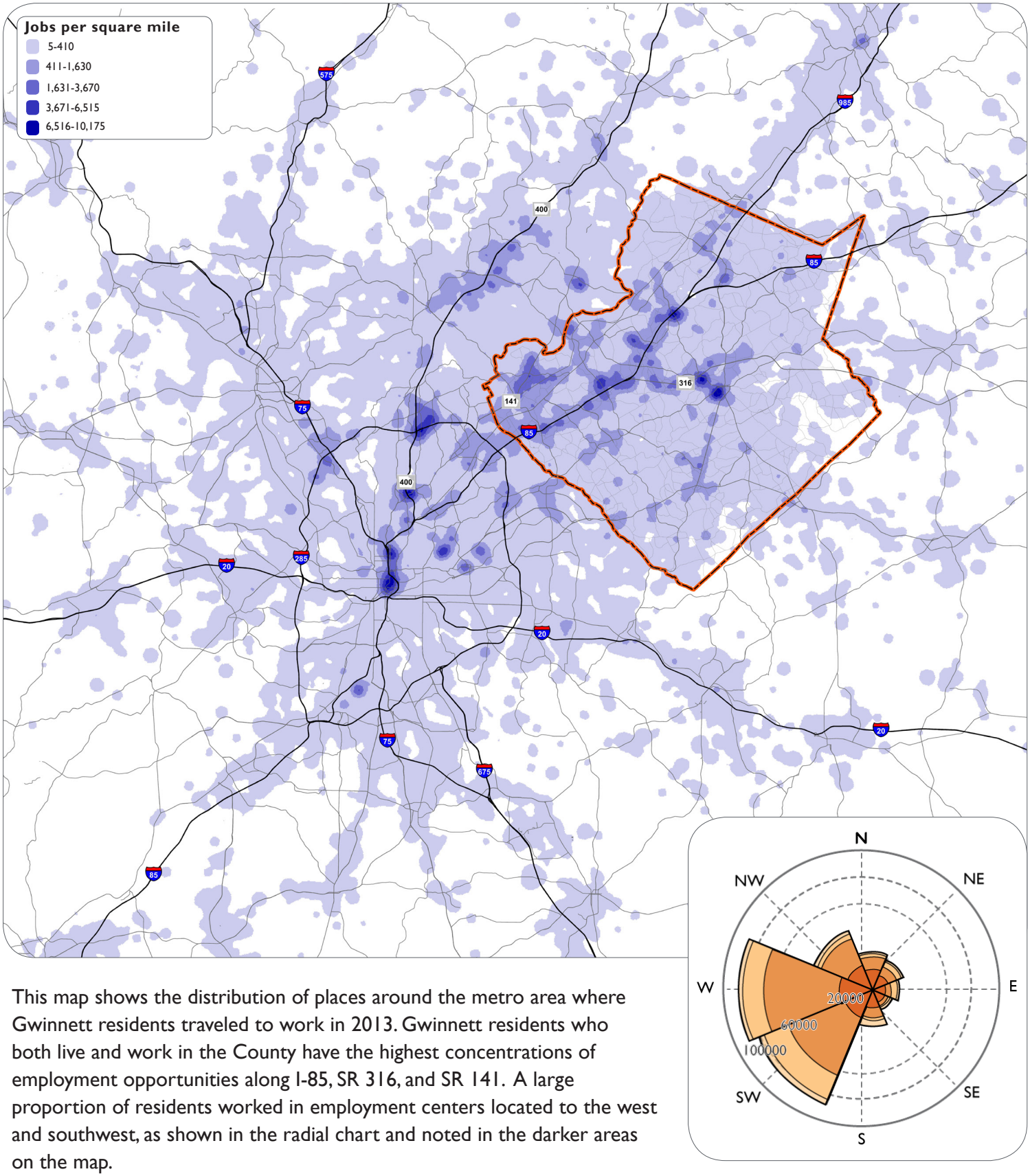
185,754 - Employed in Selection Area, Live Outside
206,899 - Live in Selection Area, Employed Outside
135,908 - Employed and Live in Selection Area

Where Gwinnett Workers Live



This map shows the distribution of where people who worked in Gwinnett County lived in 2013. People travel from across the metro area to work at locations all around the County. Employees who travel to Gwinnett for work include a fairly even distribution of those traveling from all directions into or within the County, as shown in the radial chart, with the highest number of persons traveling from the southwest.

Where Gwinnett Residents Work



This map shows the distribution of places around the metro area where Gwinnett residents traveled to work in 2013. Gwinnett residents who both live and work in the County have the highest concentrations of employment opportunities along I-85, SR 316, and SR 141. A large proportion of residents worked in employment centers located to the west and southwest, as shown in the radial chart and noted in the darker areas on the map.

ORIGIN-DESTINATION ANALYSIS

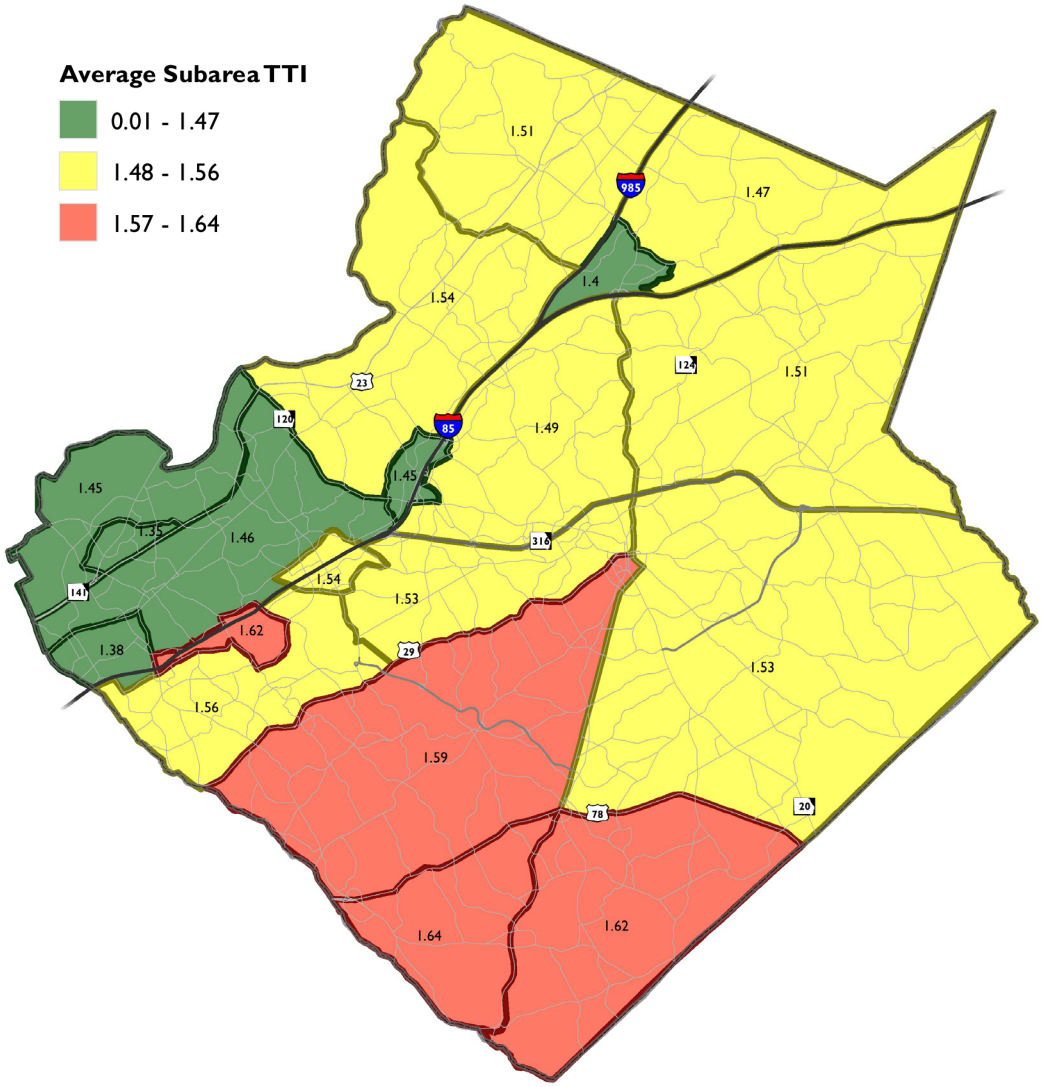
A broader analysis of origins and destinations to, from, and within Gwinnett County was conducted using the Atlanta Regional Commission's (ARC) travel demand model. These are the same subareas used in the market analysis, which were created based on similar average income, development density and general character (regional employment and commercial centers that are primarily residential). A map of these subareas is included on page 28.

Origin-Destination Travel Patterns

Focusing on the 19 subareas within Gwinnett County, a variety of travel pattern statistics were identified, including the top 10 trips to and from each subarea and information regarding the average travel times of those trips, all of which is provided in the Appendix of this report.

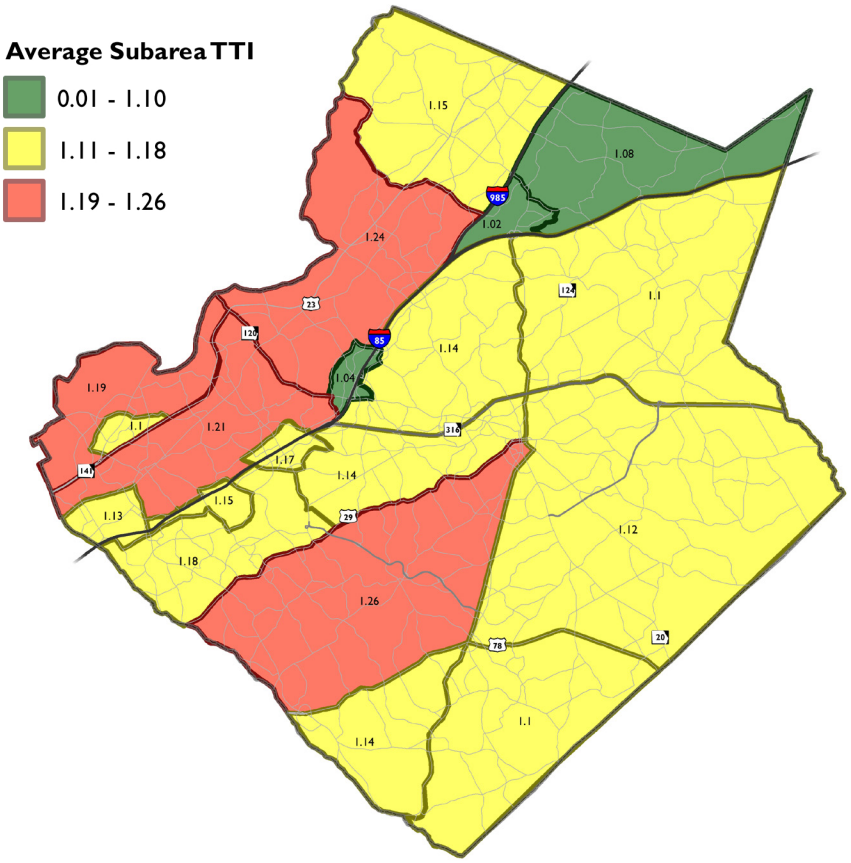
Average Gwinnett County Subarea TTI to the Atlanta Region

The map to the right shows the average TTI for all trips to and from each subarea (inside and outside of Gwinnett County). This map stresses the importance of regional connectivity given that areas connected to the I-85 or SR 316 corridors have relatively better TTI than areas in the southern part of the County.

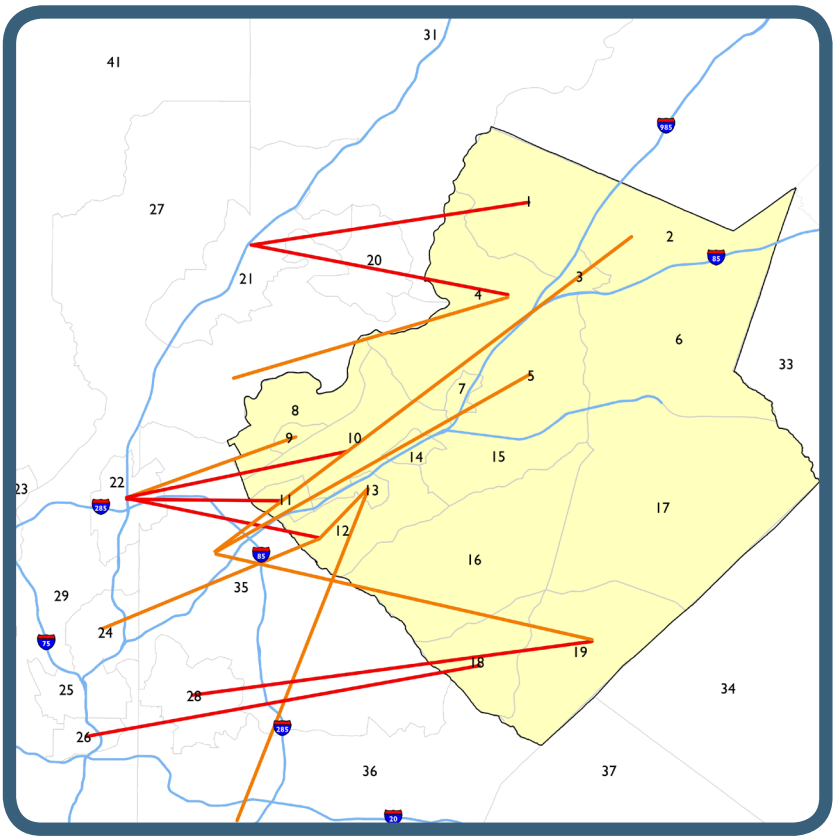


Average Gwinnett County Subarea TTI within Gwinnett County

The map at right shows the average TTI for trips within each subarea. These are effectively limited to local trips and is a measure of the level of congestion within each subarea. As the map indicates, areas that are congested within the County are more likely to be in the area between the Chattahoochee River and I-85. Notably, the subarea around Lilburn also indicates localized congestion as well as showing higher TTI when considering all trips to and from the area.



Top 15 Subarea TTIs Gwinnett County to Metro Atlanta



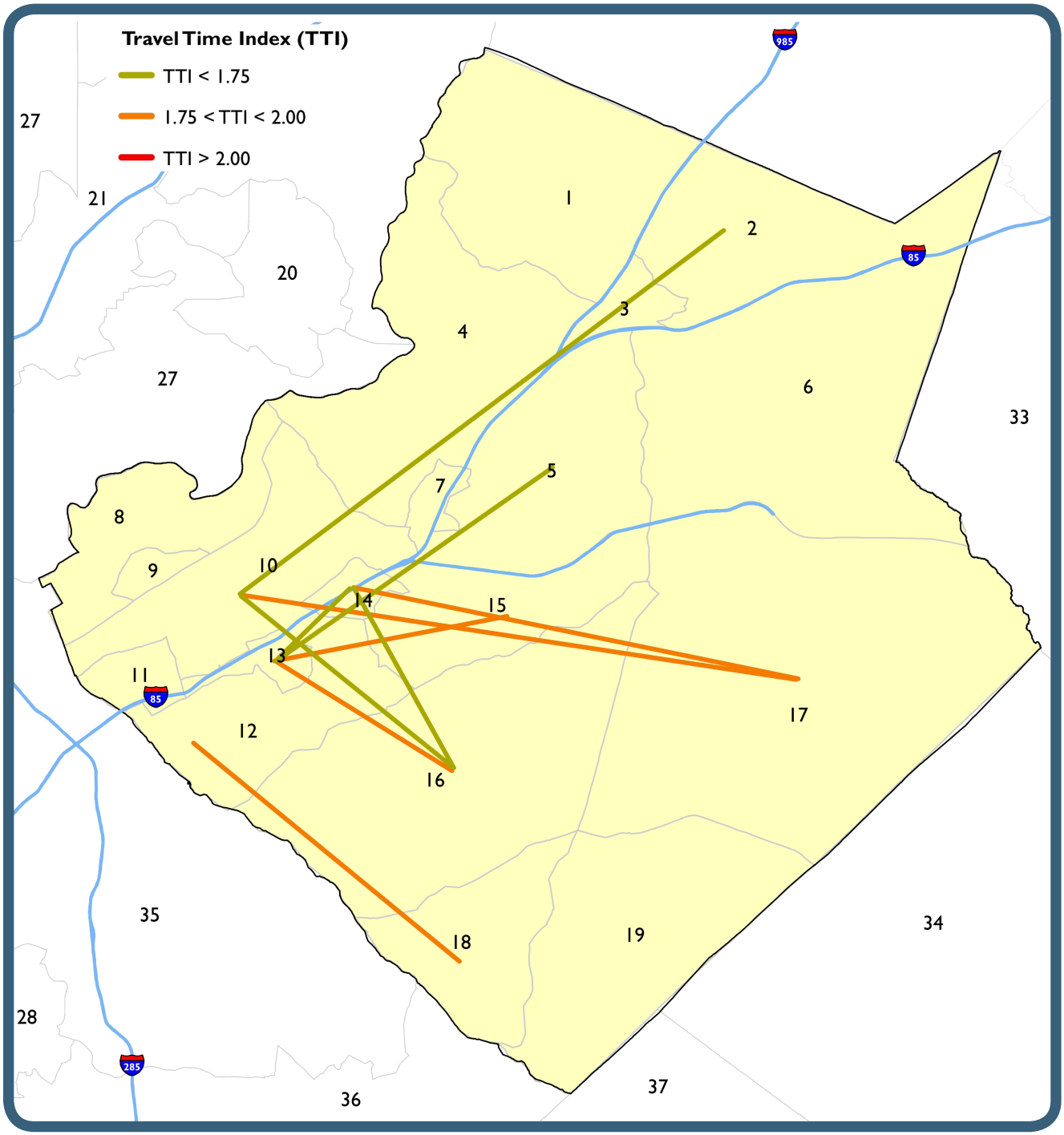
Focusing on individual travel patterns, the map at left shows the 15 highest observed TTIs between different subareas, the majority of which are travel patterns to and from areas outside of Gwinnett County such as the North Fulton/GA 400 corridor, Perimeter Center, and North DeKalb.

Travel Time Index (TTI)

- TTI < 1.75
- 1.75 < TTI < 2.00
- TTI > 2.00

Top 10 Subarea TTIs – Within Gwinnett County

The map below shows the 10 highest observed TTIs between different subareas within Gwinnett County, indicating the congestion that tends to be experienced by travelers to and from employment centers along the I-85 corridor.



OUR TRANSPORTATION NETWORK

The previous sections discussed the community of people who live in the County, the places people live, work, and play, and general travel patterns within and outside of Gwinnett County. *Our Transportation Network* focuses on the system that facilitates the movement of people between places of importance.

ROADWAY SYSTEM

Study Network

There are approximately 3,900 miles of public roadways that exist in Gwinnett County. Much of the roadway system is comprised of local or neighborhood streets, which functions to provide access to individual properties or neighborhoods with low speeds and low volumes. Connectivity among local roadways may be limited, providing shorter distance connections. The study network in this transportation plan considers roadways that provide greater connectivity and mobility than the local roadway network. Interstates, other freeways, arterials, and collector roadways generally provide longer distance connections on roadways that have higher traffic volumes and higher speeds. The study network is a subset of the overall roadway system and includes approximately 1,060 miles of the overall system.

Study Network

The Destination2040 study network includes

1,058 miles

of Gwinnett's more than 3,900 miles of public roadways

Study Network

Other Roadways

Regional and National Routes

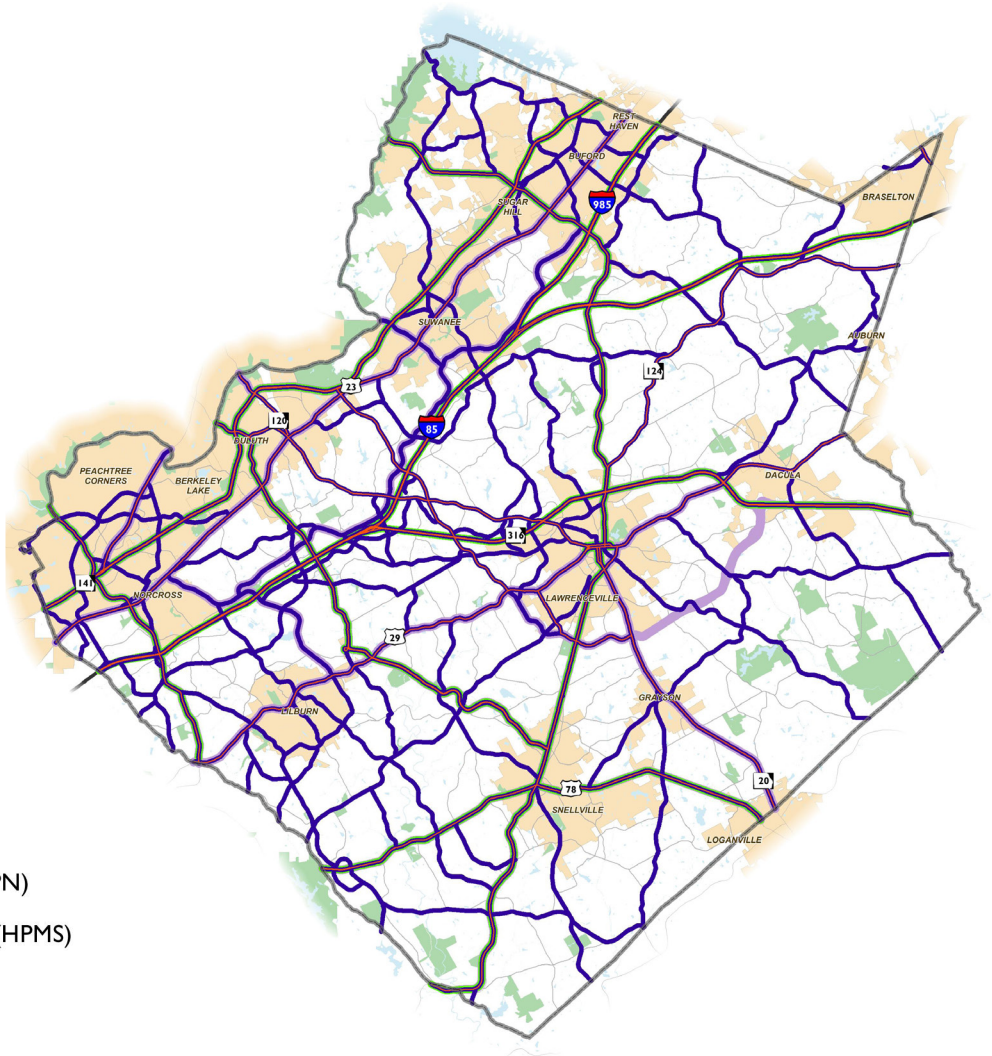
Gwinnett County roads tie into a system of strategic regional and national roadway systems. Roadways within the County that are part of regional and national systems may be eligible for dedicated funding pools from regional, state, and national agencies. Alternatively, routes on regional and national systems may be subject to restrictions based on intended functions of these routes.

The National Highway System (NHS) includes all of the interstate highway system along with other roadways important for the nation's critical functions including the economy, defense, and mobility of goods and persons. The National Highway Planning Network (NHPN) includes the NHS and its Intermodal Connectors along with the Eisenhower Interstate System, the Strategic Highway Network (STRAHNET) and all roads with a functional classification of principal or minor arterial.

The Regional Thoroughfare Network (RTN) is part of the Atlanta Regional Commission's Strategic Regional Thoroughfare Plan (SRTP) and includes the most critical non-freeway surface roads in the metropolitan planning area.

The primary purpose of the Highway Pavement Monitoring System (HPMS) is to provide data for decision processes within the FHWA, the DOT, and Congress. The State Departments of Transportation is responsible for the collection of data and reporting for the HPMS, cooperating with local governments and MPOs to collect and report the data, with the intention that the state, local and MPO agencies will benefit from the data program.

System	Miles in Study Network
NHS	233
RTN	240
NHPN	329
HPM	648



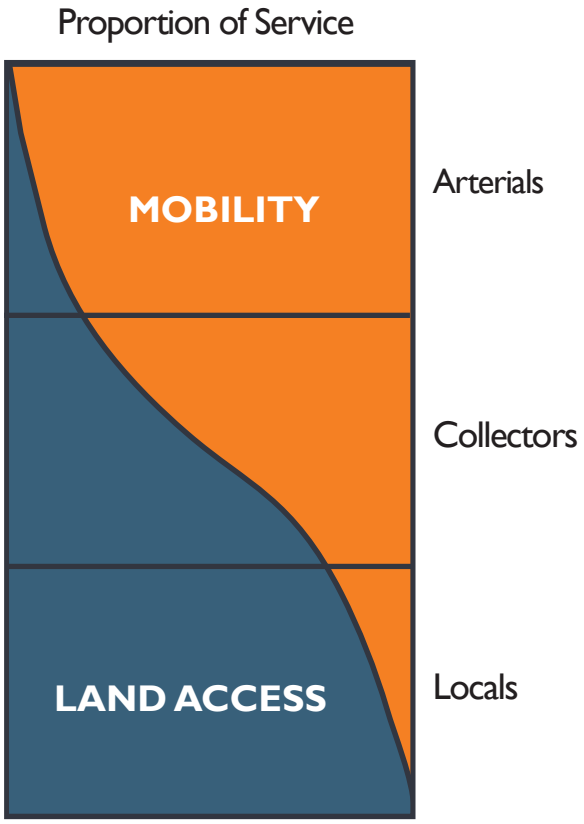
National and Regional Routes

- National Highway Planning Network (NHPN)
- Highway Performance Monitoring System (HPMS)
- National Highway System (NHS)
- Regional Thoroughfare Network (RTN)

GDOT Functional Classification

Functional classifications are defined by the Federal Highway Administration (FHWA) and used by policy makers, planners, engineers and citizens to designate the characteristics and purposes of the roadways in a system. The functional classification system categorizes streets along a general hierarchy that accounts for the inverse relationship between access and mobility.

Relationship of Functionally Classified Systems in Serving Traffic Mobility and Land Access:

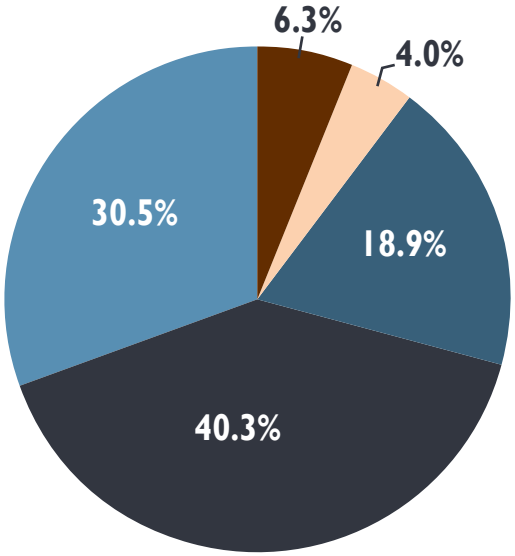


Source: http://www.fhwa.dot.gov/planning/processes/statewide/related/functional_classification/fc02.cfm

The following functional classifications, as characterized by GDOT, are found in Gwinnett County:

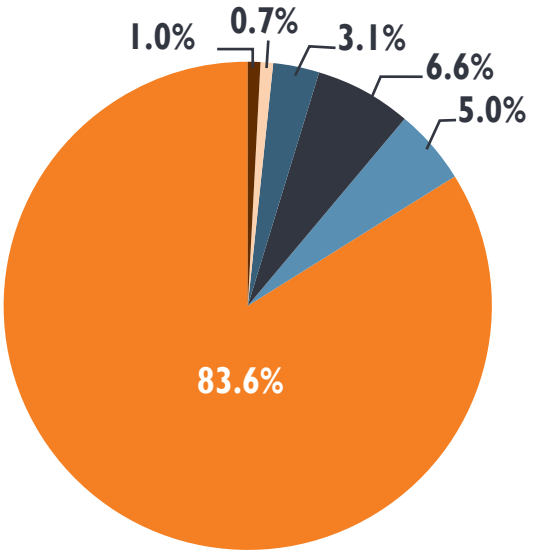
- **Interstates** are designed and constructed for long-distance travel. These roads have the highest design speeds and the most limited access in order to facilitate high mobility.
- **Other Freeways** are similar to interstates, having controlled access and limited at-grade crossings. They may have fewer lanes than interstates, but the directional travel lanes are usually divided by a physical barrier.
- **Other Principal Arterials** provide service to urban and rural areas, generally radiating outward from a city center to serve the surrounding region. Unlike interstates, principal arterials can often be accessed directly by adjacent businesses.
- **Minor Arterials** connect smaller geographic areas within a larger urban arterial network and are often used to carry local bus routes.
- **Major Collectors** are used by residents to access the arterial network from their places of origin. An example of a major collector would be the longer roads in a given residential neighborhood.
- **Minor Collectors** are similar to major collectors, but generally shorter in length and with fewer lanes.
- **Local Roads** provide direct access to property for the very beginning and the very end of a trip. Local roads have low design speeds and often prevent through traffic.

Total Mileage *(No Local Roads)*



- Interstates
- Other Freeways and Expressways
- Principal Arterials
- Minor Arterials
- Major Collectors
- Local Roads

Total Network Mileage (by Functional Class)



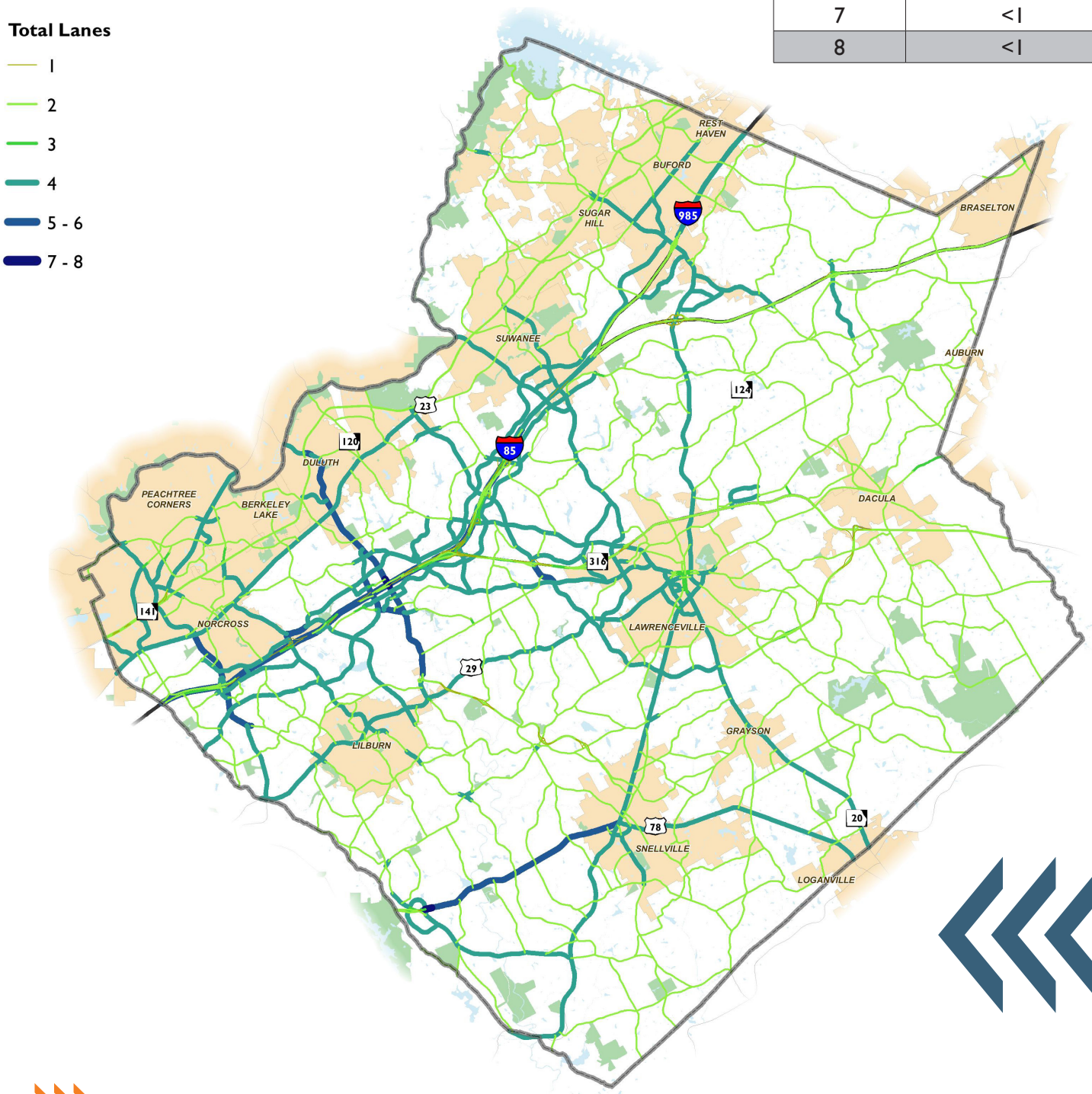
GDOT Functional Classification

- Interstate
- Other Freeways and Expressways
- Other Principal Arterials
- Minor Arterials
- Major Collectors
- Georgia State Routes
- Other Roadways

Lanes

The number of lanes is a primary characteristic to determine a roadway's vehicular capacity. The majority of roadways incorporated in the Gwinnett County study network are two-lane roadways, which account for approximately 715 miles of the study network, followed by four-lane roadways, which account for approximately 240 miles. The inventory of roadway lanes considered lane counts separately for opposing directions of divided highways.

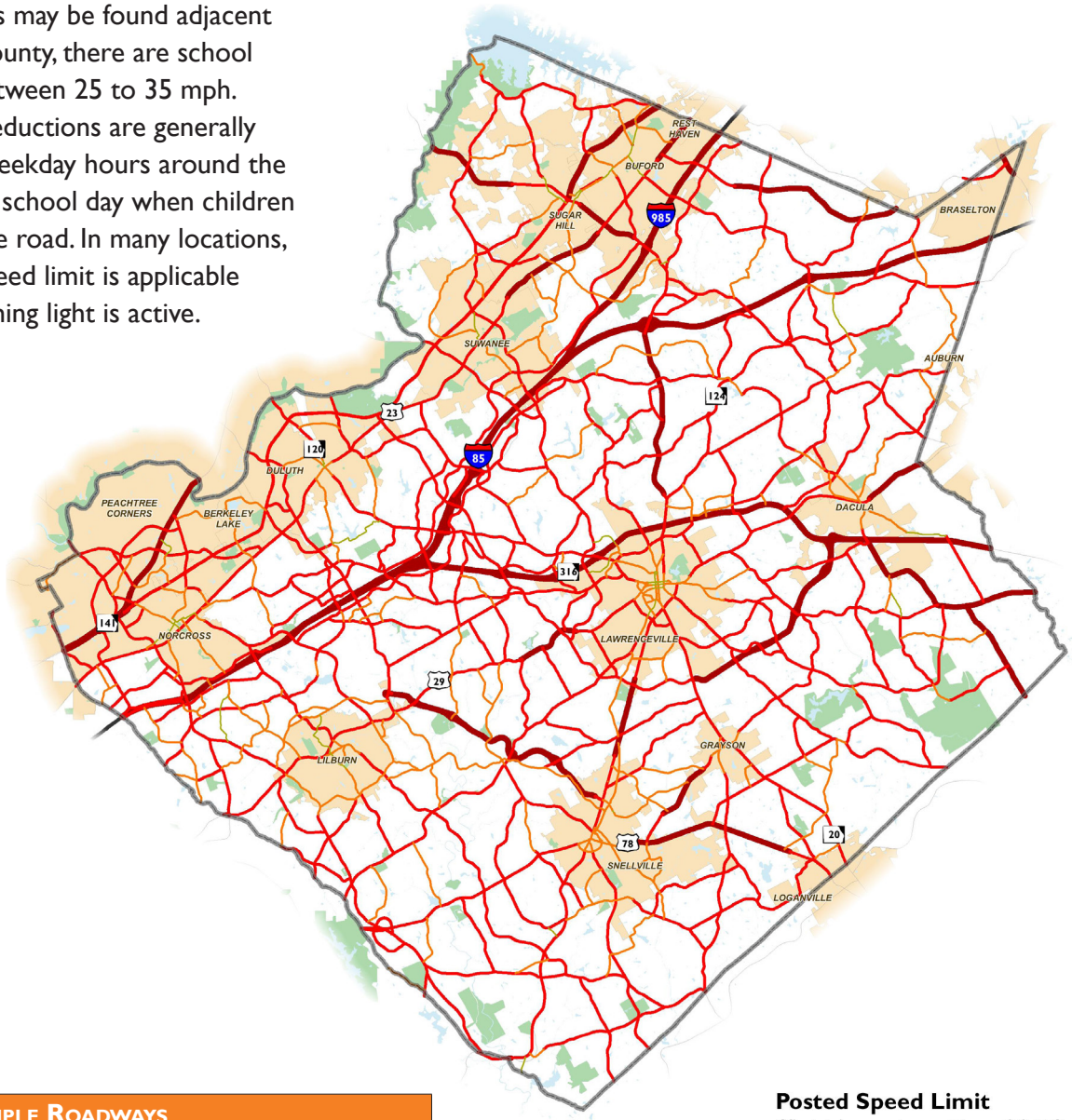
Number of Lanes	Miles (rounded to the nearest mile)
1	34
2	715
3	23
4	240
5	7
6	37
7	<1
8	<1



Speeds

Posted speed limits are typically based on the function of a roadway, the area type, and specific conditions relating to the roadway and its operations. Limited-access facilities including interstates and freeways typically have higher speeds and are signed for 50 mph and above. Posted speeds between 40-45 mph are common for suburban collector roadways and along arterials, while local and urban facilities in denser areas include speeds the range of 30-35 mph.

Variations in posted speeds may be found adjacent to schools. In Gwinnett County, there are school zones with speed limits between 25 to 35 mph. School Zone speed limit reductions are generally applicable during posted weekday hours around the start and end hours of the school day when children are likely to be crossing the road. In many locations, the posted school zone speed limit is applicable when a corresponding flashing light is active.



Speed Limit	Example Roadways
35 mph or less	Arcado Road, Davenport Road, Old Snellville Highway, Rock Springs Road
40-45 mph	Fence Road, Lawrenceville-Suwanee Road, Rockbridge Road, Satellite Boulevard
50-55 mph	Peachtree Industrial Boulevard (south of Peachtree Parkway), Peachtree Parkway, SR 316 (west of Winder Highway)
60 mph or greater	I-85, SR 316 (east of Winder Highway)

Posted Speed Limit (field inventory Dec. 2015)

- ≤ 25 MPH
- 30 - 35 MPH
- 40 - 45 MPH
- ≥ 50 MPH

Intersection Control

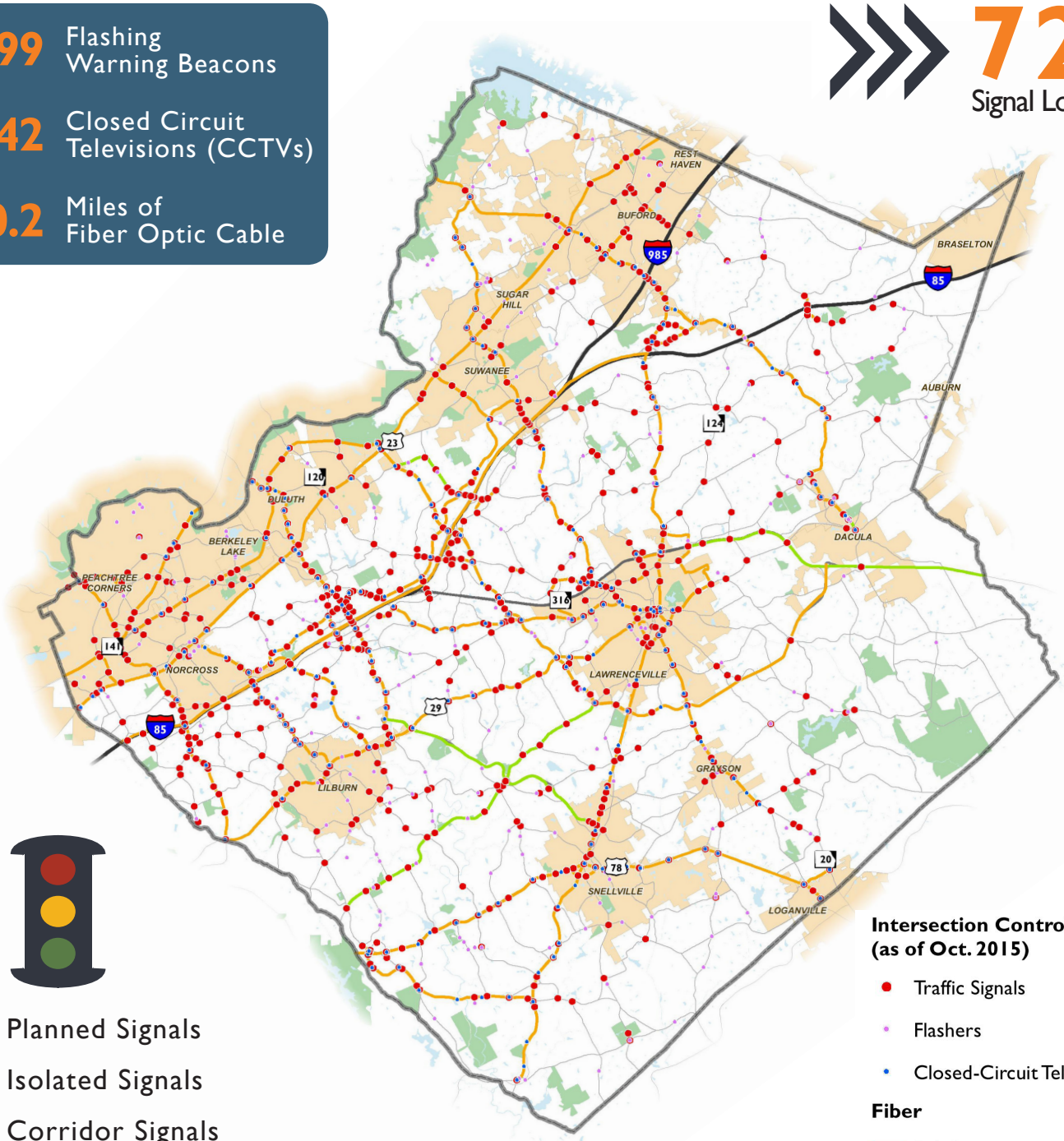
Gwinnett County's traffic control system promotes safe and efficient travel throughout the County. It consists of traffic signals, flashers, close-circuit televisions (CCTV), fiber optic communication systems, and a Traffic Control Center (TCC) located centrally within the County in Lawrenceville. Additionally, many corridors along key arterials and other roadways have coordinated traffic signals systems. The overall traffic and intersection control system allows for the County to manage real-time traffic conditions as well as plan for future transportation plans and mobility concerns. The map below details existing intersection control infrastructure throughout the County.

199 Flashing Warning Beacons

242 Closed Circuit Televisions (CCTVs)

350.2 Miles of Fiber Optic Cable

724 Signal Locations



Intersection Control (as of Oct. 2015)

- Traffic Signals
- Flashers
- Closed-Circuit Television

Fiber

- Existing
- Future

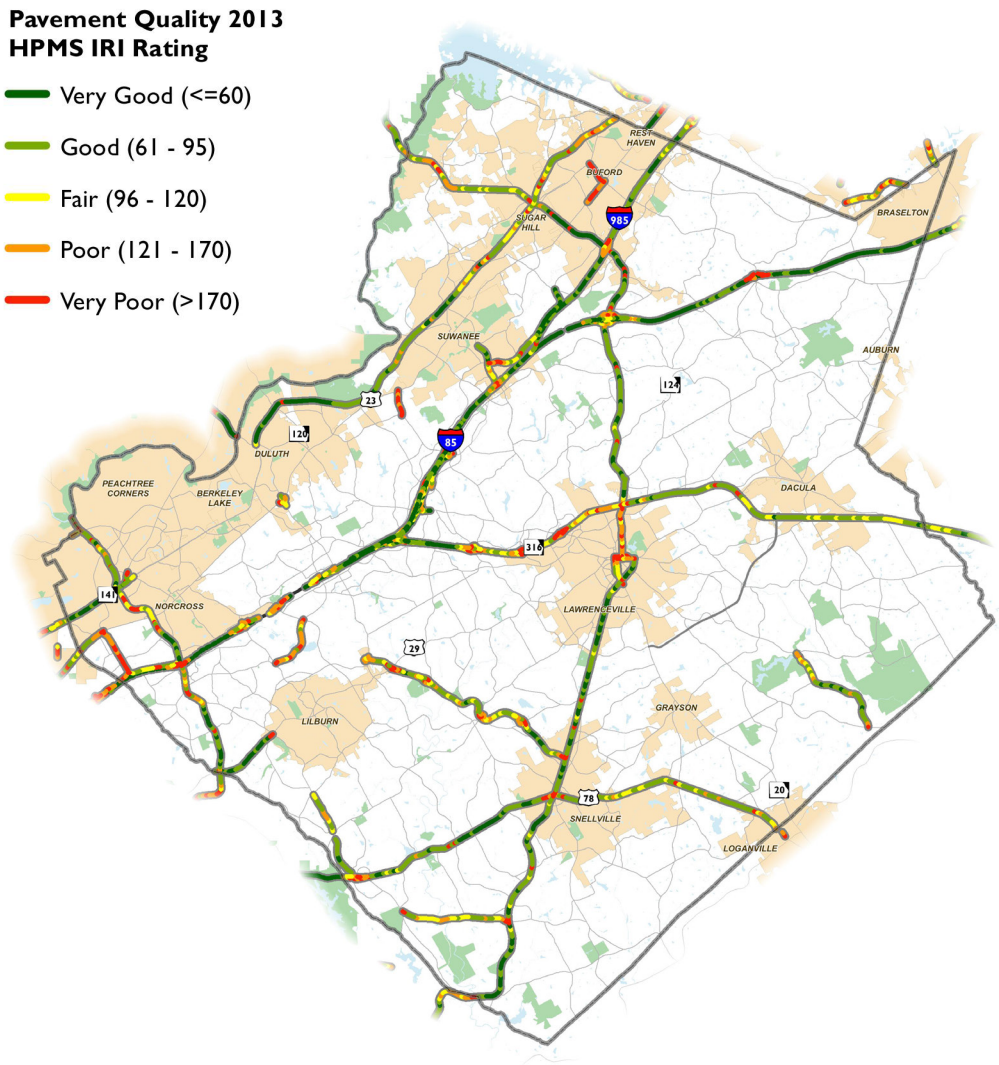
5 Planned Signals

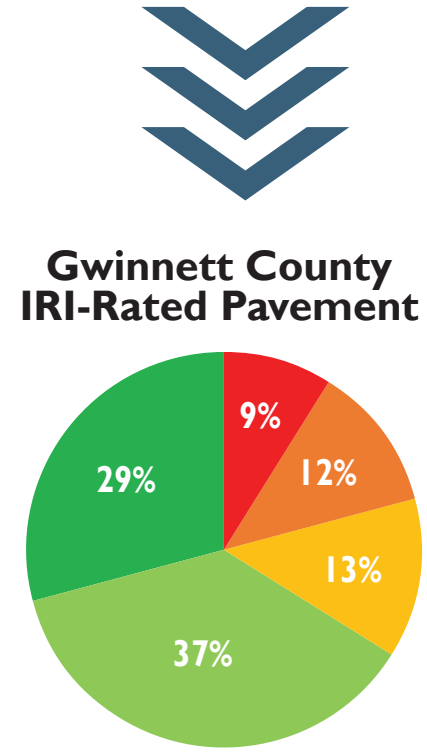
228 Isolated Signals

491 Corridor Signals

Pavement Quality

The Highway Pavement Management System (HPMS) is the official government source of data on the extent, condition, performance, use, and operating characteristics of the nation's highways. The International Roughness Index (IRI) is a standardized pavement measurement that was developed by the World Bank in the 1980s and used to define the roughness of a roadway. Pavement roughness can indicate ride comfort because it measures the response to vibrations due to irregularities in the pavement surface; it is expressed in inches per mile (the lower the number the smoother the pavement). Approximately 580 miles of roadway in Gwinnett County are included in the 2013 HPMS dataset, including a little more than 90 miles that have been measured for IRI pavement roughness quality. Of the IRI rated roadways in Gwinnett County in 2013, pavement quality is generally in good shape, with approximately two-thirds in "Good" or "Very Good" condition. Still, this pavement quality measurement is only a small sample of the roadway system, primarily focused on the major thoroughfares and highways. An assessment of pavement quality in the County on smaller roadways may reveal a different picture of pavement needs and quality.

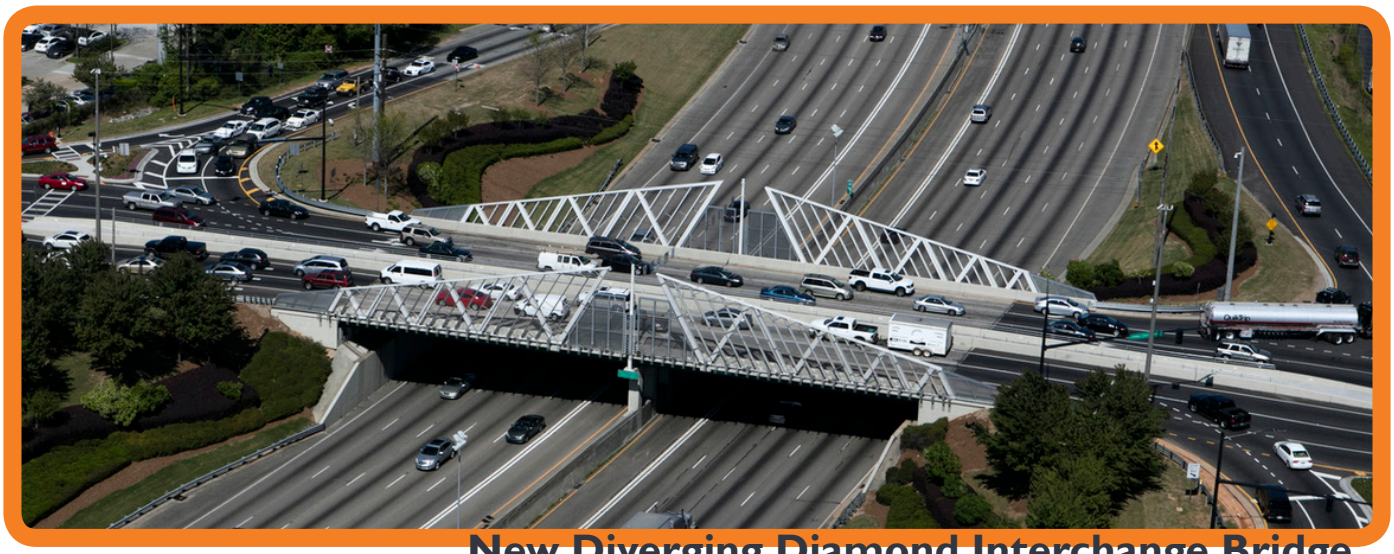




Rating	Miles
Very Good	55.7
Good	71.5
Fair	24.8
Poor	22.5
Very Poor	17.8

Bridges

Bridges represent critical components of a safe and efficient transportation system. Deficient bridges can introduce safety and congestion concerns along an otherwise properly operating corridor. Regular inspection is a must to ensure the bridge maintains its reliability. Bridges are inspected by GDOT every two years as required by the Federal Highway Administration. The FHWA uses two classifications to describe bridge conditions that are substandard. Structurally deficient bridges are not considered unsafe for travel, but refer to structures at least 10 years old that have relatively poor condition of the deck, superstructure, or substructure, and that may not be able to carry sufficient loads due to design or deterioration. Functionally obsolete bridges refer to structures that do not meet current standards for shoulder width, clearance, or load carrying capacity and may not be able to adequately serve existing traffic due to design limitations. In addition to the classifications of structurally deficient or functionally obsolete, bridges are assigned a numerical rating from 0 to 100, where 100 represents perfect condition and 0 represents total failure. To qualify for Federal funds, the bridge must be classified as either structurally deficient or functionally obsolete, must have a sufficiency rating of 80 or less, must be at least 20 feet in length on a public roadway, and cannot have been rehabilitated/reconstructed or new/replaced within the past 10 years. Best practices for roadway design include the construction of a bridge at the same (or higher) design standard as the corridor it serves.



New Diverging Diamond Interchange Bridge at Jimmy Carter Boulevard

STRUCTURALLY DEFICIENT BRIDGES:

- Brannon Road over Jacks Creek (3.3 miles southwest of Snellville)
- Martin Farm Road over the Suwanee Creek (in Suwanee)
- South Lee Road over the Suwanee Creek (2.8 miles south of Buford)
- Harbins Road/Patrick Mill Road over the Apalachee River (just across the County line in Barrow County)

306
Bridges

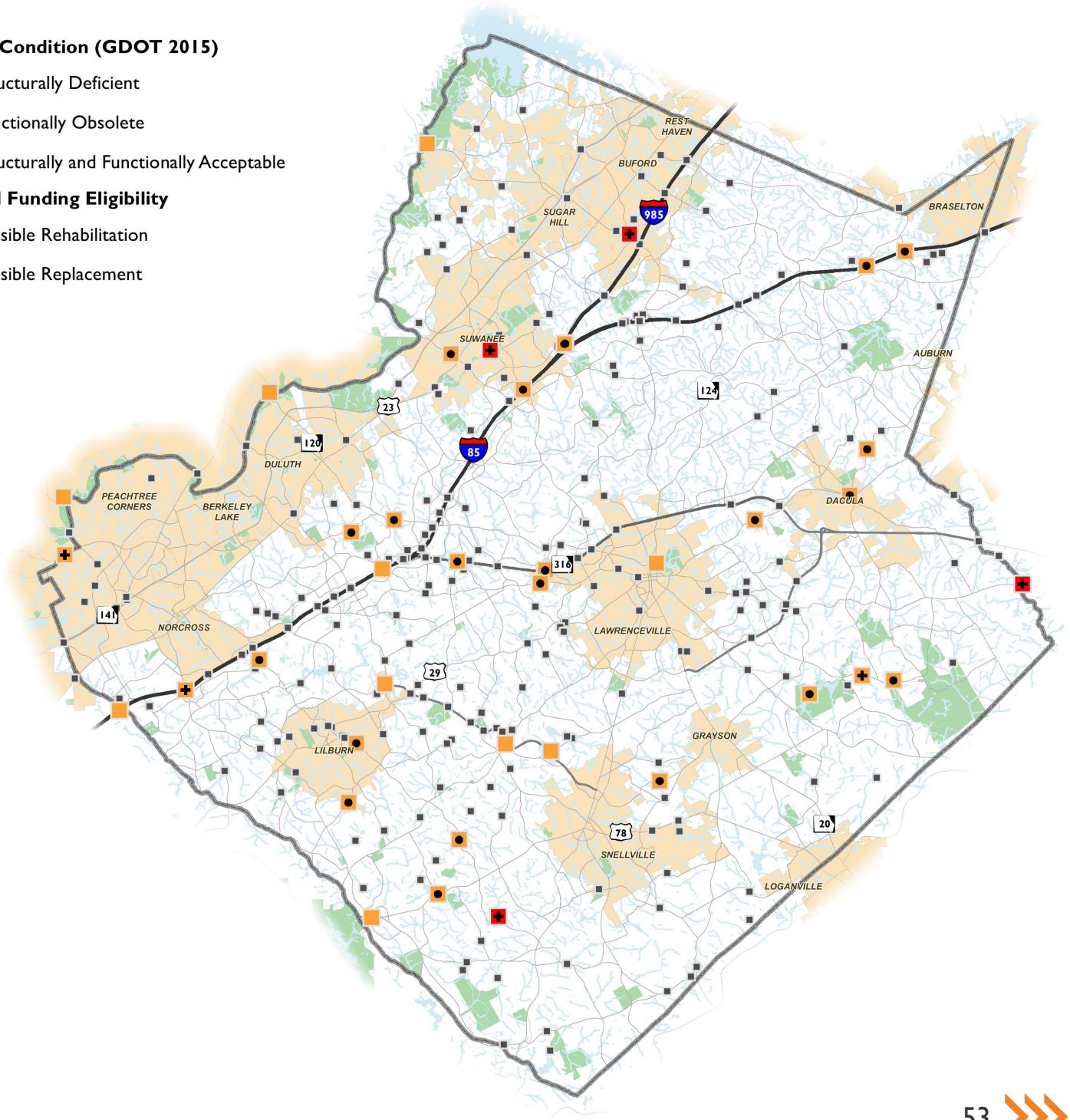
Of the 317 structures shown in the map below, 300 are bridges or culverts located within Gwinnett County with an additional 11 facilities located just outside the County line. According to GDOT 2015 fourth quarter data, there are 31 functionally obsolete structures in Gwinnett, with an additional five along roadways just outside of the County. Also shown are three structurally deficient bridges, with one additional structure located in Barrow County. Federal funding opportunities to rehabilitate or replace underperforming bridges are applicable for 30 of the 40 functionally obsolete or structurally deficient bridges shown based on additional criteria. Of those 30 structures, 23 may be eligible for federal rehabilitation funding, while 7 may be eligible for federal replacement funding based on sufficiency ratings.

Bridge Condition (GDOT 2015)

- Structurally Deficient
- Functionally Obsolete
- Structurally and Functionally Acceptable

Federal Funding Eligibility

- Possible Rehabilitation
- Possible Replacement



Travel Demand Model

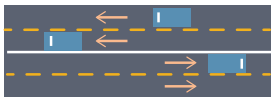
The Atlanta Regional Commission's 2015 travel demand model (TDM) was used to determine the baseline conditions of roadway operation throughout Gwinnett County. The regional travel demand model encompasses twenty counties; therefore, additional detail is necessary for a subarea study, such as this County transportation plan. Edits were made to calibrate the regional travel demand model to Gwinnett by modifying roadway network characteristics, such as laneage, functional classification, and speed. The more detailed data were used to create a computerized forecast of typical traffic conditions within the County. A summary of the results of the updated forecast is shown in a series of maps that follows.

The maps represent different states of Level-of-Service (LOS) within Gwinnett County. These maps show AM and PM peak period Levels-of-Service in 2015. The LOS is an indication of delay and is measured on a grading scale from "A" to "F"- "A" represents the best conditions and "F" represents the worst conditions. LOS A typically occurs on roadways with free-flowing conditions and little delay, while LOS F typically occurs on roadways with high congestion and heavy delay (approaching gridlock). LOS D is generally considered acceptable because the roadway is busy, yet traffic is still flowing at a reasonable speed. LOS E is typically when a roadway is operating at capacity. The travel demand model provides an estimation of volume to capacity on a roadway link. It does not fully represent delay associated with intersections or take into account congestion due to crashes. Therefore, the model often looks "better" than what drivers experience while on the roads.

Definition of Level-of-Service

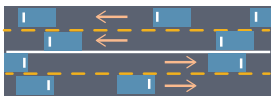
A Free flow, low traffic density

B Minimum delay, stable traffic flow

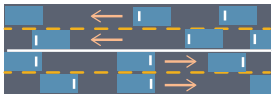


C Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists

D Movements more restricted, travel speeds begin to decline



E Traffic fills capacity of the roadway, vehicles are closely spaced, incidents can cause serious breakdown



F Forced flow with demand volumes greater than capacity resulting in breakdown in traffic flow

2015 Existing LOS

AM Peak Period

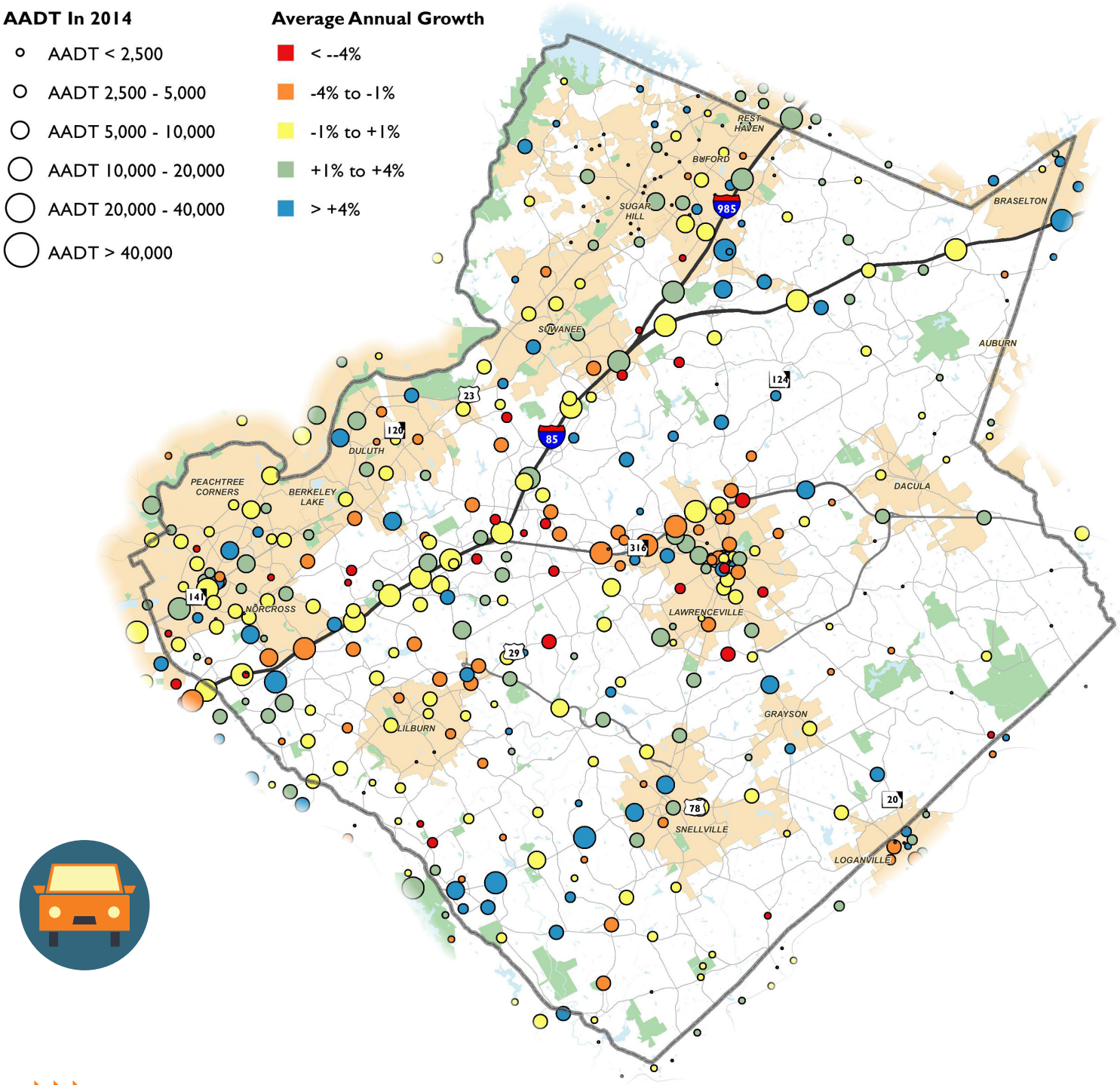
2015 Vehicular LOS

- A/B (V/C < 0.50)
- C (0.50 < V/C < 0.70)
- D (0.70 < V/C < 0.84)
- E (0.84 < V/C < 1.00)
- F (V/C > 1.00)

PM Peak Period

Average Annual Daily Traffic

Average annual daily traffic (AADT) volumes for 2014 were obtained from the Georgia Department of Transportation. The following map illustrates the 2014 AADT as well as the change in AADT between 2010 and 2014 along major corridors within the Gwinnett County study network. The size of the circle indicates the overall volume. The larger the circle is, the higher the volume of traffic at that section of the roadway in 2014. The percent change in AADT between 2010 and 2014 is expressed by the symbol color with dark blue representing the highest positive change and red representing the highest negative change.



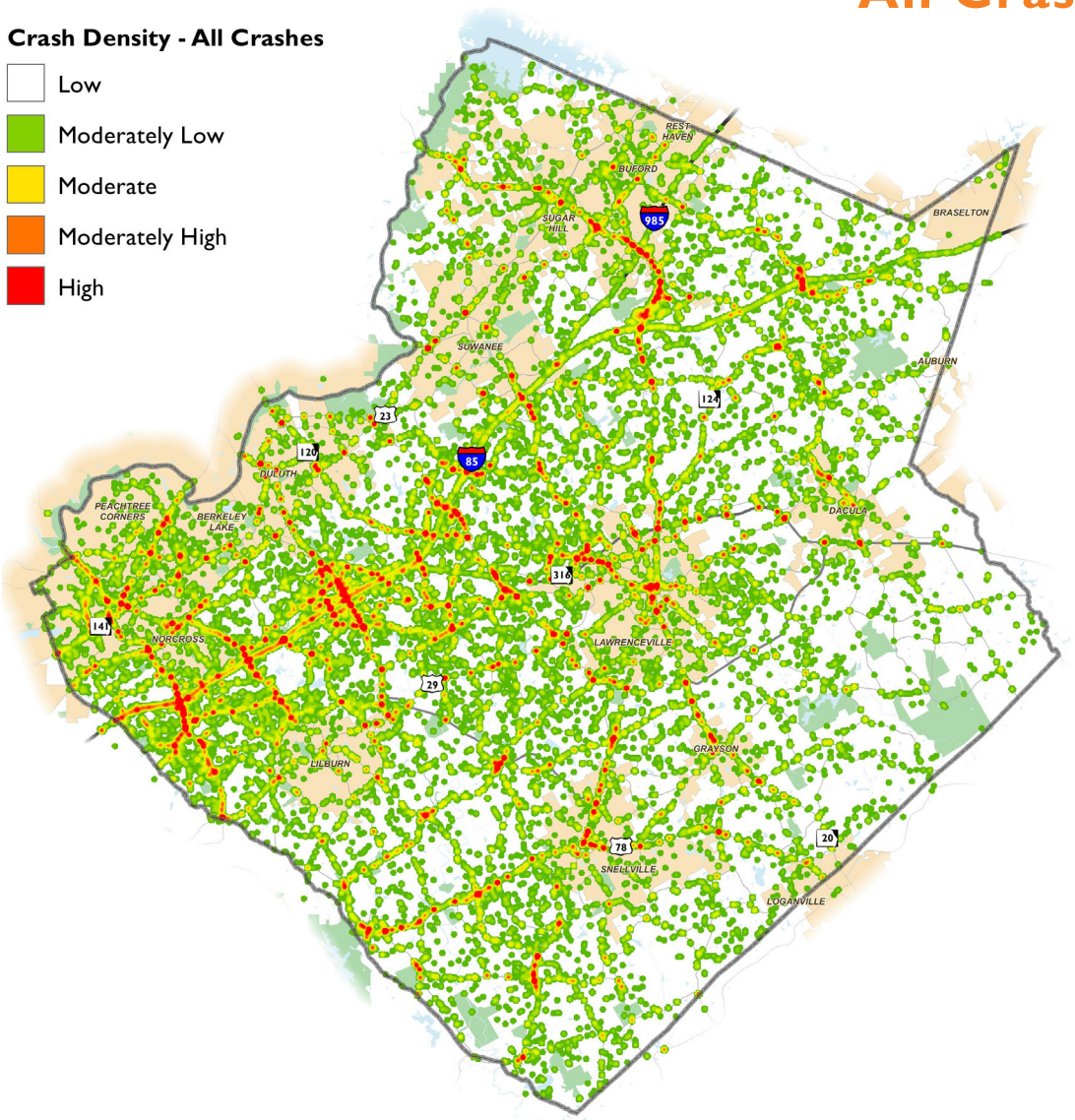
Crashes—All County Crashes

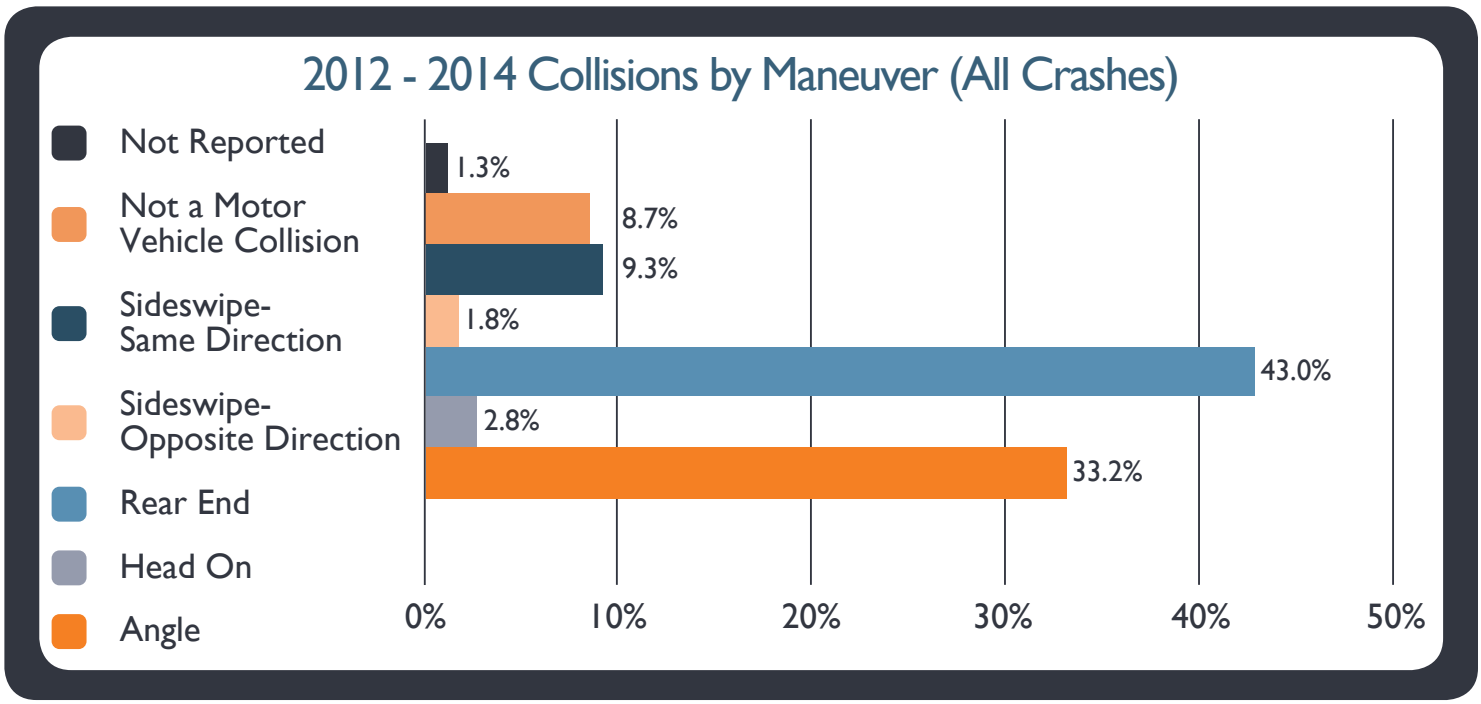
Traffic safety is a key component to any successful transportation plan and a critical consideration for community-wide mobility. Examining the crash history and traffic patterns can help identify locations where improvements in traffic safety may benefit the community as a whole.

The map below represents relative density of crashes that occurred in Gwinnett County from 2012 to 2014. It is not surprising that many of the areas in the County that show high density of crashes correspond to high traffic volume areas, interstate interchanges, and activity centers with dense roadway networks and heavy multimodal activity

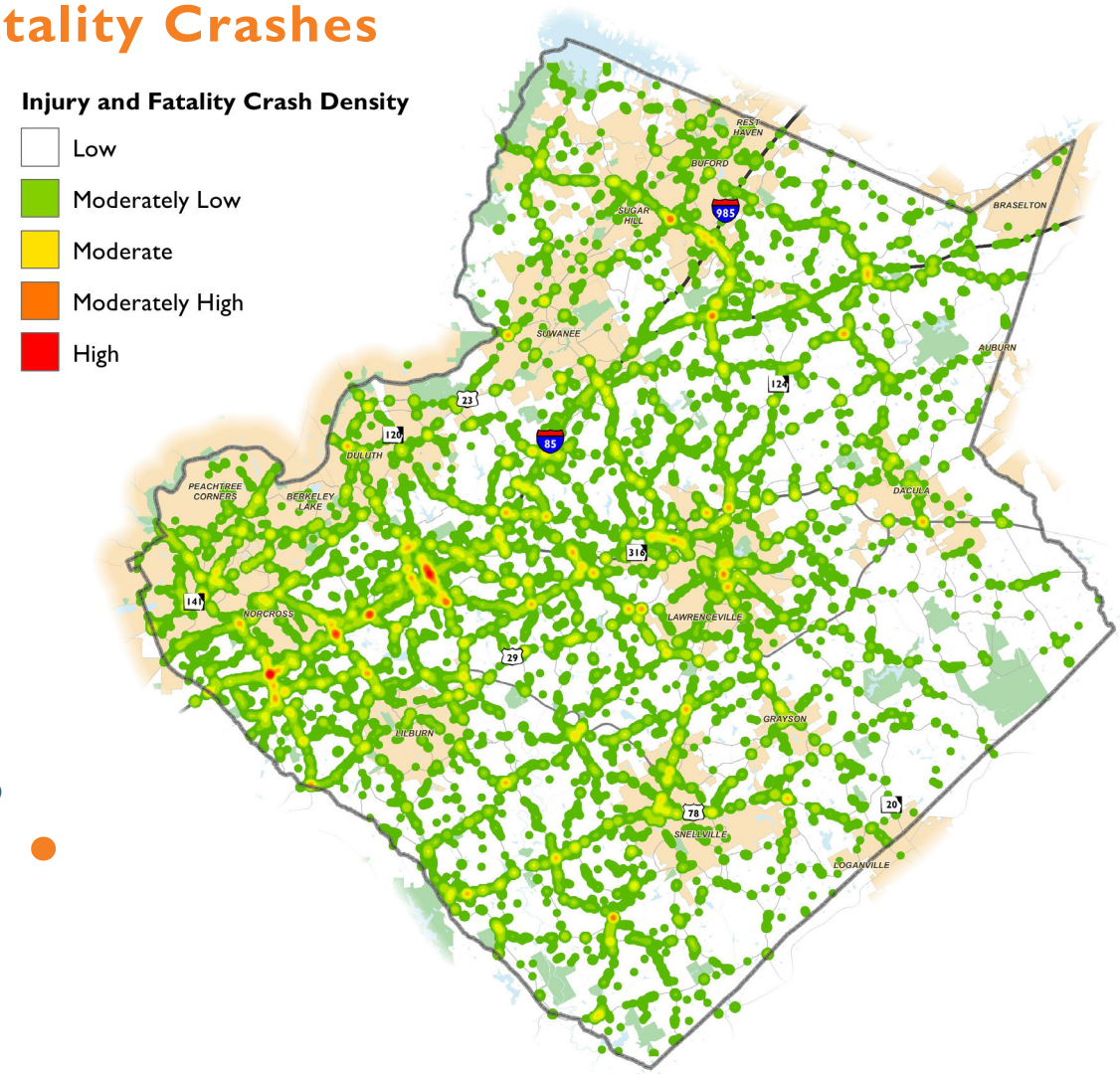
During the three-year period, 94,022 crashes were reported in locations across Gwinnett County. Approximately 22% of reported collisions resulted in at least one reported injury. There were a total of 257 reported fatalities during the three-year period. Rear end collisions were the most common manner of collision in the County followed by angle collisions (left- or right-turning maneuvers). Based on the information available, approximately 5% of collisions (4,754) included a heavy vehicle, just under 1% (822) involved a pedestrian, and approximately 0.2% (167) involved a bicyclist. Other sections of this technical report include more details specific to crashes that involved heavy vehicles, pedestrians and bicyclists.

All Crashes 2012-2014

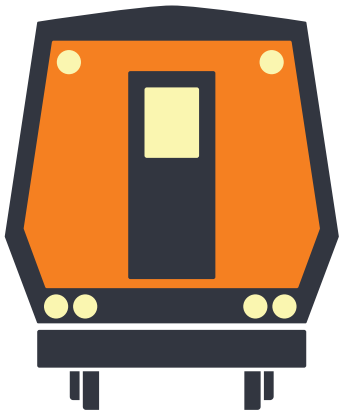




Injury and Fatality Crashes



FREIGHT



Gwinnett County is already an important activity center for freight travel and industrial production as it is home to major manufacturing facilities and has the 3rd and 6th largest distribution centers in the region. With other considerations such as the deepening of the Savannah Port and increases in industrial production/warehouse space not only in Gwinnett but throughout the Atlanta region, freight travel will remain an important part of the County's transportation system.

Gwinnett County is served by both CSX (22 rail miles in the County) and Norfolk Southern rail lines (33 rail miles). Amtrak has track rights to approximately 28 miles along the Norfolk Southern line that runs parallel to Buford Highway/US 23. There are 6 intermodal transfer facilities according to the 2015 National Transportation Atlas Database predominantly in the western corner of the County along the Norfolk Southern rail corridor and spur. Outside of intermodal facilities, a Georgia Center of Innovation for Logistics spotlight identified 83 warehousing and distribution facilities that were operational in Gwinnett in 2013, noting the largest of these facilities were the following:

- Publix Super Market Warehouse (1,200,000 SF)
- Bluelinx Corp (700,000 SF)
- Global Equipment Co., Inc. (647,228 SF)
- United Stationers Supply (600,674 SF)

The Atlanta Region Strategic Truck Route Master Plan (ASTRoMaP) is a regional truck routing plan that was developed to better accommodate freight mobility in the metropolitan area. ASTRoMaP routes through Gwinnett include slightly more than 141 miles of roadways. In addition to regionally significant routes, Gwinnett County DOT has identified 597 miles of roadways designated as County truck routes.

Additionally, the Atlanta Regional Freight Mobility Plan was completed in 2008 and is in the midst of an update. Moving forward, the Plan Update will address critical freight needs and deficiencies through short- and long-term strategies. Priority freight programs and projects also will be identified for the region. Based on preliminary data from this draft plan, Gwinnett County had the 5th and 9th highest Interstate truck volumes in 2014 for the Atlanta region. Additionally, Gwinnett County had the 1st, 2nd, 5th, and 8th highest non-Interstate truck volumes in 2014 for the Atlanta region.

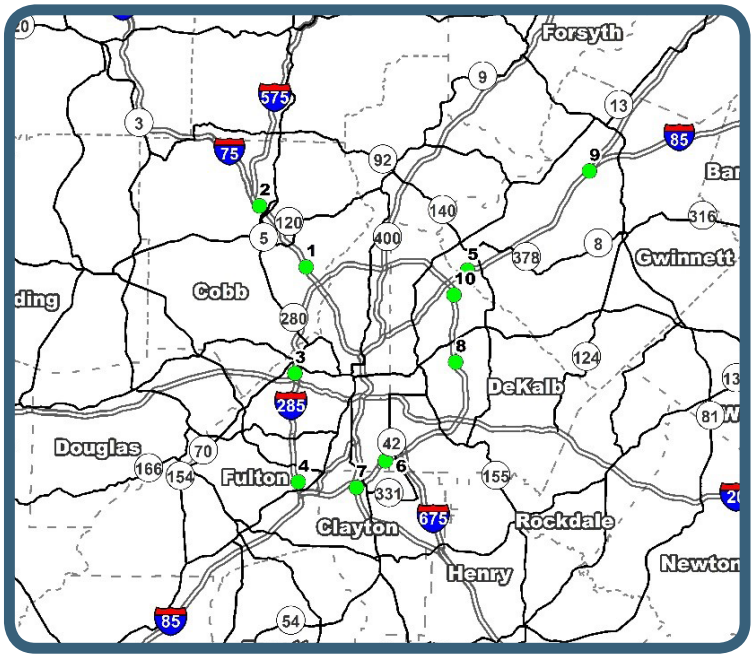
6 Distribution/ Warehouse Facilities

141 Miles of Truck routes

28 Rail Lines

55 Miles of Rail Lines

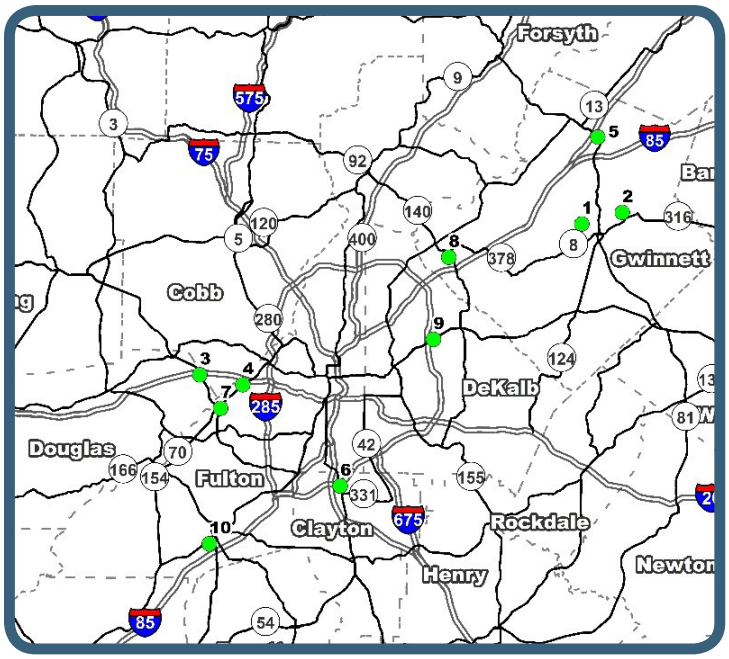
Highest Interstate Truck Count Locations in the Region



Rank	Roadway	Location	Truck AADT
1	I-75	Cobb	30,480
2	I-75	Cobb	23,715
3	I-285	Fulton	23,560
4	I-285	Fulton	23,472
5	I-85	Gwinnett	23,329
6	I-285	Fulton	19,061
7	I-285	Clayton	18,561
8	I-285	DeKalb	18,243
9	I-85	Gwinnett	17,683
10	I-285	DeKalb	17,135

Highest Non-Interstate Truck Count Locations in the Region

Rank	Roadway	Location (Between X and Y)	Truck AADT
1	SR 316	SR 120 and Collins Hill Road	6,192
2	SR 316	Cedars Road and Hurricane Trail	5,039
3	SR 6/Camp Creek Parkway	I-20 and Pointe Court	5,029
4	Fulton Industrial Boulevard	Patton Drive and Marvin Miller Drive	4,582
5	SR 20/ Buford Drive	Plunketts Road and Sudderth Road	4,563
6	US 19/Old Dixie Highway	I-285 and Forest Parkway	4,396
7	Fulton Industrial Boulevard	Camp Creek Parkway and Cascade Road	4,276
8	Jimmy Carter Boulevard	Best Friend Road and Northbelt Drive	4,226
9	US 78/Stone Mountain Parkway	I-285 and Brockett Road	4,174
10	Fairburn Industrial Boulevard	Laser Industrial Court and Howell Avenue	4,163



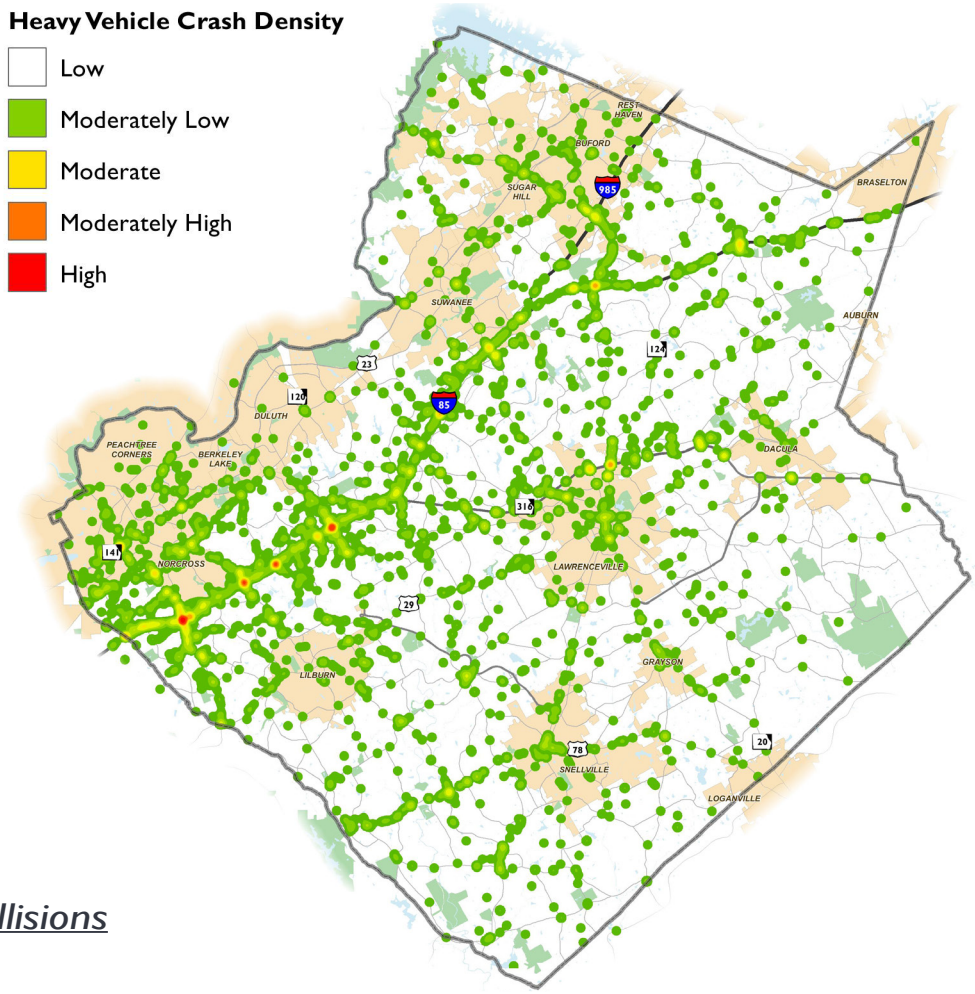
Freight, Rail, and Air Transportation Infrastructure

- Rail & Truck Intermodal Facility (NTAD 2015)
- General Aviation Airport
- Heliport
- Gwinnett County Truck Routes
- Atlanta Strategic Truck Route Master Plan (ASTRoMaP)
- CSX Rail
- Norfolk Southern Rail

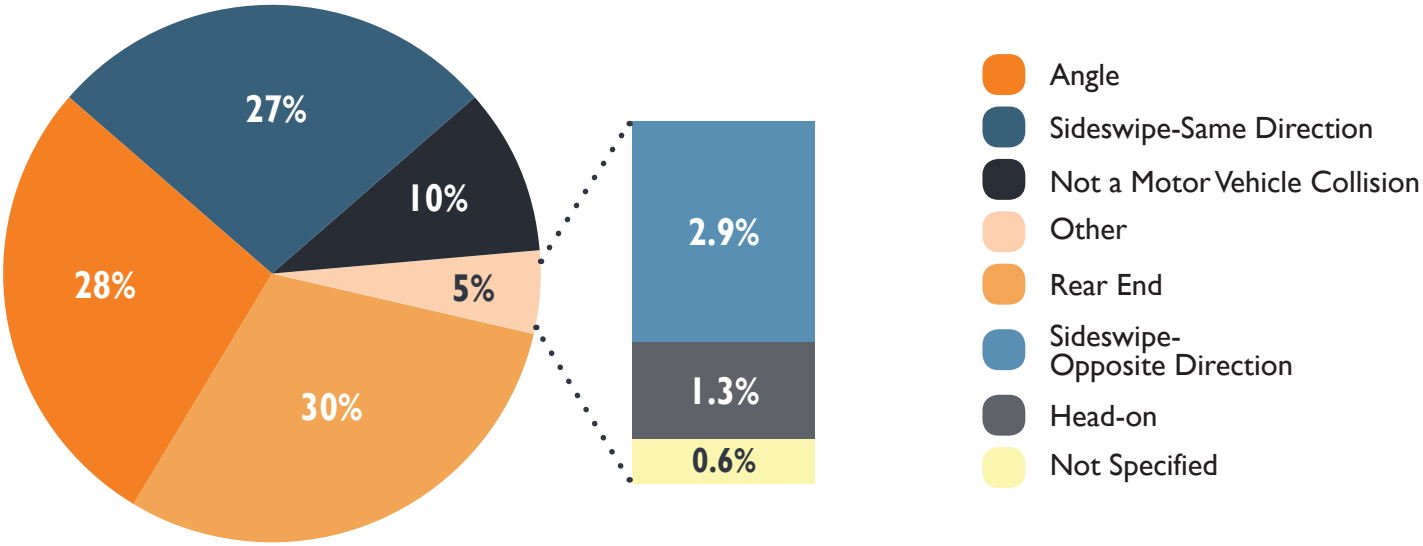
Heavy Vehicle Crashes

Crash data from 2012 to 2014 was analyzed for specific conditions involving heavy vehicles. Of the 94,022 crashes that occurred, approximately 5% of collisions (4,754) involved a heavy vehicle. As shown on the map, the highest density of crashes occurred in the southwest of the County along the I-85 corridor, specifically at interchanges.

