



Needs Assessment

Technical Memorandum

June 2018



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I INTRODUCTION

Gwinnett County Transit began Express route service in November 2001 and Local bus service in November 2002. There have been numerous service updates over the years, but service coverage remains relatively unchanged. In the meantime, Gwinnett County demographics have changed significantly. County population has almost doubled in size growing from approximately 590,000 in 2000 to almost 900,000 in 2016. The population growth coupled with strong ethnic diversity now reflects a majority minority population. Gwinnett has truly transformed from a bedroom community to an economic powerhouse. Gwinnett has grown and changed significantly since Gwinnett County Transit started service, reflecting the need for Gwinnett County Transit to update and grow service to meet the ever-changing needs of Gwinnett.

This document is part of the *Connect Gwinnett: Transit Plan*, which is the Comprehensive Transit Development Plan (CTDP) for Gwinnett County. The plan stems from a recent Comprehensive Transportation Plan (CTP) update that recognized the integral role that transit plays in the success of any major metropolitan area's transportation system. The CTP recommended that a deep-dive transit study be conducted to look closer at creating a transit blueprint for the future given its growth trajectory. The CTDP examines existing and future transit needs and offers guidance on how the County can take steps towards achieving its vision.

The plan aims to achieve the following outcomes:

- **Short-range (0 to 5 years)** modifications that improve service, ridership, and reach key untapped markets of latent demand constrained by fleet and infrastructure that is reasonably expected to be available within the next five years;
- **Mid-range (6 to 10 years)** service enhancements that expand transit accessibility and desirability with efficient service by leveraging infrastructure that is reasonably expected to be available within the next ten years and fleet expansion;
- **Long-range (Greater than 10 years)** plan that will allow the County to meet economic growth objectives and enhance the lives of its residents through the provision of high-quality and sustainable transit to meet the current and future needs of the County;
- A countywide vision with broad-based support for future dedicated transit funding and implementation;
- Transit as a mode of choice for work and leisure trips

To inform the development of short-, mid-, and long-range plans, the project team worked with stakeholder groups and County staff to develop a list of project needs for the CTDP. This memorandum serves to document this process and includes the following:

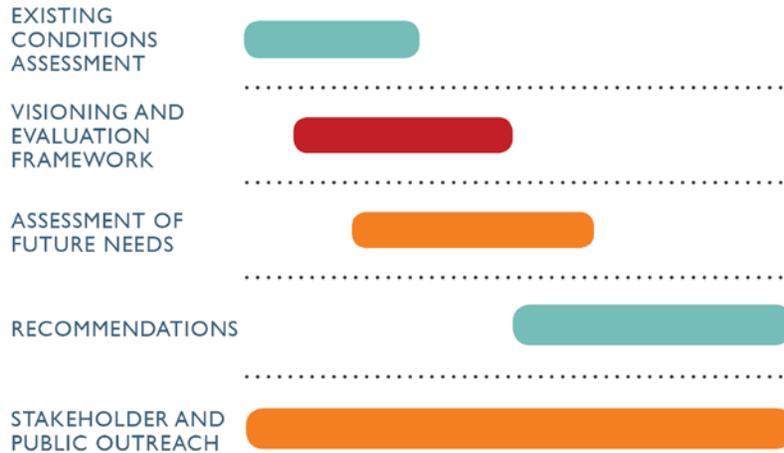
- Identification of service needs based on a combination of quantitative analysis and stakeholder input
- Development of service plans informed by the identified service needs
- Development of proposed capital improvements to support these service plans (short-range, mid-range, and long-range)

I.1 Project Process

The CTDP began in 2017 with an in-depth assessment of the County's existing transit system, transit markets, and peer comparison based on the performance of other transit systems. The plan concurrently worked with stakeholders to develop the goals and vision for the plan. This served as the framework from which the plan began to be developed.

The needs documented in this memorandum are the culmination of existing conditions, visioning, and stakeholder and public input and will ultimately be used to develop a set of recommended improvements and associated phasing. Figure I-1 illustrates the Connect Gwinnett: Transit Plan process.

Figure I-1: Project Process



I.2 What's in This Document?

The Short-Range and Mid-Range Plans are presented together in this document, as the Short-Range Plan represents a “package” of the Mid-Range improvements that could be implemented in the coming years with the resources currently available to Gwinnett County Transit or will become available to Gwinnett County Transit within the 5-year horizon. The Long-Range Plan consists of more capital-intensive recommendations and is thus presented in a separate chapter.

2 SERVICE NEEDS

2.1 Overview

Determining service needs starts with defining the word need. Travel is a necessity for everyone and serves as the means for people to access activities, whether that is commuting to work or school, going to the grocery store or hospital for appointments, or seeing friends or family. Depending on the trip purpose, service needs shift and corresponding transit service needs often require enough flexibility to meet these ever-shifting needs.

The service needs memorialized in this memorandum reflect a collection of inputs that stem from analysis of existing demographics, current and future projected travel patterns, current transit performance, as well as input from stakeholders and the public. This mix of inputs provides a balanced consideration of both regional commute trips and local mobility needs.

2.1.1 Gwinnett County Transit Strengths and Weaknesses

An Existing Conditions Technical Memorandum was prepared in July 2017 that identified service characteristics. The existing service analysis determined that Gwinnett County Transit service exhibits many strong service characteristics, like its connection to MARTA rail service, but also presents weaknesses that may be limiting its ridership potential (Table 2-1).

Table 2-1: Existing Gwinnett County Transit Service Strengths and Weaknesses

Service Strengths	Service Weaknesses
Consistent route patterns exist with no branches, no trip exceptions.	Many route alignments are circuitous – particularly on east side of I-85.
Routes operate at clock headways.	Midday frequencies are only 60 minutes on all routes.
Four of the six local routes connect to MARTA. There is a strong desire for Gwinnett County Transit riders to connect to MARTA.	Routes 30 and 40 do not connect to MARTA and are the system’s lowest-performing routes.
Routes 10A/10B are strong performing routes with good on-time performance.	Afternoon on-time performance deteriorates on all routes. There is insufficient recovery time at route ends-of-line to recover.
Route coverage is in areas where there is the greatest density	There is limited evening service coverage and no Sunday service.
Routes cover a reasonably good percentage of countywide employment locations (40% within 1/3 mile of local service).	Only 17% of county residents live within 1/3 mile of local service.
Express Route 103 is a strong-performing route, with several trips averaging more than 35 riders per trip.	Saturday route performance drops significantly from weekday performance.
	Timed transfers between routes are inconsistent.

2.1.2 Land Use and Demographics

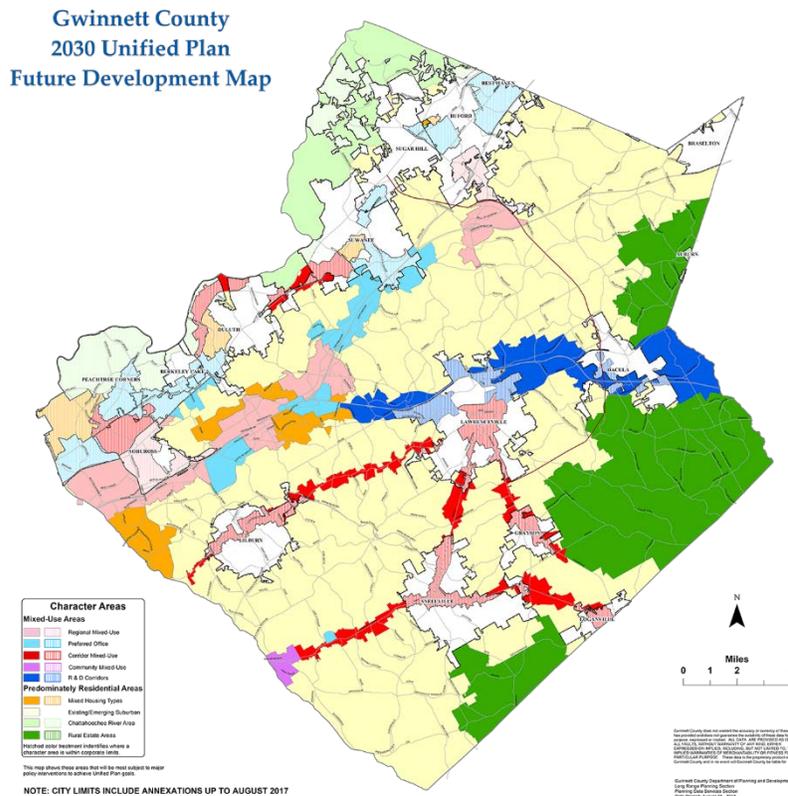
Gwinnett County Transit presently services the highest density areas of the County. However, there are areas of opportunity, such as activity centers with transit-conductive characteristics, that remain unserved by transit. These areas include:

- The Satellite Boulevard corridor north of Sugarloaf Parkway
- The Mall of Georgia area
- The Snellville area
- Georgia Gwinnett College area¹

2.1.2.1 The Gwinnett County Unified Plan

In the state of Georgia, municipal governments must retain their Qualified Local Government Status to be eligible for a variety of state funded programs. To maintain this status, communities must meet minimum planning standards developed by the Georgia Department of Community Affairs (DCA), which Gwinnett County exceeds through its Unified Plan—referred to as a Comprehensive Plan in other jurisdictions. The most recently adopted Unified plan is the 2030 Gwinnett County Unified Plan (February 2009). Figure 2-1 depicts the future development characteristics from the 2030 Unified Plan.

Figure 2-1: 2030 Unified Plan Future Development Map



¹ Subsequent to the completion of the needs analysis effort for this project and in response to the need identified, Gwinnett County Transit began a new local service to Georgia Gwinnett College in 2018

Beginning shortly after the *Connect Gwinnett* effort, the County is currently updating the Unified Plan with a horizon year of 2040; this plan must be adopted by February 2019 per DCA requirements. The 2040 Unified Plan will re-envision the County's development patterns and land uses to establish a long-term vision for Gwinnett County while also identifying short-term, incremental steps to achieve this vision. Although still under development, the 2040 Unified Plan is striving to articulate nodal-based development in the County while also identifying the appropriate areas for densification in the future, with an emphasis on responding to the projected growth in the County by 2040.

As such, this plan envisions Gwinnett County in the year 2040 and asks three fundamental questions:

- Where do we want to go?
- How do we get there?
- How will the County's infrastructure (such as transportation and sewer) interface with land use, economic development, parks, open spaces, and housing policies to ensure that Gwinnett remains a "preferred place" to live and work?

With the focus on infrastructure, the goal of a Unified Plan is to integrate land uses with transportation investments. To accomplish this, the 2040 Unified Plan is incorporating previous transportation planning efforts in the County, including recommendations from the *Connect Gwinnett: Transit Plan*. In addition to *Connect Gwinnett*, the County's Comprehensive Transportation Plan—*Destination2040*, adopted in December 2017—included policies relevant to transit investments. The *Destination2040* land use policies directly relevant to transit investments are:

- **Fortify the Link between Transportation and Land Use into the Unified Development Ordinance:** The Unified Plan and subsequent Unified Development Code (UDO) update should fortify the relationship between future land use decisions and future transportation infrastructure investments by ensuring that the policies applicable to transportation infrastructure support smart growth land use policies. In addition to providing grid-like options through an interconnected roadway network, the County should concentrate permitting and incentivizing (via non-monetary or monetary-related means) the revitalization of strategically located commercial nodes to become more complete activity nodes or town centers with a mix of uses. Additionally, the UDO, both its current iteration and the forthcoming update, as applicable, should be revised to incorporate the planning efforts reflected in Comprehensive Transit Development Plan (Connect Gwinnett), as well as the Countywide Trails Master Plan.
- **Encourage Multimodal Networks (Complete Streets):** As part of the planning and permitting process, consider the needs of people accessing sites using a variety of transportation modes beyond the use of private automobiles. Although the greatest impact is realized when deployed within an activity center, bike lanes and sidewalk improvements can reduce the number of local automobile trips. Thus, the County's regulations, investments, implemented projects, and incentives should encourage a denser network of residential and commercial developments supported by street grids and other multimodal enhancing amenities and facilities.
- **Foster Compact Mixed-Use Development:** To support projected residential growth and mitigate subsequent vehicular trips, the County should encourage a mix of uses within existing and future activity centers. Not only does this nodal approach help build economically sustainable communities, compact mixed-use development provides the opportunity to offer a variety of housing options at a range of price points as well as provide transit-supportive nodes of activity. Additionally, incorporating commercial services in proximity to residential areas, shorter and fewer vehicular trips are generated.

- **Consider Increased Densities in Activity Centers:** Gwinnett County should encourage denser development of mixed-use activity centers. This concentrated densification will provide a framework for multimodal transportation for people walking or biking. It can lay the physical framework to support the most likely riders of future higher capacity modes of transit.
- **Adopt Transit Supportive Overlay Districts:** Gwinnett would benefit from the creation of overlay districts along major transportation corridors, historic districts, watersheds, and other sensitive areas. These districts would provide additional standards for architecture, lighting, signage, streetscaping, areas for walking and biking, transit, and landscaping, helping to build upon the County's most historic, scenic, or natural features.
- **Catalyze Regional Connections:** Continue to connect Gwinnett County to regional economic vitality and quality of life by supporting enhanced transportation networks along major corridors that accommodate multiple modes of access, including travel by automobile, transit, walking, and biking. Additionally, the County should look to catalyze future regional transportation investments with supportive land use policies to attract compatible jobs, housing, and services.

In addition to other transportation policies and recommendations from the Comprehensive Transportation Plan, previous planning efforts, and its own public outreach, the 2040 Unified Plan will incorporate these transit-supportive land use policies to further support the Unified Plan's five main themes:

- Maintain Economic Development and Fiscal Health
- Foster Redevelopment
- Maintain Mobility and Accessibility
- Provide More Housing Choices
- Keep Gwinnett a Preferred Place

The correlation between the 2040 Unified Plan themes and the transit-relevant land use policies from *Destination2040* will help lay the foundation to strengthen land use decisions and development patterns to better support transit in Gwinnett County in the future.

2.1.3 Stakeholder and Public Input

Public feedback is a critical input in the Gwinnett CTDP. By understanding what the public wants and needs transit service to be in Gwinnett, the plan can better adapt recommendations to meet the public vision. The Gwinnett CTDP understands that everyone chooses to engage in different ways and created an extensive public engagement program that aimed to promote education about transit, gain input about existing and future needs, and create opportunities for everyone to be involved.

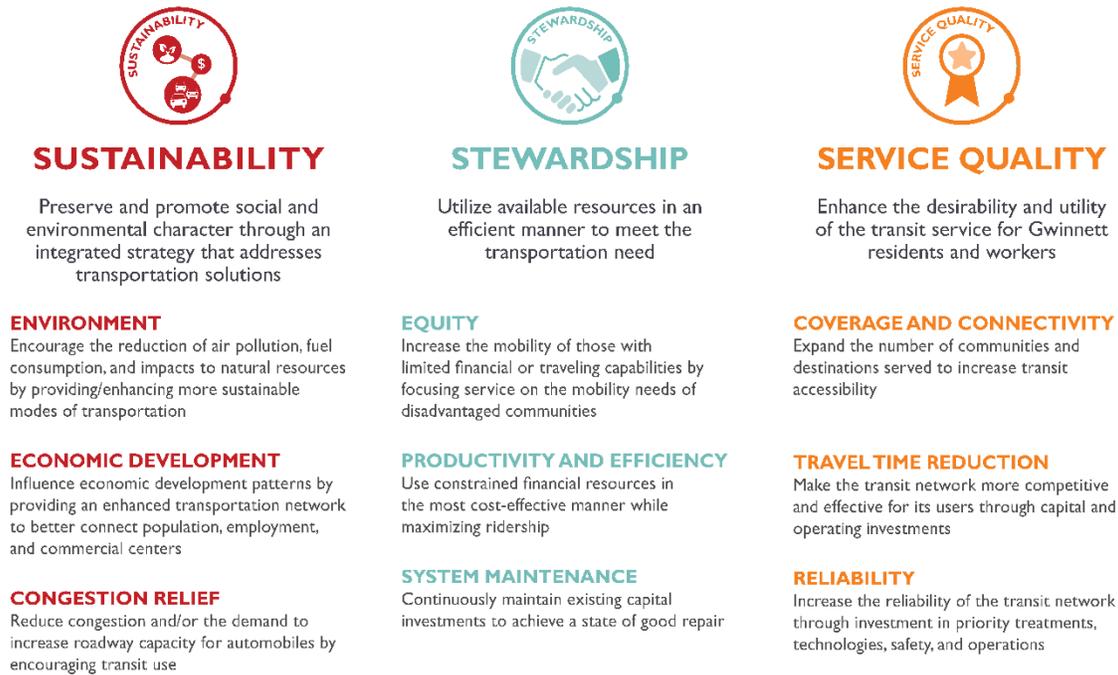
Outreach efforts included the following:

- Stakeholder Committee (i.e., Gwinnett Cities, business leaders, community groups, current riders, universities, and major health providers)
- Focus group meetings (i.e., underserved populations, mobility impaired, youth, young professionals, businesses, and Cities)
- Community events (e.g., baseball games, farmers' markets)
- Tabling events
- Countywide bus tour (12 locations, 3 buses)

2.1.3.1 System Goals and Priorities

One activity that tied all outreach efforts together was the System Goals and Priorities exercise, which created a basis for the collaborative, community-based transit vision. Participants were asked to prioritize 9 priorities within 3 system goals outlined in Figure 2-2 below.

Figure 2-2: System Goals and Priorities



The results of the prioritization activity identified the three highest priorities for the participants as: coverage and connectivity, congestion relief, and travel time reduction. Outside of the formalized survey and prioritization activity, discussion with participants resulted in common service-related themes:

- System coverage of County is inadequate
- Service should run later at night
- Takes too long to ride
- Need to make transit at least marginally better than driving
- More direct routing to MARTA Gold Line (Doraville or Chamblee)
- Service needed to:
 - Mall of Georgia
 - Georgia Gwinnett College
 - Gwinnett Medical Center – Duluth
 - Other cities in the Norfolk-Southern/Buford Highway corridor
 - Snellville
 - Perimeter Center
 - North Fulton
 - Tucker
 - MARTA Blue Line (Indian Creek or Kensington)

2.1.3.2 Survey

An online and paper survey was conducted to gain insight on thoughts about the Gwinnett County Transit existing and future services. The surveys were translated to Spanish, Vietnamese, and Korean. The online survey was placed on the project website and members of the public were directed and encouraged to take the survey throughout the outreach process by advertisements on Gwinnett County buses, social media, quarter-page cards distributed throughout the County, newsletters from various organizations, and at all the events attended and held as part of the outreach process. In total, 3,674 people filled out the survey, both online and paper. Approximately 23% of the respondents were Gwinnett County Transit riders, while 77% were classified as non-riders. High-level findings from the surveys are included below. For more details, please refer to the Technical Appendix at the end of this document.

- Respondents favored expanding the transit system with 85% of riders and 76% of non-riders supporting an expanded system (Figure 2-3).
- The two most-requested improvements were better connections to other areas in Metro Atlanta and more areas in Gwinnett County served by transit (Figure 2-4).
- In the long-term, both riders and non-riders wanted to see connections improve to Atlanta, within Gwinnett County, and to East DeKalb County (Figure 2-5).
- Respondents overwhelmingly favored investments in high-capacity transit (heavy rail, light rail, commuter rail, bus rapid transit) over local and express bus service (Figure 2-6).

Figure 2-3: Support for Expanded Transit System

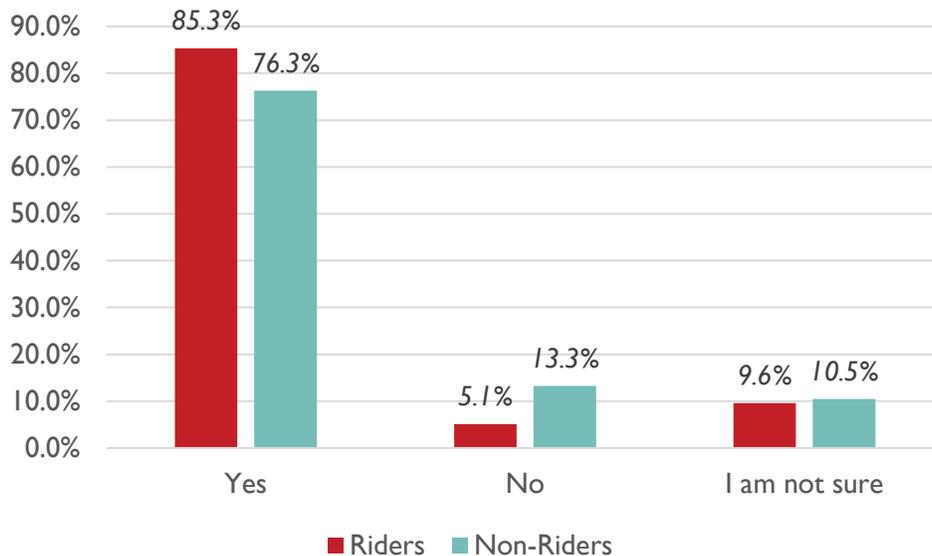


Figure 2-4: Improvements for More Frequent Use

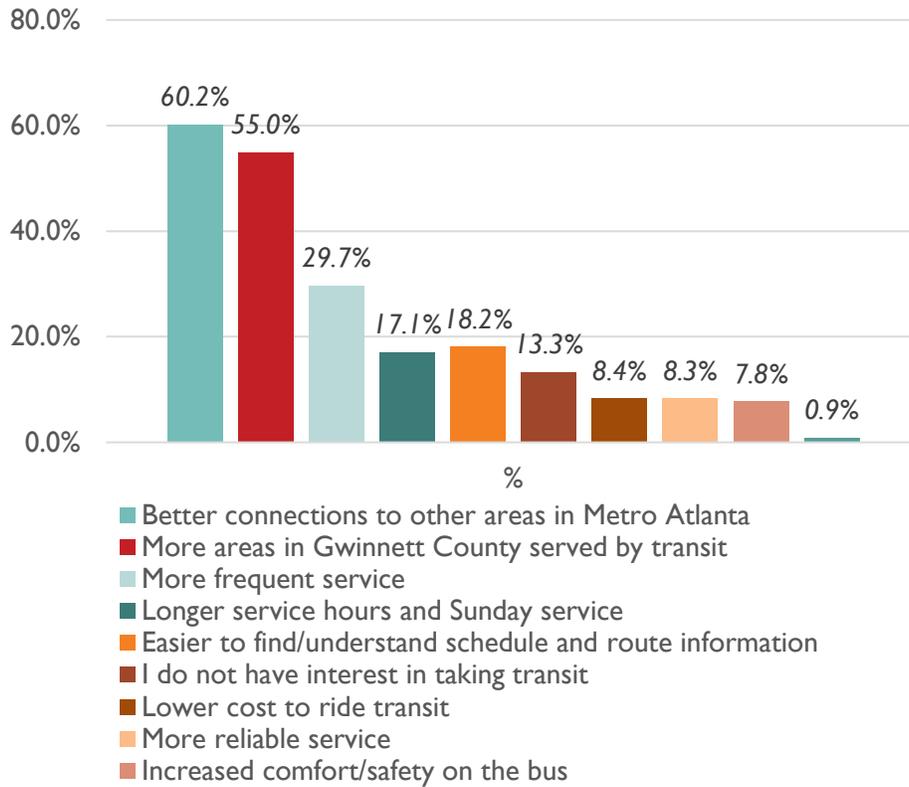
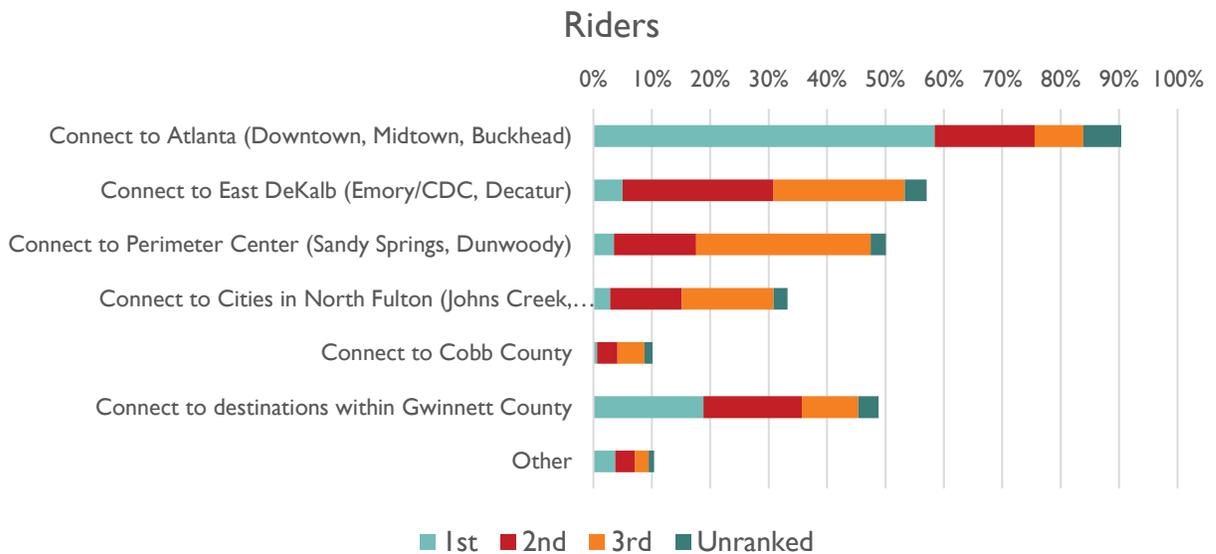


Figure 2-5: Survey Results – Long-Term Strategy Ranking (Riders and Non-Riders)



Non-Riders

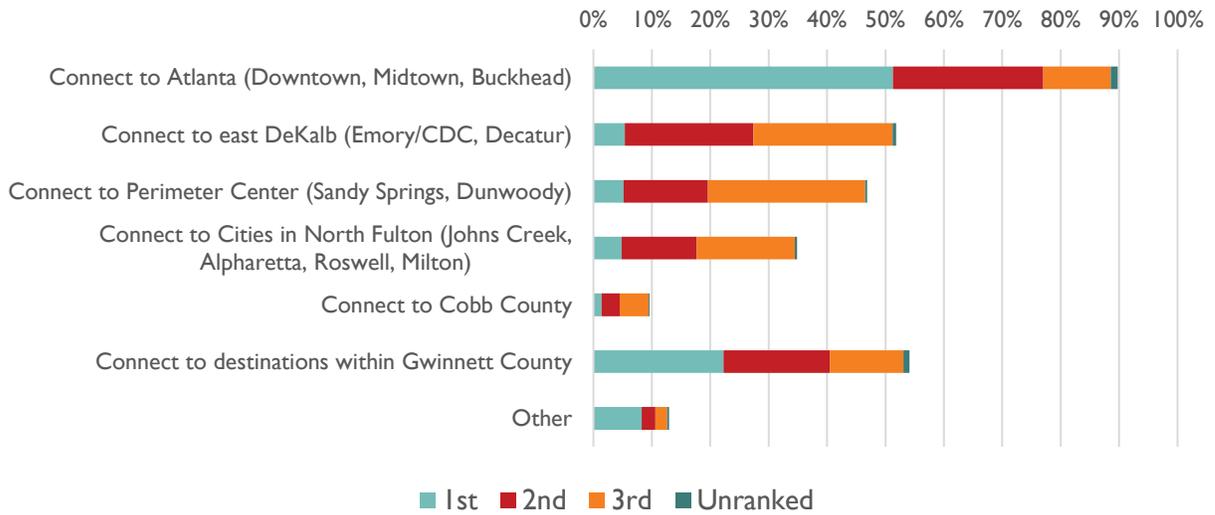
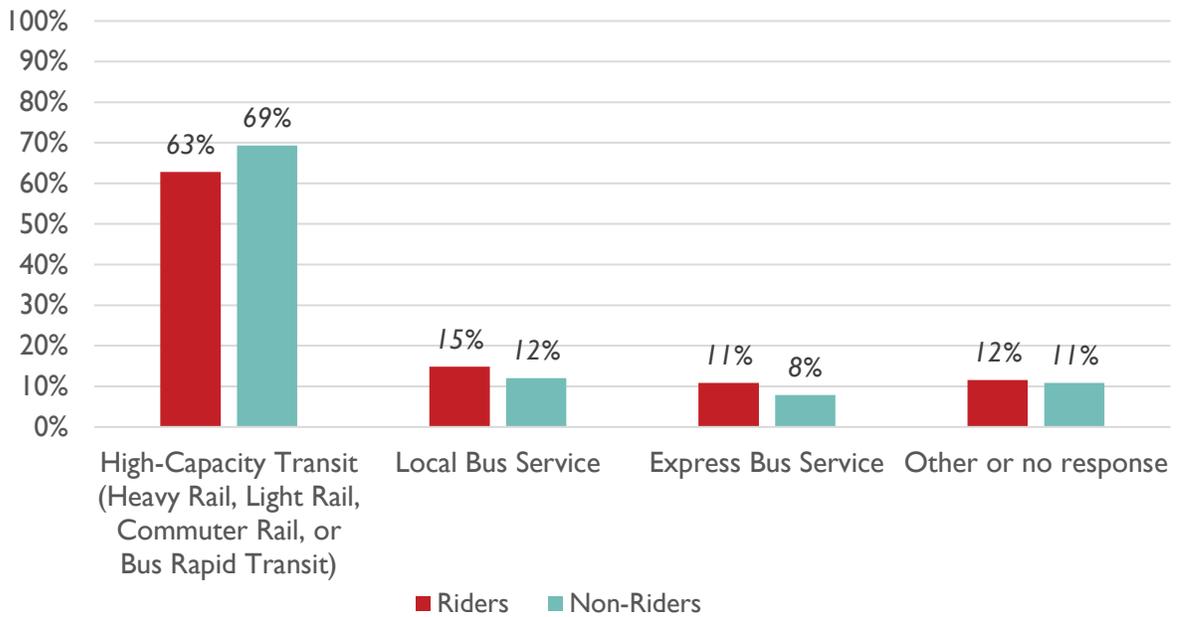


Figure 2-6: Long-Term Service Investment

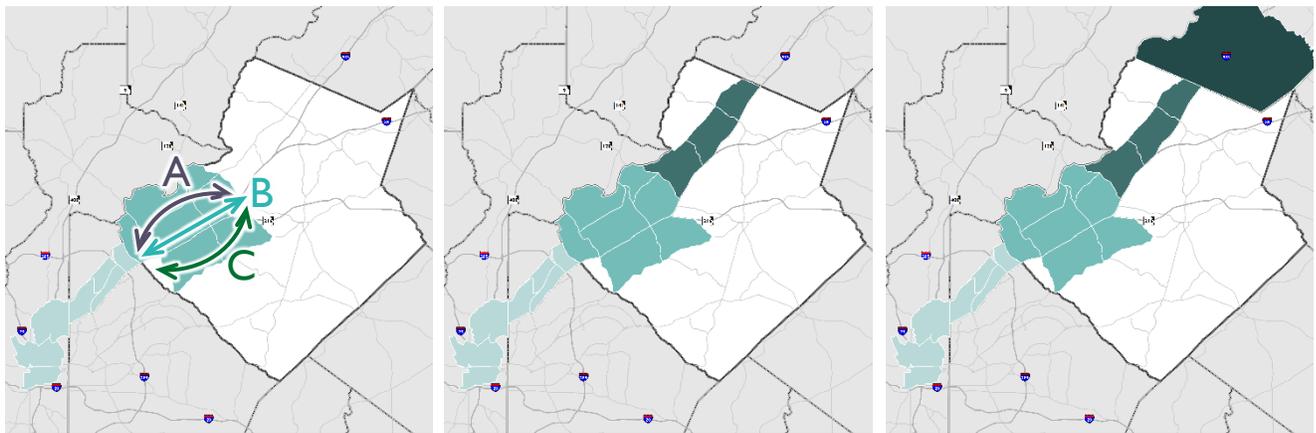


2.1.4 Travel Patterns

Travel patterns can help to determine movements within and to surrounding areas for Gwinnett County. Using travel data from the Atlanta Regional Commission’s (ARC) regional travel demand model, the magnitude of trips between model zones were used to determine trip demand along different corridors in and connecting to and from Gwinnett County; to understand trip density, daily trip numbers were divided by the length of each corridor. The model offers a point of comparison using the 2015 and 2040 model data, and starts to highlight areas of increasing travel demand and high trip density.

Figure 2-7 through Figure 2-15 show the corridors for which travel data was identified, and the number of baseline (2015) and future (2040) model daily trips per mile for each of those corridors.

Figure 2-7: Trip Pattern Key Maps – I-85 Corridor



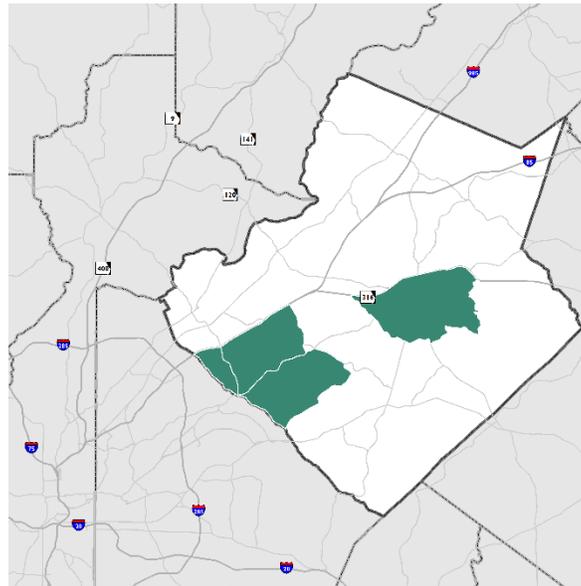
South I-85 Corridor		
2015:	7,286	15,319
2040:	10,178	22,181
	A	C

North I-85/I-985 Corridor	
2015:	3,850*
2040:	6,243*

Hall County Connections	
2015:	1,194*
2040:	2,075*

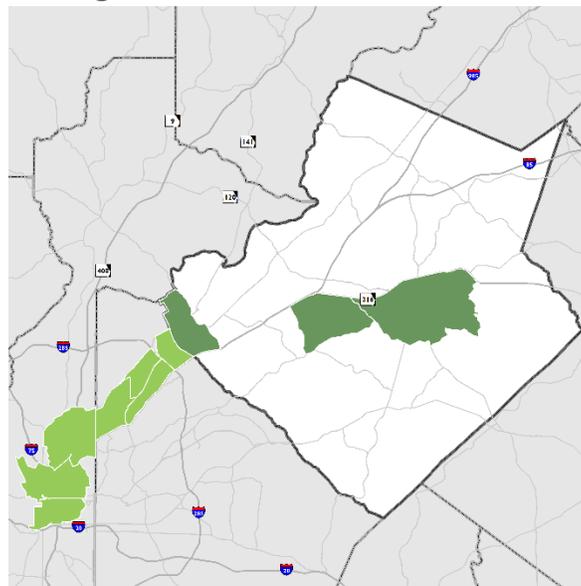
*Net increase from the specific zones added

Figure 2-8: Central to Southwest



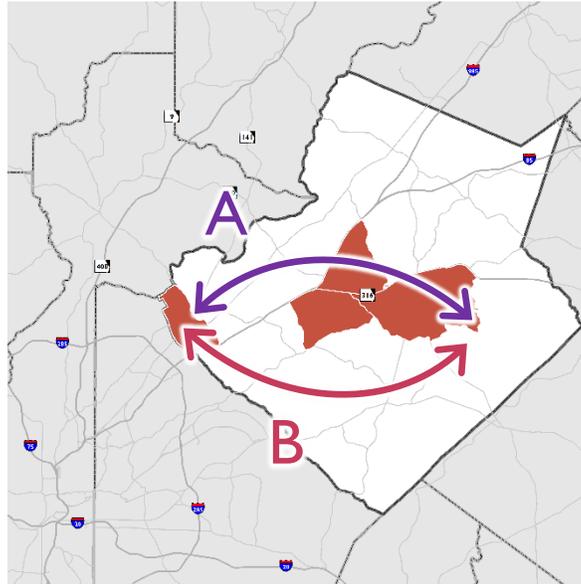
2015: 979
2040: 1,316

Figure 2-9: Central to Atlanta/I-85



2015: 3,406
2040: 4,536

Figure 2-10: Central to West

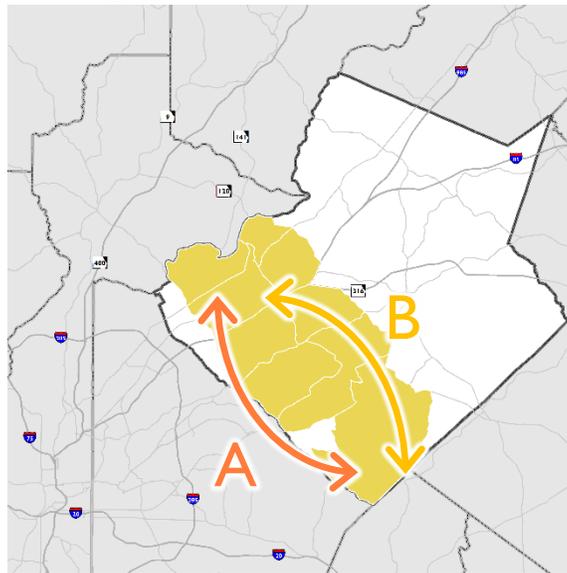


2015:	9,240	9,052
2040:	13,241	12,995

A

B

Figure 2-11: Southwest Border

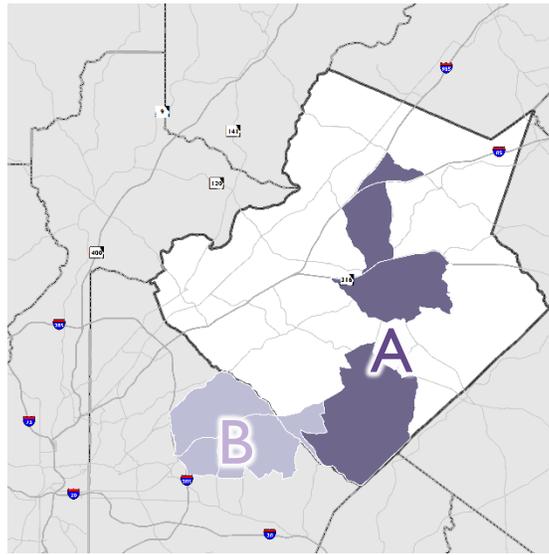


2015:	9,262	6,567
2040:	13,579	9,396

A

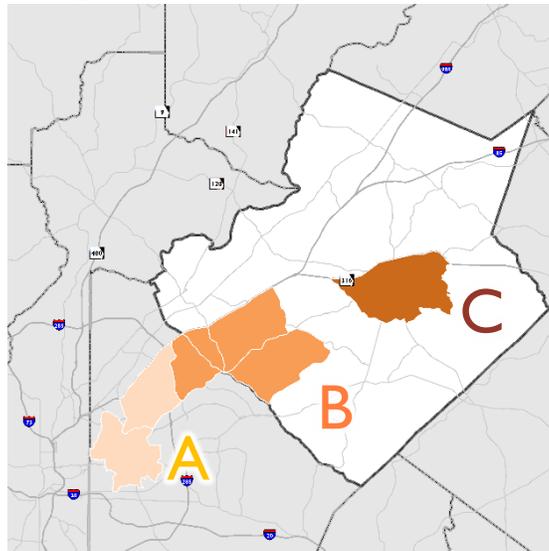
B

Figure 2-12: North/South to DeKalb



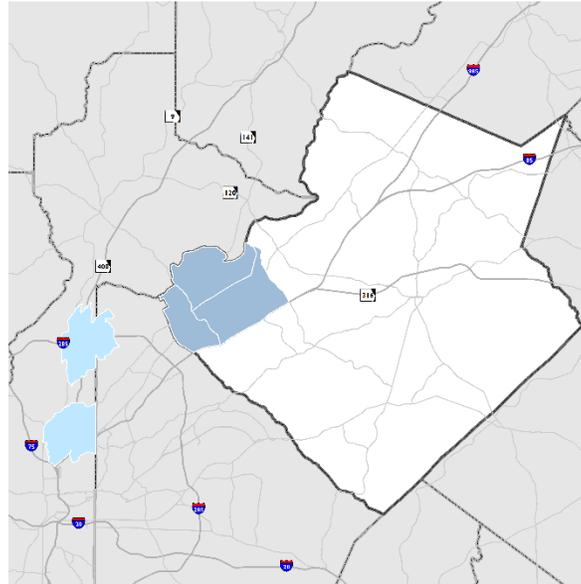
2015:	3,681	3,125
2040:	5,176	4,338
	A	A+B

Figure 2-13: Central to East DeKalb



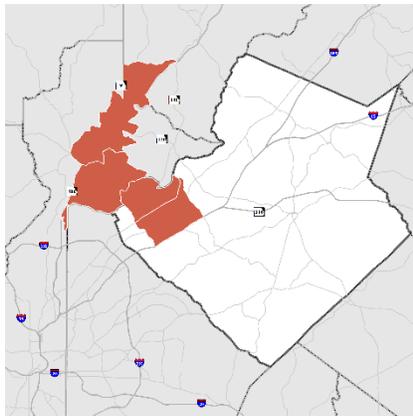
2015:	6,152	4,748
2040:	8,855	6,824
	A+B	A+B+C

Figure 2-14: West to Perimeter/Buckhead



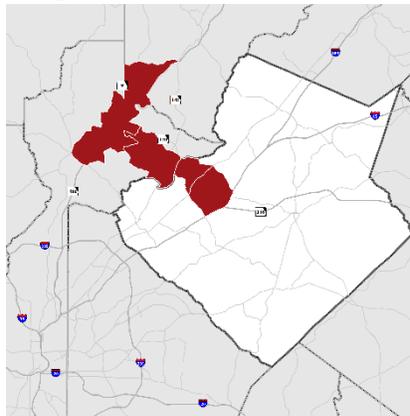
2015: 1,998
2040: 2,708

Figure 2-15: North Fulton



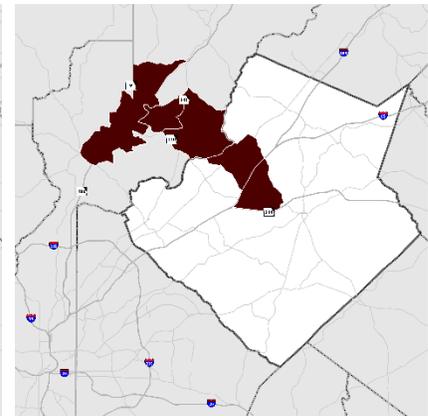
**West to North Fulton
(Holcomb Bridge Road)**

2015: 2,844
2040: 3,151



**Mid-West to North
Fulton
(State Bridge Road)**

2015: 2,042
2040: 2,495



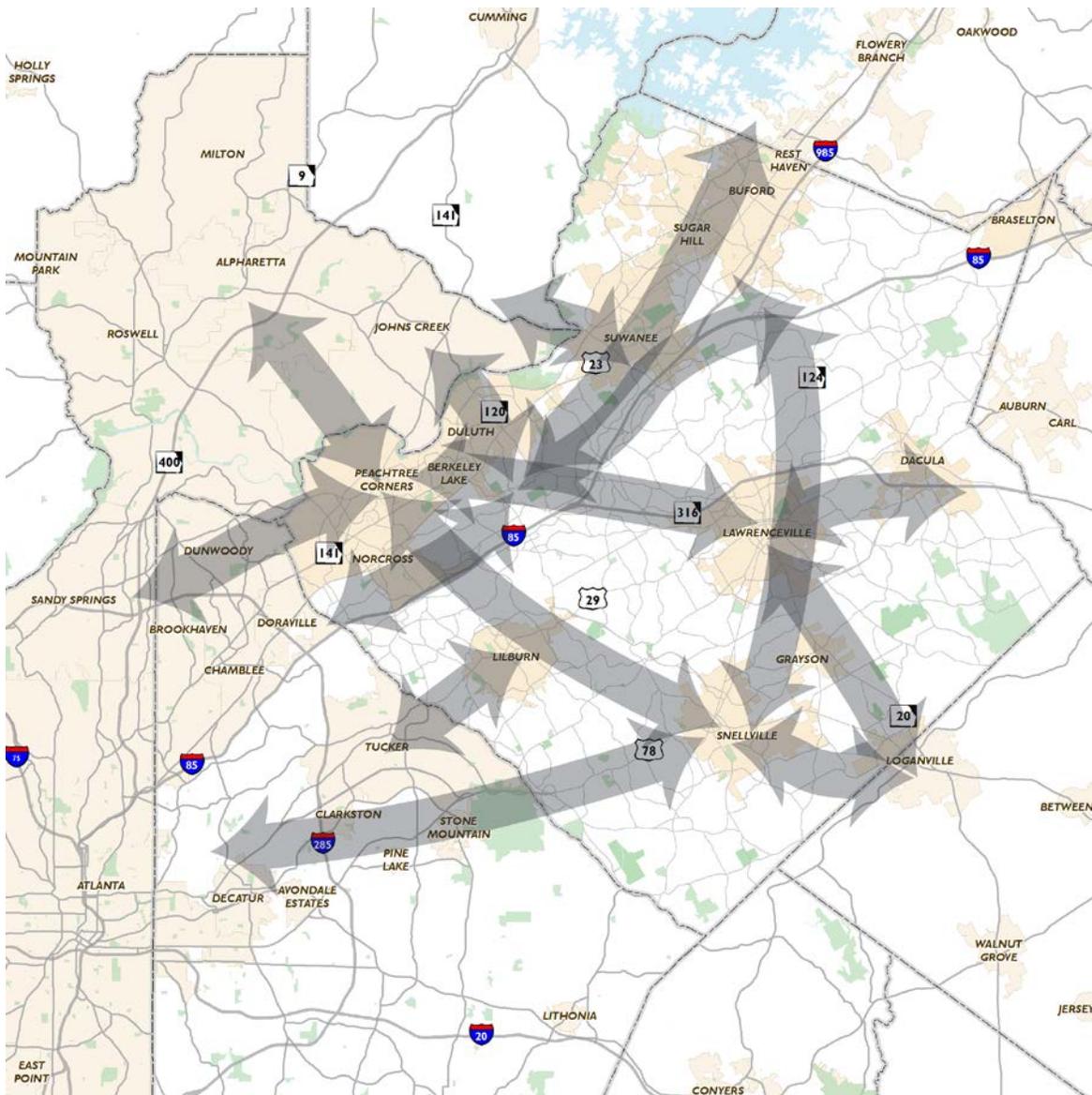
**North-West to North Fulton
(McGinnis Ferry Road)**

2015: 1,062
2040: 1,442

2.1.5 High-Activity Travel Corridors

Informed by existing ridership patterns, public and stakeholder input, and analysis of the existing and future demographic and travel pattern data, a set of high-demand corridors was identified through this process; the selection of these corridors was informed by existing ridership patterns. These travel corridors start to highlight travel patterns along major corridors that connect many of the destinations that were identified as focal points for an enhanced transit system for Gwinnett County. Major destinations include: Sugarloaf Mills; Gwinnett Place Mall; Mall of Georgia; Georgia Gwinnett College; Downtown Lawrenceville; Gwinnett Judicial and Administration Center (GJAC); Peachtree Corners; Downtown Snellville; and Infinite Energy Center. Figure 2-16 highlights the major travel patterns along major corridors.

Figure 2-16: Major Travel Patterns



2.2 Modes Considered

A variety of transit solutions are available for consideration in the CTD. Each transit mode is most applicable to serve a different type of travel pattern or density of demand. This study assessed the viability of the full spectrum of transit solutions to fit the travel characteristics and demands of Gwinnett County. Figure 2-17 defines the different modes considered and their key characteristics, including speed, cost, right-of-way needs, and station spacing.

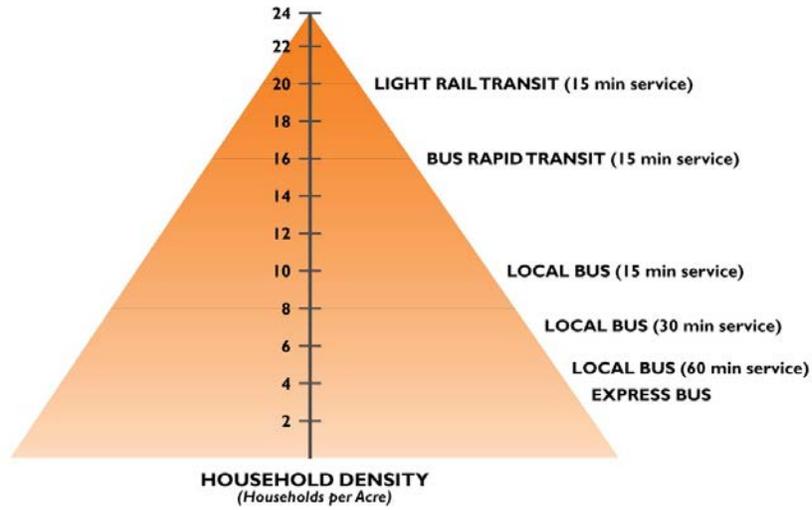
Figure 2-17: Mode Definitions

Mode	Description	Cost
 <p>Heavy Rail Transit (HRT)</p>	<ul style="list-style-type: none"> • High speed/rapid acceleration rail cars • Electrified and fully grade-separated • Substantial stations with faregates • Stations spaced every 1 to 5 miles 	<p>Capital: \$250M/mile Operating: \$1,150/revenue hour</p>
 <p>Light Rail Transit (LRT)</p>	<ul style="list-style-type: none"> • Operates most commonly in dedicated right-of-way • Electrified, can be grade-separated or street level • Lower capacity and speed than heavy rail • Stations spaced every 1/2 to 1 mile 	<p>Capital: \$95-125M/mile Operating: \$400/revenue hour</p>
 <p>Commuter Rail</p>	<ul style="list-style-type: none"> • Electric or diesel propelled • Carries moderate to long distance commuters • Often runs in corridor shared with freight services • Stations spaced at least every 2 to 5 miles 	<p>Capital: \$20-25M/mile* Operating: \$1,000/revenue hour *Assumes operation in existing rail</p>
 <p>Bus Rapid Transit (BRT)</p>	<ul style="list-style-type: none"> • Rubber tired vehicles in primarily dedicated ROW • Priority treatments to increase speed and reliability • Enhanced stations spaced like LRT with distinctive branding and off-board fare collection 	<p>Capital: \$20-30M/mile Operating: \$83/revenue hour</p>

Mode	Description	Cost
<p>Rapid Bus</p> 	<ul style="list-style-type: none"> • Rubber tired vehicles • Runs some dedicated lanes • Mostly queue jumper lanes and transit signal priority • Station spacing 1/4 to 1/3 mile 	<p>Capital: \$3-13M/mile Operating: \$73/revenue hour</p>
<p>Express Commuter Bus</p> 	<ul style="list-style-type: none"> • Rubber tired coach vehicles • Serves long-distance, commute flow • Mostly mixed flow, benefit from managed lanes • Limited stops, primarily route termini 	<p>Capital: \$10-150M/new Park-and-Ride Operating: \$105/revenue hour</p>
<p>Vanpool</p> 	<ul style="list-style-type: none"> • Uses vans for targeted small groups • Serves commuters who have similar home and work locations • Limited stops focused on route termini 	<p>Operating: \$750k/year</p>

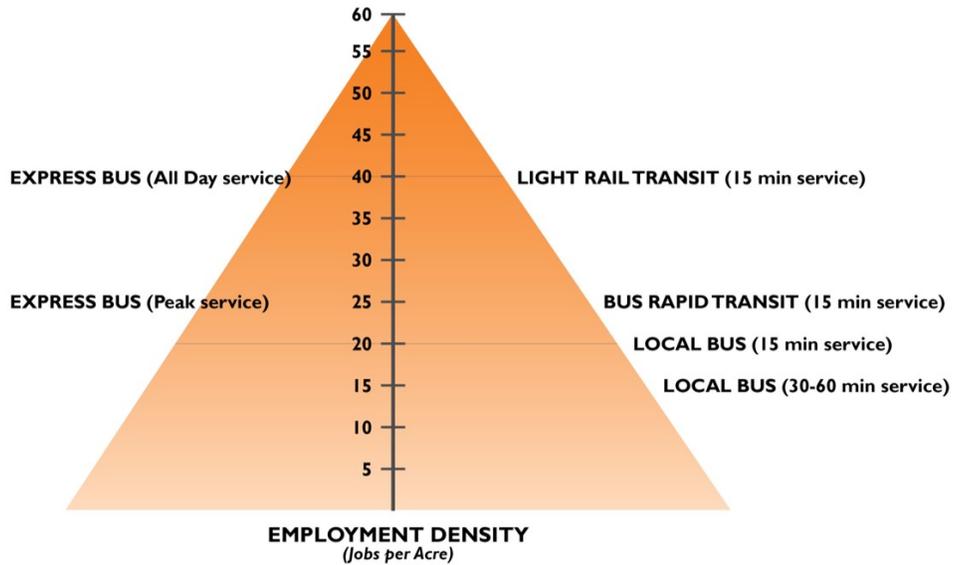
Each transit mode is most cost effective and sustainable within a certain range of trip densities; these are determined by underlying demographic household and employment densities. Higher capacity transit modes require higher levels of investment and are more efficient with higher population and employment densities that can generate higher levels of demand for travel activity. Figure 2-18 and Figure 2-19 show density guidelines based on industry research for effective transit service for population and employment, respectively. These density guidelines served to provide high-level guidance but were not the only factor in the decisions surrounding mode choice. Other factors include cost, constructability, and public preference.

Figure 2-18: Household Density Triangle*



*Adapted from TCRP Report 167: Making Effective Fixed Guideway Transit Investments

Figure 2-19: Employment Density Triangle*



*Adapted from TCRP Report 167: Making Effective Fixed Guideway Transit Investments

3 SHORT AND MID-RANGE PLANS

3.1 Mid-Range Service Recommendations

The Mid-Range plan reflects potential service for Gwinnett County that could be implemented within the next 10 years assuming additional funding was available. The proposed plan is based on analyses and input summarized in the previous section of this memorandum. The proposed service plan is presented in Figure 3-1. This figure provides a side-by-side comparison of existing and the proposed Mid-Range plan, to highlight service coverage impacts. Highlights of this service plan are as follows:

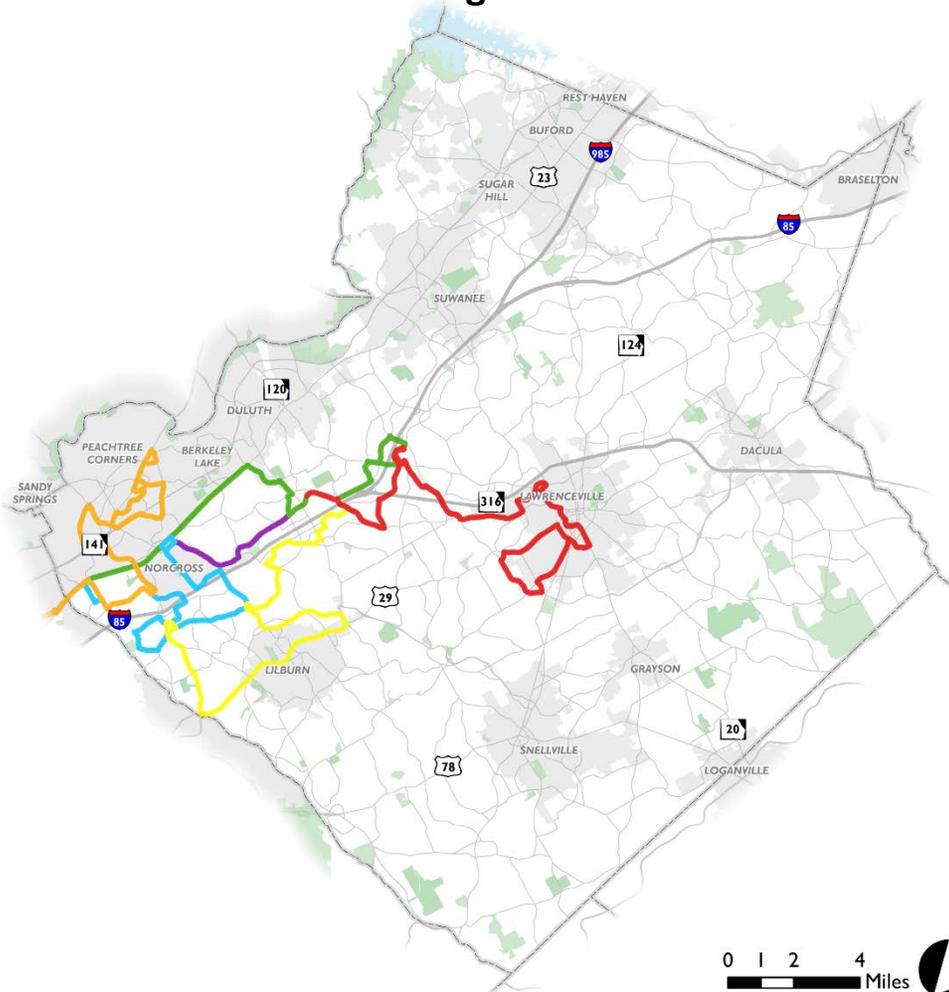
- New BRT service along the Buford Highway/Satellite Boulevard Corridor, between the Doraville MARTA Station, Infinite Energy Center and Sugarloaf Mills
- Expanded Doraville MARTA connections with local routes
- New local service connections to MARTA at Chamblee, Indian Creek, Goldsmith Park and Ride, Tucker and Spalding Dr.
- New service within Gwinnett County to major destinations such as Georgia Gwinnett College, Gwinnett Medical Center-Duluth, Mall of Georgia
- New service to cities of Snellville, Suwanee, Sugar Hill, Buford
- Upgrade of Gwinnett Place Transit Center to a major transfer center
- More direct routing
- Expanded evening service coverage
- New Sunday service
- New “Direct Connect” service to Chamblee Station
- Four new park-and-ride lots and expansion of express service to new markets
- Two new “flex routes” in the Buford/Sugar Hill and Snellville areas
- Service structured in a manner that allows for “packaging” of initial improvements that can be advanced into a 5-year Short-Range plan

For purposes of this study, route numbering for new local and express routes follows Gwinnett County Transit’s current route numbering practices, with local route numbering in increments of 5 (e.g., 10, 15, 20, 25) and express route numbering in the 100s. Rapid Ride routes (proposed in the Long-Range Plan) have been given route numbers in the 200s. Direct Connect routes have been given numbers in the 400s. Flex routes have been given numbers in the 500s, and BRT routes have been given numbers in the 700s.

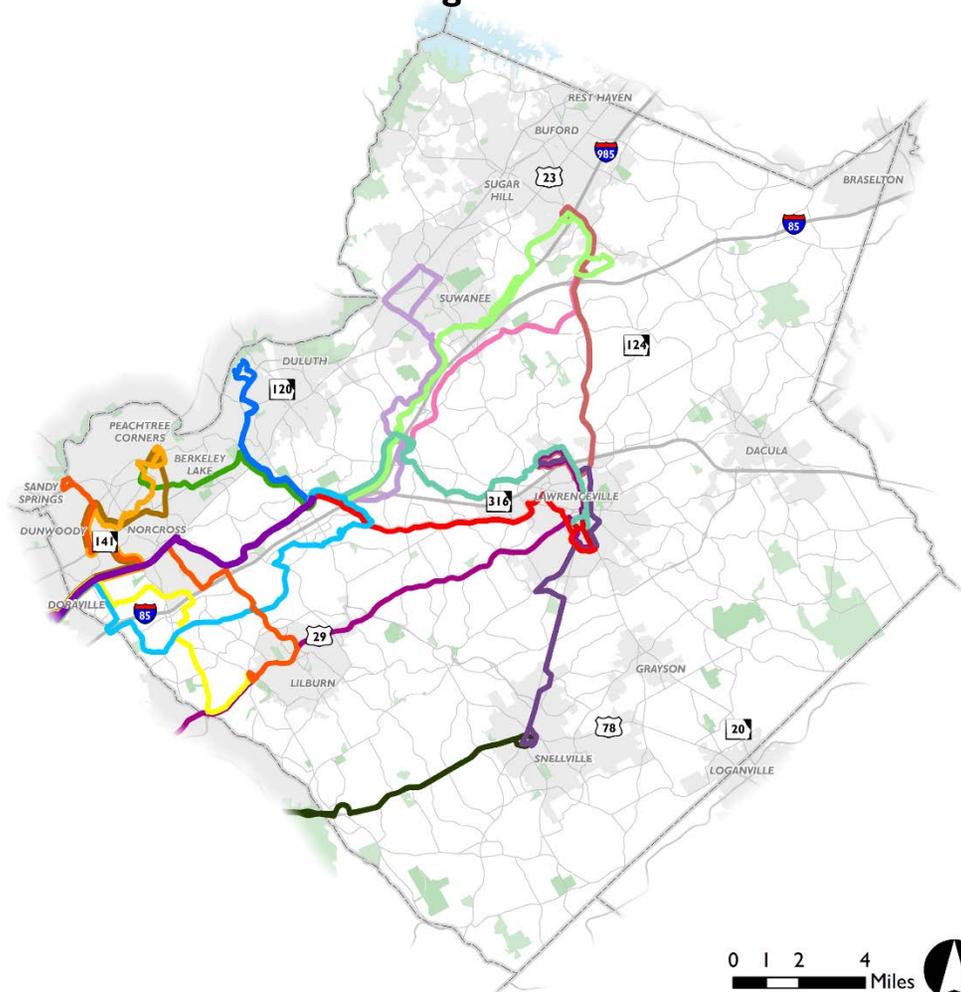
Following are descriptions of proposed routes in the Mid-Range plan, starting with local route service and progressing to BRT.