Other areas where crashes involving a heavy vehicle were common included Peachtree Industrial Boulevard south of Pleasant Hill Road, Stone Mountain Highway, SR 316, and Nelson Brogdon Road, among others.



2012-2014 Heavy Vehicle Collisions

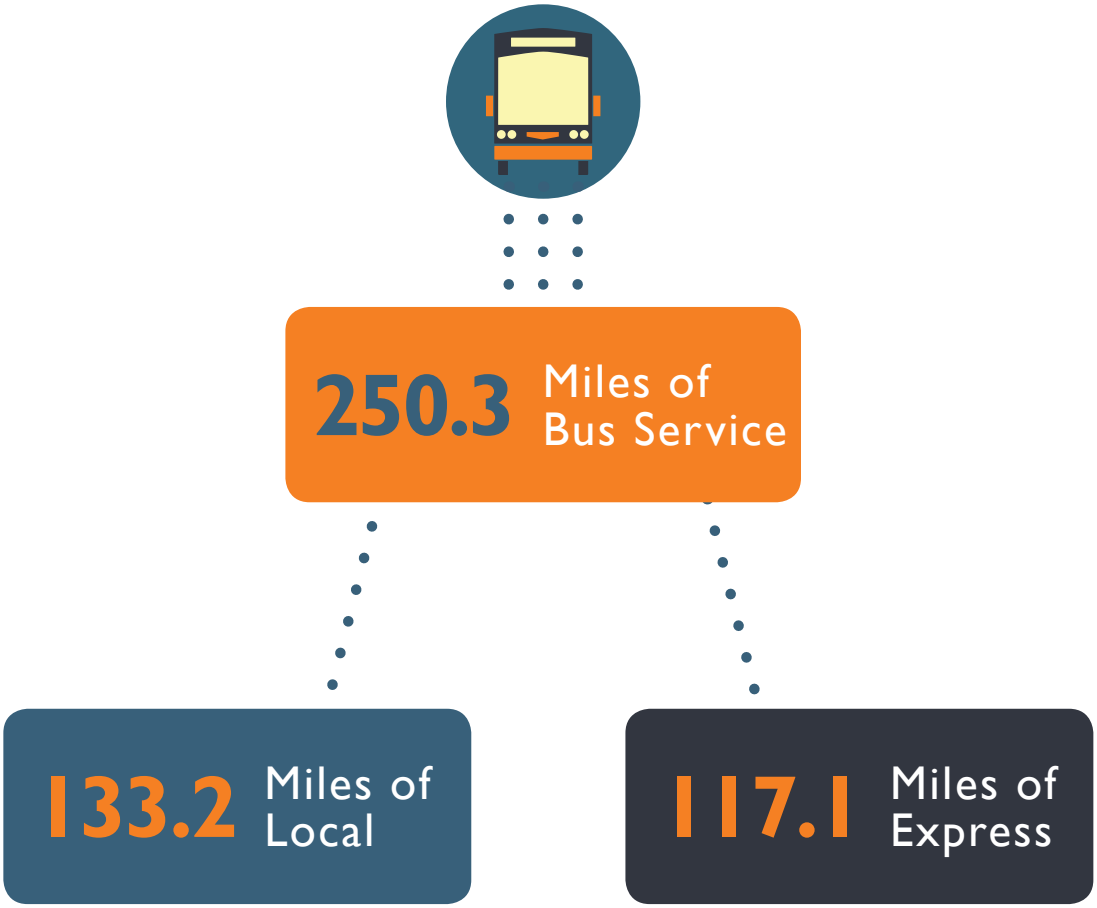


TRANSIT

Existing Transit System

Public Transportation services within Gwinnett County are provided by two transit operators – the Georgia Regional Transportation Authority (GRTA) and Gwinnett County Transit (GCT). GRTA operates strictly an express service system which has routes both originating within the County and routes passing through the County. GCT operates six local bus service routes and four express service routes. The six GCT local bus service routes are primarily focused in southwestern and central Gwinnett County and the express routes (both GRTA and GCT) are concentrated along major highways such as I-85, I-985, SR 316, and US 78.

GCT Service Summary



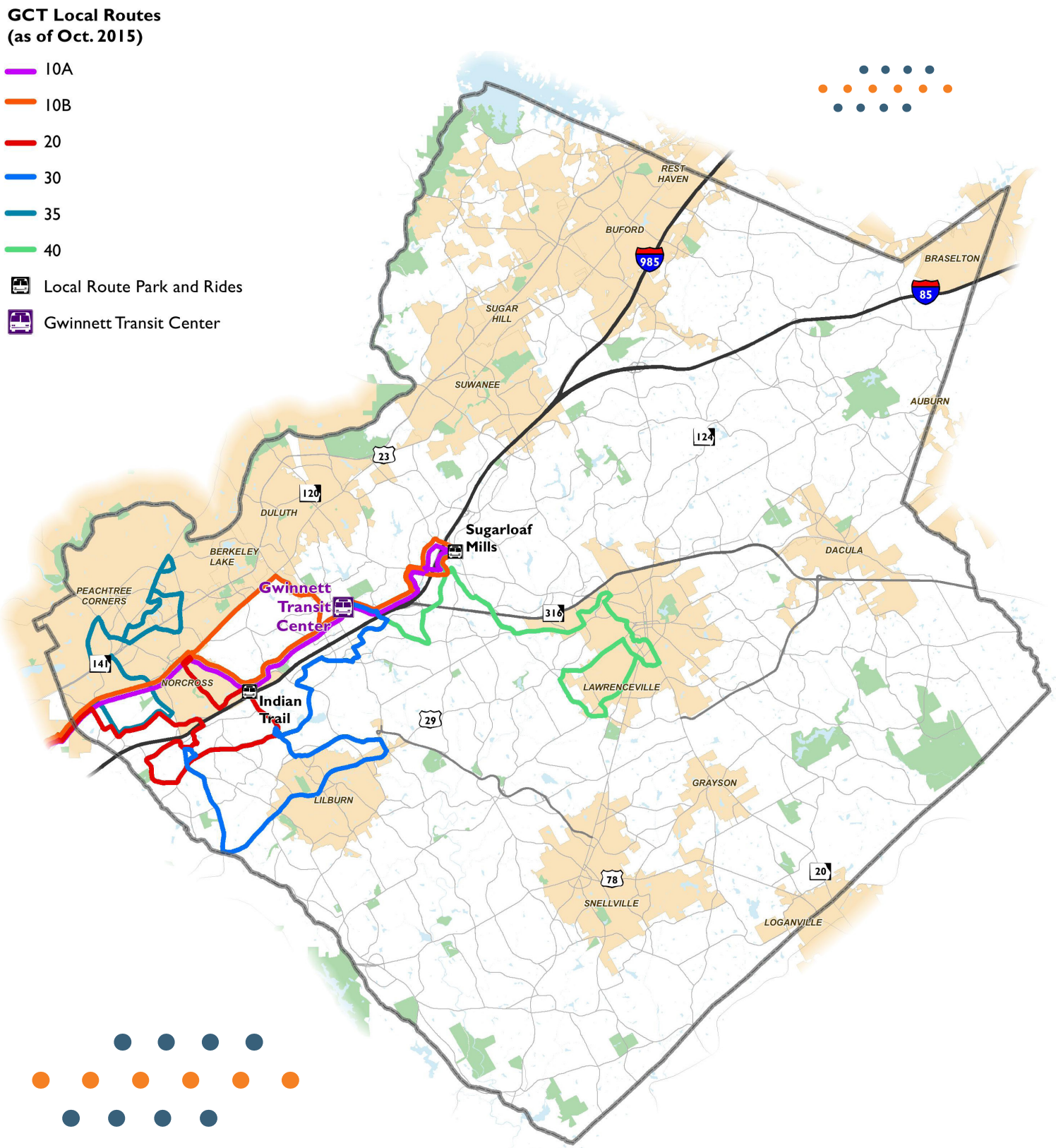
GCT Local Bus

GCT first began operating transit service in 2001, with six local bus routes currently operating primarily in the central and southwestern areas of the County. These six local bus routes have a combined average daily ridership of approximately 3,750 boardings per day. Peak service headways (average interval of time between vehicles moving along the same route in peak periods) are 30 minutes and each bus has a typical running time (travel time from the start of a rout to its ending) of approximately 60 minutes for either inbound or outbound services.

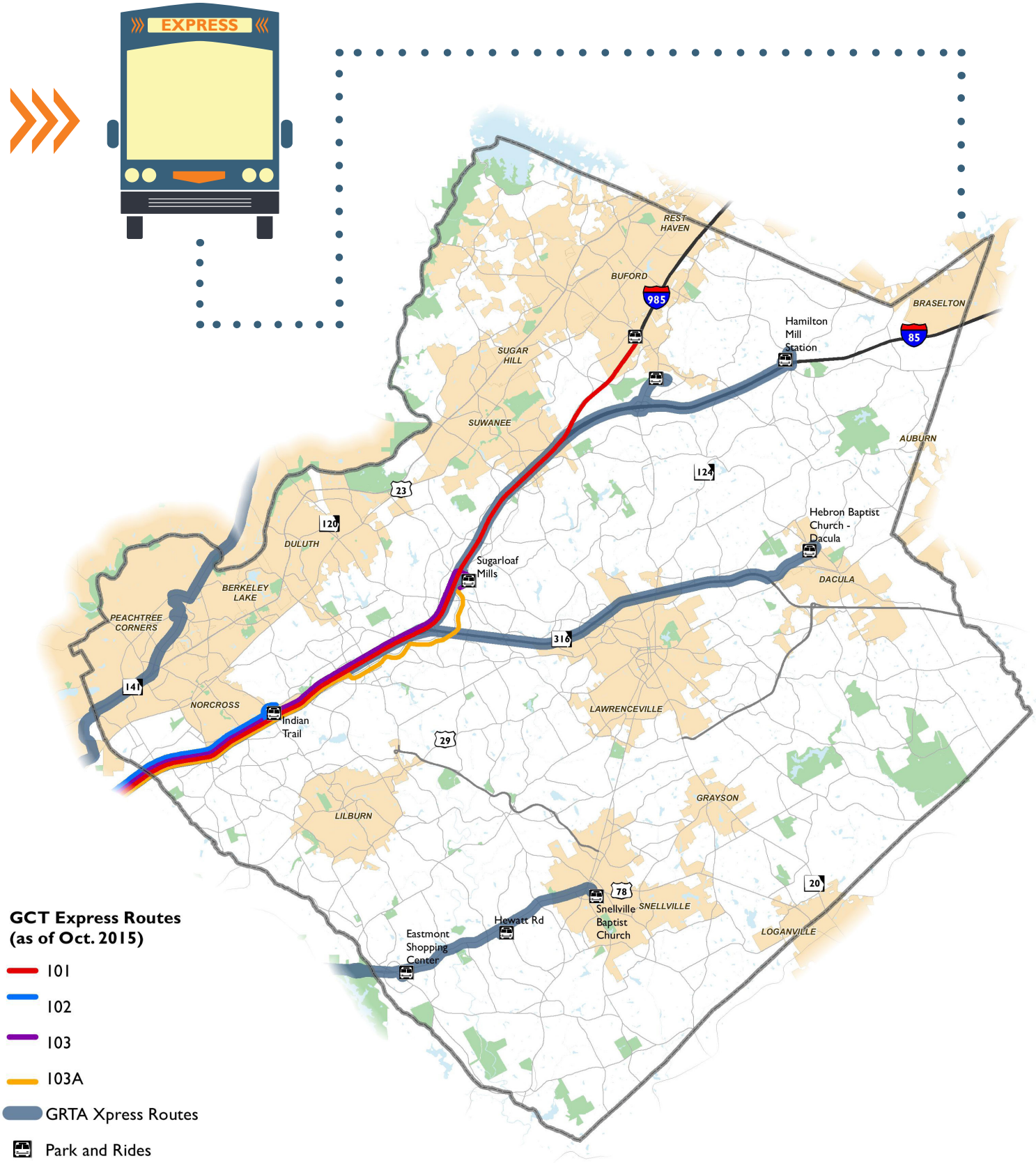
GCT local buses services are utilized by high percentages of both low income and minority riders. For example, across all six local routes, low income riders make up approximately 40% to 70% of total passengers. Similarly, minority ridership passenger make-up is approximately 85% to just less than 100% across all six local bus routes. GCT local bus service experiences a high percentage of transferring riders system wide – ranging between approximately 60% and 90%. The majority of these transfers occur at the MARTA Doraville rail station, the Gwinnett Transit Center, and at park-and-ride lots throughout the County.

	Route Number					
	10A	10B	20	30	35	40
	Service Period					
	5:30 A.M. - 9:30 P.M.	6:15 A.M. - 7:20 P.M.	5:39 A.M. - 7:45 P.M.	6:11 A.M. - 7:44 P.M.	5:50 A.M. - 7:55 P.M.	6:14 A.M. - 7:47 P.M.
Peak Headway	30 min.	30 min.	30 min.	30 min.	30 min.	30 min.
Inbound Running Time	55 min.	55 min.	54 min.	59 min.	55 min.	59 min.
Outbound Running Time	60 min.	60 min.	61 min.	57 min.	60 min.	57 min.
	Ridership Characteristics					
Low Income Riders	47%	54%	49%	71%	38%	63%
Minority Riders	91%	89%	92%	97%	86%	98%
Riders Transferring	85%	90%	76%	61%	68%	63%
	Average Daily Ridership					
	1,264	482	622	364	588	446

GCT Local Bus



GCT Express Bus



GCT Express Bus

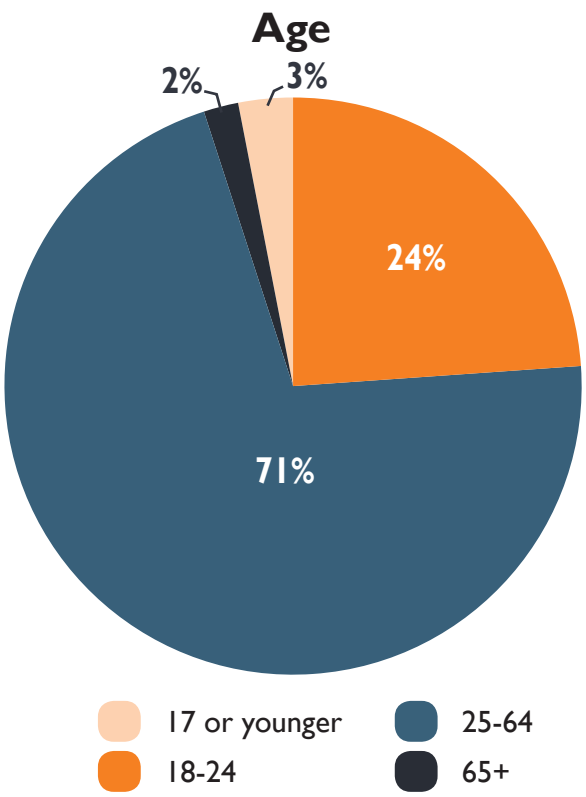
GCT began operating express service in 2001 and currently operates four GCT-only express routes. Additionally, GCT operates three express routes on behalf of the Georgia Regional Transportation Authority (GRTA) but these are not included in this assessment. The four GCT express routes have a combined average daily ridership of approximately 1,500 boardings per day. Peak service headways range from 15 to 30 minute and typical running times ranges from 45 minutes to 70 minutes for either inbound or outbound services.

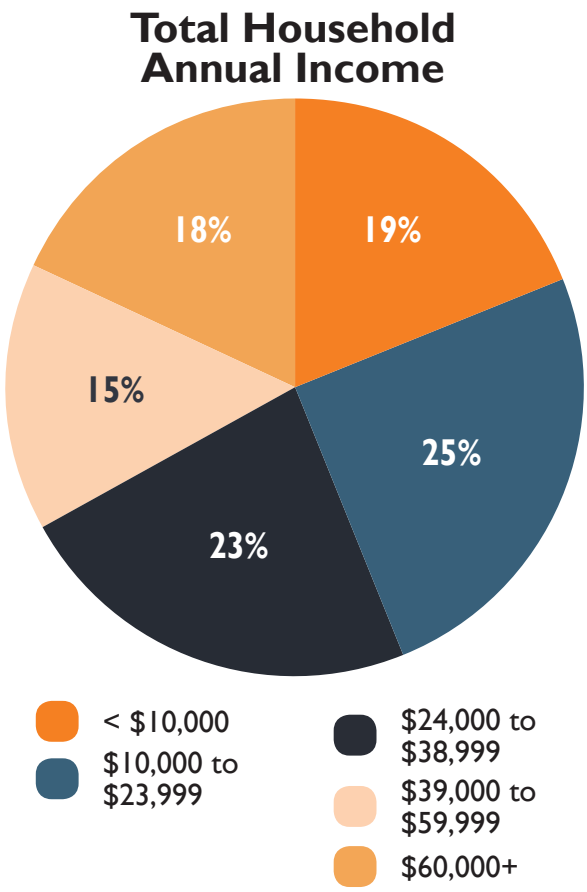
Conversely to GCT local bus service, express service tends to have a lower percentage of low income riders ranging from near 0% to approximately 20% across all four routes. Additionally, express routes tend to carry a lower percentage of minority riders, ranging from approximately 40% to 75% of total passengers across all four routes. GCT express service routes experience a low percentage of riders transferring to other routes and services, with the exception of route 103A, which is primarily due to this being reverse-commuting focused. Typical express rider transfer rates range from approximately 5% to 15% of passengers. The reason for this lower percentage is that the majority of express route users typically drive to park-and-ride lots within Gwinnett County and are travelling to employment and/or school in Atlanta.

	Route Number			
	101	102	103	103A
	Service Period			
	5:30 A.M. - 6:03 P.M.	6:10 A.M. - 5:38 P.M.	5:40 A.M. - 8:30 A.M.; 3:05 P.M. - 6:05 P.M.	5:40 A.M. - 8:30 A.M.; 3:05 P.M. - 6:05 P.M.
Peak Headway	15 min.	30 min.	10 min.	—
Inbound Running Time	70 min.	50 min.	70 min.	60 min.
Outbound Running Time	60 min.	45 min.	50 min.	80 min.
	Ridership Characteristics			
Low Income Riders	18%	20%	19%	0%
Minority Riders	39%	58%	70%	75%
Riders Transferring	14%	14%	3%	100%
	Average Daily Ridership			
	342	207	1,001	21

2015 On-Board Transit Survey Summary

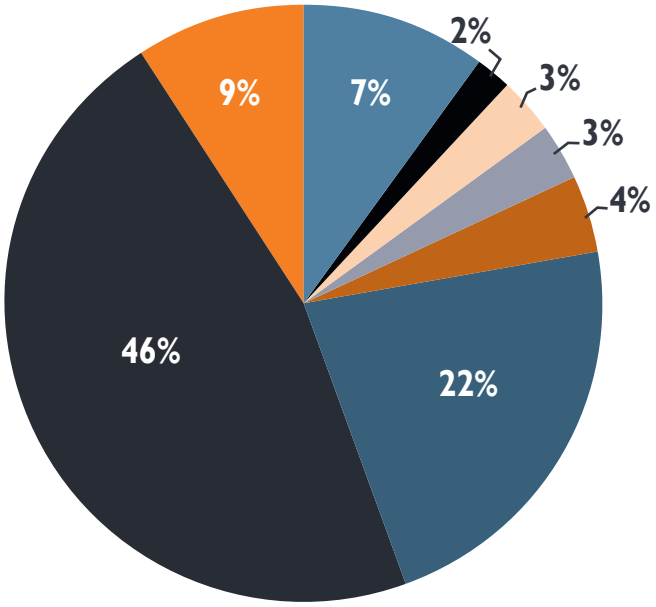
In early December 2015, an on-board transit survey was conducted on GCT local and express routes. This survey was conducted to better understand ridership demographics, trip purpose, and origins/destinations for public transportation users in Gwinnett County. This survey also provides a Title VI assessment of GCT service and is attached as an Appendix to this document. Approximately 550 riders were surveyed over a three-day period.



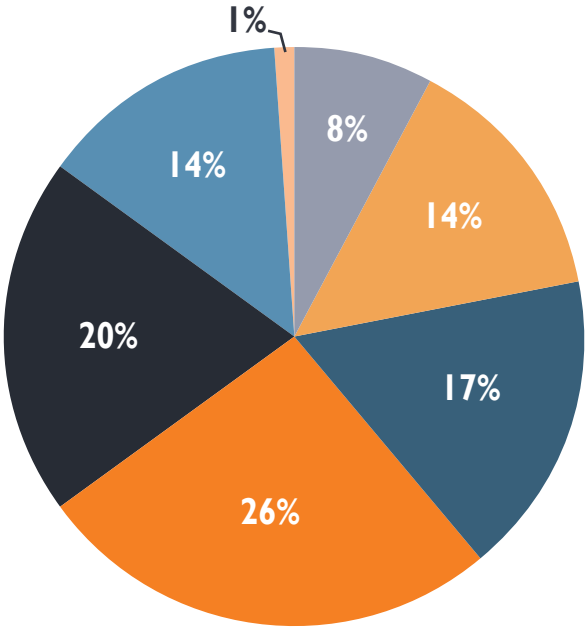


Of the approximately 550 riders surveyed, almost three quarters of passengers fell into the 25 to 64 year old range and almost one quarter of passengers where below the age of 25. There was a low share of passengers 65 years and older, at approximately 2% of all riders surveyed. Looking at total household income, approximately 44% of riders fell below the poverty level. The poverty level for a household of four (the benchmark used by GCT) is approximately $24,000 per year. However, the remaining 56% of riders were above the poverty level.

Trip Destination



Travel Time



- College/University
- Medical/Healthcare
- School (K-12)
- Shopping
- Social/Recreational
- Home
- Work
- Other

- 15 min. or less
- 16 to 30 min.
- 31 to 45 min.
- 46 min. to 1 hour
- 1 hour to 1.5 hours
- 1.5 hours to 2 hours
- 2+ hours

The majority of riders surveyed were either traveling to home (22%) or work (46%), making up approximately two-thirds of passenger destinations. Other passenger destinations included colleges/universities, medical/healthcare, schools (K-12), shopping, social/recreational activities, and other destinations. Approximately 60% of passengers reported a one-way trip travel time greater than one hour. The majority of remaining passenger one-way travel times ranged from 30 minutes to one hour, while a small portion (9%) had a one-way travel time less than 30 minutes.

Underprivileged Populations and Transit

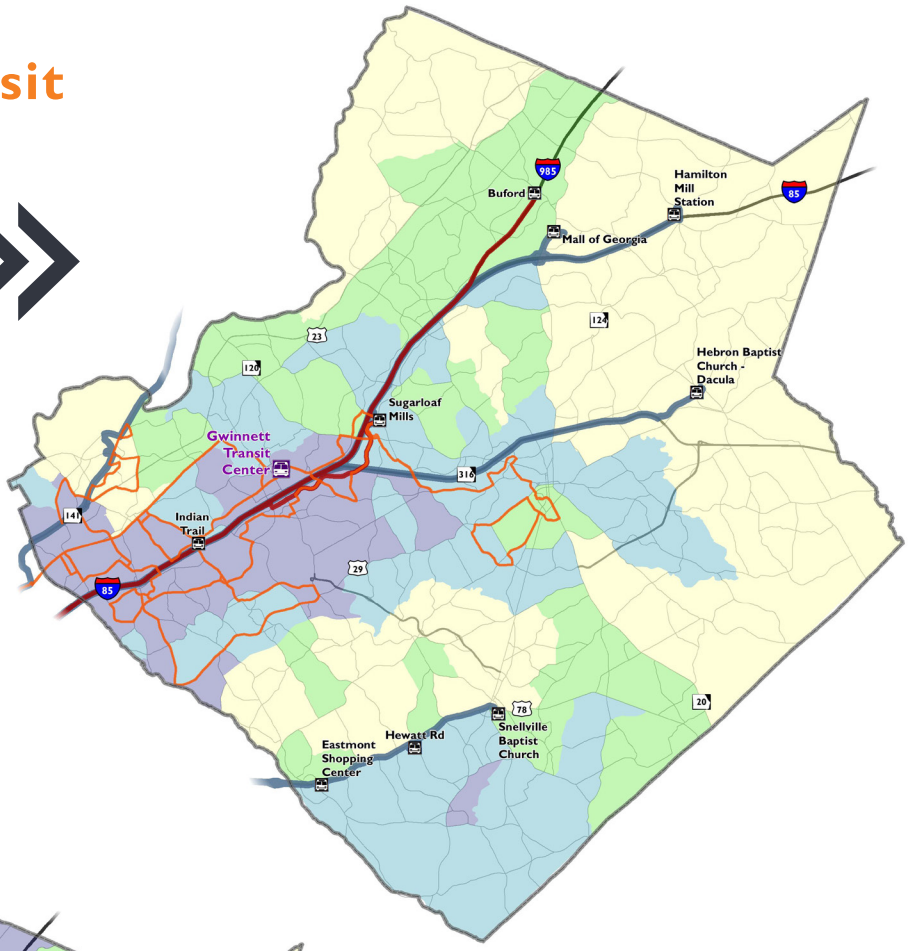
The maps on the next page demonstrate GCT local and express service in relation to minority populations and households below the poverty level. The southwestern and central regions of the County mostly have the largest proportion of minorities and households below the poverty level.

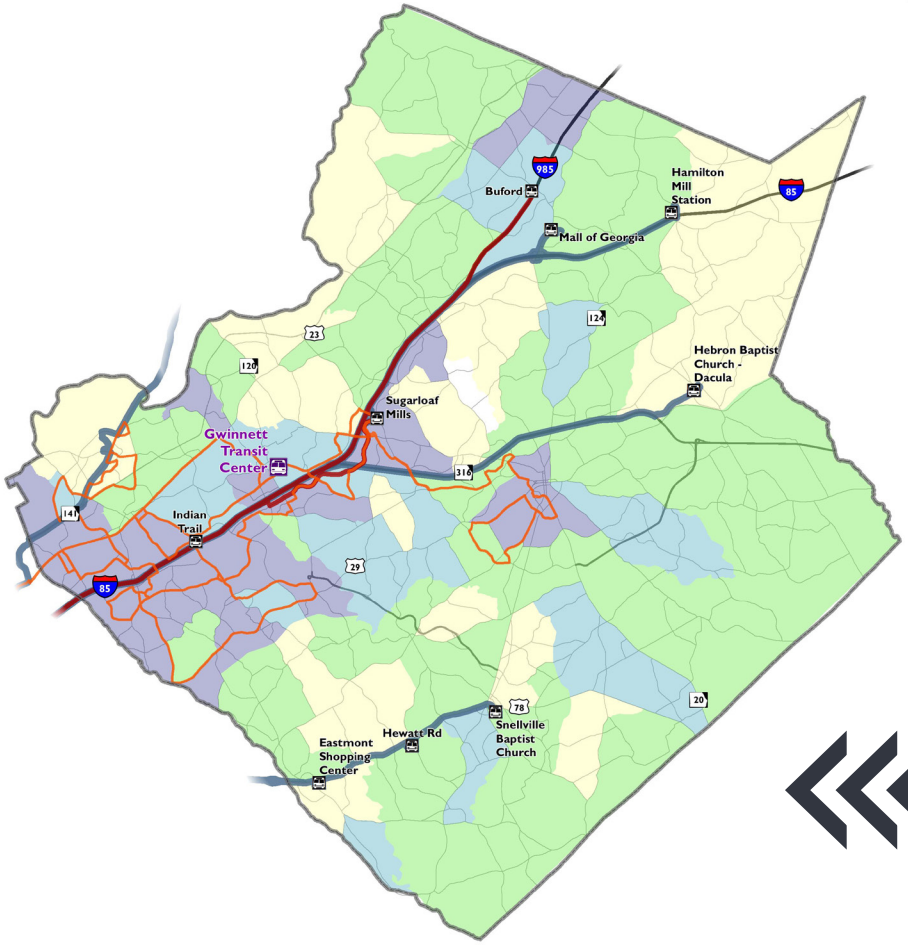
Underprivileged Populations and Transit

Transit Service - Minority Populations

Percent Minority Population

- Quartile1: 10.1% - 43.0%
- Quartile 2: 43.1% - 57.0%
- Quartile 3: 57.1% - 75.0%
- Quartile 4: 75.1% - 95.0%





- GCT Local Routes
- GCT Express Routes
- GRTA Xpress Routes
- Park and Rides
- Gwinnett Transit Center

Percent of Households in Poverty

- Quartile 1: 1.4 - 5.8
- Quartile 2: 5.9 - 11.4
- Quartile 3: 11.5 - 16.4
- Quartile 4: 16.5 - 36.5

Transit Service - Poverty

BICYCLE AND PEDESTRIAN FACILITIES

The County has over 2,500 miles of paved sidewalks that are immediately adjacent to public roadways. While there are nearly 1,060 miles of roadways in the study network, sidewalks are not appropriate facilities where pedestrians are prohibited, such as interstates or freeways. Roadways in the Study Network that are more appropriate for sidewalk coverage include approximately 830 miles of arterials, collectors, and some local roads. Approximately 660 miles of sidewalks are adjacent to Study Network roadways. Identifying existing sidewalk gaps, particularly in activity centers, is a great opportunity to begin considering the extension of sidewalk coverage in the Needs Assessment portion of this plan.

In addition to sidewalks, shared multi-use paths, greenways, and sidepaths available for both bicycle and pedestrian use, total almost 40 miles of off-road facilities according to the trails inventoried as open/built from the Gwinnett County Greenway Master Plan. The plan also identifies another four miles that have recently been funded, and another eight miles that have been routed. The list of trails and greenways is extensive and includes the Berkeley Lake Multi-Use Path, Camp Creek Greenway, Ivy Creek Greenway, Suwannee Creek Greenway, Western Gwinnett Bikeway and many others.

There are approximately 25 miles of roadways that have conventional on-road bike lanes according to the County's Existing Bikeways inventory. There is a 12-mile stretch of Sugarloaf Parkway that has bicycle lanes from Peachtree Industrial Boulevard to Grayson Highway. Other on-road bicycle lanes are located on Buford Dam Road, Callie Still Road, Annistown Road, and Hamilton Mill Road.

ARC Walk.Bike.Thrive! Assessment of Regional Travel Patterns

The December 2015 Draft ARC bicycle and pedestrian plan Walk.Bike.Thrive! incorporated a regional view of travel patterns and existing conditions relating to walking and biking. The plan focused on three core concepts including mobility, safety, and economic competitiveness.

- **Mobility:** An analysis of propensity for walking and biking throughout the region considered density, availability of infrastructure, and proximity to certain destinations such as live, work, play, retail, and educational destinations. Parts of Gwinnett County were identified as having high propensity for walking and biking, in particular surrounding the I-85 and SR 316 corridors.
- **Safety:** Metro Atlanta currently ranks as one of the top ten most dangerous places to walk, as identified in *Smart Growth America, 2014*, and noted in the draft report. In fact, while every county has pockets of higher risk areas, ARC's report identified census tracts in Gwinnett with some of the highest regional crash rates for both bicyclists and pedestrians.
- **Economic Competitiveness:** The Economic Competitiveness chapter in the ARC's bicycle and pedestrian plan highlights some broader shifts in real estate and economic performance. Today's workforce continues to demand quality of life, which includes home or work access to walkable areas with nearby amenities. Businesses and developers in the metro area have responded by providing environments that attract talent with strategies including building trails near suburban office clusters, and even relocating to areas with increased access to amenities.

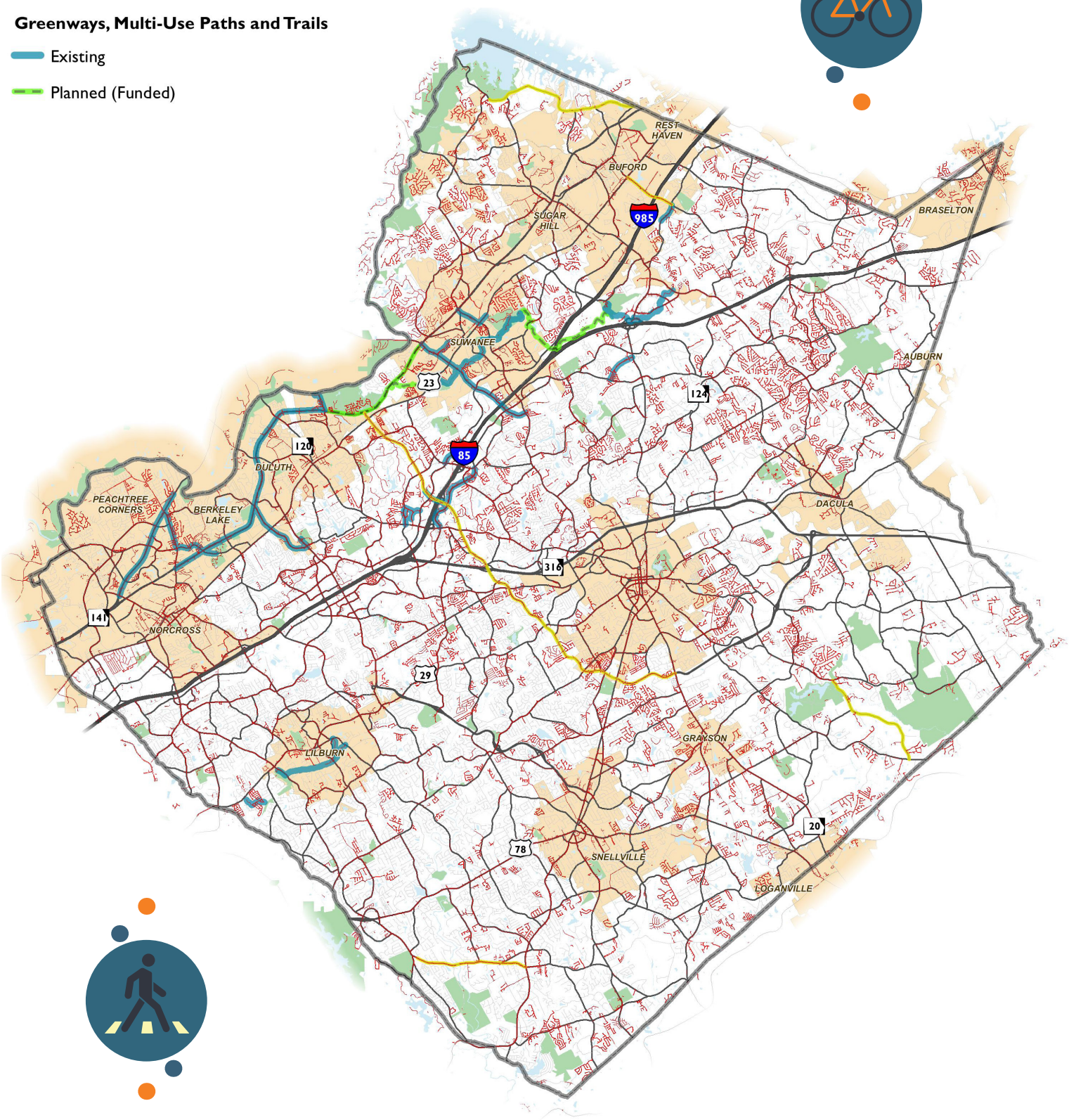
Bicycle and Pedestrian Facilities

Bicycle and Pedestrian Facilities

- Sidewalks along Public Roads
- On-Road Bike Lanes

Greenways, Multi-Use Paths and Trails

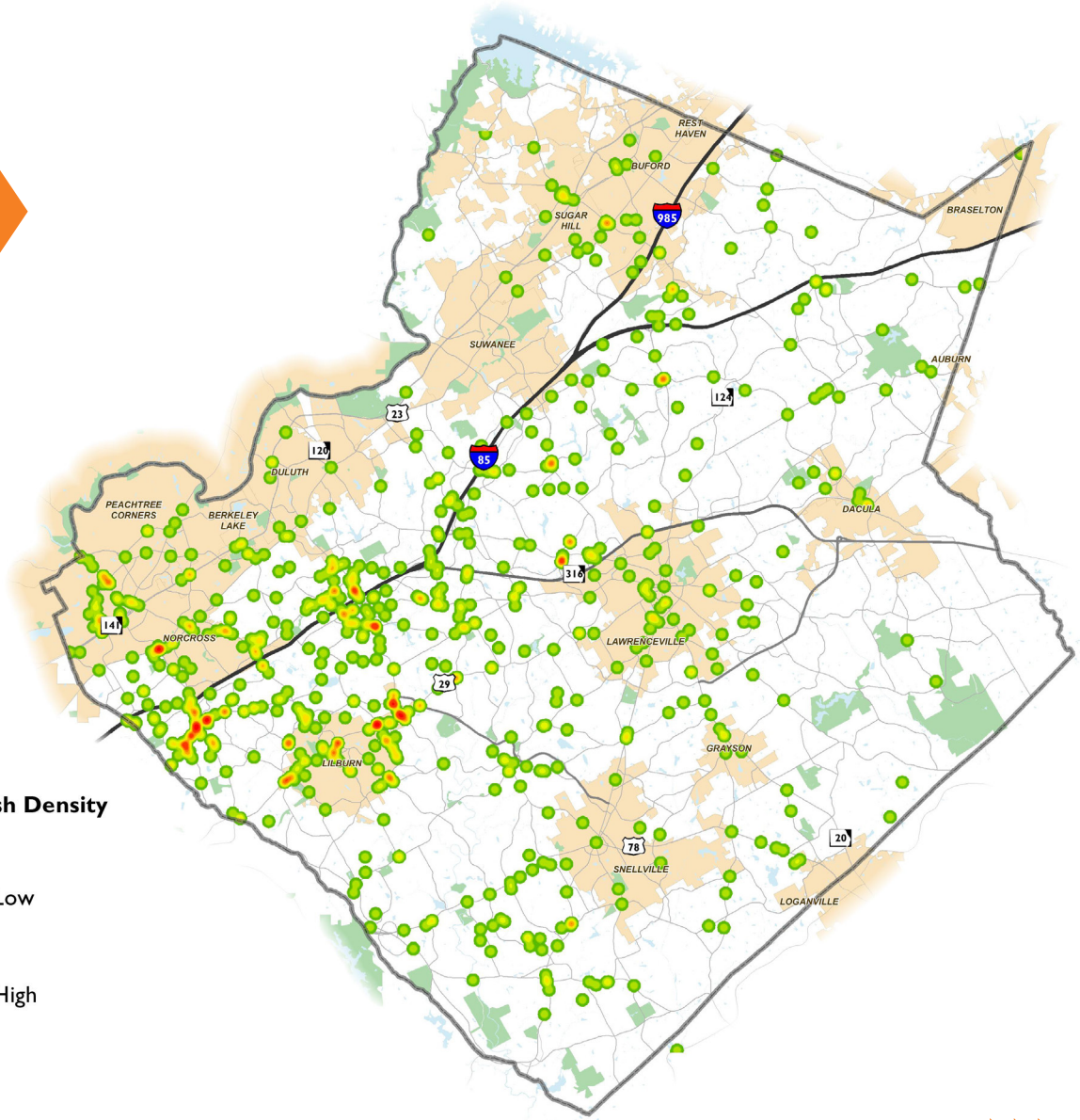
- Existing
- Planned (Funded)



Bicycle and Pedestrian Crashes

Of the transportation system users, pedestrians and bicyclists are the most vulnerable to severe consequences when subjected to collision with a motor vehicle. During the three-year period from January 1, 2012 to December 31, 2014 there were 822 crashes reported that involved a pedestrian and 167 reported crashes that involved a bicyclist. For crashes that either involved a pedestrian or a bicyclist, over 75% of crashes resulted in at least one injury. Of the 257 fatalities reported in Gwinnett County from 2012-2014, there were 26 fatalities reported that were associated with a collision that involved a pedestrian, and one fatality associated with a collision that involved a bicyclist.

The map below shows the relative density of crash locations for reported collisions that involved pedestrians or bicyclists. Pedestrian collisions were more common in the higher population density areas in the west and southwest portions of the County. The relatively low number of collisions that involved a bicyclist makes density mapping less clear for a county as large as Gwinnett. However, there are some clusters in downtown Lawrenceville, and in the western corner of the County where bicycle-related incidents appeared more frequently than in other areas of the County.



Pedestrian Crash Density

- Low
- Moderately Low
- Moderate
- Moderately High
- High

PREVIOUS PLANNING EFFORTS

PREVIOUS PLANNING EFFORTS

It is important to look at previous planning efforts when undertaking any new planning study. By building upon previous plans and coordinating with relevant jurisdictions, a more cohesive effort can be developed. This provides for a strengthened plan that incorporates many interests, characteristics, policies, and recommendations. This section highlights key findings from studies relevant to the 2017 Gwinnett CTP update. These studies are grouped into five categories:

- Previous Gwinnett CTPs
- County and Local Studies
- Livable Centers Initiative (LCI) Studies
- Transportation Mode-specific Studies
- Regionally Significant Studies

The planning process involves gathering public feedback, collecting data, and incorporating previous planning efforts. Destination2040 will help result in short- and long-term projects as well as influence the development of future regional plans crafted by the Atlanta Regional Commission.

Previous Gwinnett CTPs

Over the past two decades, Gwinnett County has updated its CTP three times—in 2001, 2007, and 2008. The 2001 and 2008 updates were more comprehensive, while the 2007 update was an intermediate update of the 2001 plan.

PREVIOUS GWINNETT CTPS

- 2001 CTP
- 2007 CTP Update
- 2008 CTP

2001 Gwinnett CTP

The 2001 Gwinnett CTP was a major plan update primarily focused on roadway and vehicular improvements such as roadway widenings, and improving roadway corridors/intersections. This plan also focused on how to leverage the transportation system around areas of intense growth (i.e. the I-85 corridor).

At the time of this study's development, there were few non-roadway and vehicular transportation studies. However, the plan addressed some aspects of the multi-modal transportation system – for example, bicycle and pedestrian recommendations were taken from the greater Atlanta region's transportation plan. Additionally, when the 2001 CTP was being developed, transit service did not exist in Gwinnett County but was being planned. Therefore the 2001 CTP did not make specific recommendations on future transit service but did reference the County's efforts to initiate transit service—mainly with express service first and local bus service second.

Below is a list of major corridors studied in 2001 CTP:

- **Radial Corridors:** Buford Highway, Peachtree Industrial Boulevard, US 29, US 78, SR 316, and I-85
- **Cross-County Corridors:** SR 20, SR 120/Sugarloaf Parkway, Indian Trail Road/Ronald Reagan Parkway, and SR 124

2007 Gwinnett CTP Update

This plan update built upon the previous 2001 Gwinnett County CTP and was primarily focused on updating and prioritizing vehicular and roadway projects. This was done through use of ARC's regional travel demand model – which demonstrated areas of existing and worsening congestion. The plan did not focus on bicycle, pedestrian, and transit recommendations as these modes would be addressed in the 2008 Gwinnett County CTP. The plan considered three primary sources of transportation funding through GDOT's Transportation Improvement Program (TIP), a Gwinnett County special-purpose local-option sales tax (SPLOST), and other local funding sources (cities, community improvement districts and others).

2008 Gwinnett CTP Update

The 2008 Gwinnett County CTP was part of the larger Gwinnett County 2030 Unified Plan. The 2030 Unified Plan considered various trends, growth scenarios, challenges, and opportunities facing Gwinnett County. The CTP, while mainly focused on the vehicular and roadway system, did have more multimodal elements than the previous two planning efforts. For example, the 2008 CTP recommended to expand transit by adding more local and express bus service. Additionally, by this time the County had a bicycle and pedestrian plan (the Gwinnett County Open Space and Greenway Master Plan), which provided the basis for bicycle and pedestrian recommendations. In addition to the modes previously mentioned, the 2008 CTP placed more emphasis on freight travel throughout the County due to the County having a large portion of the region's warehouse and distribution center employment (approximately 22% at the time). The plan further explored innovative funding strategies such as a Gwinnett County SPLOST, regional mobility authorities, tolling, public private partnerships (P3), and franchising.

County and Local Studies

This section summarizes previous study efforts from county and city comprehensive transportation plans and comprehensive plans.

County Studies

Even though eight counties surround Gwinnett County, only plans from Forsyth County, North Fulton County, and DeKalb County were considered. This was done as these counties reflect the bulk of regional connectivity to the greater Atlanta region.

The three CTPs reviewed highlight the following strategic highway corridors through recommendations such as improved roadways, transit service, signal corridor operations, bicycle facilities, and pedestrian facilities:

- I-85
- Buford Highway (US 23/SR 13)
- Peachtree Industrial Boulevard
- SR 141
- US 78
- US 29/SR 316
- US 29 Business
- SR 124
- SR 20
- McGinnis Ferry Road
- SR 120
- State Bridge Road
- SR 140

COUNTY STUDIES

- 2015 Gwinnett County Unified Plan Update
- 2014 DeKalb County CTP
- 2011 Forsyth County CTP
- 2010 North Fulton CTP

LOCAL STUDIES

- 2014 Berkeley Lake Comprehensive Plan
- 2009 Buford Comprehensive Plan
- 2008 Dacula Comprehensive Plan
- 2008 Duluth Comprehensive Plan
- 2008 Grayson Comprehensive Plan
- 2008 Lawrenceville Comprehensive Plan
- 2009 Lilburn Comprehensive Plan
- 2008 Norcross Comprehensive Plan
- 2008 Sugar Hill Comprehensive Plan
- 2008 Suwannee Comprehensive Plan
- 2006 Snellville Comprehensive Plan

The Chattahoochee River, which separates Gwinnett County from Fulton and Forsyth Counties, presents both challenges and opportunities for mobility. There is increasing demand for crossing the Chattahoochee River which is translated into improving existing crossings and constructing new ones. Moreover, recommendations from these plans incorporate vehicular, bicycle, pedestrian, and transit improvements at key crossings.

Local Studies

Over the past decade, eleven cities within Gwinnett County have completed comprehensive plans. These plans address transportation amongst other areas affecting cities such as future land use or the economy. Below are some common themes that can be found in the city comprehensive plans reviewed.

- The need for increased bicycle/pedestrian infrastructure and policies promoting bicycle/pedestrian mobility.
- Improving and managing transportation access for new developments/redevelopments such as right-in/right-outs, raised/landscaped medians, and roundabouts.
- Improving signal timing

Some cities recognize the need for improved transit within their communities – such as Grayson, Norcross, and Suwanee.

Livable Centers Initiative Studies

In addition to the city comprehensive plans mentioned in the previous section, LCIs were reviewed throughout the County. The LCI program awards grants for planning studies to local governments and nonprofit organizations. LCIs allow these jurisdictions to plan recommendations that could potentially reduce traffic congestion, improve air quality, enhance land-use, and improve connectivity between people and places in ways that are consistent with regional planning and development policies. The fifteen LCIs reviewed had many common themes, which are summarized below.

LCI STUDIES

- 2015 Suwannee LCI Study
- 2012 Jimmy Carter Boulevard LCI – 5-Year Update
- 2012 Gwinnett Place LCI – Supplemental Study
- 2012 Norcross Town Center LCI – 10-Year Update
- 2012 Norcross LCI – 10-Year Update
- 2011 Duluth LCI – 10 Year Update
- 2011 Highway 29 LCI Study
- 2011 Indian Trail LCI – 5-Year Update
- 2011 Lawrenceville LCI – 5-Year Update
- 2009 Buford Town Center LCI and Master Plan
- 2009 Snellville LCI – 5-Year Update
- 2007 Lilburn LCI – 5-Year Update
- 2007 Park Place LCI Study
- 2005 Evermore CID – 5-Year Update
- 2005 Highway 78 LCI Study

Transportation Recommendations

- Improve roadways and corridors by adding lanes, retiming signals, managing driveway access, modifying speed limits, and adding raised/landscaped medians.
- Construct or improve pedestrian amenities such as sidewalks, crosswalks, signalized intersection crossings, paths/greenways, signage, and lighting.
- Construct or improve bicycle accommodations such as bicycle lanes, signage for bicycle routes, sharrows, greenways, and bicycle parking.
- Add or modify transit bus service, bus shelters, and bus stops.
- Encourage transportation demand management (TDM) strategies to improve mobility such as carpooling, teleworking, alternative works schedules, and promoting transit use.

Land Use Recommendations

- Promote mixed-use development and moderately increase residential, commercial, and retail density in activity centers.
- Promote the redevelopment of underutilized or vacant commercial and office spaces.
- Increase greenspace, art, and recreation facilities.
- Responsibly manage new growth and preserve existing community assets, character, and historical resources.

Funding Recommendations

- Funding mechanisms identified in numerous LCIs include SPLOST, Downtown Development Authorities, LCI transportation funding, Tax Allocation Districts, Congestion Mitigation and Air Quality Improvement (CMAQ) grants, Opportunity Zone Tax-Incentive programs, Low-Income Housing tax credits, and Brownfield redevelopment programs.

Livable Centers Initiative

Transportation Mode-specific Studies

Other studies have been conducted within the County that are specific to either one transportation mode or a combination of modes. The six studies shown on the right were reviewed and could enhance future considerations within any of the modes being assessed as part of the 2017 Gwinnett County CTP update. Below are some key highlights from a few of these plans.

TRANSPORTATION MODE-SPECIFIC STUDIES

- 2014 Bike the Hooch Study
- 2014 Gwinnett Place CID Green Corridor Study
- 2014 Gwinnett Open Space and Greenways Master Plan Update
- 2009 I-85 Corridor Light Rail Transit Feasibility Study
- 2007 Buford Highway Multimodal Study
- 2007 Gwinnett Village CID Truck Study

- The 2009 I-85 Light Rail Feasibility Study evaluated high-level technical and financial viability of several light rail alternatives along the I-85 corridor. After this study an Alternatives Analysis (AA) was completed but did not result in the selection of a Locally Preferred Alternative (LPA).
- The Gwinnett Village CID Truck Study recommended the following improvements for freight movement:
  - Geometric intersection improvements
  - Alternative routing with associated maps and signage
  - Additional truck parking
  - Improvements along Button Gwinnett Road (repaving and wider roadway footprint)
- The Buford Highway Multimodal Corridor Study recommended that Buford Highway through Gwinnett County should have:
  - Additional roadway capacity
  - Enhanced cross-corridor (east-west) travel demand management along major side streets
  - Dedicated lanes for local bus and bus rapid transit
  - Improved pedestrian amenities and/or possible development of parallel multiuse trail

Regionally Significant Studies

The Atlanta Regional Commission (ARC) has numerous regional planning efforts which affect CTPs. Three studies were reviewed that affect Gwinnett County's future transportation planning efforts. A high level summary of each document is provided below:

OTHER RELEVANT STUDIES

- 2014 PLAN 2040 Update
- 2008 ASTRoMAP Study
- 2008 Concept 3 Transit Study

- The Atlanta Strategic Truck Route Master Plan (ASTRoMaP) is the region's first freight plan with the goal of enhancing regional economic competitiveness by providing an efficient, reliable, and safe freight transportation system. While this plan did not have Gwinnett County-specific recommendations, it did note that Gwinnett County is a major destination for freight. As such, Gwinnett experiences high levels of freight traffic and congestion.
- Concept 3 is the Atlanta region's vision for long-range transit and was adopted in 2008. This plan serves as a blueprint for expanding public transportation throughout Metro Atlanta; however, it is a high-level plan and is subject to changes based on local public transportation preferences. Nonetheless, this plan envisioned regional rail, arterial bus rapid transit (BRT), heavy rail, light rail, expressway bus, and arterial express bus service within the County.
- ARC's PLAN 2040, also referred to as the regional transportation plan (RTP), evaluates the region's major planning areas, of which transportation is an important component. Recommendations are coordinated with Gwinnett County and are included in the region's transportation improvement program (TIP). This document is being updated—in early February 2016, it was locally adopted and is currently waiting for federal conformity determination. The Region's Plan is expected to be adopted by ARC in 2016. Further detail on the RTP is provided in the next section.

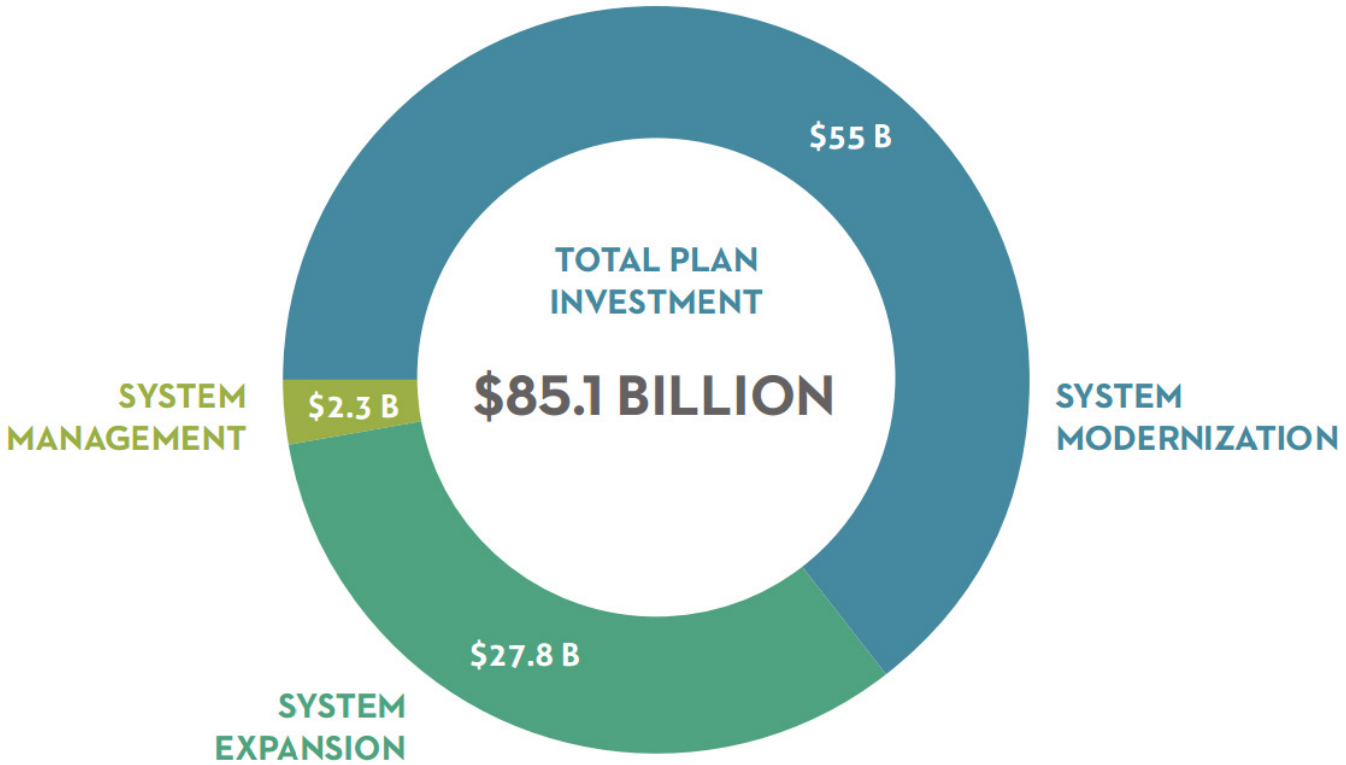
PROGRAMMED AND LONG RANGE PROJECTS

The Atlanta Regional Commission's (ARC's) Board is currently revising the comprehensive land use and transportation plan for the region, The Atlanta Region's Plan on February 24, 2016 with a later amendment in May 2016. The Atlanta Region's Plan is a long-range blueprint to guide the investments for the next 25 years to "win the future" by providing world class infrastructure, building a competitive economy, and ensuring the region is comprised of healthy, livable communities.

Projects within the constrained Regional Transportation Plan (RTP) span the 20-county metropolitan area. Programmed projects in the Transportation Improvement Program (years 2016-2022) and Long Range projects (years 2022-2040) total approximately $85.1 billion of investment with an additional $30-$35 billion in aspirational projects that do not have an identified funding source through 2040. Fiscally constrained projects in the RTP are shown in the map including anticipated transportation projects that are located in or surrounding Gwinnett County.

Projects identified in the RTP range from upgrades and maintenance to new construction. In Gwinnett, this includes a bridge upgrade, an anticipated managed lanes project, four interchanges projects (new interchange or new ramps) along I-85 and SR 316, and several multi-use path or trail facilities in addition to numerous roadway capacity, operations and safety modifications.

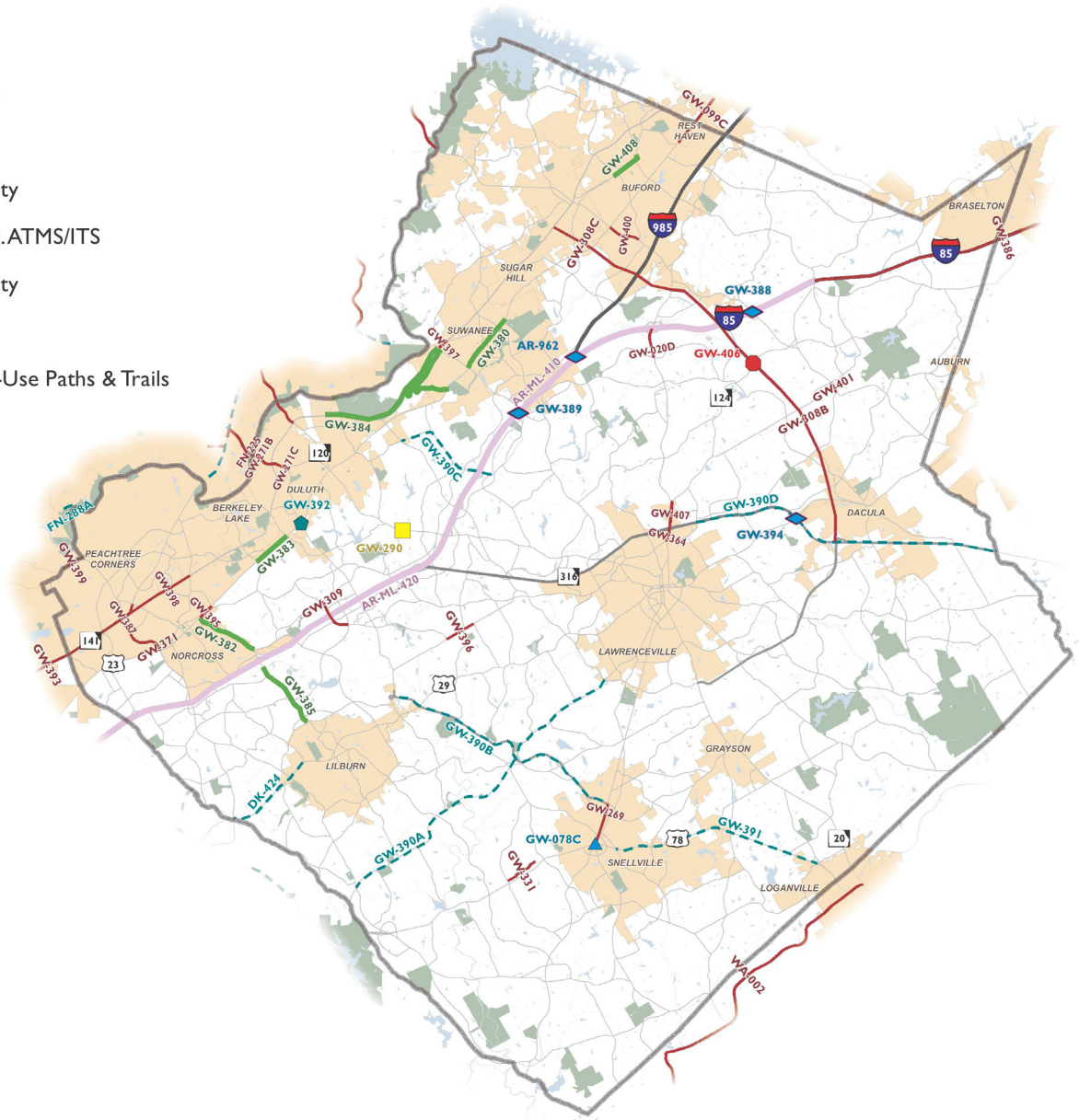
Fiscally Constrained Investment (Programmed + Long Range)



Shown in the map are 30 projects for which Gwinnett County or a local Gwinnett City or CID are the sponsor agencies, including Buford, Duluth, Lawrenceville, Norcross, Peachtree Corners, Suwanee, Evermore CID, and Gwinnett Village CID. GDOT is the sponsor for an additional 14 projects that have components inside Gwinnett. Additional Programmed or Long Range projects included in the RTP can be seen just outside Gwinnett that are sponsored by the surrounding counties and/or GDOT. Projects not shown in the map include three projects that are already in progress, along with approximately 30 Aspirations projects that are unlikely to have identified funding or to be completed within the CTP horizon.

ARC Regional Transportation Plan Projects

- Bridge Upgrade
- Intersection Capacity
- New Interchange/ Ramp
- Operations & Safety
- General Purpose Capacity
- Operations & Safety incl. ATMS/ITS
- General Purpose Capacity
- Managed Lanes
- Pedestrian Facility/Multi-Use Paths & Trails



Information shown is based on the March 2016, ARC approved update to the Atlanta Region's Plan and excludes some projects that are complete or anticipated to be complete upon publication of this document; more information can be found at: http://atlantaregionsplan.com/regional-transportation-plan/

OUR RECENT IMPLEMENTATION

OUR RECENT IMPLEMENTATION

Since the mid-1980s, Gwinnett voters have approved a series of Special Purpose Local Option Sales Tax programs, known as SPLOST. SPLOST projects and improvements have paid for County and city facilities, fire and police stations, libraries, greenspace and parks, new roads and other transportation improvements, and much more. The previous two SPLOST renewals began in 2009 (a five-year program) and 2014 (a three-year program), with the 2014 SPLOST estimated to raise $498 million. In August 2013, County and city officials agreed to share SPLOST proceeds, with 70% of the County share dedicated to transportation for roads, bridges, intersection improvements, and sidewalks. It also included $25 million for joint city/county projects.

Gwinnett County's SPLOST revenues are used to leverage state and federal funds for larger transportation projects as well as to pay for smaller projects that are best funded locally. SPLOST revenue is a critical part of Gwinnett County's overall financial strategy.

WHAT HAS SPLOST DONE IN GWINNETT?

SPLOST projects vary in size, funding required, and length of time. While many projects from both the 2009 and 2014 SPLOST programs have been completed, there are still many more that are in process. Gwinnett residents and visitors will continue to see the impacts of these two SPLOST programs for years to come. The 2014 SPLOST program will continue to identify more projects and funding before the program is complete in March 2017. The 2009 SPLOST program in summary has:

- 142 Projects completed, made possible by nearly $189,000,000 SPLOST funds
- 36 projects in process (design/construction) made possible by nearly $52,000,000 SPLOST funds
- 206 total projects made possible by an estimated nearly $293,600,000 of SPLOST funds

The following tables include informaiton on the last two SPLOST programs. the 2009 SPLOST table includes categorical allocations for Tier 1 projects, as well as the number of projects per category. The 2014 SPLOST table includes the categorical allocations for Tiers I and II projects.

2009 SPLOST Tier 1 Category Allocations

Project Type	Number of Projects	Sum of Estimated Cost (Tier I Funding Only)
Bridge	43	$71,258,147
Intersection	34	$38,101,822
Major Roads	19	$95,767,726
Pedestrian Safety	54	$41,038,291
Safety Align	21	$17,545,058
School Safety	35	$29,842,648
Total	**$200,100,000**	**$293,533,691**

2014 SPLOST Category Allocations

Category	Tier 1* (Minimum Level)	Tier II** (Minimum Level
Bridges, Culverts, and Transportation Drainage	$30,000,000	$0
Capital Projects Rehabilitation and Resurfacing	$30,000,000	$2,600,000
Intersections	$33,000,000	$10,000,000
Major Roads	$47,600,000	$7,400, 000
Residential Speed Control	$500,000	$0
Road Safety and Alignment	$15,000,000	$0
School Safety	$15,000,000	$0
Sidewalks and Pedestrian Safety	$27,000,000	$5,000,000
Transportation Planning	$1,300,000	$0
Unpaved Roads	$700,000	$0
Total	**$200,100,000**	**$25,000,000**

**Tier 1 is the amount of money that will be budgeted initially. It is 90 percent of estimated collections. The 90 percent figure is used in case collections come in lower than expected.*

***Tier II is an additional 10 percent that will be budgeted after a majority of collections have been received and there is more certainty that final collections will reach the initial estimate.*

OUR FUNDING OPPORTUNITIES

OUR FUNDING OPPORTUNITIES

One of the most critical aspects of a transportation plan is the ability to implement the projects within it. Central to that success is funding for design, right-of-way, and construction. Transportation projects in Gwinnett County can be completed using various combinations of federal, state, local, and quasi-public revenue sources.

The year 2015 was an exciting time for transportation both at the federal and state levels. In combination with the long-time success of the Gwinnett County SPLOST, tremendous opportunities exist for construction of transportation infrastructure in the County.

FEDERAL FUNDING

On December 4, 2015, Fixing America's Surface Transportation (FAST) Act was signed into law. This 5-year funding bill was the first long-term transportation bill in a decade and replaced the repeatedly extended Moving Ahead for Progress in the 21st Century (MAP-21) Act. The FAST Act increases transportation funding by approximately 11% over five years and ensures the solvency of the Highway Trust Fund (the revenue source behind federal transportation funds) through 2020.

FAST ACT

RELEVANT ELEMENTS OF THE FAST ACT:

- **Converts the Surface Transportation Program (STP) to a block grant program**
- **Brings Transportation Alternatives Program (TAP) into STP**
- **Increases funding to local governments from 50% to 55%**
- **Expands the National Highway Freight Network and introduces a grant program called the Nationally Significant Freight and Highway Projects Program**
- **Adds funding for bridges not on the National Highway System**
- **Reduces environmental review and permitting for federal projects and improves transparency through status tracking**
- **Increases dedicated bus funding by 89% over the five years**
- **Increases the allowance for states to use a greater percentage of National Priority Safety Program funds**

STATE FUNDING

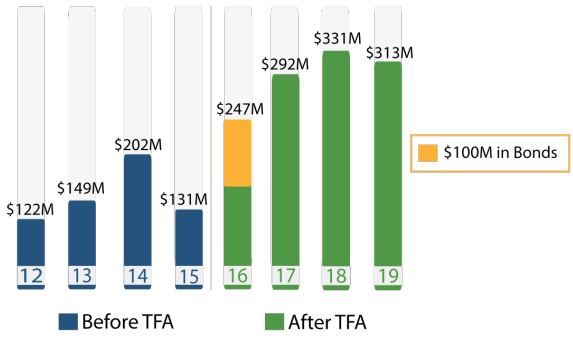
Transportation Funding Act of 2015 (TFA, formerly known as House Bill 170) was signed into law on May 4, 2015. With an estimated $830 million to $1 billion of revenue per year, this act will provide substantial increases in state revenues over previous years. Multiple provisions are contained within in this bill including the conversion of a combination excise/sales tax to an excise-only tax that is indexed to grow with inflation, alternative fuel vehicle registration fees, heavy vehicle impact fees, and a hotel tax of $5 per night.

In early January 2016, the Governor released an implementation plan that includes a short-term (18-month) program and a longer term (10-year) program. Included within this plan are the following key elements:

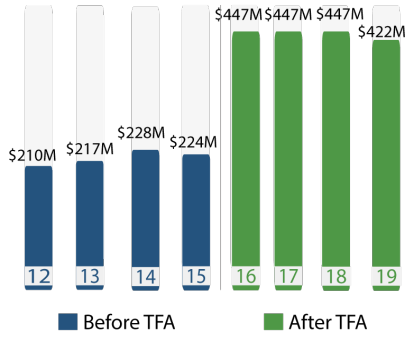
- **Short-term:**
  - Bridges—118 bridges to be replaced and 300+ bridges to be rehabilitated and maintained
  - Routine (preventative) maintenance— hundreds of safety projects (signals, intersections, signs, and guardrail replacement)
  - Capital maintenance (road resurfacing)—more than 2,500 miles of roadway to be resurfaced
  - Increase of 20-30% of the Local Maintenance & Improvement Grants (LMIG) for counties and cities
- **10-year plan:**
  - Major mobility investments, including expanding the managed lane program, reconstructing interchanges, and adding optional truck-only lanes and general purpose lanes
  - Implementation of 45 projects throughout the state to improve freight and economic growth

Gwinnett County projects that are included in the short-term and 10-year plans will be accounted for in the CTP effort.

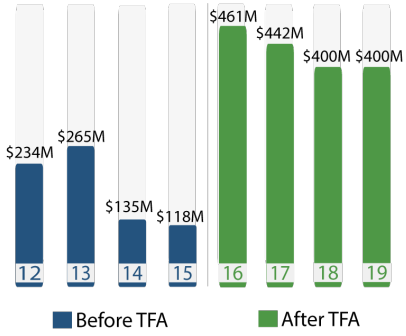
Bridge Projects



Routine Maintenance

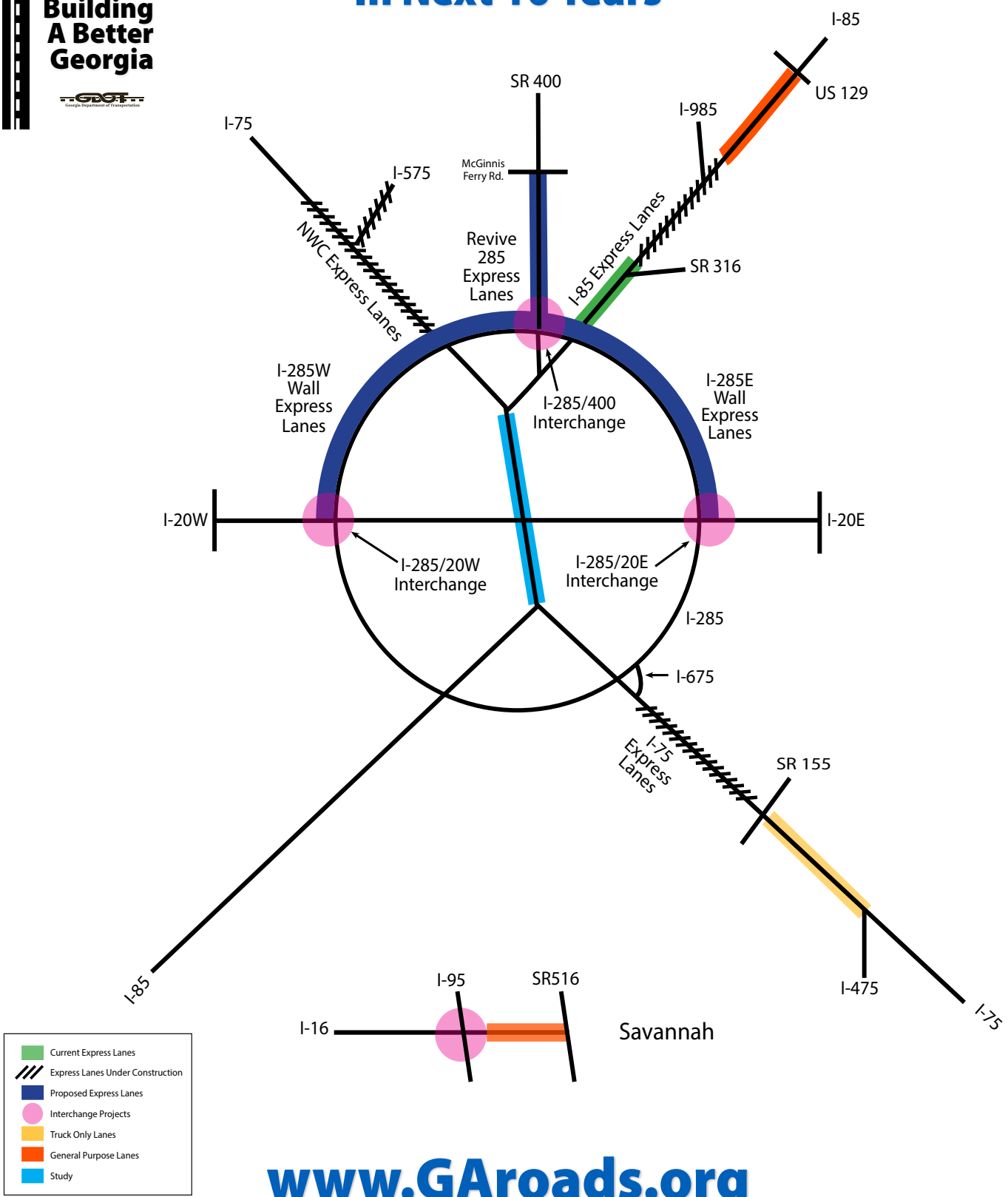


Capital Maintenance



Your Dollar$ Building A Better Georgia

Major Mobility Investments In Next 10 Years

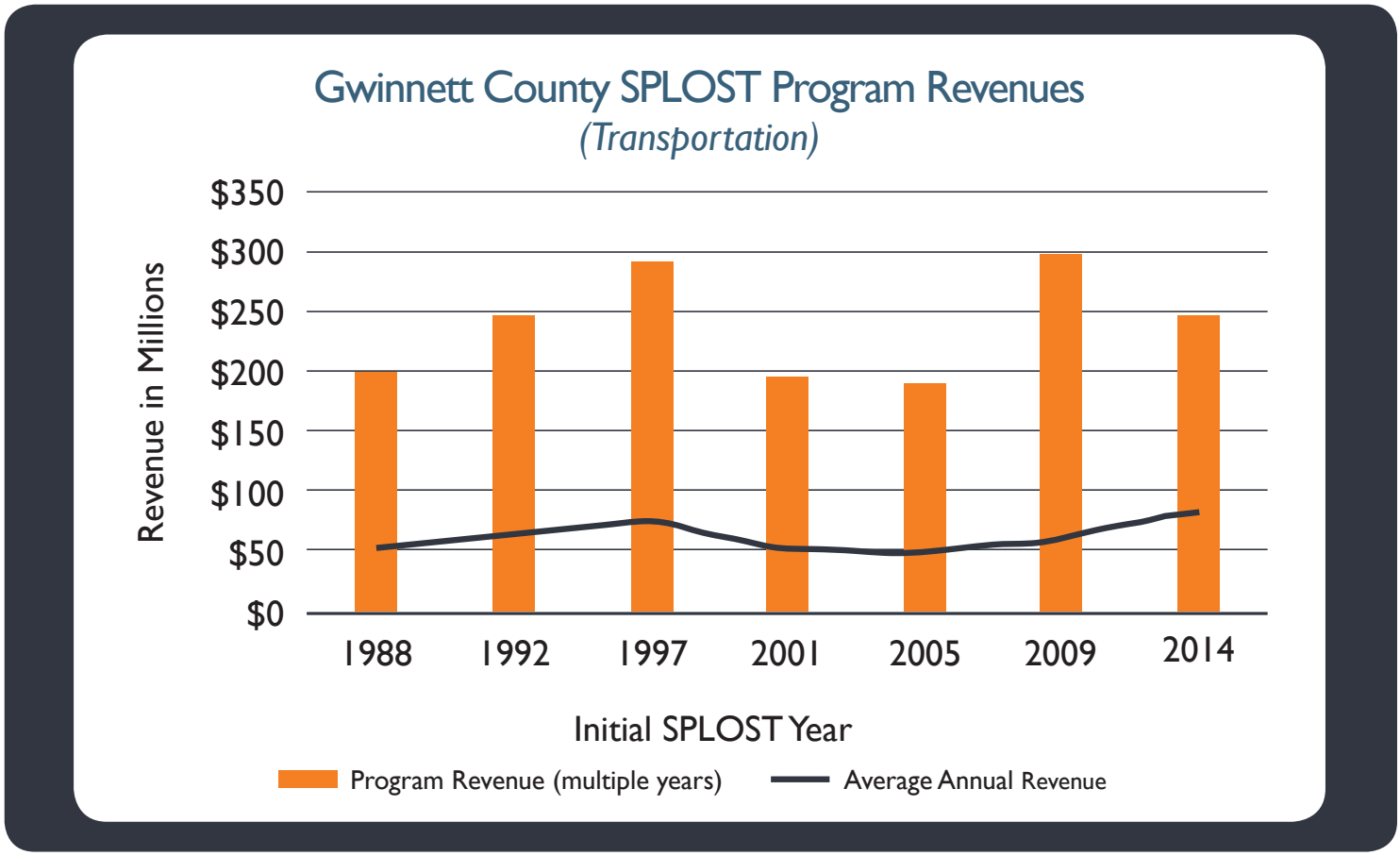


www.GAroads.org

LOCAL FUNDING

The Gwinnett County SPLOST program began in 1988 and has been a vital source of local funding for the County for almost 30 years (the SPLOST was not active for only one year (1996 -1997)). In each of the SPLOST programs, transportation infrastructure has been an important beneficiary of revenues with a total of nearly $1.7 billion over a 28-year period. The graph shows the total transportation funding for each of the multiyear SPLOST programs and the average annual revenue for each.

The 2014 Gwinnett County SPLOST will sunset on March 31, 2017.



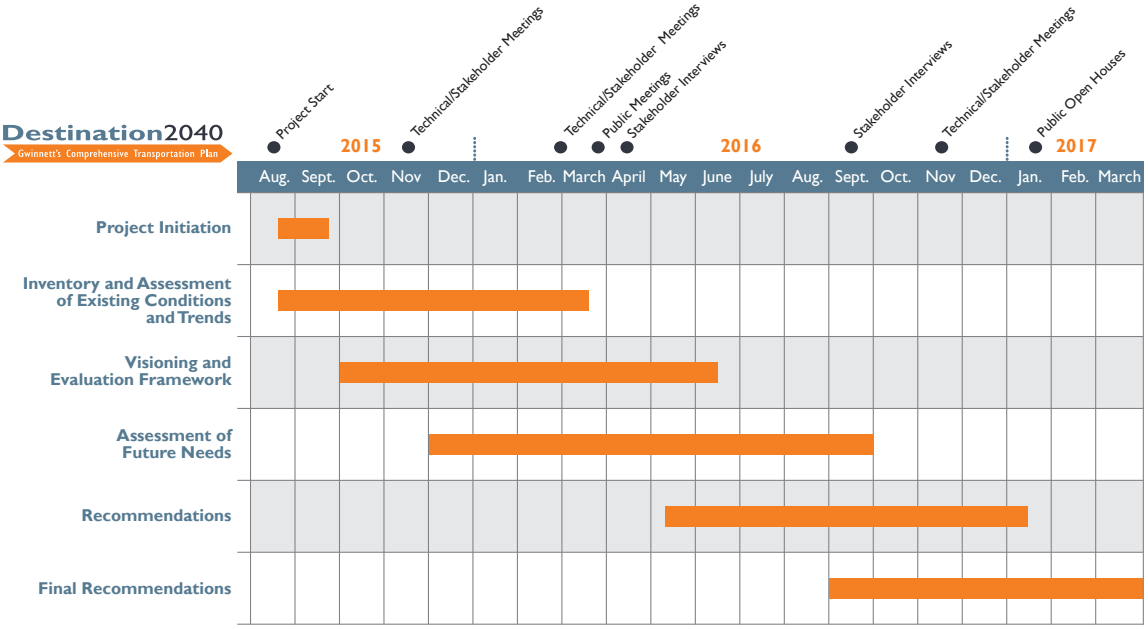
WHAT DOES IT ALL MEAN?