Figure 3-1: Existing Service and Proposed Mid-Range Plan Transit Service
(Not Including Express Routes)

Existing Network



Mid-Range Plan Network

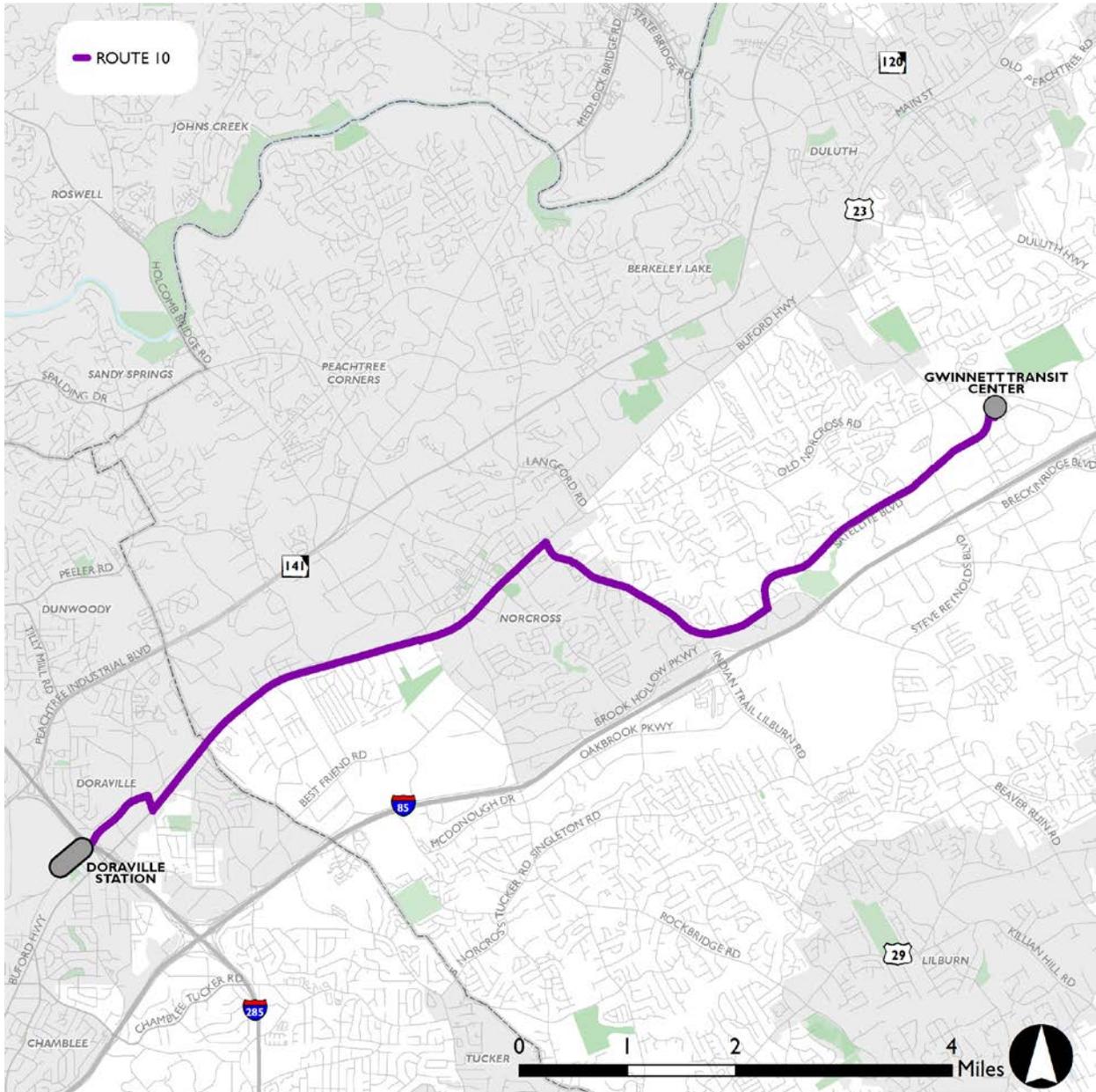


3.1.1 Route 10

The existing Route 10 has two route patterns. Both routes begin/end at the Doraville MARTA rail station and at Sugarloaf Mills. Route 10A operates to the Gwinnett Transit Center via Beaver Ruin Road and Satellite Boulevard. Route 10B operates to the Gwinnett Transit Center via Buford Highway and South Berkeley Lake Road/Pleasant Hill Road.

The Mid-Range plan proposes one route pattern that operates from Doraville Station to the Gwinnett Place Transit Center (Figure 3-2). The route will operate as an “underlying” route to the proposed BRT service (Route 700). The connection between New Peachtree Road and Buford Highway is changed from Oakcliff Road to McElroy Road (to avoid congestion at New Peachtree Road/Oakcliff Road). The route continues along Buford Highway, Beaver Ruin Road and Satellite Boulevard to the Gwinnett Transit Center, where connections can be made to several other proposed Gwinnett Transit Center routes. Existing Route 10B service along Pleasant Hill Road and South Berkeley Road is covered by new Routes 25 and 75. Existing Route 10A/10B service north of the Gwinnett Transit Center is covered by proposed Routes 45 and 50. Route 10’s proposed Mid-Range frequency is 30 minutes. Note that service levels on this alignment will increase relative to current conditions when considering both Route 10 and the new Route 700. New Sunday service and late evening service is also proposed.

Figure 3-2: Route 10



3.1.2 Route 20 and 30

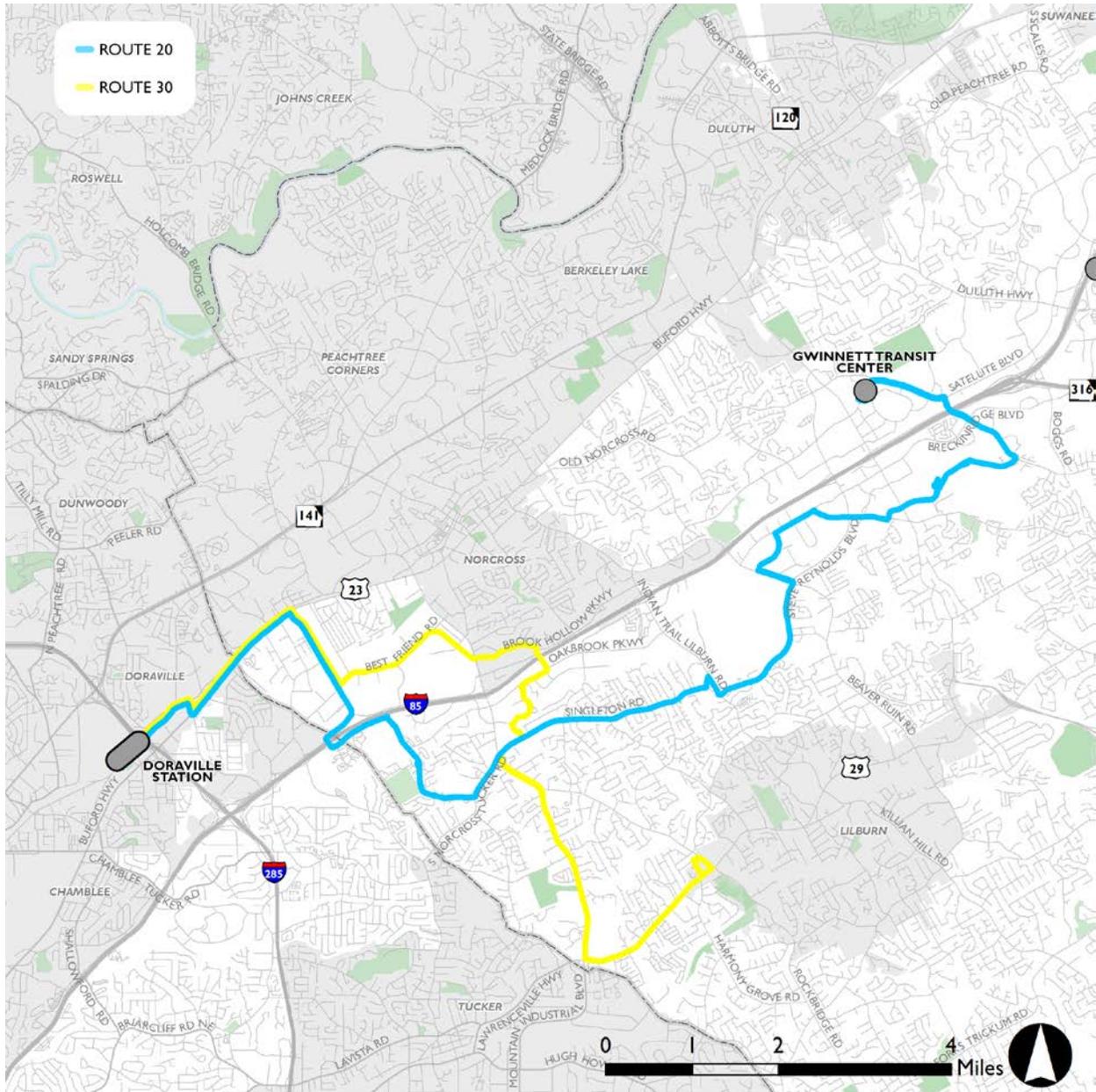
Existing Routes 20 and 30 are circuitous routes. Riders on Route 30 must transfer to Route 20 to access Doraville Station (Figure 3-3). Both routes operate at 30-minute frequencies in the peak periods and 60 minutes frequencies in the midday period, with no evening service.

Significant alignment modifications are proposed for both routes. Route 20's alignment is modified to provide more direct service to the Doraville MARTA station for passengers that are originating or destined to locations on the east side of I-85. The proposed alignment provides more direct routing for existing Gwinnett County Transit passengers along Graves Road and provides a more corridor-focused

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alignment along Singleton Road and Steve Reynolds Boulevard, with the northern terminus at the Gwinnett Transit Center. Route 30 is modified to provide riders with a one seat ride to the Doraville MARTA station. This route is also interlined with the proposed new Route 15 (3.1.5). Proposed frequencies for Route 20 are 30 minutes on weekdays and 60 minutes on weekends, including Sunday service. Proposed frequencies for Route 30 are 60 minutes on weekdays and Saturdays.

Figure 3-3: Routes 20 and 30

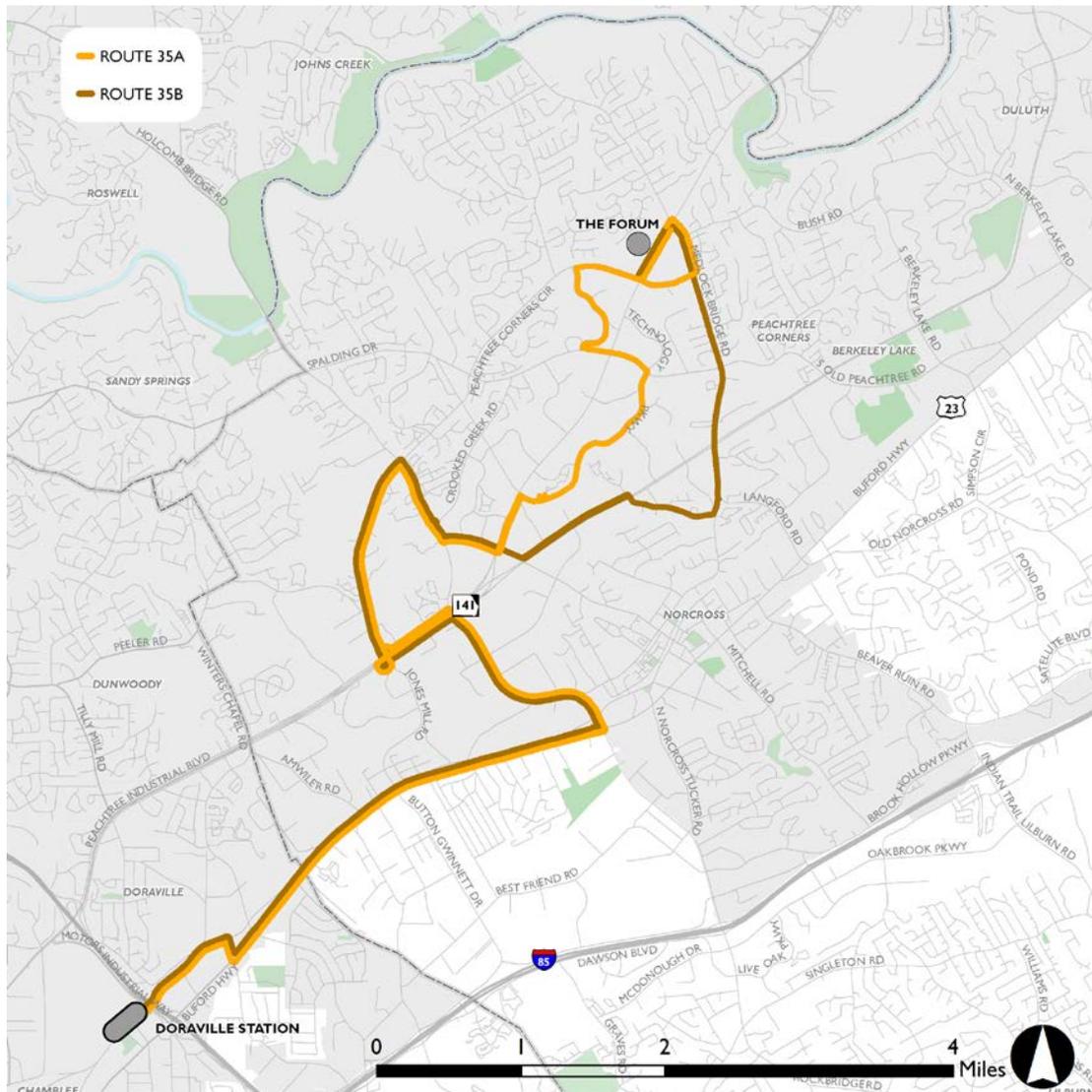


3.1.3 Routes 35A/35B

Route 35 provides service between Peachtree Corners and the Doraville MARTA Station (Figure 3-4). There are some one direction service segments with the current alignment, which creates out-of-direction travel. This route's alignment also crosses Buford Highway to Best Friend Road, resulting in indirect routing to/from the Doraville MARTA Station.

The proposed new alignment eliminates service south/east of Buford Highway to provide more direct routing. Thirty-minute all-day service is proposed from the Doraville MARTA Station to Holcomb Bridge Road, where there is a split in route alignments between Routes 35A and 35B. Both patterns' end-of-line is at The Forum. The proposed routing provides consistent service patterns, eliminating existing segments with one-direction service. Both patterns would operate at 60-minute frequencies on weekdays, providing a combined 30-minute frequency on the trunk portion of the route. Route 35A would also operate on Saturdays and Sundays, including late evening service.

Figure 3-4: Routes 35A/35B

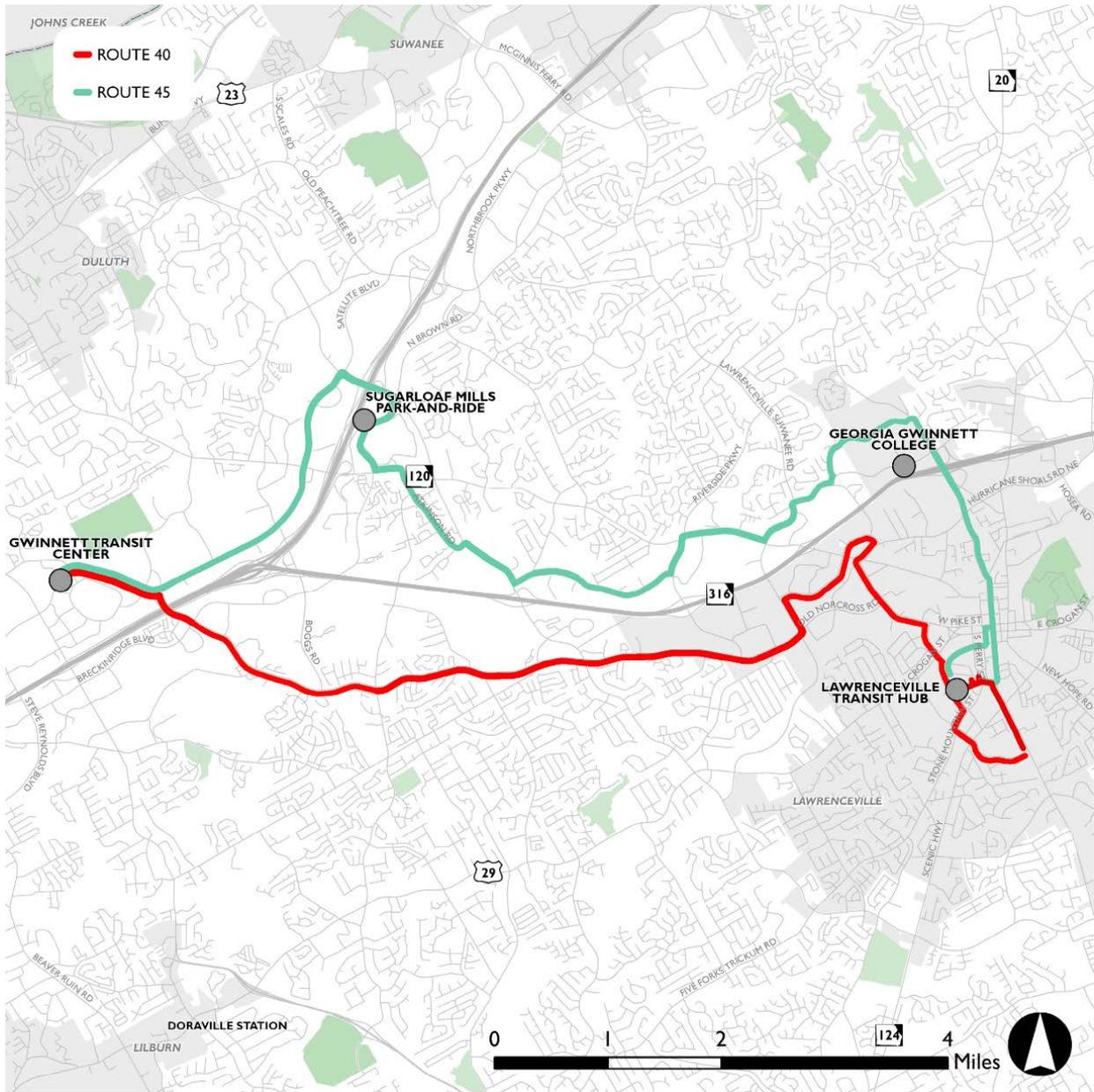


3.1.4 Routes 40 and 45

Route 40 presently provides service between the Gwinnett Transit Center and Lawrenceville via Sugarloaf Mills (Figure 3-5). The route's alignment to Sugarloaf Mills results in significant out-of-direction travel for riders traveling to/from Lawrenceville.

Two routes are proposed in this corridor. Route 40 is proposed to remain south of SR 316, primarily along Old Norcross Road, with service to Gwinnett Medical Center, GJAC, and the Division of Family and Child Services. Route 45 is proposed to continue to serve Sugarloaf Mills, but remain mainly north of SR 316 to Georgia Gwinnett College, where it then continues into Downtown Lawrenceville. Route 45 would operate bi-directionally on Brown Road adjacent to Sugarloaf Mills, resulting in a need to add a stop in the northbound direction at the Sugarloaf Mills Park-and-Ride lot. Both routes would serve a new Transit Hub located somewhere in the downtown Lawrenceville area. Both routes are proposed to operate at 30-minute frequencies on weekdays (60 minutes on Saturdays), resulting in a significant service frequency improvement between Duluth and Lawrenceville. Route 45 would also operate on Sundays.

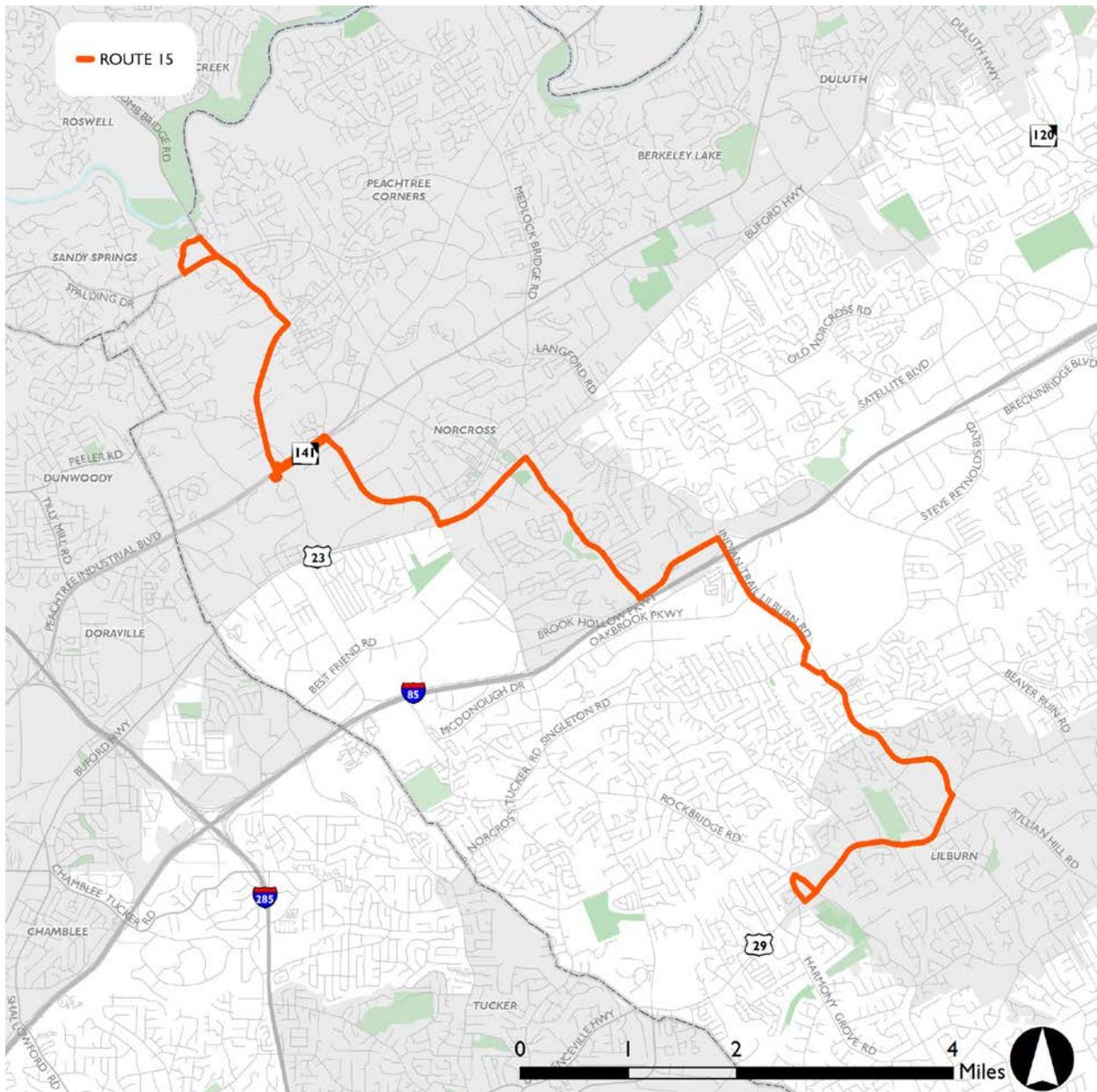
Figure 3-5: Routes 40 and 45



3.1.5 Route 15

This is a proposed new Gwinnett County Transit route (Figure 3-6). Route 15 provides service from Peachtree Corners to Lilburn via Norcross. The route begins at Holcomb Bridge Road and Spalding Drive, where it connects to MARTA's proposed Route 142 that began service in December 2017. This route operates through Norcross via Mitchell Drive, picking up segments of the existing Route 20. This route is also proposed to be interlined with Route 30. Thus, Route 15 riders will have an opportunity to connect to the Doraville MARTA Station by either staying on the bus as it changes to Route 30 or transferring along Buford Highway to BRT Route 700 (same side of street transfers). Proposed frequencies are 60 minutes on weekdays and Saturdays.

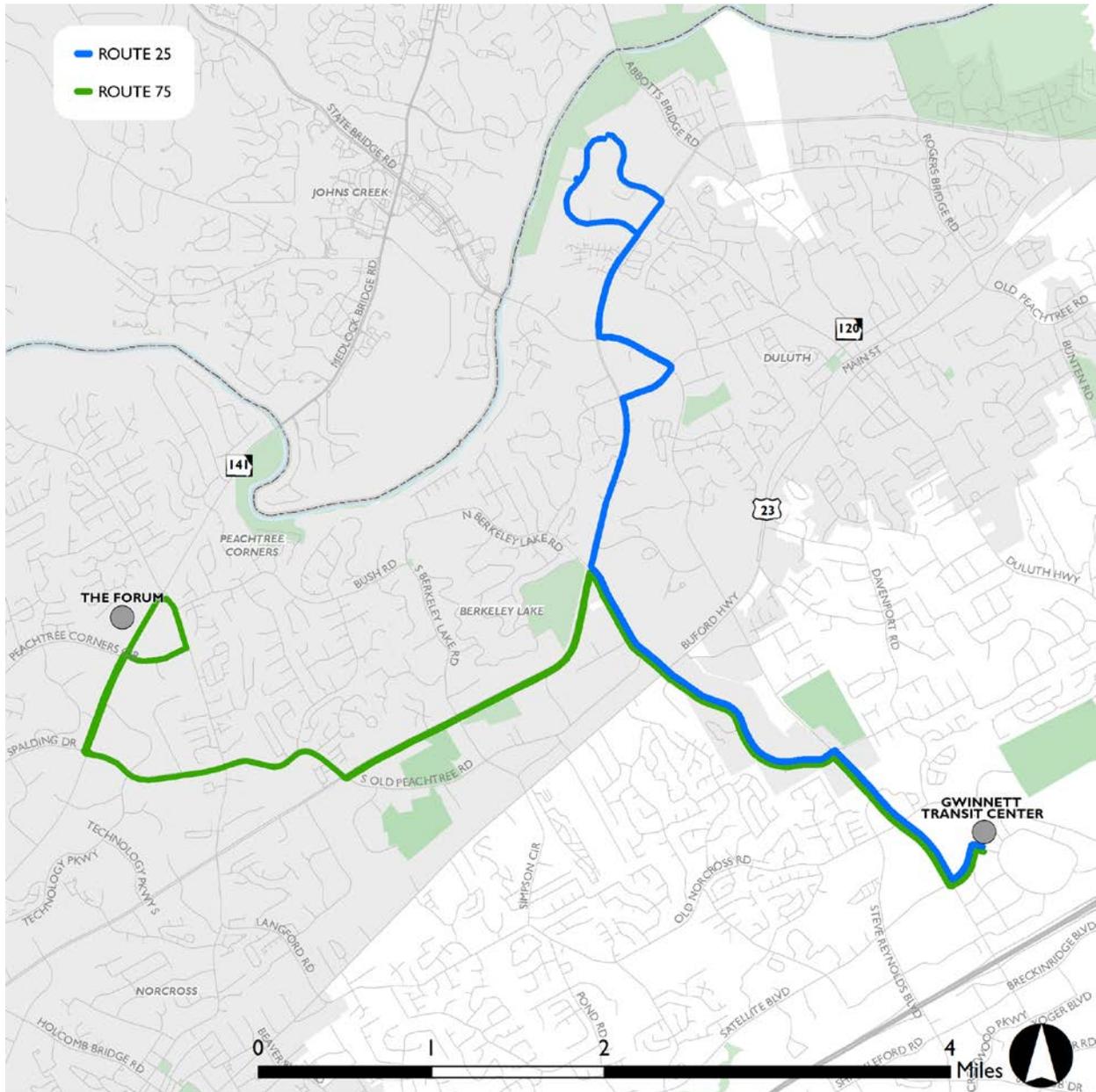
Figure 3-6: Route 15



3.1.6 Routes 25 and 75

These are proposed new Gwinnett County Transit routes. Both routes begin at the Gwinnett Transit Center and operate along Pleasant Hill Road and South Berkeley Road (adjacent to the Walmart) to Peachtree Industrial Boulevard (Figure 3-7). Route 25 continues to Duluth, serving the Georgia Medical Center – Duluth Campus. Route 75 continues to Peachtree Corners, serving the Forum and providing transfer opportunities to Routes 35A and 35B. Both routes are proposed to operate at a 60-minute all-day frequency (including Saturday service), resulting in a combined 30-minute frequency on the common route segment between Peachtree Industrial Boulevard and the Gwinnett Place Transit Center.

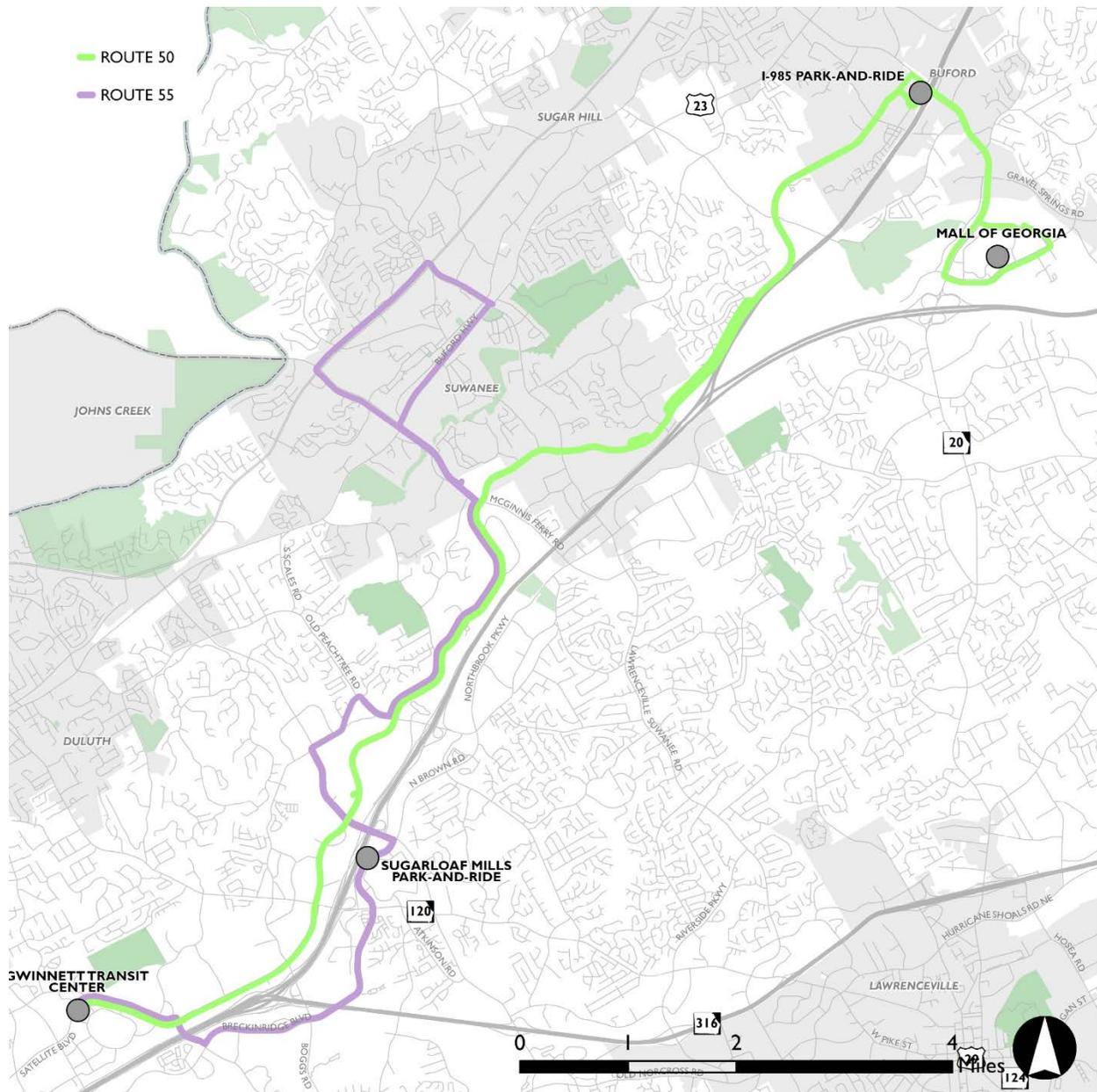
Figure 3-7: Routes 25 and 75



3.1.7 Routes 50 and 55

These are proposed new routes (Figure 3-8). Route 50 provides service between the Gwinnett Transit Center and the I-985 Park-and-Ride lot via Satellite Boulevard, with service continuing to the Mall of Georgia. Proposed frequencies are 30 minutes on weekdays and 60 minutes on Saturdays and Sundays, including evening service. Route 55 is also anchored at the Gwinnett Transit Center. This route provides service to Sugarloaf Mills, with continuing service to Suwanee. Proposed frequencies are 60 minutes on weekdays only.

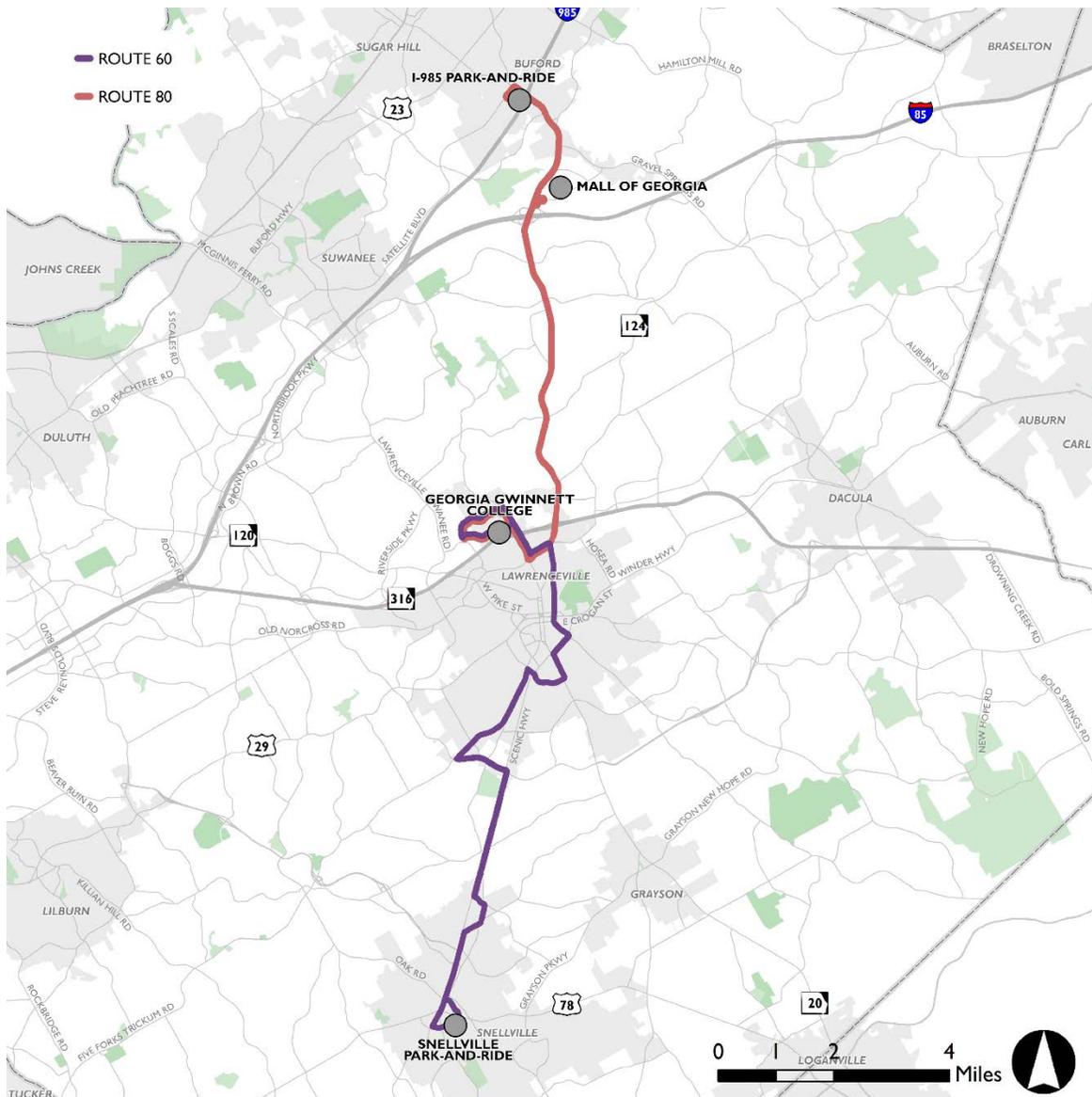
Figure 3-8: Routes 50 and 55



3.1.8 Routes 60 and 80

Route 60 is a new route that operates between the GRTA Snellville Park-and-Ride lot and Georgia Gwinnett College, where transfers are possible to other routes (Figure 3-9). This route operates primarily along Highway 124, with a deviation along Pharrs Road, North Road, and Ridgedale Drive to provide access to a major retailer. Route 60 will also serve the Lawrenceville Transit Hub. It is proposed to have extra time built into the schedule to allow for on-demand service to the Eastside Medical Center complex at Ronald Reagan Parkway. Route 60 also maintains service coverage along a portion of existing Route 40's alignment. Route 80 is proposed to operate between Lawrenceville and the Mall of Georgia area. The southern terminus is Georgia Gwinnett College and the northern terminus is the I-985 Park-and-Ride lot. Proposed frequencies on both routes are 60 minutes on weekdays and Saturdays.

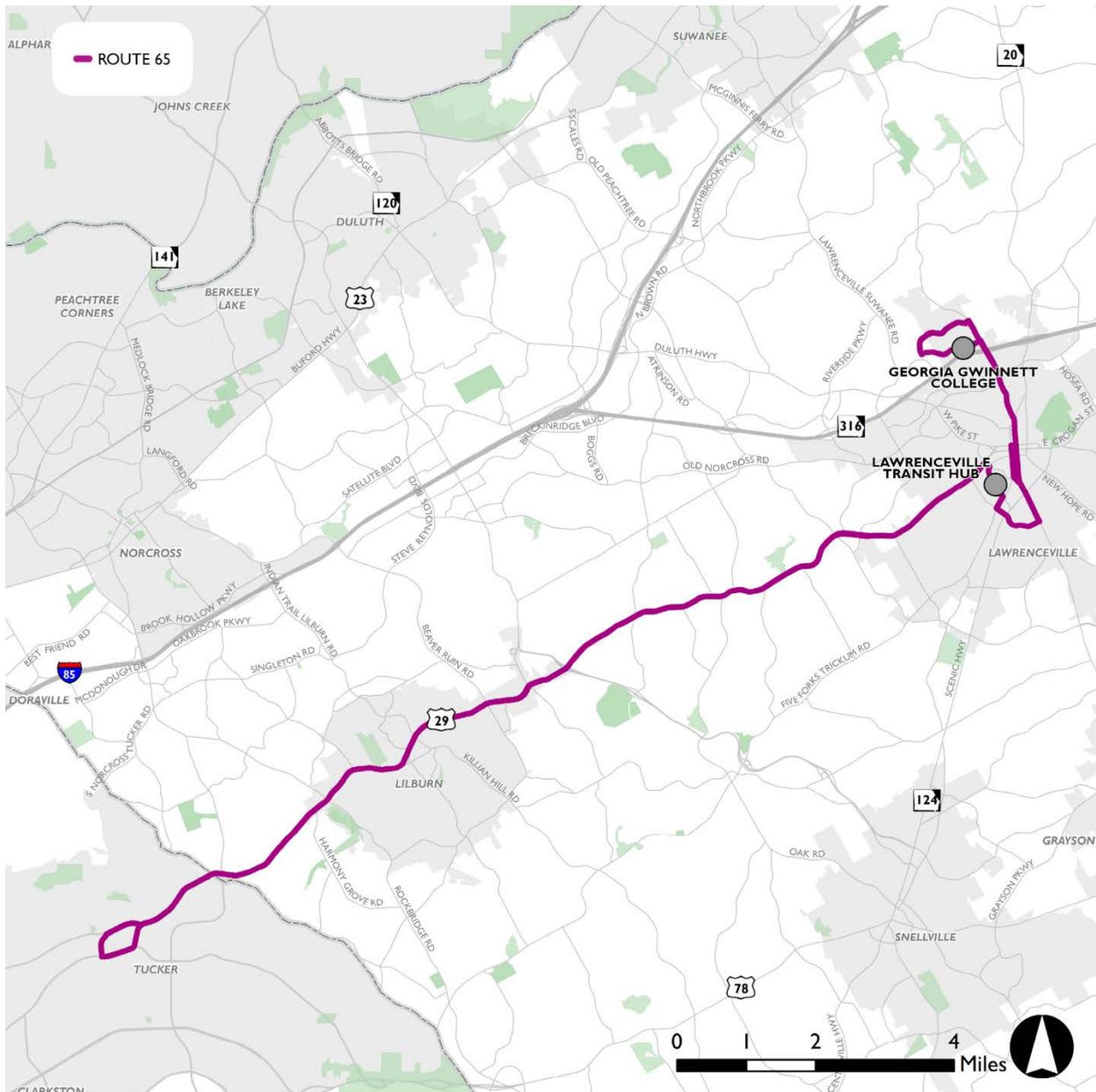
Figure 3-9: Routes 60 and 80



3.1.9 Route 65

Route 65 is anchored in Gwinnett County at Georgia Gwinnett College, where transfers are possible to other Gwinnett County Transit routes (Figure 3-10). This route operates primarily along Lawrenceville Highway into Tucker, where transfers are possible to MARTA Routes 75, 121, and 124. Transfers are possible also with Routes 15 and 30 at Lawrenceville Highway/Rockbridge Road. Route 65 will also serve the Lawrenceville Transit Hub. Proposed frequencies are 60 minutes on weekdays and Saturdays. DeKalb County is beginning work on a countywide transit plan. Coordination with DeKalb County is recommended to investigate the possibility of extending this service as a one-seat ride to the Emory University area through a joint funding arrangement.

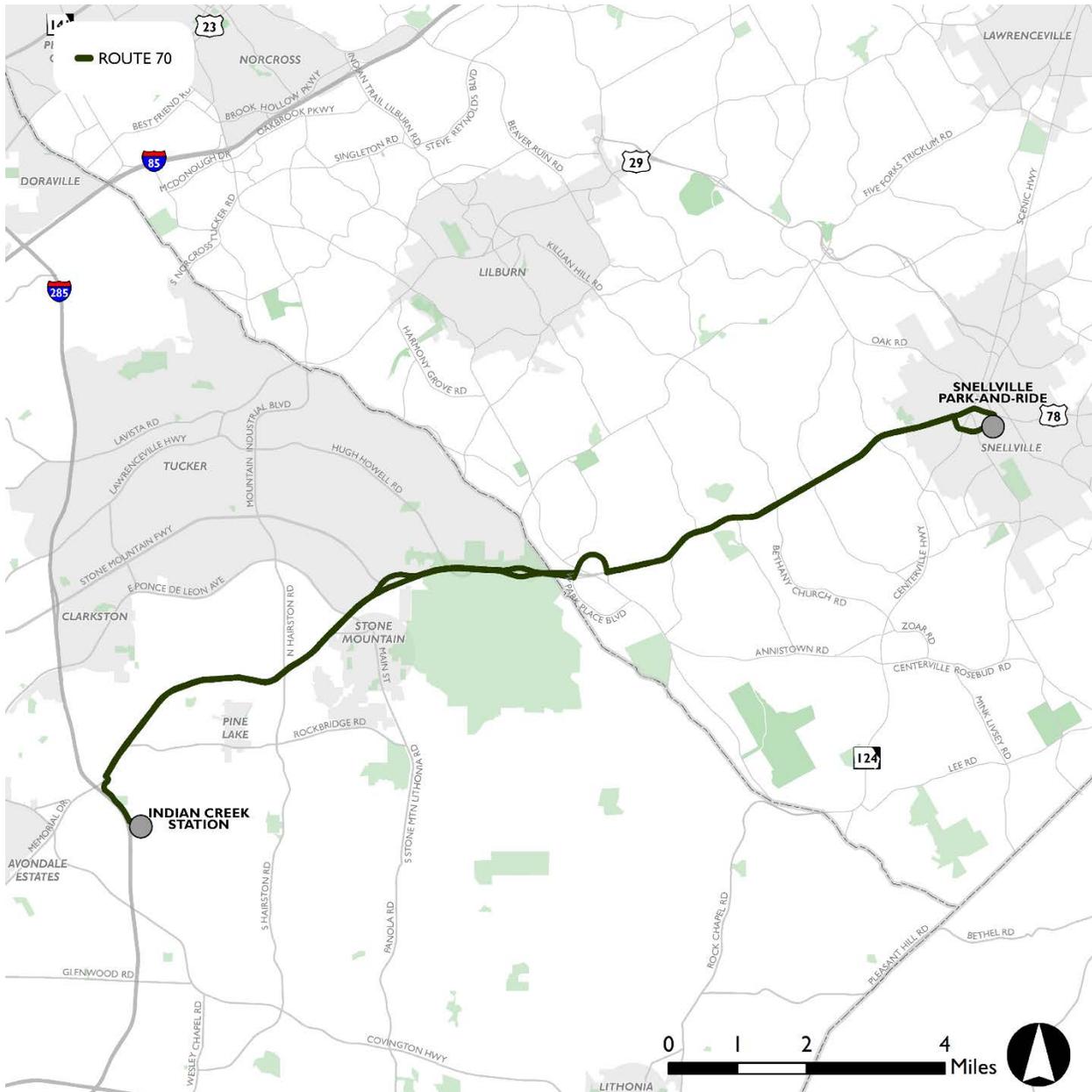
Figure 3-10: Route 65



3.1.10 Route 70

Route 70 is new route with a proposed east terminus at GRTA's Snellville Park-and-Ride lot, where transfers are possible to the proposed Route 60 (Figure 3-1 I). This route operates along US 78, with service continuing into DeKalb County to the MARTA Blue Line's Indian Creek rail station. Proposed frequencies are 60 minutes on weekdays only.

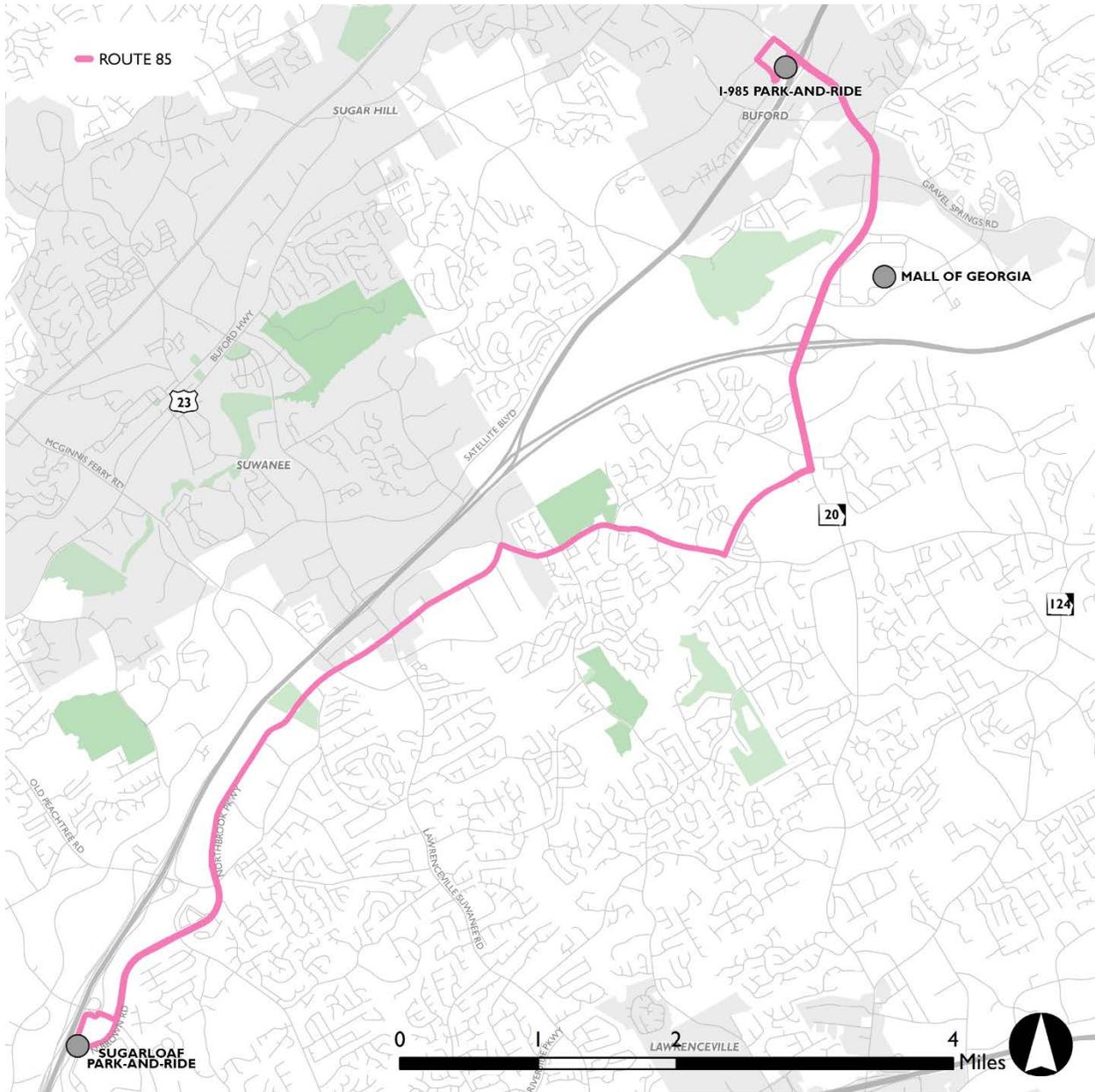
Figure 3-1 I: Route 70



3.1.1.1 Route 85

Route 85 is proposed to provide service along the east side of I-85 between Sugarloaf Mills and the Mall of Georgia (Figure 3-12). Heading north from Sugarloaf Mills, this route operates along North Brown Road, Northbrook Parkway, Horizon Drive, Old Peachtree Road and Tech Center Parkway, passing Coolray Field before turning left on Buford Drive and proceeding to the Mall of Georgia and the I-985 Park-and-Ride lot. Proposed frequencies are 60 minutes on weekdays only.

Figure 3-12: Route 85



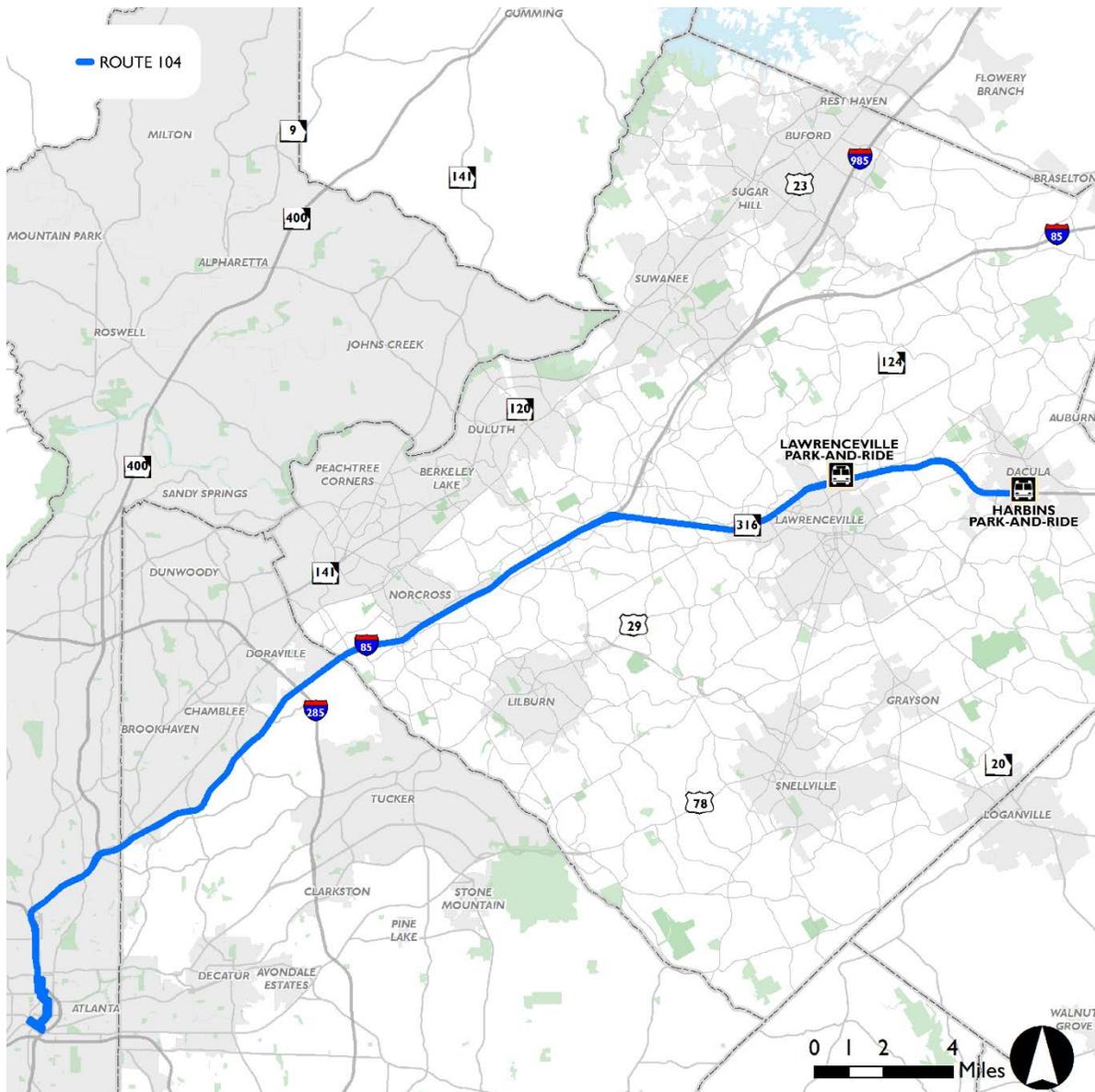
3.1.12 Existing Routes 101, 102, 103, 103A and 110

Routes 101, 102 and 103 provide express service to and from downtown Atlanta. Route 110 provides express service to and from the CDC and Emory University. All existing express routes currently operate with excess capacity. Thus, no alignment or service level changes are proposed to any of these routes. However, early/late afternoon sweeper trips and Route 103A service (reverse commute) is eliminated, replaced with new Direct Connect service that is anchored at Chamblee rail station.

3.1.13 Express Route 104

This new express route will provide service to downtown Atlanta from two new park-and-ride lots in the SR 316 corridor – Harbins Road and Lawrenceville at Buford Drive (Figure 3-13). Proposed frequencies are 20 minutes in the peak periods only.

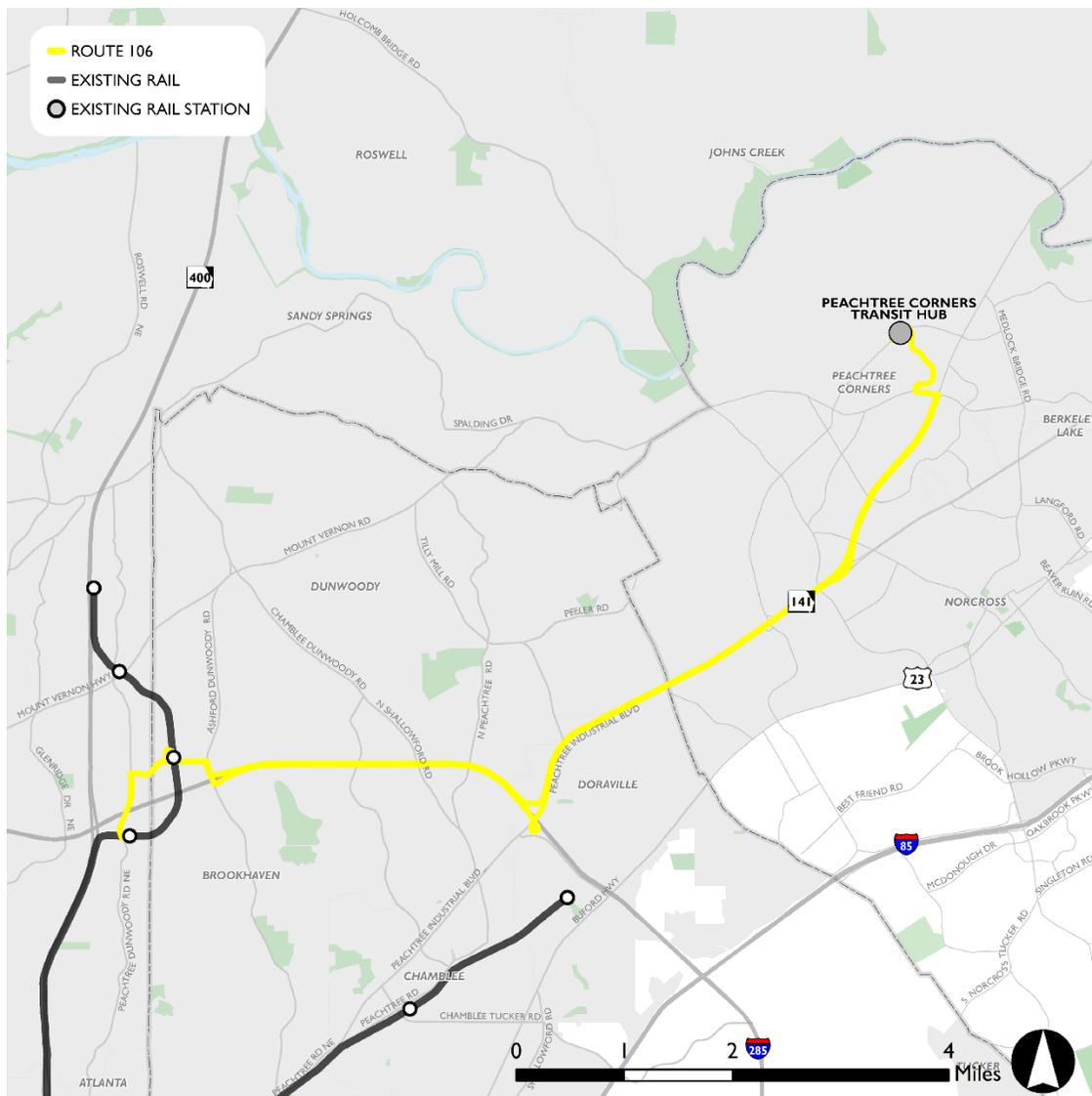
Figure 3-13: Route 104



3.1.14 Express Route 106

There is significant demand of work trips from Gwinnett County to Perimeter Center, particularly from the Peachtree Corners area. GRTA recently began Route 417 service from the Sugarloaf Mills Park-and-Ride lot to Perimeter Center. It is proposed that Gwinnett County initiate service from the Peachtree Corners area to Perimeter Center (Figure 3-14). Service is anticipated to be initiated concurrent with opening of GDOT's planned I-285 express lanes. A new transit hub will be required, either through new construction or a lease agreement. Existing GRTA Route 408 could also serve this new transit hub, providing Peachtree Corner residents with a means to park and ride to the Chamblee Station. Stops in Perimeter Center would be the same as Route 417 stops. Initial proposed service levels are three trips in each peak period (30-minute frequencies).

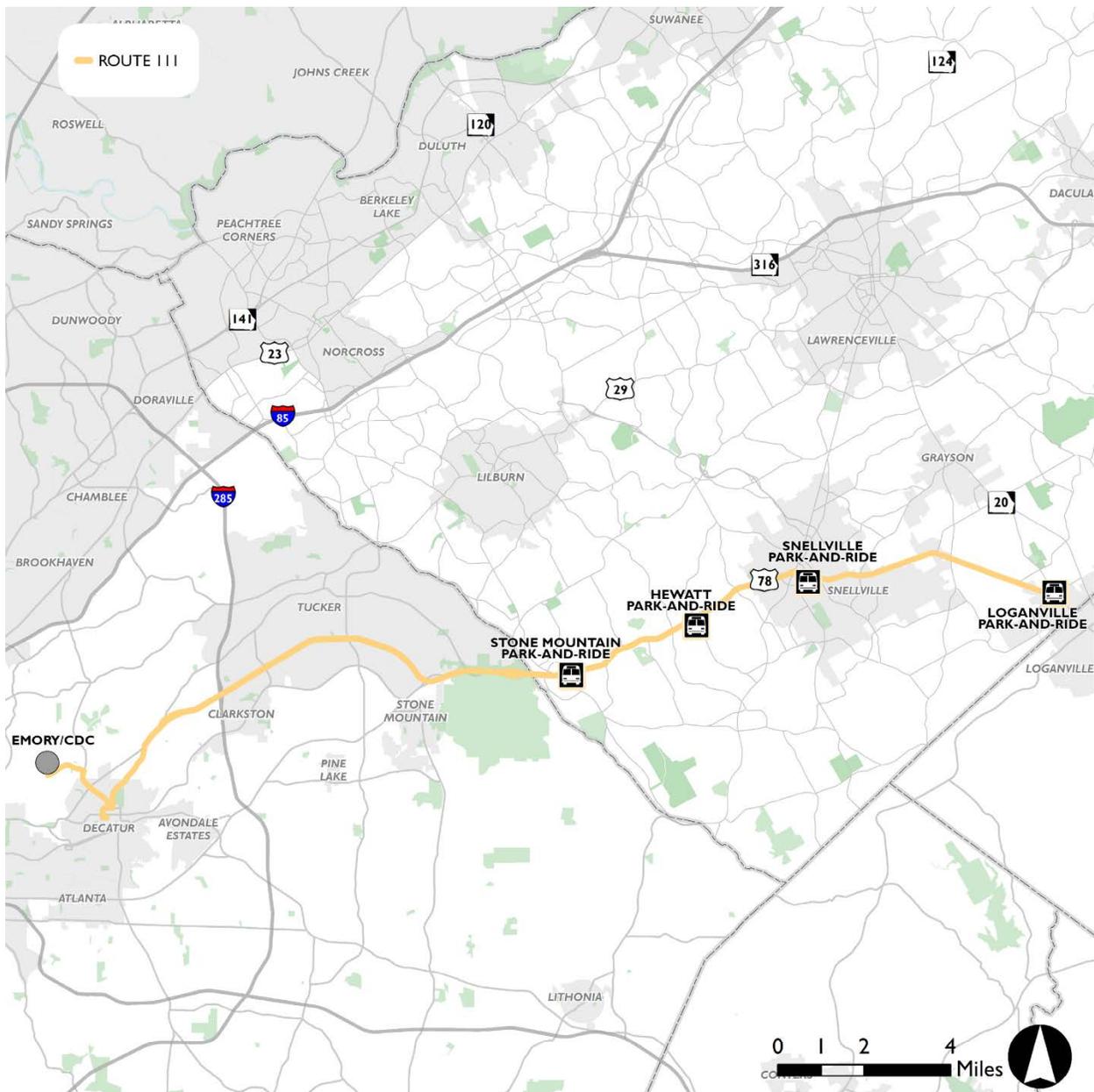
Figure 3-14: Route 106



3.1.15 Express Route III

Gwinnett County Transit presently provides express service from the Sugarloaf Mills and Indian Trail Park-and-Ride lots to Emory University and the CDC (Figure 3-15). An additional express route to the Emory University area is proposed along the US 78 corridor. This route would serve all three existing GRTA park-and-ride lots along US 78 – Snellville, Hewatt Road, and Stone Mountain and a new proposed park-and-ride lot in the Loganville area. Initial proposed service levels are three trips in each peak period (30-minute frequencies).