The future of transportation funding is optimistic, particularly in comparison with previous years. It is important to consider that with the new actions taken at the federal and state levels, a good amount of uncertainty exists about funding programs, performance measures, and project delivery. The transportation plan will consider those uncertainties and develop a flexible implementation program that can respond to the possibilities that exist at the federal, state, and local levels.

THE PLANNING PROCESS

THE PLANNING PROCESS

Updating the CTP is approximately a 20-month process that begins with determining what has changed since the previous plan and understanding what is currently happening in the County. This initial phase, the existing conditions assessment, will conclude in February 2016. Following the existing conditions analysis, other CTP tasks include plan visioning, assessing future needs, and making multimodal recommendations for Gwinnett. The planning team will present draft recommendations to the public with the final plan going before the County Commission for adoption in early 2017.

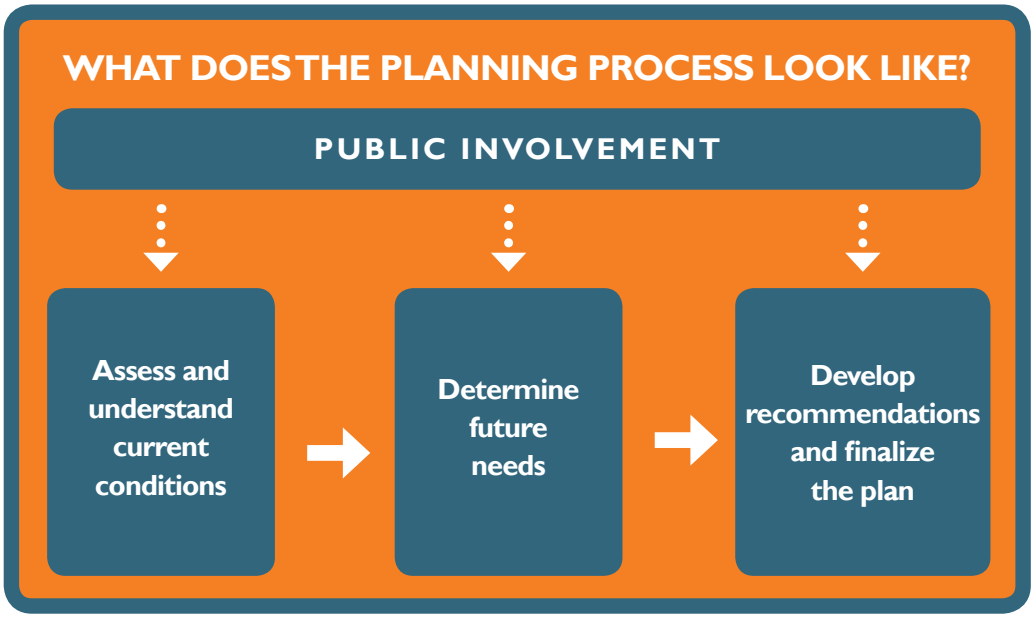


PUBLIC INVOLVEMENT

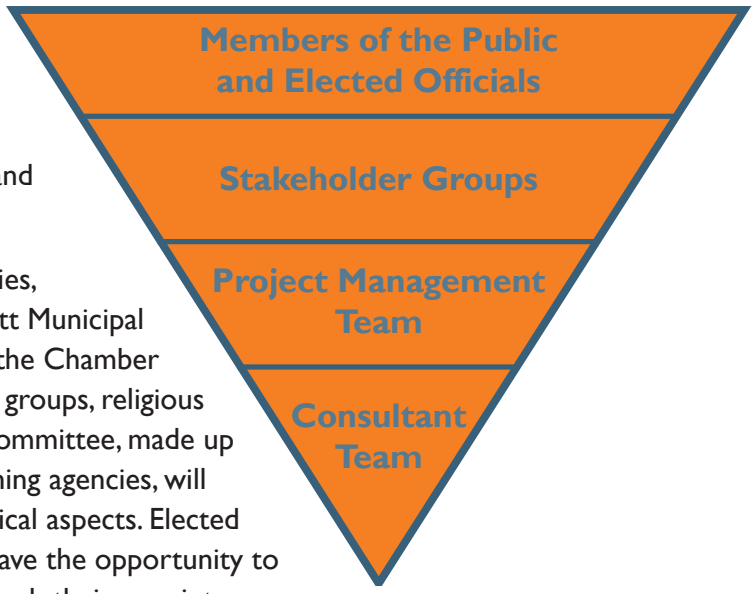
Public input and feedback are critical to ensuring that the updated CTP reflects the community's transportation goals and priorities. The planning team will hold hands-on workshops, open house presentations, and other outreach efforts to help the public stay engaged—you may even see the project team at a local festival or community event! With the public's help, the planning team can develop CTP recommendations to keep the County on track for success and address future growth opportunities.

Goals:

- To consult with local officials and staff to gather their ideas for transportation solutions
- To consult with community stakeholders and gather their ideas for issue identification and the creation of solutions
- To inform and involve the public throughout the process



Key Stakeholder Groups



Input from various stakeholder groups is vital to ensuring that the CTP meets the full spectrum of user needs. To facilitate the public involvement process, stakeholder groups will be created that can speak to local interests, which will help guide the project, provide input, and represent the larger community.

The Partner Agency Stakeholder group is comprised of cities, community improvement districts (CIDs), and the Gwinnett Municipal Association. The Community Stakeholder Group includes the Chamber of Commerce, public interest and advocacy groups, citizen groups, religious institutions, and service agencies. In addition, a Technical Committee, made up of representatives from the area's key transportation planning agencies, will meet to provide input and guidance on the project's technical aspects. Elected officials also will be briefed at major plan milestones and have the opportunity to provide input on plan development both directly and through their appointees on the community stakeholder group.

The planning process is influenced and guided by the Project Management Team, made of Gwinnett County Department of Transportation staff and the project consultant team.

Engagement/Outreach

The public engagement process involves a robust engagement and outreach program to gather input and feedback to help shape Destination2040. Public Involvement will engage the community in three primary ways: in person, on the phone, and online.

- In-Person: key stakeholder interviews, public meetings/ open house sessions, adjacent community meetings, community events/ informational kiosks
- Phone: public opinion phone poll
- Online: website, social media, MetroQuest survey

In person engagement will be spaced geographically throughout the County, at large community events to meet people where they already are, and will be transit accessible where possible. Phone communication will engage individuals who may not even be aware of the transportation planning process. Utilizing the project website, social media, and the online survey, we are able to connect with more individuals and gain feedback from an even larger cross-section of opinions and priorities.

Plan Website

Presentations, meeting summaries, and other project-related resources will be posted on the Destination2040 website throughout the CTP-update process. In addition, the website will feature opportunities for site visitors to provide feedback on plan development.

DESTINATION2040GWINNETT.COM

NEXT STEPS

The Existing Conditions Report will lay the groundwork for the next step in the planning process, which is assessing the County's transportation needs, known as a Needs Assessment. Once the needs are identified, the planning team and community stakeholders can provide recommendations that will shape the County's future and will help it achieve its transportation goals. Those recommendations will make up the third installment of the CTP, which is the plan to help Gwinnett be where it wants to be in the year 2040.

SOURCES

SOURCES

Page	Map/Chart/Image	Data Source
1	Gwinnett County in Atlanta Region	Atlanta Regional Commission GIS (Fourth Quarter 2015)
2	Gwinnett County Cities	Gwinnett DOT GIS Standard Data (2015 CDs)
5	Population Density 1990-2010	U.S. Decennial Census Data by Block Group (1990, 2000, 2010)
6	Population Density 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013) – Map; American Community Survey 5-Year Estimates (2010-2014) – Call-out text
7	Minority Population 1990-2010	U.S. Decennial Census Data by Block Group (1990, 2000, 2010)
8	Minority Population 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013) – Map; American Community Survey 5-Year Estimates (2010-2014) – Call-out text
9	Race, Ethnicity, and Minority Populations	American Community Survey 5-Year Estimates (2009-2013) – chart
10	Limited English Proficiency 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013)
11	Median Age 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013)
12	Population by Age and Gender	U.S. Decennial Census Data, 2010
13	Median Household Income 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013)
14	Household Income	American Community Survey 2009-2013, 5-year estimates
15	Percent of Households with No Vehicle 2013	American Community Survey 5-Year Estimates by Block Group (2009-2013)
16	Population Age 25+ without a High School Diploma or GED	American Community Survey 5-Year Estimates by Block Group (2009-2013)
18	Existing Land Use	Gwinnett County
19	Future Land Use	Gwinnett County
20	Proposed Future Development Classifications	Gwinnett County
21	Schools	Gwinnett DOT GIS Standard Data (2015 CDs), Inventory of Buford City Schools as part of the CTP
22	College Campus	http://www.gwinnettmagazine.com/wpcontent/uploads/2011/04/august_13_2008-079.jpg http://www.gwinnetttech.edu/enrollment/visit-gwinnett-tech/

Page	Map/Chart/Image	Data Source
23	Historic Locations	http://georgiainfo.galileo.usg.edu/images/uploads/markers/nationalregisternorcross.jpg (Historic Marker) http://millpictures.com/images/mills/ACF7FB1.jpg (Alcovy Road Grist Mill)
24	Community Facilities	Atlanta Regional Commission GIS (Fourth Quarter 2015); Gwinnett DOT GIS Standard Data (2015 CDs); Inventory of additional missing community facilities and historic sites as part of the CTP
25	Community Facilities	http://www.gwinnettpl.org/locations-and-hours/ (Hamilton Mill Branch Library) http://upload.wikimedia.org/wikipedia/en/1/1f/Gwinnett_County_Courthouse_in_2005.jpg (Gwinnett County Courthouse)
26	Environmental Features	Atlanta Regional Commission GIS (Fourth Quarter 2015); Gwinnett DOT GIS Standard Data (2015 CDs)
27	Environmental Features	http://farm1.staticflickr.com/130/372770182_f040de2a94_z.jpg http://www.suwanee.com/cityservices.recreationparks.php (Photo by David Douglas)
28	Evaluation Subareas	Areas partially based on Atlanta Regional Commission Travel Demand Model TAZ boundaries, as determined for the CTP
29	2013 Employment Density	US Census Longitudinal Employer-Household Dynamics, 2016
30	2013 Ration of Jobs to Households	US Census Longitudinal Employer-Household Dynamics, 2016
31	Net Change in Employment, 2003-2015	US Census Longitudinal Employer-Household Dynamics, 2016
32	Top Employment Sectors, 2003-2015	US Census Longitudinal Employer-Household Dynamics, 2016
33	Gwinnett County Employment History and Trends (1993-2030)	U.S Bureau of Labor Statistics
35	Major Commercial Development 1970-2015	CoStar Inc.
36	Office Space Characteristics	CoStar Inc.

Page	Map/Chart/Image	Data Source
37	Inflow/Outflow Employment	OnTheMap – U.S. Census Bureau Center for Economic Studies, 2002-2013 Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES)
38	Where Gwinnett Workers Live	OnTheMap – U.S. Census Bureau Center for Economic Studies, 2002-2013 Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES)
39	Where Gwinnett Residents Work	OnTheMap – U.S. Census Bureau Center for Economic Studies, 2002-2013 Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES)
40	Average Subarea TTI to the Atlanta Region	Output from Atlanta Regional Commission's Travel Demand Model (calibrated for Gwinnett County as part of this CTP)
41	Average Subarea TTI within Gwinnett County; Top 15 Subarea TTIs from Gwinnett County to Metro Atlanta	Output from Atlanta Regional Commission's Travel Demand Model (calibrated for Gwinnett County as part of this CTP)
42	Top 10 Subarea TTIs – within Gwinnett County	Output from Atlanta Regional Commission's Travel Demand Model (calibrated for Gwinnett County as part of this CTP)
44	Study Network	Gwinnett DOT GIS Standard Data (2015 CDs), Inventory of roadway characteristics as part of this CTP
45	Regional and National Routes	Gwinnett DOT GIS Standard Data (2015 CDs), Inventory of roadway characteristics as part of this CTP coded using data from Atlanta Regional Commission GIS (Fourth Quarter 2015)
46	FHWA Proportion of Service	http://www.fhwa.dot.gov/planning/processes/statewide/related/functional_classification/fc02.cfm
47	GDOT Functional Classification	Georgia Department of Transportation Functional Classification (Functional Classification Update as of First Quarter 2016), Gwinnett DOT GIS Standard Data (2015 CDs)
48	Lanes	Gwinnett DOT GIS Standard Data (2015 CDs), Inventory of roadway characteristics as part of this CTP
49	Speeds	Gwinnett DOT GIS Standard Data (2015 CDs), Inventory of roadway characteristics as part of this CTP

Page	Map/Chart/Image	Data Source
50	Intersection Control	Gwinnett DOT GIS Standard Data (2015 CDs), Intersection Control data from Gwinnett County TMC (Fourth Quarter 2015)
51	Pavement Quality	National Highway Pavement Management Dataset (2013)
52	Jimmy Carter Boulevard	Photo of Jimmy Carter Boulevard Diverging Diamond Interchange Bridge (Kimley-Horn)
53	Bridge Condition	Georgia Department of Transportation Bridge Inventory (Fourth Quarter 2015)
55	2015 Vehicular LOS (AM and PM Peak Periods)	Output from Atlanta Regional Commission's Travel Demand Model (calibrated for Gwinnett County as part of this CTP)
56	Average Annual Daily Traffic	Georgia Department of Transportation Count Data (2010-2014)
57	All Crashes 2012-2014	Georgia Department of Transportation Crash Data (2012-2014), mapped and reviewed for significant location errors as part of this CTP
58	Injury and Fatality Crashes	Georgia Department of Transportation Crash Data (2012-2014), mapped and reviewed for significant location errors as part of this CTP
60	Truck Count Locations in the Region	Gwinnett County
61	Freight, Rail and Air Transportation Infrastructure	Atlanta Regional Commission GIS (Fourth Quarter 2015); Gwinnett DOT GIS Standard Data (2015 CDs)
62	Heavy Vehicle Collisions	Georgia Department of Transportation Crash Data (2012-2014), mapped and reviewed for significant location errors as part of this CTP
64	GCT Local Bus	Gwinnett County
65	GCT Local Bus	Gwinnett County Transit (Fourth Quarter 2015)
66	GCT Express Bus	Gwinnett County Transit (Fourth Quarter 2015)
67	GCT Express Bus	Gwinnett County
70	Underprivileged Populations and Transit	Gwinnett County Transit (Fourth Quarter 2015), American Community Survey 5-Year Estimates by Block Group (2009-2013)
72	Bicycle and Pedestrian Facilities	Gwinnett DOT GIS Standard Data (2015 CDs)
73	Bicycle and Pedestrian Crashes	Gwinnett County
75	Pedestrian Crash Density	Georgia Department of Transportation Crash Data (2012-2014), mapped and reviewed for significant location errors as part of this CTP
81	ARC Regional Transportation Plan Projects	The Atlanta Region's Plan (Atlanta Regional Commission)

Page	Map/Chart/Image	Data Source
84	SPLOST Category Allocations	https://www.gwinnettcounty.com/static/departments/boc/pdf/SPLOSTfactsheet.pdf
87	Mobility Investments in Next 10 Years	www.GAroads.org
88	SPLOST Program Revenues (Transportation)	Gwinnett County

APPENDIX

Gwinnett County

Comprehensive Transportation Plan

Market and Economic Development Existing Conditions

Gwinnett County, GA

June 2016

Prepared for:

Gwinnett County, Georgia

Prepared by:

BleaklyAdvisoryGroup

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Executive Summary

An assessment of employment, demographic and real estate patterns and trends in Gwinnett County underlines several dominant themes:

Market Overview and Demographic Assessment

- Gwinnett County's growth and development has occurred rapidly over the past 40 years.
    - Gwinnett County's population has outpaced regional population growth by a factor of five since 1970.
    - Gwinnett's population has increased 10-fold in the past 40 years, while the population of the metro region has doubled.
    - Gwinnett County has gone from 4% of the Atlanta MSA's population in 1970 to 15% today.
- Growth and development generally started in the west and south portions of the county, moving over time to the north and east.
- Population growth in Gwinnett County since 2000 has been heavily concentrated in the northern and eastern districts, which have seen average growth rates of 4% and higher, while western districts have seen much more modest growth (<1%).

Employment

- The I-85 Corridor is the economic spine of the County, and the focus of most of the County's employment and economic activity.
- Rapid growth and uneven development pattern has resulted in a County with distinct and consistent geographic variation in terms of its demographics, economic patterns, and real estate market.
    - Some districts, particularly those in the north of the County, have seen sharp increases in employment over the past twelve years, while nearly half of the districts, all in the west or south sides of the County saw overall job declines over the last ten years.
- Gwinnett County's top employment sector is retail trade, with 14.7% of all jobs in the County, followed by wholesale trade, administrative support, educational services, and manufacturing.
- Gwinnett County's labor force has grown modestly over the past 15 years, with the County adding an average of 8,700 jobs annually since 1993.
    - The recent past was dominated by the Great Recession of 2008, which led to a significant and sharp decline in employment. Over the last ten years, county-wide employment growth averaged just 3,700 new jobs year.
    - Since 2010, employment has been steadily increasing, returning to the long-term average growth trend of 8,700 new jobs annually.
    - This employment growth trend, if continued, would suggest the addition of 120,000 new jobs in Gwinnett between now and 2030.

Real Estate Assessment

- Gwinnett County's commercial real estate inventory is vast, with 225 million SF of commercial space, of which 27% is retail space, 15% is office space, and 58% is industrial and flex space.
- Gwinnett County has evolved into multiple wide-area geographic conglomerations of buildings and land uses that are similar in use, design, and age, in a way that shifts in economic trends, obsolescence, or even the passage of time, all have the potential to impact large areas of the county.
- We can likely expect residential permit issuances to continue to rise modestly over the next several years, reaching a level of 35,000-40,000 permits annually region-wide and 3,700-4,500 annually in Gwinnett County.

Geography and Methodology

The purpose of this assessment is to provide economic, demographic, employment and real estate data and analysis to support the decision-making process for the Gwinnett County Comprehensive Transportation Plan. As such, the focus of this analysis is:

- The identification and quantification of historical trends and patterns within the county;
- Analysis of the geographic distribution of these patterns within the county and in relation to its regional context and transportation network.
- Forecasts of these trends and patterns over the next twenty five years.
- The identification and analysis of patterns and relationships within these assessments that are relevant to transportation planning and public investment.

Most of the geographic analysis is based upon 19 districts established as baseline units of analysis for the Comprehensive Transportation Planning process. This process has been outlined in detail in a separate document, "Proposed Subarea/Origin-Destination Analysis – Gwinnett County CTP" dated January 12, 2016. This document outlines and details the methodology for the subareas, summarized in the following excerpt:

> It was necessary to subdivide the County and surrounding metro area into a series of subareas in order to conduct the origin-destination analysis. It should be noted that this process is limited by the size and shape of the ARC travel demand model TAZ structure.
>
> In an effort to make this process objective, three major criteria were identified:
>
> 1. Population Density was utilized to highlight areas of relative urbanity […]
>
> 2. Regionally Significant Employment and Commercial Nodes were identified using a combination of study area knowledge and employment location data (per the U.S. Census […] It should be noted that the identification of these nodes was not intended to represent all areas of concentrated employment, but rather regionally significant areas of activity.

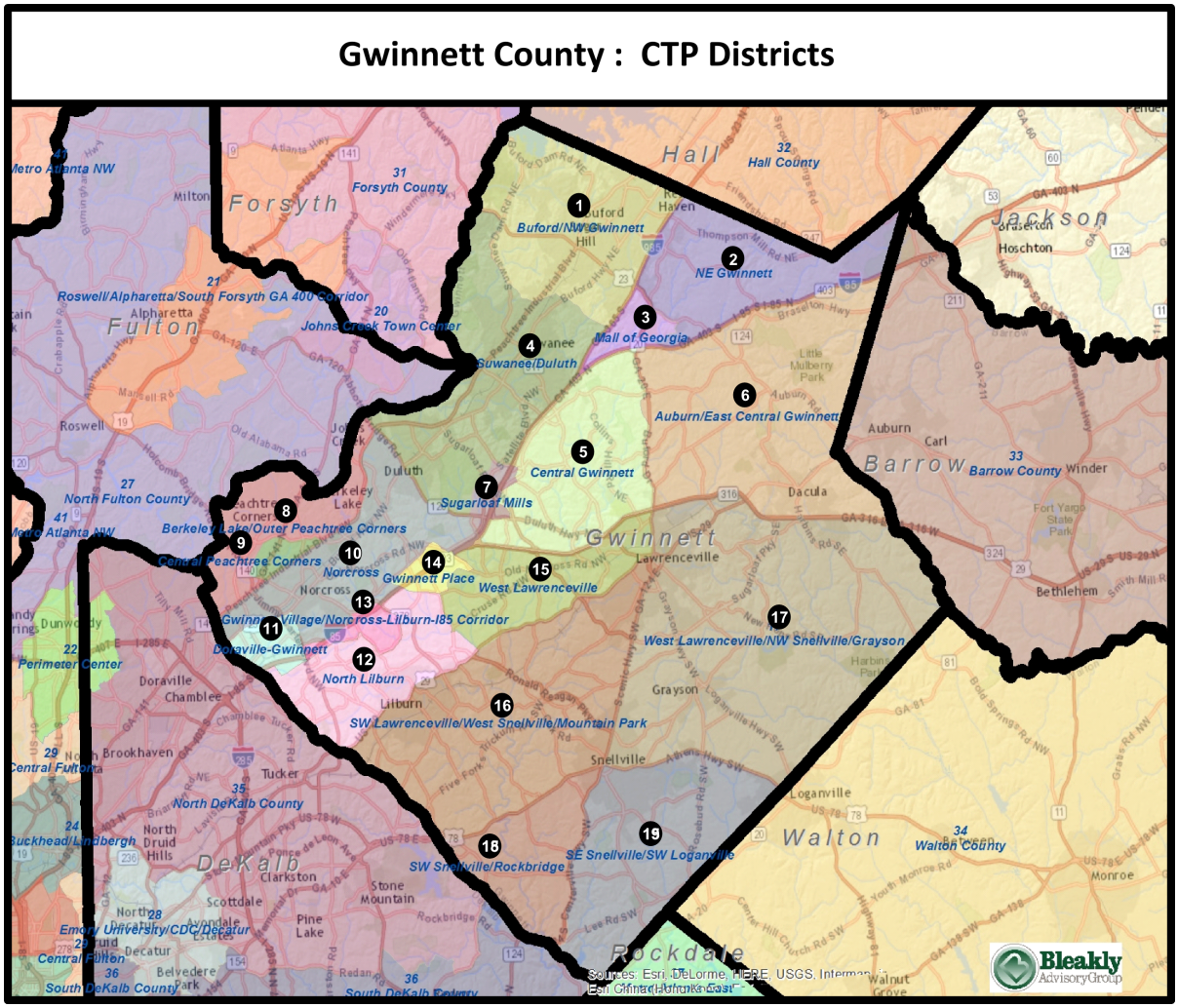
Therefore, there are areas identified with significant employment concentration (typically education, government services, or retail based) that primarily serve the local community.

3. Average income […] was utilized as a basic measurement to understand how demographics differ in certain areas of the County.

These three criteria [were combined into the resulting] subareas for Gwinnett County. In addition to the three criteria mentioned previously, the proposed boundaries of these subareas were formed using major transportation corridors and other geographic features. [Proposed Subarea/Origin-Destination Analysis – Gwinnett County CTP, January 12, 2016, Pond]

These districts are shown in the following map:

Gwinnett Comprehensive Transportation Plan District Boundaries



Source: Gwinnett County, Esri, Bleakly

While other technical elements of the planning process consider regional districts outside the county, this assessment considers only the nineteen districts within Gwinnett County.

This analysis relies on data from multiple sources, including:

- Atlanta Regional Commission Forecasts
    - County, superdistrict, and tract level
- US Census American Community Survey (2013, Tract and Block-Group level)
- US Census Longitudinal Employer-Household Dynamics
    - Tract-level employment and commuting data, 2013
- ESRI Business Analyst Online
- Nielsen Customized Demographic Data
- Bureau of Labor Statistics
- Georgia Department of Labor
- Esri Inc.

Accuracy and Compatibility of Data Sources

Different employment data sources have strengths and weaknesses in terms of the level of geographic and temporal strengths of each, however different methodologies used for each source make the total employment counts from each source incompatible with one another.

- **Population and Households:** Different data sources have been used to assess population and household estimates in this based on the dynamic being considered. While all of these sources begin with similar values, differing data methodologies, time frames, and variations introduced during the disaggregation and aggregation process produce total values with inconsistencies when compared across data sources. This analysis relies most heavily on three sources for population and household, each with strengths and weaknesses:
    - **US Census Longitudinal Employer Household Dynamics:** This source provides consistent time-series data by hear going back ten years, with a high degree of geographic specificity. This source is relied on for the sub-area level population and household estimates. However this data takes time to aggregate, meaning the most recent available data is from 2014.
    - **ARC Tract and TAZ level Population Forecasts**: These forecasts are the basis for Transportation planning processes in the Atlanta Region. They are useful for growth forecasting, however they are tied to decennial censuses, and updated infrequently, and at the local level they are not easily linked to past historical data.
    - **Nielsen Customized Demographic Data**: This private data source bridges Census and ARC data in that it tends to be more current, provides both historical data and future growth forecasts, and allows customizable geography. However, as a private, national data source, data at the local level tends to be less reliable than ARC or Census. This data source is the basis of much of the analysis of household character.
- **Employment:** This assessment relies most heavily on the US Census Longitudinal Employer Household Dynamics, 2003 and 2013 (All Jobs). This data source is well suited for this assessment as it allows for detailed customized geography and year-to year

estimates by employment sector going back ten years. The latest available 2013 employment estimates by district have been extended to 2015 estimates by applying the 2010-2013 average growth rate for each district. The Census Bureau's methodology generally produces lower total employment estimates at the county level than the ARC's forecast model. The primary difference between US Census Longitudinal employment estimates and other sources is that the Census Counts Primary Jobs (the one highest paying job of an individual worker) rather than total jobs (including multiple jobs worked by the same individual). For this reason, the Census employment numbers are being used in this section to assess changes from year to year, sector to sector, and district to district. Ultimately, ARC's TAZ level employment estimates will be considered the most accurate source for total employment counts for comprehensive transportation planning purposes.

Area Economic Overview

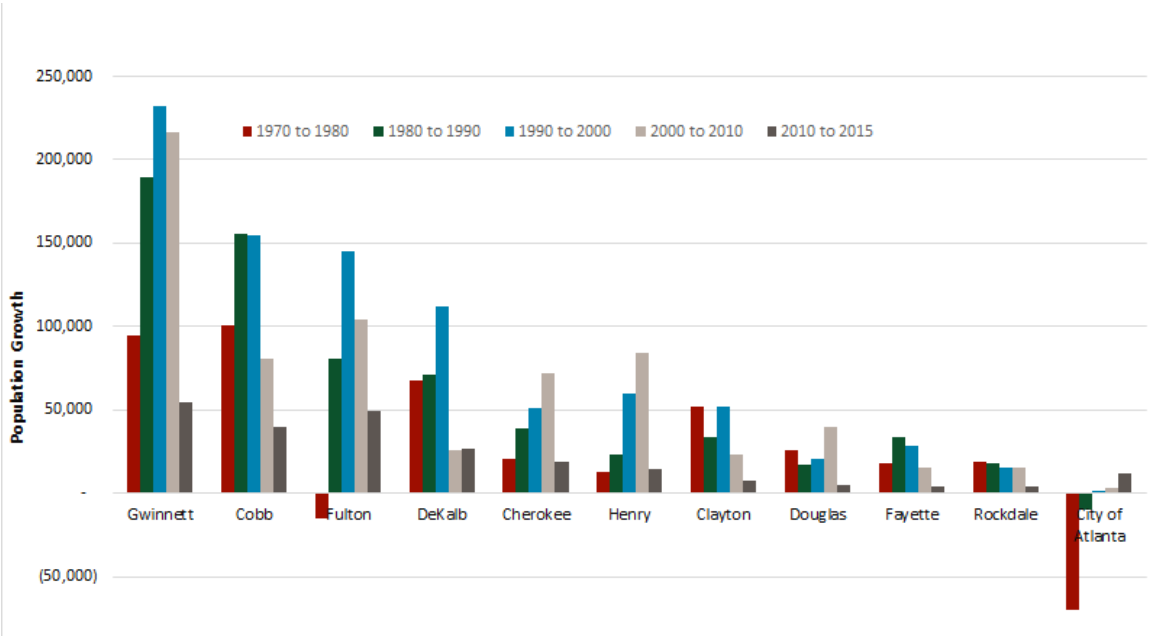
After several years of difficult economic conditions, characterized by employment loss, slow growth, financial turmoil, and a virtual standstill of development activity associated with the Great Recession of 2008-2011, the Atlanta region's economy is gradually recovering. While current levels of job growth, population growth, and development have offset the losses of the previous five years, the current pace of growth is more measured than the boom period of 2003-2007, which preceded the Great Recession.

Population and Growth Patterns: According to the Atlanta Regional Commission, the 10-county Atlanta metro region added 60,300 new residents in 2014, increasing the metro population from 4,272,300 to 4,332,600. Gwinnett County led all metro counties in absolute population growth, accounting for 15,700 new residents, or more than ¼ of regional growth over the period. While this growth is strong in relation to the recession period, it is roughly half of the pace experienced by the county during the boom years of 1990-2005. Gwinnett County's estimated 2015 population of 855,000 makes it the second most populous county in the State of Georgia.

Atlanta metropolitan population growth over the past fifteen years has been sharply concentrated in the northern suburbs, with the Interstate 85 and University Parkway/SR 316 corridors in Gwinnett County among the strongest growth areas in the region.

The chart below demonstrates how Gwinnett County has consistently led the region in population growth, with the strongest period of growth occurring from 1990 to 2000.

Figure 1: Population Growth by Atlanta Metro County, by Decade



Source: ARC, BAG

The Atlanta Regional Commission forecasts that the 10-County Atlanta region is expected to add

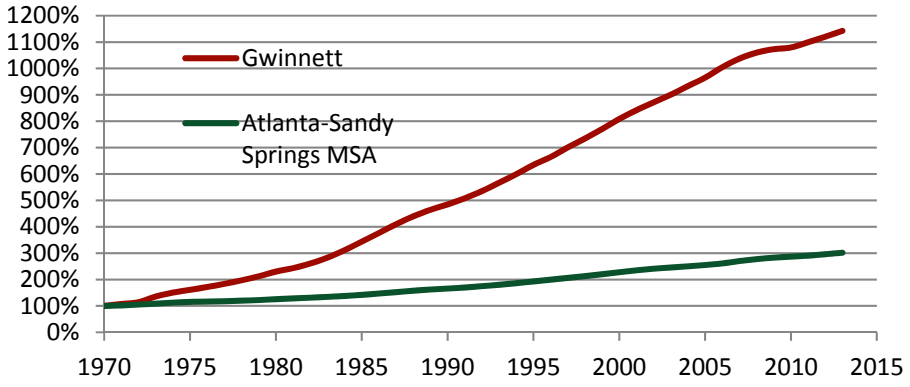
1.4 million residents and 1.0 million jobs over the next 25 years. The forecast indicates that much of the growth will continue to occur in suburban locations, with 19% of all regional job growth and 27% of all regional population growth over that period forecast to occur in Gwinnett County. Additionally an increasing portion of that growth is focused now in urban infill in urban core areas such as Midtown Atlanta, Buckhead, and in the redevelopment of established suburban sites such as the Perimeter area.

Demographics

Population Growth

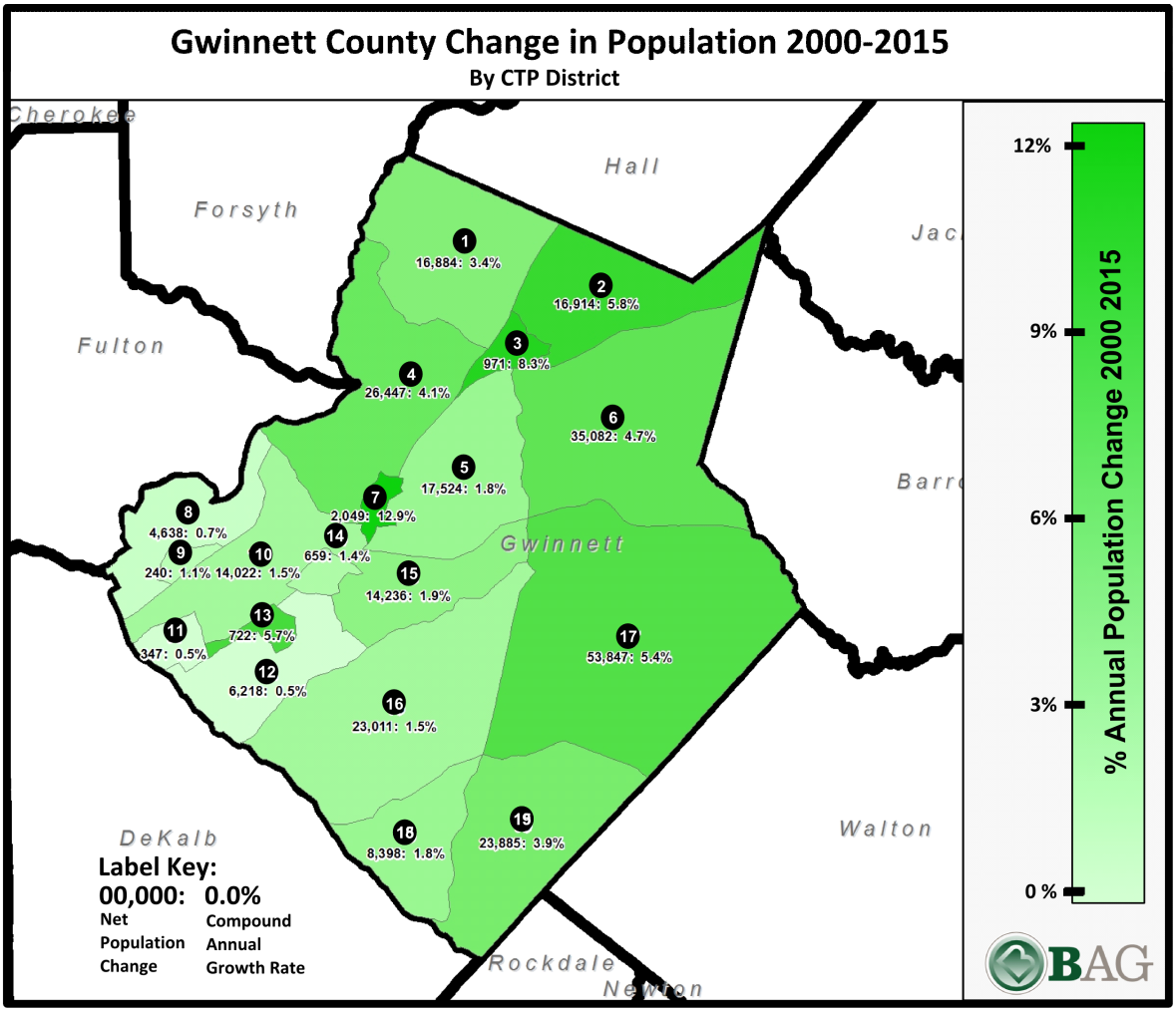
- Gwinnett County's growth and development has occurred rapidly over the past 40 years.
    - Gwinnett County's population has outpaced regional population growth by a factor of five since 1970.
    - Gwinnett's population has increased 10-fold in the past 40 years, while the population of the metro region has doubled.
    - Gwinnett County has gone from 4% of the Atlanta MSA's population in 1970 to 15% today.

Relative population growth since 1970, Gwinnett County and Atlanta-Sandy Springs MSA



Source: US Census

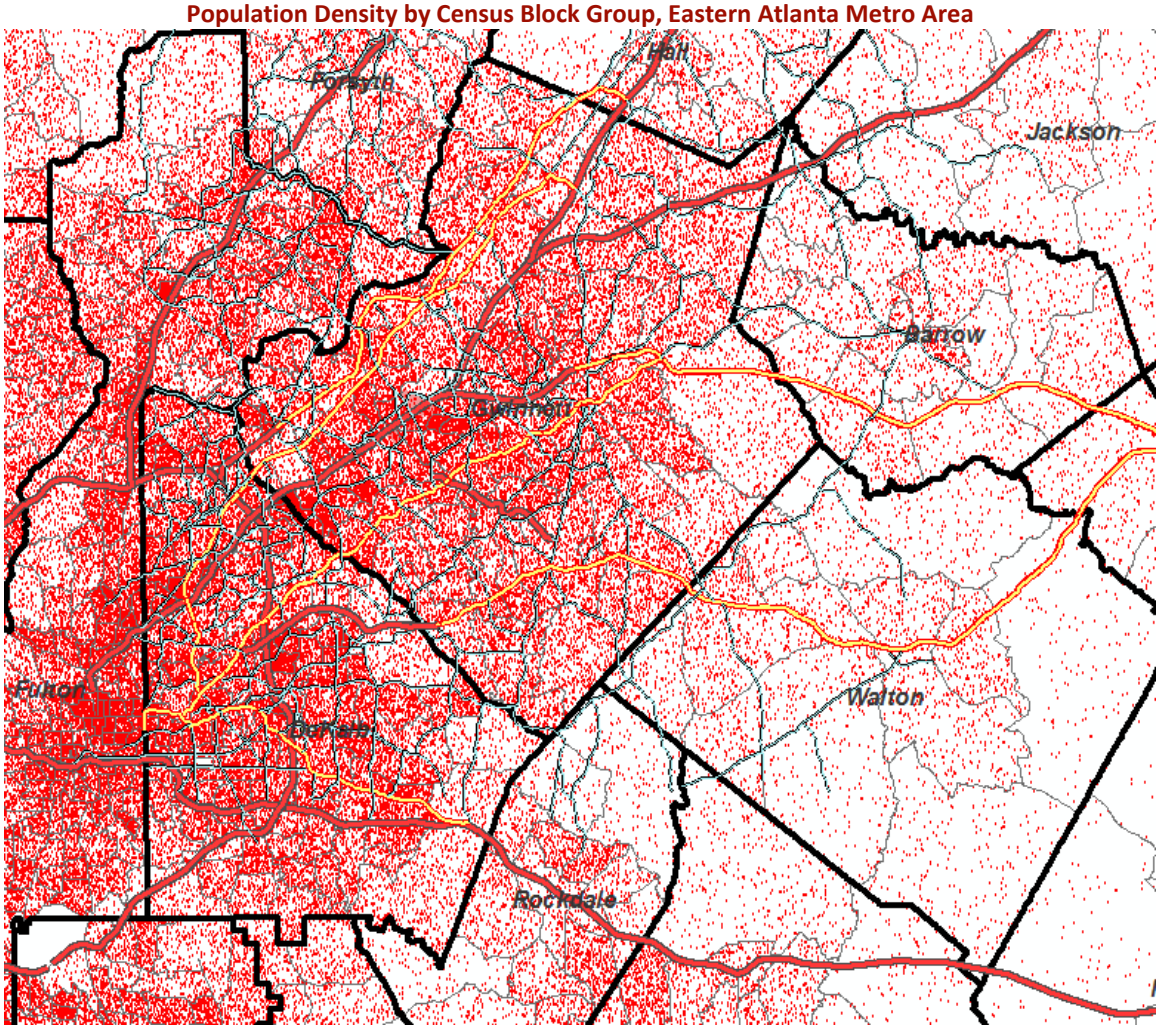
- **Population growth** in Gwinnett County since 2000 has been heavily concentrated in the northern and eastern districts, which have seen average annual growth rates of 4% and higher, while western districts have seen much more modest growth (0.5%).



Source: US Census, ARC

- **Population Density –** Gwinnett County is at the current northeastern edge of the Atlanta region's dense urbanized core. A map of population density by census tracts illustrates how Gwinnett County is nearly completely substantially developed, with the exception of a small portion eastern Gwinnett County near Grayson and Dacula.

Population Density by Census Block Group, Eastern Atlanta Metro Area



Source: US Census

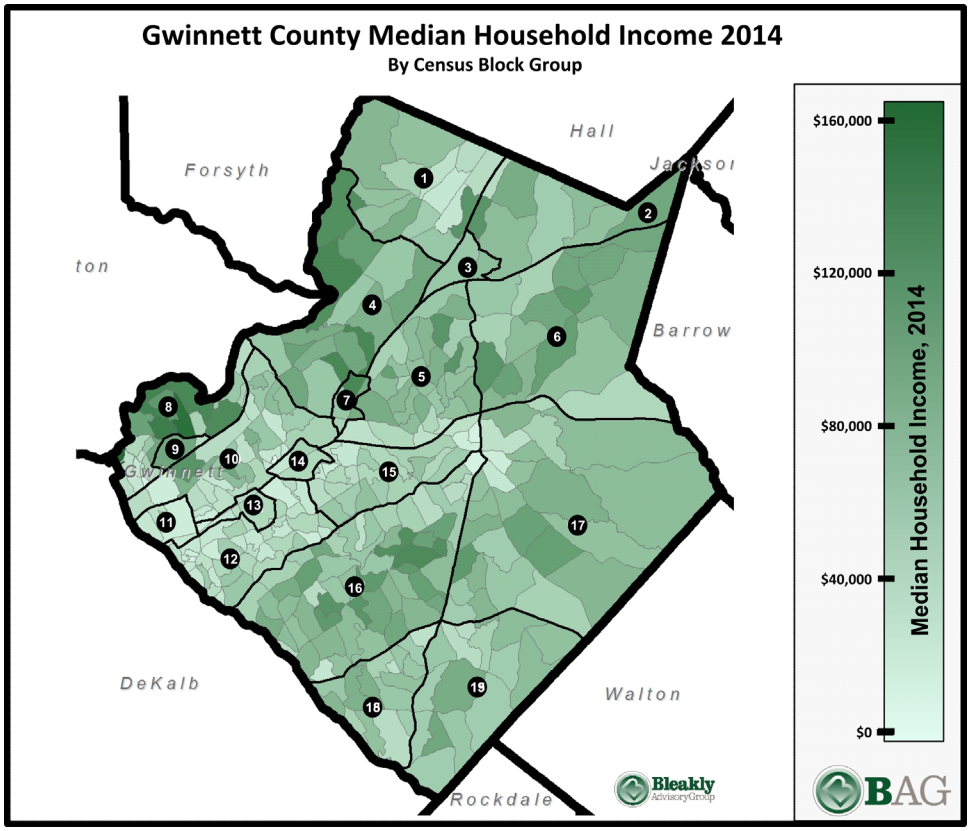
Household Income Distribution

- Gwinnett's median household income, at $58,652, is slightly above the regional median of $55,755. The distribution of income ranges is similar to the MSA, with the exception of fewer very low income houses (<$15,000).

Household Income	Gwinnett County		Atlanta MSA	
2015 Est. Median Household Income	$ 58,652		$ 55,755	
% of MSA Median Income		105%		100%
Households by Income				
HH with income >$15K	26,299	9%	250,674	12%
HH with income $15K - $35K	60,243	21%	417,224	20%
HH with income $35K - $50K	40,701	14%	282,845	14%
HH with income $50K - $100K	93,453	32%	630,183	30%
HH with income > $100K	71,722	25%	496,122	24%

Source: Nielsen, Inc.

- Much of Gwinnett County's households tend to fall into moderate income ranges, commensurate with or slightly above regional averages with two distinct differences:
  - Higher- income households tend to be concentrated in the far northern edge of the County.
  - The I-85 Corridor on the west side of the county is the center of a significant concentration of lower-income households.



Source: US Census

25-Year Forecasts of Employment, Population and Households

The following tables detail 25-year forecasts of employment, population and households based on Atlanta Regional Commission 2015 forecasts at the Transportation Analysis Zone (TAZ) level. TAZ-level forecasts have been combined into CTP districts.

25-Year Forecasts by District, Gwinnett County: Employment

Subarea	Area Name	2015	2020	2025	2030	2032	2040
1	Buford/NW Gwinnett	17,081	20,462	23,026	25,843	28,841	31,625
2	NE Gwinnett	5,126	5,808	6,365	6,918	7,575	8,168
3	Mall of Georgia	6,999	7,002	6,909	6,752	6,591	6,386
4	Suwanee/Duluth	30,830	33,820	36,080	38,472	41,080	43,408
5	Central Gwinnett	34,171	37,565	40,050	42,675	45,439	47,861
6	Auburn/East Central Gwinnett	19,089	21,863	24,026	26,280	28,712	30,998
7	Sugarloaf Mills	7,679	8,356	8,883	9,425	10,038	10,572
8	Berkeley Lake/Outer Peachtree Corners	24,488	27,157	29,127	31,376	33,800	36,013
9	Central Peachtree Corners	18,316	20,051	21,244	22,608	24,165	25,523
10	Norcross	61,317	68,908	74,364	80,225	86,533	92,182
11	Doraville-Gwinnett	16,419	19,818	22,096	25,059	28,343	31,464
12	North Lilburn	26,110	29,631	32,402	35,502	38,840	41,954
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	5,976	6,728	7,254	7,877	8,570	9,215
14	Gwinnett Place	19,546	19,604	19,532	19,269	19,017	18,661
15	West Lawrenceville	30,630	34,502	37,531	40,801	44,301	47,579
16	SW Lawrenceville/West Snellville/Mtn. Park	36,209	40,436	43,841	47,384	51,244	54,814
17	West Lawrenceville/ NW Snellville/Grayson	20,151	22,235	24,001	25,822	27,953	29,944
18	SW Snellville/Rockbridge	9,128	9,521	9,852	10,118	10,429	10,688
19	SE Snellville/SW Loganville	9,657	10,880	11,859	12,937	14,145	15,287
	TOTAL	398,922	444,347	478,442	515,343	555,616	592,342

Source: ARC. Bleakly

25-Year Forecasts by District, Gwinnett County: Population

Subarea	Area Name	2015	2020	2025	2030	2032	2040
1	Buford/NW Gwinnett	42,594	46,298	50,682	55,313	61,659	68,363
2	NE Gwinnett	29,687	33,069	37,743	42,627	48,342	54,427
3	Mall of Georgia	1,392	2,046	2,857	3,620	4,078	4,423
4	Suwanee/Duluth	58,596	64,510	68,904	73,960	79,725	86,237
5	Central Gwinnett	74,827	77,823	82,447	87,968	95,367	103,645
6	Auburn/East Central Gwinnett	70,231	77,094	83,297	90,433	98,947	108,632
7	Sugarloaf Mills	2,445	3,773	5,093	6,480	7,660	8,935
8	Berkeley Lake/Outer Peachtree Corners	47,594	49,282	52,264	55,657	60,066	64,872
9	Central Peachtree Corners	1,543	1,980	2,193	2,400	2,561	2,703
10	Norcross	69,982	75,334	81,167	87,920	96,311	105,381
11	Doraville-Gwinnett	5,274	5,667	5,704	5,823	5,973	6,081
12	North Lilburn	82,141	83,153	85,464	88,769	94,155	100,165
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	1,275	1,696	2,389	3,095	3,757	4,483
14	Gwinnett Place	3,504	4,519	5,341	6,204	7,081	8,025
15	West Lawrenceville	57,096	59,239	61,828	64,964	69,586	74,568
16	SW Lawrenceville/West Snellville/Mtn. Park	117,242	122,502	128,911	136,410	147,459	159,134
17	West Lawrenceville/ NW Snellville/Grayson	99,039	103,025	108,249	114,494	124,150	134,698
18	SW Snellville/Rockbridge	35,664	37,656	40,371	43,421	47,162	51,239
19	SE Snellville/SW Loganville	54,314	57,890	62,280	67,283	72,968	79,291
	TOTAL	854,440	906,556	967,184	1,036,841	1,127,007	1,225,302

25-Year Forecasts by District, Gwinnett County: Households

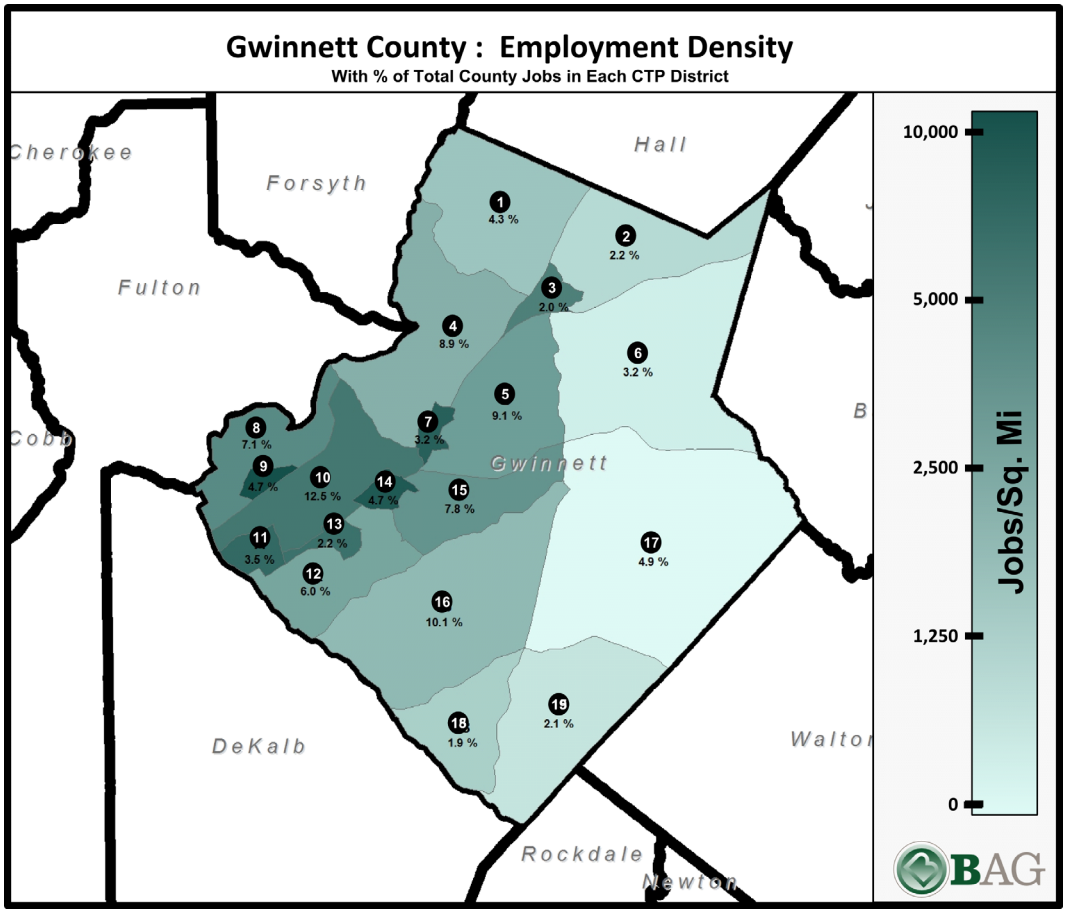
Subarea	Area Name	2015	2020	2025	2030	2032	2040
1	Buford/NW Gwinnett	15,710	17,171	18,922	20,756	23,254	25,956
2	NE Gwinnett	10,555	11,846	13,592	15,407	17,573	19,894
3	Mall of Georgia	478	719	1,000	1,261	1,418	1,540
4	Suwanee/Duluth	20,423	22,673	24,371	26,274	28,425	30,849
5	Central Gwinnett	25,419	26,461	28,169	30,121	32,752	35,707
6	Auburn/East Central Gwinnett	24,183	26,712	29,078	31,697	34,887	38,526
7	Sugarloaf Mills	1,222	1,894	2,562	3,256	3,894	4,600
8	Berkeley Lake/Outer Peachtree Corners	19,192	19,970	21,291	22,778	24,722	26,882
9	Central Peachtree Corners	789	1,016	1,140	1,262	1,362	1,454
10	Norcross	26,596	28,943	31,509	34,354	38,009	42,026
11	Doraville-Gwinnett	1,555	1,635	1,652	1,680	1,736	1,779
12	North Lilburn	29,694	30,162	31,230	32,553	34,802	37,371
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	422	562	788	1,021	1,252	1,506
14	Gwinnett Place	1,670	2,039	2,374	2,731	3,116	3,537
15	West Lawrenceville	20,917	21,804	22,874	24,129	26,008	28,052
16	SW Lawrenceville/West Snellville/Mtn. Park	39,994	42,133	44,679	47,584	51,760	56,264
17	West Lawrenceville/ NW Snellville/Grayson	34,712	36,345	38,445	40,873	44,551	48,605
18	SW Snellville/Rockbridge	12,151	12,964	14,014	15,176	16,600	18,185
19	SE Snellville/SW Loganville	18,797	20,186	21,902	23,813	25,990	28,444
	TOTAL	304,479	325,235	349,592	376,726	412,111	451,177

Source: ARC. Bleakly

Employment Characteristics

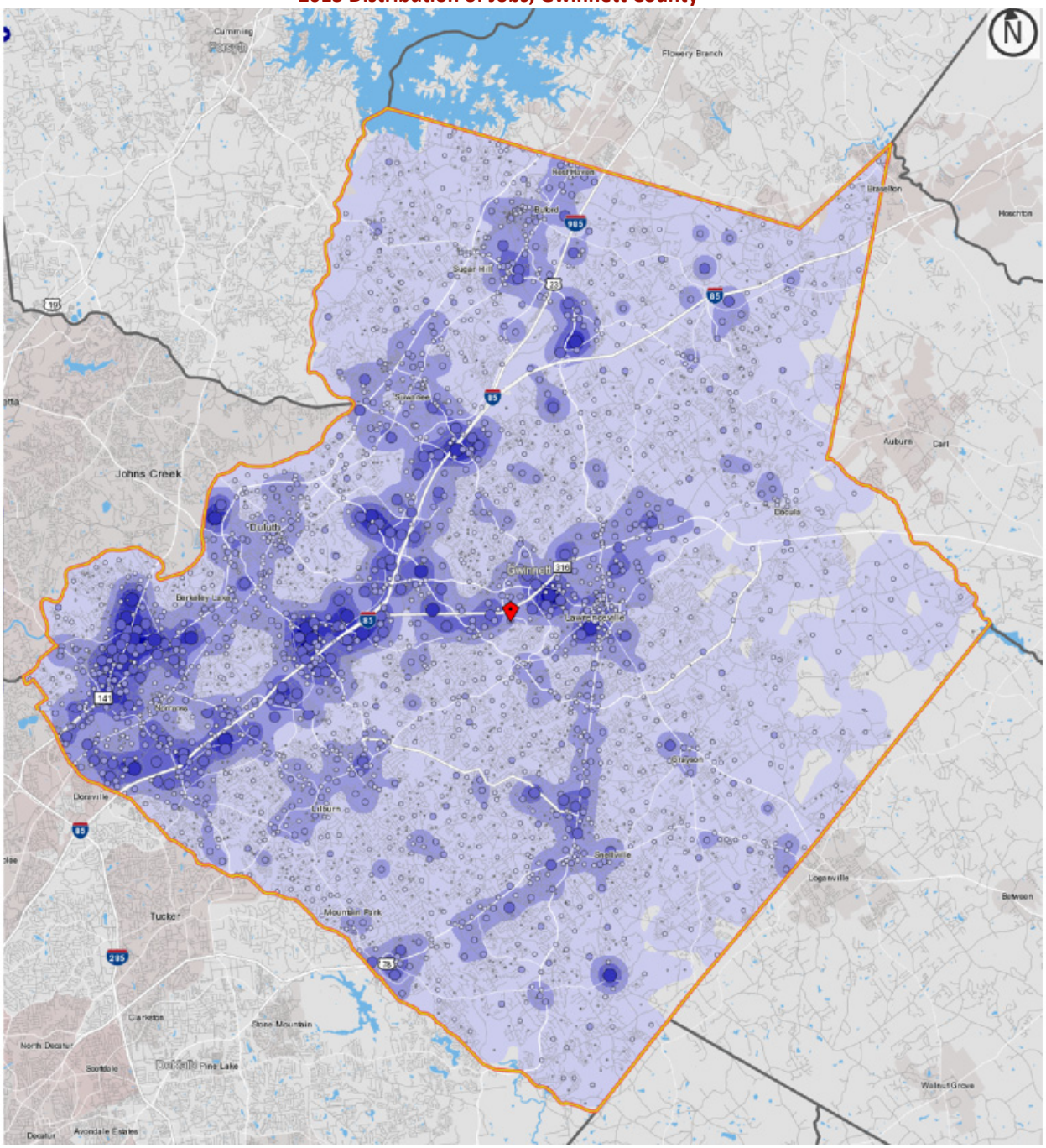
Distribution of Employment

Gwinnett County's job base is tightly concentrated along the I-85 Corridor, with additional concentrations around Lawrenceville and Peachtree Corners.



Source: *US Census Longitudinal Employer-Household Dynamics, 2016*

2013 Distribution of Jobs, Gwinnett County

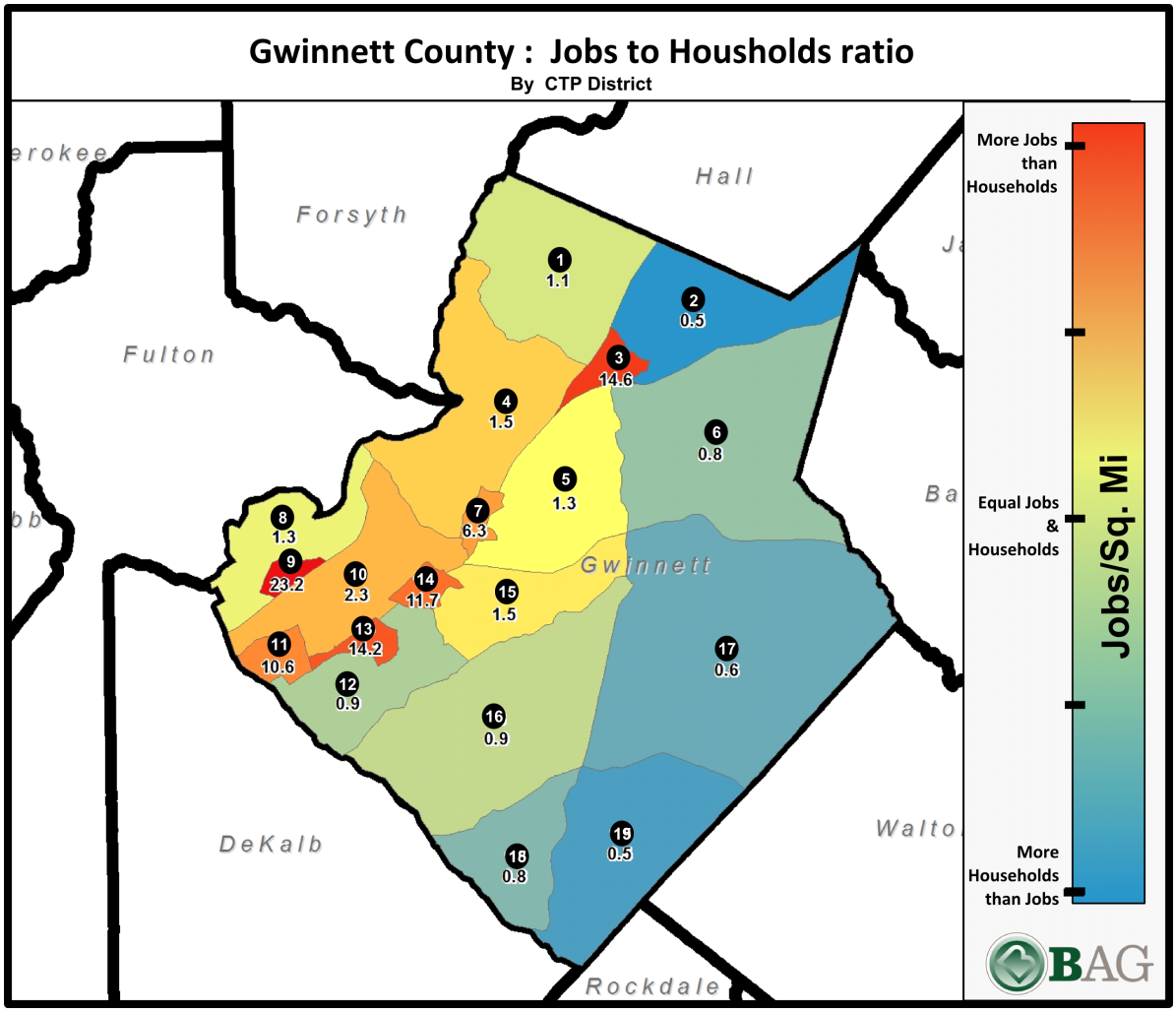


Source: US Census Longitudinal Employer-Household Dynamics, 2016

Jobs to Households Ratio

Gwinnett County has a *jobs:household ratio* of 1.3, meaning that there are 1.3 jobs for every household. The districts with a positive *jobs:household ratio* are all concentrated along the I-85 Corridor, led by Peachtree Corners, Sugarloaf Mills, Gwinnett-Village-Norcross, Mall of Georgia, and Gwinnett Place. The districts forming a crescent at the eastern half of the county all have ratios below 1, meaning they are predominantly residential.

2013 Ratio of Jobs to Households



Source: US Census Longitudinal Employer-Household Dynamics, 2016, ARC

Countywide Employment by Sector

Gwinnett County's top employment sector is retail trade, with 14.7% of all jobs in the County, followed by wholesale trade, administrative support, educational services, and manufacturing.

- The sectors with the largest gains between 2003 and 2015 are education, health care, professional and scientific, retail, accommodations and food service, public administration, and information.

- Declining sectors include utilities, construction, wholesale trade, and manufacturing.

Gwinnett County Employment by Sector 2003-2013

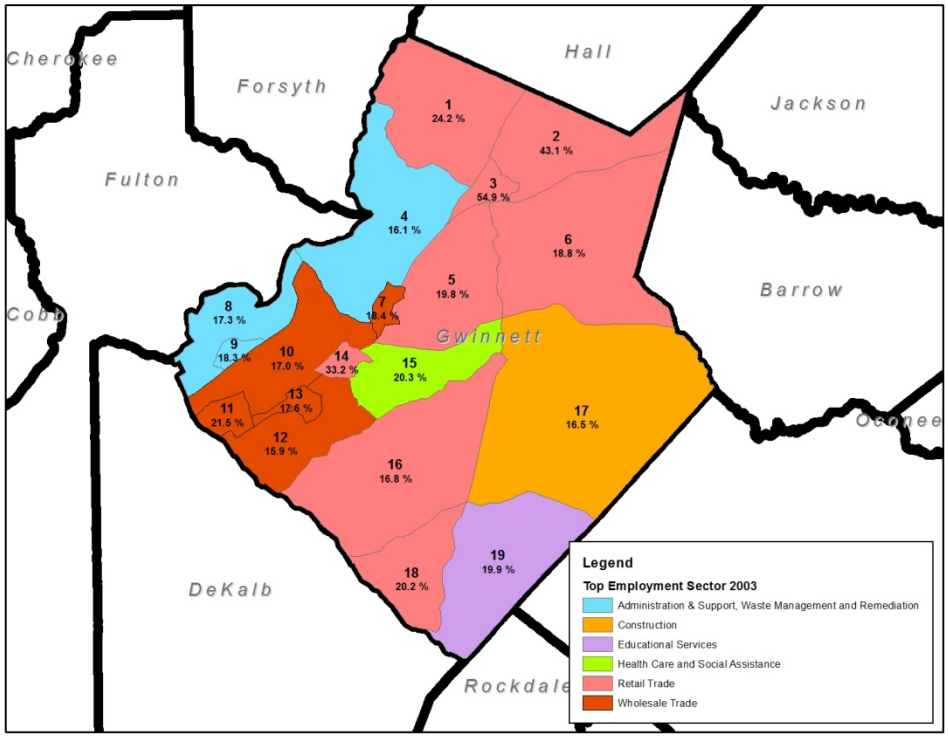
Employment Sector	2003 Total Emp.	2003 Share of County Emp.	2013 Total Emp.	2013 Share of County Emp.	Net Change 2003-2013	% Change 2003-2013	Compound Annual Growth 2003-2013	Sector Rank 2013	Rank-Net Change 2003-2013	Rank: % Chg 2003-2013
Ag., Forestry,	147	0.1%	229	0.1%	82	55.8%	4.5%	19	13	2
Mining, Oil and Gas	89	0.0%	91	0.0%	2	2.2%	0.2%	20	15	14
Utilities	1,750	0.6%	442	0.1%	(1,308)	-74.7%	-12.9%	18	18	20
Construction	19,885	7.4%	14,571	4.8%	(5,314)	-26.7%	-3.1%	10	20	19
Manufacturing	25,115	9.3%	24,779	8.2%	(336)	-1.3%	-0.1%	5	17	16
Wholesale Trade	32,379	12.0%	30,230	9.9%	(2,149)	-6.6%	-0.7%	2	19	18
Retail Trade	39,852	14.7%	44,801	14.7%	4,949	12.4%	1.2%	1	4	12
Transportation and Warehousing	5,088	1.9%	6,000	2.0%	912	17.9%	1.7%	15	10	9
Information	8,824	3.3%	11,325	3.7%	2,501	28.3%	2.5%	11	7	7
Finance and Insurance	15,161	5.6%	15,548	5.1%	387	2.6%	0.3%	9	12	13
Real Estate and Rental and Leasing	4,801	1.8%	5,499	1.8%	698	14.5%	1.4%	16	11	11
Professional, Scientific, and Tech.	18,809	7.0%	24,545	8.1%	5,736	30.5%	2.7%	6	3	6
Mgmt. of Companies	4,984	1.8%	8,966	2.9%	3,982	79.9%	6.0%	12	6	1
Admin and Support, Waste mgmt.	26,477	9.8%	26,530	8.7%	53	0.2%	0.0%	3	14	15
Educational Services	16,242	6.0%	25,246	8.3%	9,004	55.4%	4.5%	4	1	3
Health Care and Social Assistance	17,328	6.4%	24,017	7.9%	6,689	38.6%	3.3%	8	2	5
Arts, Ent., and Rec.	2,282	0.8%	2,247	0.7%	(35)	-1.5%	-0.2%	17	16	17
Accommodation and Food Services	19,515	7.2%	24,294	8.0%	4,779	24.5%	2.2%	7	5	8
Other Services (Ex. Public Admin.)	6,845	2.5%	7,881	2.6%	1,036	15.1%	1.4%	13	9	10
Public Admin.	4,635	1.7%	6,784	2.2%	2,149	46.4%	3.9%	14	8	4

Source: US Census Longitudinal Employer-Household Dynamics, 2016

An analysis of top employment sectors by CTP district for 2003 versus today (maps on following page) shows several trends:

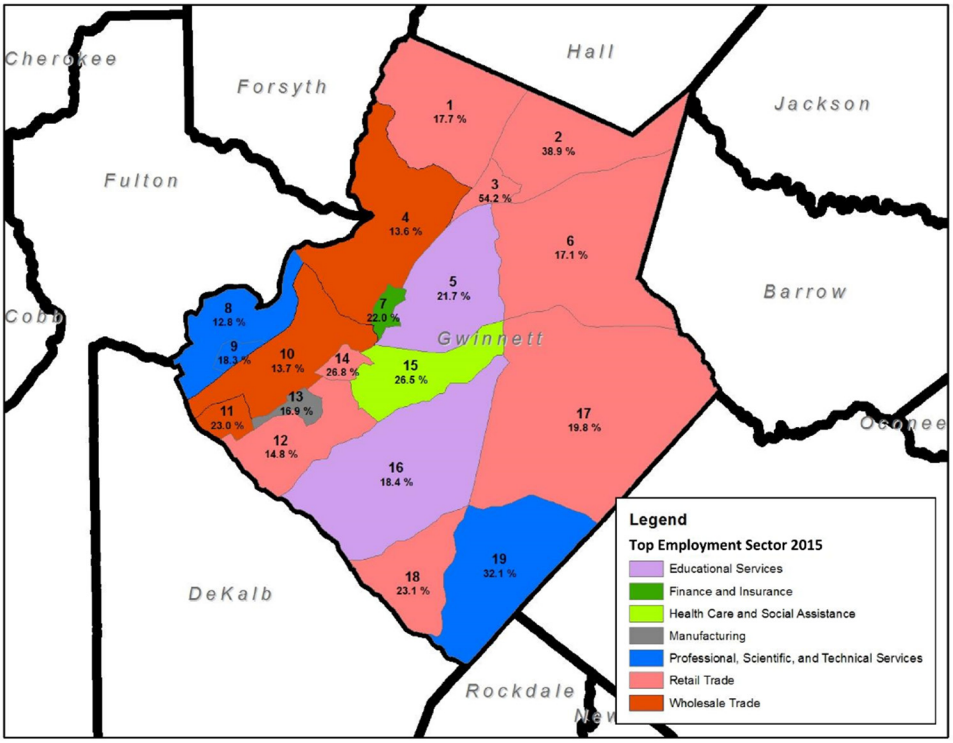
- The continuing dominance of retail, education and healthcare employment.
- The decline in construction employment.
- The emergence and growth of the professional, scientific, and technical services sector in Peachtree Corners and Stone Mountain.

Top Employment Sector by District, 2003



Source: US Census Longitudinal Employer-Household Dynamics, 2016

Top Employment Sector by District, 2015



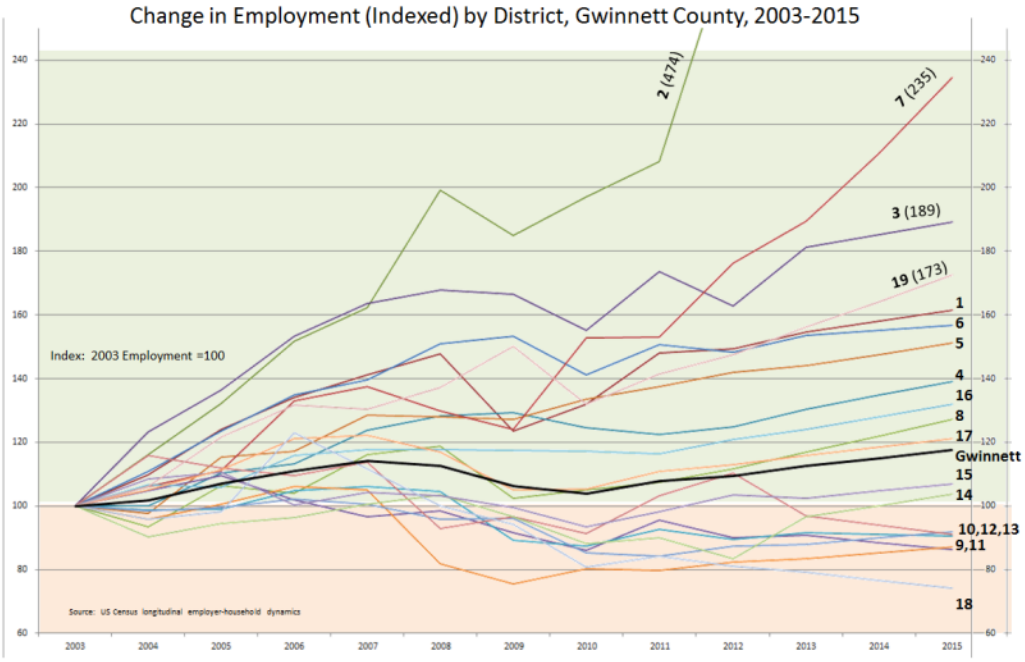
Source: US Census Longitudinal Employer-Household Dynamics, 2016

Change in Employment 2003-2015

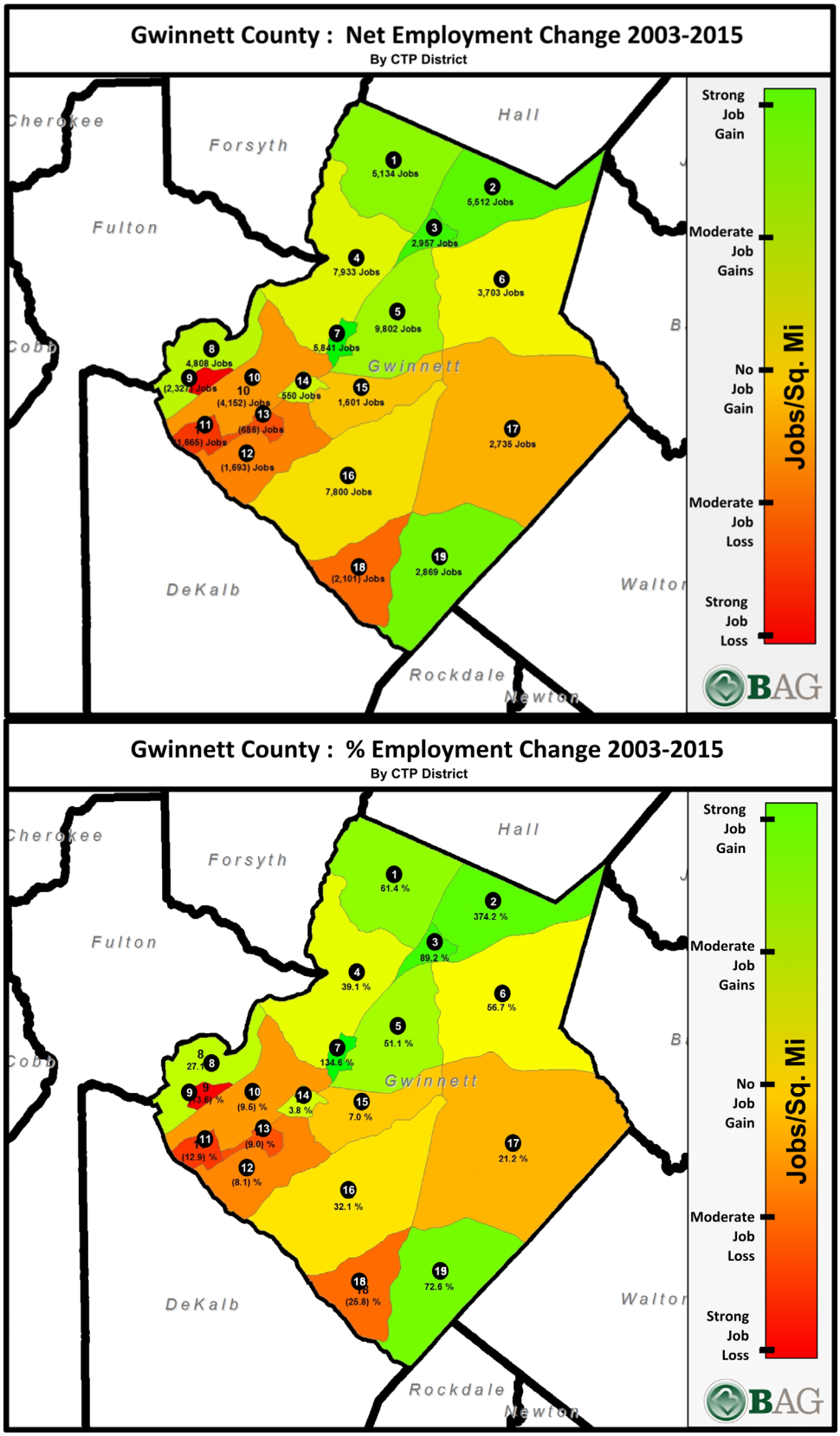
County-wide employment increased at a relatively modest compound annual growth rate of 1.2% between 2003 and 2015, largely set back by a sharp reduction in jobs and employment following the Great Recession in 2008. That overall growth, however, has not been experienced evenly around the County. Some districts, particularly those in the north of the County, saw sharp increases in employment, while nearly half of the districts, all in the west or south sides of the County saw overall job declines over the last ten years.

- Total employment in District 2 (NE Gwinnett) and 7 (Sugarloaf Mills) increased dramatically with ten year increases of 374% and 135% respectively.
- Districts 9, 10, 11, 12, 13, and 18 all showed overall employment losses over the same period.
- The districts with the largest net increase in jobs from 2003-2015 were 5-Central Gwinnett, with 9,800 new jobs over the period, and 4-Suwanee/Duluth, with 7,900.

% Change in Employment by District, 2003-2015



Source: *US Census Longitudinal Employer-Household Dynamics, 2016*



Source: *US Census Longitudinal Employer-Household Dynamics, 2016*

Net Change in Employment by District, 2003-2015

District	District Name	Total Employment 2003	Total Employment 2015	Net Change 2003-2015	% Change 2003-2015	CAGR* 2003-2015
1	Buford/NW Gwinnett	8,360	13,494	5,134	61%	4.1%
2	NE Gwinnett	1,473	6,985	5,512	374%	13.8%
3	Mall of Georgia	3,315	6,272	2,957	89%	5.5%
4	Suwanee/Duluth	20,287	28,220	7,933	39%	2.8%
5	Central Gwinnett	19,171	28,973	9,802	51%	3.5%
6	Auburn/East Central Gwinnett	6,529	10,232	3,703	57%	3.8%
7	Sugarloaf Mills	4,338	10,179	5,841	135%	7.4%
8	Berkeley Lake/Outer Peachtree Corners	17,711	22,519	4,808	27%	2.0%
9	Central Peachtree Corners	17,098	14,771	(2,327)	-14%	-1.2%
10	Norcross	43,742	39,590	(4,152)	-9%	-0.8%
11	Doraville-Gwinnett	12,863	11,198	(1,665)	-13%	-1.1%
12	North Lilburn	20,834	19,141	(1,693)	-8%	-0.7%
13	Gwinnett Vil./Norcross-Lilburn-I85	7,633	6,947	(686)	-9%	-0.8%
14	Gwinnett Place	14,486	15,036	550	4%	0.3%
15	West Lawrenceville	23,030	24,631	1,601	7%	0.6%
16	SW Lawrenceville/West Snellville/Mountain Park	24,316	32,116	7,800	32%	2.3%
17	West Lawrenceville/ NW Snellville/Grayson	12,926	15,661	2,735	21%	1.6%
18	SW Snellville/Rockbridge	8,145	6,044	(2,101)	-26%	-2.5%
19	SE Snellville/SW Loganville	3,951	6,820	2,869	73%	4.7%
	Gwinnett County	270,202	317,445	47,243	17%	1%

***CAGR**= Compound Annual Growth Rate (The average annual growth rate of a value over a specified period of time longer than one year)*

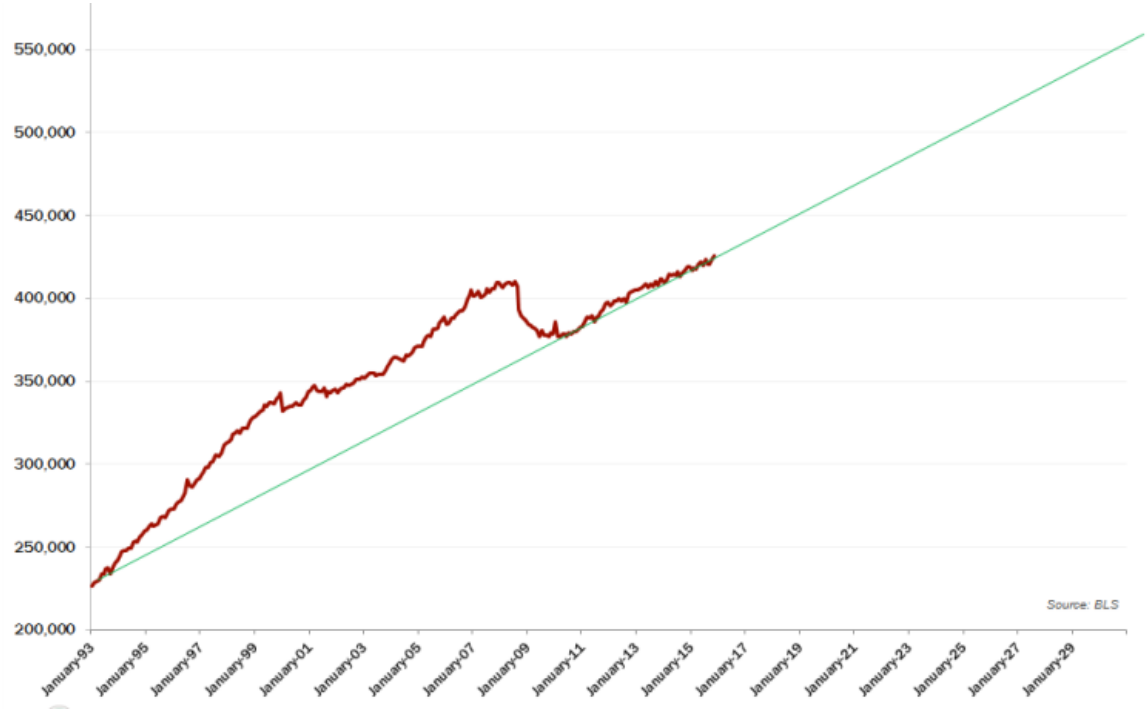
***Source:** US Census Longitudinal Employer-Household Dynamics, 2016*

Labor Force

Gwinnett County's labor force has grown modestly over the past 15 years, adding an average of 8,700 employed residents annually since 1993.

- The recent past was dominated by the Great Recession of 2008, which led to a significant and sharp decline in employment. Over the last ten years, county-wide employment growth averaged 3,700 new jobs per year.
- Since 2010, employment has been steadily increasing, returning to the long-term average growth trend of 8,700 new jobs annually. This employment growth trend, if continued, would suggest the addition of 120,000 new jobs in Gwinnett between now and 2030.

Gwinnett County Labor Force History and Trend 1993-2030



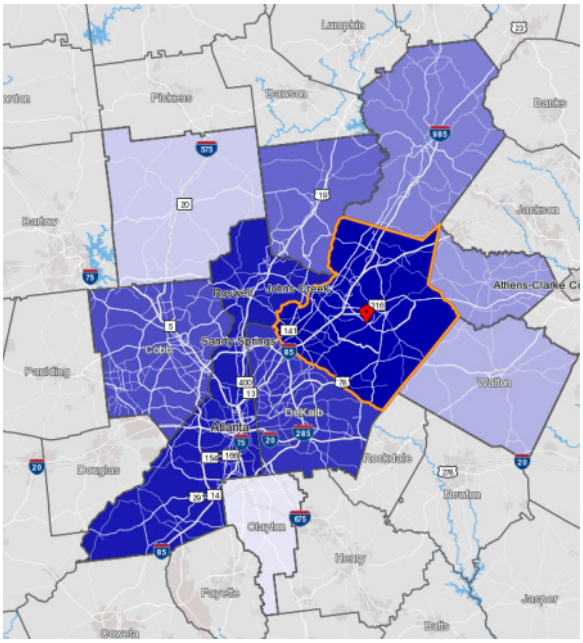
Source: *Bureau of Labor Statistics, 2016*

Commuting Patterns

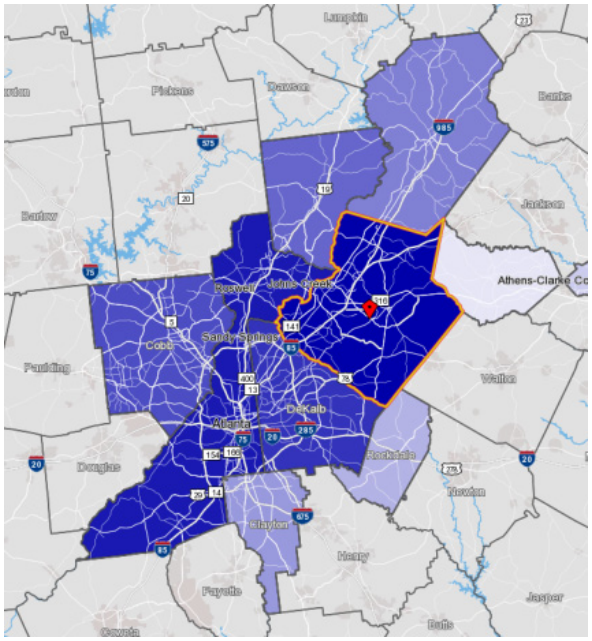
US Census Data estimates that Gwinnett County had 303,949 primary jobs in 2013, along with 323,426 working residents, meaning that Gwinnett is nearly evenly matched in jobs and workers, with an outflow of 19,000 workers. An estimated 128,403 residents, or 40% of Gwinnett's working residents also work in the County, with the remainder leaving the county to work in other counties, primarily in Fulton or DeKalb.