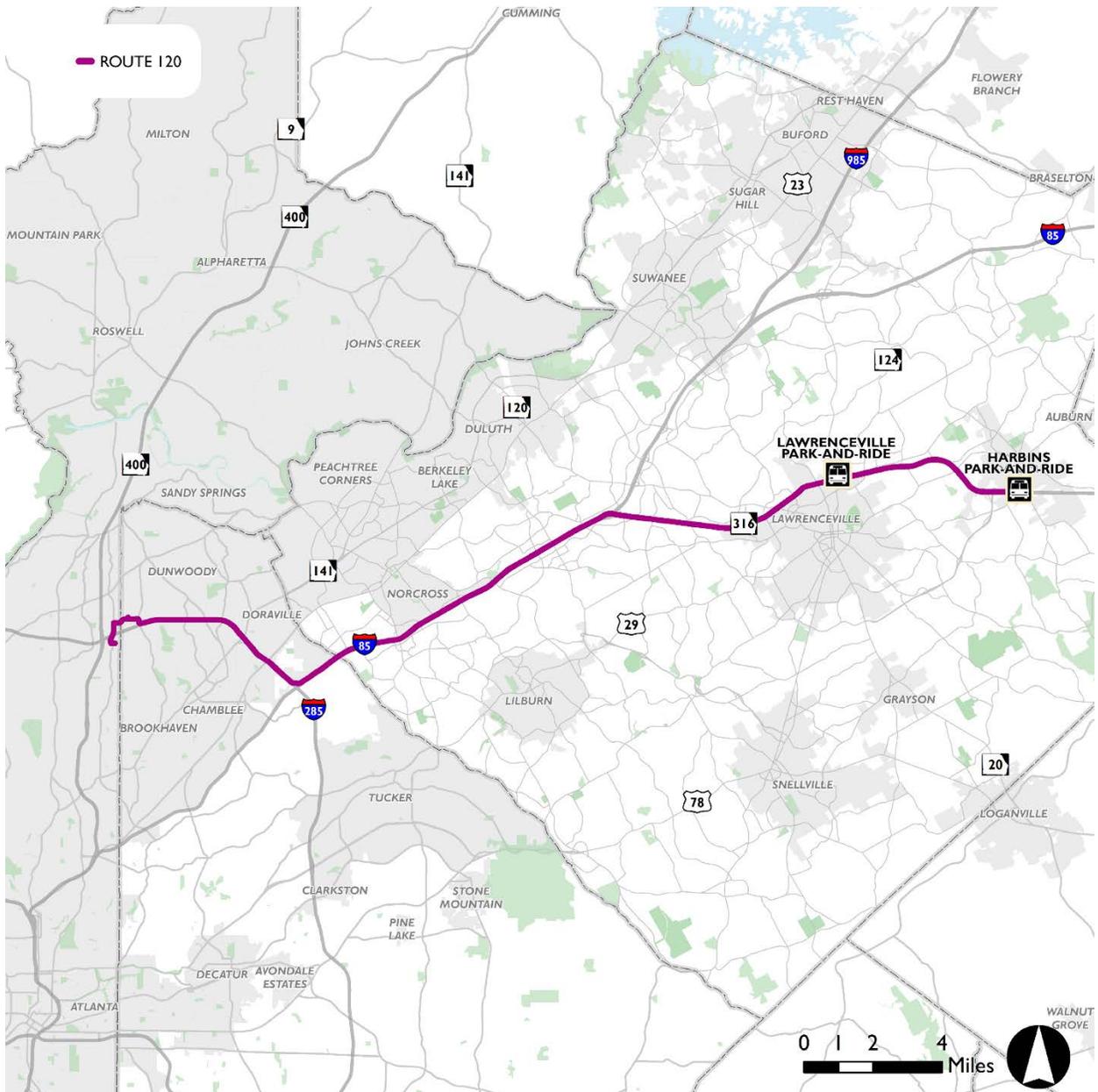
Figure 3-15: Route III



3.1.16 Express Route 120

This new express route will provide service along the SR 316 corridor to the Perimeter Center area (Figure 3-16). Service in Gwinnett County is anchored at two new park-and-ride lots – Harbins Road and Lawrenceville Park and Ride. Service should plan to coordinate with GDOT’s planned I-285 express lanes construction and opening timeline. This route will also connect to MARTA rail at the Dunwoody and Medical Center MARTA stations. Initial proposed service levels are three trips in each peak period (30-minute frequencies).

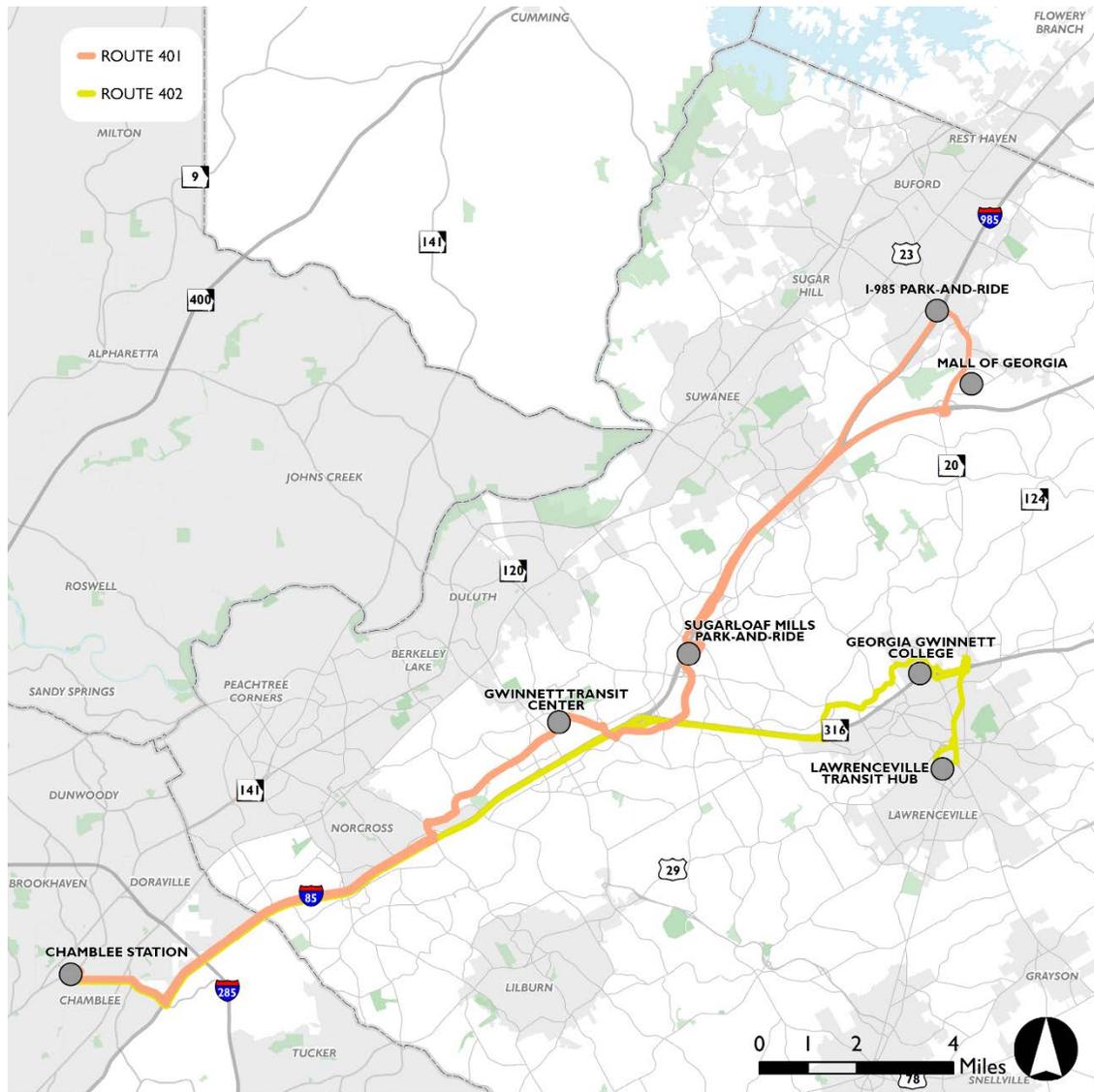
Figure 3-16: Route 120



3.1.17 Direct Connect Routes 401 and 402

The Direct Connects are a new type of transit service that is proposed for Gwinnett County. These proposed routes provide an all-day direct connection to MARTA rail service. Limited stops are proposed within Gwinnett County, to ensure a fast and reliable travel time. This service should be branded as a premium service. Two Direct Connect routes are proposed for the Mid-Range plan (Figure 3-17). Both routes are anchored at Chamblee Station, where there is sufficient bus bay capacity. Direct Connect 401 operates to/from the I-985 Park-and-Ride. Key stops include Indian Trail Park-and-Ride, the Gwinnett Transit Center, Sugarloaf Mills, and the Mall of Georgia. Direct Connect 402 operates to/from the Lawrenceville Transit Hub. Key stops include Gwinnett Medical Center, Georgia Gwinnett College, and downtown Lawrenceville. In addition to providing fast service to/from MARTA, these routes provide express route riders with midday and evening connections back to select park-and-ride lots. Proposed frequencies on both routes are 60 minutes, weekdays only.

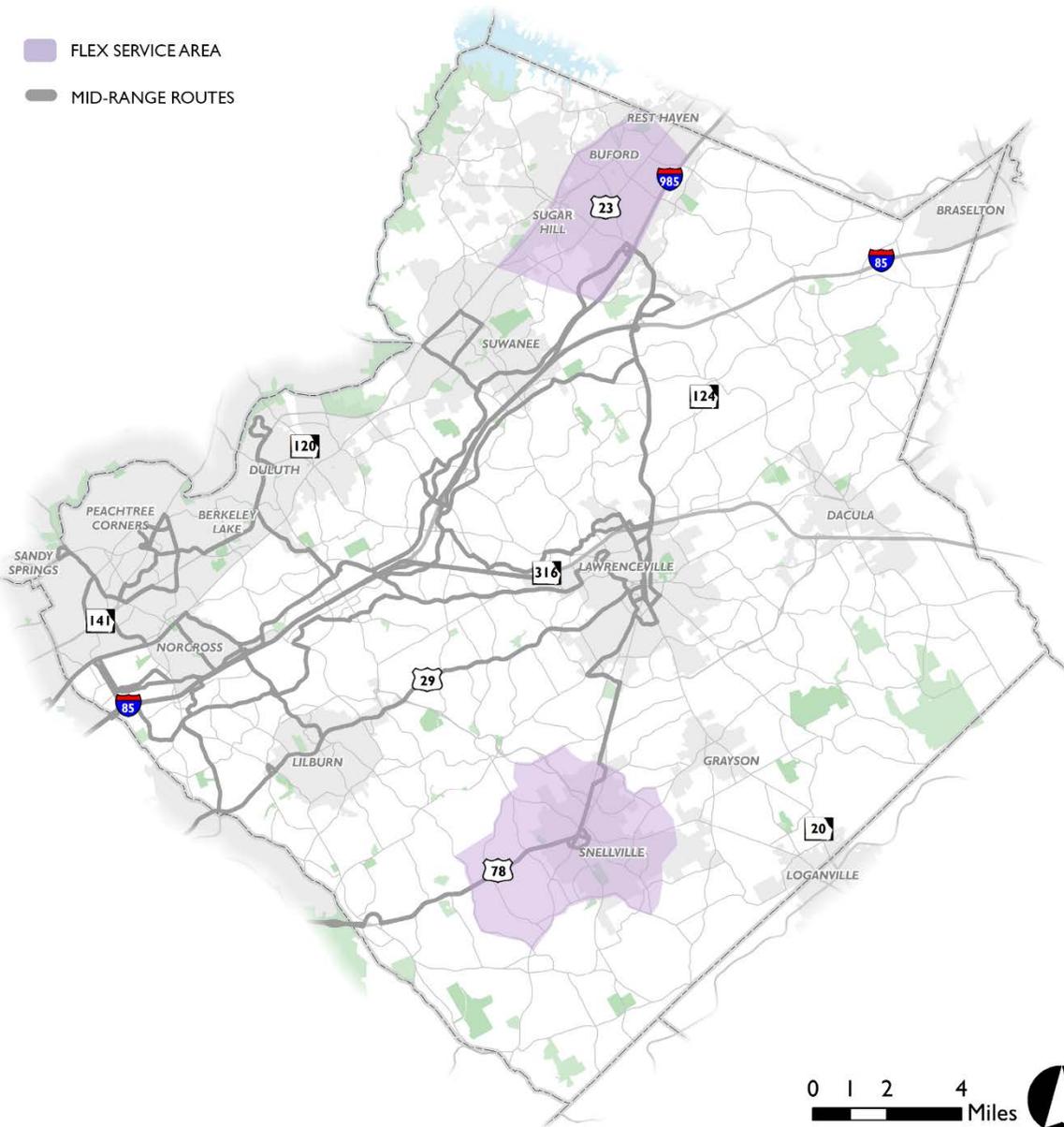
Figure 3-17: Direct Connect Routes 401 and 402



3.1.18 Flex Routes 500 and 503

The Buford/Sugar Hill Flex 500 is an on-demand route that is proposed in the Buford/Sugar Hill area (Figure 3-18). Service is proposed to be anchored at the I-985 Park-and-Ride lot, where transfers are possible to Routes 101, 50, 80, and 85. The Snellville Flex 503 is an on-demand route that is proposed in the Snellville area. Service is proposed to be anchored at the existing Snellville Park-and-Ride lot, where transfers are possible to Routes 60, 70, 111, and GRTA Xpress service. Proposed service hours for both routes are 6:00 a.m. to 8:00 p.m., weekdays only.

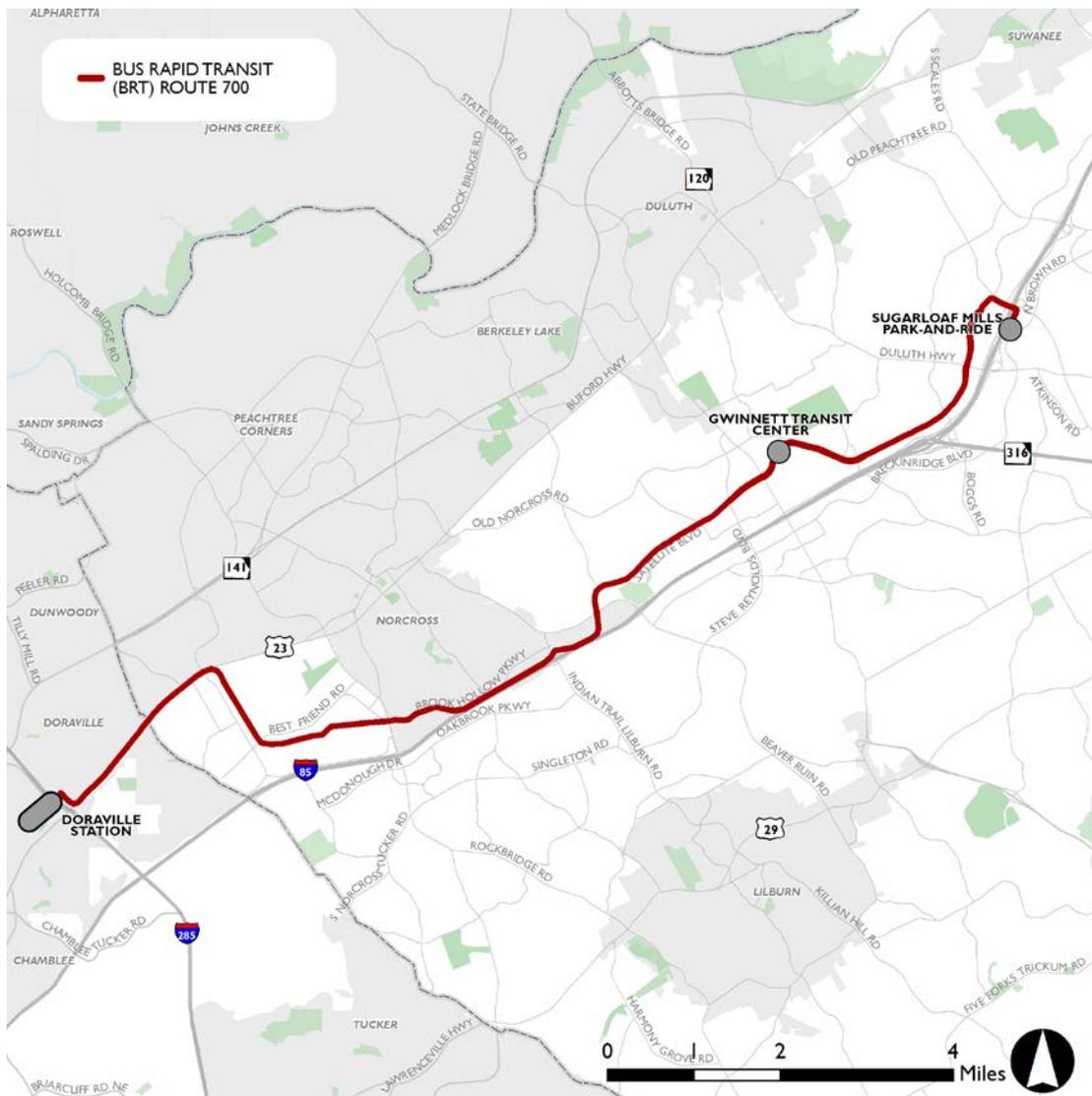
Figure 3-18: Flex Routes 500 and 503



3.1.19 BRT 700

The Mid-Range plan includes introduction of BRT service in Gwinnett County. This proposed BRT line would begin at Doraville MARTA station. Additional bus bay capacity will be needed to accommodate BRT. It is assumed that this capacity would be provided with access from the north side of I-285 including improved connections to the MARTA rail platforms. The proposed alignment follows Buford Highway, Button Gwinnett, Best Friend Road, Brook Hollow Parkway, and Satellite Boulevard to Infinite Energy Center (Figure 3-19). The alignment then crosses under I-85 via Sugarloaf Parkway to the Sugarloaf Mills Transit Center. A substantial portion of the alignment is proposed to be dedicated lanes beginning north of Jimmy Carter Boulevard. The BRT service includes additional features north of Jimmy Carter Boulevard, such as: off-board fare collection; real-time bus arrival information; enhanced stations with architectural elements; and distinctive branding and vehicles. Proposed frequencies are 10 minutes in the peak periods and 15 minutes in the mid-day periods, plus late evening and weekend service.

Figure 3-19: BRT Route 700



3.2 Mid-Range Service Plan Rider Benefits

Proposed service expansion in the Mid-Range plan is anticipated to provide many benefits to existing Gwinnett County Transit riders and attract new riders to the system. Major rider benefits include the following:

- **High-frequency service on BRT 700.** This route essentially serves as the “spine” of the Gwinnett County Transit network, providing a connection between the Doraville MARTA rail station and Sugarloaf Mills. Proposed service levels are 10 minutes in the peak periods and 15 minutes in the midday period.
- **More 30-minute all-day service.** As noted earlier, existing Gwinnett County Transit service provides 30-minute frequencies in the peak periods, but 60-minute frequencies in the midday periods. This plan proposes 30-minute all-day service in areas where such service is warranted. Routes 35A and 35B combine to provide 30-minute frequencies along significant segments of those routes. Routes 20, 40, 45 and 50 are proposed to operate at 30-minute frequencies.
- **Expanded evening service.** Presently, only Route 10A operates after 9:00 p.m. The Mid-Range plan reflects expanded evening service on several routes until midnight.
- **New Sunday service.** There presently is no Sunday service in Gwinnett County. The Mid-Range plan proposes Sunday service on BRT 700 and local routes 10, 20, 30, 35A, 45 and 50.
- **New transit service to major destinations in Gwinnett County.** The Mid-Range plan provides new service to key destinations including Georgia Gwinnett College, Gwinnett Medical Center-Duluth, and the Mall of Georgia. New service is provided to communities as well including Snellville, Suwanee, Sugar Hill, and Buford.
- **More direct routing.** The circuitousness of existing Gwinnett County Transit routes has been eliminated. Riders will have more direct routing to/from MARTA and fewer transfer requirements.
- **Expanded transfer opportunities between Gwinnett County Transit routes.** The existing Gwinnett Transit Center becomes a major transfer hub with the Mid-Range plan. Other locations within the County are proposed to accommodate transfers between routes, such as Georgia Gwinnett College and the Peachtree Corners Transit Hub.
- **New park-and-ride lots and expanded express service.** The Mid-Range plan includes new park-and-ride lots in Peachtree Corners, Loganville, and in the SR 316 corridor at Harbins Road and Buford Drive. New express services from these locations will provide service to downtown Atlanta, Emory University and Perimeter Center.
- **More connections to MARTA.** Existing Gwinnett County Transit routes that connect to MARTA have higher ridership than those routes that do not. The Mid-Range plan expands connections to MARTA’s Doraville Station. Passengers with origins/destinations on the east side of I-85 will now have a one-seat ride to Doraville Station. New MARTA connections are provided to Indian Creek Station, to bus routes in Tucker and to MARTA’s Route 142 at Spalding Road. Proposed “Direct Connect” routes will provide all-day premium limited stop service to Chamblee Station.

Figure 3-20 illustrates expanded transit service coverage with the Mid-Range plan. Overall, the Mid-Range plan maintains service coverage for approximately 97 percent of Gwinnett County Transit’s existing riders. Figure 3-21 illustrates proposed weekday service frequencies by segment for local routes (15-, 30- and 60-minute frequencies). Figure 3-22 illustrates routes that would operate in the late evenings and on Sundays.

Figure 3-20: Mid-Range Plan Service Coverage (Local Routes)

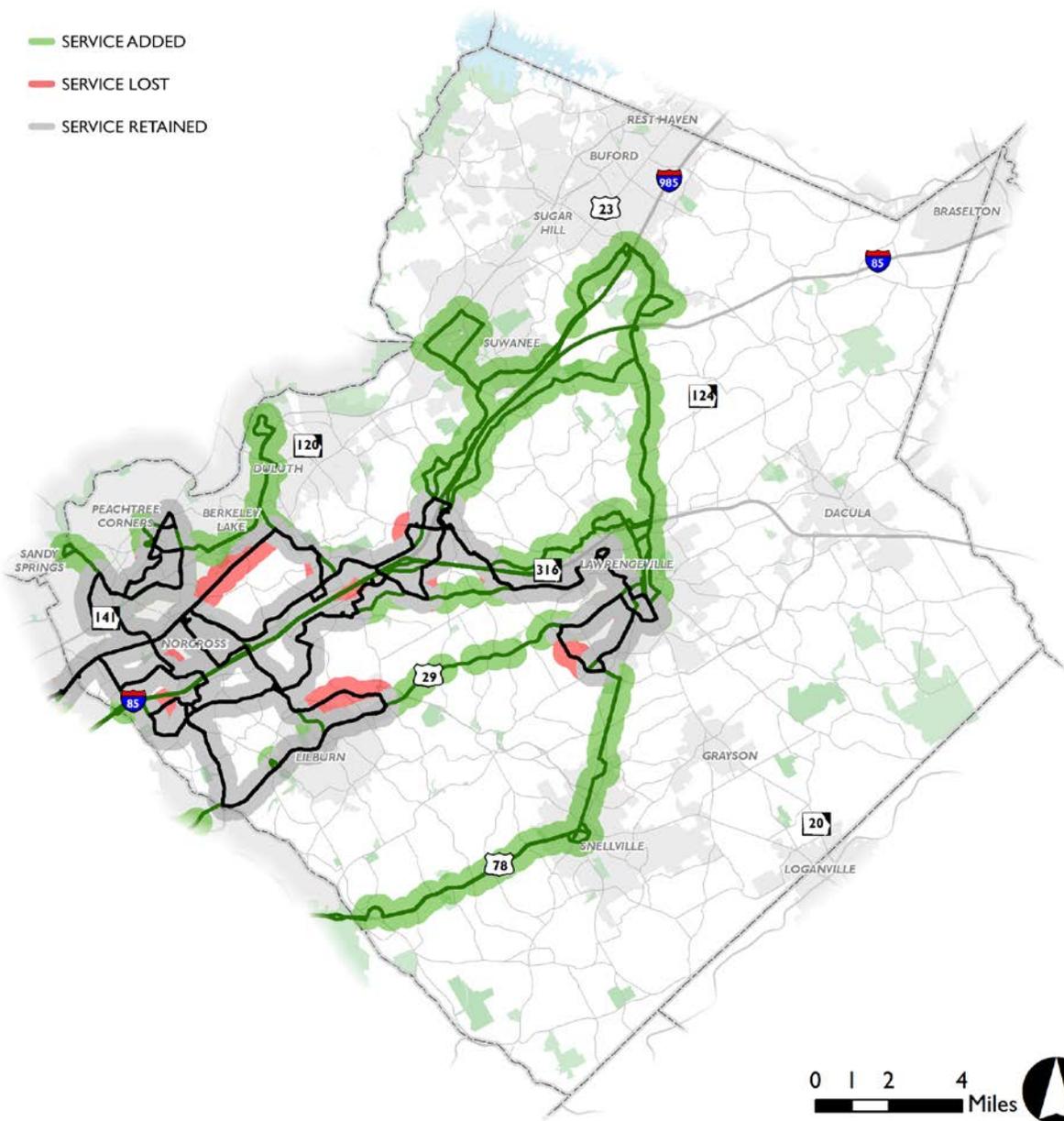


Figure 3-21: Service Levels by Segment (Local Routes)