Commuter Flow In and Out, by County

Home Destination Report - Where Gwinnett-based workers Live	
Gwinnett County, GA	42%
Fulton County, GA	9%
DeKalb County, GA	9%
Cobb County, GA	5%
Forsyth County, GA	4%
Hall County, GA	3%
Barrow County, GA	3%
Walton County, GA	3%
Cherokee County, GA	2%
Clayton County, GA	1%
All Other Locations	19%



Work Destination Report - Where Gwinnett Residents Work	
Gwinnett County, GA	40%
Fulton County, GA	23%
DeKalb County, GA	14%
Cobb County, GA	5%
Forsyth County, GA	3%
Hall County, GA	2%
Clayton County, GA	1%
Rockdale County, GA	1%
Clarke County, GA	1%
Barrow County, GA	1%
All Other Locations	10%



Source: US Census Longitudinal Employer-Household Dynamics, 2016

Real Estate Characteristics

Gwinnett County's real estate characteristics largely mirror overall economic and demographic patterns in the County, as the real estate and development history in Gwinnett County has been driven by those same demographic and employment trends.

- Rapid suburbanization beginning in the 1970s led to real estate and development patterns characterized by broad areas with similar land uses and building types constructed over a short period of time. As buildings age, and the needs of commercial tenants evolve, areas from similar time periods face similar challenges throughout the area.
- As a case in point, much of the inner I-85 Corridor (Districts 12 and 13) is dominated by warehousing and flex-industrial space built in the 1970s and 1980s, conceived to serve trucking, manufacturing and logistics uses based on proximity to the Interstate and regional distribution hubs. Several concurrent trends have caused disruptions or changes to that business model:
    - Increasing congestion due to regional population growth has made Interstate 85 and its feeder arterials less attractive to industries that rely on transportation.
    - Growth of interstates and roads in outer counties such as Henry, Barrow and Spalding, combined with inexpensive, undeveloped land make those locations relatively attractive to new development and business recruitment.
    - The growth in containerized shipping has shifted both the business model of shipping and the shape of regional distribution networks.
    - Changes in trucking, container, and warehousing technology have led to a preference for larger buildings with different physical characteristics than those constructed in the 1980s.
    - Increased globalization and inexpensive shipping has led to the decline of small "jobber" type distribution and manufacturing customers, who typically use the flex-industrial space that is prevalent in the area.
    - While these changes within the warehousing industry have resulted in higher vacancy rates and decreases in employment, they provide an opportunity for reimagining and redeveloping the main I-85 area.

Example of Gwinnett's Rapid Development: 20 Years of development in the Gwinnett Center area – 1994 (Left) and 2014 (Right), characterized by large conglomeration of buildings of similar age, style, type and land use.

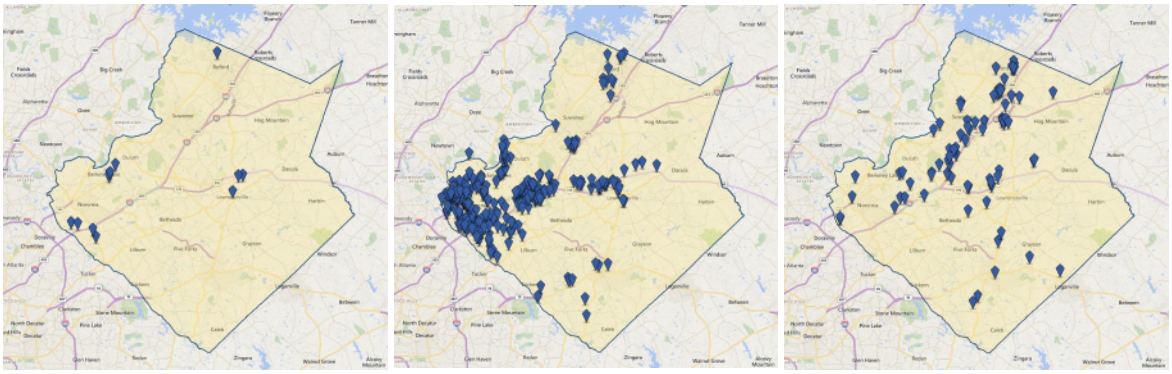
Source: Google Earth

Development occurred earliest in the west and south portions of the county, rapidly expanding to the north and east at relatively low densities, leaving few tracts undeveloped. The maps below show how development patterns in Gwinnett County sifted over three distinct eras of development.

As land was filled in, development momentum moved north and east, leading to the lower levels of investment in previously developed areas. Real Estate in the western and southern districts of the County initially exhibit higher vacancy, lower average rent, and greater potential for reinvesting.

Major Commercial Development (>100K SF) patterns in Gwinnett County illustrate three distinct eras of suburban expansion

PRE 1970 **1970-1990** **2005-2015**



Source: CoStar Inc.

One of the key takeaways of these economic, real estate and employment patterns is particularly relevant to the Comprehensive Transportation Planning process. As development, real estate and employment trends have shifted, vacancy and declines in employment have been concentrated in certain areas of the County, typically those which saw the first waves of development in the 1980s. Many of these areas are now characterized by strong, underutilized infrastructure and transportation networks.

While the private costs of development in outlying, emerging areas tend to be significantly lower than those involved in the redevelopment or upgrade of existing buildings, the higher infrastructure cost of serving those new areas tends to fall to the public sector. Surplus capacity, buildings, and land are readily available within Gwinnett's existing commercial inventory, however the redevelopment process necessary to make these buildings and areas competitive and attractive can be complicated and economically challenging.

Oakbrook Parkway in Gwinnett Village/Norcross-Lilburn-I85, carries less traffic than it is designed to accommodate. The area is dominated by aging industrial and flex space, with higher commercial vacancy rates.

Source: Google Earth

Summary of Commercial Real Estate

Gwinnett County's commercial real estate inventory is vast, with 225 million SF of commercial space, of which 27% is retail space, 15% is office space, and 58% is industrial and flex space.

- Currently 8.2% of total space is vacant, with the highest rate in District 9-Peachtree Corners (21.7%) and the lowest in District 2-NE Gwinnett (6.9%)
- Over the past 5 years, the county has absorbed an average of under 3.0 million SF of commercial real estate annually. The absorption in 2015 was 4.7 million SF.

Summary of Commercial Real Estate in Gwinnett County

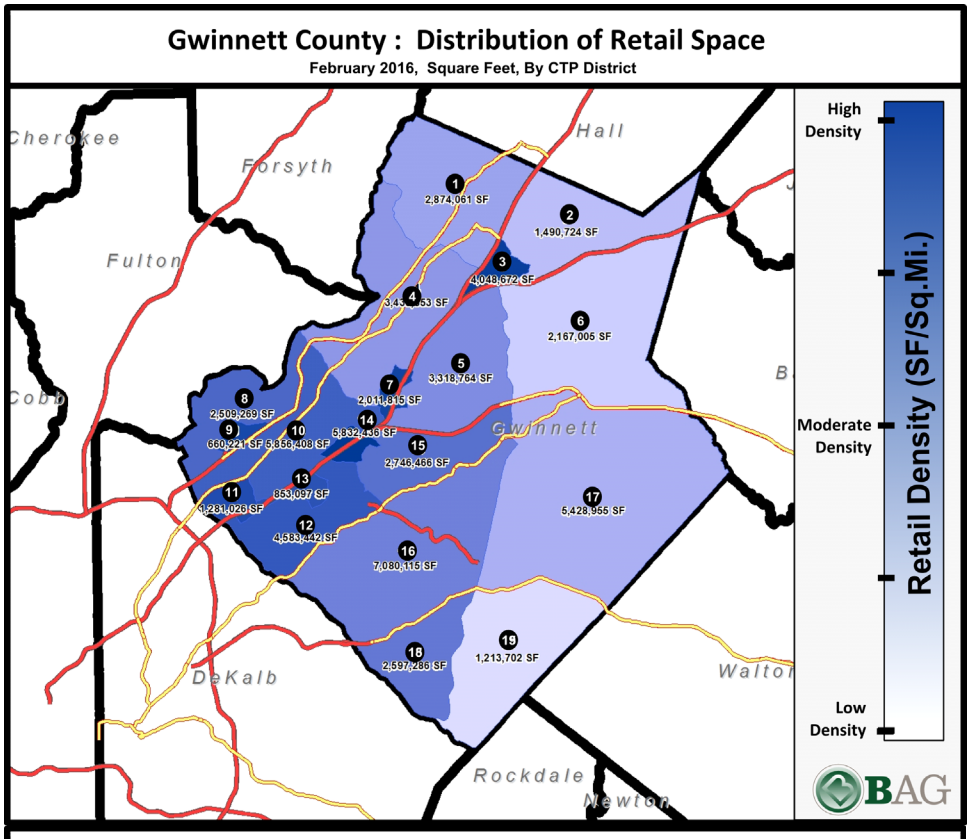
Ref #	Area Name	Inventory (SF)	% Retail	% Office	% Industrial and Flex	Vacant SF	Vacant %	2015 Absorption	12 Mo. Absorption SF 5-Year Avg.
1	Buford/NW Gwinnett	14,372,463	20%	8%	72%	995,895	6.9%	1,083,772	260,330
2	NE Gwinnett	1,614,058	92%	6%	1%	51,886	3.2%	51,309	23,432
3	Mall of Georgia	4,217,832	96%	2%	2%	279,704	6.6%	(160,309)	2,609
4	Suwanee/Duluth	20,023,787	17%	14%	69%	1,006,113	5.0%	435,483	487,017
5	Central Gwinnett	21,368,353	16%	8%	77%	1,143,369	5.4%	912,567	267,483
6	Auburn/East Central Gwinnett	7,335,134	30%	6%	65%	537,562	7.3%	(200,529)	124,525
7	Sugarloaf Mills	6,475,012	31%	35%	34%	388,291	6.0%	96,828	175,971
8	Berkeley Lake/Outer Peachtree Corners	9,510,594	26%	41%	32%	1,358,983	14.3%	37,818	124,367
9	Central Peachtree Corners	7,039,261	9%	63%	28%	1,528,604	21.7%	(134,200)	(56,684)
10	Norcross	40,049,118	15%	13%	72%	3,861,081	9.6%	365,740	583,051
11	Doraville-Gwinnett	18,006,107	7%	0%	93%	867,852	4.8%	289,097	286,505
12	North Lilburn	14,746,752	31%	13%	56%	1,945,624	13.2%	609,500	190,796
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	5,286,004	16%	6%	78%	538,029	10.2%	341,392	58,849
14	Gwinnett Place	8,959,987	65%	20%	15%	820,944	9.2%	370,429	57,471
15	West Lawrenceville	17,262,454	16%	24%	60%	980,488	5.7%	267,009	252,178
16	SW Lawrenceville/West Snellville/Mountain Park	11,848,602	60%	18%	23%	871,566	7.4%	75,817	70,533
17	West Lawrenceville/ NW Snellville/Grayson	11,075,190	49%	7%	44%	560,899	5.1%	289,760	101,547
18	SW Snellville/Rockbridge	4,006,995	65%	8%	28%	607,064	15.2%	32,769	(24,842)
19	SE Snellville/SW Loganville	2,120,330	57%	13%	30%	204,690	9.7%	(9,394)	(1,302)
	TOTAL	225,318,033	27%	15%	58%	18,548,644	8.2%	4,754,858	2,983,836

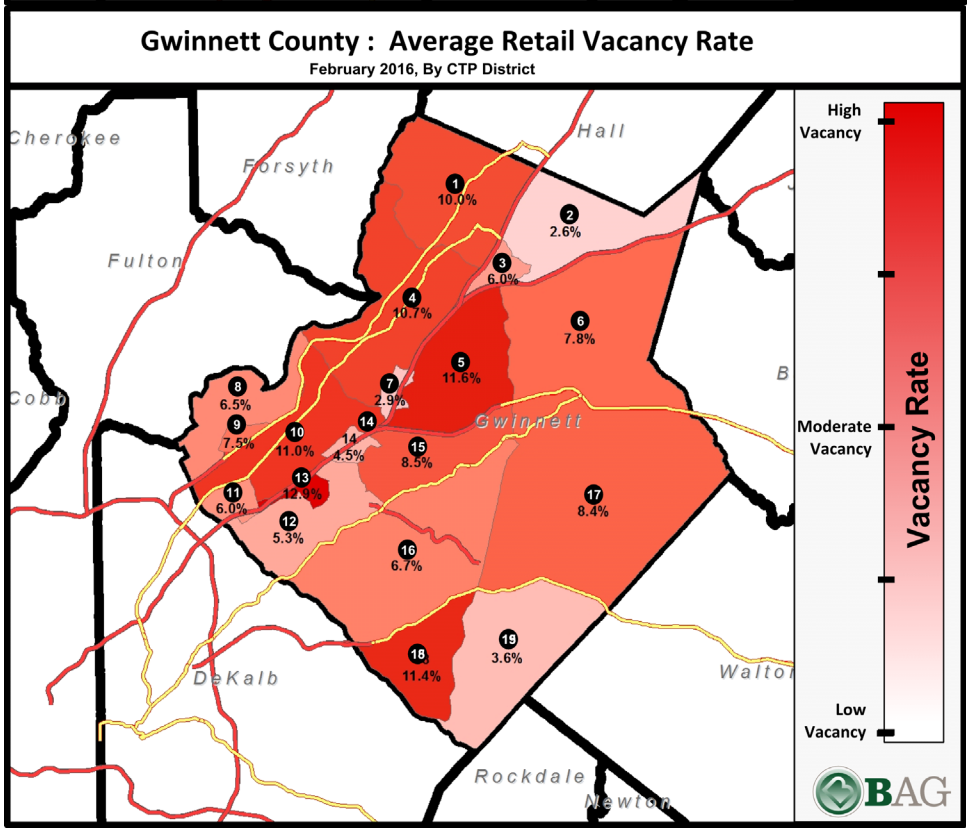
Source: CoStar Inc., January 2016

Geographic Distribution of Key Commercial Real Estate Indicators by District

The maps on the following pages illustrate key market indicators of Gwinnett's four major commercial real estate market sectors: retail, office, flex and flex industrial.

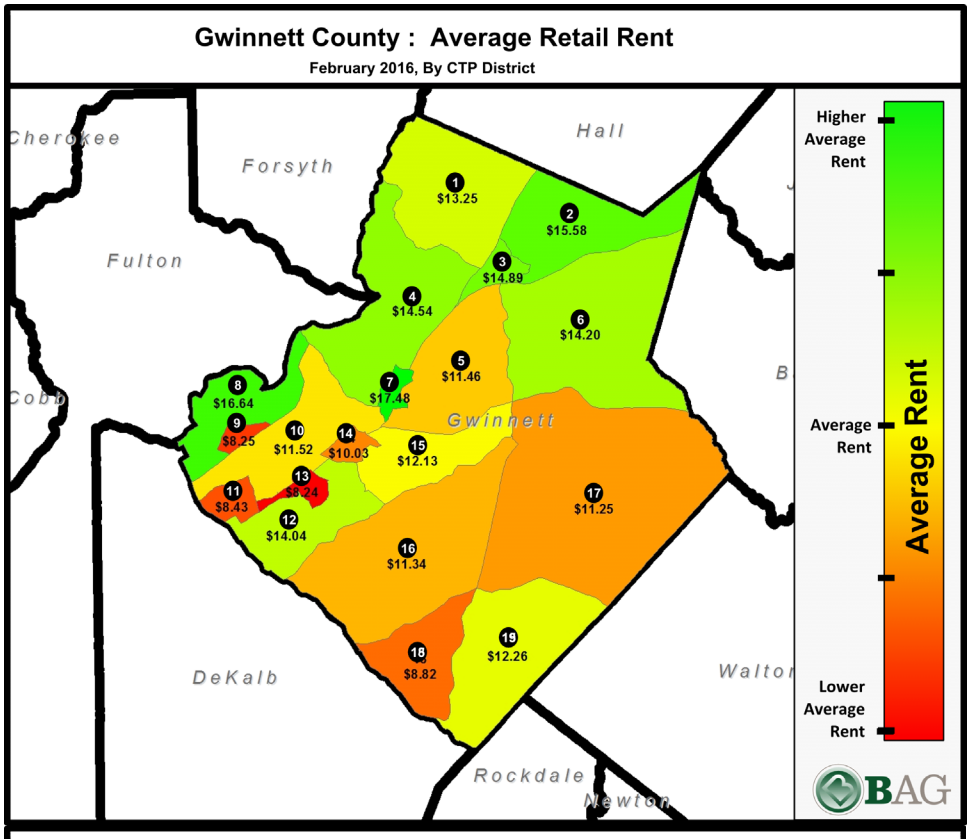
Commercial Real Estate: **Retail**

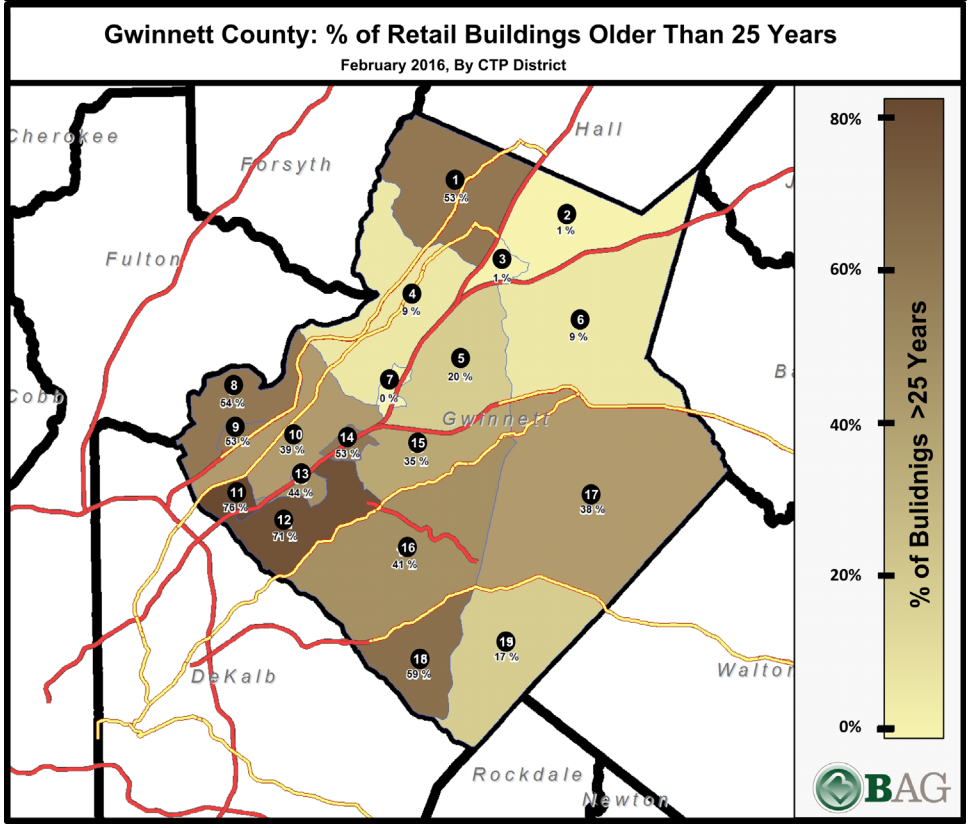




Source: CoStar, Inc.

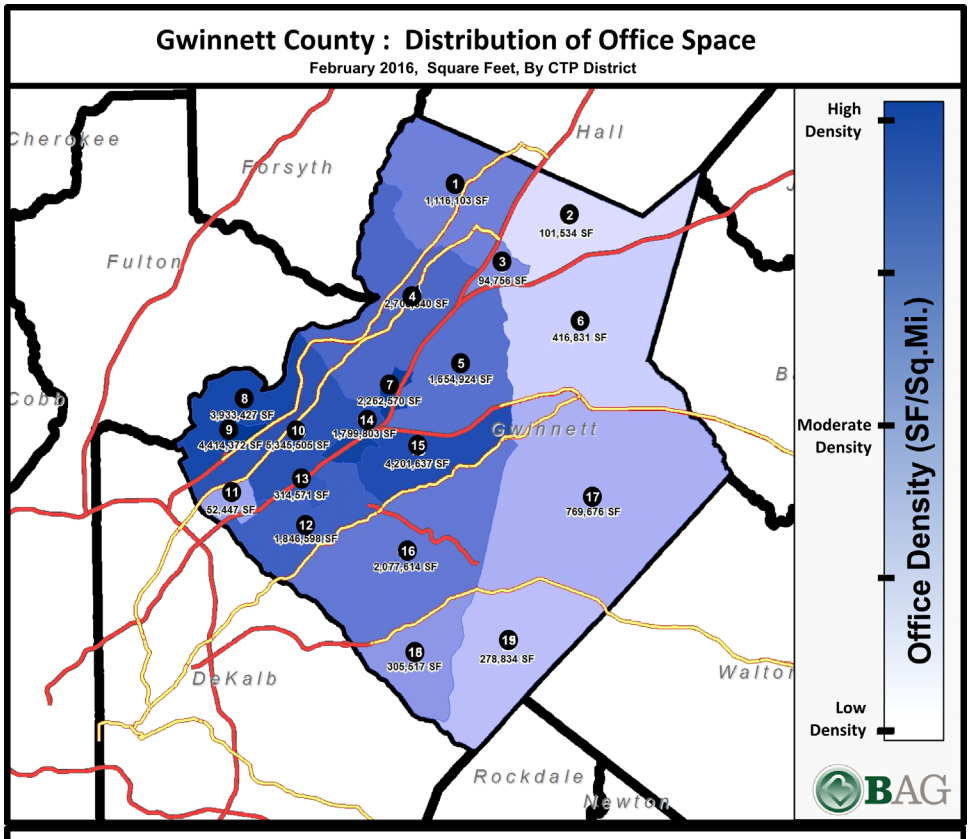
Commercial Real Estate: **Retail**

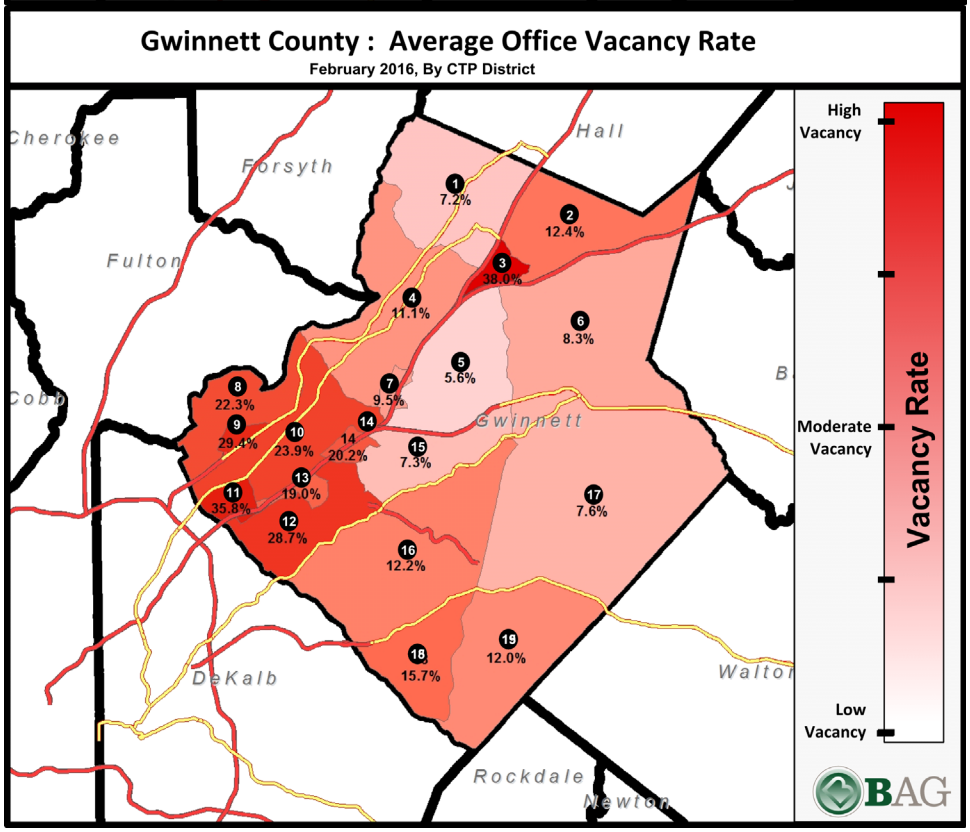




Source: CoStar, Inc.

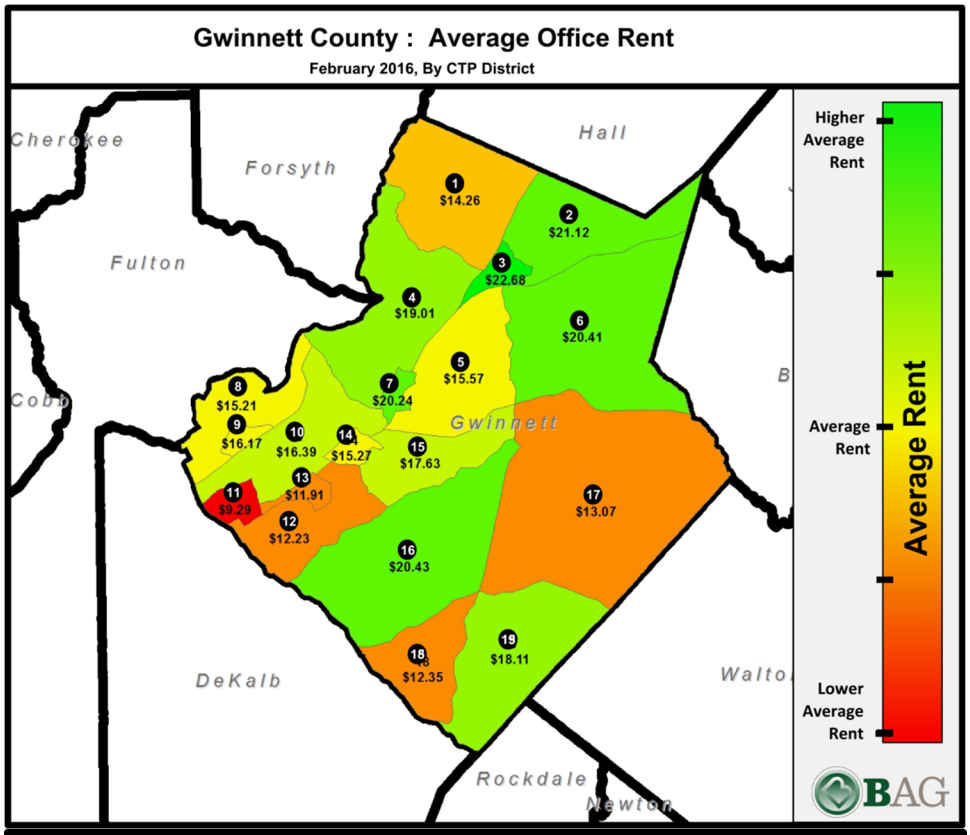
Commercial Real Estate: **Office**

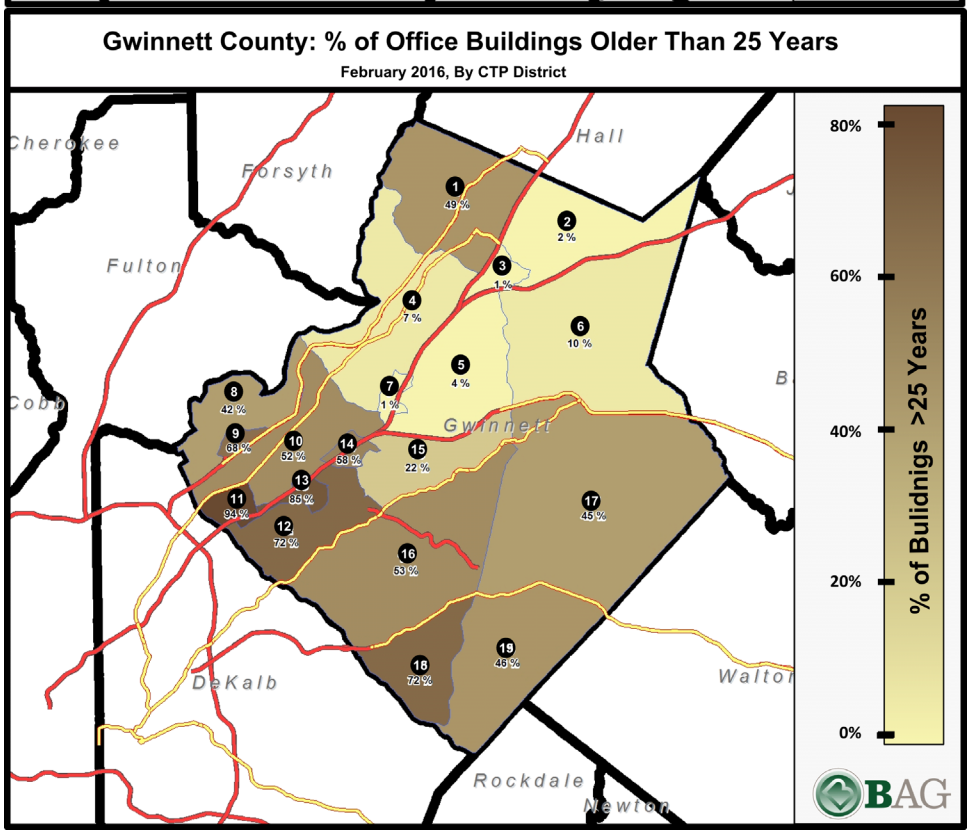




Source: CoStar, Inc.

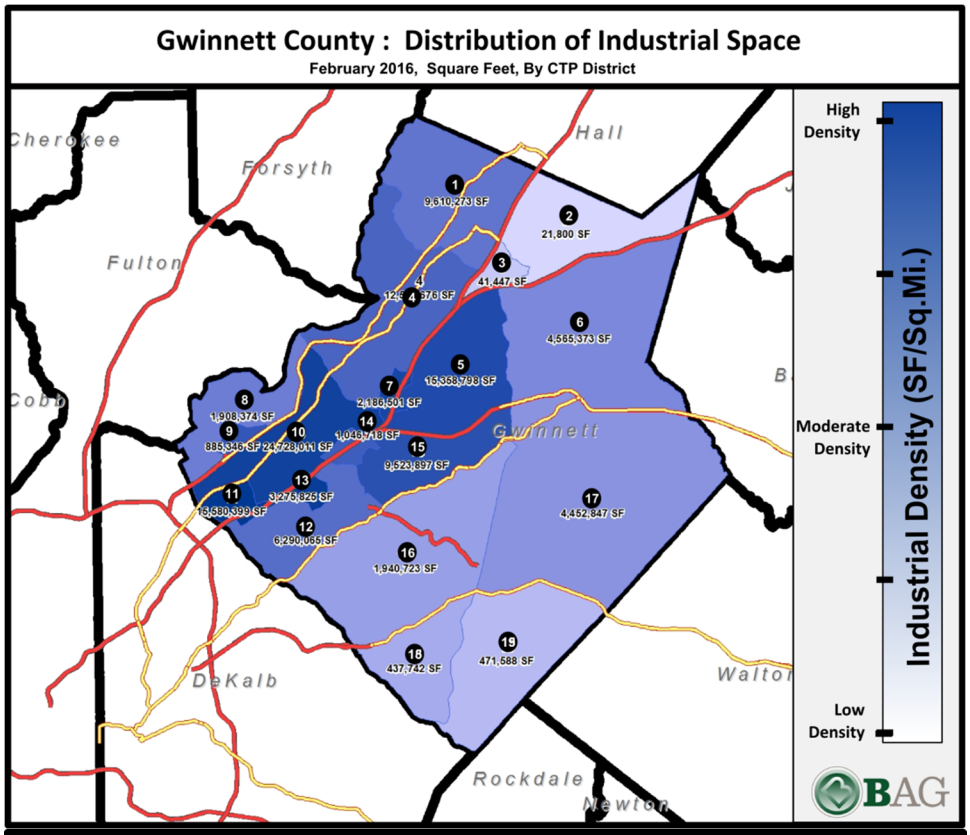
Commercial Real Estate: **Office**

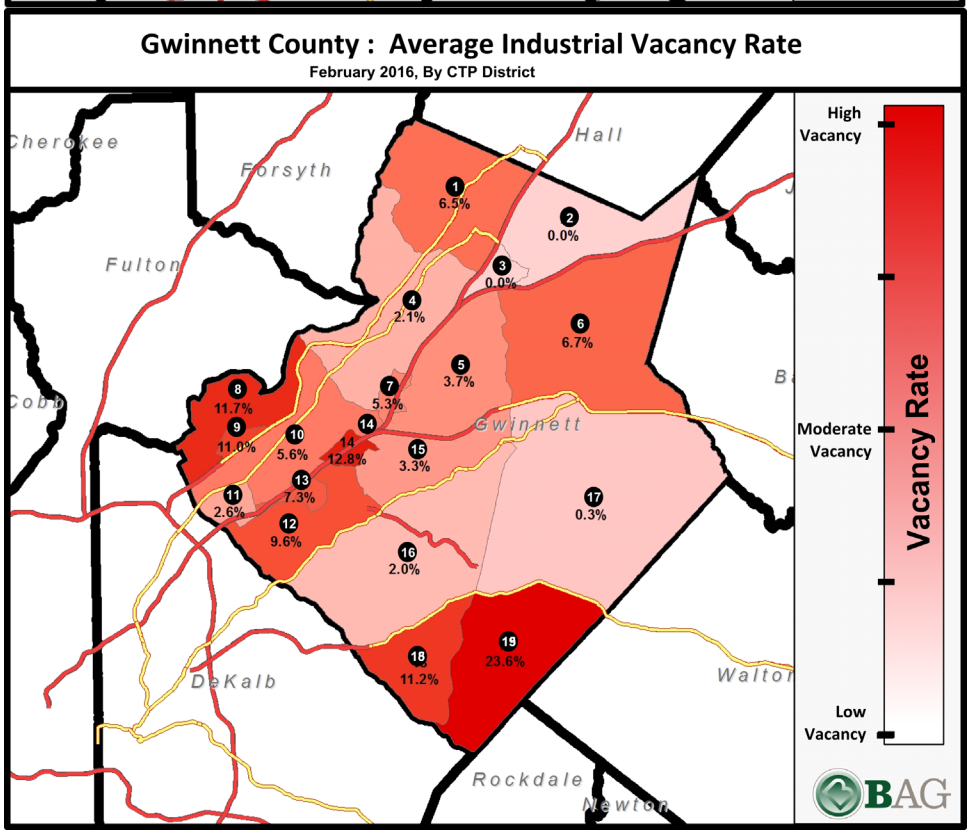




Source: CoStar, Inc.

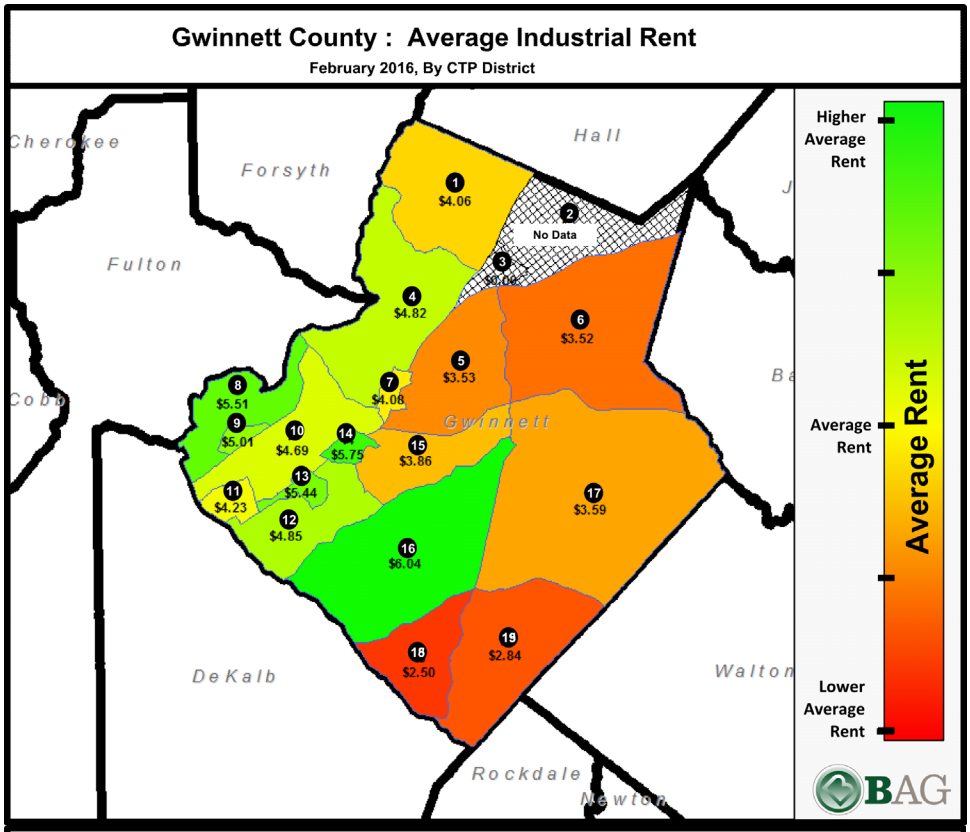
Commercial Real Estate: **Industrial**

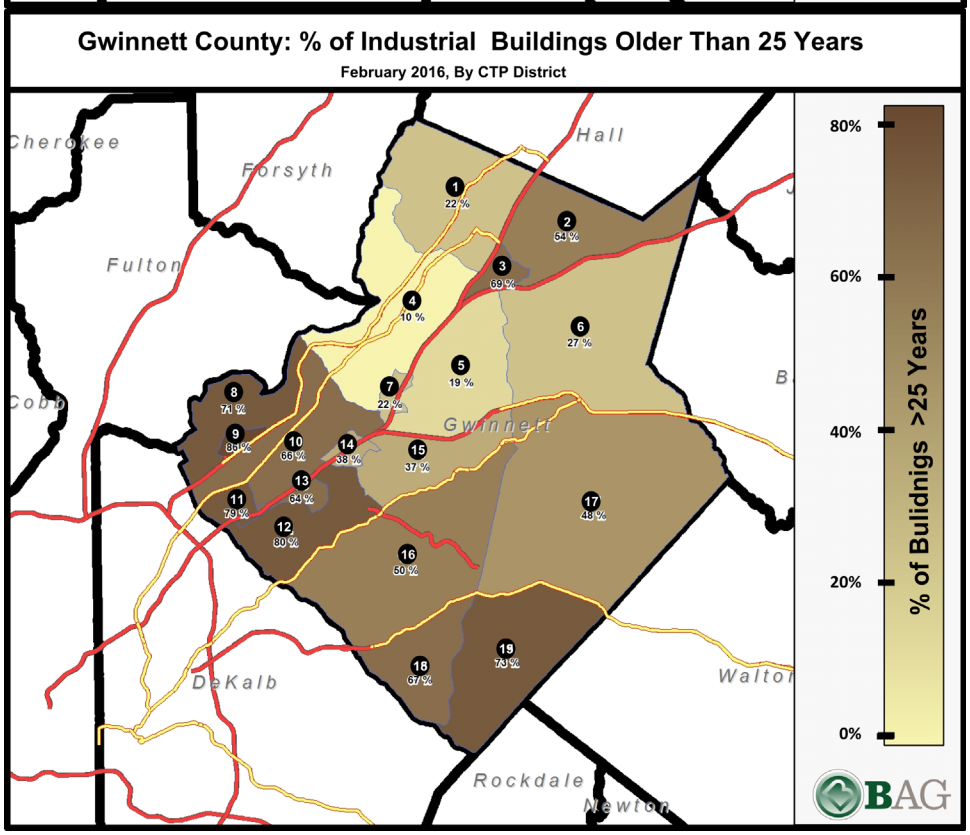




Source: CoStar, Inc.

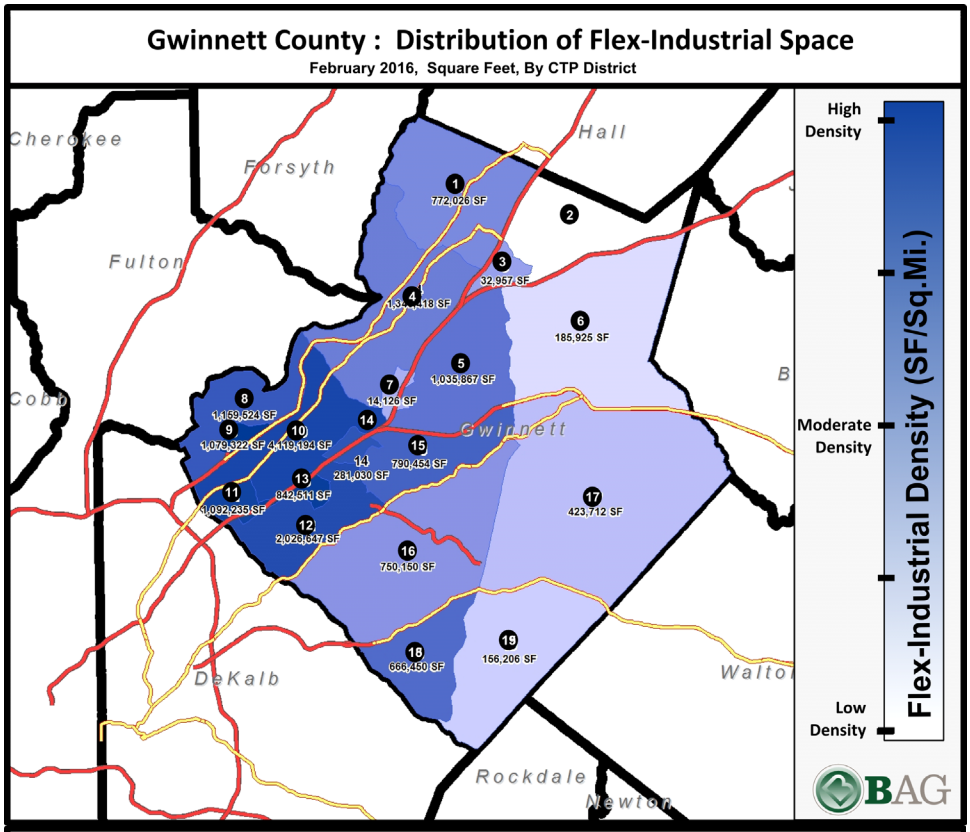
Commercial Real Estate: **Industrial**

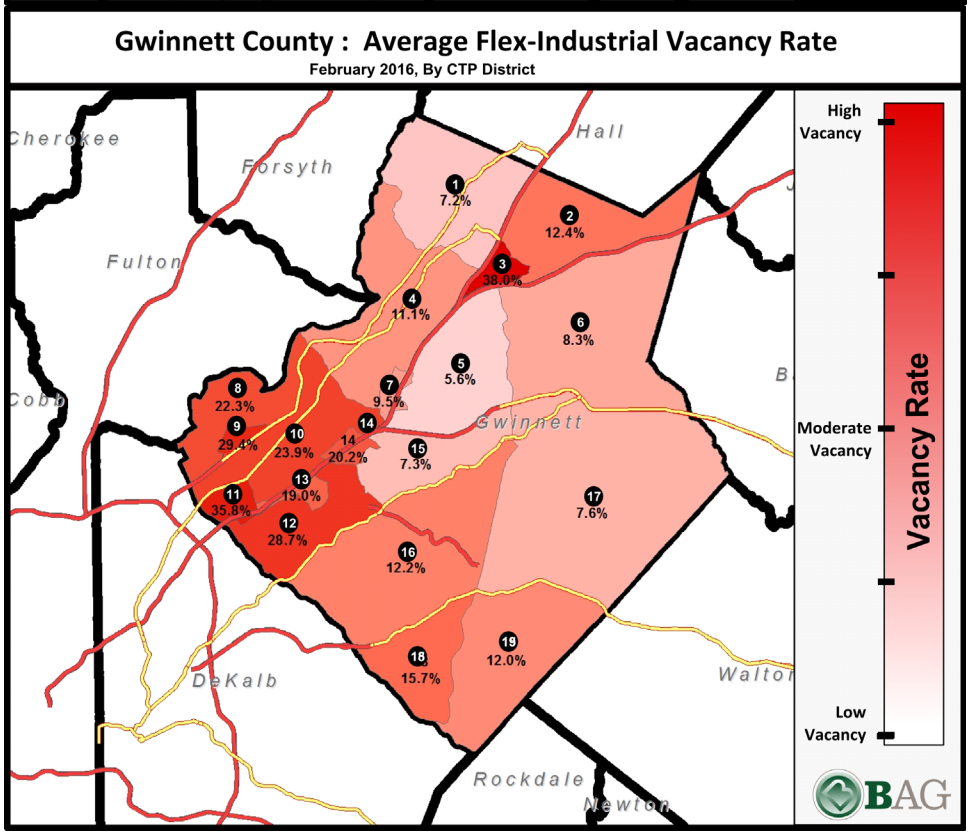




Source: CoStar, Inc.

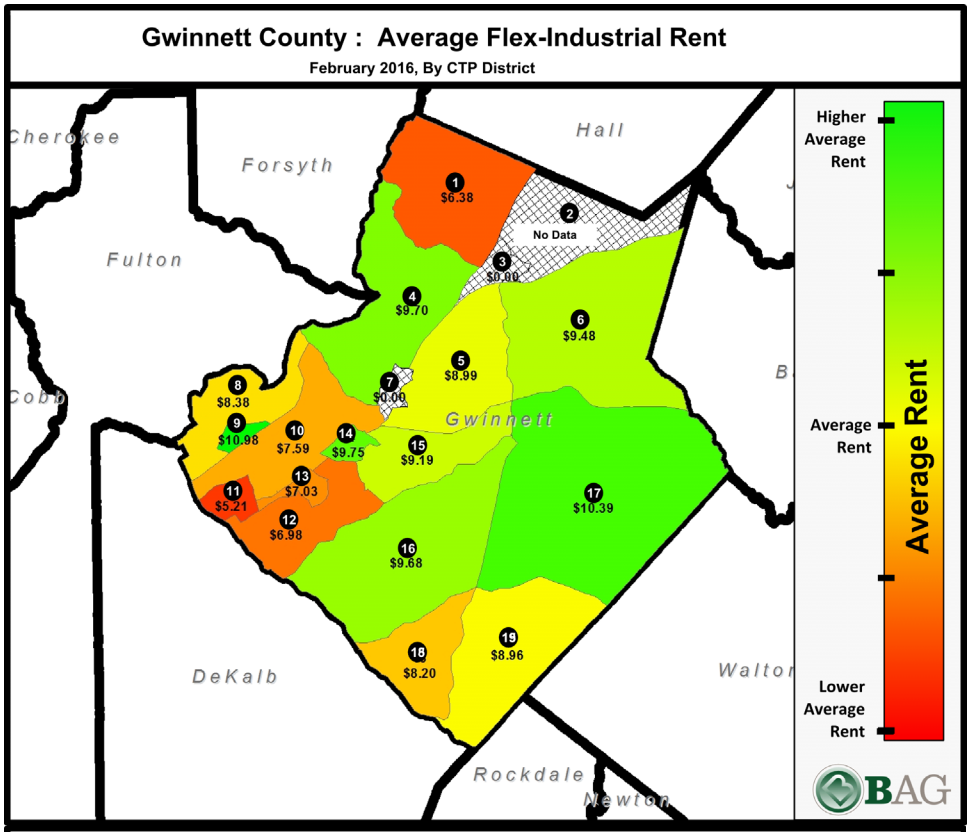
Commercial Real Estate: **Flex Industrial**

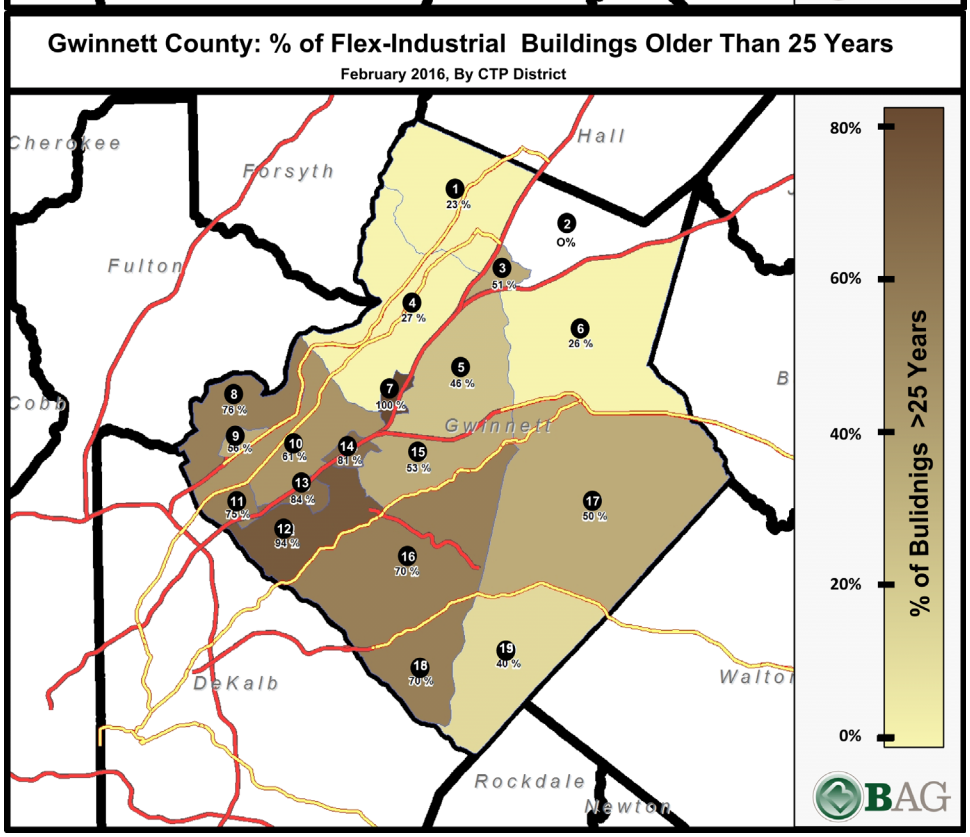




Source: CoStar, Inc.

Commercial Real Estate: **Flex Industrial**





Source: CoStar, Inc.

Detailed Commercial Real Estate Inventory Data, By District

The following tables detail key real estate market indicators for each commercial real estate sector in Gwinnett County, by District.

Key Real Estate Market Statistics for Gwinnett County, by District: Overview

	TOTAL								
Subarea	Area Name	Inventory (SF)	% Retail	% Office	% Industrial and Flex	Vacant SF	Vacant %	2015 Absorption	12 Mo. Absorption SF 5-Year Avg.
1	Buford/NW Gwinnett	14,372,463	20%	8%	72%	995,895	6.9%	1,083,772	260,330
2	NE Gwinnett	1,614,058	92%	6%	1%	51,886	3.2%	51,309	23,432
3	Mall of Georgia	4,217,832	96%	2%	2%	279,704	6.6%	(160,309)	2,609
4	Suwanee/Duluth	20,023,787	17%	14%	69%	1,006,113	5.0%	435,483	487,017
5	Central Gwinnett	21,368,353	16%	8%	77%	1,143,369	5.4%	912,567	267,483
6	Auburn/East Central Gwinnett	7,335,134	30%	6%	65%	537,562	7.3%	(200,529)	124,525
7	Sugarloaf Mills	6,475,012	31%	35%	34%	388,291	6.0%	96,828	175,971
8	Berkeley Lake/Outer Peachtree Corners	9,510,594	26%	41%	32%	1,358,983	14.3%	37,818	124,367
9	Central Peachtree Corners	7,039,261	9%	63%	28%	1,528,604	21.7%	(134,200)	(56,684)
10	Norcross	40,049,118	15%	13%	72%	3,861,081	9.6%	365,740	583,051
11	Doraville-Gwinnett	18,006,107	7%	0%	93%	867,852	4.8%	289,097	286,505
12	North Lilburn	14,746,752	31%	13%	56%	1,945,624	13.2%	609,500	190,796
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	5,286,004	16%	6%	78%	538,029	10.2%	341,392	58,849
14	Gwinnett Place	8,959,987	65%	20%	15%	820,944	9.2%	370,429	57,471
15	West Lawrenceville	17,262,454	16%	24%	60%	980,488	5.7%	267,009	252,178
16	SW Lawrenceville/West Snellville/Mountain Park	11,848,602	60%	18%	23%	871,566	7.4%	75,817	70,533
17	West Lawrenceville/ NW Snellville/Grayson	11,075,190	49%	7%	44%	560,899	5.1%	289,760	101,547
18	SW Snellville/Rockbridge	4,006,995	65%	8%	28%	607,064	15.2%	32,769	(24,842)
19	SE Snellville/SW Loganville	2,120,330	57%	13%	30%	204,690	9.7%	(9,394)	(1,302)
	TOTAL	225,318,033	27%	15%	58%	18,548,644	8.2%	4,754,858	2,983,836

Source: Bleakly, CoStar, Atlanta Regional Commission, Gwinnett County

Key Real Estate Market Statistics for Gwinnett County, by District: Retail

		Retail										
Subarea	Area Name	Inventory (SF)	% of Total	Vacant SF	Vacant %	% of Total	**>25 Years Old**	**New Inv. added since 2005**	% of Inv. >25 y/o	% of Inv. Since 2005	12 Mo. Absorption SF 5-Year Avg.	**Avg. Rent**
1	Buford/NW Gwinnett	2,874,061	5%	287,026	10.0%	6.2%	1,536,022	494,376	53.4%	17.2%	(6,303)	$13.25
2	NE Gwinnett	1,490,724	2%	39,286	2.6%	0.9%	20,580	599,680	1.4%	40.2%	20,352	$15.58
3	Mall of Georgia	4,048,672	7%	243,722	6.0%	5.3%	30,201	564,341	0.7%	13.9%	7,781	$14.89
4	Suwanee/Duluth	3,435,353	6%	366,957	10.7%	8.0%	295,197	1,241,379	8.6%	36.1%	26,721	$14.54
5	Central Gwinnett	3,318,764	6%	384,472	11.6%	8.4%	648,500	822,590	19.5%	24.8%	35,475	$11.46
6	Auburn/East Central Gwinnett	2,167,005	4%	169,910	7.8%	3.7%	193,174	910,539	8.9%	42.0%	33,995	$14.20
7	Sugarloaf Mills	2,011,815	3%	57,352	2.9%	1.2%	4,444	330,818	0.2%	16.4%	7,811	$17.48
8	Berkeley Lake/Outer Peachtree Corners	2,509,269	4%	162,035	6.5%	3.5%	1,348,718	199,510	53.7%	8.0%	51,937	$16.64
9	Central Peachtree Corners	660,221	1%	49,305	7.5%	1.1%	349,912	-	53.0%	0.0%	(1,370)	$ 8.25
10	Norcross	5,856,408	10%	643,238	11.0%	14.0%	2,291,056	1,060,627	39.1%	18.1%	61,587	$11.52
11	Doraville-Gwinnett	1,281,026	2%	77,390	6.0%	1.7%	976,177	143,114	76.2%	11.2%	11,493	$ 8.43
12	North Lilburn	4,583,442	8%	244,857	5.3%	5.3%	3,254,283	430,642	71.0%	9.4%	62,392	$14.04
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	853,097	1%	110,116	12.9%	2.4%	374,568	48,754	43.9%	5.7%	(8,157)	$ 8.24
14	Gwinnett Place	5,832,436	10%	260,407	4.5%	5.7%	3,107,664	128,318	53.3%	2.2%	68,614	$10.03
15	West Lawrenceville	2,746,466	5%	232,808	8.5%	5.1%	950,667	350,687	34.6%	12.8%	56,305	$12.13
16	SW Lawrenceville/West Snellville/Mountain Park	7,080,115	12%	475,842	6.7%	10.3%	2,915,959	938,598	41.2%	13.3%	51,717	$11.34
17	West Lawrenceville/ NW Snellville/Grayson	5,428,955	9%	455,457	8.4%	9.9%	2,088,353	1,658,220	38.5%	30.5%	53,643	$11.25
18	SW Snellville/Rockbridge	2,597,286	4%	296,733	11.4%	6.4%	1,537,532	365,494	59.2%	14.1%	(5,799)	$ 8.82
19	SE Snellville/SW Loganville	1,213,702	2%	43,720	3.6%	1.0%	207,869	196,486	17.1%	16.2%	8,849	$12.26
	TOTAL	59,988,817		4,600,633	7.7%		22,130,876	10,484,173	36.9%	17.5%	537,043	$12.10

Source: Bleakly, CoStar, Atlanta Regional Commission, Gwinnett County

Key Real Estate Market Statistics for Gwinnett County, by District: Office

		Office										
Subarea	Area Name	Inventory (SF)	% of Total	Vacant SF	Vacant %	% of Total	>25 Years Old	New Inv. added since 2005	% of Inv. >25 y/o	% of Inv. Since 2005	12 Mo. Absorption SF 5-Year Avg.	Avg. Rent
1	Buford/NW Gwinnett	1,116,103	3%	80,840	7.2%	1.4%	550,797	167,701	49.4%	15.0%	20,127	$ 14.26
2	NE Gwinnett	101,534	0%	12,600	12.4%	0.2%	2,500	93,210	2.5%	91.8%	2,780	$ 21.12
3	Mall of Georgia	94,756	0%	35,982	38.0%	0.6%	1,000	90,856	1.1%	95.9%	(5,172)	$ 22.68
4	Suwanee/Duluth	2,708,340	8%	299,523	11.1%	5.1%	190,548	912,108	7.0%	33.7%	45,041	$ 19.01
5	Central Gwinnett	1,654,924	5%	93,128	5.6%	1.6%	73,528	770,213	4.4%	46.5%	16,755	$ 15.57
6	Auburn/East Central Gwinnett	416,831	1%	34,505	8.3%	0.6%	40,408	180,982	9.7%	43.4%	18,239	$ 20.41
7	Sugarloaf Mills	2,262,570	7%	215,864	9.5%	3.7%	12,000	859,318	0.5%	38.0%	86,967	$ 20.24
8	Berkeley Lake/Outer Peachtree Corners	3,933,427	12%	875,546	22.3%	14.9%	1,665,312	352,192	42.3%	9.0%	33,107	$ 15.21
9	Central Peachtree Corners	4,414,372	13%	1,299,373	29.4%	22.0%	3,015,237	122,070	68.3%	2.8%	(80,060)	$ 16.17
10	Norcross	5,345,505	16%	1,277,091	23.9%	21.7%	2,792,629	558,368	52.2%	10.4%	13,643	$ 16.39
11	Doraville-Gwinnett	52,447	0%	18,800	35.8%	0.3%	49,180	-	93.8%	0.0%	(1,760)	$9.29
12	North Lilburn	1,846,598	5%	529,920	28.7%	9.0%	1,323,181	117,672	71.7%	6.4%	8,523	$ 12.23
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	314,571	1%	59,737	19.0%	1.0%	266,842	2,847	84.8%	0.9%	(1,927)	$ 11.91
14	Gwinnett Place	1,799,803	5%	363,840	20.2%	6.2%	1,035,340	48,000	57.5%	2.7%	(9,389)	$ 15.27
15	West Lawrenceville	4,201,637	12%	306,063	7.3%	5.2%	916,258	769,090	21.8%	18.3%	45,967	$ 17.63
16	SW Lawrenceville/West Snellville/Mountain Park	2,077,614	6%	252,738	12.2%	4.3%	1,103,515	274,675	53.1%	13.2%	5,630	$ 20.43
17	West Lawrenceville/ NW Snellville/Grayson	769,676	2%	58,397	7.6%	1.0%	343,833	223,195	44.7%	29.0%	20,809	$ 13.07
18	SW Snellville/Rockbridge	305,517	1%	48,029	15.7%	0.8%	221,240	14,895	72.4%	4.9%	(3,113)	$ 12.35
19	SE Snellville/SW Loganville	278,834	1%	33,401	12.0%	0.6%	129,364	64,286	46.4%	23.1%	2,365	$ 18.11
	TOTAL	33,695,059		5,895,377	17.5%		13,732,712	5,621,678	40.8%	16.7%	218,532	$ 16.37

Source: Bleakly, CoStar, Atlanta Regional Commission, Gwinnett County

Key Real Estate Market Statistics for Gwinnett County, by District: Industrial

		Industrial										
Subarea	Area Name	Inventory (SF)	% of Total	Vacant SF	Vacant %	% of Total	>25 Years Old	New Inv. added since 2005	% of Inv. >25 y/o	% of Inv. Since 2005	12 Mo. Absorption SF 5-Year Avg.	Avg. Rent
1	Buford/NW Gwinnett	9,610,273	8%	628,029	6.5%	11.4%	2,066,211	4,811,211	21.5%	50.1%	246,506	$ 4.06
2	NE Gwinnett	21,800	0%	-	0.0%	0.0%	11,800	-	54.1%	0.0%	300	
3	Mall of Georgia	41,447	0%	-	0.0%	0.0%	28,674	12,773	69.2%	30.8%	-	
4	Suwanee/Duluth	12,533,676	11%	263,493	2.1%	4.8%	1,228,367	2,132,632	9.8%	17.0%	411,179	$ 4.82
5	Central Gwinnett	15,358,798	13%	573,338	3.7%	10.4%	2,893,597	2,030,330	18.8%	13.2%	192,915	$ 3.53
6	Auburn/East Central Gwinnett	4,565,373	4%	304,962	6.7%	5.5%	1,219,599	597,498	26.7%	13.1%	74,840	$ 3.52
7	Sugarloaf Mills	2,186,501	2%	115,075	5.3%	2.1%	472,291	-	21.6%	0.0%	81,193	$ 4.08
8	Berkeley Lake/Outer Peachtree Corners	1,908,374	2%	222,389	11.7%	4.0%	1,357,072	-	71.1%	0.0%	11,286	$ 5.51
9	Central Peachtree Corners	885,346	1%	97,473	11.0%	1.8%	764,021	-	86.3%	0.0%	7,716	$ 5.01
10	Norcross	24,728,011	22%	1,393,018	5.6%	25.3%	16,315,505	1,067,780	66.0%	4.3%	464,206	$ 4.69
11	Doraville-Gwinnett	15,580,399	14%	404,230	2.6%	7.3%	12,356,060	20,156	79.3%	0.1%	310,216	$ 4.23
12	North Lilburn	6,290,065	5%	604,943	9.6%	11.0%	5,030,221	158,379	80.0%	2.5%	99,487	$ 4.85
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	3,275,825	3%	240,047	7.3%	4.4%	2,103,788	169,680	64.2%	5.2%	68,947	$ 5.44
14	Gwinnett Place	1,046,718	1%	133,677	12.8%	2.4%	397,404	-	38.0%	0.0%	(19,823)	$ 5.75
15	West Lawrenceville	9,523,897	8%	315,014	3.3%	5.7%	3,546,844	42,196	37.2%	0.4%	150,237	$ 3.86
16	SW Lawrenceville/West Snellville/Mountain Park	1,940,723	2%	38,014	2.0%	0.7%	980,038	95,643	50.5%	4.9%	19,985	$ 6.04
17	West Lawrenceville/ NW Snellville/Grayson	4,452,847	4%	12,980	0.3%	0.2%	2,147,315	94,567	48.2%	2.1%	16,448	$ 3.59
18	SW Snellville/Rockbridge	437,742	0%	48,999	11.2%	0.9%	294,268	-	67.2%	0.0%	(5,176)	$ 2.50
19	SE Snellville/SW Loganville	471,588	0%	111,469	23.6%	2.0%	346,047	4,000	73.4%	0.8%	(16,236)	$ 2.84
	TOTAL	114,859,403		5,507,150	4.8%		53,559,122	11,236,845	46.6%	9.8%	2,114,226	$ 4.31

Source: Bleakly, CoStar, Atlanta Regional Commission, Gwinnett County

Key Real Estate Market Statistics for Gwinnett County, by District: Flex Industrial

		Flex										
Subarea	Area Name	Inventory (SF)	% of Total	Vacant SF	Vacant %	% of Total	>25 Years Old	New Inv. added since 2005	% of Inv. >25 y/o	% of Inv. Since 2005	12 Mo. Absorption SF 5-Year Avg.	Avg. Rent
1	Buford/NW Gwinnett	772,026	5%	37,575	4.9%	1.5%	174,841	341,824	22.6%	44.3%	5,391	$6.38
2	NE Gwinnett											
3	Mall of Georgia	32,957	0%	-	0.0%	0.0%	16,957	-	51.5%	0.0%	-	
4	Suwanee/Duluth	1,346,418	8%	76,140	5.7%	2.9%	368,747	102,106	27.4%	7.6%	4,076	$9.70
5	Central Gwinnett	1,035,867	6%	92,431	8.9%	3.6%	479,371	107,896	46.3%	10.4%	22,338	$8.99
6	Auburn/East Central Gwinnett	185,925	1%	28,185	15.2%	1.1%	48,642	30,135	26.2%	16.2%	(2,549)	$9.48
7	Sugarloaf Mills	14,126	0%	-	0.0%	0.0%	14,126	-	100.0%	0.0%	-	
8	Berkeley Lake/Outer Peachtree Corners	1,159,524	7%	99,013	8.5%	3.8%	879,970	-	75.9%	0.0%	28,037	$8.38
9	Central Peachtree Corners	1,079,322	6%	82,453	7.6%	3.2%	599,382	-	55.5%	0.0%	17,030	$ 10.98
10	Norcross	4,119,194	25%	547,734	13.3%	21.2%	2,504,938	147,437	60.8%	3.6%	43,615	$7.59
11	Doraville-Gwinnett	1,092,235	7%	367,432	33.6%	14.2%	814,275	-	74.6%	0.0%	(33,444)	$5.21
12	North Lilburn	2,026,647	12%	565,904	27.9%	21.9%	1,915,018	-	94.5%	0.0%	20,394	$6.98
13	Gwinnett Village/Norcross-Lilburn-I85 Corridor	842,511	5%	128,129	15.2%	5.0%	709,972	-	84.3%	0.0%	(14)	$7.03
14	Gwinnett Place	281,030	2%	63,020	22.4%	2.4%	226,830	-	80.7%	0.0%	18,069	$9.75
15	West Lawrenceville	790,454	5%	126,603	16.0%	4.9%	421,606	46,036	53.3%	5.8%	(331)	$9.19
16	SW Lawrenceville/West Snellville/Mountain Park	750,150	4%	104,972	14.0%	4.1%	528,297	10,650	70.4%	1.4%	(6,799)	$9.68
17	West Lawrenceville/ NW Snellville/Grayson	423,712	3%	34,065	8.0%	1.3%	212,942	54,713	50.3%	12.9%	10,647	$ 10.39
18	SW Snellville/Rockbridge	666,450	4%	213,303	32.0%	8.3%	469,383	-	70.4%	0.0%	(10,754)	$8.20
19	SE Snellville/SW Loganville	156,206	1%	16,100	10.3%	0.6%	62,016	14,000	39.7%	9.0%	3,720	$8.96
	TOTAL	16,774,754		2,583,059	15.4%		10,447,313	854,797	62.3%	5.1%	119,426	$7.94

Source: Bleakly, CoStar, Atlanta Regional Commission, Gwinnett County

Correlations between Commercial Real Estate Inventory and Employment

The geographic analysis of real estate indicators and employment change over the past 12 years reveals a strong, and unsurprising, correlation between vacant space and employment loss:

- Districts with higher rates of vacant commercial space are more likely to have experienced low or negative job growth over the past twelve years.
- This indicates that districts in the County with low employment growth tend to have large reserves of vacant commercial space, buildings or land. If this space were to be re-inhabited, the County could absorb significant employment growth with minimal expansion of supporting infrastructure.
- At a typical suburban development density of 12,000 SF of commercial space per acre, Gwinnett County currently has the equivalent of 349 acres of vacant commercial space already located within developed areas. At current rates of absorption, that represents four years' worth of growth.
    - Most of the vacant space is concentrated in five districts on the west side of Gwinnett County.
- In many cases, this commercial space has been vacated because it is obsolete, does not reflect current real estate trends or demand, or otherwise is not cost effective.

Vacant Commercial Space by district, with Employment Change 2003-2015

Ref #	Area Name	Surplus Vacant SF	Surplus Vacant Job Equivalent	Surplus Vacant SF Equiv. Acres	Avg. New Space added/Year since 2005	Years of Space in Surplus	**Net Job Change 2003-2015**	**% Change 2003-2015**
1	Buford/NW Gwinnett	-	-	-	49,438		5,134	61%
2	NE Gwinnett	2,447	8	0	59,968	0.0	**5,512**	**374%**
3	Mall of Georgia	26,506	88	2	56,434	0.5	**2,957**	**89%**
4	Suwanee/Duluth	52,111	148	4	124,138	0.4	7,933	39%
5	Central Gwinnett	52,596	117	4	82,259	0.6	9,802	51%
6	Auburn/East Central Gwinnett	9,593	19	1	91,054	0.1	3,703	57%
7	Sugarloaf Mills	-	-	-	33,082	-	**5,841**	**135%**
8	Berkeley Lake/Outer P'Tree Corners	513,755	1,647	43	19,951	25.8	4,808	27%
9	Central Peachtree Corners	866,874	2,871	72	-		**(2,327)**	**-14%**
10	Norcross	935,952	2,875	78	106,063	8.8	**(4,152)**	**-9%**
11	Doraville-Gwinnett	271,764	562	23	14,311	19.0	**(1,665)**	**-13%**
12	North Lilburn	708,500	1,877	59	43,064	16.5	**(1,693)**	**-8%**
13	Gwinnett Village/Norcross-Lilburn-I85	96,964	237	8	4,875	19.9	**(686)**	**-9%**
14	Gwinnett Place	247,782	719	21	12,832	19.3	550	4%
15	West Lawrenceville	47,558	95	4	35,069	1.4	1,601	7%
16	SW Lawrenceville/West Snellville	74,934	210	6	93,860	0.8	7,800	32%
17	West Lawrenceville/ NW Snellville	-	-	-	165,822	-	2,735	21%
18	SW Snellville/Rockbridge	206,365	440	17	36,549	5.6	**(2,101)**	**-26%**
19	SE Snellville/SW Loganville	70,307	100	6	19,649	3.6	2,869	73%
	TOTAL	4,184,005	12,013	349	1,048,417	4.0	47,243	17%

Source: Bleakly, CoStar, Gwinnett County.

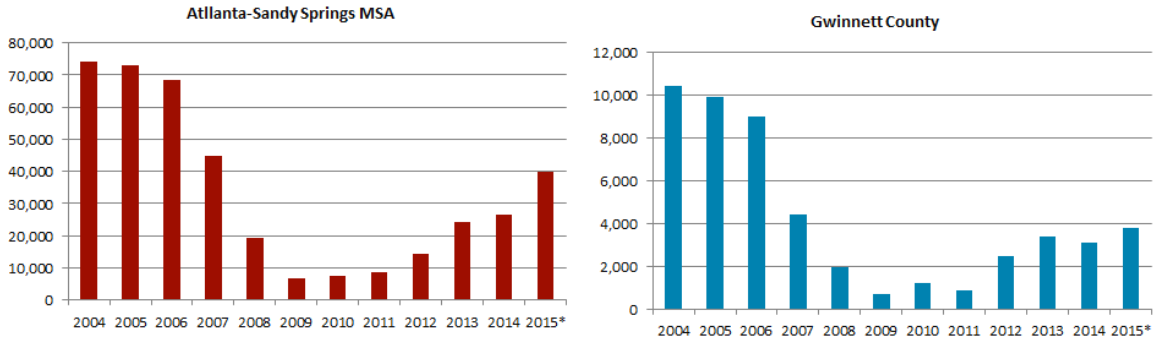
Residential Real Estate

This section looks at prevailing residential development trends in Gwinnett County.

Residential Building Permits: At the peak of the pre-recession real estate boom in 2004, the Atlanta metro area saw the issuance of 74,000 residential building permits which subsequently fell by 92% to just 6,500 units in 2009. In 2014, the region saw a steady, but still modest (and likely more sustainable) recovery of 26,683 residential units permitted metro-wide, roughly 1/3 of the pre-recession residential permits issued.

These patterns in building permit activity are reflected in Gwinnett County as well. From a peak of 10,436 permits in 2004, which was 14% of the regional total, Gwinnett plunged to only 719 permits in 2009, a decline of 94%. In 2014 Gwinnett issued 2,144 permits, which reflects a rebound in permit activity, but is just 30% of the peak in 2004.

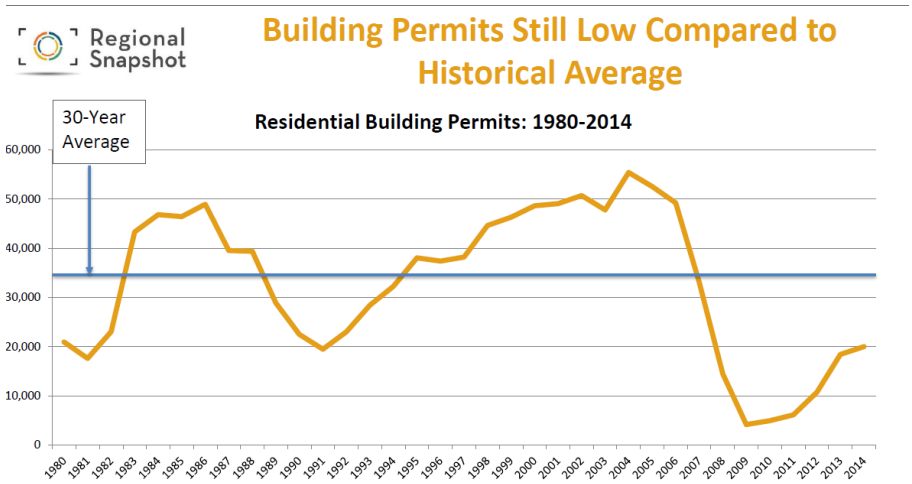
Residential Building Permits, Atlanta Metro and Gwinnett County, 2004-2015



**2015 permits through October, Annualized. Source: U.S. Census, BAG*

Atlanta Regional Commission data for the 10-county metro region shows that at this point in the recovery, we have reached just 58% of the 30-year average for residential permits, indicating that there is still room for considerable growth in the number of building permits in the near future. We can likely expect residential permit volumes to continue to rise modestly over the next several years, reaching a level of 35,000-40,000 permits annually region-wide and 3,700-4,500 annually in Gwinnett County.

Residential Building Permits Year by Year, Atlanta Metropolitan Region



Source: ARC

New Home Sales Activity: Home sales in Gwinnett County have recovered significantly from their 2011 low-point, with home sales activity and pricing increasing moderately, but remain below pre-recession levels. New home sales volumes declined from 8,274 new homes sold in 2006 to 1,019 sold at the low point in 2011. Volumes have recovered somewhat, with nearly 2,500 units sold in 2013 and 2014. New home pricing in the County fell from an average price of $326,000 in 2007 to just $226,000 at the depths of the recession in 2011, before partially recovering to $261,000 in 2015, still just 80% of the 2007 average price.

Table 1: Home Sales Trends 2006-2015, Gwinnett County

New Home Sales: Gwinnett County				
Year	**Units Sold**	**1-Yr. Change**	**Average Sale Price**	**1-Yr. Change**
2006	**8,274**		$311,688	
2007	5,033	-39%	**$325,626**	4%
2008	2,859	-43%	$299,827	-8%
2009	1,823	-36%	$249,727	-17%
2010	1,328	-27%	$248,674	0%
2011	**1,019**	-23%	$229,418	-8%
2012	1,470	44%	**$225,691**	-2%
2013	2,527	72%	$230,716	2%
2014	2,478	-2%	$255,692	11%
2015	2,796		$272,691	2%

Source: SmartREData

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Memorandum

To:	Cristina Pastore, AICP, PE (Kimley-Horn) Vince Edwards, AICP (GCDOT)
From:	Eric Lusher, AICP (Pond & Company)
CC:	
Date:	January 14, 2016
Subject:	Calibration Results for ARC Model - Gwinnett County Comprehensive Transportation Plan

Purpose

The purpose of this memorandum is to document the process by which the Atlanta Regional Commission (ARC) travel demand model was evaluated and locally calibrated in order to improve its performance within Gwinnett County for the primary purpose of conducting analysis as part of the Gwinnett County Comprehensive Transportation Plan (CTP) and other local transportation planning efforts.

Calibration Process

Based on the most recent traffic counts (provided by GDOT), performance of the model was monitored based on the difference between actual traffic counts and model volumes from the base ARC travel demand model. This difference was monitored by functional class and across seven unique screenlines drawn across the County. These screenlines, shown in Figure 1, were selected based on locations of available count data to measure overall regional flows within and to/from Gwinnett County. Refinements to improve model performance to better reflect local conditions included modifying attributes of the existing roadway network, adding new roadway network, and modifying connections to centroid connectors. These changes are listed in more detail in this document.

Compared performance of the original ARC model with the locally-calibrated model as measured through functional class is shown in Table 1, while a comparison by screenlines is shown in Table 2. These measurements indicate significant improvement in model performance, including dramatic improvement in the model's predictive performance for major arterials (from over 26 percent difference to less than 1 percent) and minor arterials (from almost 21 percent to 7 percent). Likewise, six of the seven screenlines experience an improvement in model performance including two screenlines with particularly low performance: Screenline 2 (along the north/northeast County line which improved from a difference of 25 percent to 15 percent difference) and Screenline 7 (along the Chattahoochee River which improved from a difference of 29 percent to 17 percent). Only Screenline 6 (through the center of the County along the northeastern side of Pleasant Hill Road and Ronald Reagan Parkway) experienced a decrease in performance, primarily because it was already well performing in the base model (a difference of less than 5 percent). With the decrease in performance being relatively modest (in the calibrated model it performs at a difference of less than 10 percent), it is a reasonable tradeoff for the overall better performance along other screenlines.

Figure 1: Screenlines Map

Table 1: Original and Calibrated Model Functional Class Performance

		2014 GDOT Count Volume	Original		Calibrated		Targets (1)
			Count	Percent Difference	Count	Percent Difference	
Functional Class	Interstates	3,030,331	3,180,357	5.1%	3,126,613	3.3%	±7%
	Major Arterials	2,751,554	3,474,601	26.3%	2,737,331	-0.5%	±10%
	Minor Arterials	2,437,046	2,944,892	20.7%	2,607,380	6.9%	±15%
	Collectors	724,110	776,639	7.3%	774,794	7.0%	±20%
	Total	8,943,041	10,376,489	16.0%	9,246,118	3.4%	N/A

(1) Source: FHWA Travel Model Validation and Reasonableness Checking Manual

Table 2: Original and Calibrated Model Screenline Performance

		2014 GDOT Count Volume	Original		Calibrated	
			Count	Percent Difference	Count	Percent Difference
Screenlines	1: South of US 78	112,450	123,994	10.3%	118,276	5.2%
	2: County Line N/NE	176,070	237,157	34.7%	252,099	14.8%
	3: I-85 South	389,200	449,033	15.4%	361,145	-7.2%
	4: County S/SW	577,480	695,202	20.4%	643,541	11.4%
	5: I-85/I-985 North	343,870	382,228	11.2%	324,876	-5.5%
	6: Pleasant Hill/Ronald Reagan/etc North	513,910	490,198	-4.6%	463,866	-9.7%
	7: Chattahoochee River	228,040	294,545	29.2%	265,628	16.5%
	Total	2,341,020	2,672,357	14.2%	2,429,341	1.9%

Centroid Connectors

A number of centroid connectors were added to, modified within, or deleted from the model. This was done to create a more realistic representation of the roadway network. In many instances, these changes were made to move connectors onto the aforementioned new roadway network. In other instances, these changes were made in order to make the overall model network more representative of the actual network (e.g. adding more connectors to represent additional access points, removing connectors where access does not actually exist, moving connector locations to more closely match actual access points).

New Roadway Network

Where appropriate, roadways which have a notable impact on the network were added, with all necessary model attributes. The added network is indicated in Figure 2 (in yellow) and include the following:

- Bush Road (Berkeley Lake)
- North Berkeley Lake Road (Berkeley Lake)
- South Berkeley Lake Road (Berkeley Lake)
- Bogan Road (Buford)
- Cemetery Road (Buford)
- Main Street (Buford)
- Plunkett Road (Buford)
- Auburn Avenue (Dacula)
- Bailey Road (Dacula)
- Clack Road/Mt. Moriah Road (Dacula)
- Dacula Road (Dacula)
- Hamilton Mill Parkway (Dacula)
- Luke Edwards Road (Dacula)
- Summit Ridge Parkway (Duluth)
- Grayson - New Hope Road/Bramlett Shoals Road (Grayson)
- Camp Perrin Road (Lawrenceville)
- Campbell Road/West Campbell Road (Lawrenceville)
- Davis Road (Lawrenceville)
- Ewing Chapel Road (Lawrenceville)
- Hi-Hope Road (Lawrenceville)
- Paden Drive (Lawrenceville)
- Paper Mill Road (Lawrenceville)
- Sunny Hill Road (Lawrenceville)
- Taylor Road (Lawrenceville)
- Mink Livsey Road (Loganville)
- Ozora Road (Loganville)
- Temple Johnson Road (Loganville)
- Harbins Road (Lilburn)
- Crooked Creek Road (Peachtree Corners)
- Jay Bird Alley (Peachtree Corners)
- Technology Parkway (Peachtree Corners)
- Winters Chapel Road (Peachtree Corners)
- Bethesda Church Road (Snellville)
- Hillside Drive (Snellville)
- Skyland Drive (Snellville)
- Level Creek Road (Sugar Hill)
- Riverside Drive (Sugar Hill)
- Sycamore Road (Sugar Hill)
- Woodward Mill Road (Sugar Hill)
- Moore Road (Suwanee)

Figure 2: Additional Roadway Network (new roadways shown in yellow)

Roadway Attributes

Pond also performed a review of actual conditions in the field for several roadway attributes throughout the County. In situations where the ARC model and actual conditions differed, the attributes were changed in order to make the model more accurately represent the real network conditions. Attributes changed include:

- Functional Class
- Facility Type
- Number of Lanes
- Speed Limit

These changes were applied to many roadways throughout the Gwinnett County portion of the model, as necessary. Notable roads that were modified include:

- Peachtree Industrial Boulevard (including, but not limited to, portions of SR 141)
- Peachtree Parkway (SR 141)
- Buford Highway (SR 13)
- Sugarloaf Parkway and Connector
- Lawrenceville Highway (US 29/SR 8)
- University Parkway (SR 316)
- Interstate 85
- Interstate 985
- Grayson Highway/Loganville Highway (SR 20)
- Scenic Highway (SR 124)
- Stone Mountain Parkway/Main Street (US 78)

A complete list of attribute changes made is included on the following pages.

Conclusion

As indicated in this memorandum, a variety of changes were made to the base ARC model to improve performance within Gwinnett County. Almost universally, these changes result in better performance (in overall performance and as measured by functional class and screenlines) throughout the County. This locally calibrated version of the ARC model will be used as part of the Gwinnett CTP for a variety of analyses and can also be utilized for other transportation planning needs within the County.