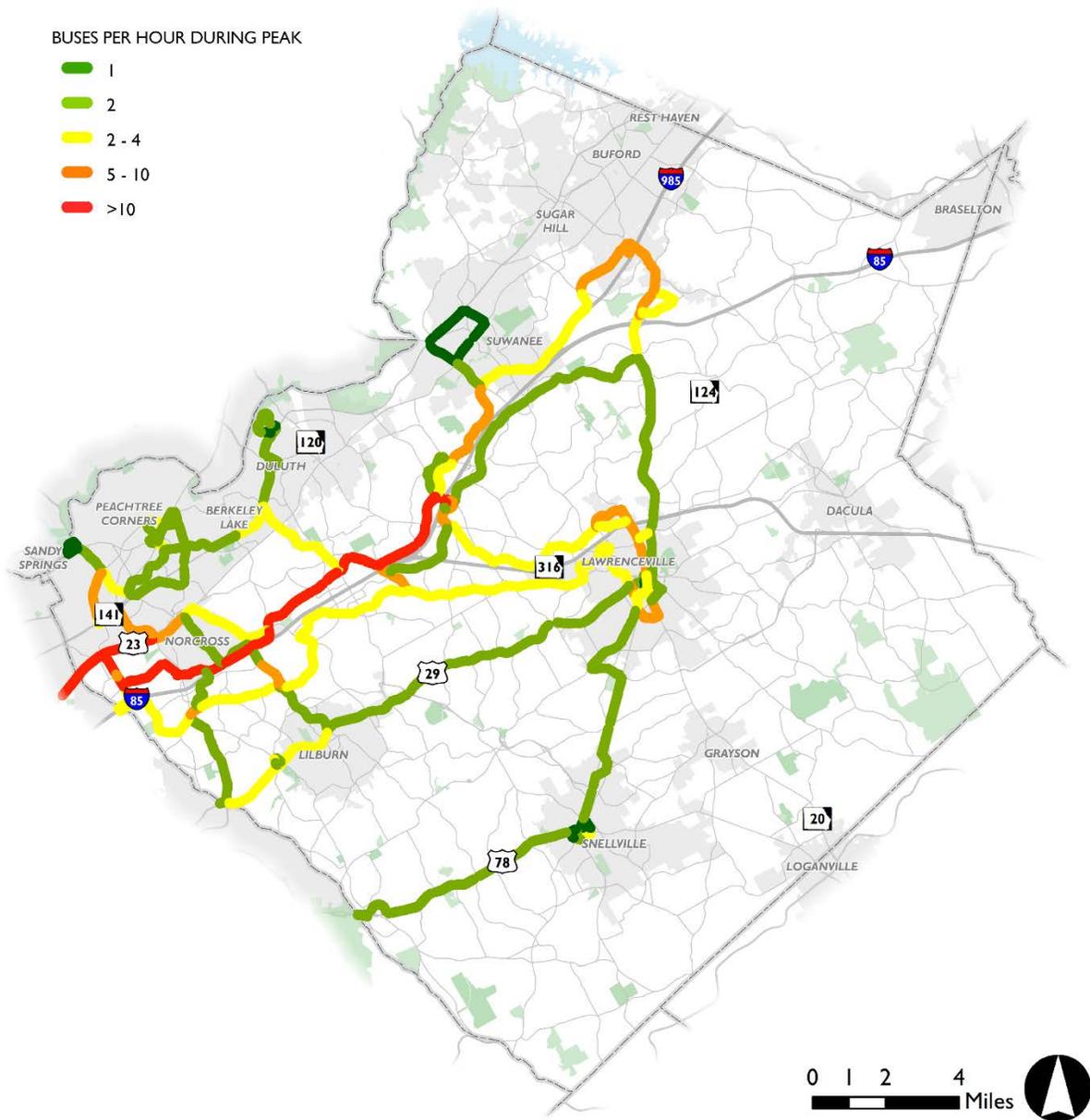
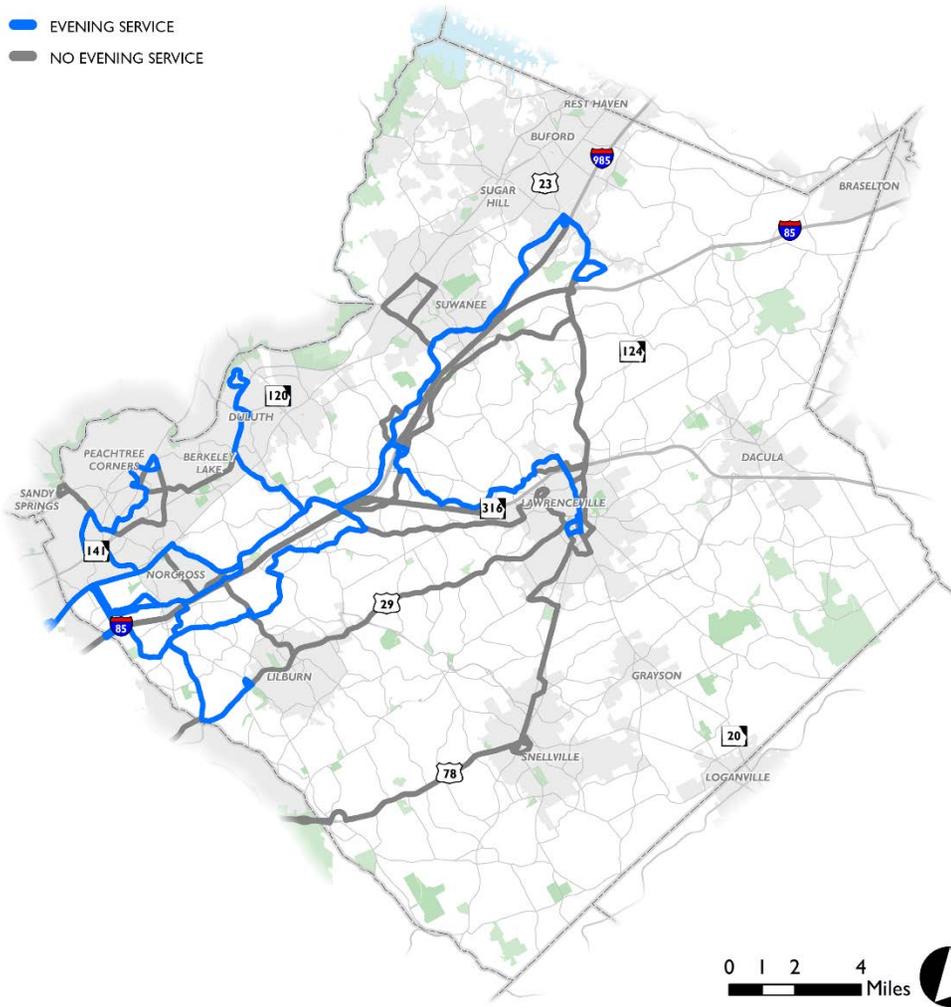
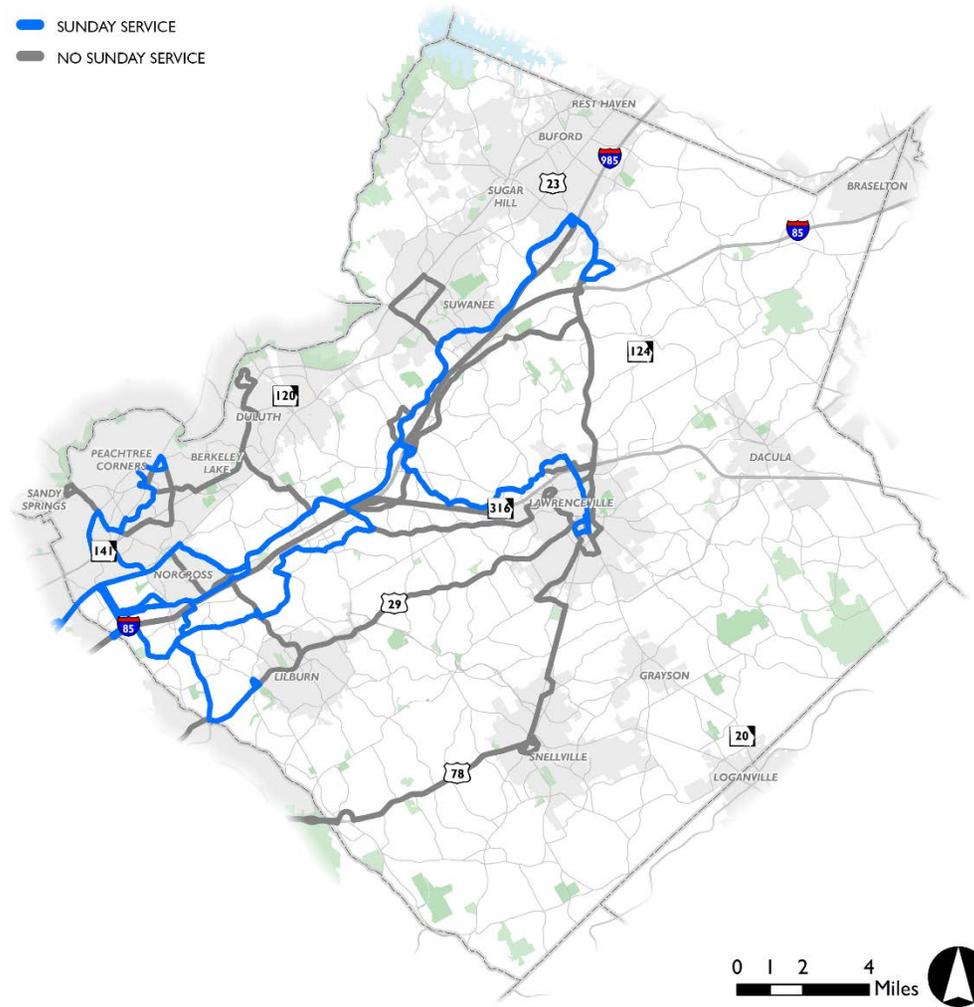


Figure 3-22: Evening and Sunday Service Coverage

- EVENING SERVICE
- NO EVENING SERVICE



- SUNDAY SERVICE
- NO SUNDAY SERVICE



3.3 Mid-Range Service Plan Requirements

The proposed Mid-Range plan reflects a significant expansion of service over existing Gwinnett County Transit service. Table 3-1 presents proposed service requirements for the Mid-Range plan. As noted below, the proposed Mid-Range plan reflects a 222 percent increase in annual bus-hours of service. Note that this table does not include corresponding paratransit service expansion requirements. Gwinnett County population is anticipated to grow by 33 percent between 2015 and 2030 according to Atlanta Regional Commission projections. Thus, the proposed Mid-Range plan reflects an increase in transit service levels per capita for the County. Detailed route-level service requirements are provided in Appendix A.

Table 3-1: Mid-Range Service Plan Characteristics

Scenario	Service Type	Peak Buses	Fleet Required	Annual Revenue Bus-Miles	Annual Revenue Bus-Hours
Existing	Local	25	30	1,289,700	71,900
	Express	23	28	660,770	20,700
	Total	48	58	1,950,400	92,600
Mid-Range Plan	Local	42	50	2,362,500	196,000
	Express	39	47	821,300	29,200
	Direct Connect	5	6	395,800	17,800
	Flex	8	10	170,972	23,134
	BRT	13	16	740,200	47,300
	Total	107	129	4,868,772	313,434
Percent Increase from Existing Service		122.9%	122.4%	149.63%	238.5%

The Mid-Range plan reflects several locations where passengers can transfer between routes. The existing Gwinnett Transit Center, I-985 Park-and-Ride lot, and Sugarloaf Park-and-Ride lot become major transfer locations where transfers can be made between several routes. Additionally, new major transfer locations are proposed at the Infinite Energy Center, Georgia Gwinnett College, the new Lawrenceville Transit Hub area, and the new Peachtree Corners Transit Hub. Figure 3-23 presents proposed transfer locations. Investment will be required at these locations to accommodate buses and passenger volumes (e.g., bus pull-out bays, passenger shelters, sidewalks).

Additional new facilities required for the Mid-Range plan include the following:

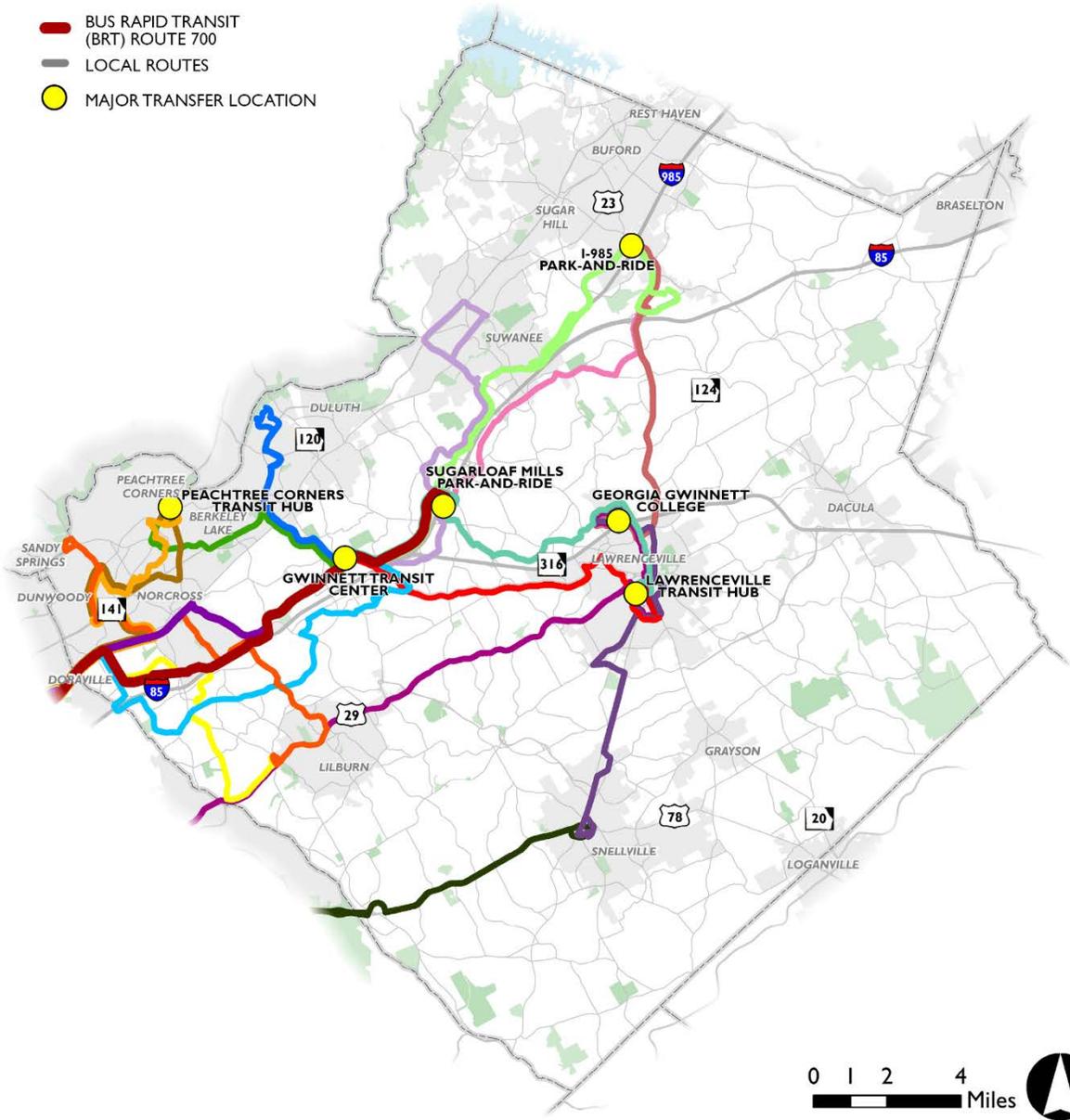
- New park-and-ride lots at Loganville, Harbins Road, Buford Drive and Peachtree Corners

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- BRT facility improvements along the proposed BRT Route 700 alignment
- Bus bay expansion at MARTA's Doraville Station to provide for BRT Route 700 service
- Pedestrian/bus accommodations at transfer center locations (described below)

It was previously noted that the Mid-Range plan expands service connections to MARTA bus and rail services. Consideration has been given to capacity constraints at MARTA rail stations. The Chamblee Station is expected to have sufficient capacity for proposed Direct Connect routes, and the Indian Creek Station is expected to have sufficient capacity for proposed Route 70. The Medical Center Station is also expected to have sufficient capacity for proposed Route 120. The Mid-Range plan includes expanded service to/from Doraville Station, including Route 700 BRT service. As previously noted, bus bay capacity expansion will be required at this station.

Figure 3-23: Mid-Range Plan Transfer Locations



3.4 Short-Range Service Plan Recommendations

The Mid-Range plan reflects a significant expansion of transit services for Gwinnett County over a 10-year period. These improvements cannot be implemented all at once, but rather will require a phased implementation approach as additional resources become available and additional facilities are constructed. As part of this phased approach, a Short-Range plan has been defined to reflect service plan proposals for the first five years of the plan. Short-Range recommendations are based on most immediate service needs previously identified (e.g., reduction in circuitous routing, later evening service), and take into consideration likely timeframes required to implement significant capital facility improvements. The Short-Range plan does not include implementation of BRT Route 700 but does reflect interim frequency improvements in the Buford/Satellite corridor. During the Short-Range plan timeframe, planning and possibly right-of-way acquisition for the BRT Route 700 is expected to begin. This plan also does not include Sunday service. Proposed Short-Range service plan recommendations are as follows:

Route 10: The Short-Range plan reflects Route 10 alignment modifications as proposed in the Mid-Range plan. Since BRT is not yet assumed to be in place in this corridor, proposed Route 10 frequencies in the Short-Range Plan are 15 minutes all-day on weekdays and 30 minutes on weekday evenings and Saturdays.

Route 15: The Short-Range plan includes new Route 15 service between Lilburn and Peachtree Corners at the same frequencies proposed in the Mid-Range plan (60 minutes).

Route 20: The Short-Range plan includes a modified Route 20 alignment as proposed in the Mid-Range plan, with 30-minute frequencies on weekdays and 60-minute frequencies on weekday evenings and Saturdays.

Route 25: The Short-Range plan includes new Route 25 service between the Gwinnett Place Transit Center and Duluth as proposed in the Mid-Range plan, with 60-minute frequencies on weekdays and Saturdays.

Route 30: The Short-Range plan includes a modified Route 30 alignment as proposed in the Mid-Range plan, with 60-minute frequencies on weekdays and Saturdays.

Routes 35A/35B: The Short-Range plan includes restructuring Route 35 into two patterns – 35A/3B. Both patterns operate at 60-minute frequencies, providing a combined 30-minute frequency on the trunk portion of the route.

Routes 40 and 45: The Short-Range plan includes restructuring existing Route 40 into two new routes – Routes 40 and 45. Both routes would operate at 30-minute frequencies on weekdays and 60-minute frequencies on weekday evenings and Saturdays.

Route 50: The Short-Range plan includes new Route 50 service between Gwinnett Transit Center and the Mall of Georgia, as proposed in the Mid-Range plan. This route would operate at 30-minute frequencies on weekdays and 60-minute frequencies on weekday evenings and Saturdays.

Route 60: The Short-Range plan includes new Route 60 service between Lawrenceville and Snellville, as proposed in the Mid-Range Plan. This route would operate at 60-minute frequencies on weekdays and Saturdays.

Route 70: The Short-Range plan includes new Route 70 service from Snellville along US 78, but only to the existing Goldsmith Park-and-Ride lot. Proposed frequencies are 60 minutes on weekdays only.

Route 104: The Short-Range plan includes one new express route from the Mid-Range plan. Route 104 is included, providing express service from new park-and-ride lots in the SR 316 corridor – at Harbins Road and at Buford Drive. Proposed frequencies are 20 minutes in the peak periods only.

Direct Connect Routes: The Short-Range plan includes both Direct Connect Routes that were proposed in the Mid-Range plan – Routes 401 and 402. Both routes would be anchored at the Chamblee MARTA Station, operating at 60-minute frequencies on weekdays only.

Flex Routes 500 and 503: The Short-Range plan includes both Flex routes that were proposed in the Mid-Range plan – Routes 500 (Buford/Sugar Hill Flex) and 503 (Snellville Flex).

3.5 Short-Range Service Plan Requirements

The proposed Short-Range plan reflects a significant expansion of service over existing Gwinnett County Transit service. Table 3-2 presents proposed service requirements for the Mid-Range plan. As noted below, the proposed Short-Range plan reflects a 125 percent increase in annual bus-hours of service. Note that this table does not include corresponding paratransit service expansion requirements. New facility requirements include new park-and-ride lots at Harbins Road and Buford Drive and expansion of the Gwinnett Transit Center at Gwinnett Place Mall. Detailed route-level service requirements are provided in Appendix A.

Table 3-2: Short-Range Service Plan Requirements

Scenario	Service Type	Peak Buses	Fleet Required	Annual Revenue Bus-Miles	Annual Revenue Bus-Hours
Existing	Local	25	30	1,289,700	71,900
	Express	23	28	660,770	20,700
	Total	48	58	1,950,400	92,600
Mid-Range Plan	Local	36	43	2,176,600	152,700
	Express	28	34	683,300	22,900
	Direct Connect	5	6	395,800	17,800
	Flex	8	10	170,972	23,134
	Total	77	93	3,426,672	216,534
Percent Increase from Existing Service		60.4%	60.3%	75.7%	133.8%

3.6 Short-Range Plan Implementation Packages

It is recognized that even within the Short-Range plan, service improvements are not likely to be made all at once. A phased implementation approach will be required, taking into consideration that some route modifications must be completed concurrently to ensure continuity of service. The following six packages have been identified for the Short-Range plan. These packages are independent and can be implemented in any order. Some of the improvements within each package can also be phased, if desired.

Package A. This package focuses on improvements to Route 35. Specifically, it improves Route 35 service to 30-minute frequencies all-day, with two 60-minute patterns (35A and 35B). It also includes new evening service on the Route 35A pattern.

Package B. This package focuses on service improvements between Doraville MARTA, the Gwinnett Transit Center and Lawrenceville. Route 10 is restructured to provide 15-minute all-day service between the Gwinnett Place Transit Center and Doraville, with evening service. Route 40's alignment is streamlined and new Route 45 service is proposed that introduces service to Gwinnett Georgia College. Both routes are proposed to operate at 30-minute frequencies, with evening service on Route 45.

Package C. Routes 20 and 30 are streamlined, and new Routes 15 and 25 are introduced. Proposed frequencies on Route 20 are 30 minutes, with evening service.

Package D. This package includes the two proposed Direct Connect Routes. If desired, Gwinnett County Transit could implement the two Direct Connect routes in phases (e.g., Direct Connect 401 in Phase 1, followed by Direct Connect 402 in Phase 2).

Package E. This package includes introduction of new Express Route 104 (Harbins Road/Buford Drive).

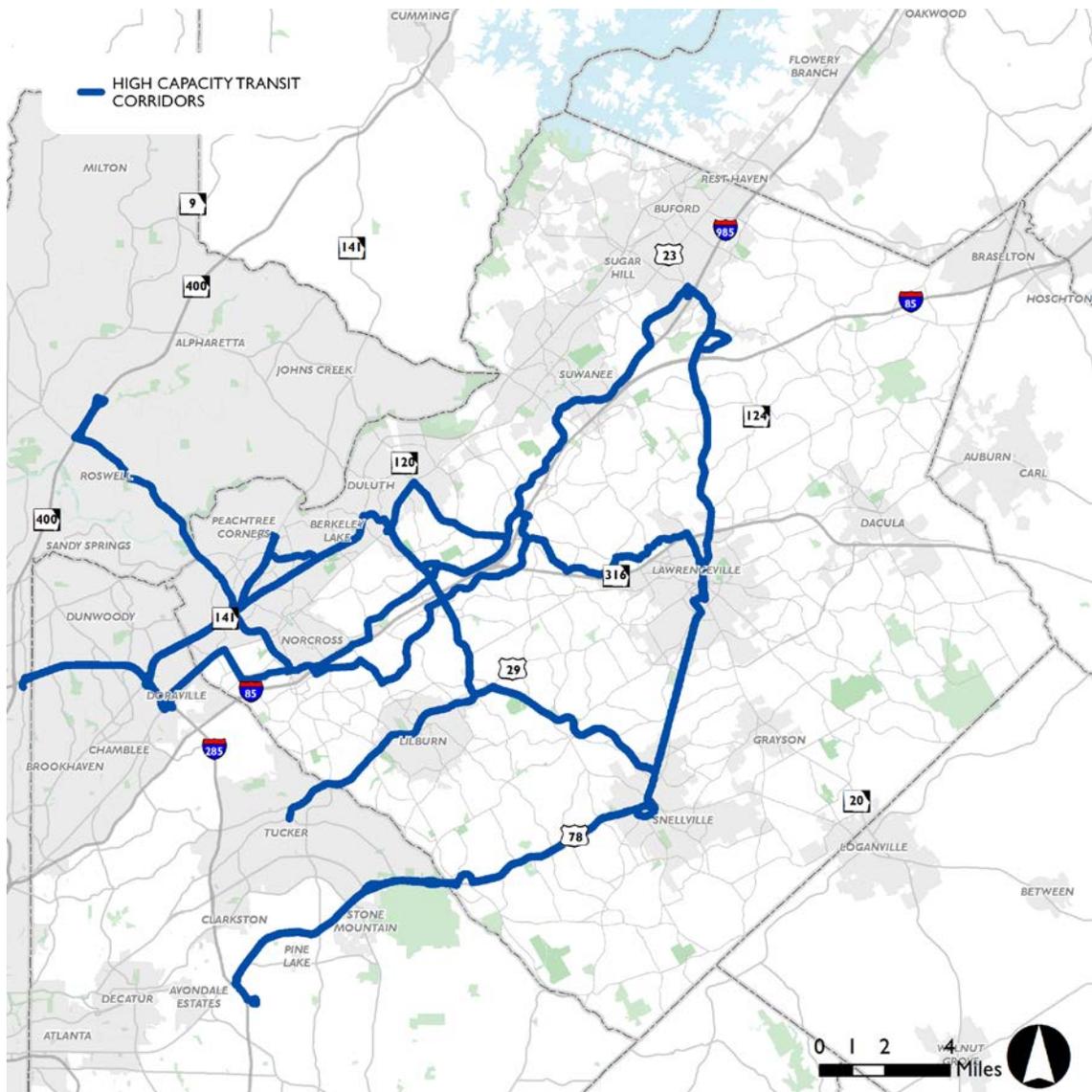
Package F. This package includes introduction of new Flex routes 500 and 503. If desired, these two routes can be implemented in phases.

ADA Paratransit Expansion. Packages included in the Short-Range plan reflect some expansion of service coverage, which will impact Gwinnett County Transit's ADA service requirements.

4 LONG-RANGE PLAN

The Long-Range plan builds on the Mid-Range Plan with substantial investments in some of the higher-demand corridors. The proposed service plan would be implemented beyond the ten year timeframe. The proposed plan looks at ways to invest in travel time, reliability, and capacity improvements in the higher-demand corridors while growing overall coverage of the County through appropriate levels of investment by area. For each higher-demand corridor, potential alternative alignments were identified, then screened down to a single alignment for each corridor based on roadway geometrics, fronting land uses, travel times, and ridership potential. Figure 4-1 shows the selected alignments for the high-capacity transit corridors.

Figure 4-1: High Capacity Transit Corridor Alignments



After selection of the alignments within the high-activity corridors, the team identified the transit modes most appropriate to serve the travel demand along each of the corridors. The following sections go into the recommended corridors and modes in more detail.

4.1 Plan Recommendations

4.1.1 High-Capacity Transit Corridors

The Long-Range Plan proposes a total of three high-capacity transit corridors as being able to support BRT or higher levels of investment. These three corridors are shown in Figure 4-2. Of these three, the I-85 corridor was identified as the highest-demand corridor in the County, meriting an investment greater than BRT.

The plan proposes a high-capacity transit corridor extending from the Doraville MARTA rail station to Infinite Energy Center and the Sugarloaf Mills Park-and-Ride, following the I-85 corridor discussed in Section 2.1. In the Mid-Range Plan, BRT would run predominately in dedicated lanes north of Jimmy Carter Boulevard. South of Jimmy Carter Boulevard, buses would run in mixed traffic. In the Long-Range, the southern portion of the corridor would be replaced by extension of the existing heavy rail line that terminates at the Doraville station. The line would be extended to a new multimodal hub in the western part of Gwinnett County. The hub would accommodate heavy rail, bus rapid transit, express, commuter, and local buses, and potentially other modes in the future. The BRT would be truncated at the multimodal hub, connecting that transfer facility with Infinite Energy Center and Sugarloaf Mills. The alignment of this high-capacity corridor with the extension of rail is shown in Figure 4-3.

Service characteristics are shown in Table 4-1. As previously discussed the BRT service would include features, including off-board fare collection, real-time bus arrival information, enhanced stations with architectural elements, and distinctive branding and vehicles. Service along the BRT alignment will be extended until 2 a.m. to meet the last MARTA train.

A long-term consideration for this Plan, outside of the 30-year horizon, is to do one of two things:

- Extend the heavy rail from Jimmy Carter Boulevard and the multimodal hub to Gwinnett Place Mall area and have the BRT line remain as is along the corridor
- Convert the northern portion of the corridor from BRT to light rail transit (LRT).

Figure 4-2: High-Capacity Transit Corridors

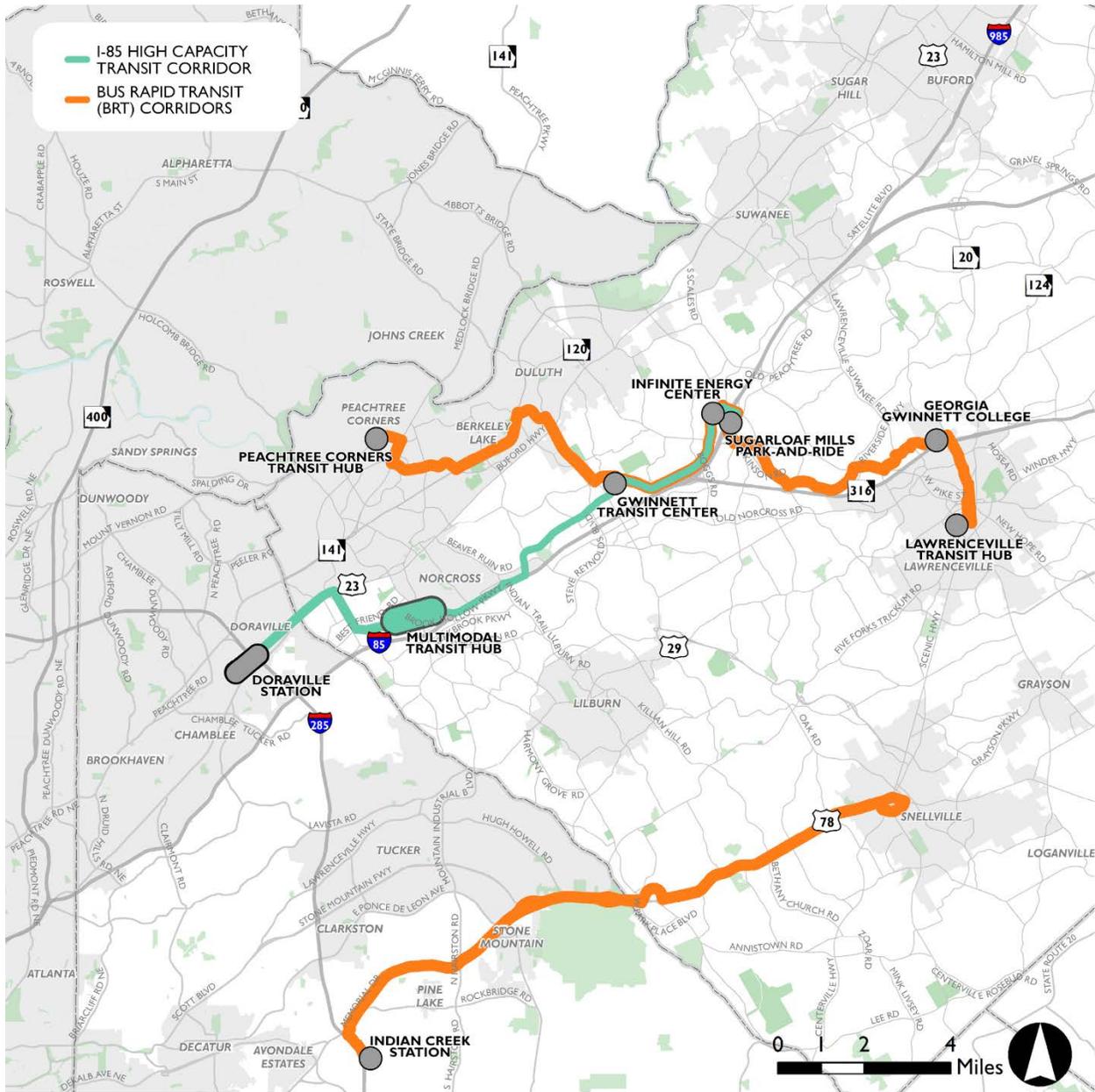


Figure 4-3: High-Capacity I-85 Transit Corridor Alignment

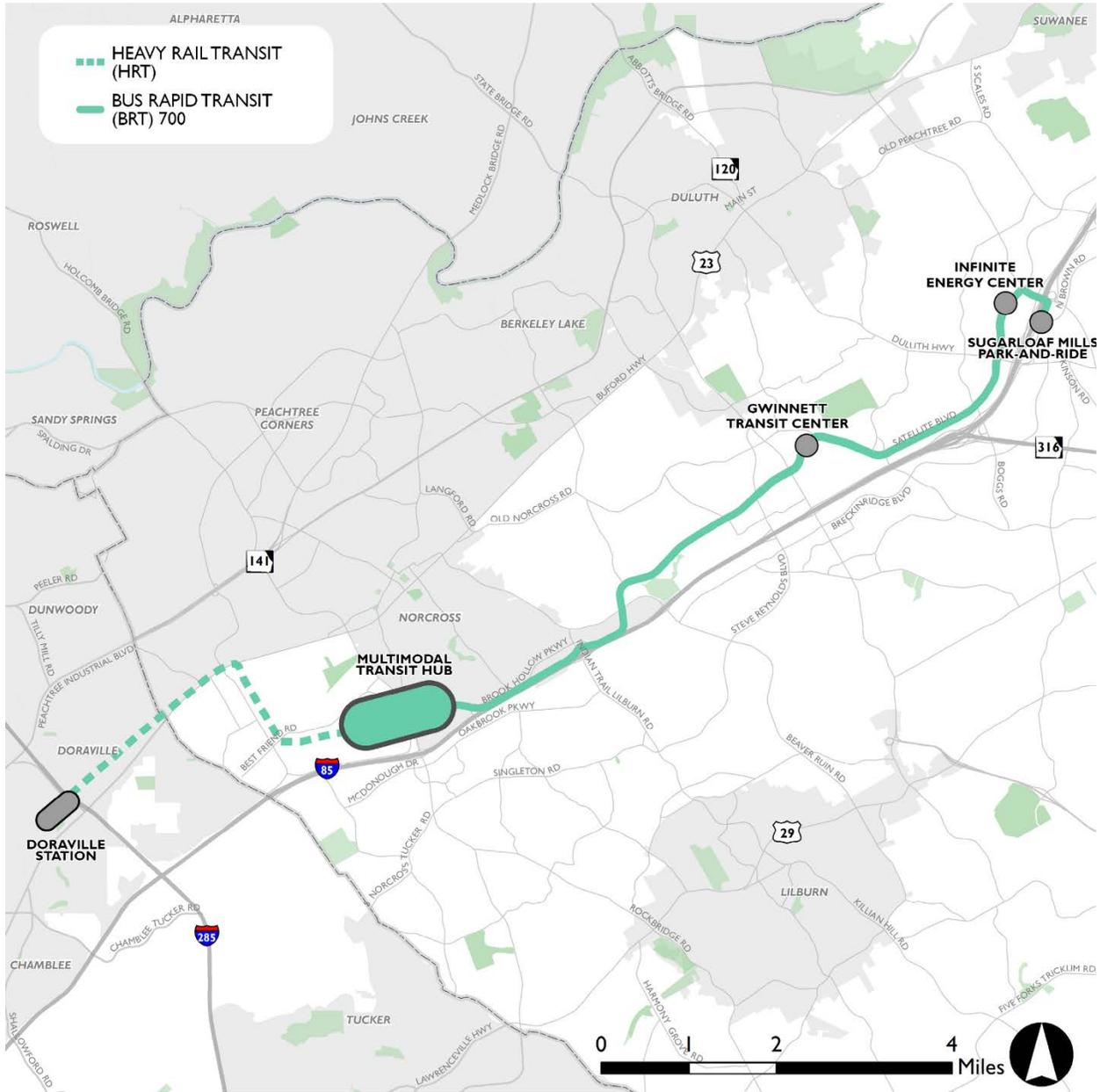


Table 4-1: Long-Range High-Capacity I-85 Transit Corridor Service Characteristics

Route	Gold Line (HRT)	700 (BRT)
Length (mi)	4.6	10.4
Span of Service	4:45 a.m. – 1:30 a.m.	5:30 a.m. – 2:00 a.m.
Span of Service (Saturday)	6:00 a.m. – 1:15 a.m.	6:00 a.m. – 12:00 a.m.
Span of Service (Sunday)	6:00 a.m. – 1:15 a.m.	6:00 a.m. – 12:00 a.m.
Frequency (Weekday)	10 min (peak) 12 min (off-peak) 20 min (late evening)	10 min (peak) 15 min (off-peak) 15 min (late evening)
Frequency (Saturday)	20 min (all day)	15 min (peak) 20 min (off-peak) 30 min (late evening)
Frequency (Sunday)	20 min (all day)	15-30 min
Fleet Needs	-	10 Buses
Key Destinations Served	Doraville Station Multimodal Hub	Multimodal Hub Infinite Energy Center Sugarloaf Mills
Key Connections to Other Transit Services	Link to MARTA system Connections to local, express, rapid, and BRT routes at Multimodal Hub	Connections to local, express, rapid, and HRT routes at Multimodal Hub

Needs Assessment June 2018

Two new BRT routes are proposed in addition to the I-85 corridor and are shown in more detail in Figure 4-4. These corridors will include exclusive bus lanes to allow transit to bypass congestion. Transit signal priority would be provided at intersections to allow for faster travel times. Service will operate for both routes at a minimum of 15-minute frequencies on weekdays and 20-minute frequencies on Saturdays. Route 702 will have 30-minute frequencies on Sundays while Route 701 will not have Sunday service. Service characteristics are shown in Table 4-2. These BRTs would have similar enhanced features as noted above for the Route 700 BRT.