Functional Class Changes

Road	Location	Nodes	Previous Coding	Revised Coding
Flowery Branch Rd	SR 124 to Spout Springs Road	14168-14169	7	9
Old Peachtree Rd/Horizon Dr	SR 124 to Scales Road	7121-9436	8	7
SR 20	Old Peachtree Road to I-985 ramp	7128-8804/14086	6	2
Hamilton Mill Rd	SR 124 to Scales Rd	8451-7097	8	7
Thompson Mill Rd/Sardis Church Rd	Hamilton Mill Rd to county boundary (northwest)	7096-58083	16 (northern section), 7 (southern section)	9
Ridge Rd	Thompson Mill Rd to county boundary (north)	31604-58205	8	7
I-85 NB and SB	Old Peachtree Road to SR 317	9792-7001 (NB), 7006-9795 (SB)	0	1
Northbrook Pkwy	Old Peachtree Road to Server Road	8870-47005	7	9
McGinnis Ferry Rd	SR 317 to SR 13/Buford Hwy	16653-7060	9	6
SR 13/Buford Hwy	SR 20 to county boundary (north)	57904-7134	14	16
SR 20	I-85 interchange to immediate west	7036-8401	0	14
Suwanee Dam Rd	Buford Dam Rd to Peachtree Industrial Blvd	7046-7050	8	7
SR 317/Suwanee Buford Dam Rd	Peachtree Industrial Blvd to I-85	7002-7050	7	16
Eva Kennedy Rd	Stonecypher Rd to Peachtree Industrial Blvd	7219-7049	8	7
McGinnis Ferry Rd	Immediately west of Peachtree Industrial Blvd	7961-7220	7	6
SR 13/Buford Hwy	County boundary (south) to just south of McGinnis Ferry Rd	9604-8183	14	16

Functional Class Changes

Road	Location	Nodes	Previous Coding	Revised Coding
Westbrook Rd/Smithtown Rd	SR 317 to SR 13/Buford Hwy and Satellite Blvd to SR 13/Buford Higway	7063-7040, 28311	7/17	9
Satellite Blvd	SR 317 to north of Old Peachtree Rd	8180-8182	8	7
Shackleford Rd	Club Dr to Pleasant Hill Rd	8744-8745	16/17	19
Steve Reynolds Blvd	Immediately north of Club Drive	8446-9428	16	19
Old Norcross Rd	Satellite Blvd to Breckenridge Blvd	7192-8746	0	16
Bold Spring Road	County boundary to Dacula-Harbin Rd	7179-34503	7	6
Brooks Rd/Martins Chapel Rd	Immediately east of Downing Creek Rd to Simonton Rd	7182-7180	8/7	7
Drowning Creek Rd/Tanners Rd	Dacula-Harbin Rd to Harbin Rd	31774-7274	7	9
Harbins Rd	SR 8 to Dacula-Harbin Rd	7181-7090	7	6
Boggs Rd	Immediately north of Old Norcross Rd	17421-7191	17	16
Breckinridge Blvd	Boggs Rd to SR 120	8747-7201	17	19
Lawrenceville-Suwanee Rd	Sugarloaf Pkwy to Walther Blvd	7994-7992	16	17
Hurricane Shoals Rd	SR 120 to Old Norcross Rd	7138-8800	17	19
SR 120	US 29 to county boundary (west)	16133/7085-5772	14	16
US 29/SR 8	One-way pair to county boundary (east)	7087-16161	7/14/6	16
US 29/SR 20 WB	2-way (east) to SR 124	7124-7087	19	14

Functional Class Changes

Road	Location	Nodes	Previous Coding	Revised Coding
SR 20	Between east-west one-way pair	7124-59211	17	14
SR 20 EB	Between north-south one-way pair	7255-7086	7	16
SR 20 NB	Between east-west one-way pair	7136-7086	6	16
SR 20 SB	From east-west pair to north-south pair end	9450-8523	16	14
Sugarloaf Pkwy	Brown Road to I-85 ramp	9772-7989	0	16
Fence Road	SR 316 to county boundary (east)	31770-12930	8	7
SR 324	SR 20 to county boundary (east)	7132-16161	7/9	6
SR 124	SR 20 to Old Peachtree Rd	7125-7121	14	16
SR 124	Old Peachtree Rd to county boundary (east)	7121-46536	7	6
Lenora Church Rd	Lee Rd to SR 20/Pleasant Hill Rd	5934-5935	7	16
Hewatt Rd/Everson Rd	SR 124 to Oak Rd	6115/12927-8465/8466	19	7
Lake Lucerne Rd	US 78 to Five Forks Trickum Rd	6094/6122-7247/27407	19	7
Cole Dr	Immediately north of Five Forks Trickum Rd	7073-7246	17	19
Pinehurst Rd	SR 124 to Ridgedale Dr	8503/31822-8481/14174	17	19
Ronald Reagan Pkwy	SR 124 to Pleasant Hill Rd	8503/12203-13453/13457 and 13456/13452	4	12
US 78	East of Cooper Road to county boundary	6091-7160	6	2
SR 20	Near Hoke O'Kelly Mill Rd	6090-8759	9	6

Functional Class Changes

Road	Location	Nodes	Previous Coding	Revised Coding
Briscoe Rd	SR 20 to Ozora Rd	7167/27912-7168/7169	7	9
Ozora Rd/Tribble Mill Rd	Briscoe Rd to Callie Stil Rd	7189-27919	17	19
Rosebud Rd	Grayson Pkwy to SR 20	8461-12202	16	19
SR 20	SR 124 to Cooper Rd/Ozora Rd	7232-9489	14	16
Sugarloaf Pkwy	SR 124 to SR 20	7274-7156	14	16
Sugarloaf Pkwy/Conn	SR 20 to SR 316	7156-19263	0	16
Sugarloaf Pkwy	Old Norcross Rd to SR 316	7198-7204	14	16
Sugarloaf Pkwy	SR 124 to Old Norcross Road	7244-7198	19	16
Burns Rd/Dickens Rd	Pleasant Hill Rd to Rockbridge Rd	10375-8406	17	19
Harmony Grove Rd	SR 8/US 29 to Rockbridge Rd	10375-8409	17	19
Rosebud Rd	US 78 to Cooper Rd	7161-8460	7	16
US 29	County line to SR 20	9450/7255-5502	14/6	16
Bethesda School Rd	US 29/SR 9 to Cruse Rd	7257-7197	14	19
Norcross Tucker Rd/Singleton Rd	Pleasantdale Rd to Indian Trail Rd	5393-7262	17	16
Shackleford Rd	SR 378 to Club Dr	7893-8744	16	17
Commerce Ave/Northwest Pkwy	SR 120 to Satellite Blvd	17414-17416	17	19
Old Norcross Rd	Pleasant Hill Rd to SR 13/Buford Hwy	5500-7194	16	17
Steve Reynolds Blvd	Old Norcross Rd to Pleasant Hill Rd	10324-9425	17	19

Functional Class Changes

Road	Location	Nodes	Previous Coding	Revised Coding
Holcomb Bridge Rd	Jimmy Carter Blvd to S Peachtree St	5512-5510	17	16
Jimmy Carter Blvd	Peachtree Industrial Blvd to south	8718-8719	19	14
Peachtree Corners Circle	Peachtree Industrial Blvd to Medlock Bridge Rd	9456-9457	17	19
Mimms Dr	Button Gwinnett Dr to Pleasantdale Rd	5463-5546	17	19
Brook Hollow Pkwy	Best Friends Rd to SR 140/Jimmy Carter Blvd	12928/5531	17	19

Facility Type Changes (FACTYPE)

Road	Location	Nodes	Previous Coding	Revised Coding
Killian Hill Rd/ Bethany Church Rd	SR 124-Lawrenceville Hwy	6114-7030	13	14
Killian Hill Rd/ Bethany Church Rd	Near intersection with Lawrenceville Hwy	7071-7077	12	14
Louis Rd	East of Killian Hill Rd	27831-17426	15	17
Hewatt Rd	North of US 78	6092-8468	17	15
Highpoint Rd	US 78 to Oak Rd	7239-7234	17	15
Sugarloaf Parkway	US 29 to SR 20	9484-7156	12/14	11
Sugarloaf Parkway	SR 20 to Peachtree Industrial Blvd	7156-7958	12	14
Lawrenceville Hwy	Langely Dr to county boundary	7757-5502	12	14
Crogan St	East of Lawrenceville and SR 124	7088-7089	17	14
SR 317/Lawrenceville Bypass/Suwanee Rd	Sugarloaf Pkwy to Peachtree Industrial Blvd	7994-7050	15	13
Duluth Hwy	Bunten Rd to Satellite Blvd	8706-7153	13/12	14
Old Peachtree Rd	Bunten Rd to SR 13/Buford Hwy	9434-9435	17	14
Rogers Bridge Rd	SR 13/Buford Hwy to Albion Farm	9434-17891	15	17
SR 120	Peachtree Industrial Blvd to SR 12/Buford Hwy	7153-8828	13	14
Suwanee Dam Rd	SR 20 to Buford Dam Rd	7043-7046	15	17
Buford Dam Rd	County boundary to Little Mill Rd	7045-27809	15	17
Little Mill Rd	Buford Dam Rd to Peachtree Industrial Blvd	27809-7053	15	17

Facility Type Changes (FACTYPE)

Road	Location	Nodes	Previous Coding	Revised Coding
Peachtree Industrial Blvd	Little Mill Rd to county boundary	7053-58780	14/15	14
Peachtree Industrial Blvd NB	I-285 to Peachtree Pkwy	9267-9315	1	11
Peachtree Pkwy	Peachtree Industrial Blvd to county boundary	9315-8249	11	14
Peachtree Pkwy	Holcomb Bridge Rd to Peachtree Industrial Blvd SB	5526-17816	11	12
Peachtree Industrial Blvd SB	Peachtree Pkwy to I-285	9316-9266	1	11
Peachtree Industrial Blvd	Peachtree Pkwy to Medlock Bridge Rd	17817-5530	11	14
Pleasantdale Rd	Mimms Dr to Oakcliff Rd	5463-5458	18	15
Amwiler Rd	Amwiler Industrial Blvd to Winters Chapel Rd	9327-9325	18	15
Langford Pkwy	SR 13/Buford Hwy to Medlock Bridge Road	5492-5529	17	15
Peachtree Corners Cir	Peachtree Pkwy to Medlock Bridge Rd	9456-9457	15	18
Pleasant Home Road	County line to Ronald Reagan Parkway	13455/9431-5571	12	14
SR 316/University Parkway	SR 124 to county line	9566/9571-9530/9531	11	14
SR 316/University Parkway	Interstate 85 to SR 20 Ramps	7014/59236-9575/9576	1	11
SR 316/University Parkway	SR 20 ramps to SR 124	9575/9576-9571/9566	1/11	12
SR 124	Centerville Rosebud Rd to Dogwood Road	6112-7241	12/13	12
SR 20	Lawrenceville to county boundary	7124-30049	12/13	14

Facility Type Changes (FACTYPE)

Road	Location	Nodes	Previous Coding	Revised Coding
Holcomb Bridge Rd/Jimmy Carter Blvd	Spalding Road to county boundary	5543-	12/13	14
Buford Hwy/SR 13	County boundary to Old Peachtree Rd	5305-9434	12	14
Buford Hwy/SR 13	Old Peachtree Rd to Thompson Mill RD	9434-7066	12/13	15
Satellite Blvd	SR 120 to Old Peachtree Rd	8706-8704	17	15
Satellite Blvd	SR 317 to SR 20	8182-8401	17	15
McGinnis Ferry Rd	Sargent Rd to SR 317	16653-5782	15/17	13

Lane Changes

Road	Location	Nodes	Previous Coding	Revised Coding
West Park Pl Blvd	South of intersection with Bermuda Rd	31437-8444	1 NB	2 NB
Webb Gin House Rd	East intersection with of SR 124	27981-7230	1 each	2 each
West Park Pl Blvd	Southwest of intersection with Rockbridge Rd	8440-31437	1 SWB	2 SWB
Stone Mountain Hwy/Main St	Henry Clower Blvd to SR 124	7227-7965	2 WB	3 WB
Duluth Hwy	I-85 off ramp to Breckinridge Blvd	59195-7201	2 EB	3 EB
Duluth Hwy	Atkinson Rd to Breckinridge Blvd	31620-7201	2 WB	3 WB
Five Forks Trickum Rd	At Ronald Reagan Pkwy interchange	7970-13466-13468	2 each	1 each
SR 20	SR 124 to one-way split	8523-7232	2 NB	3 NB
Nash Street	Constitution Blvd to SR 20/Perry St	59220-9451	1 each	2 each
Constitution Blvd	Langley Dr to Culver St	59218-59216	2 each	1 each

Speed Limit Changes (PSPEED04)

Road	Location	Nodes	Previous Coding	Revised Coding
East Park Pl	North of US 78 at Stone Mountain Square	8441-10372	55	45
West Park Pl	South of US 78 at Stone Mountain Square	10372-8440	55	45
Bermuda Rd	Southwest of West Park Pl	8444-12241	55	45
North Deshong Rd	South of Rockbridge Rd	6101-6110	55	45
SR 124	County boundary to Highpoint Rd	6112-6116	55/50	45
Bethany Church Rd	West of SR 124	6114-6089	55	45
US 78	Hewatt Rd to Highpoint Rd	8469-7239	55	45
US 78	Snellville to Grayson Pkwy	7965-7162	45	35
Grayson Pkwy	US 78 to Rosebud Rd	7162-8461	55	45
Cooper Rd/Ozora Rd	US 78 to Chandlre Rd	9442-7169	50	45
SR 20	Cooper Rd to county boundary	9489-8759	55	45
New Hope Rd/Jackson St	SR 8 to Simonton Rd	59212-725	45	45, 35 (Jackson St)
SR 8/Winder Hwy	Hosea Rd to Harbins Rd	7186-7090	55	45
Drowning Creek Rd	Harbins Rd to south of 316	31774-8456	55	35
Sugarloaf Pkwy	Five Forks Trickum Rd to Old Norcross Rd	9682-7198	40	45
Cruse Rd	Old Norcross Rd to Pleasant Hill Rd	7196-7268	45	40
Indian Trail Rd	Brook Hollow Pkwy to Hillcrest Spur	17862-5495	55	45
Killian Hill Rd	Lawrenceville Hwy to Camp creek	7077-7070	30	35

Speed Limit Changes (PSPEED04)

Road	Location	Nodes	Previous Coding	Revised Coding
Jimmy Carter Blvd/Norcross Tucker Rd/Old Norcross Tucker Rd	I-85 to county boundary	5507-5536	35	40
Peachtree Corners Circle	Peachtree Industrial Blvd frontage road to Peachtree Pkwy	9320-9456	55	45 (SW of Holcomb Bridge Rd), 40 (NE of Holcomb Bridge Rd)
Jones Mill Rd	Peachtree Industrial Blvd frontage road to Button Gwinnett Rd	9300-5466	35	40, 45 (5466-31638)
Brook Hollow Pkwy	Jimmy Carter Blvd to Indian Trail Rd	5531-17862	35/55	45
SR 13/Buford Hwy	Old Norcross Rd to N Berkley Lake	8501-5537	50	45
SR 13/Buford Hwy	West of SR 120/Duluth Hwy	7057-7153	45	35
SR 13/Buford Hwy	East of Sugarloaf Pkwy to southwest of McGinnis Ferry Rd	7058-8183	55	45
SR 13/Buford Hwy	Northeast of Lawrenceville-Suwanee Dam Rd to northeast of Old Suwanee Rd	7062-7064	55	50
SR 120/Duluth Hwy	West of Burnett Rd to Riverside Pkwy	7152-7143	50	45
McGinnis Ferry Rd	County boundary to SR 317	27969-16653	35/40	45
SR 124	Norwalk Trace to Old Fountain Rd	7104-7110	55	45
SR 20/Buford Dr	I-985 to I-85	7133-7131	50	45
Hamilton Mill Rd	Bogan Rd to Sardis Church Rd	8451-7096	50	40
Thompson Mill Rd	SR 13/Buford Hwy to Sardis Church Rd	7093-58893	50	45

Speed Limit Changes (PSPEED04)

Road	Location	Nodes	Previous Coding	Revised Coding
Peachtree Industrial Blvd	Holcomb Bridge Road to SR 20	9317-7051	55	45
I-85	County boundary to county boundary	5472/5263/10673/ 10702-8771/8772	55/65	70
I-985	I-85 to county boundary	7029/7032-72901/7034	65	70

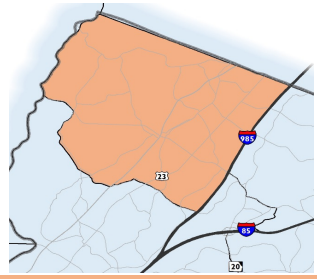
Summary of Travel Demand Model O&D Statistics

Subarea	2015 Overall TTI	2015 Internal TTI	2040 E+C Overall TTI	2040 E+C Internal TTI	Overtall TTI % Increase	Internal TTI % Increase
Buford/Sugar Hill	1.51	1.15	2.6	1.53	72%	33%
NE Gwinnett	1.47	1.08	2.72	1.33	85%	23%
Mall of Georgia	1.4	1.02	2.3	1.16	64%	14%
Suwanee/Duluth	1.54	1.24	2.56	1.64	66%	32%
NW Lawrenceville	1.49	1.14	2.42	1.4	62%	23%
Dacula	1.51	1.1	2.68	1.33	77%	21%
Sugarloaf Mills Area	1.5	1.04	2.46	1.23	64%	18%
Berkeley Lake/Peachtree Corners	1.45	1.19	2.22	1.56	53%	31%
Technology Park Employment Area	1.67	1.1	3.09	1.37	85%	25%
Norcross/Duluth	1.46	1.21	2.3	1.82	58%	50%
Best Friend Road/Button Gwinnett Drive Employment Area	1.38	1.13	3.27	1.49	137%	32%
North Lilburn	1.51	1.18	2.59	1.69	72%	43%
Gwinnett Village/Norcross/Indian Trail	1.62	1.15	2.94	1.45	81%	26%
Gwinnett Place	1.54	1.17	2.54	1.44	65%	23%
West Lawrenceville	1.53	1.14	2.54	1.48	66%	30%
Lilburn/Mountain Park/NW Snellville	1.59	1.26	2.7	1.8	70%	43%
East Lawrenceville/NE Snellville/Grayson	1.53	1.12	2.71	1.39	77%	24%
SW Snellville/Rockbridge	1.64	1.14	2.88	1.51	76%	32%
SE Snellville/SW Loganville	1.62	1.1	2.96	1.31	83%	19%

From 1 - Buford

Buford subarea

	Year 2015	Year 2040
Population	42,594	68,363
Households	15,710	25,956
Employment	17,081	31,625
Total Daily Commute Trips Beginning in subarea	29,500	48,500
Total Trips Beginning in subarea	137,900	217,200
Average Free-Flow Travel Time (in Minutes) of All Trips	17.6	17.4
Average Congested Travel Time (in Minutes) of All Trips	26.7	45.1
Average Travel Time Index of All Trips	1.51	2.60



Major 2040 E+C Travel Patterns from Buford subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Buford/Sugar Hill	16,700	74,300	91,000	6.5	10.0	1.53	Local corridors
Suwanee/Duluth	5,100	16,200	21,300	16.6	35.4	2.14	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Hall County	5,200	11,900	17,100	25.1	46.4	1.85	Peachtree Industrial Boulevard, Buford Highway, I-985
Forsyth County	2,200	10,300	12,500	25.8	67.2	2.61	SR 20
NE Gwinnett	1,100	7,800	8,900	15.1	19.6	1.30	Hamiton Mill Road, Thompson Mill Road
NW Lawrenceville	2,100	6,500	8,600	20.8	51.5	2.48	SR 20, Suwanee Dam Road/Lawrenceville-Suwanee Road
Mall of Georgia	1,100	7,100	8,200	12.5	21.5	1.72	SR 20
Norcross/Duluth	1,300	3,500	4,800	26.3	90.7	3.45	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Dacula	800	3,700	4,500	24.3	37.6	1.55	SR 20, Gravel Springs Road, Hamilton Mill Road
North Fulton County	600	3,100	3,700	32.8	127.2	3.87	I-985/I-85, Peachtree Industrial Boulevard, McGinnis Ferry Road, SR 120

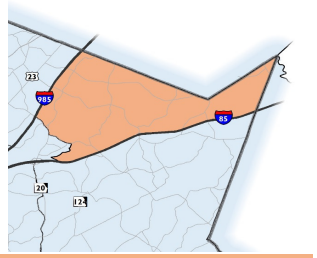
Major 2015 Travel Patterns from Buford subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Buford/Sugar Hill	4,900	46,800	51,700	6.2	7.2	1.15	Local corridors
Suwanee/Duluth	2,600	10,700	13,300	16.4	21.3	1.30	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Hall County	3,200	7,800	11,000	25.3	32.8	1.29	Peachtree Industrial Boulevard, Buford Highway, I-985
Forsyth County	2,100	7,500	9,600	24.8	42.3	1.71	SR 20
Mall of Georgia	700	6,000	6,700	11.9	14.1	1.18	SR 20
NW Lawrenceville	1,600	4,400	6,000	20.1	29.2	1.45	SR 20, Suwanee Dam Road/Lawrenceville-Suwanee Road
NE Gwinnett	400	5,100	5,500	14.4	15.6	1.09	Hamiton Mill Road, Thompson Mill Road
Roswell/Alpharetta/South Forsyth GA 400 Corridor	2,000	1,500	3,500	32.4	65.4	2.02	SR 20, McGinnis Ferry Road, Peachtree Industrial Boulevard, Buford Highway
Norcross/Duluth	1,400	1,800	3,200	26.0	43.7	1.68	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
North DeKalb County	1,500	1,500	3,000	38.1	70.9	1.86	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85

From 2 - NE Gwinnett

Northeast Gwinnett subarea

	Year 2015	Year 2040
Population	29,687	54,427
Households	10,555	19,894
Employment	5,126	8,168
Total Daily Commute Trips Beginning in subarea	21,600	40,600
Total Trips Beginning in subarea	84,700	149,600
Average Free-Flow Travel Time (in Minutes) of All Trips	19.3	20.0
Average Congested Travel Time (in Minutes) of All Trips	28.4	54.5
Average Travel Time Index of All Trips	1.47	2.72



Major 2040 E+C Travel Patterns from Northeast Gwinnett subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NE Gwinnett	4,500	31,600	36,100	5.7	7.6	1.33	Local corridors
Buford/Sugar Hill	5,300	12,700	18,000	15.1	28.0	1.86	Peachtree Industrial Boulevard, Buford Highway, I-985
Dacula	3,100	14,600	17,700	16.0	25.9	1.61	SR 20, SR 324/Gravel Springs Road/Auburn Road
Hall County	7,800	9,600	17,400	25.7	48.8	1.90	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Mall of Georgia	1,300	8,700	10,000	11.2	25.4	2.27	SR 20
NW Lawrenceville	1,600	4,900	6,500	21.2	60.5	2.85	SR 20, Suwanee Dam Road/Lawrenceville-Suwanee Road
Suwanee/Duluth	2,100	4,000	6,100	23.1	64.5	2.79	Hamiton Mill Road, Thompson Mill Road
Barrow County	1,200	3,800	5,000	26.5	40.1	1.51	SR 20, McGinnis Ferry Road, Peachtree Industrial Boulevard, Buford Highway
Norcross/Duluth	1,000	2,100	3,100	28.6	105.1	3.67	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
West Lawrenceville	1,000	1,700	2,700	25.9	73.6	2.84	SR 20/Buford Drive, SR 124/Braselton Highway, I-85

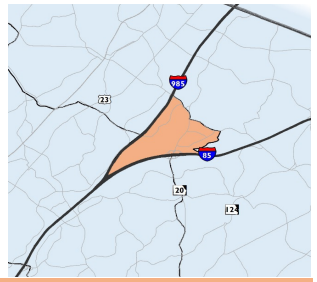
Major 2015 Travel Patterns from Northeast Gwinnett subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NE Gwinnett	1,400	17,700	19,100	5.5	6.0	1.08	Local corridors
Hall County	3,800	6,300	10,100	25.5	33.4	1.31	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Buford/Sugar Hill	1,900	8,100	10,000	14.3	17.2	1.20	Peachtree Industrial Boulevard, Buford Highway, I-985
Dacula	1,400	8,300	9,700	15.4	17.1	1.12	SR 20
Mall of Georgia	900	6,800	7,700	10.8	14.2	1.32	SR 20
NW Lawrenceville	1,300	2,600	3,900	21.3	32.3	1.52	SR 20, Suwanee Dam Road/Lawrenceville-Suwanee Road
Suwanee/Duluth	1,200	2,100	3,300	23.2	34.3	1.48	Hamiton Mill Road, Thompson Mill Road
Barrow County	500	1,900	2,400	26.5	30.2	1.14	SR 20, McGinnis Ferry Road, Peachtree Industrial Boulevard, Buford Highway
North DeKalb County	1,000	900	1,900	39.5	76.3	1.93	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85
Norcross/Duluth	900	900	1,800	29.5	51.6	1.75	Suwanee Dam Road, Peachtree Industrial Boulevard, Buford Highway, I-985/I-85

To 3 - Mall of Georgia

Mall of Georgia Subarea

	Year 2015	Year 2040
Population	1,392	4,423
Households	478	1,540
Employment	6,999	6,386
Total Daily Commute Trips Ending in subarea	8,300	7,800
Total Trips Ending in subarea	62,000	66,900
Average Free-Flow Travel Time (in Minutes) of All Trips	16.9	16.4
Average Congested Travel Time (in Minutes) of All Trips	23.7	37.7
Average Travel Time Index of All Trips	1.40	2.30



Major 2040 E+C Travel Patterns to Mall of Georgia Subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Dacula	1,400	9,400	10,800	14.6	34.4	2.35	SR 20, SR 324/Gravel Springs Road
NE Gwinnett	1,300	8,700	10,000	11.2	25.4	2.27	I-85, I-985, Bogan Road, Hamilton Mill Road
Buford/Sugar Hill	1,100	7,100	8,200	12.5	21.5	1.72	SR 20/Buford Drive, Plunkett Road
Mall of Georgia	800	7,200	8,000	2.1	2.5	1.16	Local Corridors
Hall County	300	6,400	6,700	26.1	91.3	3.50	I-985
NW Lawrenceville	700	6,000	6,700	13.8	23.9	1.73	I-85, I-985, SR 20
Suwanee/Duluth	500	3,300	3,800	16.6	25.3	1.52	I-85, I-985, Plunkett Road
East Lawrenceville/NE Snellville/Grayson	400	1,500	1,900	26.1	60.5	2.32	SR 20/Grayson Highway, SR 124
Barrow County	300	1,600	1,900	29.5	77.0	2.61	SR 324/Auburn Road
Forsyth County	100	1,200	1,300	33.7	101.1	3.00	SR 20, McGinnis Ferry Road

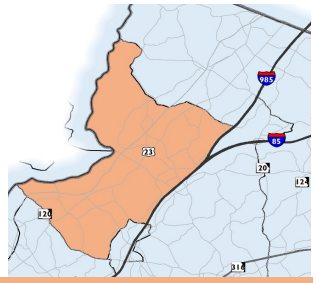
Major 2015 Travel Patterns to Mall of Georgia Subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Dacula	1,300	8,800	10,100	14.5	21.0	1.44	SR 20, SR 324/Gravel Springs Road
NE Gwinnett	900	6,800	7,700	10.8	14.2	1.32	I-85, I-985, Bogan Road, Hamilton Mill Road
Mall of Georgia	200	7,000	7,200	1.5	1.6	1.02	Local Corridors
NW Lawrenceville	700	6,300	7,000	13.6	18.5	1.36	I-85, I-985, SR 20
Buford/Sugar Hill	700	6,000	6,700	11.9	14.1	1.18	SR 20/Buford Drive, Plunkett Road
Hall County	1,000	4,700	5,700	26.3	37.7	1.43	I-985
Suwanee/Duluth	400	3,100	3,500	16.4	20.9	1.27	I-85, I-985, Plunkett Road
Barrow County	600	1,600	2,200	30.6	47.0	1.53	I-85
East Lawrenceville/NE Snellville/Grayson	600	1,600	2,200	26.1	38.7	1.48	SR 20
West Lawrenceville	200	1,000	1,200	19.6	26.9	1.37	SR 29, I-85

From 4 - Suwanee; Duluth

Suwanee/Duluth subarea

	Year 2015	Year 2040
Population	58,596	86,237
Households	20,423	30,849
Employment	30,830	43,408
Total Daily Commute Trips Beginning in subarea	42,600	64,300
Total Trips Beginning in subarea	190,600	273,800
Average Free-Flow Travel Time (in Minutes) of All Trips	17.8	17.0
Average Congested Travel Time (in Minutes) of All Trips	27.5	43.6
Average Travel Time Index of All Trips	1.54	2.56



Major 2040 E+C Travel Patterns from Suwanee/Duluth subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Suwanee/Duluth	17,100	70,100	87,200	6.2	10.2	1.64	Local corridors
NW Lawrenceville	5,900	18,800	24,700	15.2	25.1	1.65	Lawrenceville-Suwanee Road, SR 120/Duluth Highway
Norcross/Duluth	6,100	16,400	22,500	15.5	42.0	2.70	I-85, Peachtree Industrial Boulevard, Buford Highway
Buford/Sugar Hill	4,600	14,100	18,700	16.6	23.3	1.41	I-85, Peachtree Industrial Boulevard, Buford Highway, Suwanee Dam Road
Berkeley Lake/Peachtree Corners	2,900	7,500	10,400	17.3	55.3	3.19	Peachtree Industrial Boulevard, Buford Highway
North Fulton County	1,800	7,700	9,500	23.3	85.6	3.67	McGinnis Ferry Road, SR 120/Abbotts Bridge Road
Forsyth County	1,800	6,800	8,600	28.3	68.1	2.41	McGinnis Ferry Road
West Lawrenceville	2,300	6,100	8,400	18.5	32.6	1.77	I-85, Lawrenceville-Suwanee Road, Sugarloaf Parkway
Sugarloaf Mills Area	1,800	5,600	7,400	10.9	19.6	1.80	I-85, Sugarloaf Parkway, SR 120
Roswell/Alpharetta/South Forsyth GA 400 Corridor	2,500	4,700	7,200	27.8	105.7	3.81	McGinnis Ferry Road, SR 120/Abbotts Bridge Road

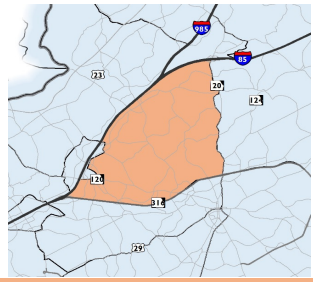
Major 2015 Travel Patterns from Suwanee/Duluth subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Suwanee/Duluth	6,600	50,200	56,800	6.1	7.5	1.24	Local corridors
NW Lawrenceville	3,000	13,800	16,800	15.0	19.1	1.27	Lawrenceville-Suwanee Road, SR 120/Duluth Highway
Norcross/Duluth	3,300	11,600	14,900	15.2	22.6	1.48	I-85, Peachtree Industrial Boulevard, Buford Highway
Buford/Sugar Hill	1,700	9,300	11,000	16.4	19.0	1.16	I-85, Peachtree Industrial Boulevard, Buford Highway, Suwanee Dam Road
North Fulton County	1,700	5,800	7,500	23.3	44.3	1.90	McGinnis Ferry Road, SR 120/Abbotts Bridge Road
North DeKalb County	3,000	3,900	6,900	31.9	56.6	1.77	I-85, Peachtree Industrial Boulevard, Buford Highway
Forsyth County	1,600	5,200	6,800	27.9	46.2	1.66	McGinnis Ferry Road
Berkeley Lake/Peachtree Corners	1,500	5,100	6,600	17.4	27.8	1.59	Peachtree Industrial Boulevard, Buford Highway
Roswell/Alpharetta/South Forsyth GA 400 Corridor	2,900	3,000	5,900	27.8	58.1	2.09	McGinnis Ferry Road, SR 120/Abbotts Bridge Road
Gwinnett Place	1,200	4,200	5,400	15.8	22.0	1.39	I-85, Peachtree Industrial Boulevard, Buford Highway

From 5 - NW Lawrenceville

Northwest Lawrenceville subarea

	Year 2015	Year 2040
Population	74,827	103,645
Households	25,419	35,707
Employment	34,171	47,861
Total Daily Commute Trips Beginning in subarea	52,800	74,300
Total Trips Beginning in subarea	237,300	320,500
Average Free-Flow Travel Time (in Minutes) of All Trips	16.4	15.4
Average Congested Travel Time (in Minutes) of All Trips	24.4	37.2
Average Travel Time Index of All Trips	1.49	2.42



Major 2040 E+C Travel Patterns from Northwest Lawrenceville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NW Lawrenceville	23,700	84,700	108,400	6.6	9.3	1.40	Local corridors
West Lawrenceville	9,500	24,600	34,100	11.4	17.1	1.50	SR 20/Buford Drive, SR 120, SR 317/Lawrenceville-Suwanne Road, Sugarloaf Parkway, I-85
Suwanee/Duluth	6,600	19,500	26,100	15.2	29.7	1.96	SR 317, Old Peachtreee Road, Sugarloaf Parkway, SR 120/Duluth Highway
Norcross/Duluth	5,200	12,400	17,600	16.9	50.8	3.00	I-85, SR 316, SR 120/Duluth Highway
Dacula	3,000	11,100	14,100	17.7	21.2	1.20	SR 316, I-85, Rock Springs Road, Old Peachtree Road, Russell Road/Ridge Road
Lilburn/Mountain Park/NW Snellville	2,300	8,200	10,500	18.8	31.8	1.69	SR 20, SR 120, SR 317/Lawrenceville-Suwanne Road, Sugarloaf Parkway
Sugarloaf Mills Area	2,500	7,700	10,200	10.0	21.1	2.12	I-85, SR 316, SR 120/Duluth Highway
Gwinnett Place	2,100	7,500	9,600	13.2	33.2	2.51	I-85, SR 316, SR 120/Duluth Highway
East Lawrenceville/NE Snellville/Grayson	1,900	7,500	9,400	20.6	26.1	1.27	SR 20, Old Peachtree Road, SR 316, SR 120
North DeKalb County	1,400	7,100	8,500	28.9	121.7	4.22	I-85

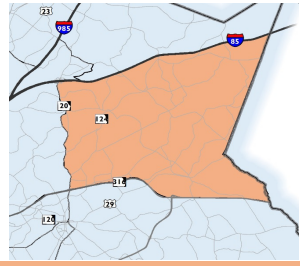
Major 2015 Travel Patterns from Northwest Lawrenceville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NW Lawrenceville	10,700	66,100	76,800	6.7	7.7	1.14	Local corridors
West Lawrenceville	4,400	17,200	21,600	11.5	13.5	1.17	SR 20/Buford Drive, SR 120, SR 317/Lawrenceville-Suwanne Road, Sugarloaf Parkway, I-85
Suwanee/Duluth	3,600	15,200	18,800	15.0	20.6	1.37	SR 317, Old Peachtreee Road, Sugarloaf Parkway, SR 120/Duluth Highway
Norcross/Duluth	3,000	7,800	10,800	17.5	27.2	1.55	I-85, SR 316, SR 120/Duluth Highway
Dacula	1,700	8,200	9,900	17.7	19.3	1.09	SR 316, I-85, Rock Springs Road, Old Peachtree Road, Russell Road/Ridge Road
Gwinnett Place	1,600	6,700	8,300	13.5	20.1	1.49	I-85, SR 316, SR 120/Duluth Highway
North DeKalb County	3,300	5,000	8,300	29.3	55.6	1.90	I-85
Lilburn/Mountain Park/NW Snellville	1,700	6,100	7,800	18.4	21.9	1.19	SR 20, SR 120, SR 317/Lawrenceville-Suwanne Road, Sugarloaf Parkway
Mall of Georgia	700	6,300	7,000	13.6	18.5	1.36	SR 20, I-85, I-985
East Lawrenceville/NE Snellville/Grayson	1,300	5,700	7,000	20.4	22.6	1.11	SR 20, Old Peachtree Road, SR 316, SR 120

From 6 - Dacula

Dacula subarea

	Year 2015	Year 2040
Population	70,231	108,632
Households	24,183	38,526
Employment	19,089	30,998
Total Daily Commute Trips Beginning in subarea	49,800	79,300
Total Trips Beginning in subarea	202,200	314,800
Average Free-Flow Travel Time (in Minutes) of All Trips	19.7	19.7
Average Congested Travel Time (in Minutes) of All Trips	29.9	52.8
Average Travel Time Index of All Trips	1.51	2.68



Major 2040 E+C Travel Patterns from Dacula subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Dacula	18,000	99,300	117,300	7.2	9.6	1.33	Local corridors
NW Lawrenceville	6,600	19,500	26,100	17.6	42.6	2.42	SR 316, I-85, Rock Springs Road, Old Peachtree Road, Russell Road/Ridge Road
Barrow County	4,800	12,700	17,500	24.0	30.0	1.25	I-85, SR 124, SR 324, US 29B/Atlanta Highway
East Lawrenceville/NE Snellville/Grayson	3,400	13,900	17,300	19.7	33.3	1.69	SR 20, Winder Highway, SR 316, Cedars Road, Sugarloaf Parkway, Harbins Road
West Lawrenceville	4,800	10,200	15,000	18.7	50.8	2.71	SR 20, SR 124, SR 316, US 29/Crogan Street
NE Gwinnett	1,900	12,100	14,000	16.0	25.4	1.59	I-985, I-85, SR 211, Hamilton Mill Road, SR 324, Spout Springs Road
Hall County	4,200	7,100	11,300	33.4	69.7	2.09	I-985, I-85, SR 211
Mall of Georgia	1,400	9,400	10,800	14.6	34.4	2.35	I-85, SR 324/Gravel Springs Road
Suwanee/Duluth	3,300	6,900	10,200	25.1	69.6	2.77	I-85, Old Peachtree Road, SR 316, Russell Road, SR 124
Buford/Sugar Hill	3,200	6,500	9,700	24.3	52.1	2.14	I-85, I-985, Sugarloaf Parkway, SR 324, SR 20, Hamilton Mill Road

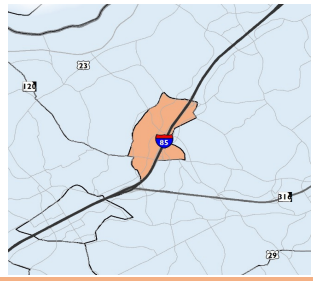
Major 2015 Travel Patterns from Dacula subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Dacula	7,000	61,400	68,400	7.2	7.9	1.10	Local corridors
NW Lawrenceville	4,700	13,500	18,200	17.6	25.6	1.45	SR 316, I-85, Rock Springs Road, Old Peachtree Road, Russell Road/Ridge Road
East Lawrenceville/NE Snellville/Grayson	2,000	8,500	10,500	19.6	23.2	1.18	SR 20, Winder Highway, SR 316, Cedars Road, Sugarloaf Parkway, Harbins Road
Hall County	4,600	5,800	10,400	33.4	48.6	1.46	I-985, I-85, SR 211
Mall of Georgia	1,300	8,800	10,100	14.5	21.0	1.44	I-85, SR 324/Gravel Springs Road
Barrow County	2,000	7,400	9,400	23.9	26.0	1.09	I-85, SR 124, SR 324, US 29B/Atlanta Highway
NE Gwinnett	1,100	8,200	9,300	15.3	19.0	1.24	I-985, I-85, SR 211, Hamilton Mill Road, SR 324, Spout Springs Road
West Lawrenceville	2,700	6,400	9,100	18.7	28.2	1.51	SR 20, SR 124, SR 316, US 29/Crogan Street
Suwanee/Duluth	2,300	4,400	6,700	25.5	41.1	1.61	I-85, Old Peachtree Road, SR 316, Russell Road, SR 124
Buford/Sugar Hill	1,700	4,800	6,500	23.5	32.6	1.38	I-85, I-985, Sugarloaf Parkway, SR 324, SR 20, Hamilton Mill Road

To 7 - Sugarloaf Mills

Sugarloaf Mills subarea

	Year 2015	Year 2040
Population	2,445	8,935
Households	1,222	4,600
Employment	7,679	10,572
Total Daily Commute Trips Ending in subarea	10,000	13,800
Total Trips Ending in subarea	34,900	53,100
Average Free-Flow Travel Time (in Minutes) of All Trips	17.9	15.8
Average Congested Travel Time (in Minutes) of All Trips	26.8	39.0
Average Travel Time Index of All Trips	1.50	2.46



Major 2040 E+C Travel Patterns to Sugarloaf Mills subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NW Lawrenceville	2,500	7,700	10,200	10.0	21.1	2.12	SR 120/Duluth Highway, Sugarloaf Parkway, N Brown Road, I-85
Suwanee/Duluth	1,800	5,600	7,400	10.9	19.6	1.80	SR 120/Duluth Highway, Sugarloaf Parkway, Satellite Boulevard, I-85
West Lawrenceville	1,600	3,400	5,000	11.6	23.3	2.00	I-85, Satellite Boulevard, Pleasant Hill Road, SR 13/Buford Highway, Peachtree Industrial Boulevard
Norcross/Duluth	1,300	3,400	4,700	10.8	13.9	1.28	I-85, Satellite Boulevard
Sugarloaf Mills Area	1,200	2,800	4,000	2.7	3.3	1.23	Local corridors
Lilburn/Mountain Park/NW Snellville	1,000	1,400	2,400	20.5	53.7	2.62	I-85, Old Peachtree Road, SR 120
Dacula	800	1,300	2,100	22.7	72.9	3.20	I-85, Herrington Road/Bethesda School Road/Bethesda Church Road
East Lawrenceville/NE Snellville/Grayson	800	1,000	1,800	25.7	76.8	2.99	I-85, Sugarloaf Parkway, Boggs Road, Satellite Boulevard, Pleasant Hill Road
Hall County	100	1,600	1,700	33.4	137.6	4.12	I-85, SR 13/Buford Highway, Brekinridge Boulevard/Shackleford Road
North Lilburn	400	1,200	1,600	15.4	28.7	1.87	SR 120/Duluth Highway, Pleasant Hill Road, Sugarloaf Parkway, McGinnis Ferry Road

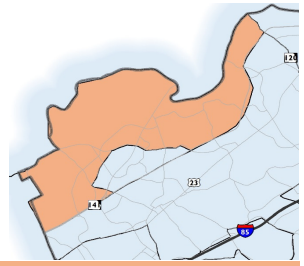
Major 2015 Travel Patterns to Sugarloaf Mills subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
NW Lawrenceville	1,300	4,700	6,000	10.3	14.0	1.36	SR 120/Duluth Highway, Sugarloaf Parkway, N Brown Road, I-85
Suwanee/Duluth	900	3,500	4,400	11.1	14.1	1.27	SR 120/Duluth Highway, Sugarloaf Parkway, Satellite Boulevard, I-85
West Lawrenceville	800	2,300	3,100	11.8	16.2	1.37	I-85, Satellite Boulevard, Pleasant Hill Road, SR 13/Buford Highway, Peachtree Industrial Boulevard
Norcross/Duluth	600	2,100	2,700	11.4	12.7	1.12	I-85, Satellite Boulevard
Lilburn/Mountain Park/NW Snellville	700	1,000	1,700	19.9	31.8	1.60	Local corridors
East Lawrenceville/NE Snellville/Grayson	700	800	1,500	25.4	42.5	1.68	I-85, Sugarloaf Parkway, Boggs Road, Satellite Boulevard, Pleasant Hill Road
Sugarloaf Mills Area	200	1,200	1,400	2.5	2.6	1.04	I-85
Hall County	500	800	1,300	33.7	55.6	1.65	I-85, SR 13/Buford Highway, Brekinridge Boulevard/Shackleford Road
Dacula	600	700	1,300	23.1	40.0	1.73	I-85, Herrington Road/Bethesda School Road/Bethesda Church Road
North Lilburn	400	800	1,200	15.7	21.0	1.34	SR 120/Duluth Highway, Pleasant Hill Road, Sugarloaf Parkway, McGinnis Ferry Road

From 8-Berkeley Lake/Peachtree Corners

Berkeley Lake/Peachtree Corners subarea

	Year 2015	Year 2040
Population	47,594	64,872
Households	19,192	26,882
Employment	24,488	36,013
Total Daily Commute Trips Beginning in subarea	36,100	50,100
Total Trips Beginning in subarea	152,900	205,200
Average Free-Flow Travel Time (in Minutes) of All Trips	15.6	14.6
Average Congested Travel Time (in Minutes) of All Trips	22.6	32.4
Average Travel Time Index of All Trips	1.45	2.22



Major 2040 E+C Travel Patterns from Berkeley Lake/Peachtree Corners subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Berkeley Lake/Peachtree Corners	10,700	40,700	51,400	5.2	8.2	1.56	Local corridors
Norcross/Duluth	8,200	21,500	29,700	11.0	18.4	1.67	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
North DeKalb County	7,600	16,200	23,800	17.3	40.0	2.31	Peachtree Industrial Boulevard, SR 141/Peachtree Parkway, SR 13/Buford Highway
North Fulton County	3,200	18,000	21,200	14.9	38.9	2.62	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway, Pleasant Hill Road, SR 120/Duluth Highway
Technology Park Employment Area	5,200	9,700	14,900	8.6	16.7	1.94	SR 141/Peachtre Parkway, SR 140/Holcomb Bridge Road, Medlock Bridge Road
Perimeter	3,200	6,900	10,100	19.3	64.2	3.33	SR 141/Peachtree Industrial Boulevard, I-285, Dunwoody Club Road/Mt. Vernon Road
Best Friend Road/Button Gwinnett Drive Employment Area	2,000	4,200	6,200	13.2	31.1	2.36	SR 140/Jimmy Carter Boulevard, Peachtree Industrial Boulevard, I-85, Simpson Circle/Hopkins Mill Road
Roswell/Alpharetta/South Forsyth GA 400 Corridor	1,600	4,600	6,200	22.2	63.4	2.86	SR 140/Holcomb Bridge Road, SR 120, Medlock Bridge Road, Old Alabama Road
Buckhead/Lindbergh	1,500	2,900	4,400	25.7	73.3	2.85	I-85, SR 13/Buford Highway, SR 141/Peachtree Road/Peachtree Industrial Boulevard
Suwanee/Duluth	500	3,700	4,200	17.3	22.2	1.28	Peachtree Industrial Boulevard, SR 13/Buford Highway

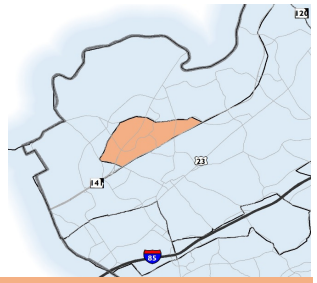
Major 2015 Travel Patterns from Berkeley Lake/Peachtree Corners subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Berkeley Lake/Peachtree Corners	4,100	31,300	35,400	5.3	6.4	1.19	Local corridors
Norcross/Duluth	4,200	15,900	20,100	11.1	13.4	1.20	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
North DeKalb County	4,800	12,700	17,500	17.5	25.0	1.43	Peachtree Industrial Boulevard, SR 141/Peachtree Parkway, SR 13/Buford Highway
North Fulton County	2,400	13,600	16,000	15.2	23.9	1.57	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway, Pleasant Hill Road, SR 120/Duluth Highway
Technology Park Employment Area	2,400	7,200	9,600	8.3	10.9	1.31	SR 141/Peachtre Parkway, SR 140/Holcomb Bridge Road, Medlock Bridge Road
Perimeter	2,900	5,000	7,900	19.5	36.5	1.87	SR 141/Peachtree Industrial Boulevard, I-285, Dunwoody Club Road/Mt. Vernon Road
Roswell/Alpharetta/South Forsyth GA 400 Corridor	2,100	3,300	5,400	22.2	38.6	1.74	SR 140/Holcomb Bridge Road, SR 120, Medlock Bridge Road, Old Alabama Road
Buckhead/Lindbergh	1,700	2,000	3,700	25.7	41.5	1.62	I-85, SR 13/Buford Highway, SR 141/Peachtree Road/Peachtree Industrial Boulevard
Suwanee/Duluth	600	2,900	3,500	17.4	19.8	1.14	Peachtree Industrial Boulevard, SR 13/Buford Highway
Best Friend Road/Button Gwinnett Drive Employment Area	900	2,300	3,200	12.6	17.1	1.36	SR 140/Jimmy Carter Boulevard, Peachtree Industrial Boulevard, I-85, Simpson Circle/Hopkins Mill Road

To 9-Technology Park Emp Area

Technology Park subarea

	Year 2015	Year 2040
Population	1,543	2,703
Households	789	1,454
Employment	18,316	25,523
Total Daily Commute Trips Ending in subarea	21,800	30,200
Total Trips Ending in subarea	56,000	82,100
Average Free-Flow Travel Time (in Minutes) of All Trips	20.1	19.7
Average Congested Travel Time (in Minutes) of All Trips	33.6	60.8
Average Travel Time Index of All Trips	1.67	3.09



Major 2040 E+C Travel Patterns to Technology Park subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Berkeley Lake/Peachtree Corners	5,200	9,700	14,900	8.6	16.7	1.94	SR 141/Peachtree Parkway, SR 140/Holcomb Bridge Road, Medlock Bridge Road
Norcross/Duluth	4,500	9,100	13,600	10.0	25.7	2.57	Peachtree Industrial Boulevard, SR 140/Jimmy Carter Boulevard, Medlock Bridge Road
Technology Park Employment Area	600	6,500	7,100	1.6	2.1	1.37	Local corridors
North DeKalb County	2,500	3,800	6,300	19.9	41.4	2.08	SR 141/Peachtree Industrial Boulevard, SR 13/Buford Highway
North Fulton County	1,900	3,600	5,500	17.3	51.8	3.00	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway
Lilburn/Mountain Park/NW Snellville	1,900	1,200	3,100	26.1	97.3	3.73	SR 140/Jimmy Carter Boulevard, Killian Hill Road, Rockbridge Road
North Lilburn	1,500	1,600	3,100	17.7	53.9	3.04	Indian Trail Road, Harbins Road, Beaver Ruin Road, SR 140/Jimmy Carter Boulevard
Suwanee/Duluth	1,400	1,300	2,700	22.1	83.8	3.80	Peachtree Industrial Boulevard, SR 13/Buford Highway
Metro Atlanta NW	1,200	1,200	2,400	45.0	147.4	3.28	I-85, I-285, I-75
Forsyth County	900	900	1,800	42.0	177.6	4.23	SR 141/Medlock Bridge Road, Abbotts Bridge Road

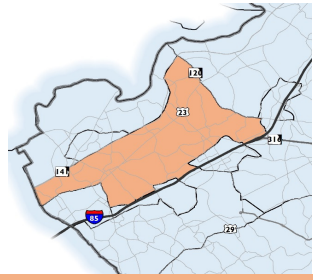
Major 2015 Travel Patterns to Technology Park subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Berkeley Lake/Peachtree Corners	2,400	7,200	9,600	8.3	10.9	1.31	SR 141/Peachtre Parkway, SR 140/Holcomb Bridge Road, Medlock Bridge Road
Norcross/Duluth	1,600	5,400	7,000	10.1	15.3	1.51	Peachtree Industrial Boulevard, SR 140/Jimmy Carter Boulevard, Medlock Bridge Road
North DeKalb County	2,500	3,200	5,700	19.5	27.7	1.42	Local corridors
North Fulton County	2,100	2,900	5,000	17.4	29.3	1.69	SR 141/Peachtree Industrial Boulevard, SR 13/Buford Highway
Technology Park Employment Area	200	3,400	3,600	1.9	2.1	1.10	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway
Metro Atlanta NW	1,300	800	2,100	38.7	69.5	1.79	SR 141/Peachtree Industrial Boulevard, I-285, Dunwoody Club Road/Mt. Vernon Road
North Lilburn	900	1,200	2,100	17.3	28.3	1.64	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway
Lilburn/Mountain Park/NW Snellville	1,200	700	1,900	26.3	49.3	1.88	Peachtree Industrial Boulevard, SR 140/Jimmy Carter Boulevard, Medlock Bridge Road
Suwanee/Duluth	900	800	1,700	22.1	39.9	1.81	I-85, I-285, I-75, SR 140/Holcomb Bridge Road/SR 92/Alabama Road
South DeKalb County	800	600	1,400	34.7	65.8	1.90	I-85, I-285, SR 140/Jimmy Carter Boulevard

From 10-Norcross/Duluth

Norcross/Duluth subarea

	Year 2015	Year 2040
Population	69,107	103,071
Households	26,179	40,887
Employment	56,923	85,750
Total Daily Commute Trips Beginning in subarea	49,500	76,400
Total Trips Beginning in subarea	231,600	343,700
Average Free-Flow Travel Time (in Minutes) of All Trips	15.3	14.2
Average Congested Travel Time (in Minutes) of All Trips	22.3	32.7
Average Travel Time Index of All Trips	1.46	2.30



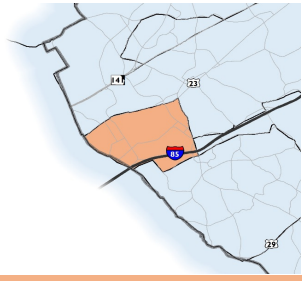
Major 2040 E+C Travel Patterns from Norcross/Duluth subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Norcross/Duluth	23,200	71,900	95,100	6.4	11.6	1.82	Local corridors
North DeKalb County	7,100	22,000	29,100	18.1	51.5	2.84	I-85, SR 141/Peachtree Industrial Boulevard, SR 13/Buford Highway
Berkeley Lake/Peachtree Corners	5,400	23,000	28,400	11.0	22.8	2.07	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
Gwinnett Place	4,500	16,300	20,800	8.6	11.2	1.30	Pleasant Hill Road, Satellite Boulevard
North Lilburn	4,500	15,400	19,900	12.8	23.2	1.81	Pleasant Hill Road, SR 140/Jimmy Carter Boulevard, SR 378/Beaver Ruin Road
North Fulton County	2,100	11,800	13,900	19.1	54.8	2.87	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway, Pleasant Hill Road, SR 120/Duluth Highway
Technology Park Employment Area	4,500	9,100	13,600	10.0	25.7	2.57	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
Suwanee/Duluth	2,700	10,800	13,500	15.7	21.4	1.36	I-85, Peachtree Industrial Boulevard, SR 13/Buford Highway
Best Friend Road/Button Gwinnett Drive Employment Area	3,300	9,600	12,900	11.3	31.7	2.80	I-85, SR 13/Buford Highway, SR 141/Peachtree Industrial Boulevard, SR 140/Jimmy Carter Boulevard
NW Lawrenceville	2,600	7,900	10,500	17.2	22.4	1.31	SR 120/Duluth Highway, I-85, SR 316

Major 2015 Travel Patterns from Norcross/Duluth subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Norcross/Duluth	8,900	48,500	57,400	6.7	8.1	1.21	Local corridors
North DeKalb County	5,200	14,900	20,100	18.6	29.2	1.57	I-85, SR 141/Peachtree Industrial Boulevard, SR 13/Buford Highway
Berkeley Lake/Peachtree Corners	2,400	15,200	17,600	11.1	14.7	1.33	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
Gwinnett Place	2,500	14,600	17,100	8.8	9.9	1.13	Pleasant Hill Road, Satellite Boulevard
North Lilburn	2,200	11,200	13,400	12.7	15.4	1.22	Pleasant Hill Road, SR 140/Jimmy Carter Boulevard, SR 378/Beaver Ruin Road
North Fulton County	1,900	9,100	11,000	19.0	32.0	1.69	SR 140/Holcomb Bridge Road, SR 141/Peachtree Parkway, Pleasant Hill Road, SR 120/Duluth Highway
Suwanee/Duluth	1,700	8,100	9,800	15.4	17.8	1.16	I-85, Peachtree Industrial Boulevard, Buford Highway
Perimeter	2,800	4,800	7,600	21.2	44.6	2.11	SR 13/Buford Highway, SR 141/Peachtree Industrial Boulevard, I-285, Dunwoody Club Road/Mt. Vernon Road
Technology Park Employment Area	1,600	5,400	7,000	10.1	15.3	1.51	Peachtree Industrial Boulevard, SR140/Holcomb Bridge Road, Medlock Bridge Road
NW Lawrenceville	1,400	5,500	6,900	17.7	20.3	1.15	Sugarloaf Parkway, I-85, SR 316

To 11-Best Friend Rd./Button Gwinnett Rd.



Best Friend/Button Gwinnett Employment Center subarea

	Year 2015	Year 2040
Population	5,274	6,081
Households	1,555	1,779
Employment	16,419	31,464
Total Daily Commute Trips Ending in subarea	2,900	38,500
Total Trips Ending in subarea	231,600	127,100
Average Free-Flow Travel Time (in Minutes) of All Trips	16.8	19.7
Average Congested Travel Time (in Minutes) of All Trips	23.1	64.4
Average Travel Time Index of All Trips	1.38	3.27

Major 2040 E+C Travel Patterns to Best Friend/Button Gwinnett Employment Center subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
North DeKalb County	7,600	17,400	25,000	14.0	30.3	2.17	SR 13/Buford Highway, I-85
North Lilburn	4,400	10,900	15,300	10.8	35.1	3.25	I-85, SR 140/Jimmy Carter Boulevard
Norcross/Duluth	3,300	9,600	12,900	11.3	31.7	2.80	SR 13/Buford Highway, SR 140/Jimmy Carter Boulevard, Jones Mill Road/Button Gwinnett Drive
Best Friend Road/Button Gwinnett Drive Employment Area	1,000	7,900	8,900	3.4	5.1	1.49	Local corridors
Lilburn/Mountain Park/NW Snellville	3,200	3,900	7,100	21.1	86.0	4.07	US 29/Lawrenceville Highway, SR 140/Jimmy Carter Boulevard, Rockbridge Road
Berkeley Lake/Peachtree Corners	2,000	4,200	6,200	13.2	31.1	2.36	Peachtree Industrial Boulevard, SR 13/Buford Highway, SR 140/Jimmy Carter Boulevard
South DeKalb County	1,500	2,500	4,000	28.4	99.6	3.51	I-20, I-285, I-85
Metro Atlanta NW	1,600	1,900	3,500	42.6	144.5	3.39	I-85, I-285, I-75
North Fulton County	1,000	2,500	3,500	22.4	65.6	2.92	SR 140/Jimmy Carter Boulevard, SR 141/Peachtree Parkway
Perimeter	300	2,700	3,000	17.4	36.5	2.10	SR 13/Buford Highway, I-85, I-285

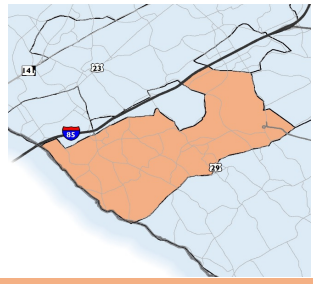
Major 2015 Travel Patterns to Best Friend/Button Gwinnett Employment Center subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Norcross/Duluth	300	57,100	57,400	11.3	13.7	1.21	SR 13/Buford Highway, SR 140/Jimmy Carter Boulevard, Jones Mill Road/Button Gwinnett Drive
North DeKalb County	600	19,500	20,100	13.6	18.2	1.34	SR 13/Buford Highway, I-85
Berkeley Lake/Peachtree Corners	100	17,500	17,600	12.5	16.5	1.32	Peachtree Industrial Boulevard, SR 13/Buford Highway, SR 140/Jimmy Carter Boulevard
Gwinnett Place	0	17,100	17,100	13.5	17.9	1.32	I-85
North Lilburn	100	13,300	13,400	10.3	11.5	1.12	Oakcliff Road/Northcrest Road, Pleasantdale Road, SR 140/Jimmy Carter Boulevard
North Fulton County	100	10,900	11,000	22.0	34.8	1.59	SR 140/Jimmy Carter Boulevard, SR 141/Peachtree Parkway
Suwanee/Duluth	0	9,800	9,800	25.1	31.6	1.26	I-85, SR 13/Buford Highway
Perimeter	200	7,400	7,600	17.0	35.0	2.06	SR 13/Buford Highway, I-85, I-285
Technology Park Employment Area	100	6,900	7,000	12.6	17.3	1.37	SR 140/Jimmy Carter Boulevard, SR 141/Peachtree Parkway
NW Lawrenceville	0	6,900	6,900	22.4	28.0	1.25	I-85

From 12-North Lilburn

North Lilburn subarea

	Year 2015	Year 2040
Population	82,141	100,165
Households	29,694	37,371
Employment	26,110	41,954
Total Daily Commute Trips Beginning in subarea	34,000	68,700
Total Trips Beginning in subarea	189,700	277,900
Average Free-Flow Travel Time (in Minutes) of All Trips	16.7	14.9
Average Congested Travel Time (in Minutes) of All Trips	25.2	38.5
Average Travel Time Index of All Trips	1.51	2.59



Major 2040 E+C Travel Patterns from North Lilburn subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
North Lilburn	15,000	49,600	64,600	6.2	10.4	1.69	Local corridors
North DeKalb County	13,800	33,200	47,000	15.8	46.8	2.97	I-85, US 29/Lawrenceville Highway, Singleton Road, Norcross-Tucker Road
Norcross/Duluth	6,800	18,100	24,900	12.8	30.3	2.36	SR 140/Jimmy Carter Boulevard, Indian Trail Road, Beaver Ruin Road
Lilburn/Mountain Park/NW Snellville	3,800	17,600	21,400	13.6	18.7	1.37	SR 140/Jimmy Carter Boulevard, Killian Hill Road, Rockbridge Road
Best Friend Road/Button Gwinnett Drive Employment Area	4,400	10,900	15,300	10.8	35.1	3.25	SR 140/Jimmy Carter Boulevard
Gwinnett Village/Norcross/Indian Trail	4,000	8,900	12,900	8.2	17.2	2.09	I-85, US 29/Lawrenceville Highway
Gwinnett Place	2,200	9,100	11,300	9.4	17.5	1.86	Jimmy Carter Boulevard, Indian Trail Road, Beaver Ruin Road
Perimeter	1,800	6,500	8,300	20.9	99.0	4.75	Jimmy Carter Boulevard
West Lawrenceville	1,300	6,500	7,800	13.8	19.6	1.42	US 29/Lawrenceville Highway
Buckhead/Lindbergh	1,600	4,100	5,700	24.4	94.1	3.85	I-85, US 29/Lawrenceville Highway

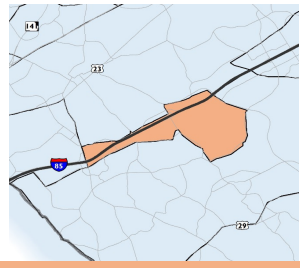
Major 2015 Travel Patterns from North Lilburn subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
North Lilburn	5,800	42,500	48,300	6.2	7.3	1.18	Local corridors
North DeKalb County	3,600	23,400	27,000	15.6	20.1	1.29	I-85, US 29/Lawrenceville Highway, Singleton Road, Norcross-Tucker Road
Lilburn/Mountain Park/NW Snellville	3,400	19,500	22,900	13.7	22.2	1.62	Jimmy Carter Boulevard, Indian Trail Road, Beaver Ruin Road
Norcross/Duluth	2,200	11,200	13,400	12.7	15.4	1.22	Jimmy Carter Boulevard, Killian Hill Road, Rockbridge Road
West Lawrenceville	1,800	7,200	9,000	14.1	22.1	1.57	Pleasant Hill Road, Steve Reynolds Boulevard
South DeKalb County	1,500	4,300	5,800	29.2	47.1	1.61	I-85, US 29/Lawrenceville Highway
East Lawrenceville/NE Snellville/Grayson	1,800	3,100	4,900	26.0	46.9	1.80	Jimmy Carter Boulevard, Indian Trail Road, Beaver Ruin Road
NW Lawrenceville	1,100	3,400	4,500	19.7	32.2	1.64	Jimmy Carter Boulevard
Gwinnett Place	200	3,600	3,800	10.2	14.6	1.43	US 29/Lawrenceville Highway
North Fulton County	900	2,600	3,500	26.2	40.0	1.53	I-85, US 29/Lawrenceville Highway

To 13-GVCID Norcross Indian Trail

Gwinnett Village subarea

	Year 2015	Year 2040
Population	2,150	6,793
Households	839	2,645
Employment	10,370	15,647
Total Daily Commute Trips Beginning in subarea	12,900	19,500
Total Trips Beginning in subarea	44,400	68,600
Average Free-Flow Travel Time (in Minutes) of All Trips	17.2	16.5
Average Congested Travel Time (in Minutes) of All Trips	27.8	48.6
Average Travel Time Index of All Trips	1.62	2.94



Major 2040 E+C Travel Patterns to Gwinnett Village subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
North Lilburn	4,000	8,900	12,900	8.2	17.2	2.09	SR 378/Beaver Ruin Road, Indian Trail Road, Harbins Road, Jimmy Carter Boulevard, Rockbridge Road
Norcross/Duluth	2,600	6,800	9,400	9.9	19.7	1.99	Jimmy Carter Boulevard, SR 378/Beaver Ruin Road, Mitchell Road
Lilburn/Mountain Park/NW Snellville	2,700	3,900	6,600	16.1	56.3	3.49	SR 378/Beaver Ruin Road, Indian Trail Road, Harbins Road, Jimmy Carter Boulevard, Rockbridge Road
North DeKalb County	1,600	4,900	6,500	15.1	30.1	1.99	I-85
Gwinnett Village/Norcross/Indian Trail	800	2,700	3,500	2.9	4.1	1.45	Local corridors
West Lawrenceville	1,000	2,000	3,000	15.1	56.2	3.72	SR 316, Cruse Road, Old Norcross Road
NW Lawrenceville	800	1,800	2,600	17.4	66.6	3.83	I-85, SR 316
Gwinnett Place	100	1,700	1,800	8.8	31.2	3.54	I-85, Satellite Boulevard, Steve Reynolds Boulevard
Suwanee/Duluth	500	1,200	1,700	20.3	69.7	3.44	I-85, Lawrenceville-Suwanee Road, Old Peachtree Road
Berkeley Lake/Peachtree Corners	500	1,100	1,600	16.3	29.5	1.81	SR 140/Holcomb Bridge Road, Jimmy Carter Boulevard, Medlock Bridge Road

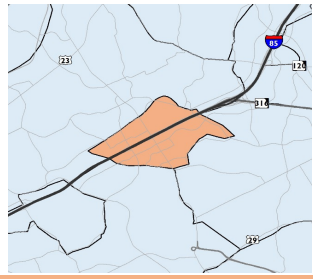
Major 2015 Travel Patterns to Gwinnett Village subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
North Lilburn	1,800	6,300	8,100	8.3	11.0	1.32	SR 378/Beaver Ruin Road, Indian Trail Road, Harbins Road, Jimmy Carter Boulevard, Rockbridge Road
Norcross/Duluth	1,200	4,300	5,500	9.7	12.0	1.24	Jimmy Carter Boulevard, SR 378/Beaver Ruin Road, Mitchell Road
North DeKalb County	1,500	3,800	5,300	14.7	20.5	1.40	I-85
Lilburn/Mountain Park/NW Snellville	1,000	2,500	3,500	16.1	29.4	1.82	SR 378/Beaver Ruin Road, Indian Trail Road, Harbins Road, Jimmy Carter Boulevard, Rockbridge Road
West Lawrenceville	500	1,300	1,800	14.8	26.2	1.77	SR 316, Cruse Road, Old Norcross Road
NW Lawrenceville	500	1,000	1,500	17.5	30.6	1.75	I-85, SR 316
Gwinnett Place	0	1,400	1,400	8.5	14.5	1.69	I-85, Satellite Boulevard, Steve Reynolds Boulevard
Gwinnett Village/Norcross/Indian Trail	100	1,300	1,400	3.1	3.6	1.15	Local corridors
South DeKalb County	600	600	1,200	29.3	53.3	1.82	I-85
Berkeley Lake/Peachtree Corners	300	800	1,100	15.8	19.8	1.25	SR 140/Holcomb Bridge Road, Jimmy Carter Boulevard, Medlock Bridge Road

To 14-Gwinnett Place

Gwinnett Place subarea

	Year 2015	Year 2040
Population	3,504	8,025
Households	1,670	3,537
Employment	19,546	18,661
Total Daily Commute Trips Ending in subarea	24,500	24,100
Total Trips Ending in subarea	117,400	120,500
Average Free-Flow Travel Time (in Minutes) of All Trips	16.4	15.1
Average Congested Travel Time (in Minutes) of All Trips	25.4	38.4
Average Travel Time Index of All Trips	1.54	2.54



Major 2040 E+C Travel Patterns to Gwinnett Place subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Norcross/Duluth	4,500	16,300	20,800	8.6	11.2	1.30	Pleasant Hill Road, Old Norcross Road, Satellite Boulevard
West Lawrenceville	3,500	11,100	14,600	10.0	22.9	2.29	SR 316, Old Norcross Road
North Lilburn	2,200	9,100	11,300	9.4	17.5	1.86	Pleasant Hill Road, Steve Reynolds Boulevard
Gwinnett Place	1,400	8,400	9,800	3.2	4.5	1.44	Local corridors
NW Lawrenceville	2,100	7,500	9,600	13.2	33.2	2.51	I-85, SR 316
Lilburn/Mountain Park/NW Snellville	2,300	6,300	8,600	16.7	49.9	2.98	Pleasant Hill Road, Steve Reynolds Boulevard, Old Norcross Road
Suwanee/Duluth	1,500	4,700	6,200	15.7	35.9	2.28	I-85, Satellite Boulevard, Buford Highway, Peachtree Industrial Boulevard
North DeKalb County	400	4,100	4,500	20.6	41.2	2.00	I-85
East Lawrenceville/NE Snellville/Grayson	1,100	2,600	3,700	24.5	82.9	3.38	SR 316, Old Norcross Road
Dacula	800	2,000	2,800	25.3	85.3	3.38	I-85, SR 316

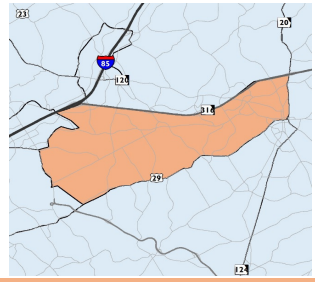
Major 2015 Travel Patterns to Gwinnett Place subarea

From	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Norcross/Duluth	2,500	14,600	17,100	8.8	9.9	1.13	Pleasant Hill Road, Old Norcross Road, Satellite Boulevard
West Lawrenceville	2,400	10,400	12,800	10.2	14.7	1.44	SR 316, Old Norcross Road
North Lilburn	1,700	9,400	11,100	10.2	13.9	1.37	Pleasant Hill Road, Steve Reynolds Boulevard
Gwinnett Place	500	9,400	9,900	3.0	3.5	1.17	Local corridors
Lilburn/Mountain Park/NW Snellville	2,000	6,600	8,600	16.6	28.3	1.70	Pleasant Hill Road, Steve Reynolds Boulevard, Old Norcross Road
NW Lawrenceville	1,600	6,700	8,300	13.5	20.1	1.49	I-85, SR 316
North DeKalb County	1,200	5,100	6,300	20.7	30.7	1.48	I-85
Suwanee/Duluth	1,200	4,200	5,400	15.8	22.0	1.39	I-85, Satellite Boulevard, Buford Highway, Peachtree Industrial Boulevard
East Lawrenceville/NE Snellville/Grayson	1,600	2,600	4,200	24.6	43.6	1.77	SR 316, Old Norcross Road
North Fulton County	700	2,000	2,700	23.2	35.2	1.52	Pleasant Hill Road

From 15-West Lawrenceville

West Lawrenceville subarea

	Year 2015	Year 2040
Population	57,096	74,568
Households	20,917	28,052
Employment	30,630	47,579
Total Daily Commute Trips Beginning in subarea	40,000	54,100
Total Trips Beginning in subarea	177,500	235,800
Average Free-Flow Travel Time (in Minutes) of All Trips	16.0	14.9
Average Congested Travel Time (in Minutes) of All Trips	24.5	37.8
Average Travel Time Index of All Trips	1.53	2.54



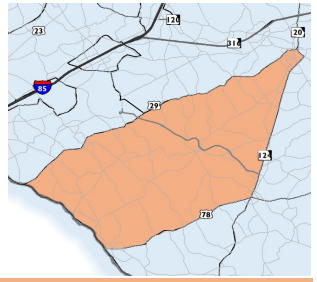
Major 2040 E+C Travel Patterns from West Lawrenceville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
West Lawrenceville	12,300	47,200	59,500	5.8	8.6	1.48	Local corridors
NW Lawrenceville	8,400	22,700	31,100	11.4	17.9	1.58	SR 20/Buford Drive, SR 317/Lawrenceville Suwanee Road, SR 120/Duluth Highway
Lilburn/Mountain Park/NW Snellville	3,600	18,600	22,200	13.4	22.5	1.68	SR 124, Sugarloaf Parkway
Norcross/Duluth	5,300	11,400	16,700	15.5	45.5	2.94	I-85, SR316, SR 120/Duluth Highway, Old Norcross Road
Gwinnett Place	3,500	11,100	14,600	10.0	22.9	2.29	SR 316, Old Norcross Road
North Lilburn	3,800	9,300	13,100	14.0	41.7	2.98	SR 8/Lawrenceville Highway, Cruse Road
East Lawrenceville/NE Snellville/Grayson	1,400	9,500	10,900	15.8	18.6	1.18	SR 316, SR 8/Lawrenceville Highway, Winder Highway
North DeKalb County	2,100	6,900	9,000	26.4	110.1	4.18	I-85
Suwanee/Duluth	2,900	5,700	8,600	18.7	36.1	1.93	SR 317/Lawrenceville Suwanee Road, McGinnis Ferry Road, Sugarloaf Parkway
Dacula	700	4,600	5,300	18.6	23.8	1.28	Winder Highway, Sugarloaf Parkway

Major 2015 Travel Patterns from West Lawrenceville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
West Lawrenceville	5,200	36,000	41,200	5.9	6.8	1.14	Local corridors
NW Lawrenceville	3,900	17,500	21,400	11.5	14.2	1.24	SR 20/Buford Drive, SR 317/Lawrenceville Suwanee Road, SR 120/Duluth Highway
Lilburn/Mountain Park/NW Snellville	2,200	15,000	17,200	12.9	15.4	1.19	SR 124, Sugarloaf Parkway
Gwinnett Place	2,400	10,400	12,800	10.2	14.7	1.44	SR 316, Old Norcross Road
Norcross/Duluth	2,800	7,900	10,700	15.8	25.2	1.59	I-85, SR316, SR 120/Duluth Highway, Old Norcross Road
North Lilburn	1,800	7,200	9,000	14.1	22.1	1.57	SR 8/Lawrenceville Highway, Cruse Road
North DeKalb County	3,400	4,900	8,300	26.4	50.2	1.90	I-85
East Lawrenceville/NE Snellville/Grayson	900	7,100	8,000	15.5	16.5	1.07	SR 316, SR 8/Lawrenceville Highway, Winder Highway
Suwanee/Duluth	1,600	4,200	5,800	19.0	25.9	1.37	SR 317/Lawrenceville Suwanee Road, McGinnis Ferry Road, Sugarloaf Parkway
Dacula	600	3,100	3,700	18.5	21.0	1.13	Winder Highway, Sugarloaf Parkway

From 16-Lilburn; Mtn. Park; NW Snellville



Lilburn/Mountain Park/Snellville subarea

	Year 2015	Year 2040
Population	117,242	159,134
Households	39,994	56,264
Employment	36,209	54,814
Total Daily Commute Trips Beginning in subarea	82,400	116,200
Total Trips Beginning in subarea	348,500	476,700
Average Free-Flow Travel Time (in Minutes) of All Trips	18.0	16.8
Average Congested Travel Time (in Minutes) of All Trips	28.7	45.2
Average Travel Time Index of All Trips	1.59	2.70

Major 2040 E+C Travel Patterns from Lilburn/Mountain Park/Snellville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Lilburn/Mountain Park/NW Snellville	26,500	125,500	152,000	7.7	13.9	1.80	Local corridors
North DeKalb County	15,900	36,000	51,900	19.1	65.2	3.41	US 78/SR 10/Stone Mountain Highway, Lilburn Stone Mountain Road, Five Forks Trickum Road
North Lilburn	8,700	27,000	35,700	13.7	40.4	2.95	Rockbridge Road, Killian Hill Road, Beaver Ruin Road/Arcado Road, Pleasant Hill Road/Lester Road
West Lawrenceville	7,600	23,700	31,300	13.4	26.7	2.00	Sugarloaf Parkway, Ronald Reagan Parkway, Huff Drive
East Lawrenceville/NE Snellville/Grayson	4,600	24,700	29,300	15.2	19.6	1.29	US 78, Sugarloaf Parkway, Pinehurst Road, Webb Gin House Road
SW Snellville/Rockbridge	2,100	17,400	19,500	12.8	20.8	1.62	SR 264/Bethany Church Road, Rockbridge Road, Hewatt Road
Norcross/Duluth	7,500	10,800	18,300	21.5	71.0	3.30	SR 140/Holcomb Bridge Road, SR 378/Beaver Ruin Road, Pleasant Hill Road
NW Lawrenceville	6,300	10,800	17,100	18.9	39.5	2.10	Sr 124, Sugarloaf Parkway
SE Snellville/SW Loganville	1,300	8,900	10,200	17.2	24.1	1.40	Highpoint Road, Oak Road, Lenora Church Road
South DeKalb County	2,000	7,800	9,800	27.0	61.4	2.28	US 78/Stone Mountain Highway, Killian Hill Road/Bethany Church Road, SR 124/Centreville Highway

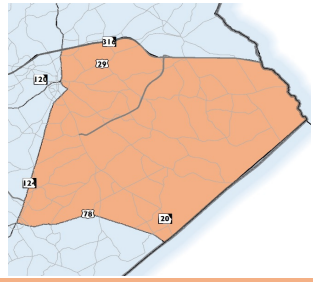
Major 2015 Travel Patterns from Lilburn/Mountain Park/Snellville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
Lilburn/Mountain Park/NW Snellville	9,700	87,700	97,400	7.9	9.9	1.26	Local corridors
North DeKalb County	11,400	24,400	35,800	20.3	35.7	1.76	US 78/SR 10/Stone Mountain Highway, Lilburn Stone Mountain Road, Five Forks Trickum Road
West Lawrenceville	4,200	19,800	24,000	12.8	17.1	1.33	Sugarloaf Parkway, Ronald Reagan Parkway, Huff Drive
East Lawrenceville/NE Snellville/Grayson	2,600	21,000	23,600	14.6	16.4	1.13	US 78, Sugarloaf Parkway, Pinehurst Road, Webb Gin House Road
North Lilburn	3,400	19,500	22,900	13.7	22.2	1.62	Rockbridge Road, Killian Hill Road, Beaver Ruin Road/Arcado Road, Pleasant Hill Road/Lester Road
SW Snellville/Rockbridge	1,400	15,300	16,700	12.4	15.1	1.21	SR 264/Bethany Church Road, Rockbridge Road, Hewatt Road
NW Lawrenceville	3,700	9,100	12,800	18.4	25.9	1.41	SR 124, Sugarloaf Parkway
Norcross/Duluth	4,200	7,600	11,800	21.3	36.9	1.73	SR 140/Holcomb Bridge Road, SR 378/Beaver Ruin Road, Pleasant Hill Road
Gwinnett Place	2,000	6,600	8,600	16.6	28.3	1.70	Pleasant Hill Road
SE Snellville/SW Loganville	900	6,700	7,600	16.9	19.1	1.13	Highpoint Road, Oak Road, Lenora Church Road

From 17-E Lawrenceville/NE Snellville/Grayson

East Lawrenceville/Snellville/Grayon subarea

	Year 2015	Year 2040
Population	99,039	134,698
Households	34,712	48,605
Employment	20,151	29,944
Total Daily Commute Trips Beginning in subarea	70,300	98,600
Total Trips Beginning in subarea	280,300	383,600
Average Free-Flow Travel Time (in Minutes) of All Trips	20.2	20.5
Average Congested Travel Time (in Minutes) of All Trips	30.9	55.5
Average Travel Time Index of All Trips	1.53	2.71



Major 2040 E+C Travel Patterns from East Lawrenceville/Snellville/Grayon subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
East Lawrenceville/NE Snellville/Grayson	16,300	113,500	129,800	8.1	11.3	1.39	Local corridors
Lilburn/Mountain Park/NW Snellville	8,300	32,700	41,000	15.2	37.6	2.47	US 78, Sugarloaf Parkway, Pinehurst Road, Webb Gin House Road
West Lawrenceville	8,600	19,900	28,500	15.9	41.5	2.61	SR 316, SR 8/Lawrenceville Highway, SR 8/Winder Highway, Sugarloaf Parkway
Dacula	5,700	16,000	21,700	19.7	31.8	1.61	SR 124/Braselton Highway, SR 8/Winder Highway, Old Peachtree Road
NW Lawrenceville	6,500	13,700	20,200	20.5	52.4	2.56	SR 20/Buford Drive, SR 316, SR 120/Duluth Highway, Old Peachtree Road
SE Snellville/SW Loganville	2,200	15,100	17,300	16.5	26.2	1.59	SR 124, SR 84/Grayson Parkway
Walton County	4,700	8,600	13,300	29.0	36.4	1.26	Monroe Highway, Loganville Highway, Ozora Road, Bay Creek Church Road
Barrow County	4,500	8,000	12,500	29.6	37.8	1.28	SR 316, Patrick Mill Road
North DeKalb County	2,700	7,800	10,500	36.6	150.6	4.12	US 78/SR 10/Stone Mountain Highway, Lilburn Stone Mountain Road, Five Forks Trickum Road
Norcross/Duluth	2,500	4,700	7,200	30.2	107.3	3.55	SR 316

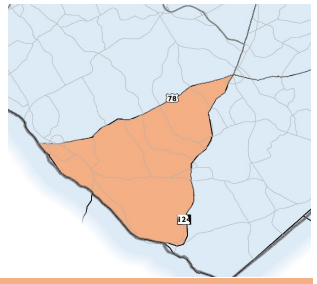
Major 2015 Travel Patterns from East Lawrenceville/Snellville/Grayon subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
East Lawrenceville/NE Snellville/Grayson	7,400	80,900	88,300	8.0	9.0	1.12	Local corridors
Lilburn/Mountain Park/NW Snellville	6,000	26,200	32,200	14.6	21.0	1.44	US 78, Sugarloaf Parkway, Pinehurst Road, Webb Gin House Road
West Lawrenceville	5,000	15,200	20,200	15.6	23.4	1.50	SR 316, SR 8/Lawrenceville Highway, SR 8/Winder Highway, Sugarloaf Parkway
NW Lawrenceville	5,300	11,200	16,500	20.2	31.1	1.54	SR 20/Buford Drive, SR 316, SR 120/Duluth Highway, Old Peachtree Road
Dacula	3,200	10,400	13,600	19.6	23.9	1.22	SR 124/Braselton Highway, SR 8/Winder Highway, Old Peachtree Road
SE Snellville/SW Loganville	1,500	11,300	12,800	16.2	19.1	1.18	SR 124, SR 84/Grayson Parkway
North DeKalb County	5,700	5,600	11,300	35.6	67.7	1.90	US 78/SR 10/Stone Mountain Highway, Lilburn Stone Mountain Road, Five Forks Trickum Road
Walton County	2,400	6,100	8,500	29.0	31.6	1.09	Monroe Highway, Loganville Highway, Ozora Road, Bay Creek Church Road
Barrow County	2,200	5,300	7,500	29.6	33.1	1.12	SR 316, Patrick Mill Road
Norcross/Duluth	3,100	3,200	6,300	30.4	55.2	1.82	SR 316

From 18-SW Snellville/Rockbridge

SW Snellville/Rockbridge subarea

	Year 2015	Year 2040
Population	35,664	51,239
Households	12,151	18,185
Employment	9,128	10,688
Total Daily Commute Trips Beginning in subarea	25,000	37,400
Total Trips Beginning in subarea	112,400	150,100
Average Free-Flow Travel Time (in Minutes) of All Trips	18.6	18.2
Average Congested Travel Time (in Minutes) of All Trips	30.4	52.4
Average Travel Time Index of All Trips	1.64	2.88



Major 2040 E+C Travel Patterns from SW Snellville/Rockbridge subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
SW Snellville/Rockbridge	5,100	31,200	36,300	5.4	8.1	1.51	Local corridors
Lilburn/Mountain Park/NW Snellville	4,800	21,800	26,600	12.8	31.7	2.48	SR 264/Bethany Church Road, Rockbridge Road, Hewatt Road
North DeKalb County	5,900	13,000	18,900	20.4	77.8	3.82	US 78/SR 10/Stone Mountain Highway
SE Snellville/SW Loganville	2,000	9,300	11,300	13.0	15.7	1.20	Centreville Rosebud Road, Lee Road
South DeKalb County	2,400	7,100	9,500	21.5	48.2	2.25	SR 124/Centreville Highway, N. Deshong Road
East Lawrenceville/NE Snellville/Grayson	1,400	5,400	6,800	18.1	30.1	1.67	SR 124/Centreville Highway, US 78/SR 10/Stone Mountain Highway
Metro Atlanta East	1,700	3,200	4,900	29.6	43.4	1.47	SR 124/Centreville Highway, Norris Lake Road
Emory University/CDC/Decatur	1,900	2,300	4,200	27.0	118.7	4.39	US 78/SR 10/Stone Mountain Highway, Rockbridge Road
North Lilburn	1,200	2,300	3,500	22.3	77.7	3.49	Rockbridge Road, Killian Hill Road, Ronald Reagan Parkway
West Lawrenceville	1,000	1,500	2,500	23.9	61.8	2.58	Sugarloaf Parkway, SR 124

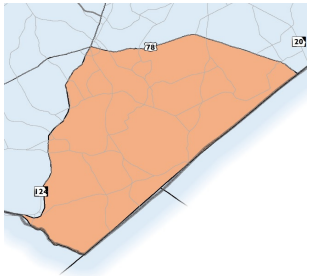
Major 2015 Travel Patterns from SW Snellville/Rockbridge subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
SW Snellville/Rockbridge	1,900	25,800	27,700	5.4	6.1	1.14	Local corridors
Lilburn/Mountain Park/NW Snellville	1,800	16,800	18,600	12.4	18.3	1.48	SR 264/Bethany Church Road, Rockbridge Road, Hewatt Road
North DeKalb County	3,900	9,400	13,300	20.5	37.8	1.85	US 78/SR 10/Stone Mountain Highway
SE Snellville/SW Loganville	800	7,000	7,800	13.1	13.9	1.07	Centreville Rosebud Road, Lee Road
South DeKalb County	1,400	5,100	6,500	21.9	29.6	1.35	SR 124/Centreville Highway, N. Deshong Road
East Lawrenceville/NE Snellville/Grayson	700	4,600	5,300	17.8	22.9	1.28	SR 124/Centreville Highway, US 78/SR 10/Stone Mountain Highway
Metro Atlanta East	1,000	2,300	3,300	30.1	35.0	1.16	SR 124/Centreville Highway, Norris Lake Road
Emory University/CDC/Decatur	1,500	1,700	3,200	27.1	60.6	2.24	US 78/SR 10/Stone Mountain Highway, Rockbridge Road
North Lilburn	600	1,800	2,400	21.7	39.1	1.81	Rockbridge Road, Killian Hill Road, Ronald Reagan Parkway
Downtown Atlanta	1,400	600	2,000	35.9	72.7	2.03	US 78/SR 10/Stone Mountain Highway, Rockbridge Road

From 19-SE Snellville/SW Loganville

SE Snellville/Loganville subarea

	Year 2015	Year 2040
Population	54,314	79,291
Households	18,797	28,444
Employment	9,657	15,287
Total Daily Commute Trips Beginning in subarea	38,300	57,900
Total Trips Beginning in subarea	149,700	215,800
Average Free-Flow Travel Time (in Minutes) of All Trips	20.3	20.4
Average Congested Travel Time (in Minutes) of All Trips	32.8	60.6
Average Travel Time Index of All Trips	1.62	2.96



Major 2040 E+C Travel Patterns from SE Snellville/Loganville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
SE Snellville/SW Loganville	9,800	55,000	64,800	5.7	7.5	1.31	Local corridors
Lilburn/Mountain Park/NW Snellville	4,600	18,000	22,600	17.2	51.1	2.97	Highpoint Road, Oak Road, Lenora Church Road
East Lawrenceville/NE Snellville/Grayson	3,400	16,800	20,200	16.3	30.4	1.86	SR 124, SR 84/Grayson Parkway
SW Snellville/Rockbridge	1,900	15,000	16,900	13.1	31.1	2.38	Centreville Rosebud Road, Lee Road
North DeKalb County	3,700	8,400	12,100	29.2	121.0	4.15	US 78/SR 10/Stone Mountain Highway, Centreville Rosebud Road
Metro Atlanta East	4,100	6,100	10,200	28.9	45.3	1.56	Mink Livsey Road, Rosebud Drive, Lenora Church Road
Walton County	3,900	6,000	9,900	25.2	29.5	1.17	US 78/SR 10/Athens Highway, Rosebud Road
South DeKalb County	2,100	7,000	9,100	25.4	70.9	2.79	SR 124/Turner Hill Road
West Lawrenceville	1,900	2,900	4,800	24.3	72.4	2.98	SR 124
Emory University/CDC/Decatur	2,000	1,800	3,800	36.0	166.4	4.62	Centreville Rosebud Road/Annistown Road, Springdale Road/Everson Road

Major 2015 Travel Patterns from SE Snellville/Loganville subarea

To	Daily Commute Trips	Daily Non Commute Trips	Total Trips	Average Free Flow Travel Time (in minutes)	Average Congested Travel Time (in minutes)	Travel Time Index	Affected Routes Include:
SE Snellville/SW Loganville	3,500	39,100	42,600	5.5	6.0	1.10	Local corridors
Lilburn/Mountain Park/NW Snellville	2,500	12,700	15,200	16.9	27.0	1.60	Highpoint Road, Oak Road, Lenora Church Road
East Lawrenceville/NE Snellville/Grayson	1,800	12,600	14,400	16.0	20.9	1.31	SR 124, SR 84/Grayson Parkway
SW Snellville/Rockbridge	1,200	11,300	12,500	13.1	17.7	1.35	Centreville Rosebud Road, Lee Road
North DeKalb County	4,800	5,500	10,300	29.4	56.7	1.93	US 78/SR 10/Stone Mountain Highway, Centreville Rosebud Road
South DeKalb County	2,100	4,600	6,700	26.3	38.9	1.48	SR 124/Turner Hill Road
Metro Atlanta East	2,400	4,200	6,600	28.5	33.6	1.18	Mink Livsey Road, Rosebud Drive, Lenora Church Road
Walton County	1,400	4,100	5,500	25.4	27.1	1.07	US 78/SR 10/Athens Highway, Rosebud Road
West Lawrenceville	1,200	2,100	3,300	23.9	40.3	1.68	SR 124
Emory University/CDC/Decatur	1,700	1,200	2,900	35.1	75.9	2.16	Centreville Rosebud Road/Annistown Road, Springdale Road/Everson Road

Introduction

Gwinnett County Transit (GCT) provides express, local, and paratransit services for the people of Gwinnett County. It operates six local bus routes and seven express routes into Fulton County. Three of the express routes operated by GCT are designated as Georgia Regional Transportation Authority (GRTA) routes. Communities served by GCT include Doraville, Norcross, Lawrenceville, Lilburn, Peachtree Corners, and Duluth. Major destinations served by transit include Sugarloaf Mills, the Gwinnett Place Mall, MARTA Doraville Station, the Gwinnett Justice & Administration Center, Gwinnett Civic Center & Arena, several park-and-rides along I-85, and downtown Atlanta.

As part of the Gwinnett County Comprehensive Transportation Plan (CTP), Kimley-Horn is examining the current operation of GCT and identifying additional transit needs and opportunities within the County. Also included in the broader CTP effort is a review of the transit system relative to the requirements of Title VI of the Civil Rights Act of 1964, detailed in Federal Transit Administration (FTA) Circular FTA C 4702.1B (October 2012). The FTA Circular establishes reporting requirements for FTA funding recipients to ensure compliance with federal statutes. Proposed modifications to transit service in the County will be evaluated for compliance with Title VI requirements.

This report documents the current operation of the GCT system and serves as a monitoring report of the performance of the transit system relative to federal requirements. It will be used as the basis for the identification of system-level transit system enhancement recommendations proposed in the CTP. This report includes data collected regarding current GCT bus system operations, demographics of Gwinnett County, and compliance with agency-established service standards. It discusses key transit patterns and service attributes, laying the foundation for the recommendation of improvements in the CTP.

Title VI Requirements

The requirements for transit operators to verify compliance with Title VI of the Civil Rights Act of 1964 are outlined in FTA Circular FTA C 4702.1B. Specifically, Chapter 4 of the Circular identifies a *Requirement to Collect and Report Demographic Data*, *Requirement to Monitor Transit Service*, and a *Requirement to Evaluate Service and Fare Changes*. The evaluation of any potential service and fare changes will be subsequent to the development of those recommendations, and thus will be contained in a report at a later stage of this project. This report will include the information required in the *Requirement to Report Demographic Data* and *Requirement to Monitor Transit Service* sections of the Circular.

Requirement to Report Demographic Data

Transit providers that operate 50 or more fixed route vehicles in peak service and are located in Urbanized Areas of 200,000 or more in population are required to collect and report demographic data for the transit system. This information demonstrates to what extent minority groups are beneficiaries of programs that receive Federal financial assistance. GCT currently has more than 50 fixed route vehicles in peak service and operates within the Atlanta, Georgia Urbanized Area, and therefore is required to report demographic data.

The FTA Circular requires data mapping of minority and low-income populations using recent Census data. Providers are also required to collect information on the race, color, national origin, English proficiency, household income, fare type, and travel patterns of their riders using customer surveys.

Requirement to Monitor Transit Service

Transit providers are required to monitor the performance of their transit system relative to their system-wide service standards and policies. A minority transit route is one "in which at least one-third of revenue miles are located in a Census block, Census block group, or traffic analysis zone where the percentage minority population exceeds the percentage minority population in the service area" (FTA Circular). These routes are then analyzed and compared to the established policies and standards. In cases where the assessment exceeds or fails to meet the standards or policies, the discrepancy will be analyzed and steps identified to reduce the effects.

GCT Service

GCT was formed in 2000 and first provided transit service in November 2001 with the operation of three express routes into downtown Atlanta. The three GRTA-designated Xpress routes were added in February 2006 and March 2007. In the fall of 2002 and winter of 2003, five local routes were added to the service.

Service levels grew through 2007, which represented the historical peak service level for GCT. Service reductions were implemented in 2008, 2009, 2010, and 2011, reducing the overall service level, as measured by annual revenue hours of operation, 18 percent below 2007 levels. Meanwhile, productivity grew from 13.4 passengers per revenue hour in 2007 to a high of 19.1 passenger per revenue hour in 2012. A 2012 fare increase impacted ridership and productivity.

Recently, service levels have started to increase towards their previous levels. In 2015, Saturday service was restored for all local routes, and there were service restorations for the express services. GCT currently has 61 peak pullouts and an annualized total of 126,600 revenue hours (an increase of 6.5 percent above the 2011 low). Peak pullouts reflect the maximum number of buses scheduled to be in service at any one time. GCT currently has the funds for a limited increase in service in 2016. It is targeting expanded geographic coverage, moderate frequency increase, and increasing the span of evening service.

GCT maintains the Gwinnett Transit Center and three park-and-ride lots, and shares in the use of MARTA rail stations. Gwinnett County owns the Hewitt Park & Ride facility. All other park-and-ride lots and the Gwinnett Transit Center are owned by the Georgia Department of Transportation and leased by Gwinnett County. Park-and-ride lots include security lighting, parking, passenger pavilions, informational signage and wayfinding, benches, waste receptacles, and digital message signs. Bus stops include bus shelters, benches, information signage and wayfinding, and waste receptacles.

GCT is funded from a combination of farebox, federal/state, and local funds. Approximately one-third of the funding comes from each category. Federal funds are primarily sourced from the FTA Section 5307 Urbanized Area formula category. All service is contracted to and operated by Transdev – a private transit service provider.

GCT currently operates six local routes, three express routes plus one reverse commute route, and three additional GRTA-designated Xpress routes. GCT local routes are shown in Figure 1 and GCT express routes in Figure 2.

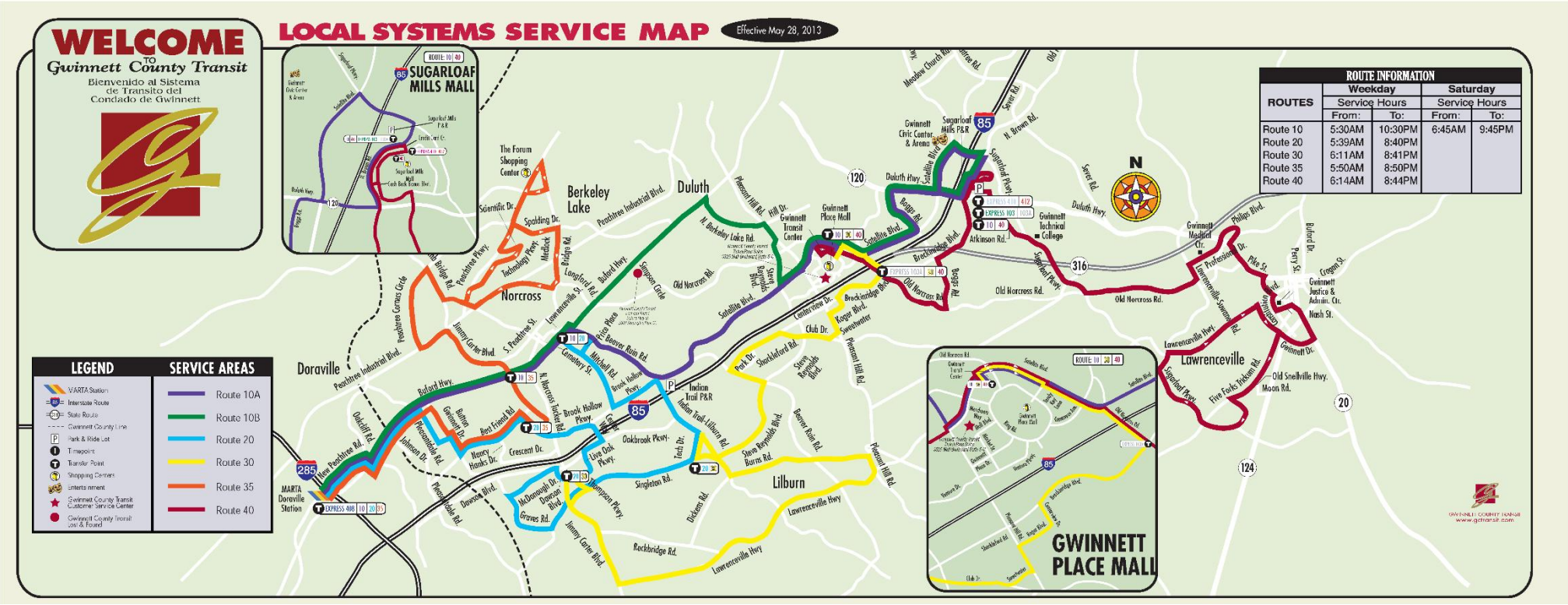


Figure 1. Local Routes

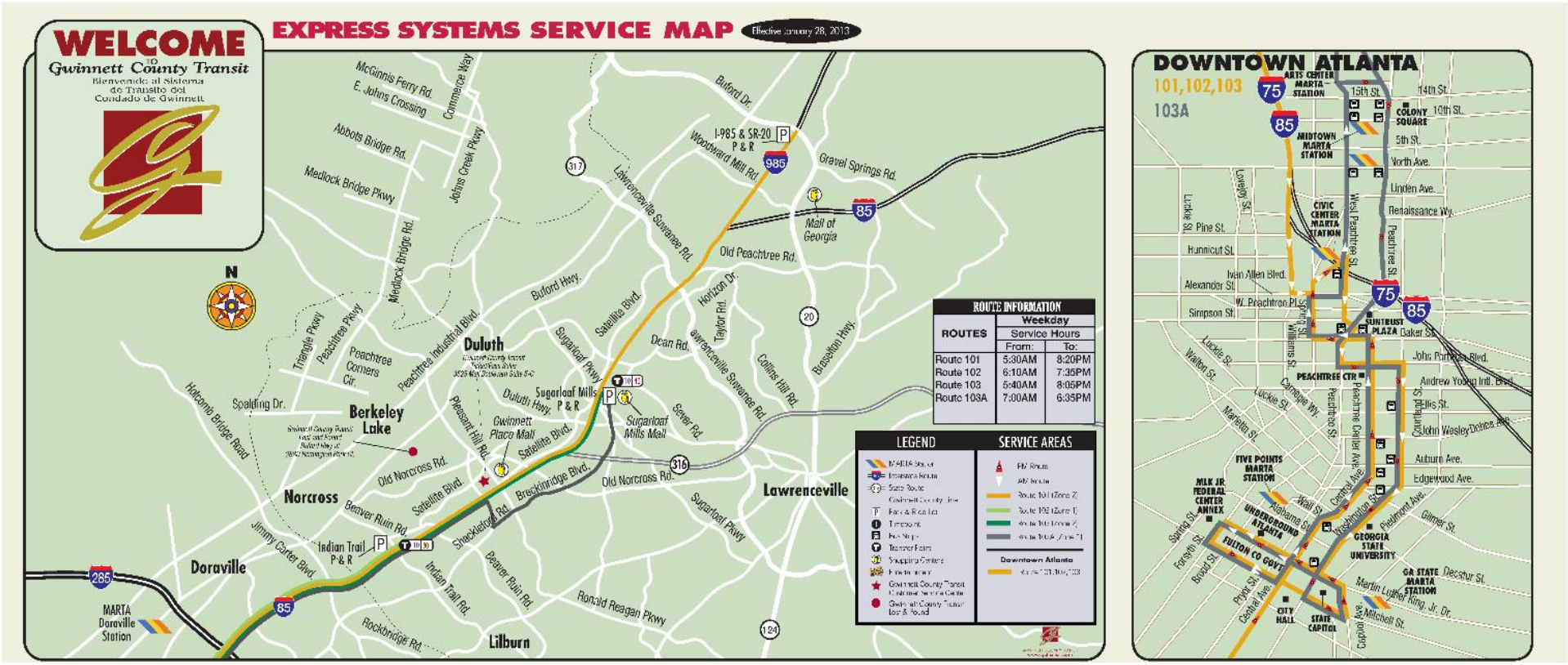


Figure 2. Express Routes

Performance Standards

Gwinnett County Transit complies with Federal requirements in the adoption and monitoring of quantitative service standards. GCT currently has service standards for vehicle load, vehicle headway, on-time performance, and service availability.

Vehicle load standards are in place to balance operational efficiency with customer comfort and safety. Load factor represents the ratio of passengers on board at any given point to the number of seats on the vehicle. A load factor of 1.00 would reflect all of the seats being occupied. The desired vehicle load factor for express routes is lower due to the longer trip lengths and faster speeds than local service. Standing on an express bus is considered less desirable for passengers than standing on a local bus. Load factor standards are shown in Table 1.

TIME PERIOD	LOCAL ROUTE LOAD FACTOR	EXPRESS ROUTE LOAD FACTOR
Weekday		
- AM, PM Peak	1.25	1.10
- Base	1.00	N/A
- Evening	1.00	N/A
Saturday	1.00	N/A

Table 1. GCT Load Factor Standards

Load standards are applied to the average ridership and number of seats per bus for a period of 60 minutes at the maximum load point. Individual trips may exceed the load standard. Routes exceeding load standards should be considered for increased frequency or larger vehicles.

Vehicle headway represents the time between transit vehicles on a given route and is generally based on existing or projected ridership and load standards. Minimum headways are set in order to provide a reliable level of service for customers. Headway standards are shown in Table 2.

TIME PERIOD	LOCAL ROUTE HEADWAY	EXPRESS ROUTE HEADWAY
Weekday		
- AM, PM Peak	30 Minutes	30 Minutes
- Base	60 Minutes	N/A
- Evening	60 Minutes	N/A
Saturday	60 Minutes	N/A

Table 2. GCT Headway Standards

Headway standards are applied to the average frequency on a route over a two-hour period. Service headway between individual pairs of bus trips within that period may exceed the standard. Clock headways (for example, service frequency intervals of 10, 15, 20, 30, and 60 minutes) should be maintained whenever possible for ease of use.

On-time performance measures bus routes completed as scheduled. GCT defines on-term performance as a trip completed within 5 minutes of the scheduled time. GCT has set a standard of 95 percent of all runs completed within 5 minutes of their scheduled time. GCT has also set a standard of 100 percent of runs departing zero (0) minutes early.

Service availability measures the distribution of routes within Gwinnett County. The six local bus routes operated by GCT focus service on the denser, western half of the County, serving minority, low income, and Limited English Proficiency (LEP) populations. The four GCT express routes serve the same portion of the County, but also extend coverage into the northern and eastern parts of the County.

Gwinnett County Transit has also adopted service policies to allow for system service design and operational decisions that guard against disparate impacts. GCT has facility standards for facilities operated by the agency (Gwinnett Transit Center and park-and-ride facilities), which includes a policy that all facilities are to have the same package of amenities. For local route bus stops, amenities are determined on the basis of ridership, adjacent land use, input from the public, equity in distribution within the service area, and field evaluation of physical suitability and feasibility.

Vehicle assignments policy is based on the service type being provided. Buses are assigned to routes based on ridership, with all buses within a given class offering similar amenities. GCT uses 45-foot, 57-seat over-the-road coaches for express service. Local routes are served by a combination of 40-foot and 30-foot buses.

Data Collection

Data for the analysis of routes in the GCT system was gathered via both on-board surveys and Automatic Passenger Counter (APC) methods.

On-board surveys were completed from December 1 to December 3, 2015. Surveys of express routes involved an intercept survey at the various park-and-rides in the County to capture passengers waiting for their bus. Surveys of local routes consisted of 9 surveyors riding buses throughout the transit system and asking passengers to complete a survey. Passengers were asked to provide answers to a variety of questions designed to better understand where they were coming from and going to, the purpose of their trip, and how they got to and from the bus stop, along with a host of demographic questions. Exhibit A includes the survey questions. All local and express GCT designated routes were surveyed.

The survey process yielded 590 surveys, with 560 of those fully completed. A total of 261 surveys were completed on express routes and 133 on local routes. Survey results were calibrated with expansion factors to account for actual ridership volumes on local and express routes.

APC data was collected for the month of May 2015. This data provides the number of passengers boarding and alighting at each bus stop for each bus trip. This information makes it possible to understand both ridership patterns for each route and the load on each bus.

County Demographics

Gwinnett County demographics are provided in Table 3 below. The County is a majority-minority County, with 53.7% of the population identifying as a minority. Hispanic/Latino and Black are the most identified minority ethnicities, with 20.1% and 22.9% of the County population, respectively.

RACE/ETHNICITY	% OF POPULATION IN GWINNETT COUNTY (2010)
White	44.0%
Black	22.9%
American Indian or Alaska Native	0.2%
Asian	10.5%
Native Hawaiian or Other Pacific Islander	0.0%
Some Other Race	0.3%
Two or More Races	2.0%
Hispanic/Latino	20.1%

Table 3. 2010 Race and Ethnic Characteristics

The U.S. Department of Health & Human Services publishes annual guidelines on the designation of poverty levels. The poverty level for a household of four (the benchmark used by GCT) is $24,300. The 2010 Census indicates that 11.4 percent of Gwinnett County households currently have a standard of living beneath the poverty level.

Figures 3 through 6 illustrate the concentration of minority populations and low-income census tracts throughout the County relative to current GCT bus routes. The west-central and southern regions of the County have the largest proportion of minorities.

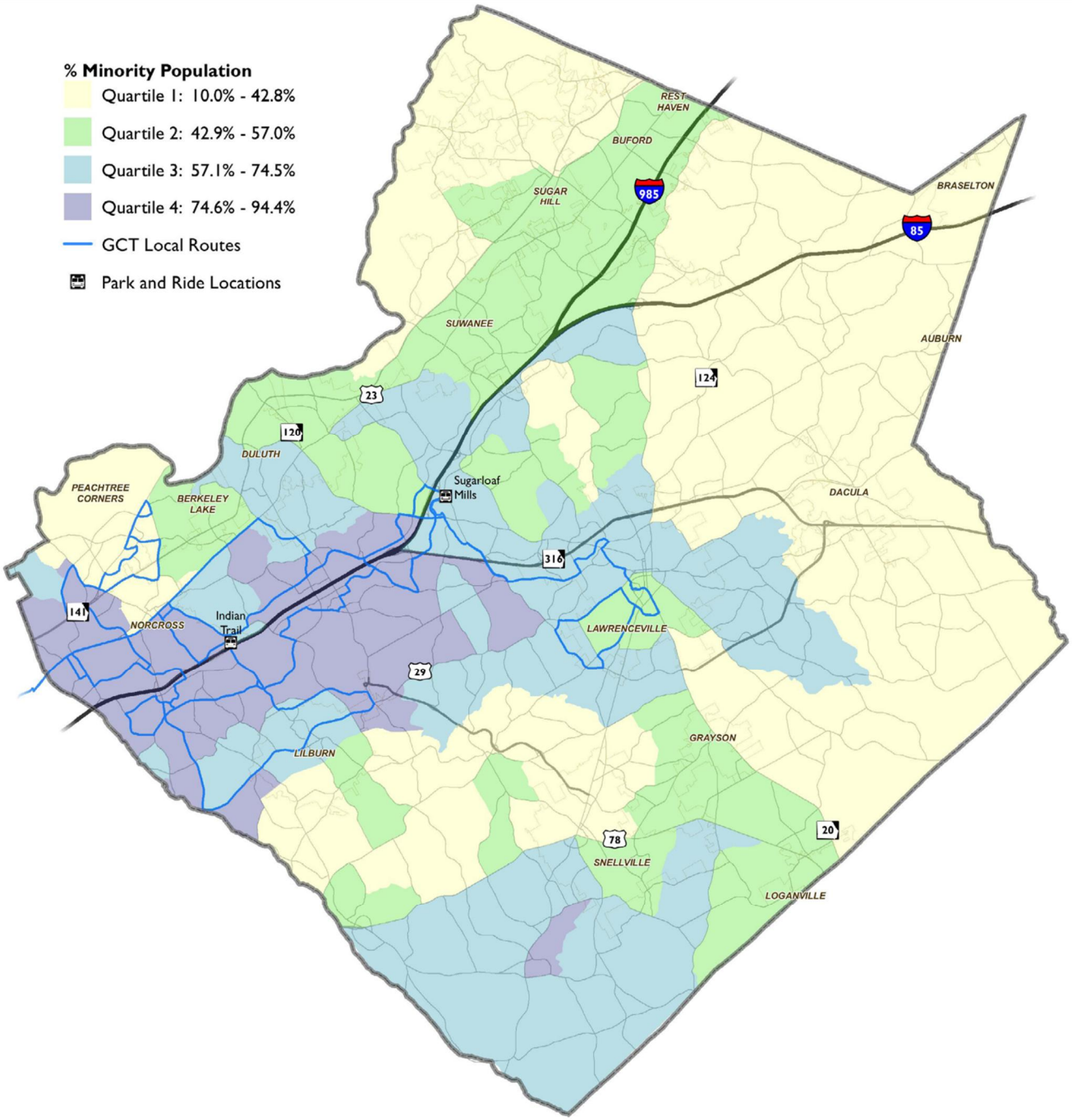


Figure 3. Percentage of Minority Population Relative to Local Routes

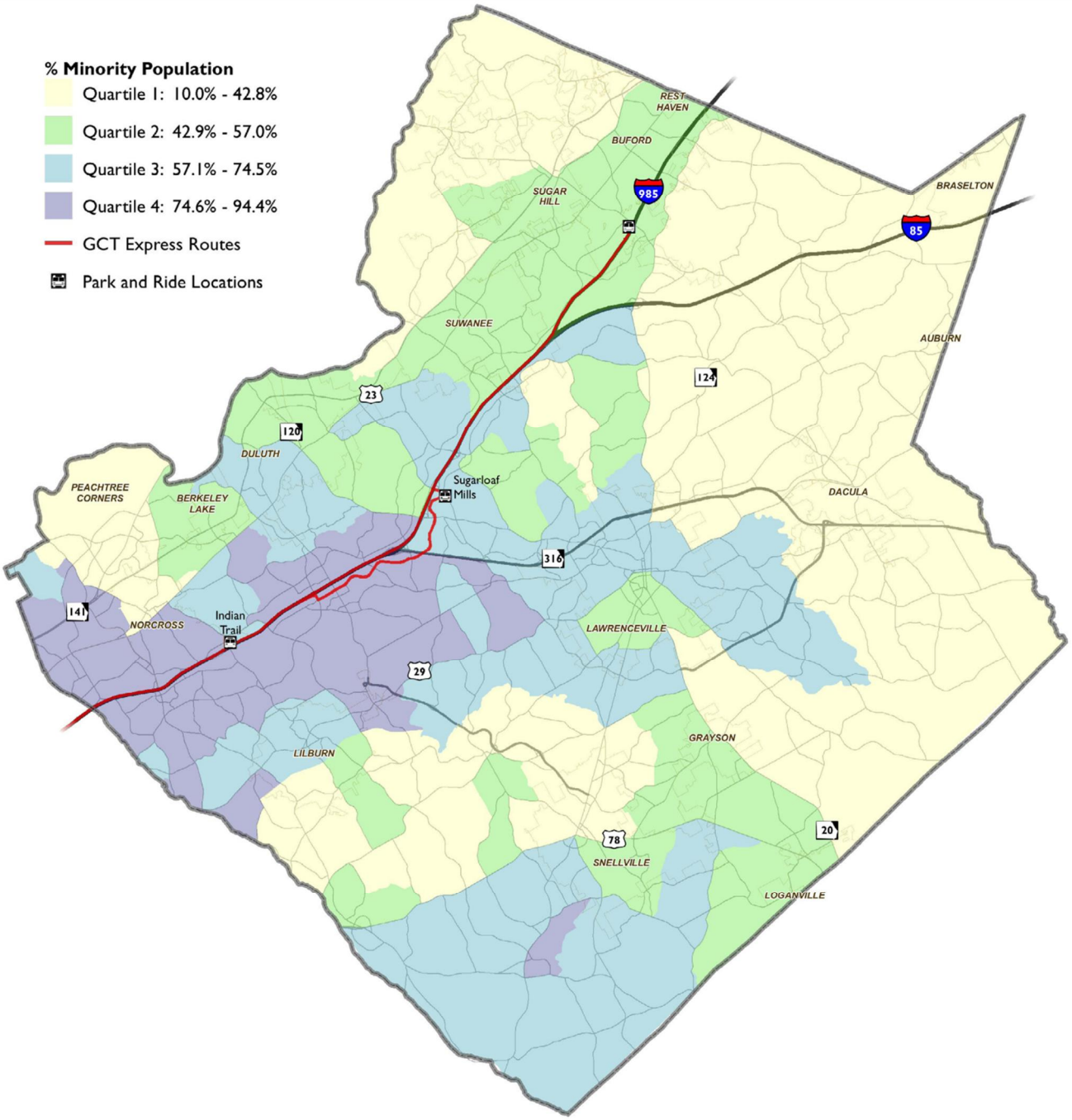


Figure 4. Percentage of Minority Population Relative to Express Routes

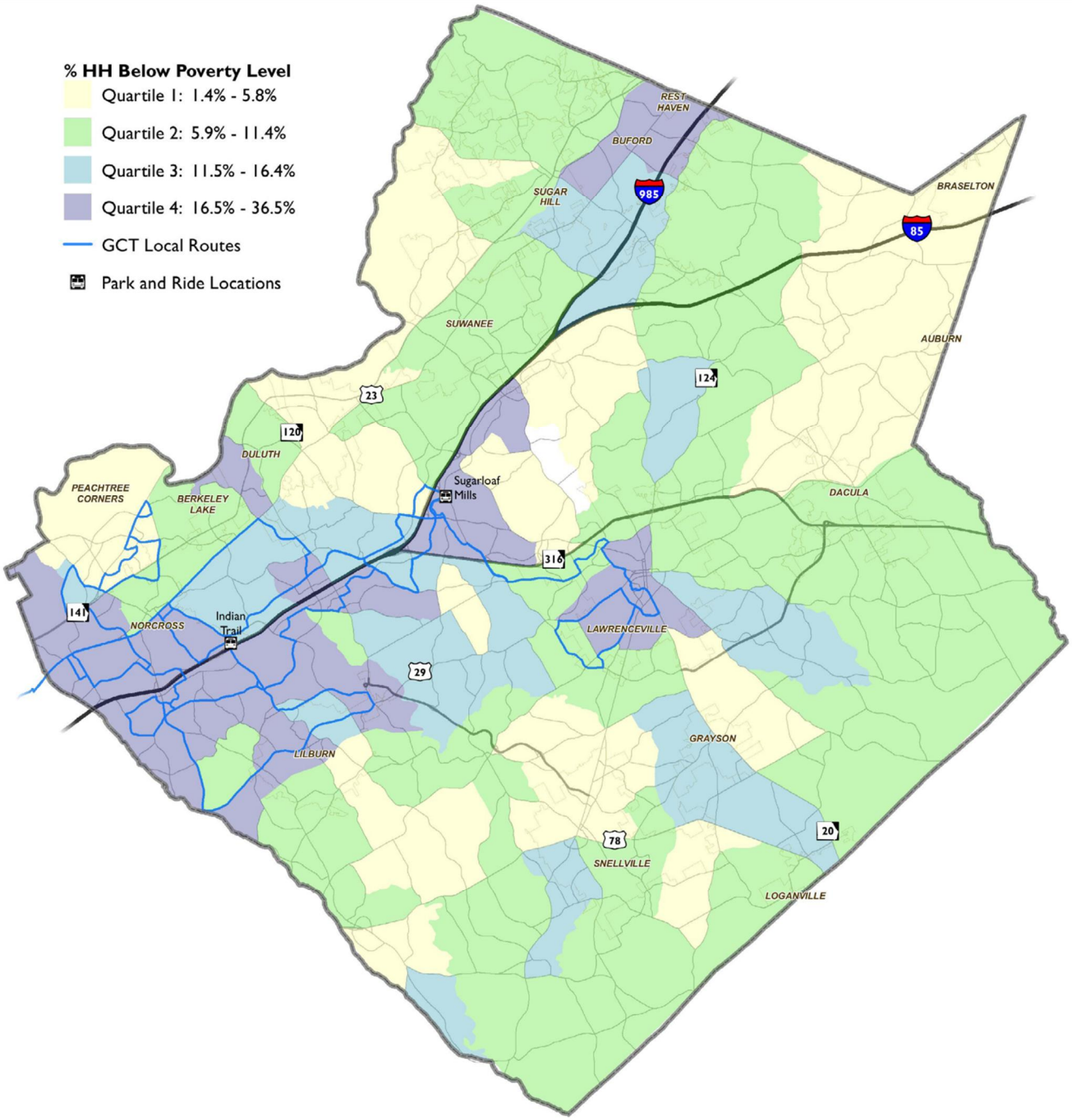


Figure 5. Percentage of Households below the Poverty Line Relative to Local Routes

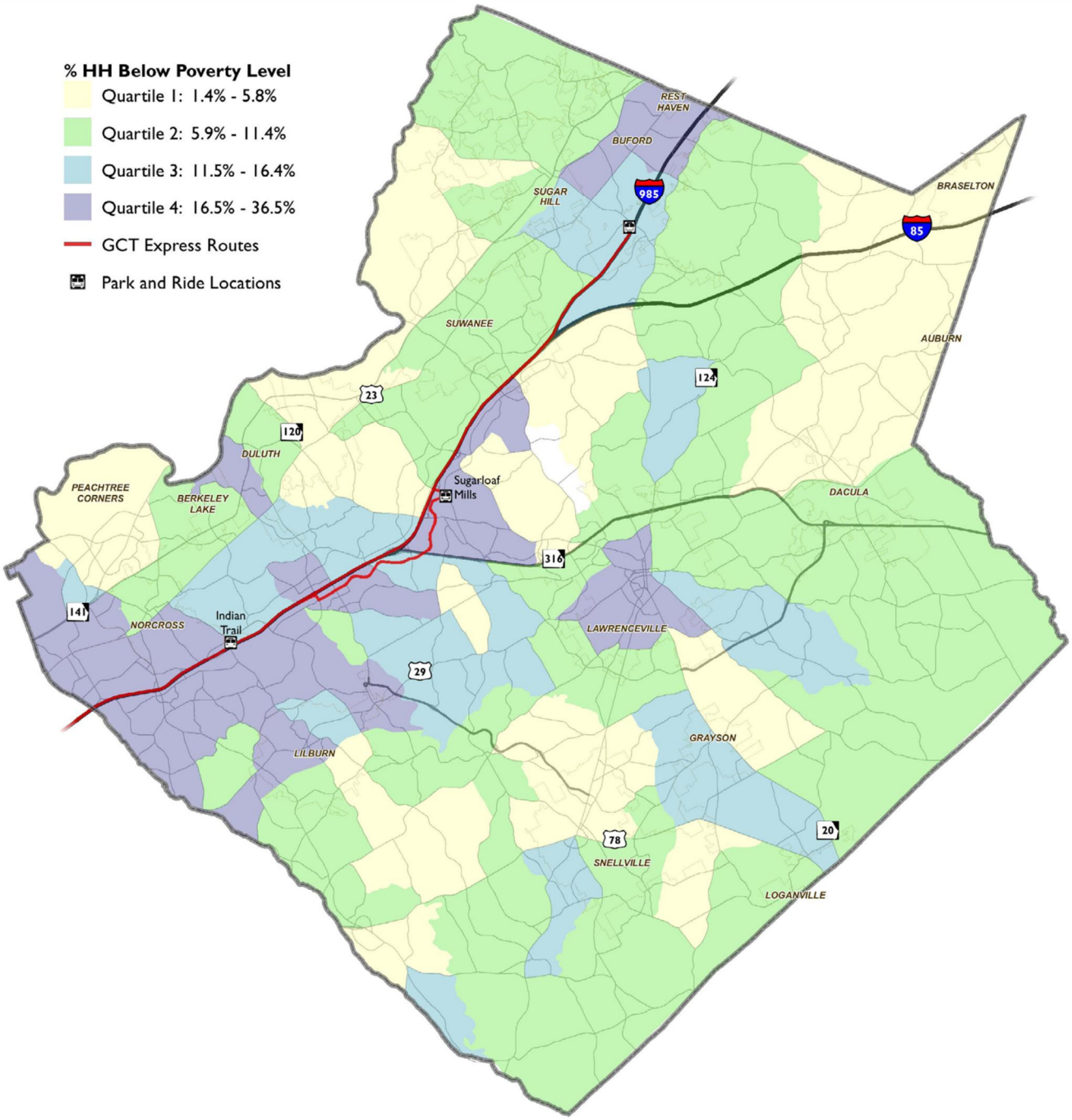


Figure 6. Percentage of Households below the Poverty Line Relative to Express Routes

Figure 7 shows County population density. Figure 8 shows County job density. As shown in Figure 7, the southwest portion of the County, along the I-85 corridor, is the densest in terms of residential population. Employment is densest in the I-85 corridor, Norcross, and Lawrenceville. The northern and eastern reaches of the County do not have significant population density, although there is an employment center in the Mall of Georgia area.

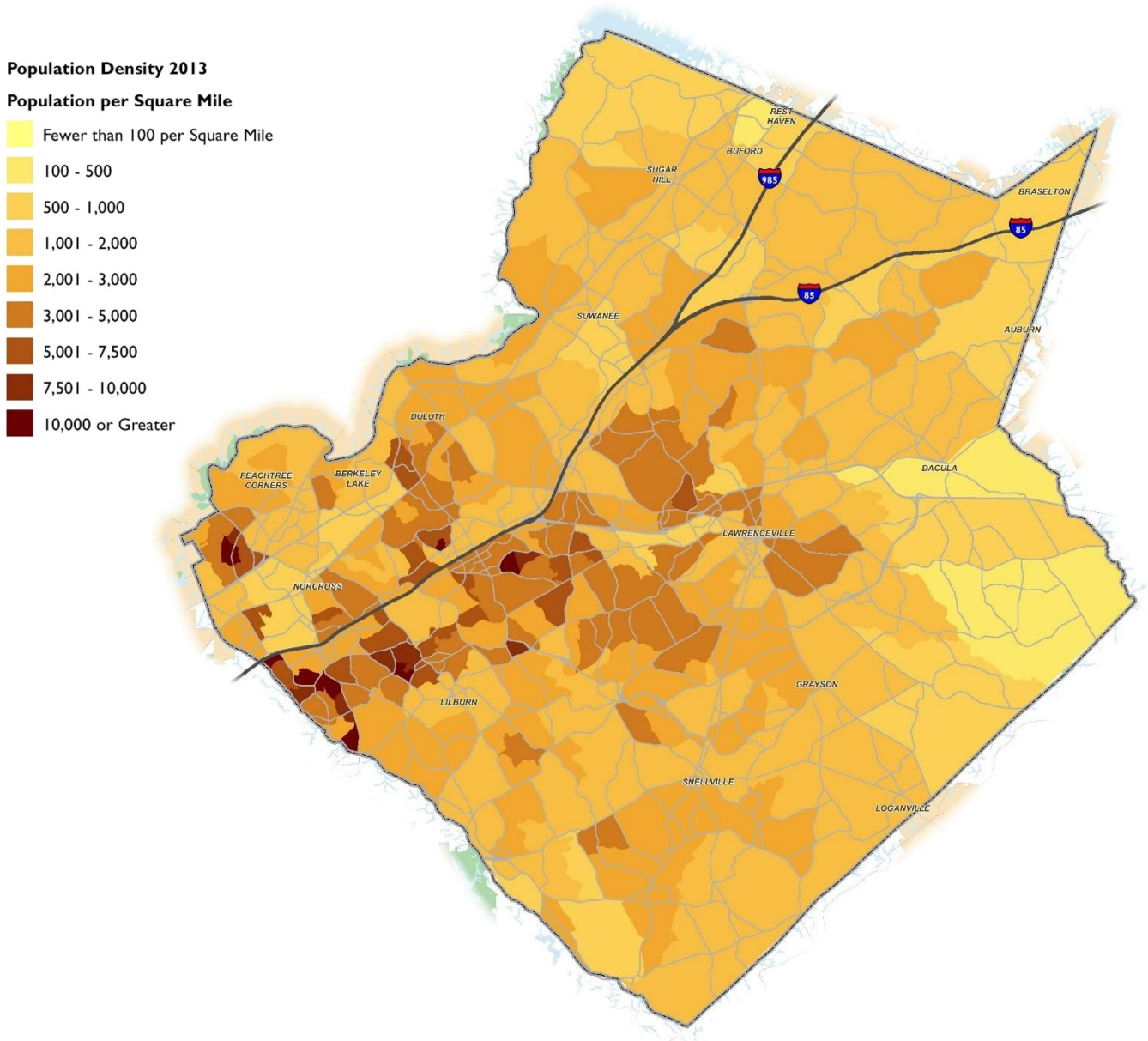


Figure 7. County Population Density

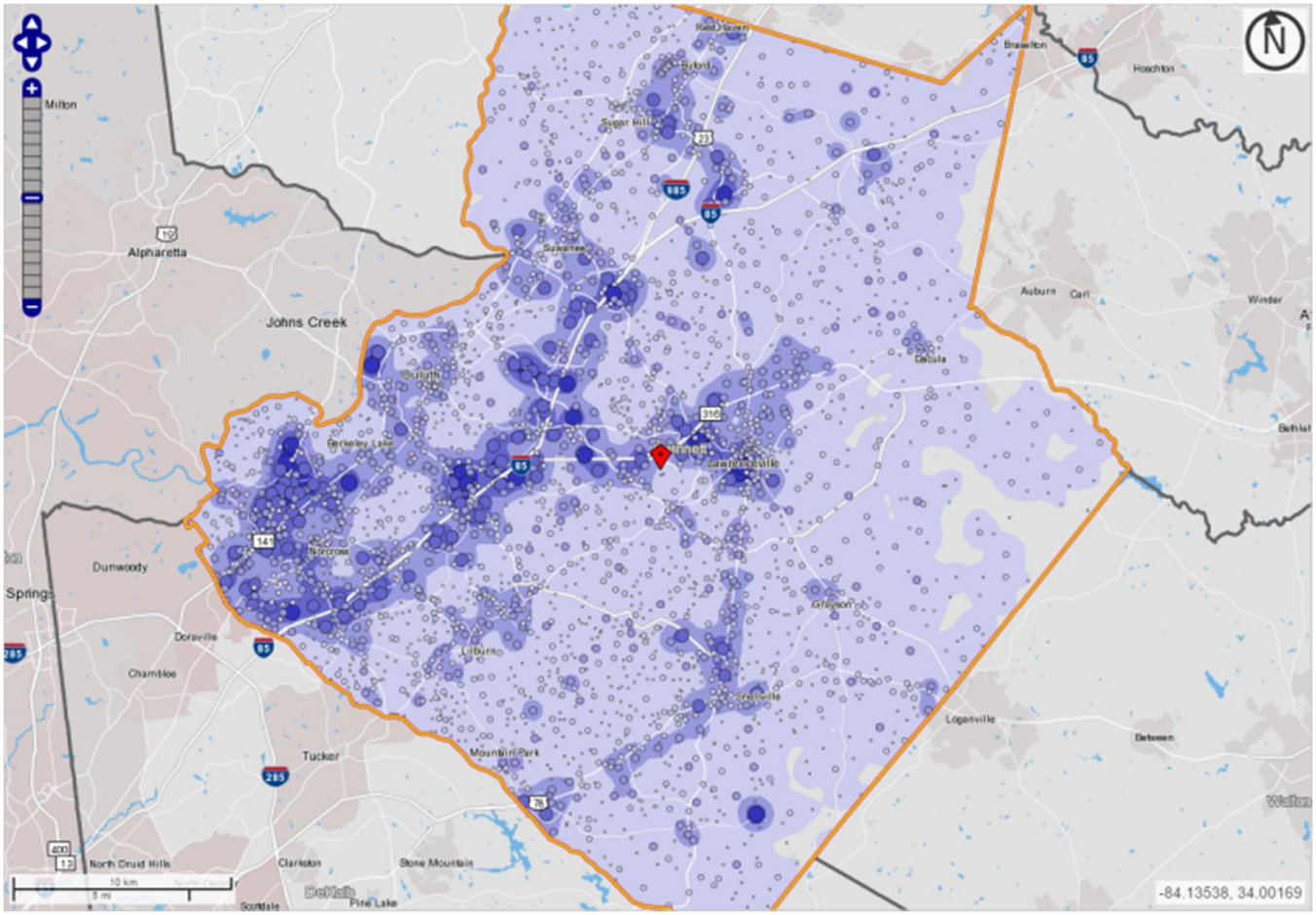


Figure 8. County Employment Density

Demographic information for users of the GCT system, as determined by the on-board survey performed in December 2015, is presented in Figures 9 through 20.

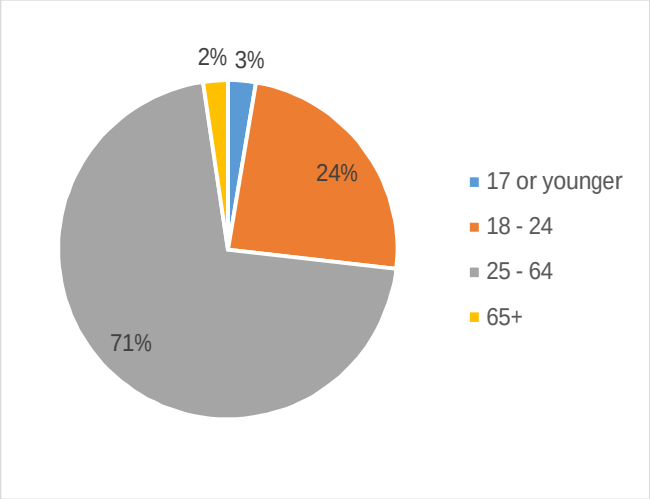


Figure 9. Age

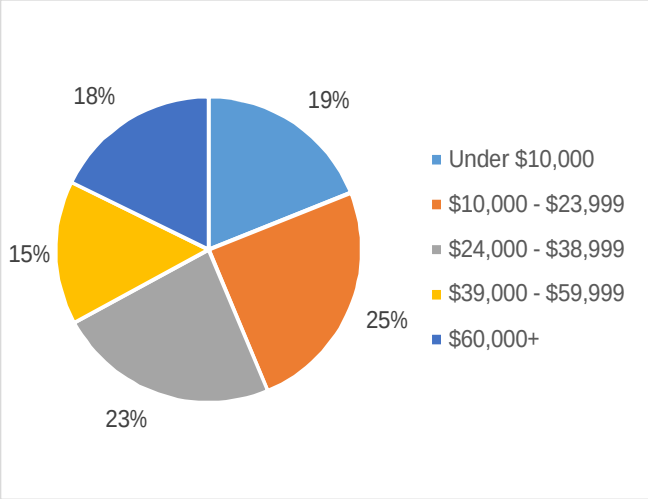


Figure 10. Household Income

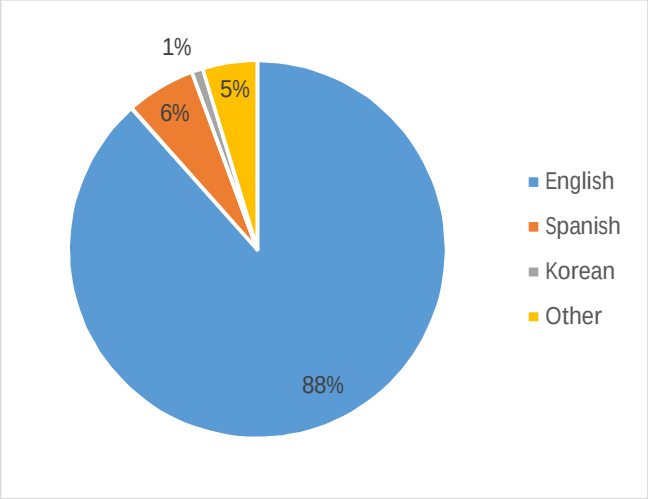


Figure 11. Languages Spoken

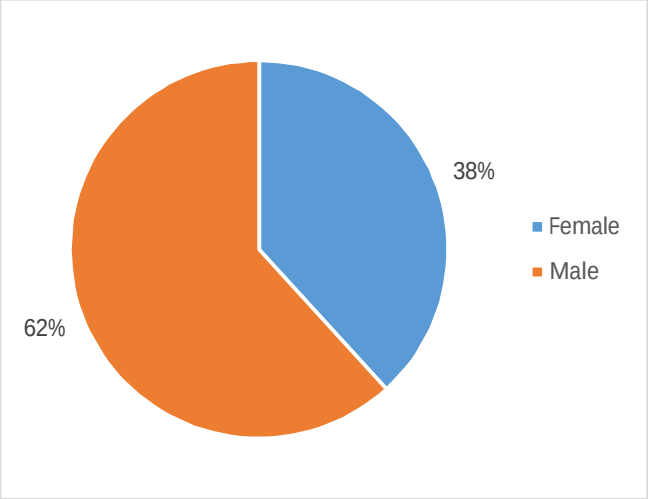


Figure 12. Gender

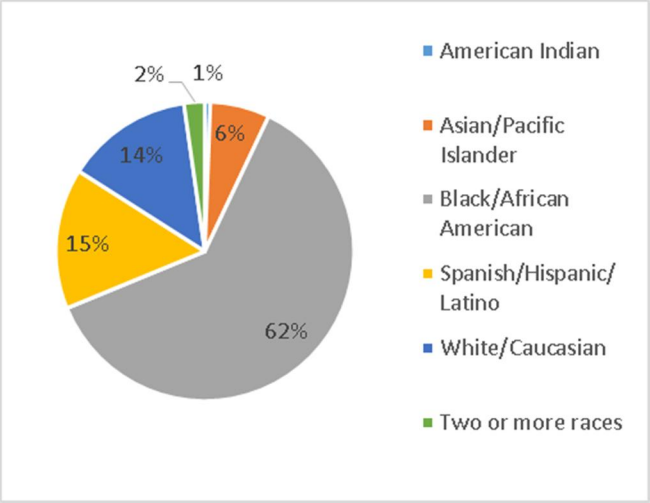


Figure 13. Ethnicity

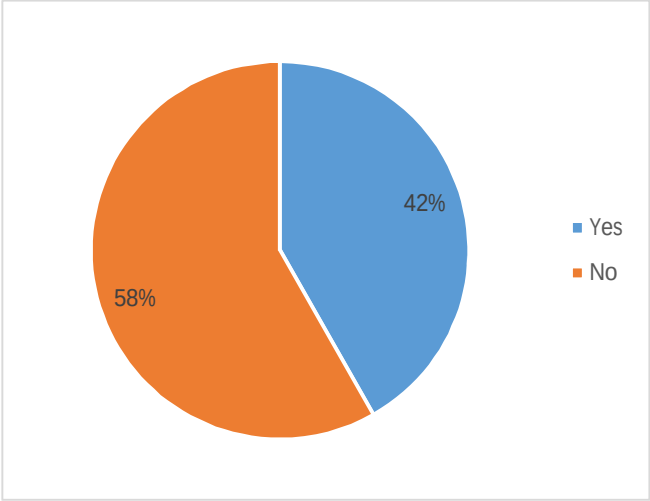


Figure 14. Riders with a Car Available

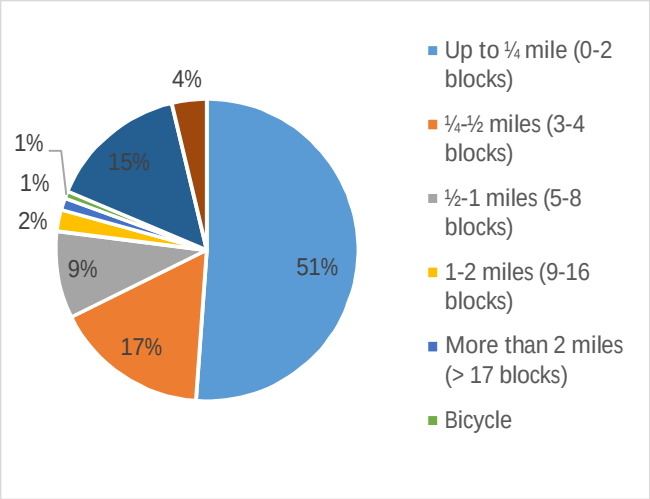


Figure 15. Access Distance to Transit

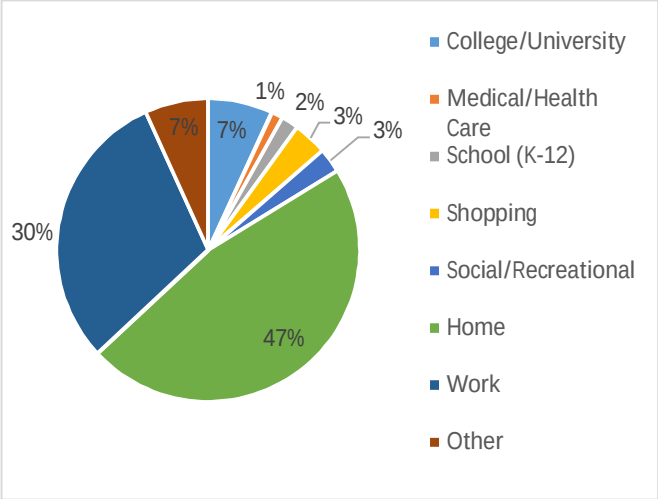


Figure 16. Trip Purpose

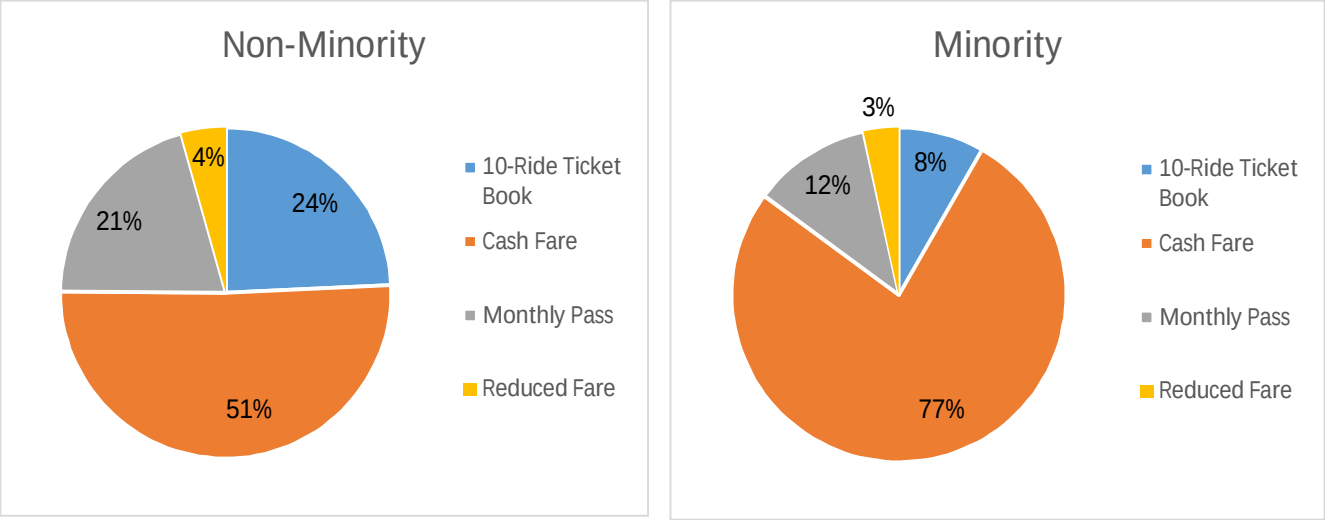


Figure 17. Fare Type Non-Minority Riders versus Minority Riders

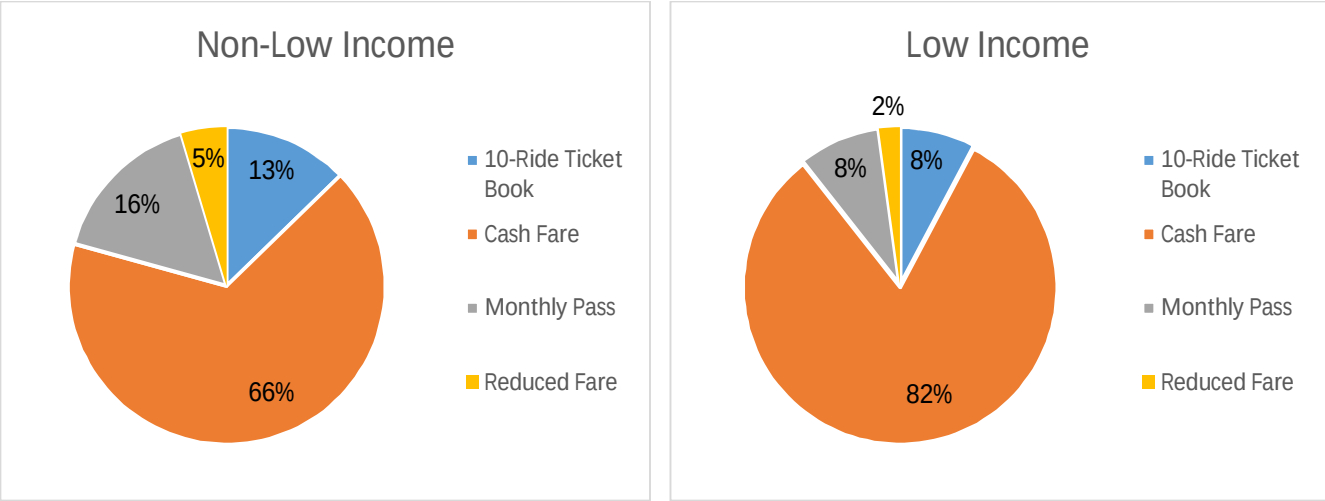


Figure 18. Fare Type Non Low-Income Riders versus Low-Income Riders

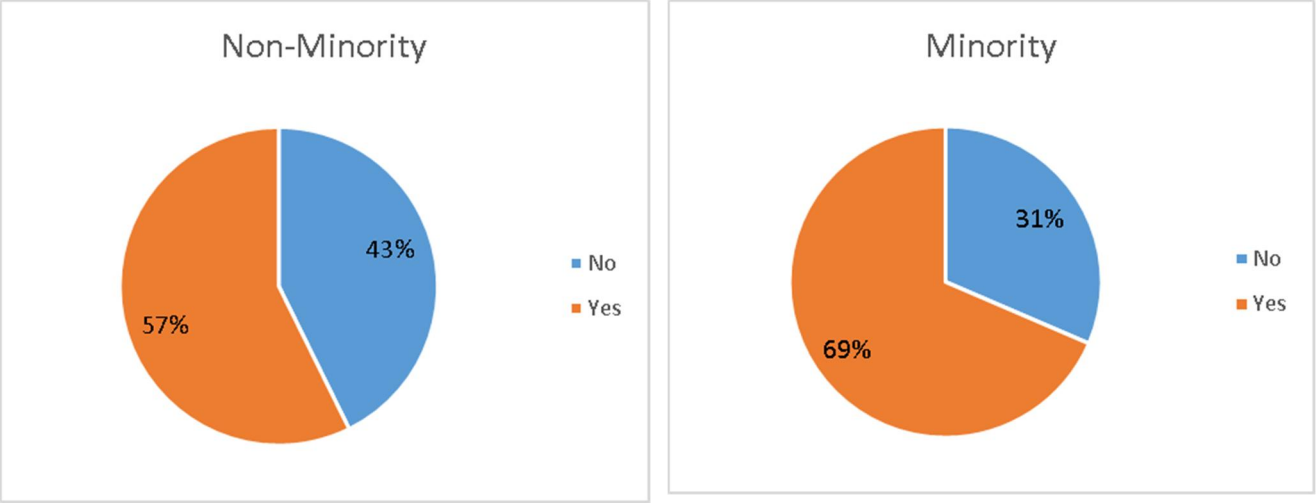


Figure 19. Breeze Card Use Non-Minority Riders versus Minority Riders

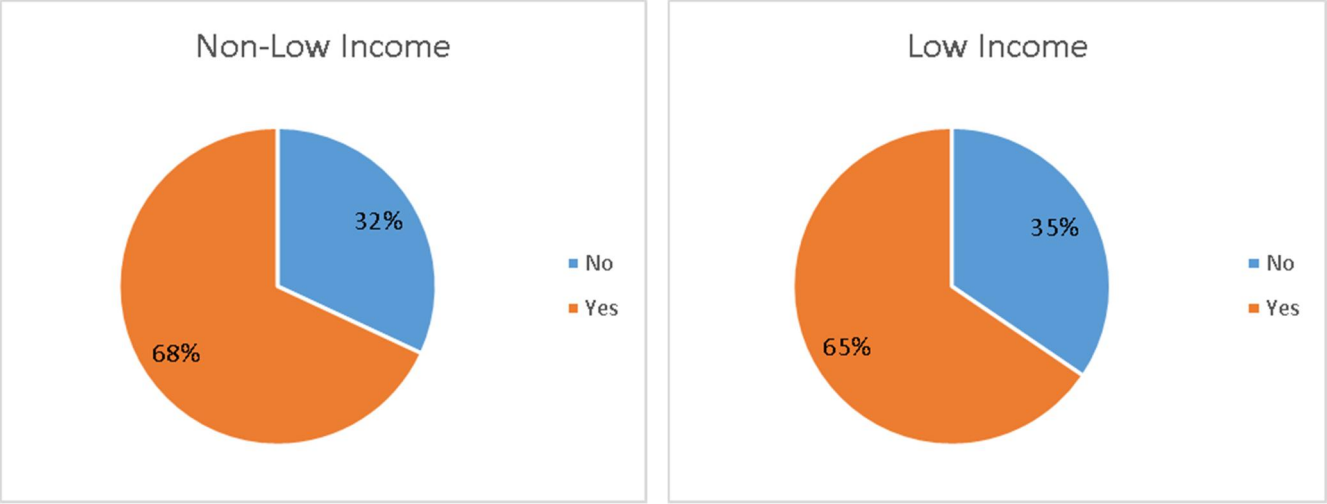


Figure 20. Breeze Card Use Non Low-Income Riders versus Low-Income Riders

Route Characteristics

An overview of route characteristics for the GCT local routes and express routes is provided in Table 4 and Table 5, respectively.

As shown in Table 4, all local routes have peak headways of 30 minutes. The span of service varies for local routes, with service starting between 5:30 AM and 6:15 AM and continuing until between 7:20 PM and 7:55 PM. The exception is Route 10A, which continues until 9:30 PM. The routes are all between 15 and 21 miles in length and peak one-way trip time is between 57 and 76 minutes.

As shown in Table 5, the peak headway and span of service varies between each of the express routes. Routes 101 and 102 are all-day express routes, while Route 103 and 103A are peak-period only. There is greater variation in trip length and running time between express than local routes.

CHARACTERISTICS (LOCAL BUS)	10A	10B	20	30	35	40
Weekday Peak Headway (mins)	30	30	30	30	30	30
Weekday Off-Peak Headway (mins)	60	120	60	60	60	60
Weekday Span of Service	5:30 AM-9:30 PM	6:15 AM-7:20 PM	5:39 AM-7:45 PM	6:11 AM-7:44 PM	5:50 AM-7:55 PM	6:14 AM-7:47 PM
Saturday Headway (mins)	60	60	60	60	60	60
Saturday Span of Service	6:00 AM-10:00 PM	6:45 AM-9:45 PM	6:09 AM-8:02 PM	6:41 AM-8:34 PM	6:25 AM-8:15 PM	6:44 AM-8:43 PM
Route Length - Inbound (mi)	15.8	16.9	18.1	20.5	15.1	20.2
Route Length - Outbound (mi)	15.1	16.1	17.4	20.7	15.2	19.4
Peak Hour Actual Running Time – Inbound/Outbound (mins)	76/66	68/64	65/67	68/66	57/60	61/69
Average Actual Running Time – Inbound/Outbound (mins)	48/57	52/54	53/52	54/54	46/55	54/54

Table 4. Local Bus Service Characteristics

CHARACTERISTICS (EXPRESS BUS)	101	102	103	103A
Weekday Peak Headway (mins)	15	30	10	60
Weekday Off-Peak Headway (mins)	30	30	20	N/A
Span of Service	5:30 AM-6:03 PM	6:10 AM-5:38 PM	5:40 AM-8:30 AM, 3:05 PM-6:05 PM	7:00 AM-8:05 AM, 3:10 PM-5:15 PM
Route Length - Inbound (mi)	36.8	21.0	28.1	27.9
Route Length - Outbound (mi)	36.0	21.3	28.0	32.5
Peak Hour Actual Running Time – Inbound/Outbound (mins)	67/68	54/46	70[1]/51	53/88
Average Actual Running Time – Inbound/Outbound (mins)	62/59	46/37	70[1]/47	44/73

[1] Represents scheduled time. Actual travel time data was not available.

Table 5. Express Bus Service Characteristics

An overview of route performance for GCT local routes and express routes is provided in Tables 6 and Table 7, respectively.

As shown in Table 6, Route 10A is the highest performing route with nearly 30 passengers per revenue mile. Route 30 and 40 are the lowest performing routes with just over 10 passengers per revenue mile. The last row in Table 6 indicates the percentage of riders who transfer to another transit route. These percentages include transfers to MARTA rail and bus services. As shown in the table, Routes 10A and 10B have very high transfer rates, primarily associated with transfers at the MARTA Doraville Station. Transfer percentages for all local routes are very high, with all routes having greater than 60 percent of passengers transferring to/from another transit route.

As shown in Table 7, while express bus routes have fewer passengers per revenue mile, they have similar passengers per revenue hour metrics to those of the local routes. Route 103 is the most productive of the express routes, with nearly 23 passengers per revenue hour. Route 103A, designed to take passengers living in or near Downtown Atlanta to employment centers in Gwinnett County, is the worst performing route on the system. However, it should be noted that 103A utilizes buses operating on other express routes for its service. Therefore, the route only requires a marginal investment to operate. Even if Route 103A was not operated, GCT would incur similar overall operating costs because buses used on that route would be deadheading (non-revenue service) anyways.

Also of note is that the transfer percentage is comparatively low for all of the express routes, except Route 103A, which is fed by the various MARTA services operating in Downtown Atlanta and provides service to the park-and-ride areas served by GCT local routes. Passenger mode of access for the express routes is primarily auto, as express bus users predominately drive to park-and-ride lots to access the system and the express buses drop many of the passengers off at their place of employment in downtown Atlanta. Meanwhile, many trips on local routes require transfers between multiple local routes to get from the trip origin to the destination or transfers to the MARTA system at the Doraville station.

Route profiles showing origin-destination locations, key performance attributes, and boarding and alighting locations are shown in Exhibit B. Load profiles for all routes depicting the average load by stop are shown in Exhibit C.

ROUTE METRICS (LOCAL BUS)	10A	10B	20	30	35	40
Average Weekday Boardings	1,339	520	743	395	725	449
Passengers/Revenue Mile	1.8	1.1	1.0	0.5	1.1	0.6
Passengers/Revenue Hour	29.7	19.5	18.5	10.8	18.0	12.2
Peak Hour Average Max Load Inbound (passengers)	31.7	21.5	26	14.7	26.8	10.8
Hour of Max Load Inbound	8:35 PM-9:35 PM	6:50 AM - 7:50 AM	5:15 PM-6:15 PM	6:11 AM-7:11 AM	6:55 AM-7:55 AM	2:44 PM-3:44 PM
Peak Hour Average Max Load Outbound (passengers)	34.2	17.9	16	9.4	10.8	12.3
Hour of Max Load Outbound	2:30 PM-3:30 PM	4:15 PM-5:15 PM	6:09 AM-7:09 AM	12:44 PM-1:44 PM	5:50 AM-6:50 AM	12:47 PM-1:47 PM
Riders Transferring (%)	85%	90%	76%	61%	68%	63%

Table 6. Local Bus Service Performance

ROUTE METRICS (EXPRESS BUS)	101	102	103	103A
Average Weekday Boardings	276	179	788	21
Passengers/Revenue Mile	0.4	0.7	0.8	0.1
Passengers/Revenue Hour	14.9	18.8	22.9	3.8
Peak Hour Average Max Load Inbound (passengers)	18	18.5	24.8	5.9
Hour of Max Load Inbound	3:03 PM-4:03 PM	4:38 PM-5:38 PM	4:05 PM-5:05 PM	7:00AM-8:00 AM
Peak Hour Average Max Load Outbound (passengers)	24.6	16.7	27.9	5.3
Hour of Max Load Outbound	6:00 AM-7:00 AM	6:10 AM-7:10 AM	6:00 AM-7:00 AM	5:15 PM
Riders Transferring (%)	14%	14%	3%	100%

Table 7. Express Bus Service Performance

Table 8 and Table 9 identify the demographics of ridership of local and express routes, respectively, for protected (minority and low-income) populations. As shown in the table, the local routes have a substantially higher low-income and minority utilization than the express routes. Routes 30 and 40 have the highest percentages of ridership comprised of low-income and minority populations.

Route 30 is routed through predominately low-income census tracts in Gwinnett County, resulting in higher levels of low-income riders than any other route. Additionally, the route primarily serves to connect the neighborhood of Lilburn with Gwinnett Place Mall, which may explain its lower levels of ridership and productivity as compared to other routes that serve large employment centers and/or regional transit service such as the MARTA Doraville Station. The routes which serve the MARTA Doraville Station (10A, 10B, 20, 35) have nearly double the productivity as Routes 30 and 40, but have somewhat less ridership composition of low-income and minority populations.

ROUTE METRICS (LOCAL BUS)	10A	10B	20	30	35	40
Low-Income Riders (%)	47%	54%	49%	71%	38%	63%
Minority Riders (%)	91%	89%	92%	97%	86%	98%

Table 8. Local Bus Service Demographics

ROUTE METRICS (EXPRESS BUS)	101	102	103	103A
Low-Income Riders (%)	18%	20%	19%	0%
Minority Riders (%)	39%	58%	70%	75%

Table 9. Express Bus Service Demographics

Service Monitoring Evaluation

Transit providers are required to monitor their system in order to compare the operating results versus system-wide service standards and policies.

Designation of Minority and Low-Income Routes

As stated in Section 1, a minority transit route is one "in which at least one-third of revenue miles are located in a Census block, Census block group, or traffic analysis zone where the percentage minority population exceeds the percentage minority population in the service area." Route designations may be adjusted by transit providers, if necessary. This could occur in the event a route carries predominately non-minority passengers, yet travels mainly through minority areas, which may be prevalent in express or commuter bus routes. In this case, a route could be designated as a non-minority route. The reverse could be true of routes that travel through large employment centers that may not have above average minority populations, but carry predominately minority passengers. Based on the FTA designation, minority routes and low-income routes are designated in Table 10 below.

Minority Routes	Low-Income Routes
10A	10A
10B	10B
20	20
30	30
35	35
40	40
102	101
103	102
103A	103
	103A

Table 10. Route Designations

As shown in Table 10, all GCT routes except Route 101 are designated as minority routes. While Route 101 travels through minority areas, its ridership consists of substantially fewer minority users than the County average (ridership is 39 percent minority compared to 56 minority in County). All other routes predominately travel through minority areas and are utilized by a higher minority percentage that is greater than the County average.

Also shown in Table 10, all GCT routes are designated as low-income routes. All routes travel through predominately low-income areas. All routes also have a higher percentage of low-income riders than the overall low-income rate for the County as a whole, except for Route 103A. Due to very low ridership activity on Route 103A, there were very few surveys completed for that route. Therefore, given its alignment and other ridership tendencies, Route 103A is assumed to be a low-income route.

Performance Against Standards

As seen in Table 11, all routes meet established load standards. No route has a load factor that exceeds 1.00. This indicates a high degree of passenger comfort across the system, with limited to no standees across the routes. Routes 10A, 10B, 20, and 35 are the only routes with peak hour load factors above 0.50. Rider safety is also benefited by limiting the occurrences of standing passengers.

ROUTE	PEAK HOUR AVERAGE MAX LOAD	SEATS PER BUS	LOAD FACTOR	SATISFIES SERVICE STANDARD
10A	34.2	42	0.81	✓
10B	21.5	42	0.51	✓
20	26.0	42	0.62	✓
30	14.7	42	0.35	✓
35	26.8	42	0.64	✓
40	12.3	42	0.29	✓
101	24.6	57	0.43	✓
102	18.5	57	0.32	✓
103	24.8	57	0.44	✓
103A	5.9	57	0.10	✓

Table 11. Load by Route

As seen in Table 12, all routes, except Route 10B and Route 103A, meet established service frequency standards. Route 10B meets peak headway frequency standards, but does not meet the off-peak threshold of 60 minutes. Route 10B shares approximately two-thirds of its alignment with Route 10A. Thus, service on much of the alignment meets headway frequency. Route 103A only includes two trips in each peak period. As noted earlier, Route 103A is a reverse commute route that utilizes buses used on other express routes.

ROUTE	WEEKDAY PEAK HEADWAY	SATISFIES SERVICE STANDARD (30 MIN)	WEEKDAY OFF-PEAK HEADWAY	SATISFIES SERVICE STANDARD (60 MIN)	WEEKEND HEADWAY	SATISFIES SERVICE STANDARD (60 MIN)
10A	30	✓	60	✓	60	✓
10B	30	✓	120	X	60	✓
20	30	✓	60	✓	60	✓
30	30	✓	60	✓	60	✓
35	30	✓	60	✓	60	✓
40	30	✓	60	✓	60	✓
101	15	✓	30	N/A[1]	-	N/A[1]
102	30	✓	30	N/A[1]	-	N/A[1]
103	10	✓	20	N/A[1]	-	N/A[1]
103A	60	X	-	N/A[1]	-	N/A[1]

[1] There is no off-peak or weekend service frequency standard for express routes

Table 12. Headways by Route

As seen in Table 13, all routes do not meet on-time performance measures. The standards are 95 percent of trips completed within 5 minutes of the scheduled time, and 0 percent of trips completed early. The highest on-time performance of any route is Route 35, at 68.1 percent, while the lowest is Route 30, at 21.9 percent. All routes have some trips arrive early, with the highest early percentage (greatest deviation from the standard) being 43.2 percent for Route 102. The route with the lowest percent early arrivals is Route 10A, at 8.1 percent. Express routes tend to fare slightly worst in on-time performance, likely due to slightly longer routes and variability associated with I-85 highway traffic conditions. Note that express routes arriving early may not result in a negative outcome for riders, as destinations (i.e. downtown Atlanta for outbound trips) do not have boarding activity. Thus, an express bus completing its route early would likely not cause any riders to miss the bus, but rather simply result in riders arriving at their destination prior to the scheduled time. However, the adopted performance measure does not distinguish between local and express routes.

ROUTE	% ON TIME	VARIATION FROM SERVICE STANDARD (95%)	% EARLY	VARIATION FROM SERVICE STANDARD (0%)
10A	63.9	(31.1)	8.1	8.1
10B	59.4	(35.6)	8.6	8.6
20	56.9	(38.1)	8.2	8.2
30	21.9	(73.1)	10.1	10.1
35	68.1	(26.9)	11.7	11.7
40	61.8	(33.2)	9.4	9.4
101	53.6	(41.4)	25.4	25.4
102	47.7	(47.3)	43.2	43.2
103	51.5	(43.5)	18.7	18.7
103A	49.0	(46.0)	25.5	25.5

Table 13. Schedule Adherence by Route

Trip Characteristics

An overview of the origin and destinations of GCT passengers, as determined through the on-board survey, is presented in Figures 21 through 23.

Figure 21 depicts the overall system-wide origins and destinations. As seen in the figure, origins and destinations are most dense in the Norcross and downtown Atlanta areas.

Figure 22 illustrates the density of places of residence for existing GCT users. As seen in the figure, the highest density of residential uses generating ridership are in the Norcross area, where service frequencies are also the highest. However, there are a handful of trips generated from residences in the Duluth, Suwanee, Sugar Hill, and greater Lawrenceville areas that are farther from existing GCT routes.

Figure 23 illustrates the density of non-residential trip ends (i.e., places of employment, education, shopping, or other activity centers) for existing GCT users. These trip ends are clustered in downtown Atlanta, the Norcross area with its large technology employment centers, and Lawrenceville with its County administration facilities. Non-residential trip ends not locally served by GCT include locations near MARTA stations outside of Gwinnett County and, to a lesser extent, Duluth.

Figures 24 and 25 illustrate origins and destinations of trips with transit transfers on the GCT system. Note that they do not include trips only involving transfers with non-GCT transit routes. Trips with transfers add inconvenience to the rider and often increase travel time. Reducing the number of transfers required may make transit more desirable and competitive with other modes of transportation.

Figure 24 maps the density of origins and destinations that involve at least one transfer on the GCT system. These trips fall primarily within the Lawrenceville, Lilburn, and Norcross areas. Figure 25 shows trips that involved two or more transfers. These origins and destinations were most dense in Lawrenceville and Peachtree Corners areas. These areas are currently served by Route 40 and Route 35, respectively. Lawrenceville likely sees increased transfer activity because Route 40 only extends to the Gwinnett Place Mall, requiring a transfer to the western part of the system. Peachtree Corners likely sees an increased amount of double transfers because Route 35 does not serve any of the major transit centers or park-and-ride locations in the County.