Figure 4-4: Additional BRT Corridors

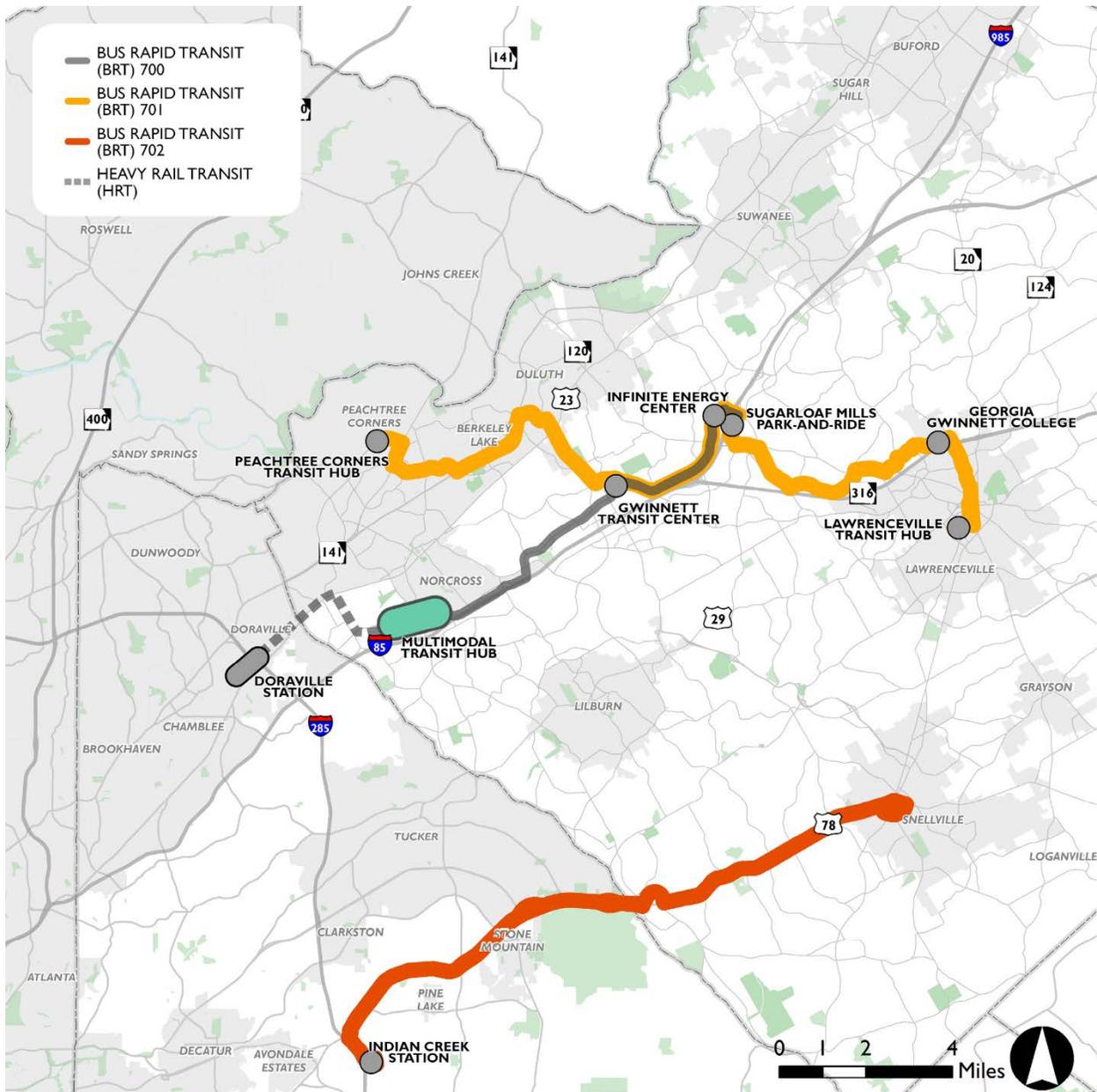


Table 4-2. BRT Service Characteristics

Route	701 – Gwinnett Place	702 – Snellville/Indian Creek
Length (mi)	21.9	16.6
Span of Service (Weekday)	5:30 a.m. – 12:00 a.m.	5:30 a.m. – 12:00 a.m.
Span of Service (Saturday)	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.
Span of Service (Sunday)	None	6:00 a.m. – 10:00 p.m.
Frequency (Weekday)	15 min (peak) 20 min (off-peak) 30 min (late evening)	15 min (peak) 20 min (off-peak) 30 min (late evening)
Frequency (Saturday)	20-30 min	20-30 min
Frequency (Sunday)	30 min (all day)	30 min (all day)
Fleet Needs	14 Buses	10 Buses
Key Destinations Served	Peachtree Corners Gwinnett Place Mall Infinite Energy Center Sugarloaf Mills Gwinnett Technical College Georgia Gwinnett College Downtown Lawrenceville	Downtown Snellville Indian Creek MARTA Station
Key Connections to Other Transit Services	Connections to local, express, rapid, and BRT at Gwinnett Place Mall, Sugarloaf Mills, Downtown Lawrenceville	Connections to rapid and express buses in Snellville Link to MARTA system at Indian Creek station

4.1.2 Rapid Bus

For the high-activity corridors discussed in Section 2.1 where travel demands may not warrant an HRT- or BRT-level of investment, rapid bus improvements are proposed. Along these corridors, the Long-Range Plan proposes similar capital improvements to those proposed for the BRT alignments, but at a lower level of investment. These corridors will include limited dedicated bus lanes with buses operating within mixed traffic much of the alignment. Transit signal priority is proposed for all signalized intersections along these corridors. Queue jump lanes are proposed at high-volume intersections. BRT corridors may include real-time information, off-board fare collection, distinctive branding, and upgraded shelters. The proposed rapid bus corridors are shown in Figure 4-5.

For six of the eight of the proposed rapid bus corridors, the capital improvements will be paired with a new Rapid bus service. For two of the proposed rapid corridors, 207 and 208, the corridors will receive rapid bus-like capital improvements along the alignment, but the service itself will be a mixture of local, express, and/or Direct Connect services. All Rapid corridors will have peak service frequency of at least 15 minutes. Rapid services that will connect to MARTA will operate until 2 a.m. on weekdays to meet the last MARTA train, while other Rapid services will operate until midnight. Rapid bus service characteristics are shown in Table 4-3.

Figure 4-5: Rapid Bus Corridors

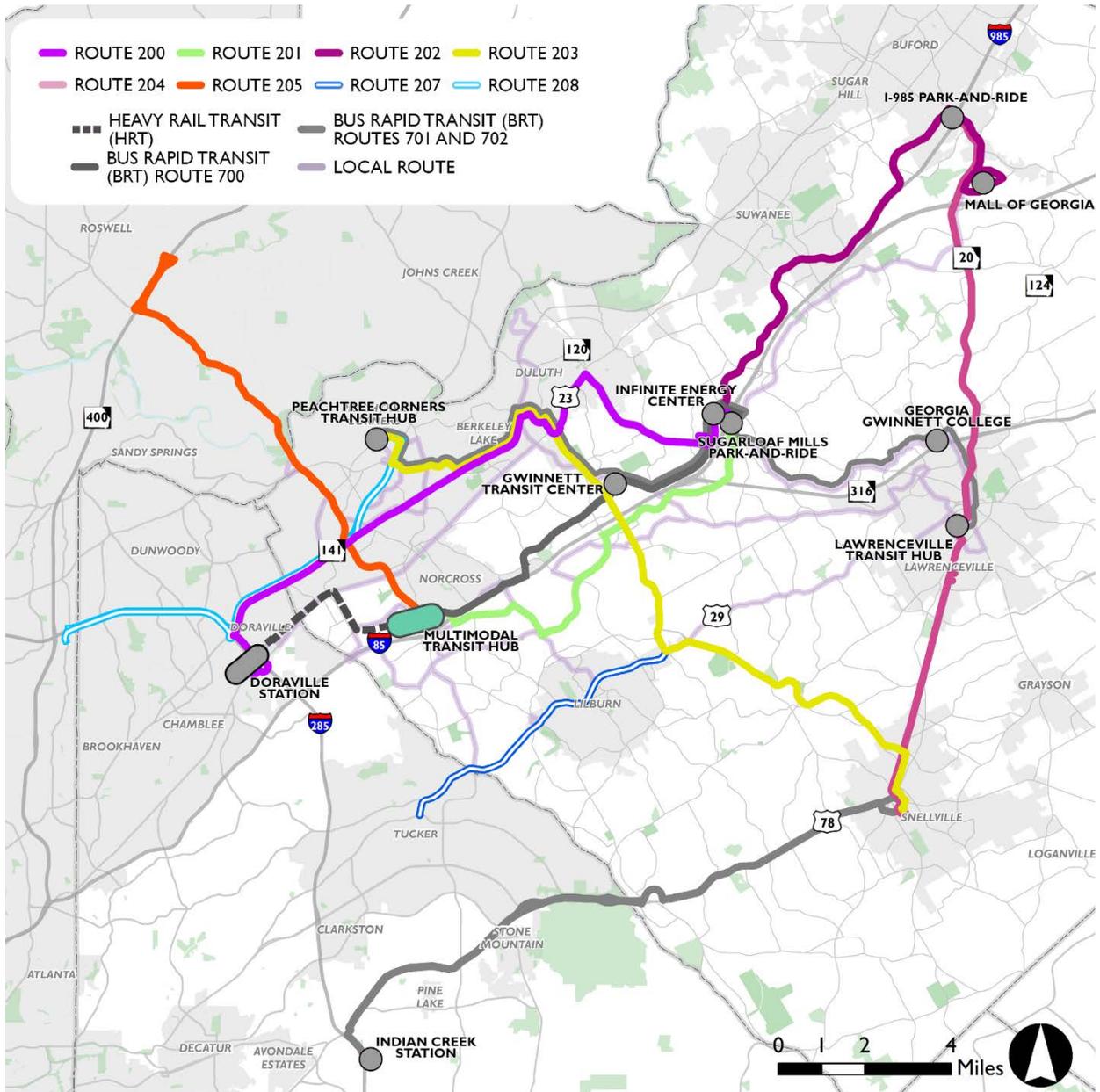


Table 4-3. Rapid Bus Service Characteristics

Route	200 - Peachtree	201 – S. Reynolds	202 – Gwinnett Place Transit Center/Mall of Georgia	203 – Pleasant Hill	204 – SR 124	205 – North Fulton
Length (mi)	18.3	12.3	14.3	20.4	17.8	12.2
Span of Service	5:30 a.m. – 2:00 a.m.	5:30 a.m. – 2:00 a.m.	5:30 a.m. – 12:00 a.m.	5:30 a.m. – 12:00 a.m.	5:30 a.m. – 12:00 a.m.	5:30 a.m. – 2:00 a.m.
Span of Service (Saturday)	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.	6:00 a.m. – 12:00 a.m.
Span of Service (Sunday)	6:00 a.m. – 10:00 p.m.	None	6:00 a.m. – 10:00 p.m.	6:00 a.m. – 10:00 p.m.	6:00 a.m. – 10:30 p.m.	6:00 a.m. – 10:00 p.m.
Frequency (Weekday)	15 min (peak) 20 min (off-peak) 30 min (late evening)	15 min (peak) 30 min (off-peak) 60 min (late evening)	15 min (peak) 20 min (off-peak) 30 min (late evening)	15 min (peak) 20 min (off-peak) 30 min (late evening)	15 min (peak) 20 min (off-peak) 30 min (late evening)	15 min (peak) 20 min (off-peak) 30 min (late evening)
Frequency (Saturday)	20-30 min	20-30 min	20-30 min	20-60 min	20-60 min	20-30 min
Frequency (Sunday)	30 min (all day)	None	30 min (all day)	30-60 min	30-60 min	30 min (all day)
Fleet Needs	13 Buses	10 Buses	11 Buses	16 Buses	15 Buses	8 Buses
Key Destinations Served	Downtown Duluth Doraville MARTA Infinite Energy Center Sugarloaf Mills	Doraville MARTA Infinite Energy Center Sugarloaf Mills	Infinite Energy Center Sugarloaf Mills Mall of Georgia	Peachtree Corners Downtown Snellville	Downtown Snellville Downtown Lawrenceville Mall of Georgia	Peachtree Corners Downtown Snellville
Key Connections to Other Transit Services	Connections to local, express, rapid, and BRT at Sugarloaf Mills; Connection to MARTA at Doraville Station	Connections to local, express, rapid, and BRT at Multimodal Hub and Sugarloaf Mills;	Connections to local, rapid, and BRT at Infinite Energy Center, I-985 Park-and-Ride, and Mall of Georgia;	Connections to local, express, rapid, and BRT in Snellville, Peachtree Corners, and Gwinnett Transit Center;	Connections to local, express, rapid, and BRT in Snellville and at Mall of Georgia	Connections to local, express, rapid, and BRT at Multimodal Hub; Connections to MARTA routes in North Fulton

4.1.3 Express Bus/Direct Connect

The Long-Range Plan proposes an expansion of the express bus system to nine routes and an expansion of the Direct Connect system to three routes. Two of the Direct Connect routes in the Mid-Range Plan would be redirected to the new multimodal hub in western Gwinnett County, and a third new route is proposed to provide service from Peachtree Corners to the MARTA red line stations in Sandy Springs.

The new Direct Connect route to Sandy Springs, Route 403, would leverage the rapid bus improvements constructed along its corridor (discussed in a previous section) and along the I-285 top end managed lanes system. Additional capital improvements supporting the Direct Connect service are discussed in section 4.1.7.

The express bus system is proposed to be expanded to include additional pickup points in Gwinnett County to serve existing destinations in downtown Atlanta (Figure 4-6) and at Emory University (Figure 4-7). In addition, new destinations would be served at Perimeter Center (Figure 4-8), the new multimodal hub in western Gwinnett County (Figure 4-9), and Buckhead (Figure 4-10). There would also be an increase in service to park-and-rides already being served. Service characteristics for the proposed express and Direct Connect system are provided in Table 4-4. Additional capital improvements are proposed for existing park-and-rides at Indian Trail, Snellville and Sugarloaf Mills. New park-and-rides would be constructed at McGinnis Ferry and Steve Reynolds. Direct ramps, in-line stops, or flyover ramps are proposed to better connect these park-and-rides to the managed lanes on I-85, allowing for reduced travel times and increased service. These improvements are discussed in further detail in section 4.1.7. In addition, the planned managed lane system on State Route 316 would include enhancements to facilitate improved express bus service from the Lawrenceville/Dacula area on Routes 104 and 120.

Table 4-4: Express/Direct Connect Service Characteristics

Route	Express	Direct Connect
Span of Service (Weekday)	5:30 a.m. – 9:00 a.m. 3:00 p.m. – 8:00 p.m.	5:30 a.m. – 2:00 a.m.
Span of Service (Saturday)	None	8:00 a.m. – 12:00 a.m.
Span of Service (Sunday)	None	8:00 a.m. – 10:00 p.m. (Route 403 only)
Frequency (Weekday)	10-30 min (varies by Route), peak periods only	30-60 min
Frequency (Saturday)	None	30-60 min (Route 403 only)
Frequency (Sunday)	None	60 min (Route 403 only)
Fleet Needs	33 Buses	11 Buses

Figure 4-7: Express Bus/Direct Connect Routes Serving East DeKalb/Emory

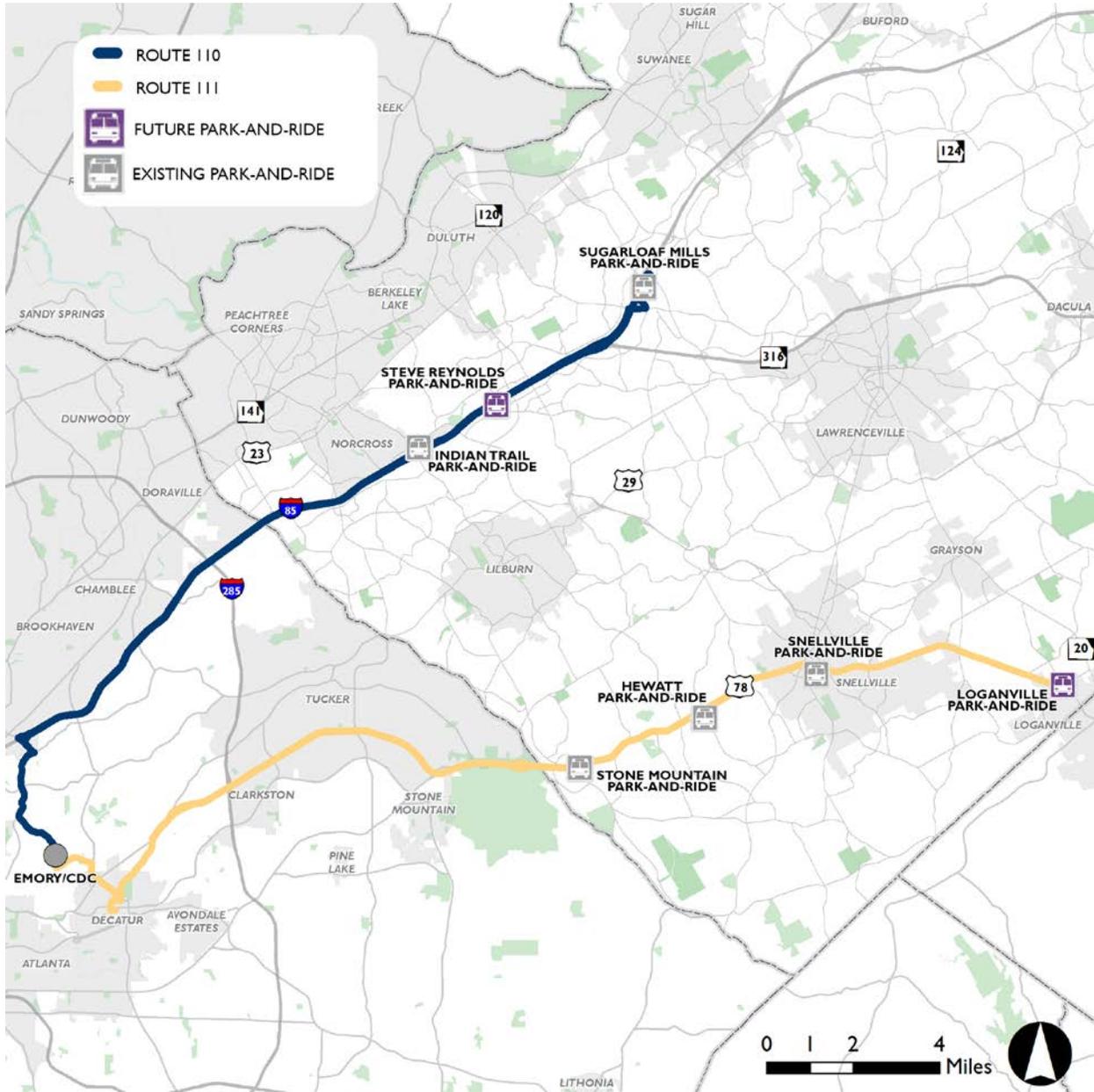


Figure 4-8: Express Bus/Direct Connect Routes Serving Perimeter

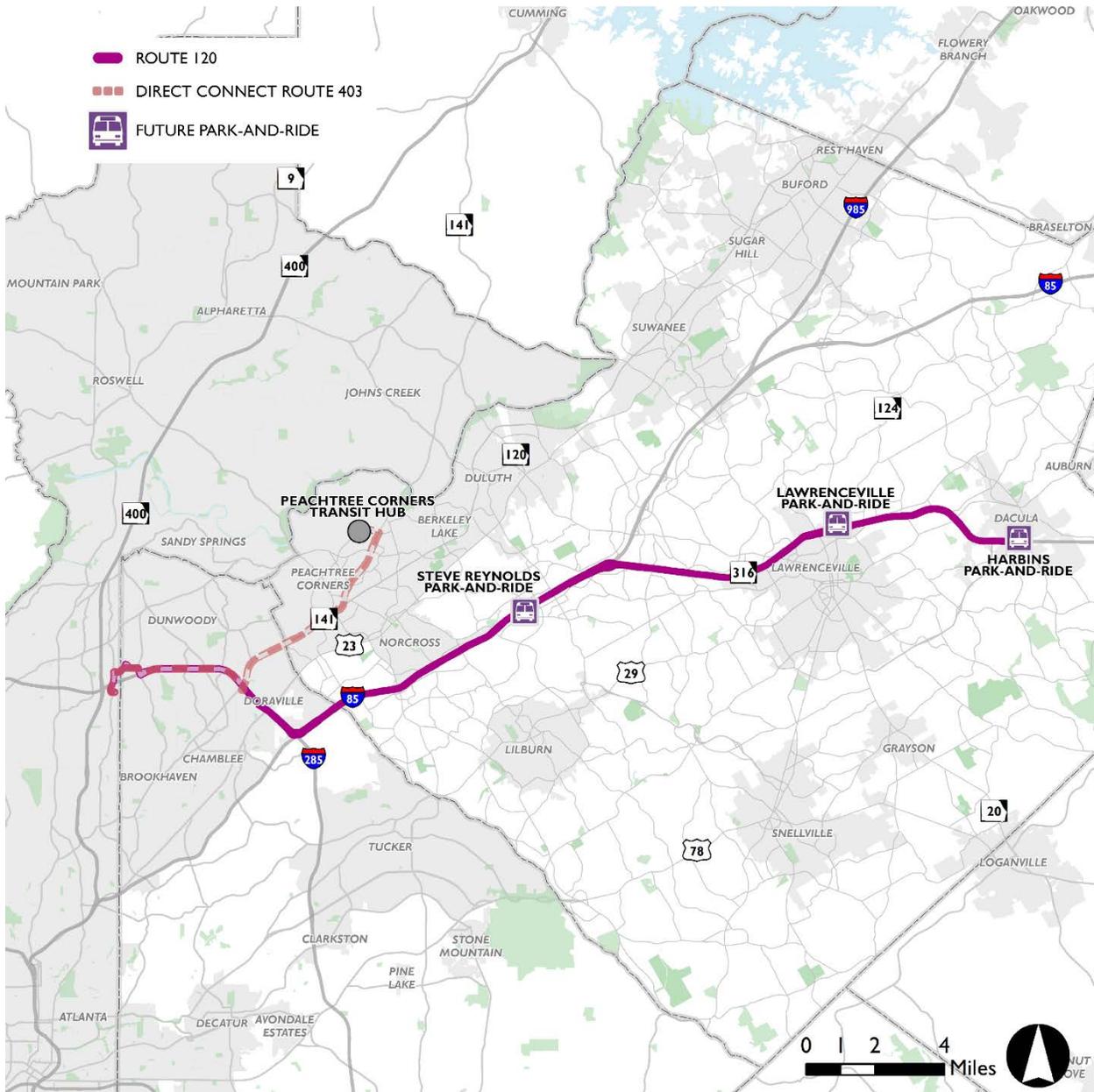


Figure 4-9: Express Bus/Direct Connect Routes Serving the Multimodal Hub

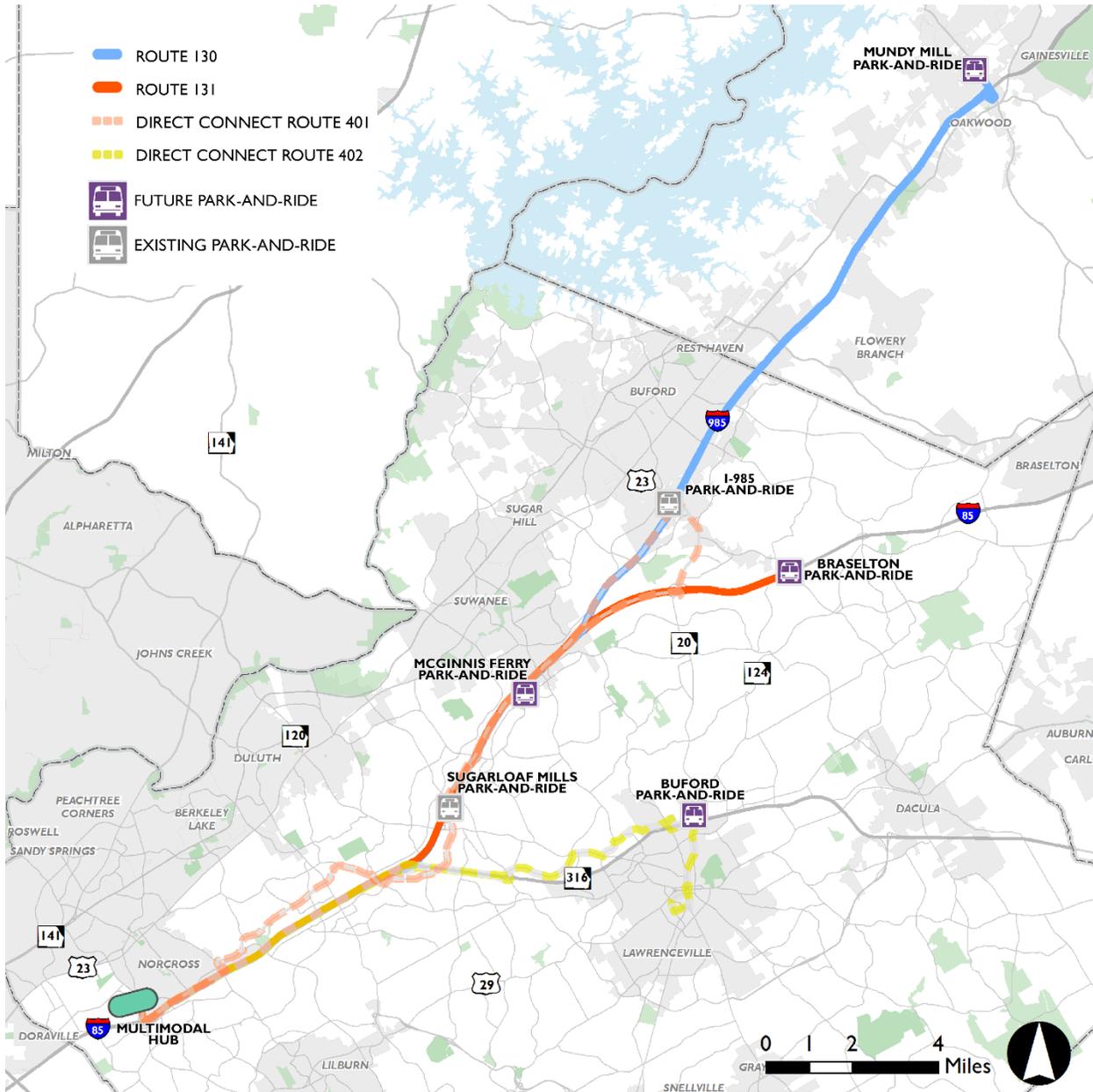
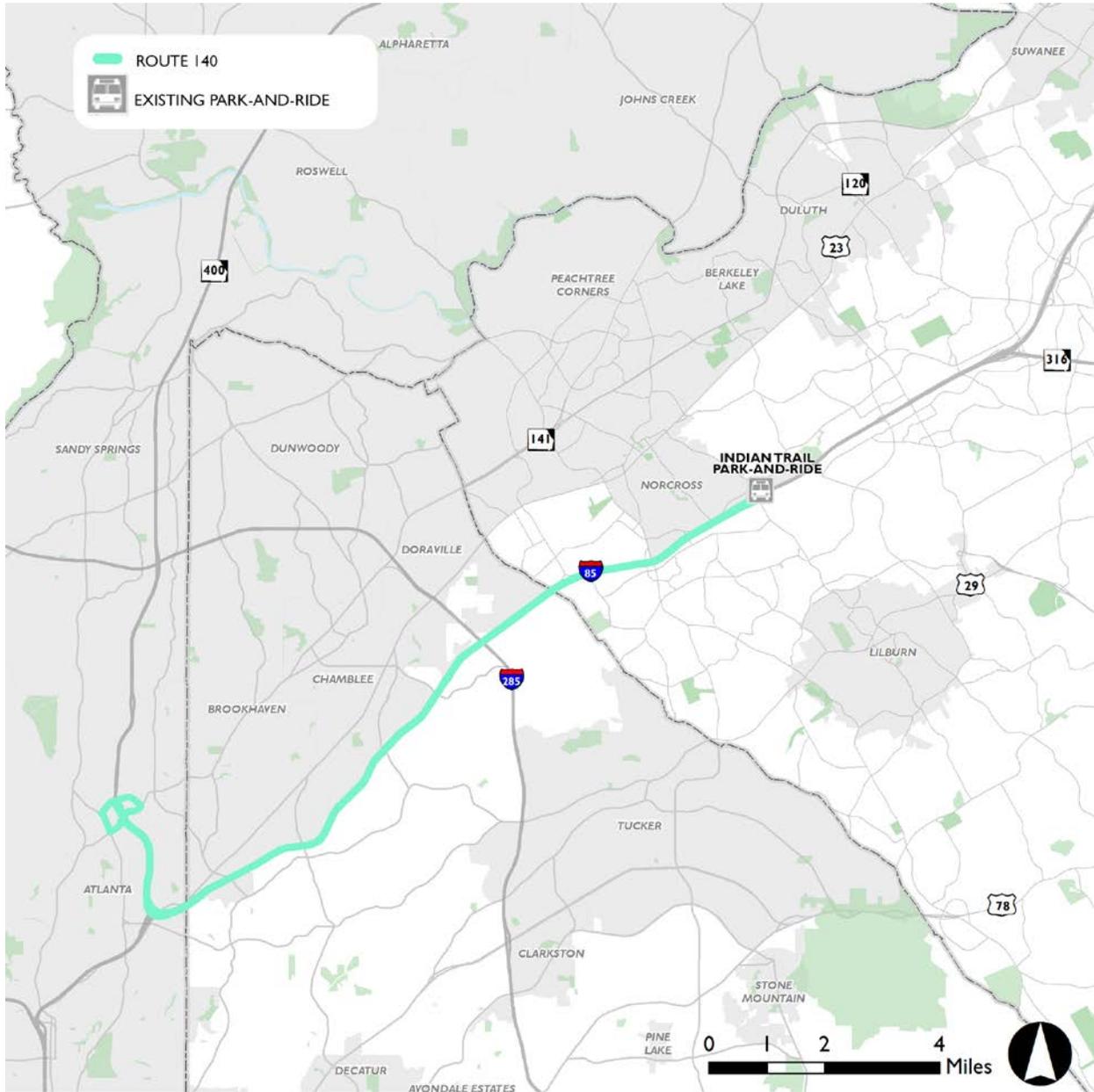