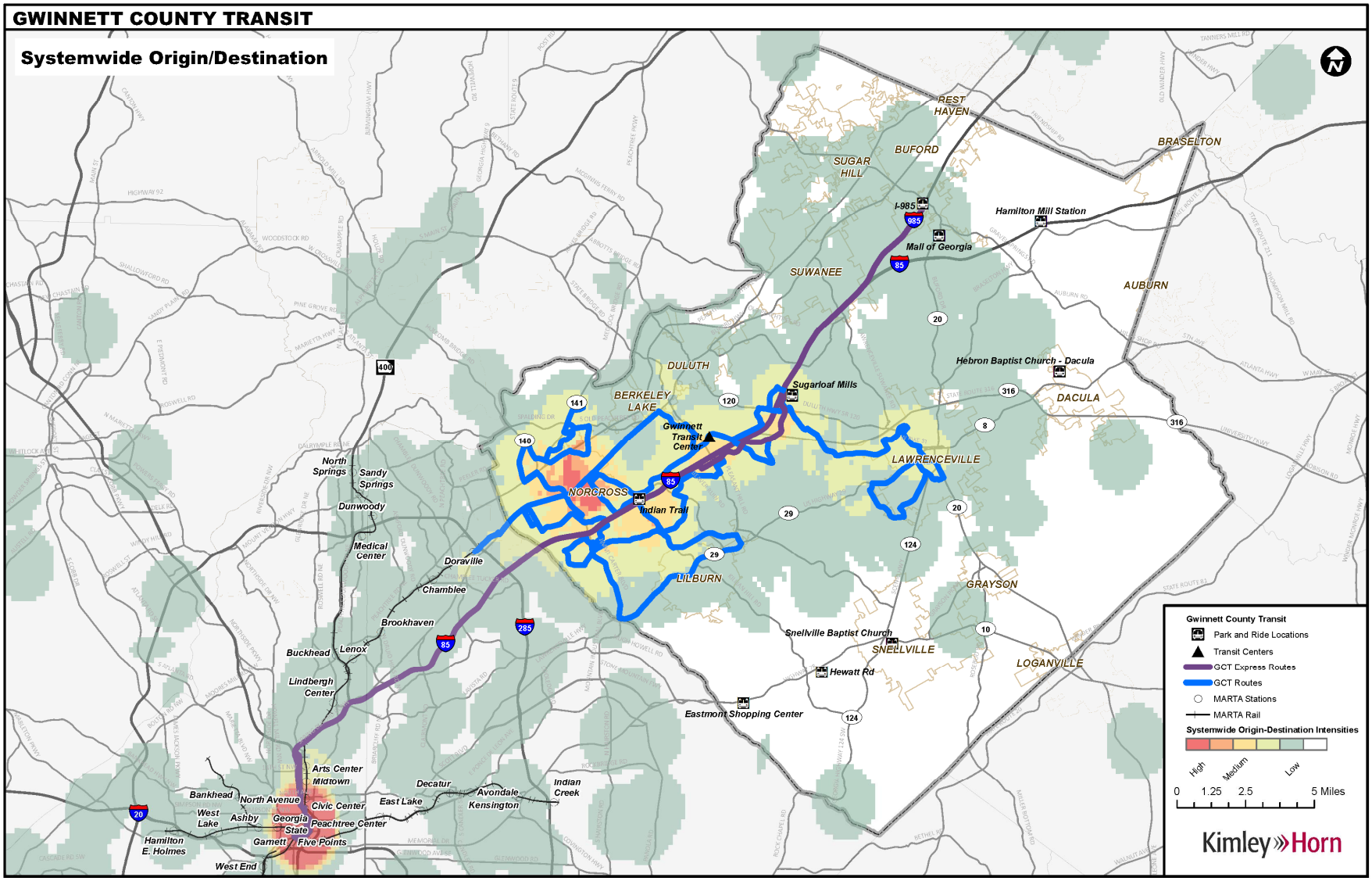


Figure 21. System-wide Origin/Destinations

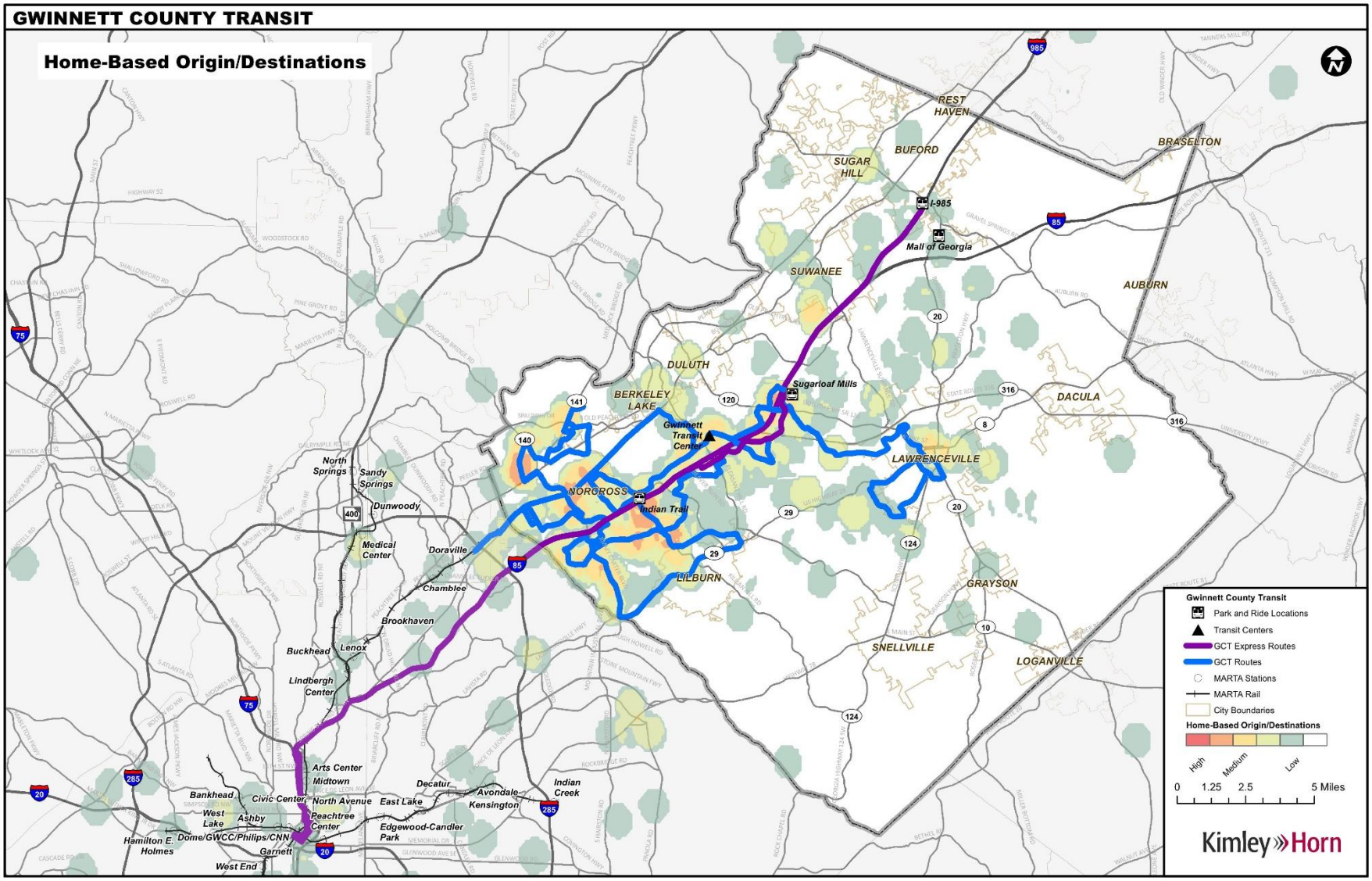


Figure 22. Home-Based Origin/Destinations

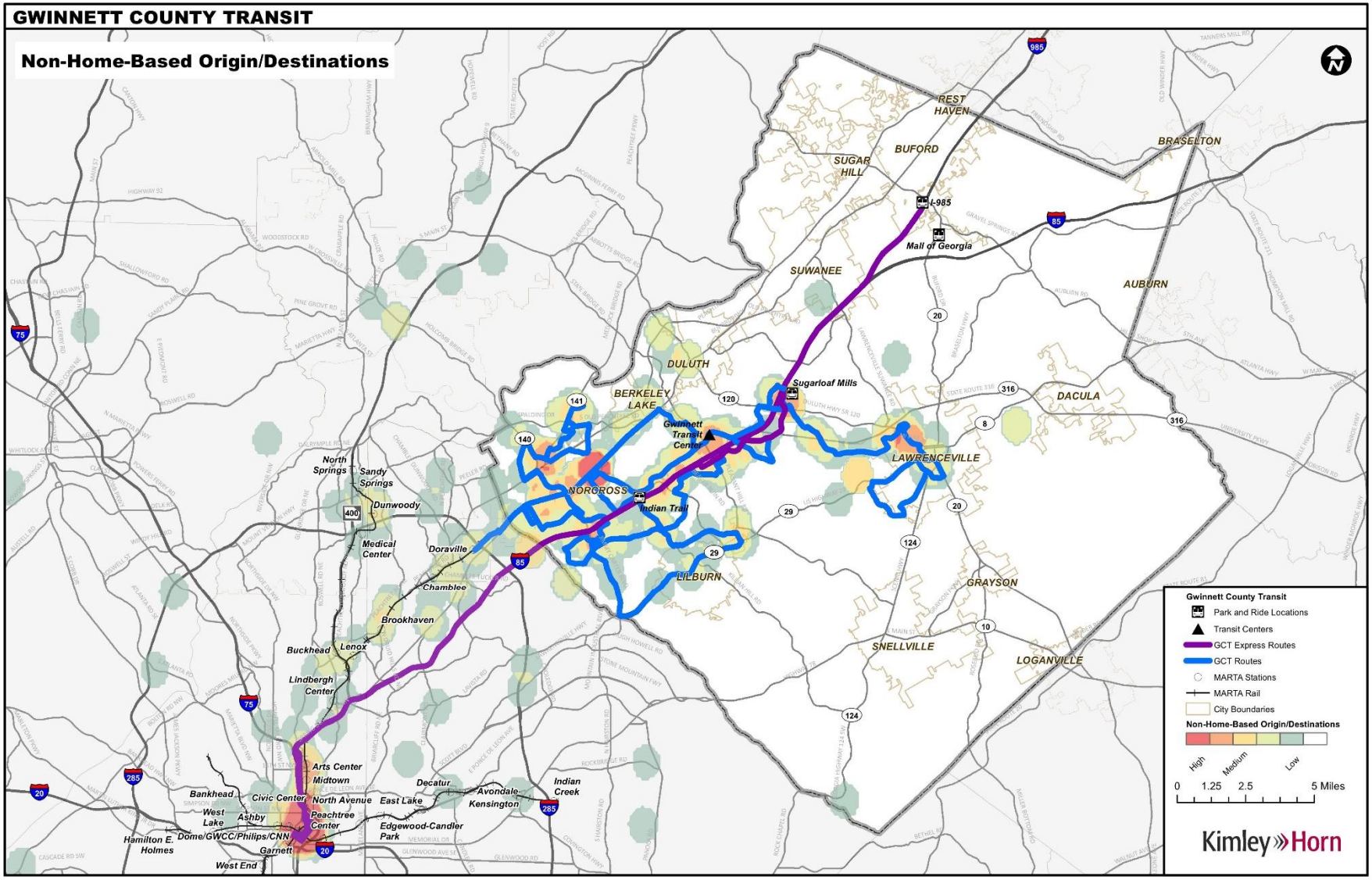


Figure 23. Non-Home-Based Origin/Destinations

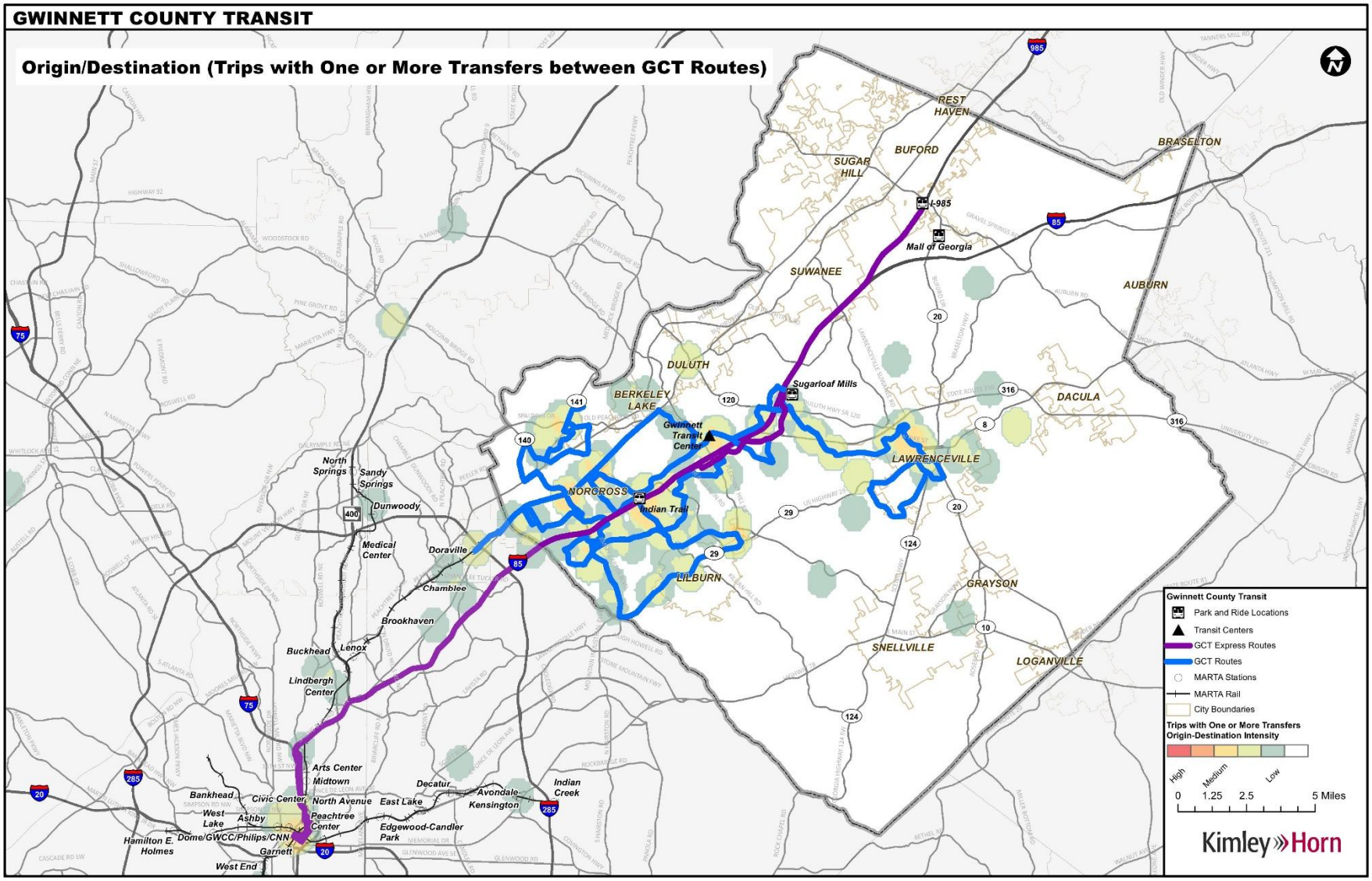


Figure 24. Origin/Destinations with One or More Transfers

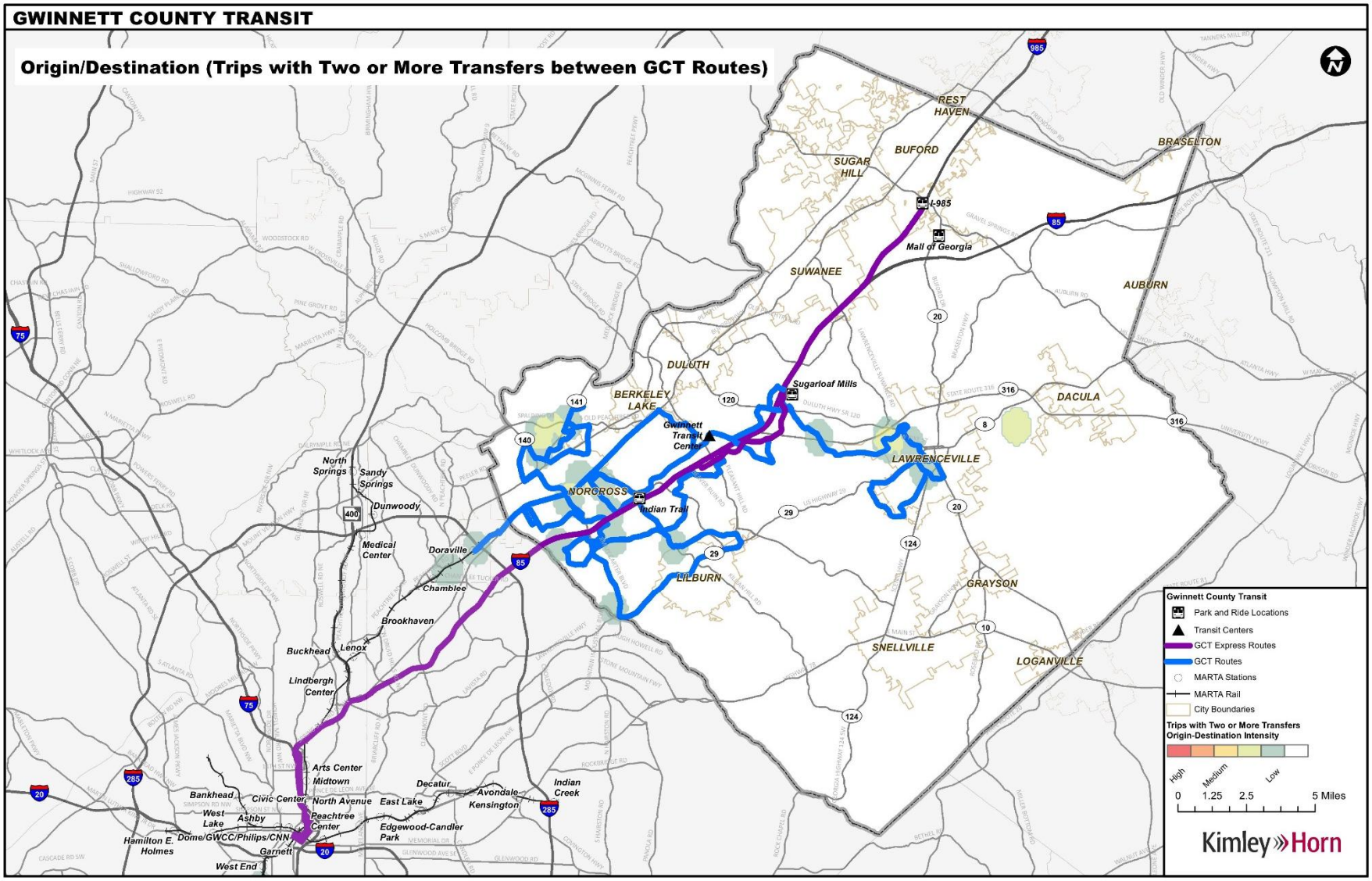


Figure 25. Origin/Destinations with Two or More Transfers

The location of weekday and weekend bus stop boardings are presented in Figures 26 and 27, respectively.

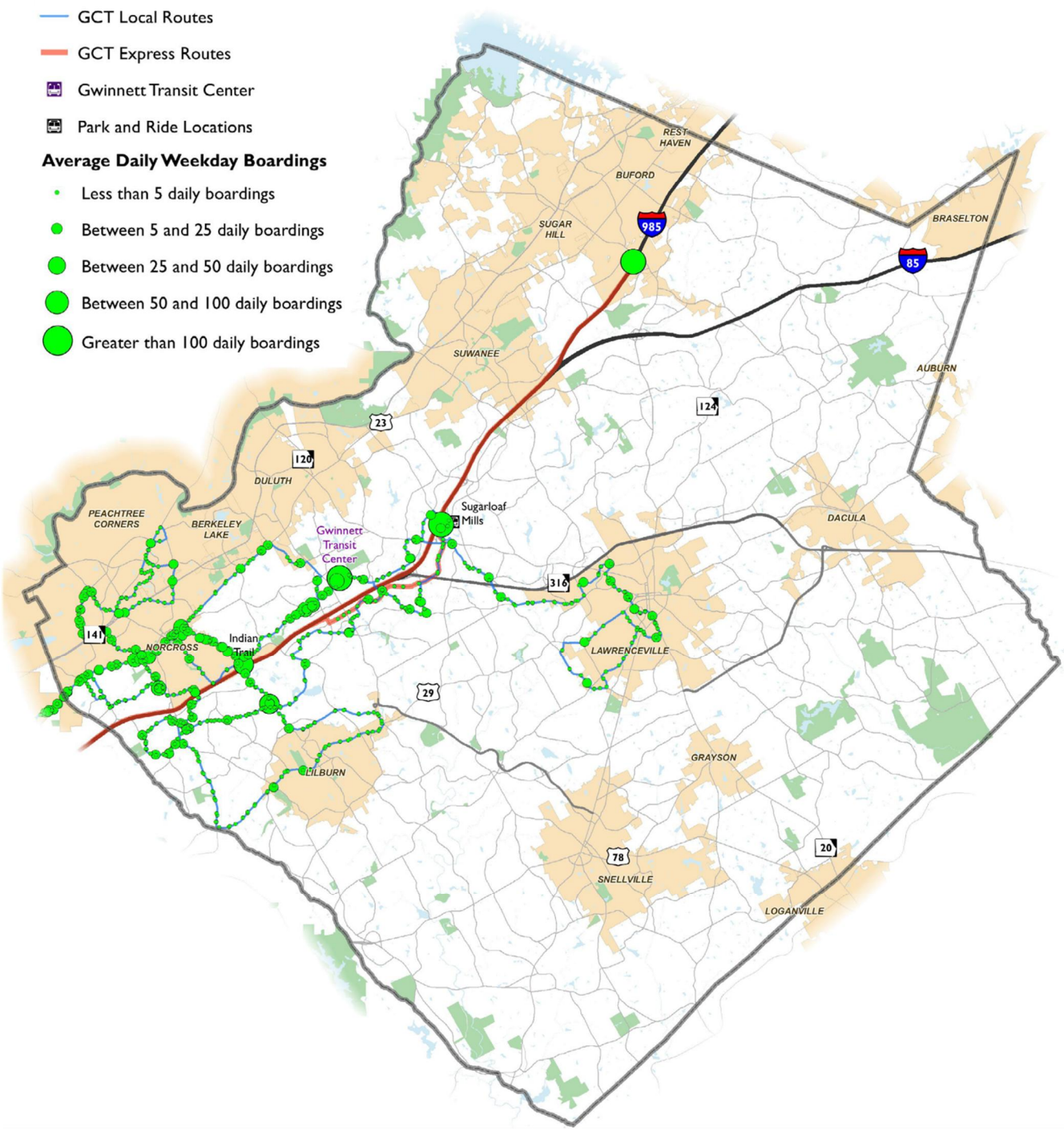


Figure 26. Average Daily Boardings (Weekday)

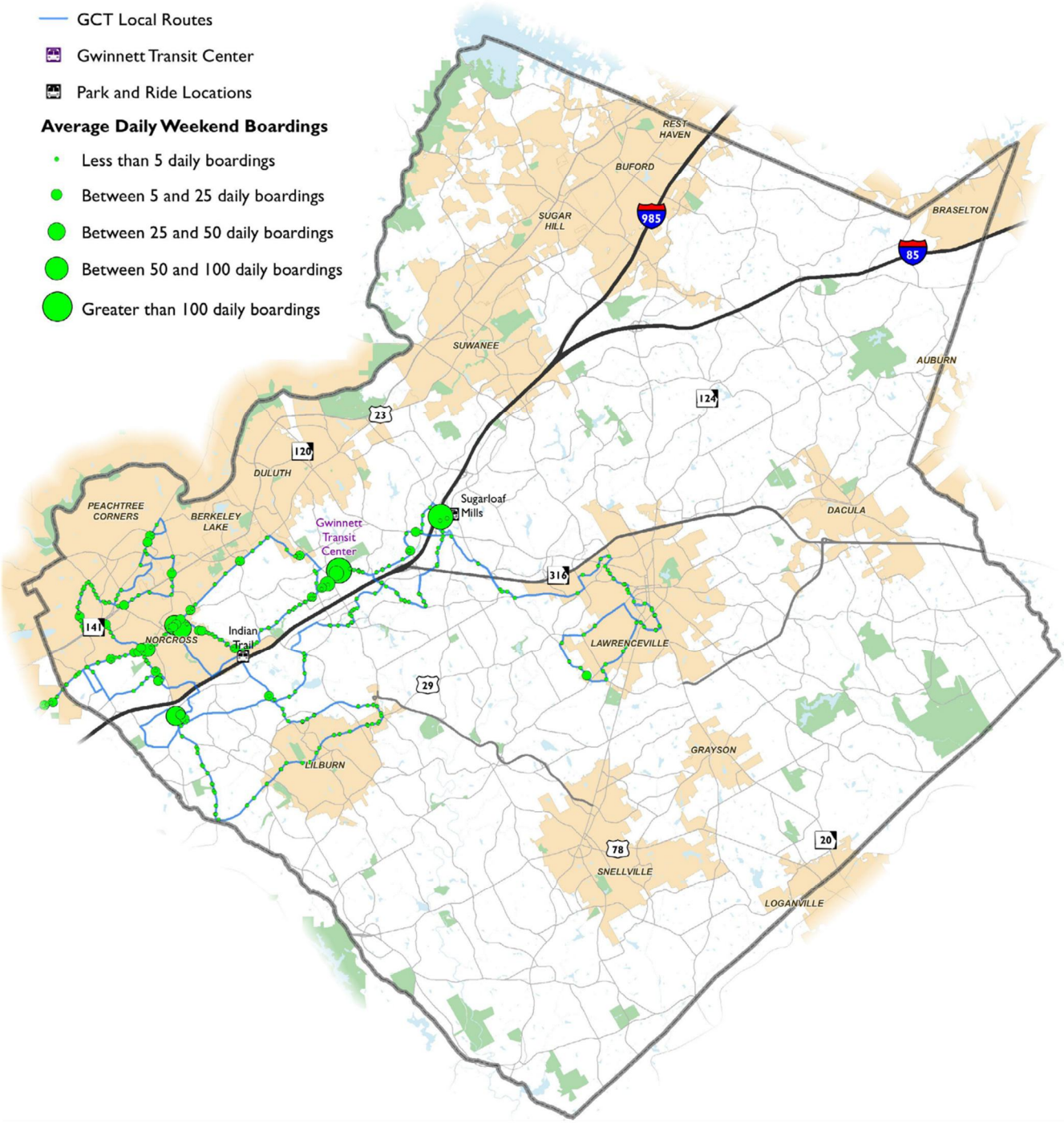


Figure 27. Average Daily Boardings (Weekend)

Summary

The analysis contained in this assessment meets the requirements of FTA Circular FTA C 4702.1B and Title VI. It includes information on the demographics served by GCT and on the current performance of the GCT system against established thresholds. All GCT routes meet established load factor standards. All routes except Route 10B and Route 103A meet established headway standards. Route 10B meets peak headway frequency standards, but does not meet the off-peak threshold of 60 minutes. Route 10B shares approximately two-thirds of its alignment with Route 10A. Thus, service on much of the alignment meets headway frequency. Route 103A only includes two trips in each peak period. Route 103A is a reverse commute route that utilizes buses used on other express routes. No routes meet on-time performance standards both for early and late arrival frequency. On-time performance standards are set at aggressive levels compared to peer transit agencies.

GCT routes currently provide service in the areas with the highest concentration of minority and low-income populations in the County. While there are some minority and low-income populations within the County that are not served by transit, densities in those areas are fairly low. Low-income or minority communities that are not currently well served by GCT local routes include Berkeley Lake, the Centerville area, Buford, and the outskirts of Lawrenceville. Population densities in these areas are generally less than 5,000 persons per square mile.

GCT routes provide access to the major employment centers in the County and provide access to the regional employment centers in Atlanta and other locations accessible from the MARTA system. Employment centers that are not currently served by GCT local bus routes include the Mall of Georgia, Buford, and Duluth.

The next phase of this project will utilize the information documented in this existing conditions assessment to identify transit improvement needs and opportunities within the County.

Exhibits

Exhibit A – Survey Questions

Exhibit B – Route Profile Maps

Exhibit C – Load by Route and Direction

Exhibit A - Survey Questions

1. Where did you COME FROM? Where did you BEGIN this one-way trip?

2. What is the address or place where you are COMING FROM?

3. How many different bus/train routes will you take on this trip?

4. How did you get to the FIRST transit stop?

5. Where did you GET ON THIS bus?

6. Where will you GET OFF THIS bus?

7. Where ARE YOU GOING? Where will you END this one way trip?

8. What is the address or intersection of the place where you are GOING TO?

9. After you get off the last bus/train on this trip, how will you get to the END of your one-way trip?

10. How many days per week do you make this trip on average?

11. What is the average time it takes to make a ONE-WAY trip from door to door?

12. Will you be making a return trip (back here) at the end of the day? (*Express only)*

13. Will you be boarding from the same downtown stop (as your destination for this morning)? (*Express only)*

14. Approximately what time will you be leaving downtown? (*Express only)*

15. Gender

16. How old are you?

17. Do you have a valid driver's license?

18. Is there a car/vehicle available you could have used instead of the bus for this trip?

19. What is your household's approximate total annual income?

20. What is your current EMPLOYMENT status?

21. Did you use a Breeze card to pay for this trip?

22. What type of fare did you pay for this trip?

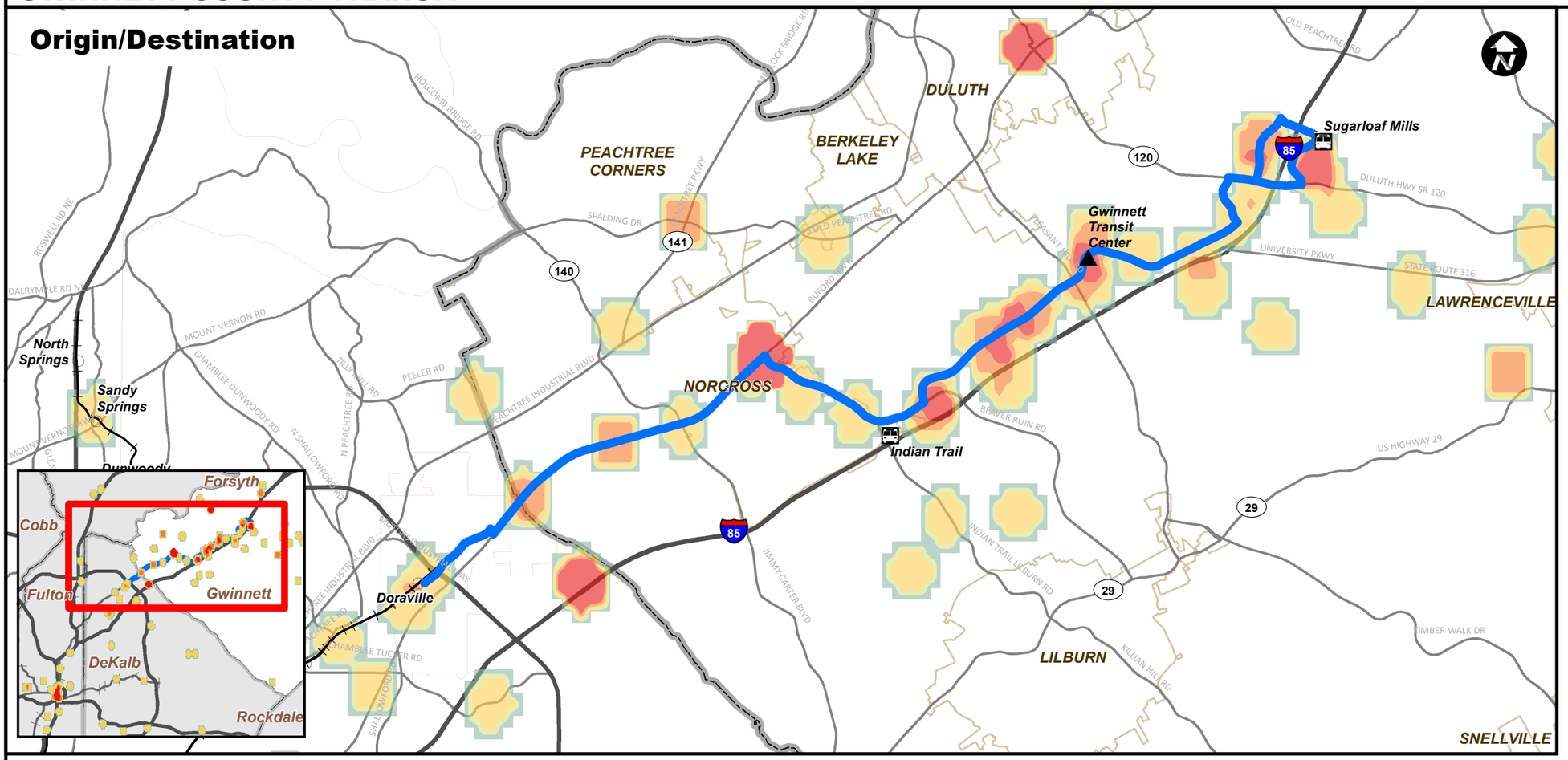
23. What language do you primarily speak at home?

24. My race is best described as:

Exhibit B – Route Profiles

GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 10A

Route Metrics - GCT 10A	
Peak Headway (mins)	30
Off-Peak Headway (mins)	60
Span	5:30 AM-9:30 PM
Route Length - Inbound (mi)	15.8
Route Length - Outbound (mi)	15.1
Running Time - Inbound (mins)	55
Running Time - Outbound (mins)	60
Average Weekday Boardings	1339
Pax/Revenue Mile	1.8
Pax/Revenue Hour	29.7
Low Income Riders (%)	47%
Minority Riders (%)	91%
Riders Transferring (%)	85%

Gwinnett County Transit

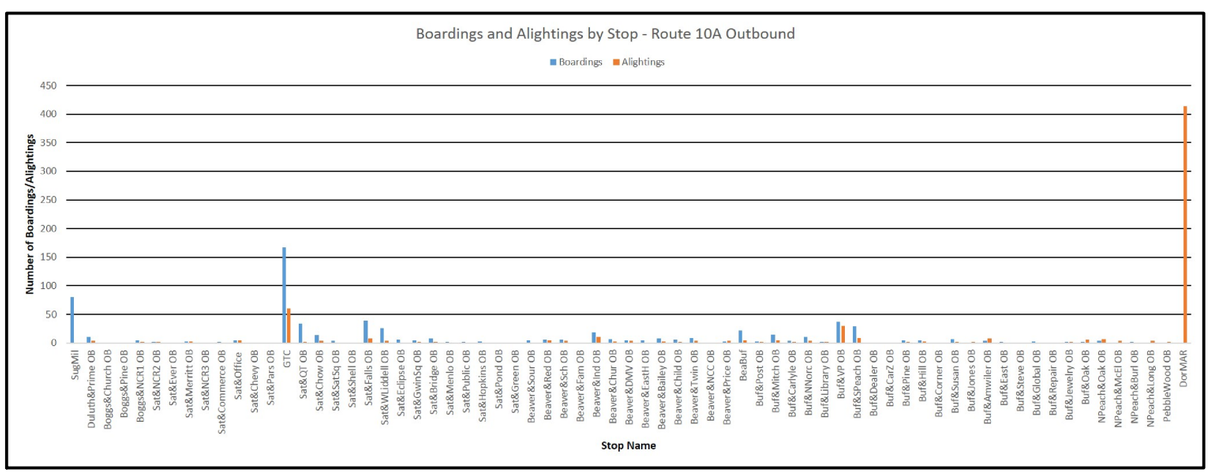
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

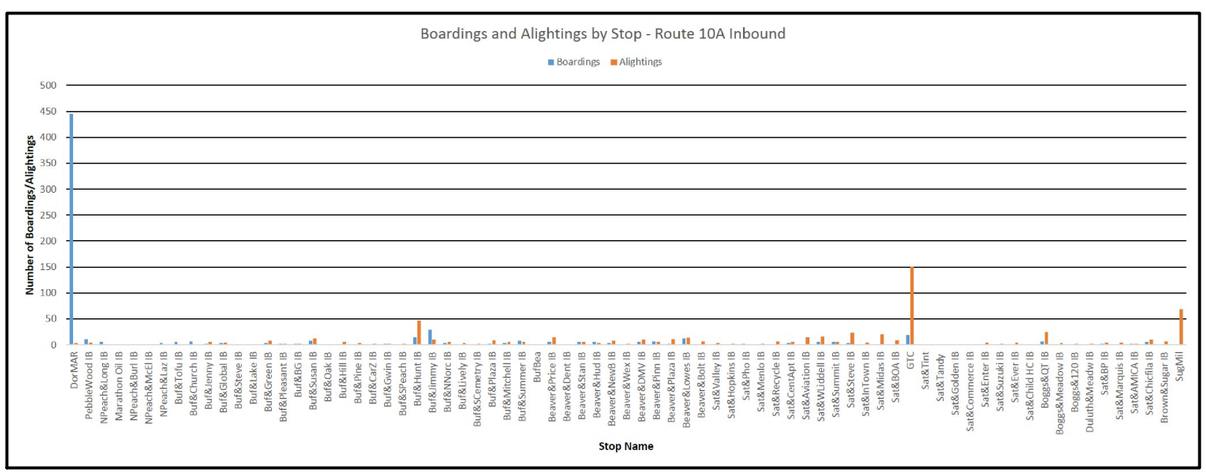
Origin-Destination Intensity

High — Medium — Low

0 0.5 1 2 Miles

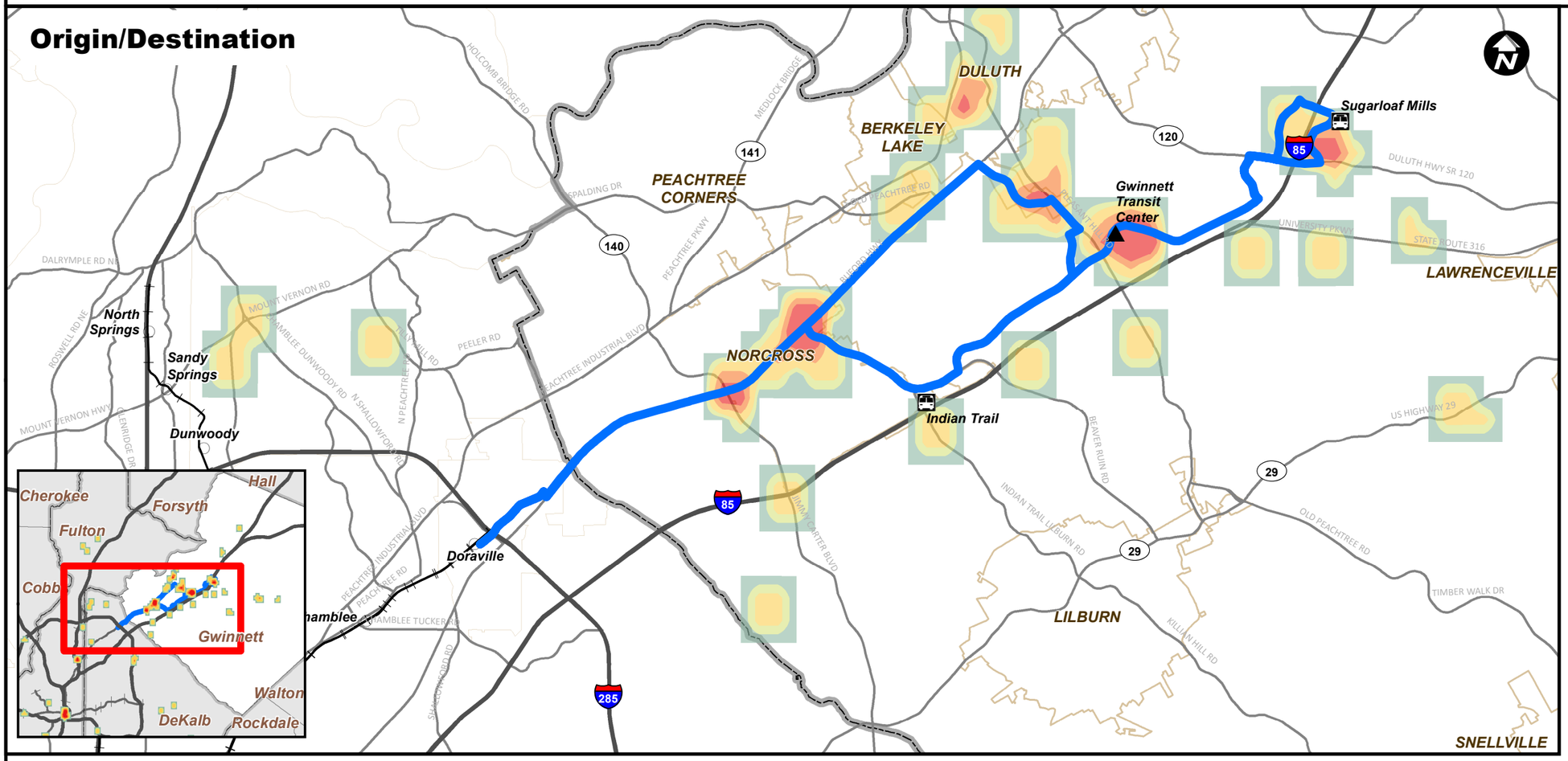
Kimley»Horn





GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 10B

Route Metrics - GCT 10B	
Peak Headway (mins)	30
Off-Peak Headway (mins)	120
Span	6:15 AM-7:20 PM
Route Length - Inbound (mi)	16.9
Route Length - Outbound (mi)	16.1
Running Time - Inbound (mins)	55
Running Time - Outbound (mins)	60
Average Weekday Boardings	520
Pax/Revenue Mile	1.1
Pax/Revenue Hour	19.5
Low Income Riders (%)	54%
Minority Riders (%)	89%
Riders Transferring (%)	90%

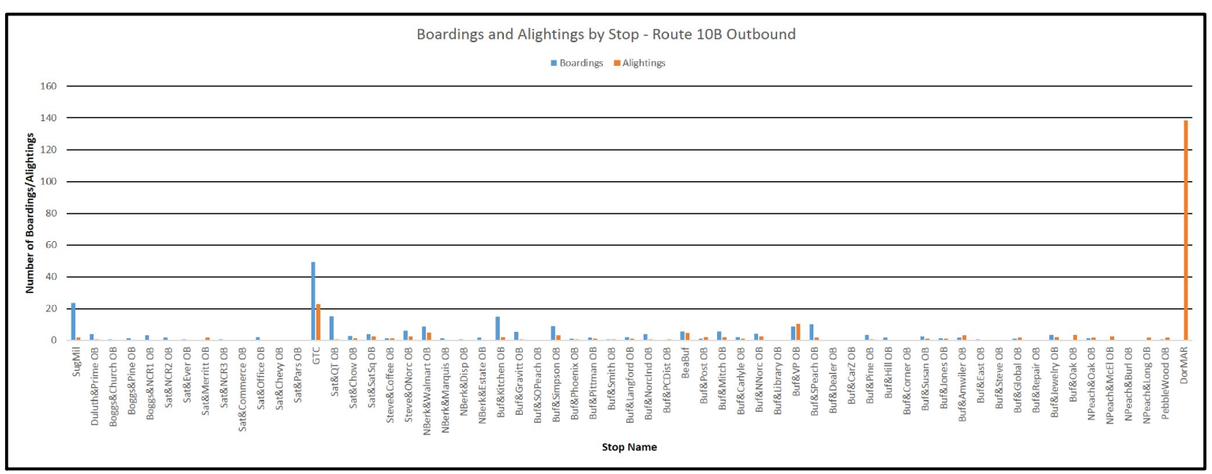
Park and Ride Locations
Transit Centers
GCT Routes
MARTA Stations
MARTA Rail

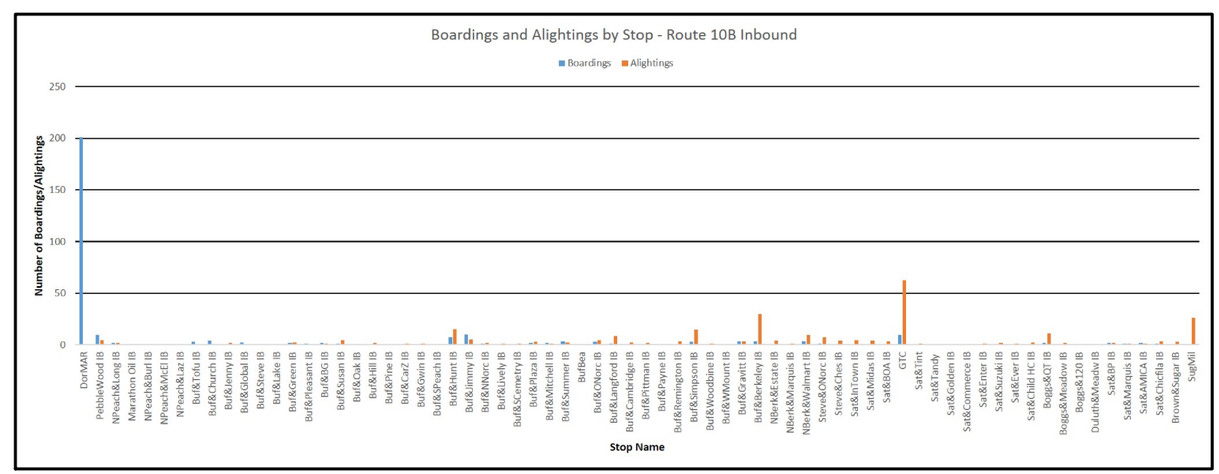
Origin-Destination Intensity

High Medium Low

0 0.5 1 2 Miles

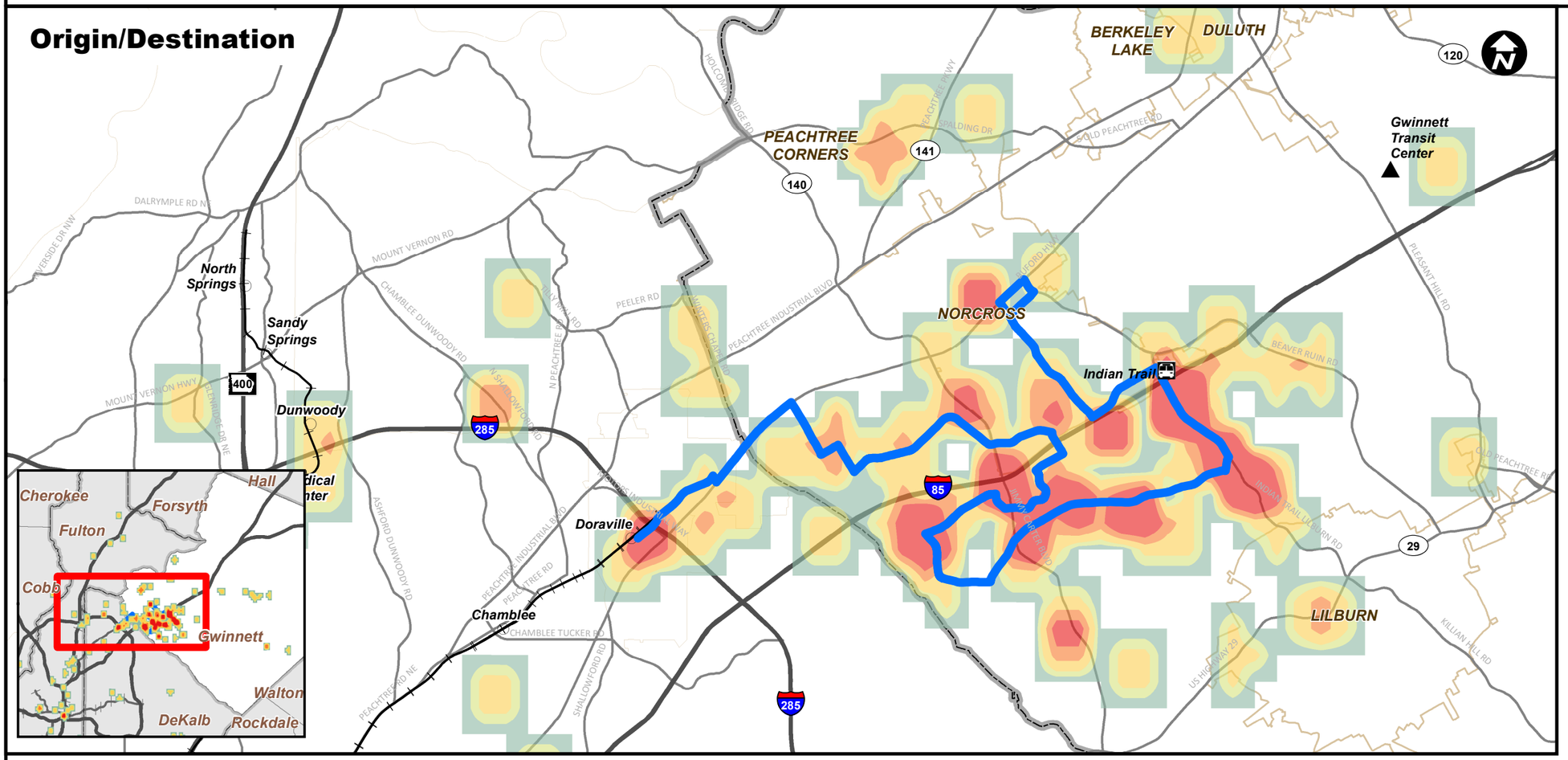
Kimley»Horn





GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 20

Route Metrics - GCT 20	
Peak Headway (mins)	30
Off-Peak Headway (mins)	60
Span	5:39 AM-7:45 PM
Route Length - Inbound (mi)	18.1
Route Length - Outbound (mi)	17.4
Running Time - Inbound (mins)	54
Running Time - Outbound (mins)	61
Average Weekday Boardings	743
Pax/Revenue Mile	1.0
Pax/Revenue Hour	18.5
Low Income Riders (%)	49%
Minority Riders (%)	92%
Riders Transferring (%)	76%

Gwinnett County Transit

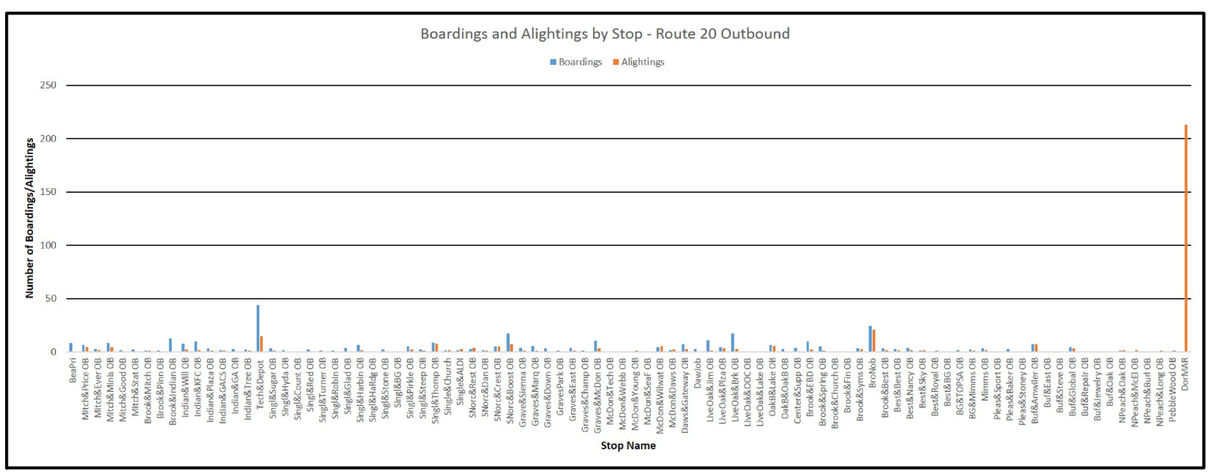
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

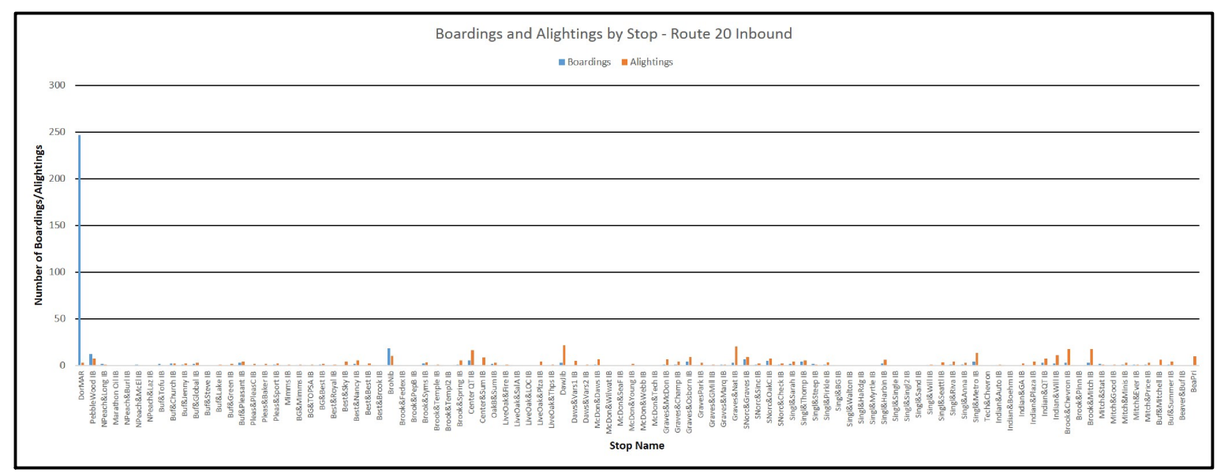
Origin-Destination Intensity

High — Medium — Low

0 0.5 1 2 Miles

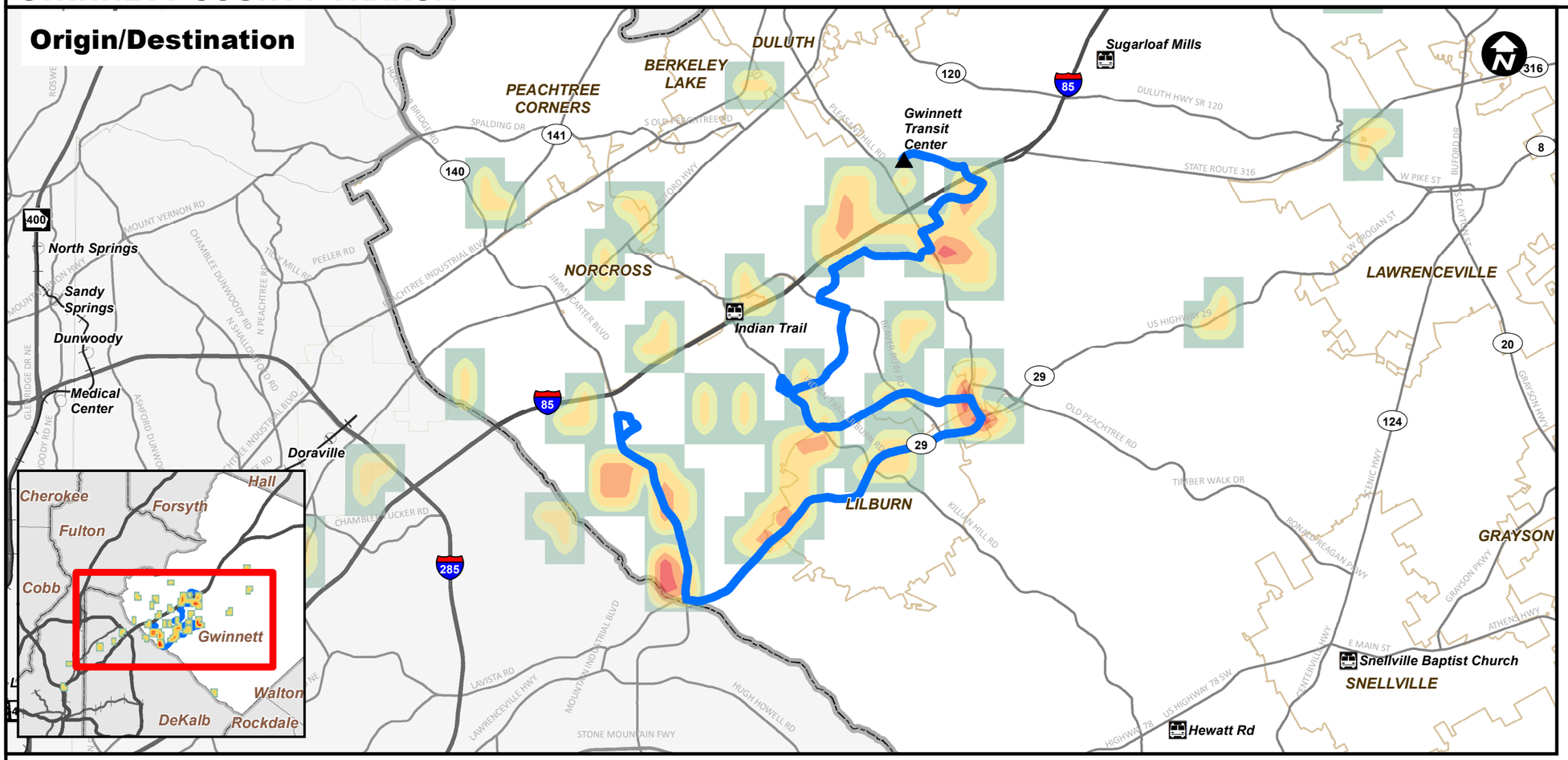
Kimley»Horn





GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 30

Route Metrics - GCT 30	
Peak Headway (mins)	30
Off-Peak Headway (mins)	60
Span	6:11 AM-7:44 PM
Route Length - Inbound (mi)	20.5
Route Length - Outbound (mi)	20.7
Running Time - Inbound (mins)	59
Running Time - Outbound (mins)	57
Average Weekday Boardings	395
Pax/Revenue Mile	0.5
Pax/Revenue Hour	10.8
Low Income Riders (%)	71%
Minority Riders (%)	97%
Riders Transferring (%)	61%

Gwinnett County Transit

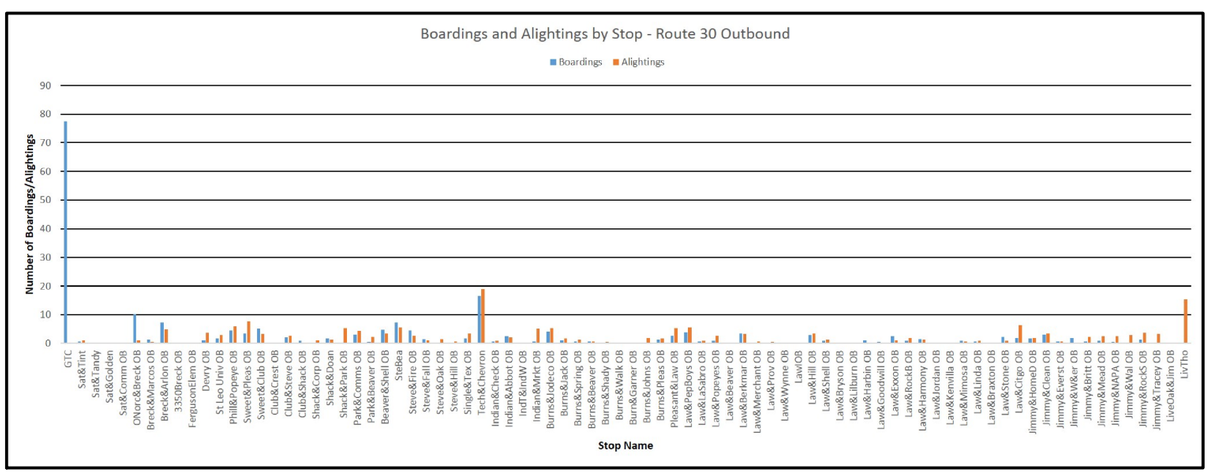
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

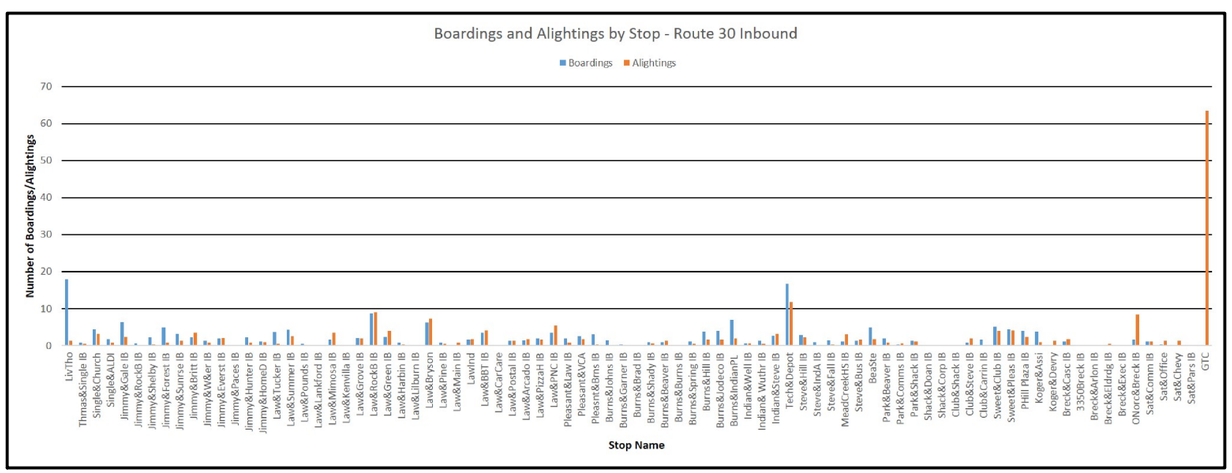
Origin-Destination Intensity

High — Medium — Low

0 0.5 1 2 Miles

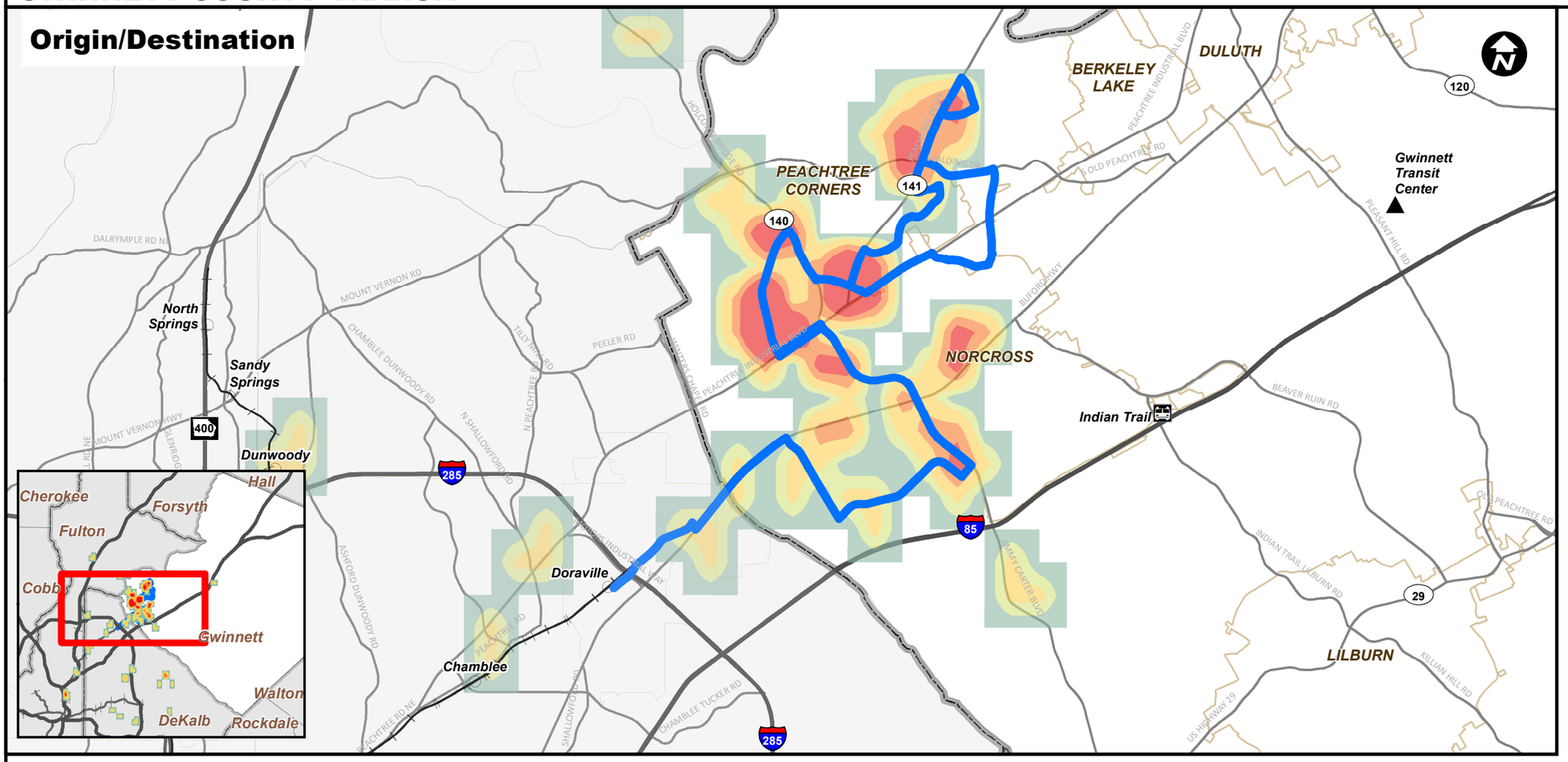
Kimley»Horn





GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 35

Route Metrics - GCT 35	
Peak Headway (mins)	30
Off-Peak Headway (mins)	60
Span	5:50 AM-7:55 PM
Route Length - Inbound (mi)	15.1
Route Length - Outbound (mi)	15.2
Running Time - Inbound (mins)	55
Running Time - Outbound (mins)	60
Average Weekday Boardings	725
Pax/Revenue Mile	1.1
Pax/Revenue Hour	18.0
Low Income Riders (%)	38%
Minority Riders (%)	86%
Riders Transferring (%)	68%

Gwinnett County Transit

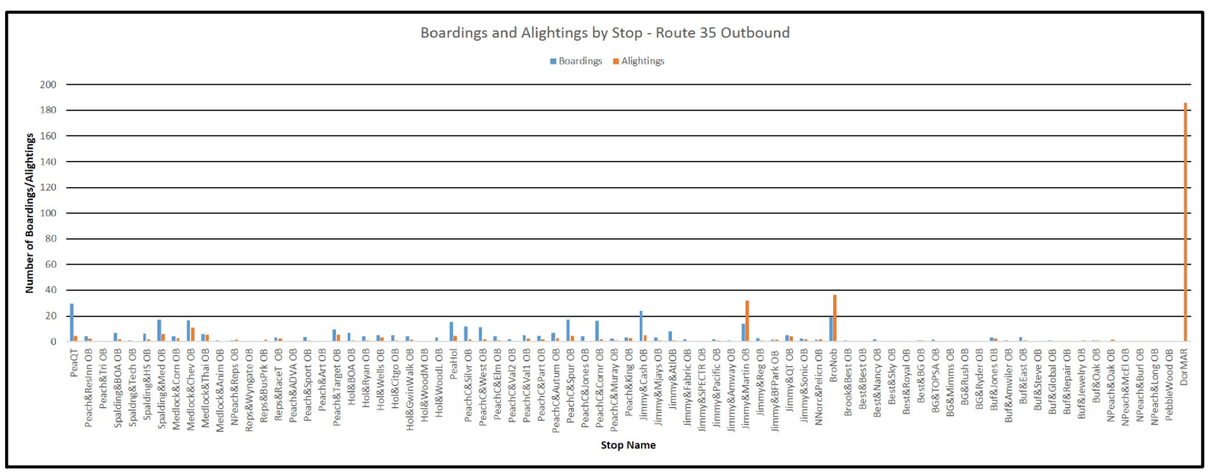
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

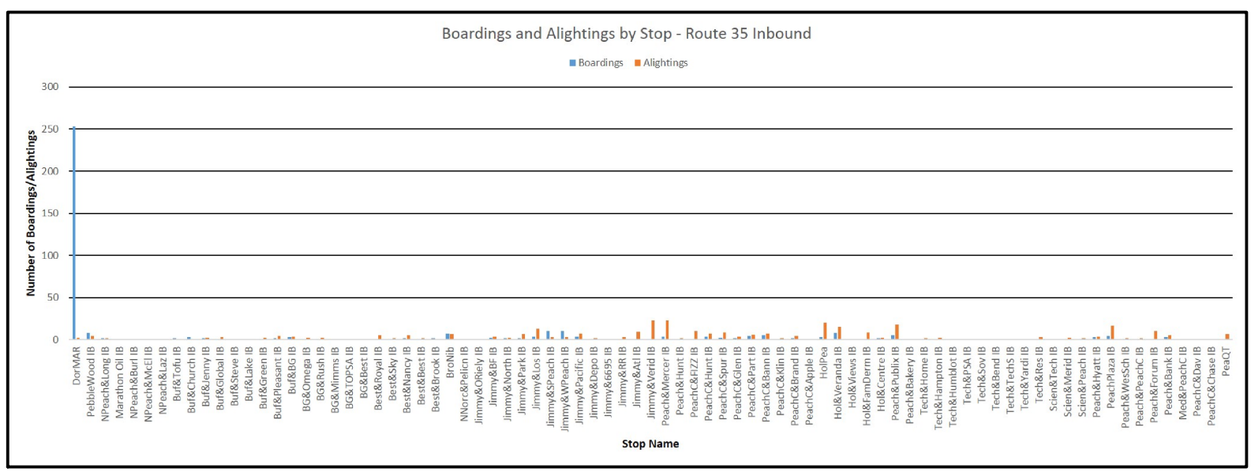
Origin-Destination Intensity

High Medium Low

0 0.5 1 2 Miles

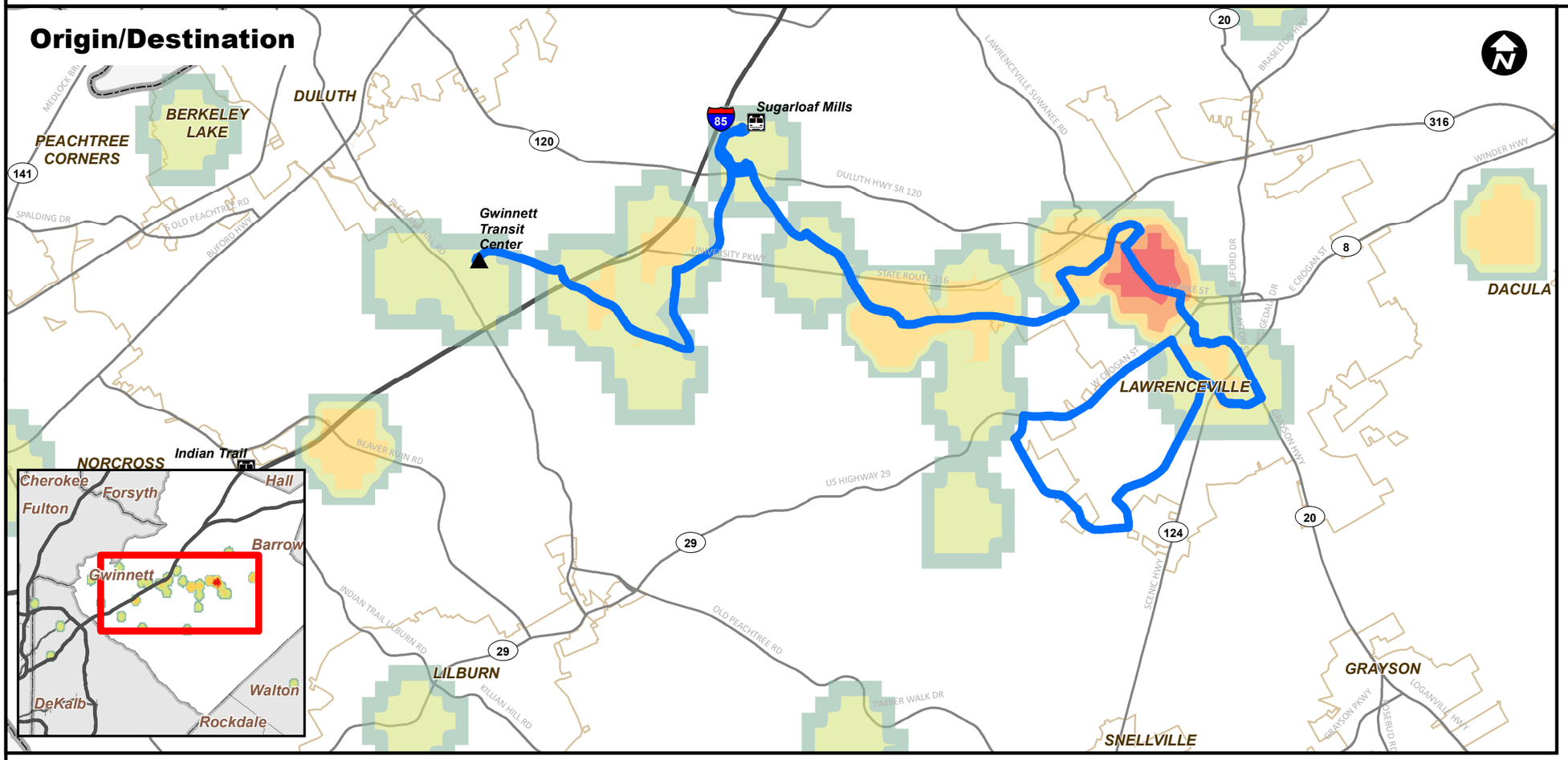
Kimley»Horn





GWINNETT COUNTY TRANSIT

Origin/Destination



ROUTE 40

Route Metrics - GCT 40	
Peak Headway (mins)	30
Off-Peak Headway (mins)	60
Span	6:14 AM-7:47 PM
Route Length - Inbound (mi)	20.2
Route Length - Outbound (mi)	19.4
Running Time - Inbound (mins)	59
Running Time - Outbound (mins)	57
Average Weekday Boardings	449
Pax/Revenue Mile	0.6
Pax/Revenue Hour	12.2
Low Income Riders (%)	63%
Minority Riders (%)	98%
Riders Transferring (%)	63%

Gwinnett County Transit

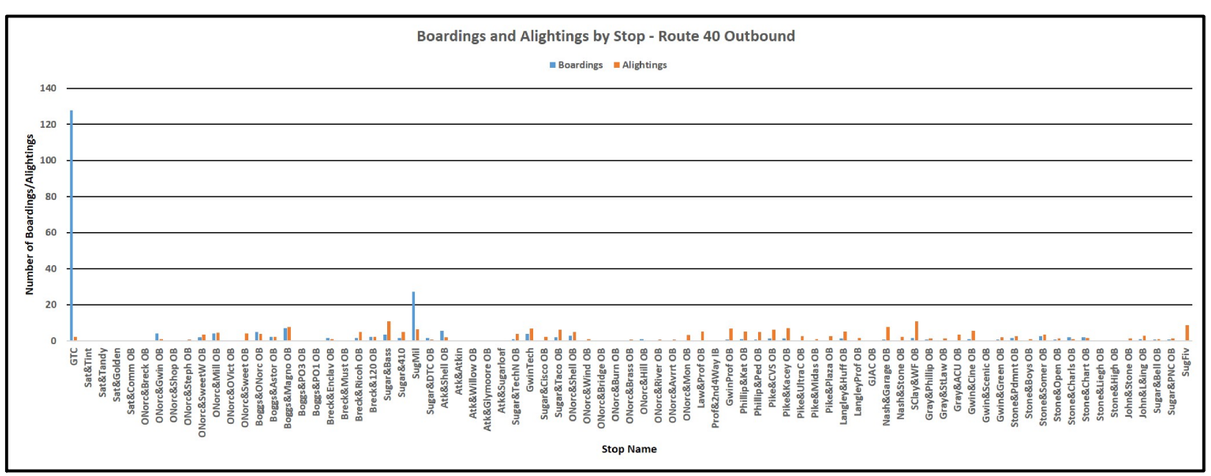
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

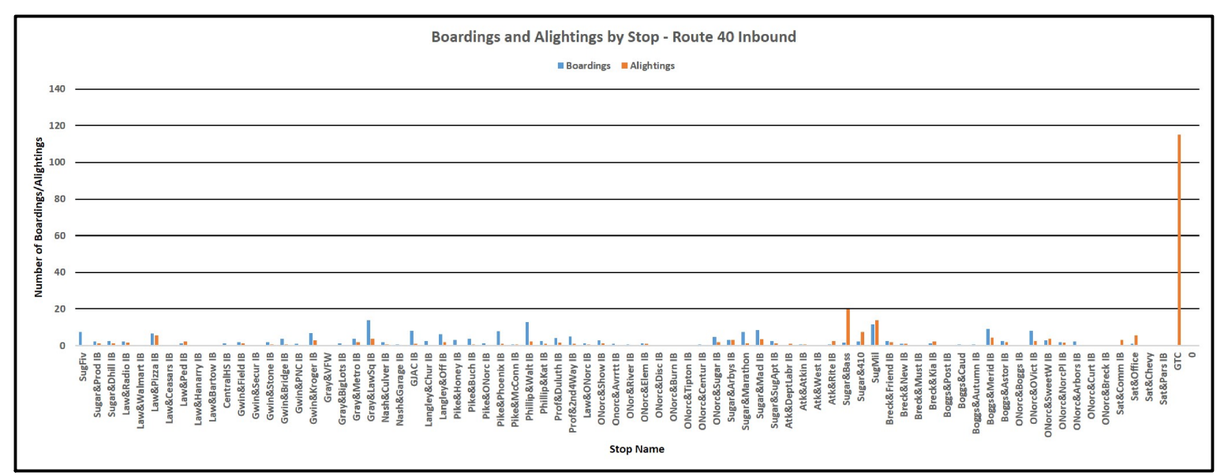
Origin-Destination Intensity

High — Medium — Low

0 0.5 1 2 Miles

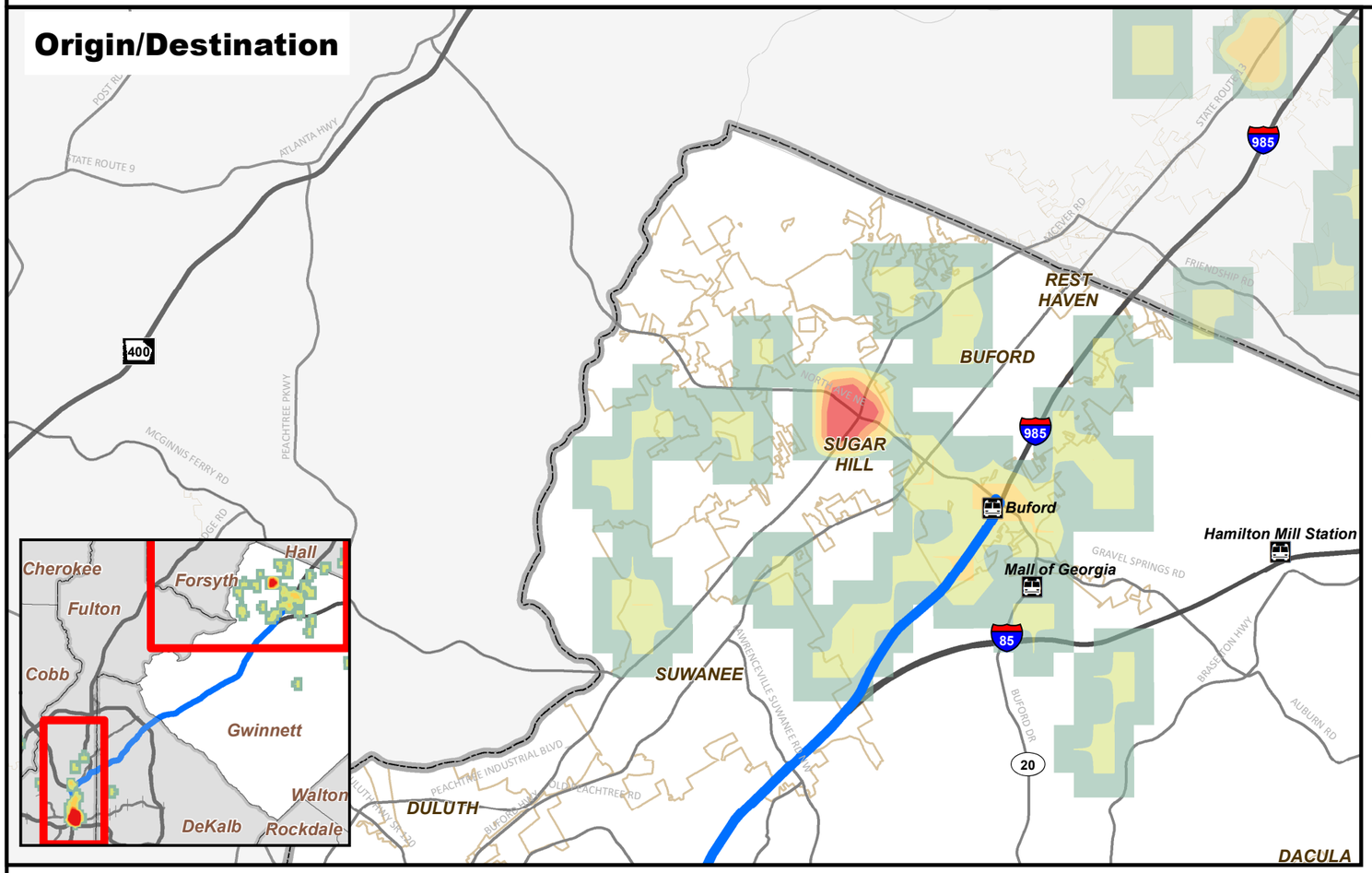
Kimley»Horn

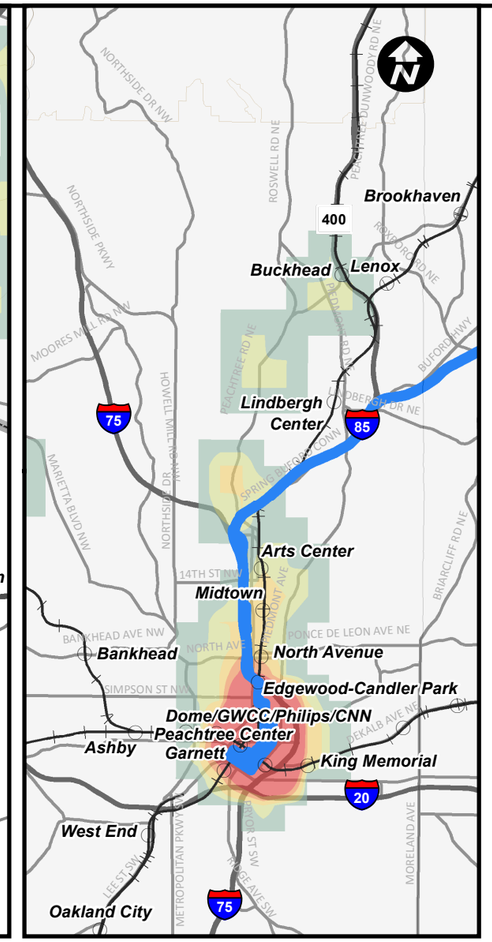




GWINNETT COUNTY TRANSIT

Origin/Destination





ROUTE 101

Route Metrics - GCT 101	
Peak Headway (mins)	15
Off-Peak Headway (mins)	30
Span	5:30 AM-6:03 PM
Route Length - Inbound (mi)	36.8
Route Length - Outbound (mi)	36
Running Time - Inbound (mins)	70
Running Time - Outbound (mins)	60
Average Weekday Boardings	276
Pax/Revenue Mile	0.4
Pax/Revenue Hour	14.9
Low Income Riders (%)	18%
Minority Riders (%)	39%
Riders Transferring (%)	14%

Gwinnett County Transit

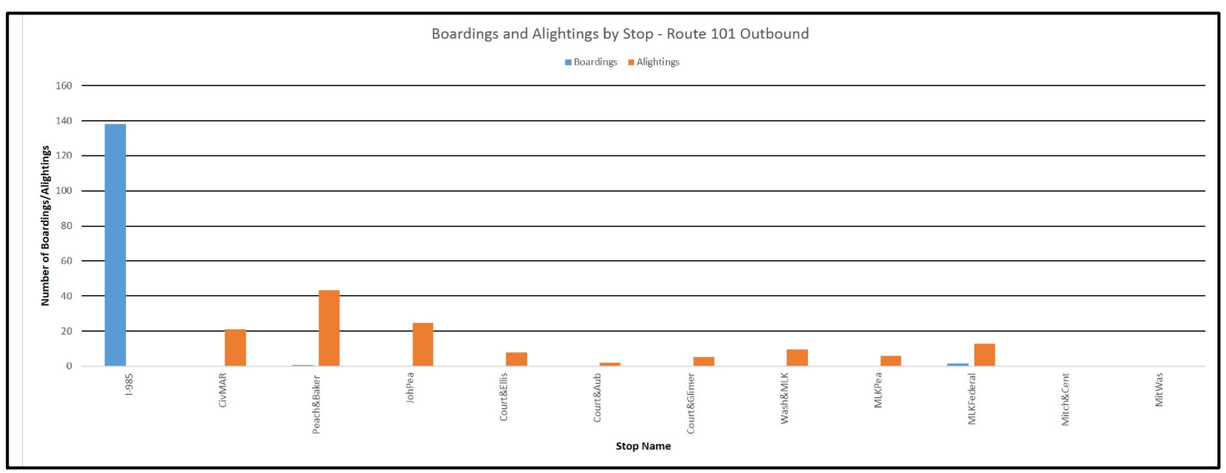
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

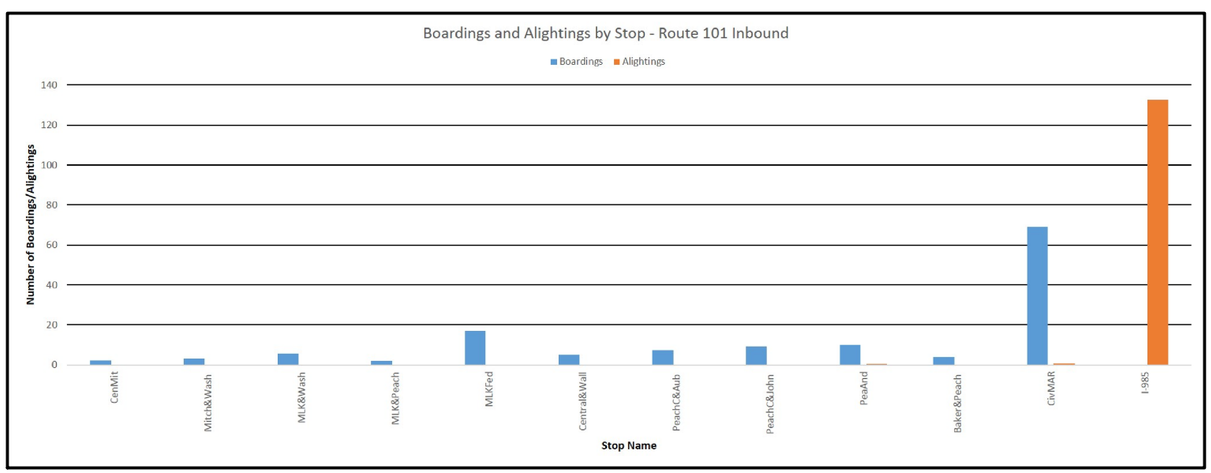
Origin-Destination Intensity

High — Medium — Low

0 1.25 2.5 5 Miles

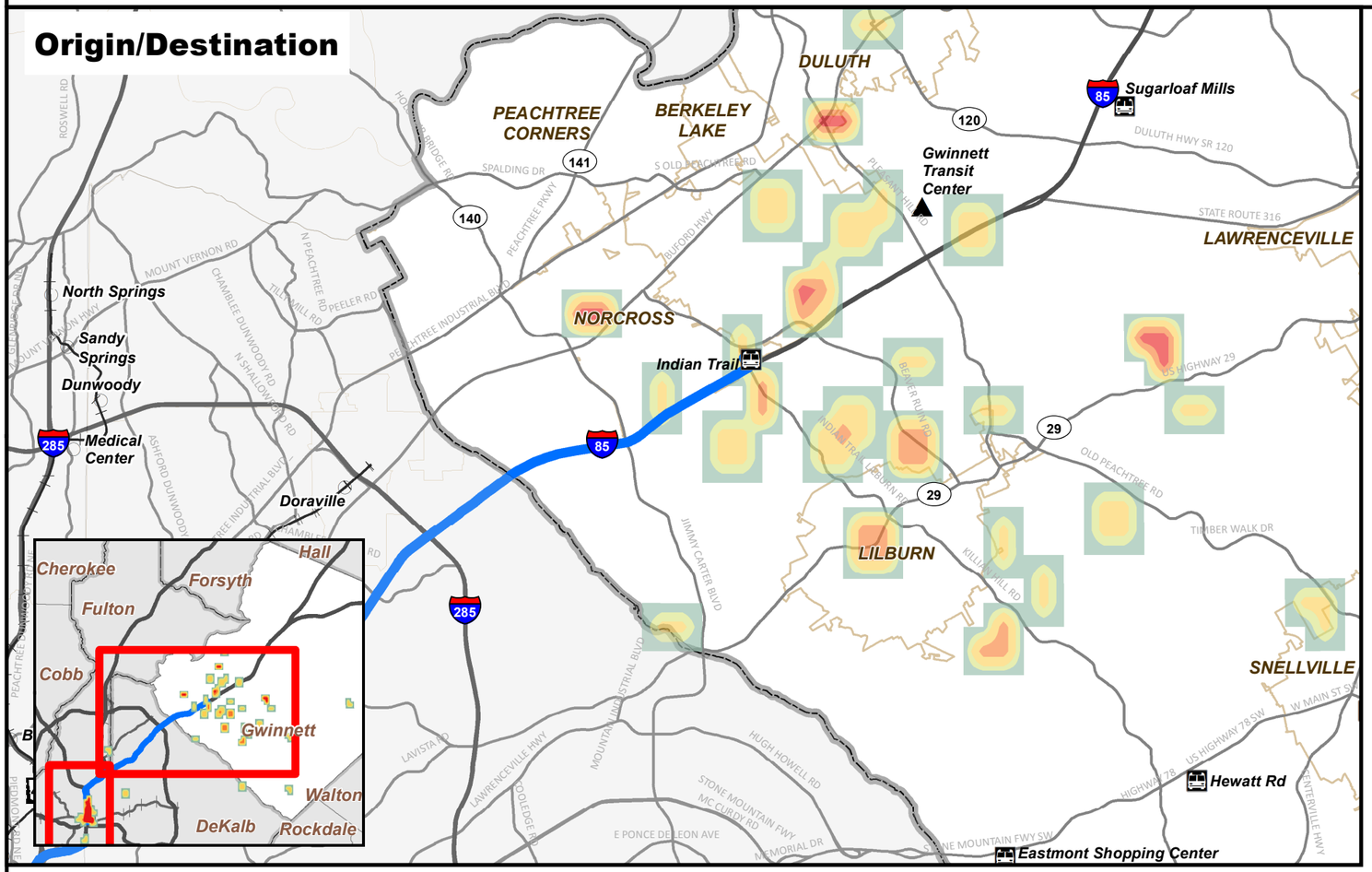
Kimley»Horn

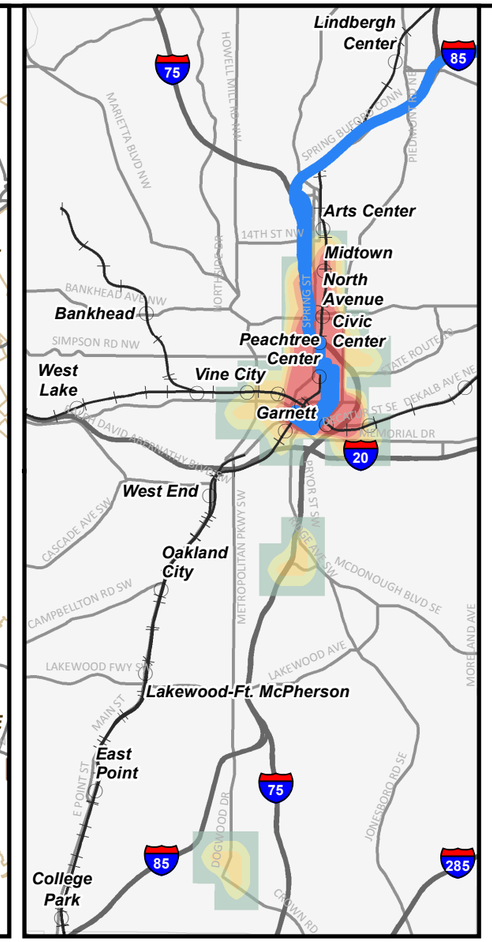




GWINNETT COUNTY TRANSIT

Origin/Destination





ROUTE 102

Route Metrics - GCT 102	
Peak Headway (mins)	30
Off-Peak Headway (mins)	30
Span	6:10 AM-5:38 PM
Route Length - Inbound (mi)	21
Route Length - Outbound (mi)	21.3
Running Time - Inbound (mins)	50
Running Time - Outbound (mins)	45
Average Weekday Boardings	179
Pax/Revenue Mile	0.7
Pax/Revenue Hour	18.8
Low Income Riders (%)	20%
Minority Riders (%)	58%
Riders Transferring (%)	14%

Gwinnett County Transit

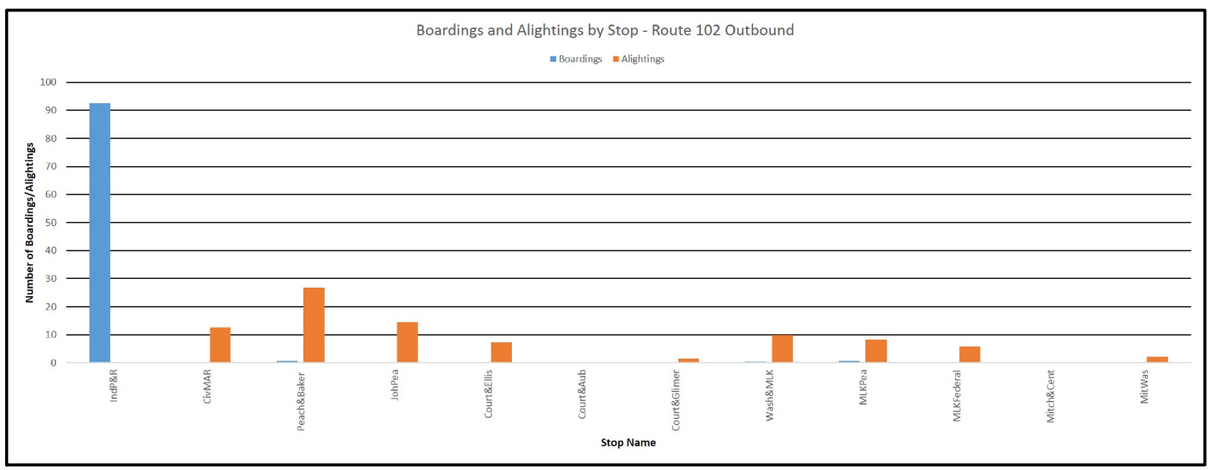
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

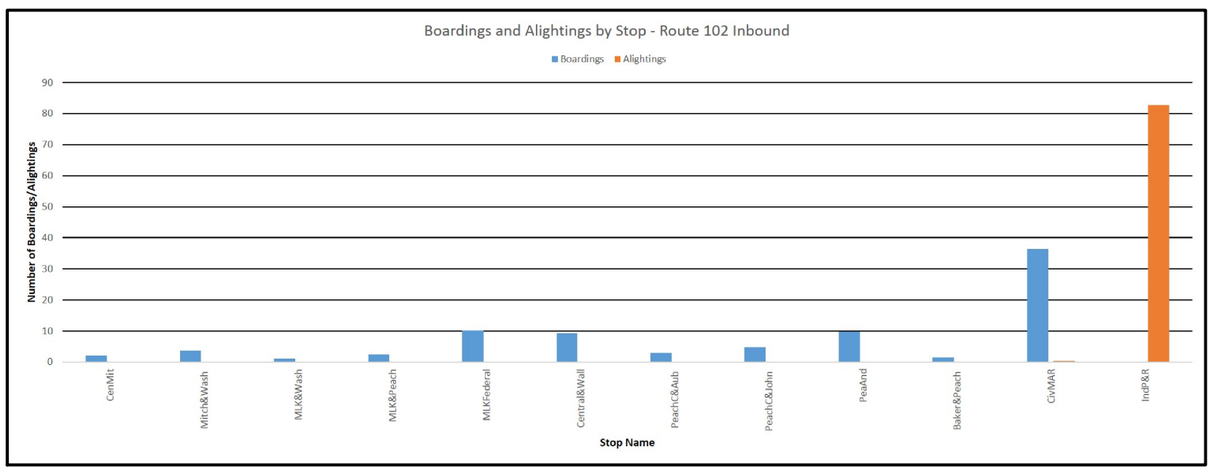
Origin-Destination Intensity

High — Medium — Low

0 1.25 2.5 5 Miles

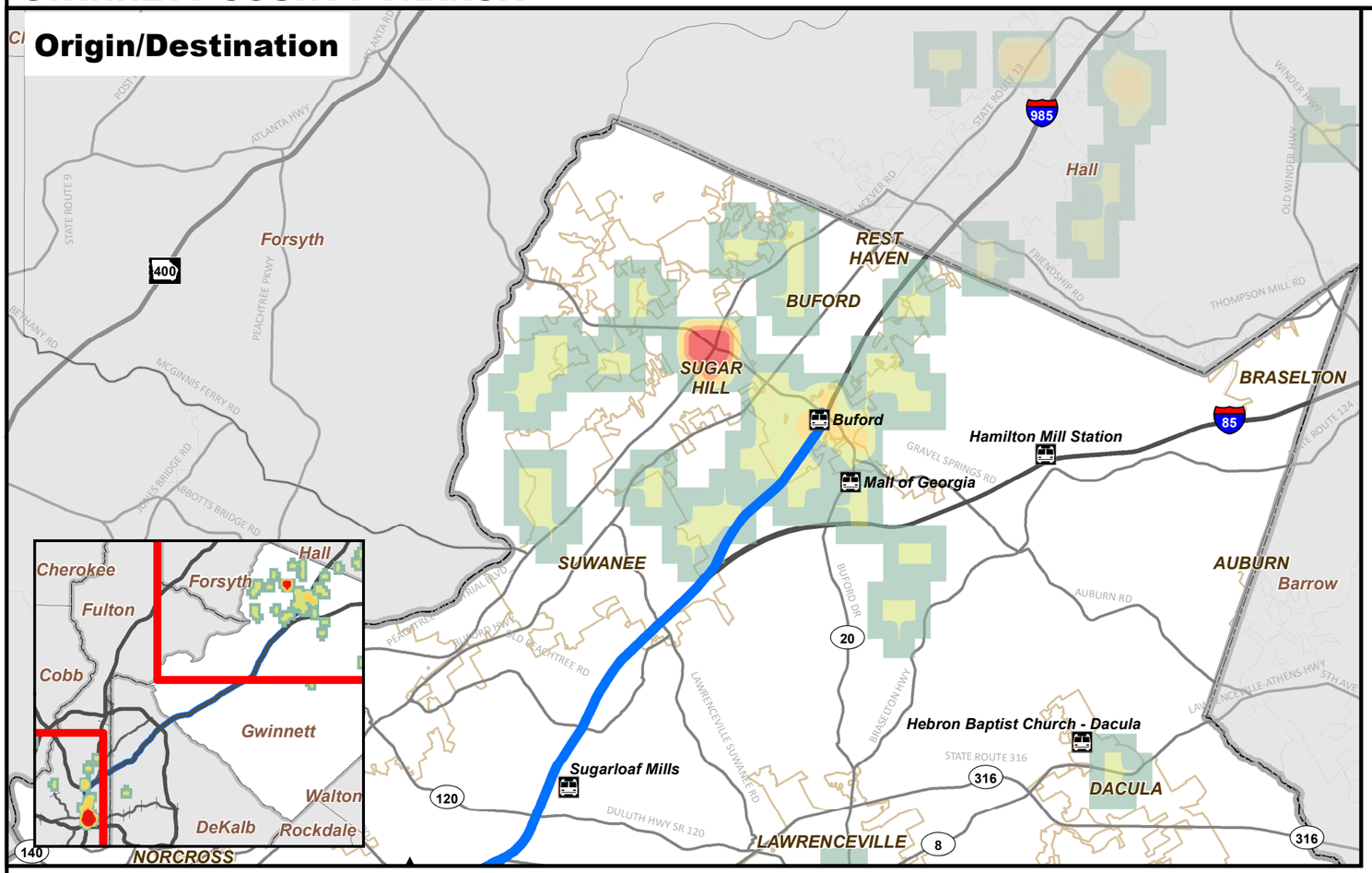
Kimley»Horn

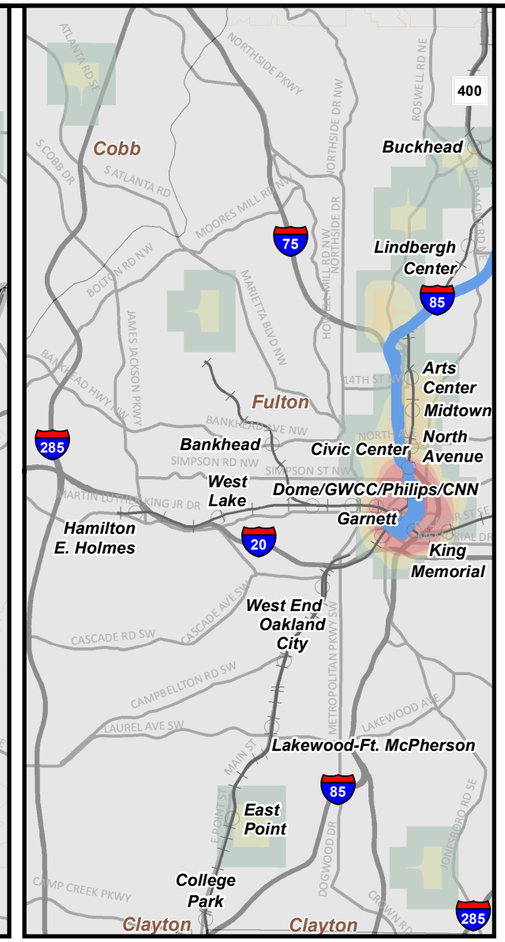




GWINNETT COUNTY TRANSIT

Origin/Destination





ROUTE 103

Route Metrics - GCT 103	
Peak Headway (mins)	10
Off-Peak Headway (mins)	20
Span	5:40 AM - 8:30 AM, 3:05 PM - 6:05 PM
Route Length - Inbound (mi)	28.1
Route Length - Outbound (mi)	28
Running Time - Inbound (mins)	70
Running Time - Outbound (mins)	50
Average Weekday Boardings	788
Pax/Revenue Mile	0.8
Pax/Revenue Hour	22.9
Low Income Riders (%)	19%
Minority Riders (%)	70%
Riders Transferring (%)	3%

Gwinnett County Transit

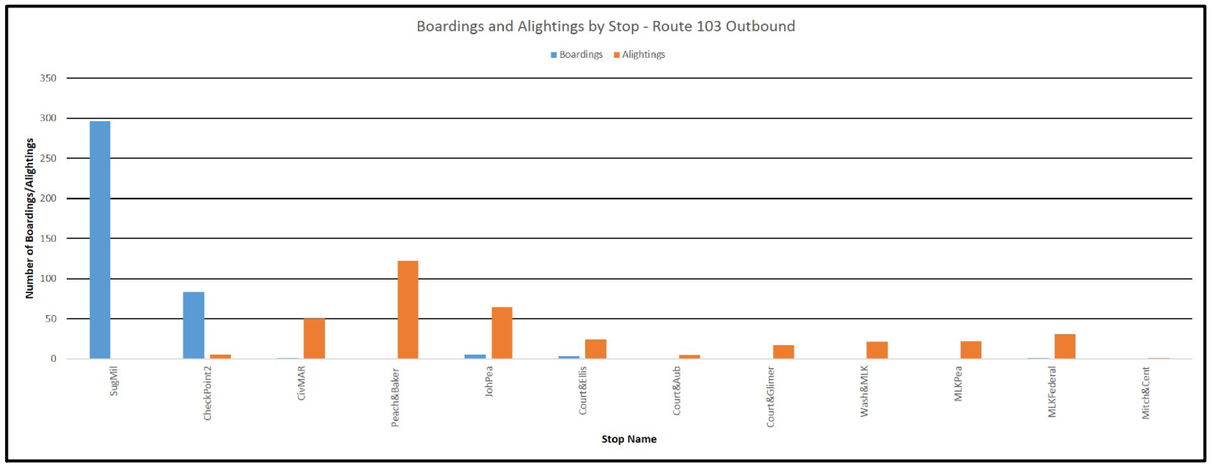
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

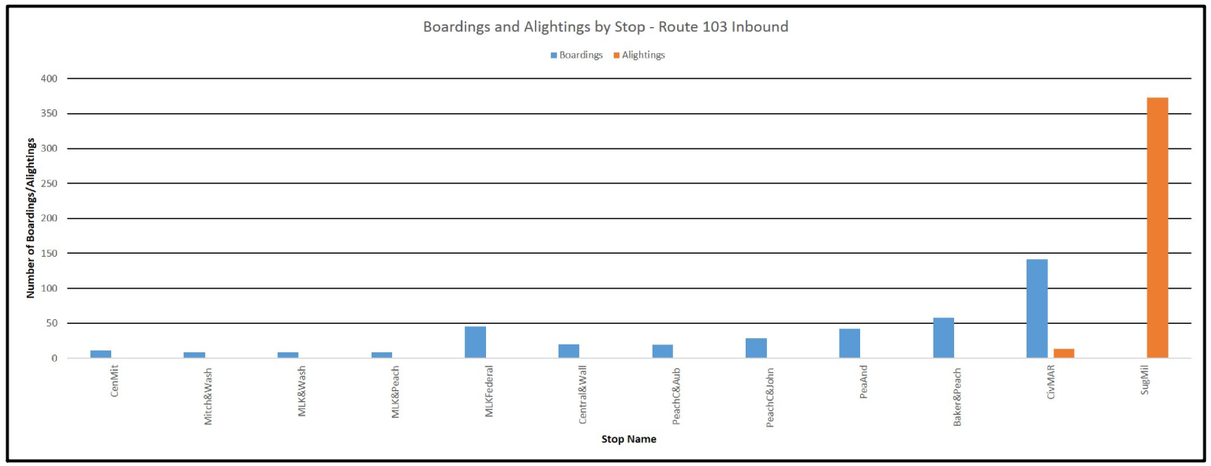
Origin-Destination Intensity

High — Medium — Low

0 1.25 2.5 5 Miles

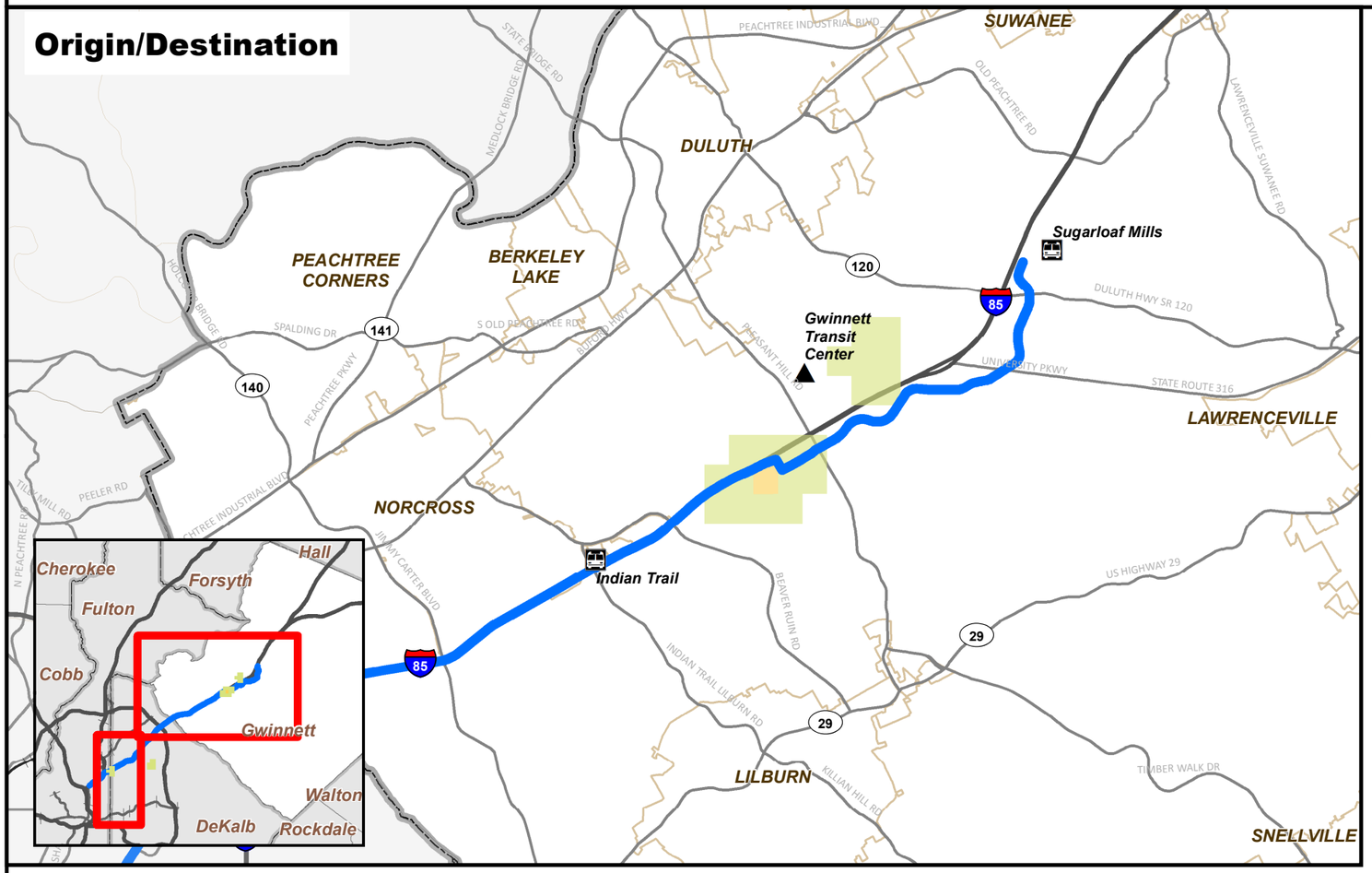
Kimley»Horn

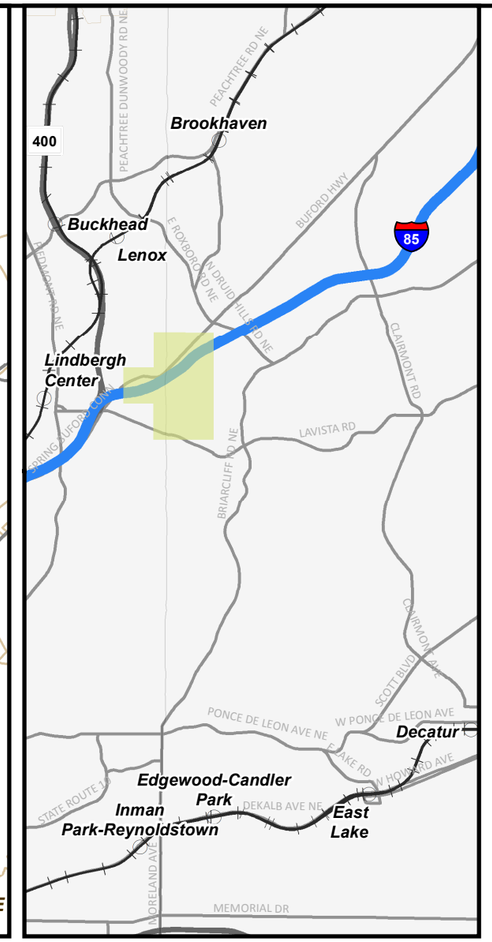




GWINNETT COUNTY TRANSIT

Origin/Destination





ROUTE 103A

Route Metrics - GCT 103A	
Peak Headway (mins)	-
Off-Peak Headway (mins)	-
Span	7:00 AM - 8:05 AM, 3:10 PM - 5:15 PM
Route Length - Inbound (mi)	27.9
Route Length - Outbound (mi)	32.5
Running Time - Inbound (mins)	60
Running Time - Outbound (mins)	80
Average Weekday Boardings	21
Pax/Revenue Mile	0.1
Pax/Revenue Hour	3.8
Low Income Riders (%)	0%
Minority Riders (%)	75%
Riders Transferring (%)	100%

*Survey sample size for Route 103A was 4 people

Gwinnett County Transit

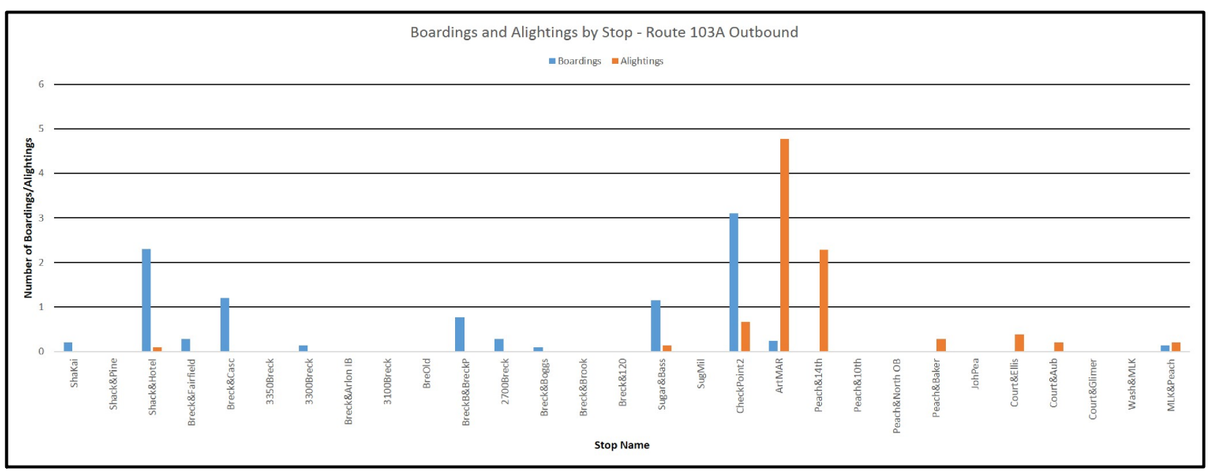
- Park and Ride Locations
- Transit Centers
- GCT Routes
- MARTA Stations
- MARTA Rail

Origin-Destination Intensity

High Medium Low

0 0.5 1 2 Miles

Kimley»Horn



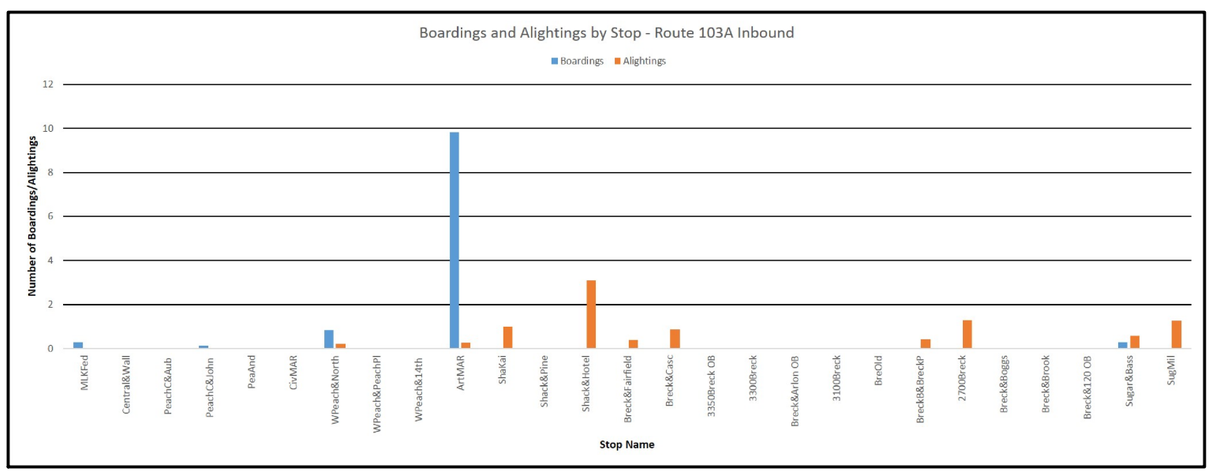
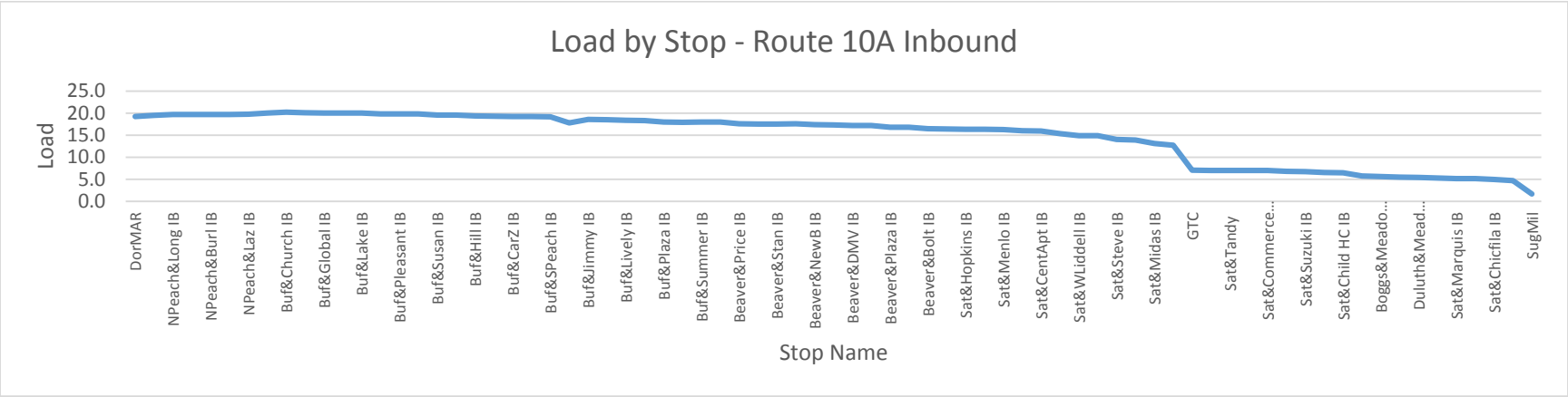
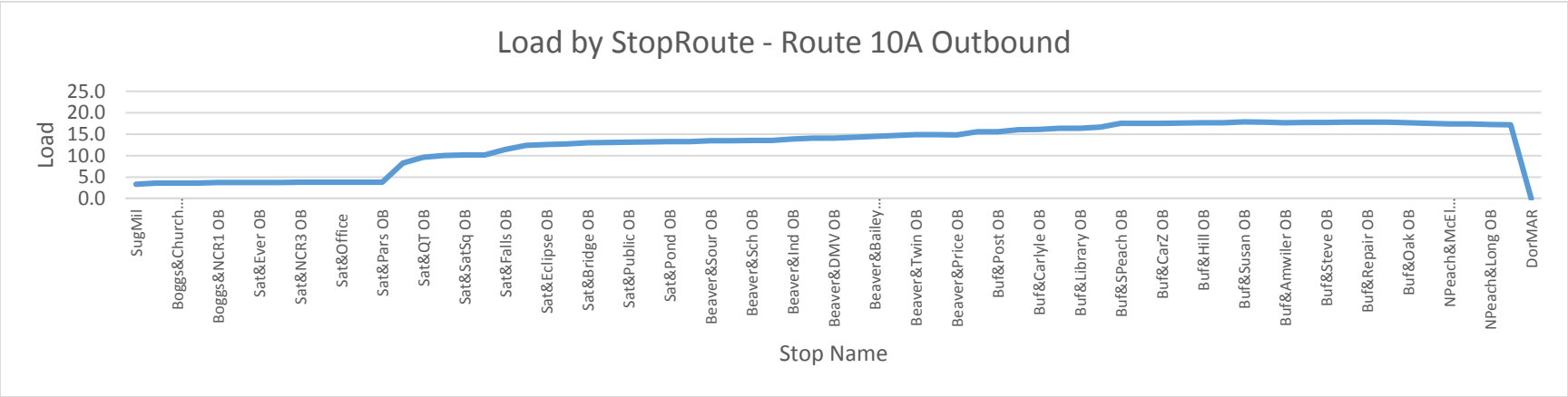
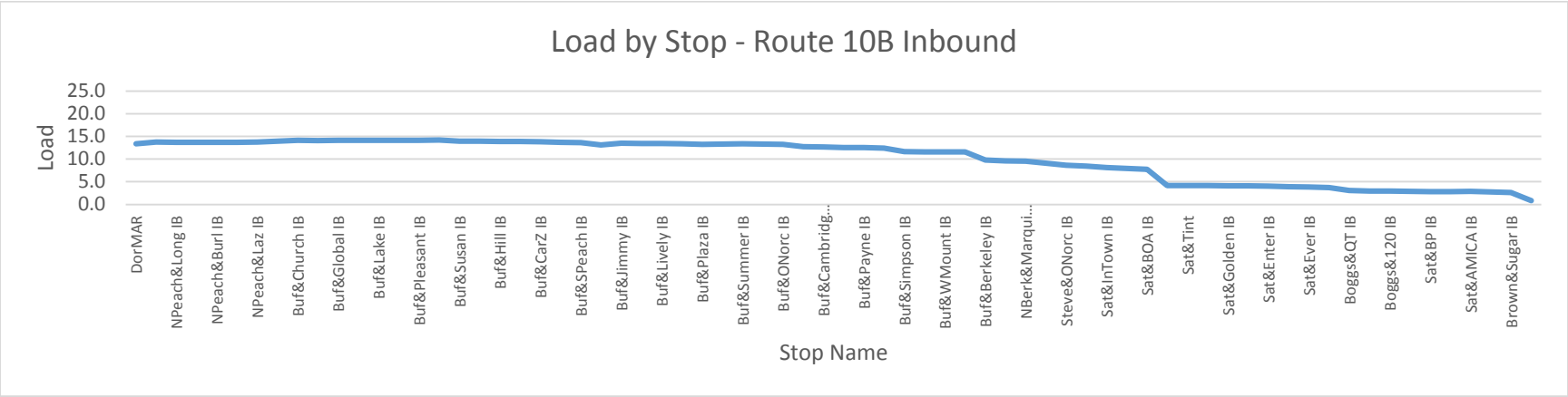
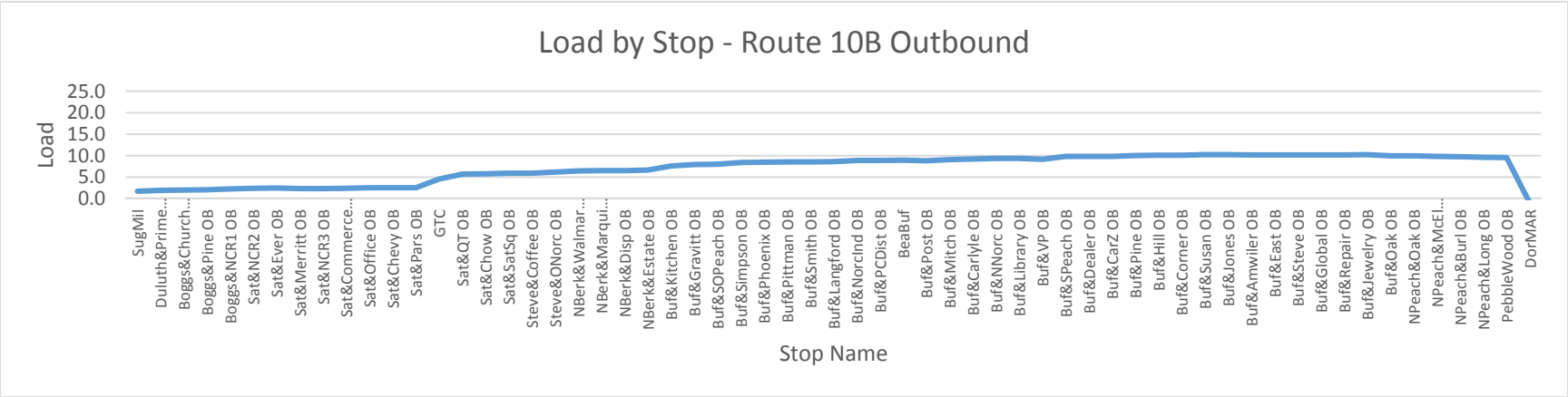


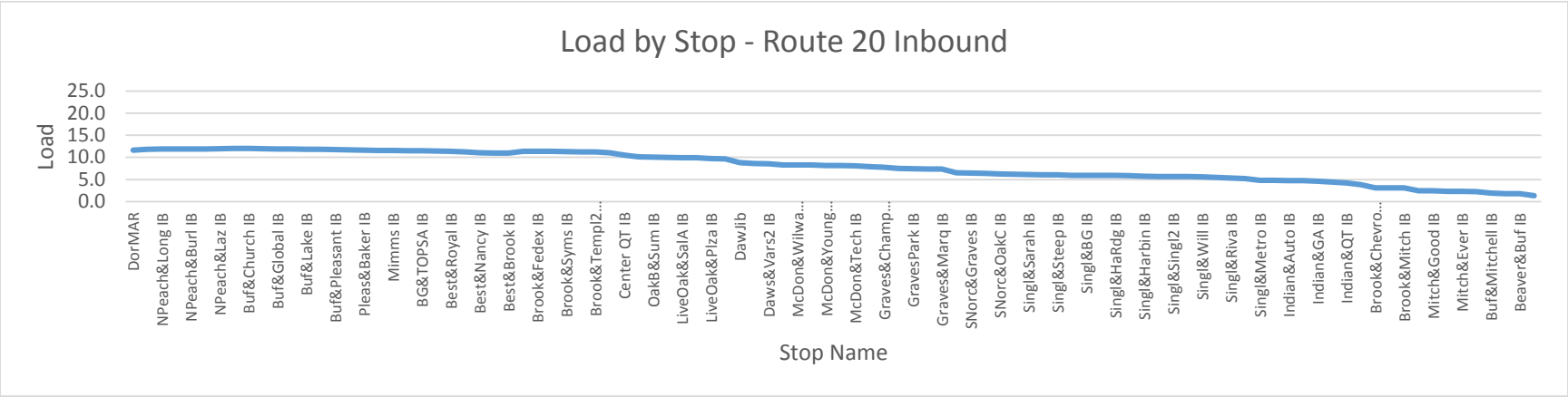
Exhibit C – Load by Route and Direction

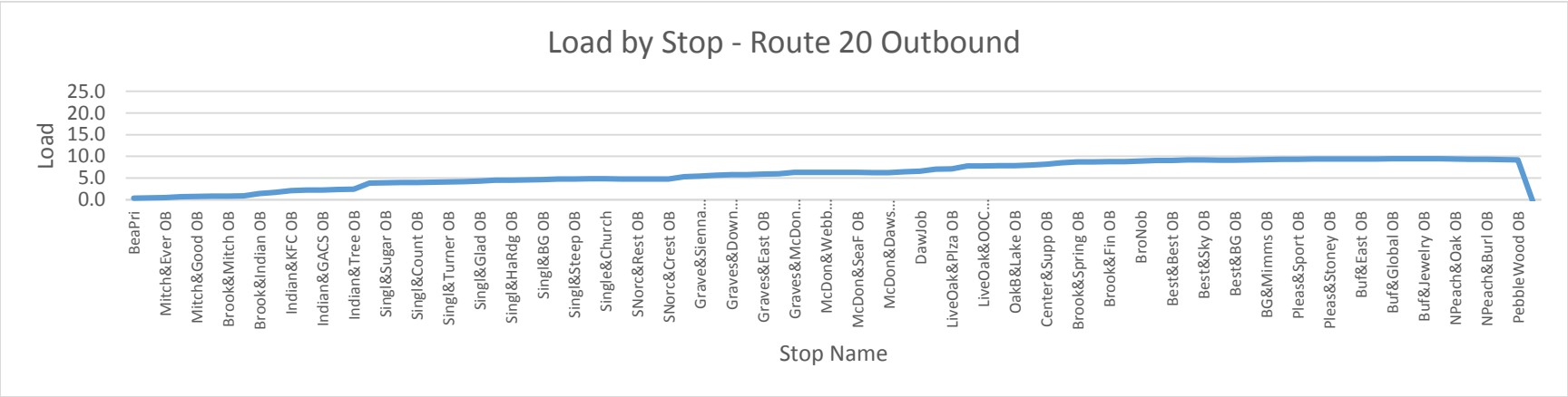

Load by Stop - Route 10A Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
DorMAR
NPeach&Long IB
NPeach&Burl IB
NPeach&Laz IB
Buf&Church IB
Buf&Global IB
Buf&Lake IB
Buf&Pleasant IB
Buf&Susan IB
Buf&Hill IB
Buf&CarZ IB
Buf&SPeach IB
Buf&Jimmy IB
Buf&Lively IB
Buf&Plaza IB
Buf&Summer IB
Beaver&Price IB
Beaver&Stan IB
Beaver&NewB IB
Beaver&DMV IB
Beaver&Plaza IB
Beaver&Bolt IB
Sat&Hopkins IB
Sat&Menlo IB
Sat&CentApt IB
Sat&WLiddell IB
Sat&Steve IB
Sat&Midas IB
GTC
Sat&Tandy
Sat&Commerce...
Sat&Suzuki IB
Sat&Child HC IB
Boggs&Meado...
Duluth&Mead...
Sat&Marquis IB
Sat&Chicfila IB
SugMil
Stop Name

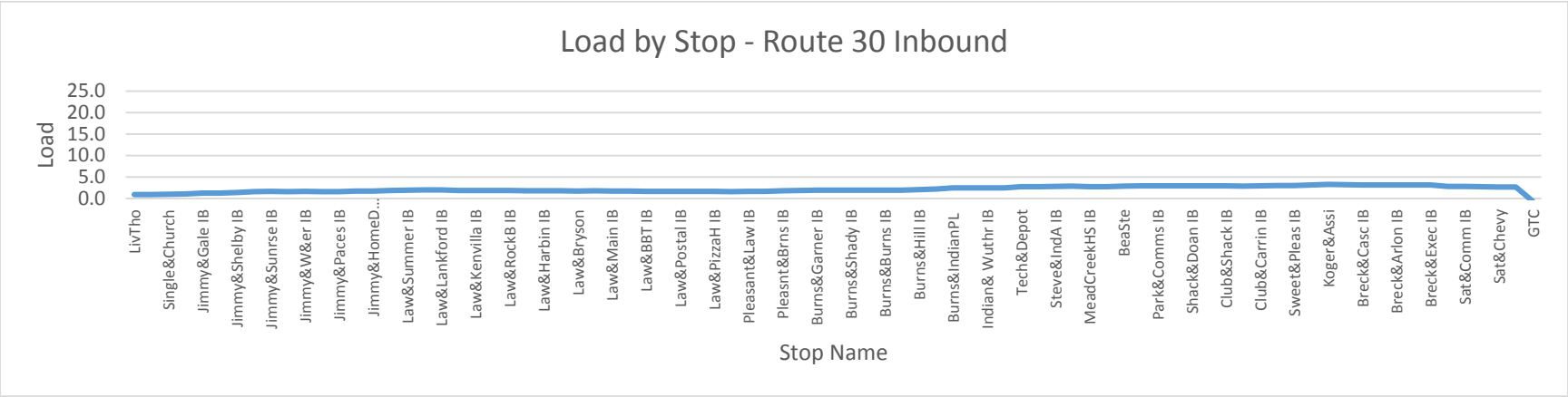

Load by StopRoute - Route 10A Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
SugMil
Boggs&Church...
Boggs&NCR1 OB
Sat&Ever OB
Sat&NCR3 OB
Sat&Office
Sat&Pars OB
Sat&QT OB
Sat&SatSq OB
Sat&Falls OB
Sat&Eclipse OB
Sat&Bridge OB
Sat&Public OB
Sat&Pond OB
Beaver&Sour OB
Beaver&Sch OB
Beaver&Ind OB
Beaver&DMV OB
Beaver&Bailey...
Beaver&Twin OB
Beaver&Price OB
Buf&Post OB
Buf&Carlyle OB
Buf&Library OB
Buf&SPeach OB
Buf&CarZ OB
Buf&Hill OB
Buf&Susan OB
Buf&Amwiler OB
Buf&Steve OB
Buf&Repair OB
Buf&Oak OB
NPeach&McEl...
NPeach&Long OB
DorMAR
Stop Name

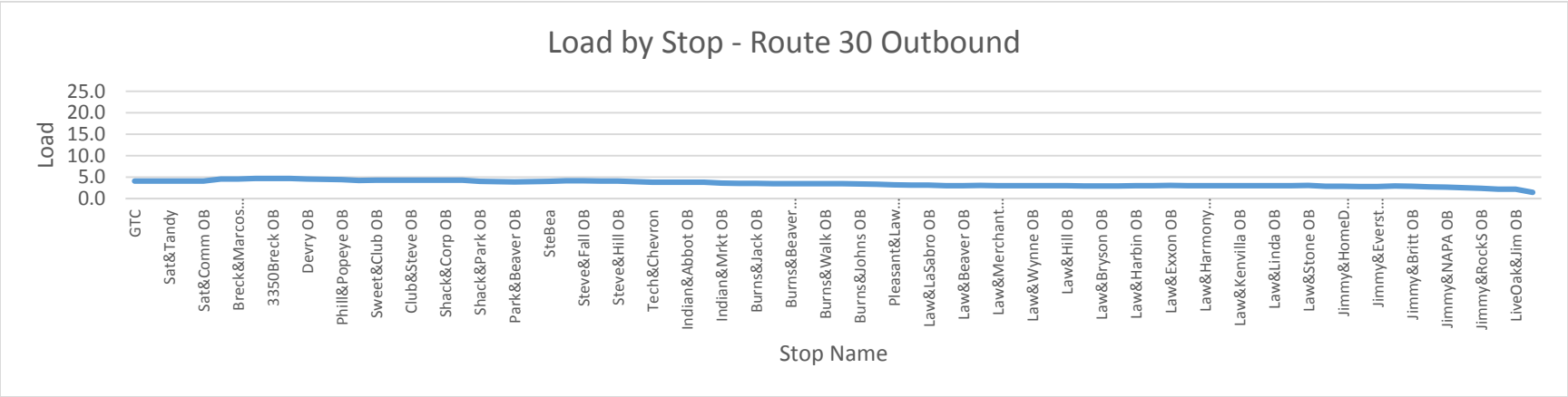

Load by Stop - Route 10B Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
DorMAR
NPeach&Long IB
NPeach&Burl IB
NPeach&Laz IB
Buf&Church IB
Buf&Global IB
Buf&Lake IB
Buf&Pleasant IB
Buf&Susan IB
Buf&Hill IB
Buf&CarZ IB
Buf&SPeach IB
Buf&Jimmy IB
Buf&Lively IB
Buf&Plaza IB
Buf&Summer IB
Buf&ONorc IB
Buf&Cambridg...
Buf&Payne IB
Buf&Simpson IB
Buf&WMount IB
Buf&Berkeley IB
NBerk&Marqui...
Steve&ONorc IB
Sat&InTown IB
Sat&BOA IB
Sat&Tint
Sat&Golden IB
Sat&Enter IB
Sat&Ever IB
Boggs&QT IB
Boggs&120 IB
Sat&BP IB
Sat&AMICA IB
Brown&Sugar IB
Stop Name

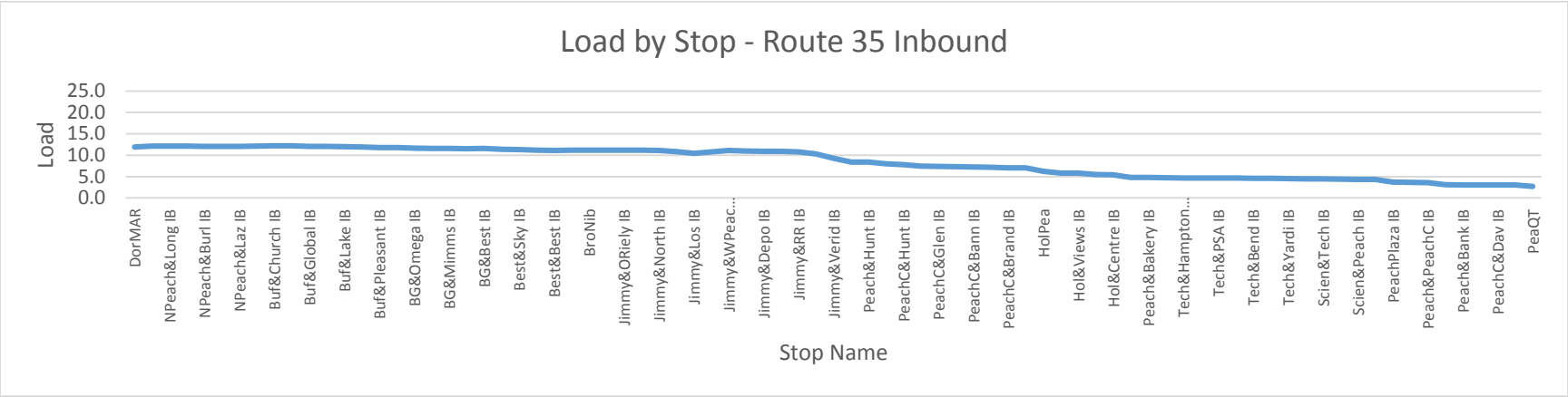

Load by Stop - Route 10B Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
SugMil
Duluth&Prime...
Boggs&Church...
Boggs&Pine OB
Boggs&NCR1 OB
Sat&NCR2 OB
Sat&Ever OB
Sat&Merritt OB
Sat&NCR3 OB
Sat&Commerce...
Sat&Office OB
Sat&Chevy OB
Sat&Pars OB
GTC
Sat&QT OB
Sat&Chow OB
Sat&SatSq OB
Steve&Coffee OB
Steve&ONorc OB
NBerk&Walmar...
NBerk&Marqui...
NBerk&Disp OB
NBerk&Estate OB
Buf&Kitchen OB
Buf&Gravitt OB
Buf&SOPeach OB
Buf&Simpson OB
Buf&Phoenix OB
Buf&Pittman OB
Buf&Smith OB
Buf&Langford OB
Buf&NorcInd OB
Buf&PCDist OB
BeaBuf
Buf&Post OB
Buf&Mitch OB
Buf&Carlyle OB
Buf&NNorc OB
Buf&Library OB
Buf&VP OB
Buf&SPeach OB
Buf&Dealer OB
Buf&CarZ OB
Buf&Pine OB
Buf&Hill OB
Buf&Corner OB
Buf&Susan OB
Buf&Jones OB
Buf&Amwiler OB
Buf&East OB
Buf&Steve OB
Buf&Global OB
Buf&Repair OB
Buf&Jewelry OB
Buf&Oak OB
NPeach&Oak OB
NPeach&McEl...
NPeach&Burl OB
NPeach&Long OB
PebbleWood OB
DorMAR
Stop Name

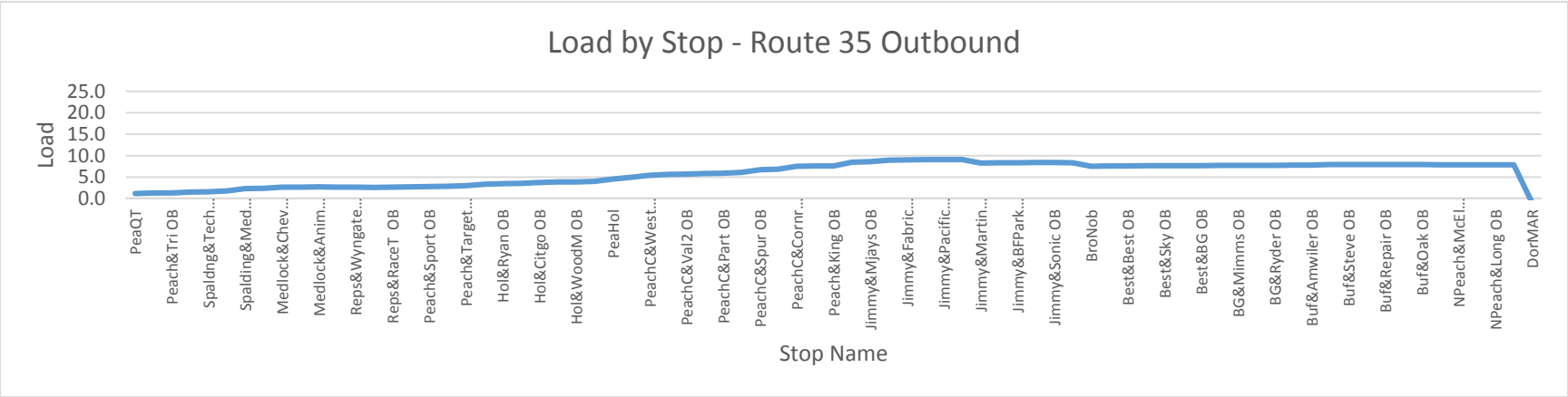

Load by Stop - Route 20 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
DorMAR
NPeach&Long IB
NPeach&Burl IB
NPeach&Laz IB
Buf&Church IB
Buf&Global IB
Buf&Lake IB
Buf&Pleasant IB
Pleas&Baker IB
Mimms IB
BG&TOPSA IB
Best&Royal IB
Best&Nancy IB
Best&Brook IB
Brook&Fedex IB
Brook&Syms IB
Brook&Templ2...
Center QT IB
OakB&Sum IB
LiveOak&SalA IB
LiveOak&Plza IB
DawJib
Daws&Vars2 IB
McDon&Wilwa...
McDon&Young...
McDon&Tech IB
Graves&Champ...
GravesPark IB
Graves&Marq IB
SNorc&Graves IB
SNorc&OakC IB
Singl&Sarah IB
Singl&Steep IB
Singl&BG IB
Singl&HaRdg IB
Singl&Harbin IB
Singl&Singl2 IB
Singl&Will IB
Singl&Riva IB
Singl&Metro IB
Indian&Auto IB
Indian&GA IB
Indian&QT IB
Brook&Chevro...
Brook&Mitch IB
Mitch&Good IB
Mitch&Ever IB
Buf&Mitchell IB
Beaver&Buf IB
Stop Name

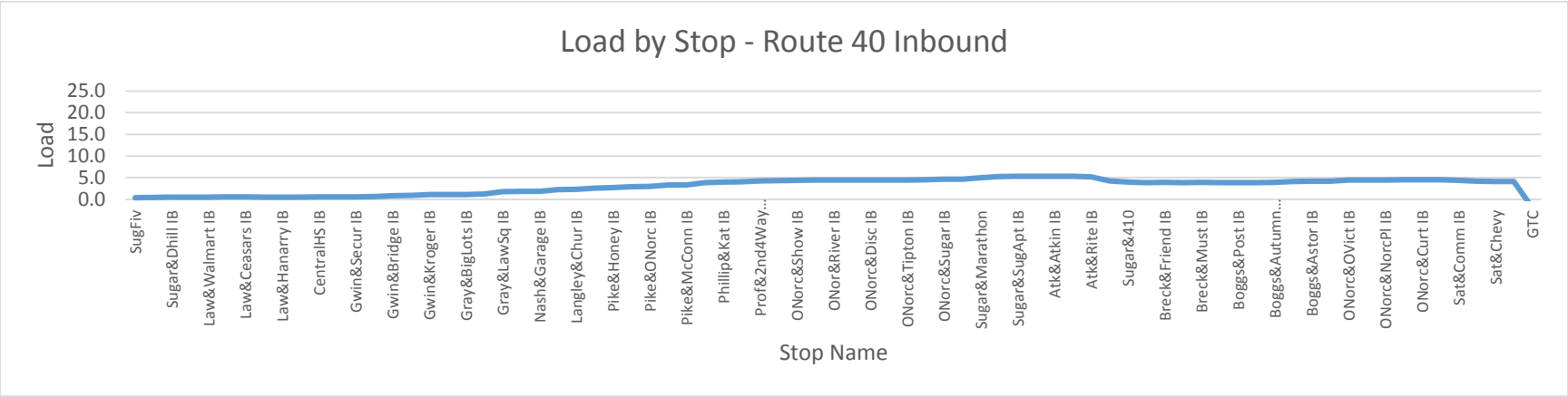

Load by Stop - Route 20 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
BeaPri
Mitch&Ever OB
Mitch&Good OB
Brook&Mitch OB
Brook&Indian OB
Indian&KFC OB
Indian&GACS OB
Indian&Tree OB
Singl&Sugar OB
Singl&Count OB
Singl&Turner OB
Singl&Glad OB
Singl&HaRdg OB
Singl&BG OB
Singl&Steep OB
Single&Church
SNorc&Rest OB
SNorc&Crest OB
Grave&Sienna...
Graves&Down...
Graves&East OB
Graves&McDon...
McDon&Webb...
McDon&SeaF OB
McDon&Daws...
DawJob
LiveOak&Plza OB
LiveOak&OOC...
OakB&Lake OB
Center&Supp OB
Brook&Spring OB
Brook&Fin OB
BroNob
Best&Best OB
Best&Sky OB
Best&BG OB
BG&Mimms OB
Pleas&Sport OB
Pleas&Stoney OB
Buf&East OB
Buf&Global OB
Buf&Jewelry OB
NPeach&Oak OB
NPeach&Burl OB
PebbleWood OB
Stop Name

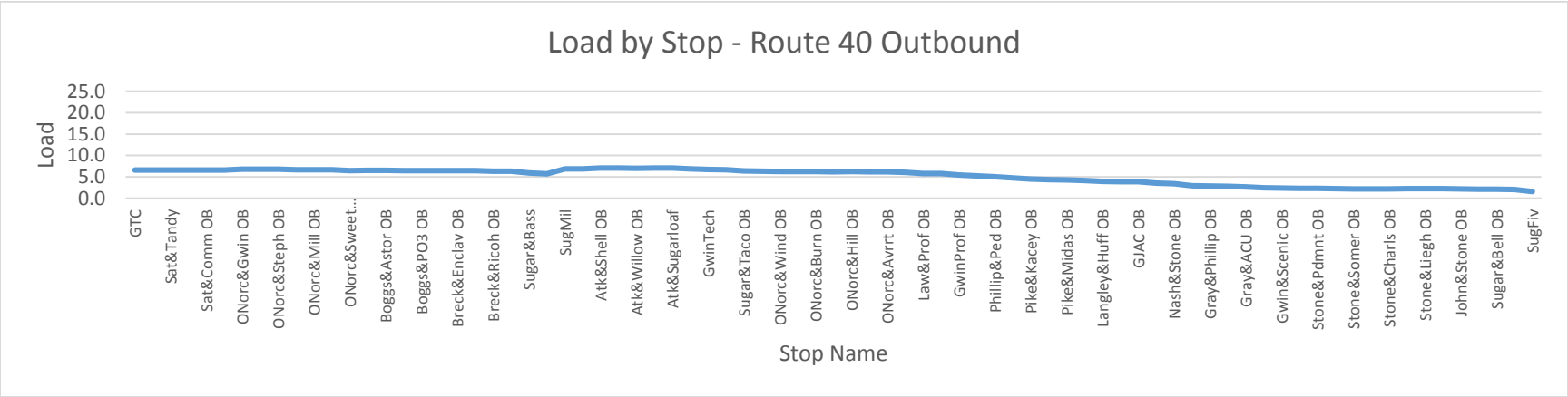

Load by Stop - Route 30 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
LivTho
Single&Church
Jimmy&Gale IB
Jimmy&Shelby IB
Jimmy&Sunrse IB
Jimmy&W&er IB
Jimmy&Paces IB
Jimmy&HomeD...
Law&Summer IB
Law&Lankford IB
Law&Kenvilla IB
Law&RockB IB
Law&Harbin IB
Law&Bryson
Law&Main IB
Law&BBT IB
Law&Postal IB
Law&PizzaH IB
Pleasant&Law IB
Pleasnt&Brns IB
Burns&Garner IB
Burns&Shady IB
Burns&Burns IB
Burns&Hill IB
Burns&IndianPL
Indian& Wuthr IB
Tech&Depot
Steve&IndA IB
MeadCreekHS IB
BeaSte
Park&Comms IB
Shack&Doan IB
Club&Shack IB
Club&Carrin IB
Sweet&Pleas IB
Koger&Assi
Breck&Casc IB
Breck&Arlon IB
Breck&Exec IB
Sat&Comm IB
Sat&Chevy
GTC
Stop Name

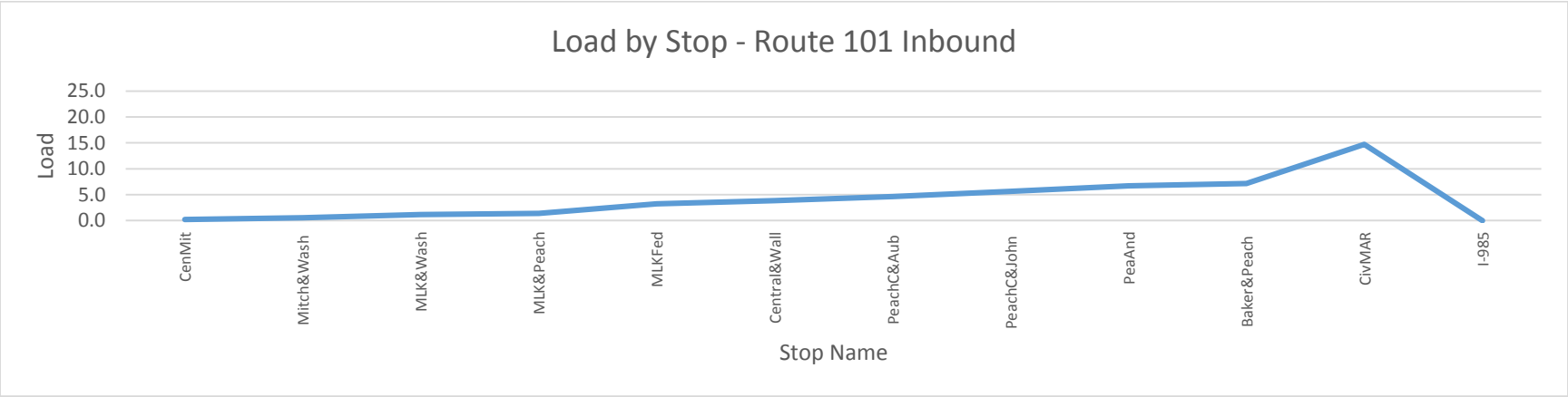

Load by Stop - Route 30 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
GTC
Sat&Tandy
Sat&Comm OB
Breck&Marcos...
3350Breck OB
Devry OB
Phill&Popeye OB
Sweet&Club OB
Club&Steve OB
Shack&Corp OB
Shack&Park OB
Park&Beaver OB
SteBea
Steve&Fall OB
Steve&Hill OB
Tech&Chevron
Indian&Abbot OB
Indian&Mrkt OB
Burns&Jack OB
Burns&Beaver...
Burns&Walk OB
Burns&Johns OB
Pleasant&Law...
Law&LaSabro OB
Law&Beaver OB
Law&Merchant...
Law&Wynne OB
Law&Hill OB
Law&Bryson OB
Law&Harbin OB
Law&Exxon OB
Law&Harmony...
Law&Kenvilla OB
Law&Linda OB
Law&Stone OB
Jimmy&HomeD...
Jimmy&Everst...
Jimmy&Britt OB
Jimmy&NAPA OB
Jimmy&RockS OB
LiveOak&Jim OB
Stop Name

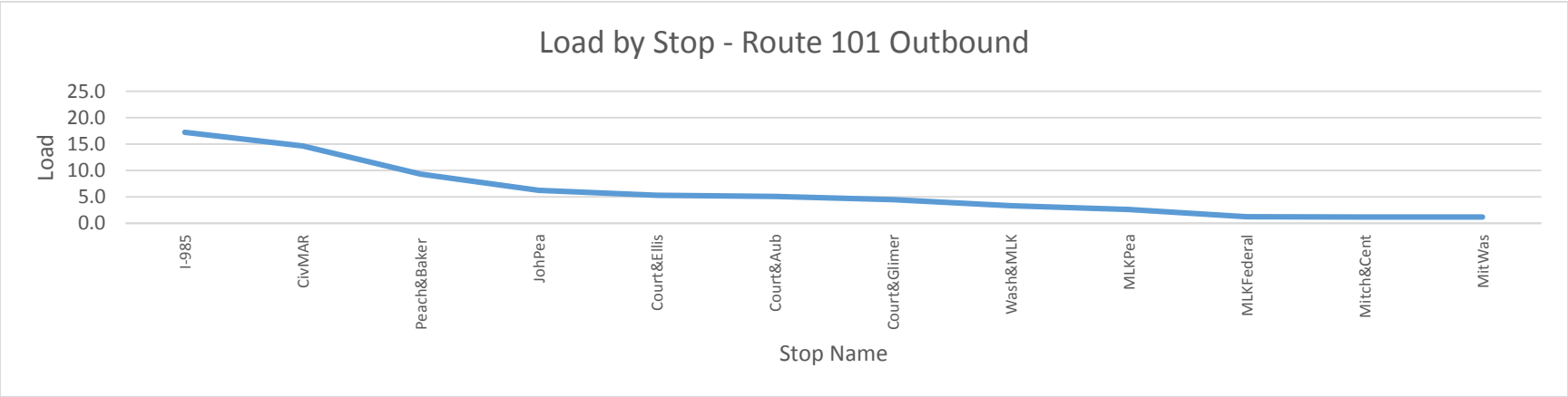

Load by Stop - Route 35 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
DorMAR
NPeach&Long IB
NPeach&Burl IB
NPeach&Laz IB
Buf&Church IB
Buf&Global IB
Buf&Lake IB
Buf&Pleasant IB
BG&Omega IB
BG&Mimms IB
BG&Best IB
Best&Sky IB
Best&Best IB
BroNib
Jimmy&ORiely IB
Jimmy&North IB
Jimmy&Los IB
Jimmy&WPeac...
Jimmy&Depo IB
Jimmy&RR IB
Jimmy&Verid IB
Peach&Hunt IB
PeachC&Hunt IB
PeachC&Glen IB
PeachC&Bann IB
PeachC&Brand IB
HolPea
Hol&Views IB
Hol&Centre IB
Peach&Bakery IB
Tech&Hampton...
Tech&PSA IB
Tech&Bend IB
Tech&Yardi IB
Scien&Tech IB
Scien&Peach IB
PeachPlaza IB
Peach&PeachC IB
Peach&Bank IB
PeachC&Dav IB
PeaQT
Stop Name

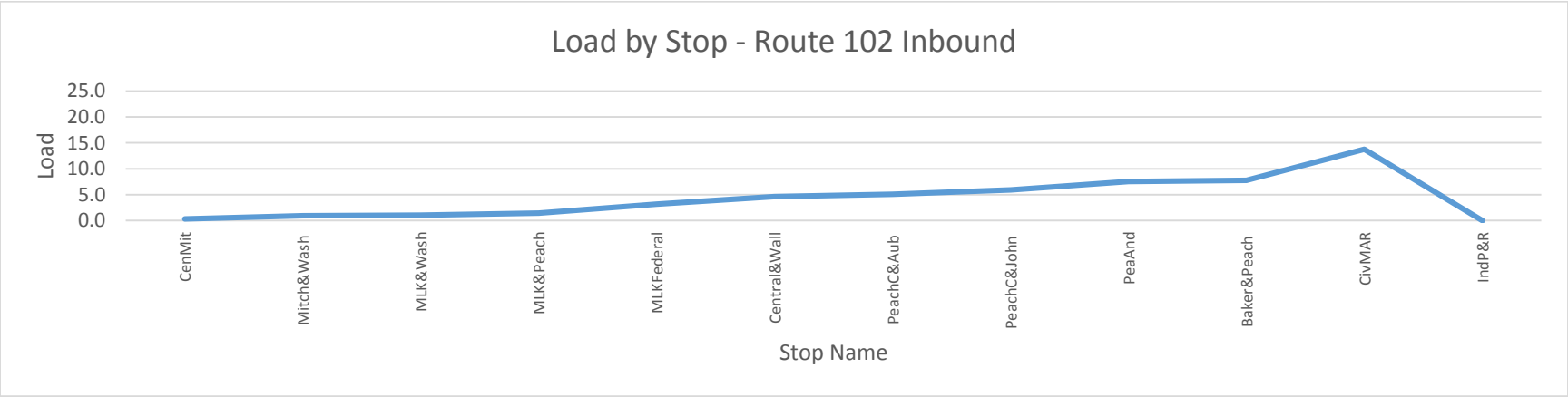

Load by Stop - Route 35 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
PeaQT
Peach&Tri OB
Spaldng&Tech...
Spalding&Med...
Medlock&Chev...
Medlock&Anim...
Reps&Wyngate...
Reps&RaceT OB
Peach&Sport OB
Peach&Target...
Hol&Ryan OB
Hol&Citgo OB
Hol&WoodM OB
PeaHol
PeachC&West...
PeachC&Val2 OB
PeachC&Part OB
PeachC&Spur OB
PeachC&Cornr...
Peach&King OB
Jimmy&Mjays OB
Jimmy&Fabric...
Jimmy&Pacific...
Jimmy&Martin...
Jimmy&BFPark...
Jimmy&Sonic OB
BroNob
Best&Best OB
Best&Sky OB
Best&BG OB
BG&Mimms OB
BG&Ryder OB
Buf&Amwiler OB
Buf&Steve OB
Buf&Repair OB
Buf&Oak OB
NPeach&McEl...
NPeach&Long OB
DorMAR
Stop Name

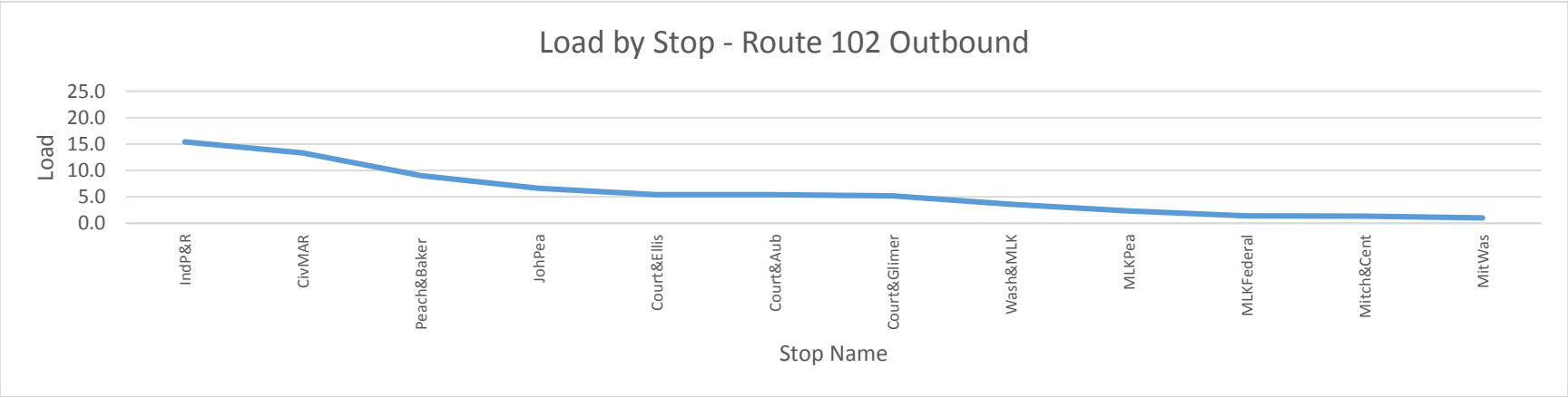

Load by Stop - Route 40 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
SugFiv
Sugar&Dhill IB
Law&Walmart IB
Law&Ceasars IB
Law&Hanarry IB
CentralHS IB
Gwin&Secur IB
Gwin&Bridge IB
Gwin&Kroger IB
Gray&BigLots IB
Gray&LawSq IB
Nash&Garage IB
Langley&Chur IB
Pike&Honey IB
Pike&ONorc IB
Pike&McConn IB
Phillip&Kat IB
Prof&2nd4Way...
ONorc&Show IB
ONor&River IB
ONorc&Disc IB
ONorc&Tipton IB
ONorc&Sugar IB
Sugar&Marathon
Sugar&SugApt IB
Atk&Atkin IB
Atk&Rite IB
Sugar&410
Breck&Friend IB
Breck&Must IB
Boggs&Post IB
Boggs&Autumn...
Boggs&Astor IB
ONorc&OVict IB
ONorc&NorcPl IB
ONorc&Curt IB
Sat&Comm IB
Sat&Chevy
GTC
Stop Name

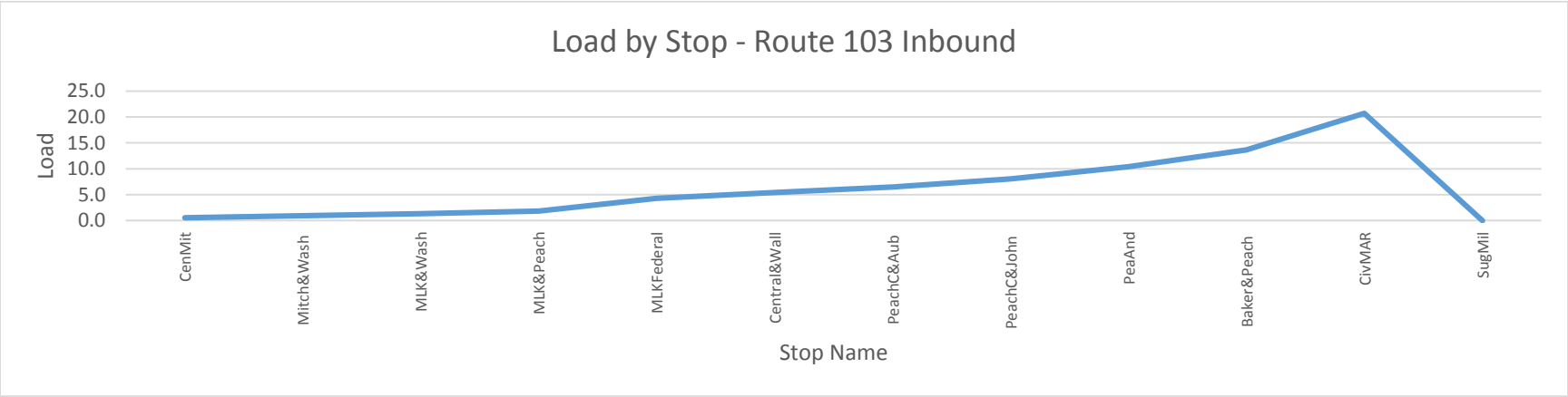

Load by Stop - Route 40 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
GTC
Sat&Tandy
Sat&Comm OB
ONorc&Gwin OB
ONorc&Steph OB
ONorc&Mill OB
ONorc&Sweet...
Boggs&Astor OB
Boggs&PO3 OB
Breck&Enclav OB
Breck&Ricoh OB
Sugar&Bass
SugMil
Atk&Shell OB
Atk&Willow OB
Atk&Sugarloaf
GwinTech
Sugar&Taco OB
ONorc&Wind OB
ONorc&Burn OB
ONorc&Hill OB
ONorc&Avrrt OB
Law&Prof OB
GwinProf OB
Phillip&Ped OB
Pike&Kacey OB
Pike&Midas OB
Langley&Huff OB
GJAC OB
Nash&Stone OB
Gray&Phillip OB
Gray&ACU OB
Gwin&Scenic OB
Stone&Pdmnt OB
Stone&Somer OB
Stone&Charls OB
Stone&Liegh OB
John&Stone OB
Sugar&Bell OB
SugFiv
Stop Name

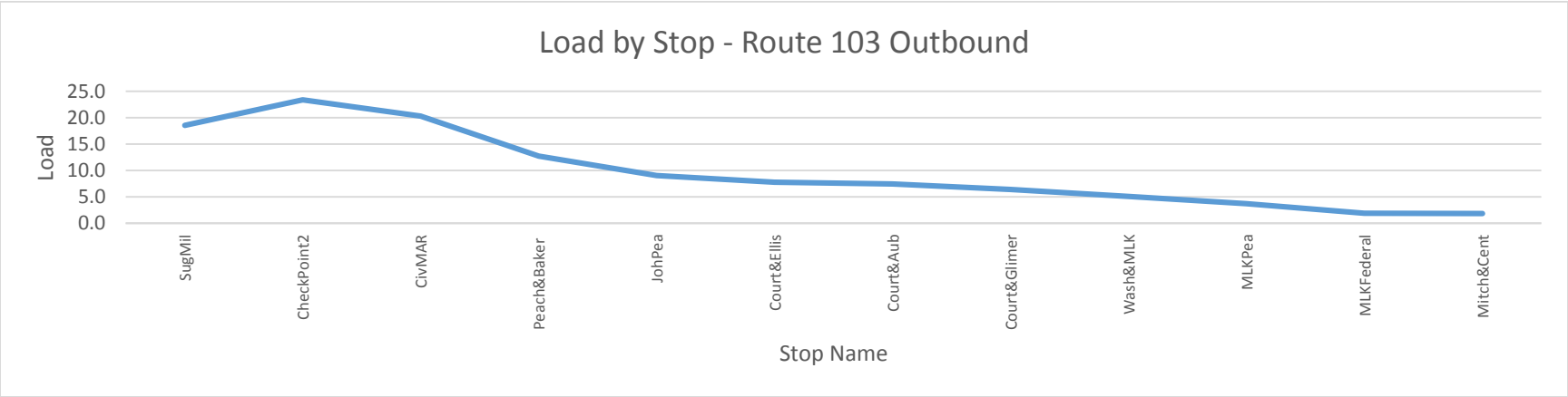

Load by Stop - Route 101 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
CenMit
Mitch&Wash
MLK&Wash
MLK&Peach
MLKFed
Central&Wall
PeachC&Aub
PeachC&John
PeaAnd
Baker&Peach
CivMAR
I-985
Stop Name

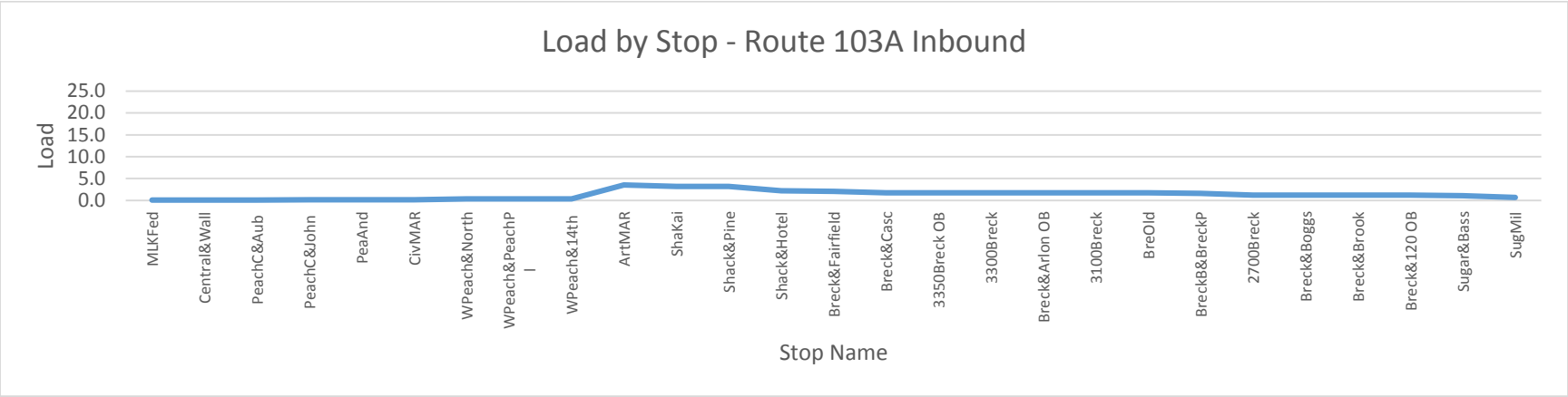

Load by Stop - Route 101 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
I-985
CivMAR
Peach&Baker
JohPea
Court&Ellis
Court&Aub
Court&Glimer
Wash&MLK
MLKPea
MLKFederal
Mitch&Cent
MitWas
Stop Name

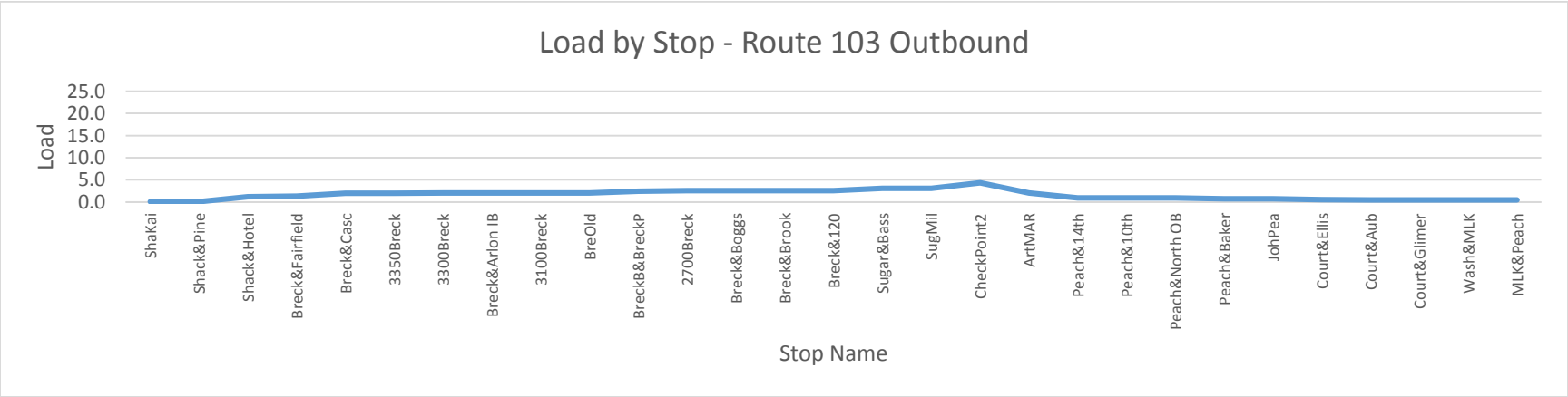

Load by Stop - Route 102 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
CenMit
Mitch&Wash
MLK&Wash
MLK&Peach
MLKFederal
Central&Wall
PeachC&Aub
PeachC&John
PeaAnd
Baker&Peach
CivMAR
IndP&R
Stop Name


Load by Stop - Route 102 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
IndP&R
CivMAR
Peach&Baker
JohPea
Court&Ellis
Court&Aub
Court&Glimer
Wash&MLK
MLKPea
MLKFederal
Mitch&Cent
MitWas
Stop Name


Load by Stop - Route 103 Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
CenMit
Mitch&Wash
MLK&Wash
MLK&Peach
MLKFederal
Central&Wall
PeachC&Aub
PeachC&John
PeaAnd
Baker&Peach
CivMAR
SugMil
Stop Name


Load by Stop - Route 103 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
SugMil
CheckPoint2
CivMAR
Peach&Baker
JohPea
Court&Ellis
Court&Aub
Court&Glimer
Wash&MLK
MLKPea
MLKFederal
Mitch&Cent
Stop Name


Load by Stop - Route 103A Inbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
MLKFed
Central&Wall
PeachC&Aub
PeachC&John
PeaAnd
CivMAR
WPeach&North
WPeach&PeachP
I
WPeach&14th
ArtMAR
ShaKai
Shack&Pine
Shack&Hotel
Breck&Fairfield
Breck&Casc
3350Breck OB
3300Breck
Breck&Arlon OB
3100Breck
BreOld
BreckB&BreckP
2700Breck
Breck&Boggs
Breck&Brook
Breck&120 OB
Sugar&Bass
SugMil
Stop Name


Load by Stop - Route 103 Outbound
Load
25.0
20.0
15.0
10.0
5.0
0.0
ShaKai
Shack&Pine
Shack&Hotel
Breck&Fairfield
Breck&Casc
3350Breck
3300Breck
Breck&Arlon IB
3100Breck
BreOld
BreckB&BreckP
2700Breck
Breck&Boggs
Breck&Brook
Breck&120
Sugar&Bass
SugMil
CheckPoint2
ArtMAR
Peach&14th
Peach&10th
Peach&North OB
Peach&Baker
JohPea
Court&Ellis
Court&Aub
Court&Glimer
Wash&MLK
MLK&Peach
Stop Name

gwinnettcounty