Figure 4-10: Express Bus/Direct Connect Routes Serving Downtown Buckhead

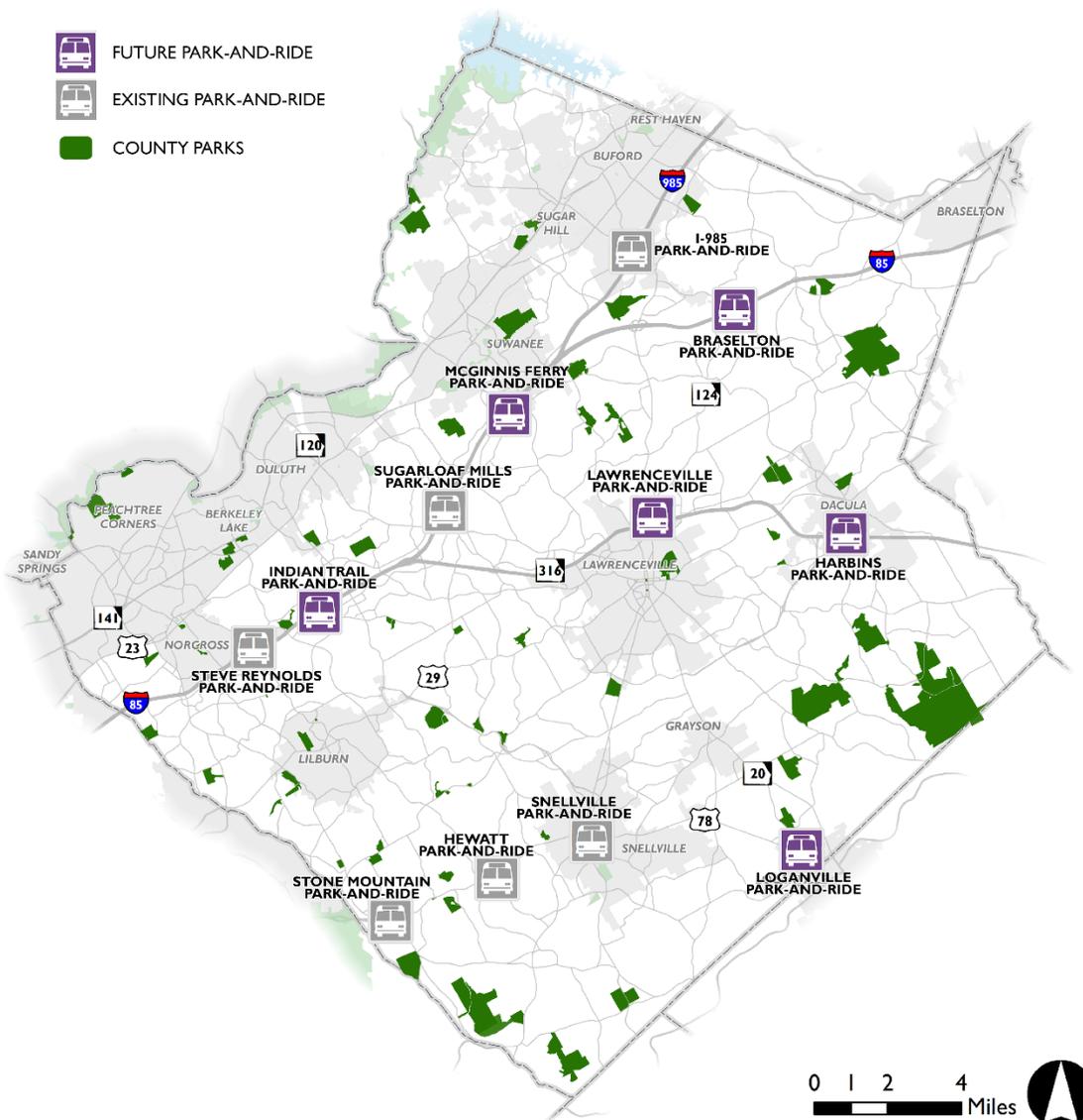


4.1.4 Vanpool

The Long-Range Plan proposes subsidies of private vanpool services to supplement public transit service. Vanpool is a service in which a group of people headed to a common destination (typically a single employer) meet at a gathering location and are driven to their destination. This type of service works well for commuters with similar home and work locations, and allows for employers to transport their employees to locations that otherwise would not be accessible via transit.

Vanpools require little capital investment outside of the van itself; the only infrastructure needed is a gathering location. There is an opportunity to utilize public parking spaces, such as County parks or park-and-ride lots, as these gathering locations. Figure 4-11 shows the County public spaces that represent opportunity sites for this type of use.

Figure 4-11: Vanpool Opportunity Sites



4.1.5 Local Bus

The Long-Range Plan proposes an expansion of the local bus system to eleven routes to provide greater coverage to the County and a higher level of connectivity to the multimodal hub. Some of the local bus routes in the Short- and Mid-Range Plans would be partially or fully upgraded to BRT or Rapid corridors in the Long-Range. Capital improvements for the local bus system would include upgrade of existing bus stops, provision of new bus stops where there are no preexisting stops, and improved bicycle and pedestrian connectivity to stops. The larger local bus network will require an expansion of the local bus fleet. The proposed local bus routes are shown in Figure 4-12. Service characteristics are shown in Table 4-5.

Figure 4-12: Local Bus Corridors

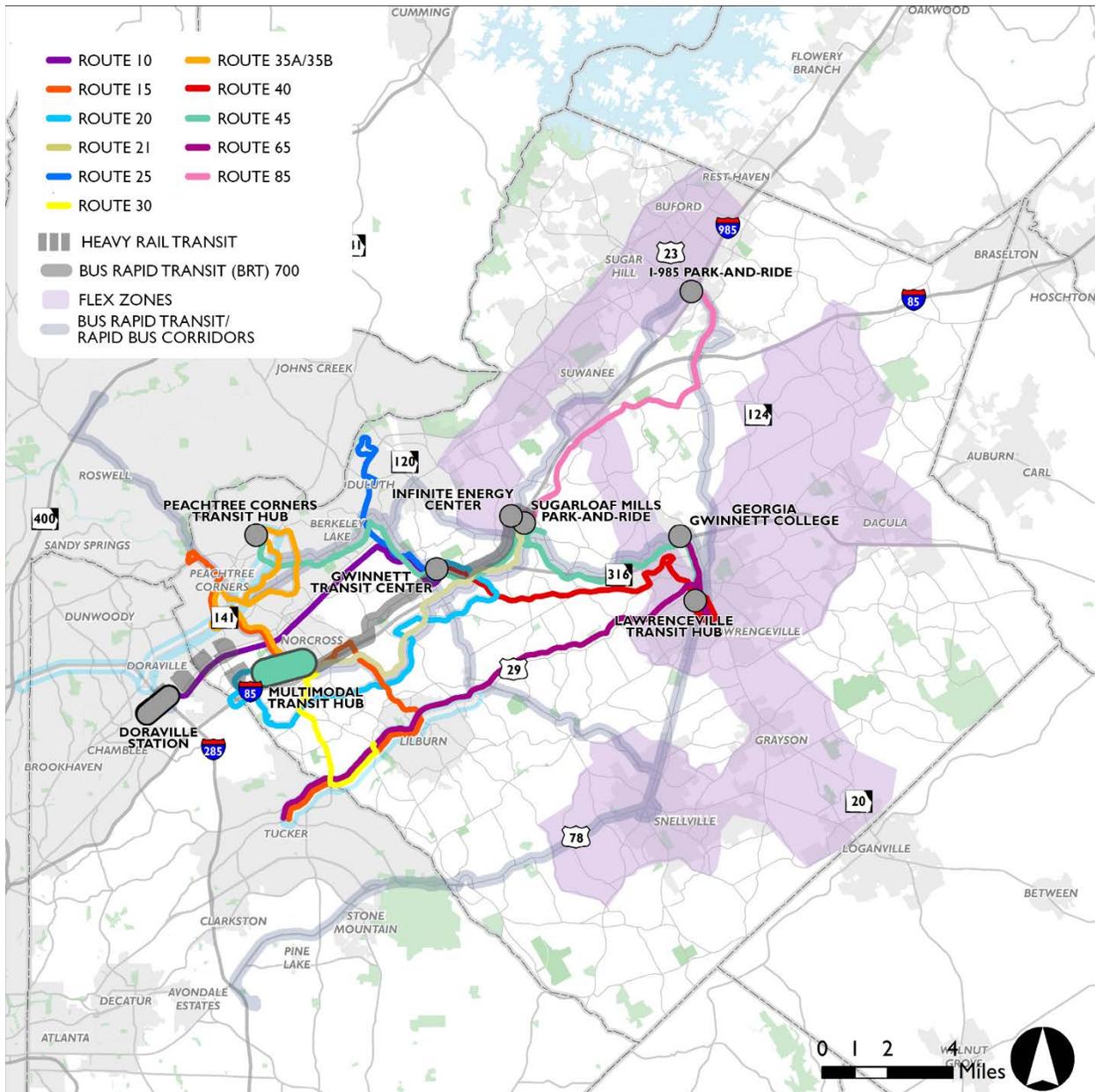


Table 4-5: Local Service Characteristics

Route	All Local Routes
Span of Service	5:30 a.m. – 12:00 a.m.
Frequency (Weekday)	15-30 min (peak) 20-40 min (off-peak) 30-60 min (late evening)
Frequency (Saturday)	30-60 min (all day)
Frequency (Sunday)	30-60 min (all day)
Fleet Needs	71 Buses
Sample of Key Destinations Served	Peachtree Corners Doraville MARTA Tucker Downtown Lawrenceville Georgia Gwinnett College Mall of Georgia Sugarloaf Mills Gwinnett Place Mall Multimodal Hub
Key Connections to Other Transit Services	HRT connection at Multimodal Hub and Doraville MARTA; BRT, Rapid, express, and Direct Connect connections throughout the County

4.1.6 Flex

An expanded network of Flex Service areas is proposed as part of the Long-Range Plan. Flex Service is an on-demand transit service that carries passengers upon request within the service area. Flex Service is most cost-effective where transit is desired but densities do not support fixed route transit. Service areas are typically anchored at a transit center where passengers can transfer to the fixed route system. Each service area is proposed to be assigned enough buses to cover the service area and operate at 20- to 30-minute frequencies or faster during the span of service. Capital costs will be set aside to purchase the technology needed to operate and maintain an on-demand transit network. The proposed service areas and characteristics are included in Figure 4-13 and Table 4-6.

Figure 4-13: Flex Route Service Areas

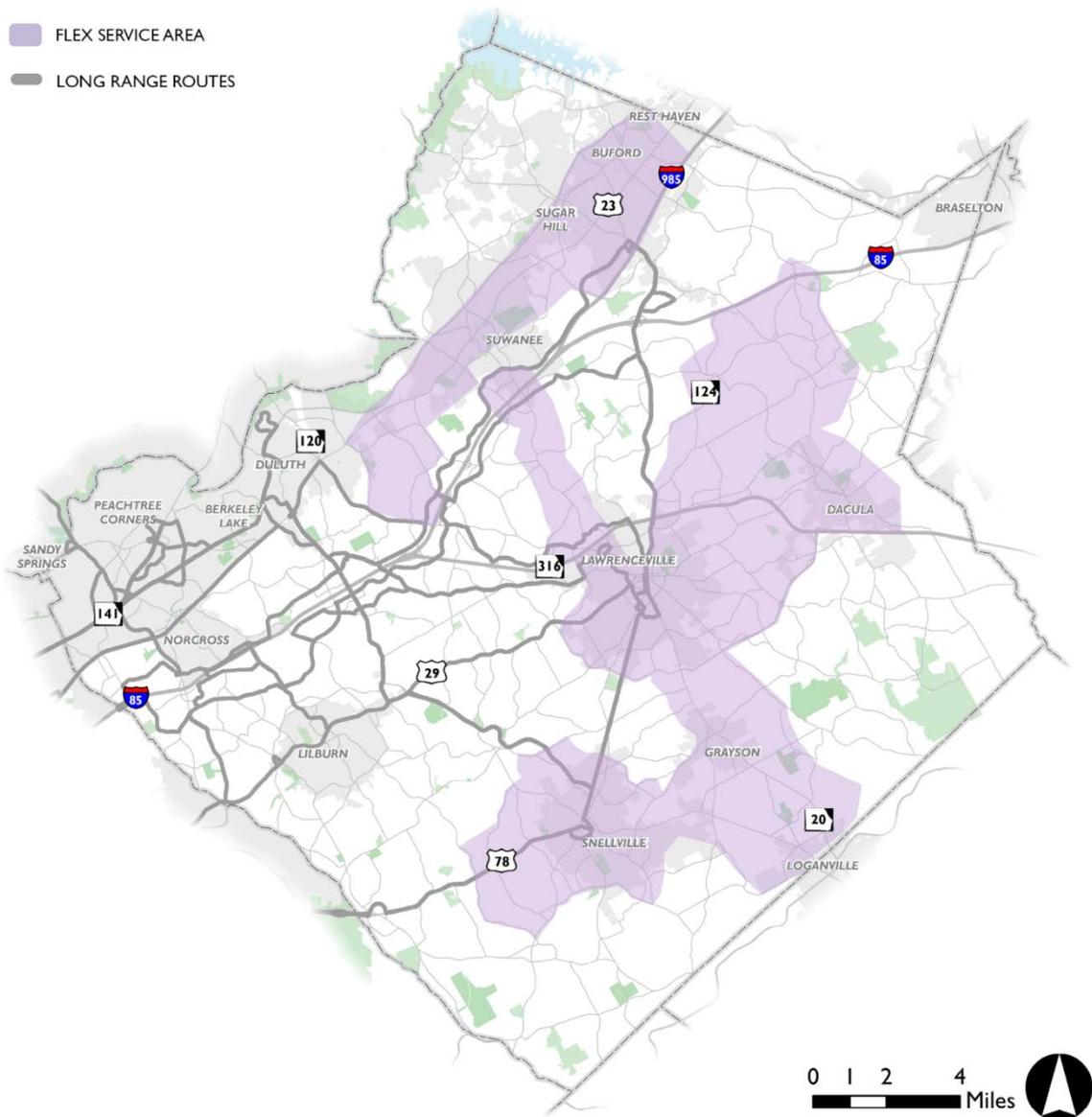


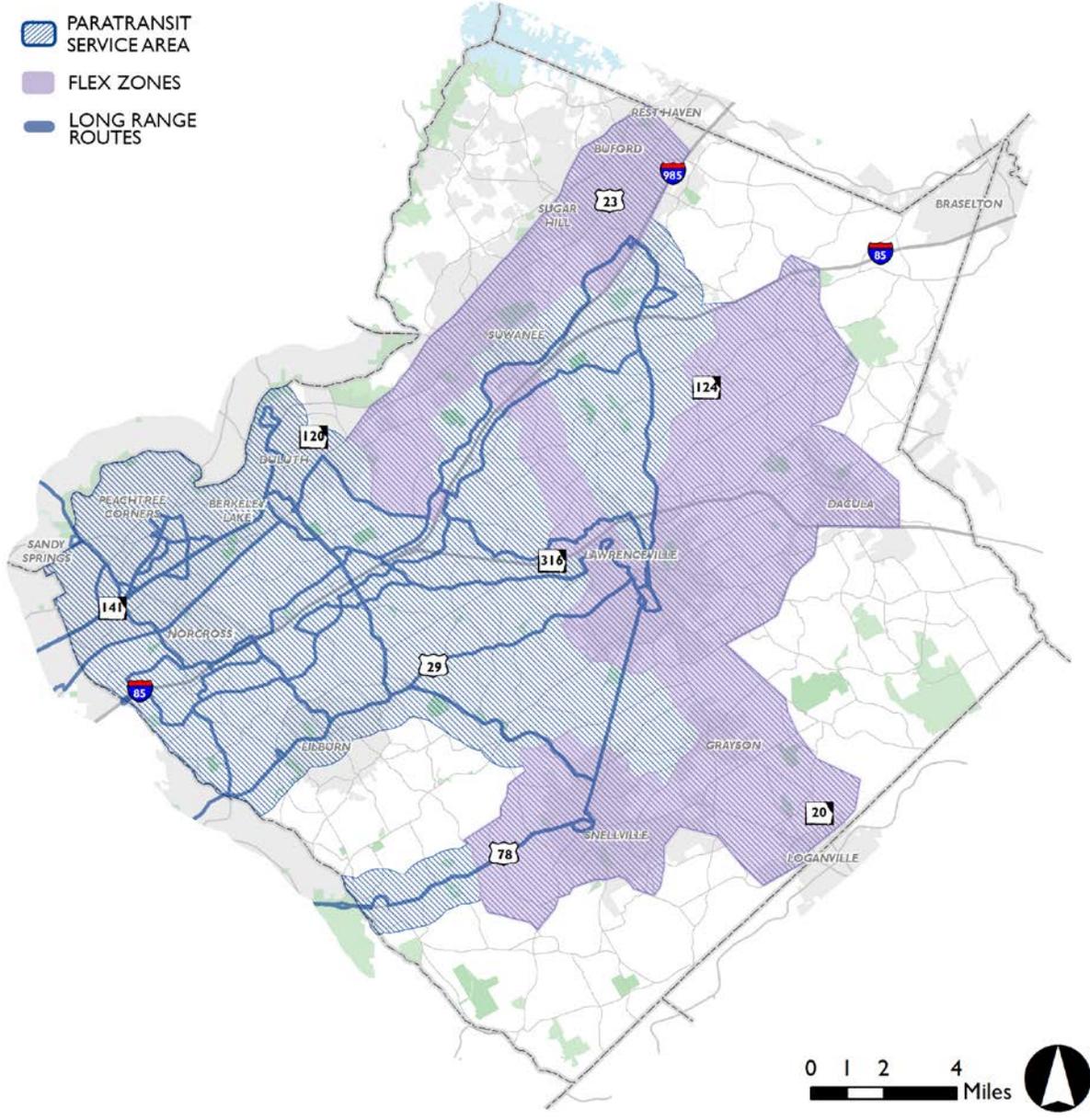
Table 4-6: Flex Service Characteristics

Route	All Flex Routes
Span of Service (Weekday)	6:00 a.m. – 10:00 p.m.
Span of Service (Saturday)	None
Span of Service (Sunday)	None
Fleet Needs	36 Buses
Key Connections to Other Transit Services	Connections to local, express, rapid, Direct Connect, and BRT at Sugarloaf Mills, Infinite Energy Center, I-985 Park-and-Ride, Lawrenceville, and Snellville

4.1.7 Paratransit

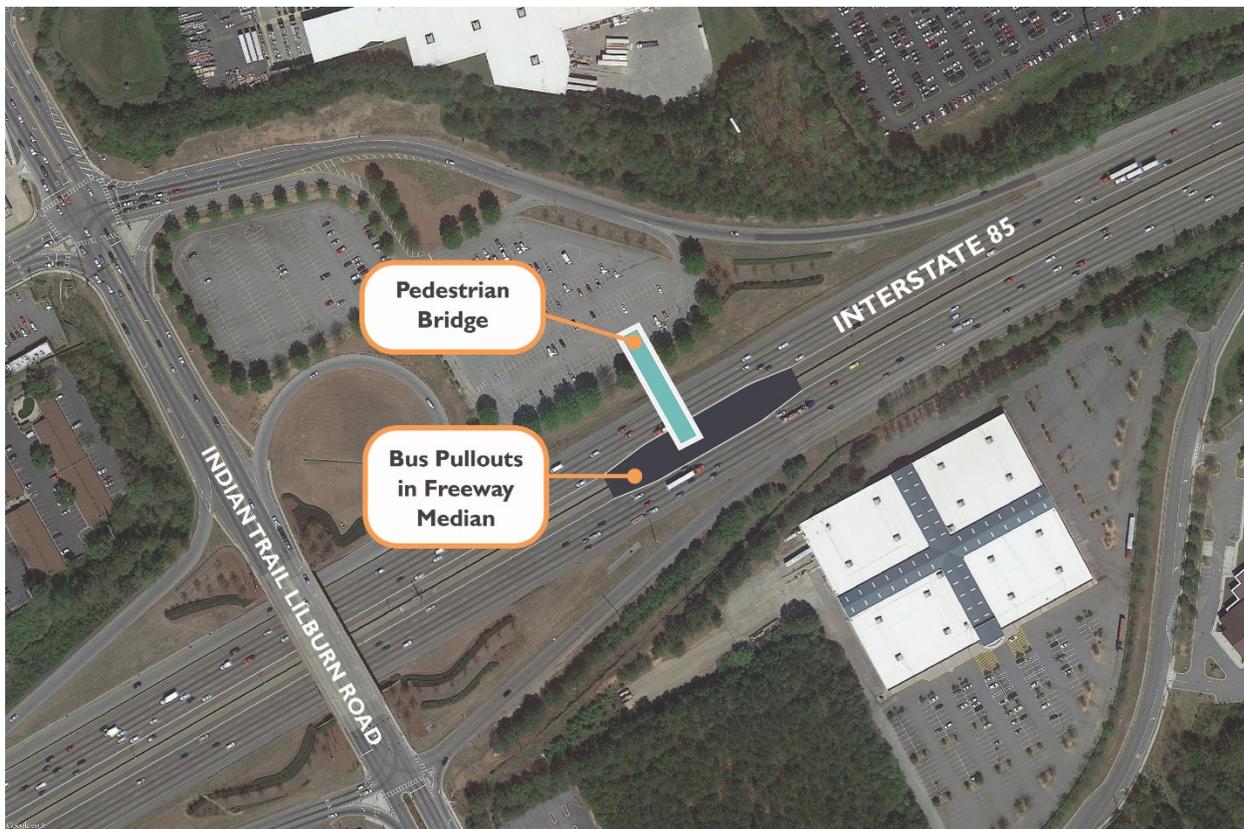
Paratransit in Gwinnett County includes demand response transportation services for individuals with disabilities, older adults, and other individuals that meet the eligibility requirements of a specific transportation provider. Paratransit service must be provided for all areas within $\frac{3}{4}$ mile of fixed route transit. In conjunction with the expansion of fixed route services, the service area for Paratransit will increase commensurately. The Flex system will also meet the needs of those eligible for Paratransit service. The proposed paratransit service area is shown in Figure 4-14.

Figure 4-14: Paratransit Service Area



Upgrades to select park-and-ride locations are proposed to enhance their connections to the managed lanes on I-85. At Indian Trail Park-and-Ride, an in-line stop is proposed; this stop would be constructed in the median of the I-85 freeway as pullouts from the managed lanes. This would allow for buses to stop at Indian Trail without having to pull off the freeway, reducing travel times and allowing for express buses serving other park-and-rides to also stop at Indian Trail with minimal travel time impact. A pedestrian bridge would be constructed to connect the median stop to the parking lot next to the freeway. A diagram of this proposal is shown in Figure 4-17.

Figure 4-17: Indian Trail Park-and-Ride Diagram



At Sugarloaf Mills Park-and-Ride, a flyover ramp is proposed to provide a direct connection to the park-and-ride lot. This ramp would connect the managed lanes in the median of I-85, cross over northbound I-85, and connect directly to the park-and-ride lot at Sugarloaf Mills. This reduces travel times for northbound and southbound express buses serving Sugarloaf Mills. This concept is illustrated in Figure 4-18.

Figure 4-18: Sugarloaf Park-and-Ride Flyover Diagram



Direct access ramps from I-85 managed lanes are proposed at new park-and-rides at McGinnis Ferry Road and Steve Reynolds Boulevard. In these locations, ramps would be constructed connecting median managed lanes to a freeway overpass. The ramps would intersect with the overpassing road at a signalized intersection. The bus stop would be located on the ramps. The ramps enable express buses to stop at these locations without having to travel on local streets, reducing the travel time penalty associated with the stop. Pedestrian connections to the park-and-ride lots would be provided via sidewalks on the overpass structure. Illustrations of the proposed direct access ramps for McGinnis Ferry are shown in Figure 4-19.

Figure 4-19: McGinnis Ferry Road Park-and-Ride Direct Access Ramps Diagram



4.1.9 Capital Improvements – Bus

4.1.9.1 Light Bus Maintenance Facility

With the expansion of the transit system, particularly in the central and eastern portions of the County, and the corresponding expansion of the required fleet, a new light bus maintenance facility is proposed. This facility would be in Lawrenceville to minimize dead-head travel time with the service area expansion. It would include facilities for storage, fueling, light repair, and office space for operations staff.

4.1.9.2 Local Bus Stop Upgrades

Budget would be set aside for upgrades to local bus stops. While each of the BRT and Rapid projects would include budget for upgrades to stops for those services, enhancements are also needed for local stops to provide additional amenities such as seating, shelters, lighting, concrete bus pads, pedestrian waiting areas, signage, and bicycle parking. The Bus Stop Design Guidelines, to be completed as part of the overall Connect Gwinnett: Transit Plan effort, will identify ridership and service level thresholds to determine which stops warrant amenity upgrades. In addition, new local bus routes will require the installation of dozens of new bus stops throughout the County.

4.1.9.3 Fleet Transit Signal Priority Enhancement

The implementation of signalized intersections with transit signal priority will require upgrades to the vehicle fleet serving BRT and Rapid routes. Budget would be allocated to equip the BRT and Rapid bus fleet with transit signal priority technology to enable the buses to utilize signals along the routes with transit signal priority.

4.1.10 Capital Improvements - Other

A series of other capital improvements are proposed as part of the Long-Range Plan. These improvements supplement the proposed service network but are not directly linked to any individual service type.

4.1.10.1 Bicycle and Pedestrian Enhancements

The Long-Range Plan proposes a set-aside of a portion of the cost of local, rapid, and BRT capital investments to pay for various bicycle and pedestrian access enhancements to improve last-mile connections to transit facilities; these improvements could include new sidewalks, walkways, multi-use paths, bike lanes/cycle tracks, bicycle parking, pedestrian amenities, or other infrastructure improvements.

4.1.10.2 Technology Upgrades

A small portion of the overall capital program would also be set aside for technology upgrades. Over the course of the plan, it is anticipated that new technology systems will become available to enhance the information available to the public, provide additional tools for Gwinnett County to monitor and assess system performance, and to more efficiently fulfill security and maintenance functions. This budget will allow Gwinnett County Transit to periodically upgrade systems to current standards and best practices.

4.1.10.3 Transportation Network Companies (TNCs)

The Long-Range Plan proposes an annual subsidy of resident use of transportation network companies (TNCs), such as Uber or Lyft, specifically to access transit. Pilot programs may be implemented to identify effective programs to enhance access to transit, such as subsidized rides to certain destinations, within certain areas, or at certain times of day. TNCs provide first-mile/last-mile connections, can provide service in areas where fixed routes would be underutilized, and can also help in accommodating trips outside of normal transit service hours.

4.1.10.4 Contributions to Regional Transit Projects

This Plan allocates funding to be expended in contribution to regional transit projects yet to be determined. It is anticipated that these projects will include higher capacity transit infrastructure improvements that may extend into Gwinnett County or provide for improved connectivity to the regional transit network for Gwinnett County residents and employees.

4.1.10.5 Future Enhancements

In the longer-term vision, Gwinnett County may reach the density thresholds in some transit corridors necessary to sustain an expanded high-capacity network, including additional route-miles of rail service. Budget will be set aside to begin planning and design efforts for expansion of the rail network during the period covered by this plan.

4.2 Rider Benefits

4.2.1 General Benefits of Long-Range Plan

The proposed services and capital improvements in the Long-Range Plan are anticipated to provide many benefits to existing transit patrons and attract new riders to the system. Table 4-7 and Table 4-8 identify service characteristics of the system. Major benefits of the Plan include the following:

- **An expanded high-frequency network.** The network of high-capacity transit routes in the Long-Range Plan will place over 312,000 people and 285,000 jobs in Gwinnett County within a half-mile of a high-frequency transit service corridor (15-minute peak-frequency or better) through a Rapid, BRT, or HRT route by 2040*. The high-frequency network is shown in Figure 4-20.
 - * The number of people and jobs served in the County was calculated using projected 2040 population and employment data from the Atlanta Regional Commission. A half-mile buffer of the full routes was used because specific station locations have yet to be determined.
- **Increased transit coverage throughout the County.** The Long-Range Plan will increase transit service coverage to a total of over 294,000 people and 273,000 jobs in Gwinnett County within a quarter-mile of all fixed route transit routes by 2040. The number of people and jobs served in the County was calculated using projected 2040 population and employment data from the Atlanta Regional Commission. Figure 4-21 illustrates the Long-Range Plan's increase in service coverage throughout the County. Including flex services, 47% of the population of the County will be within a quarter mile of a transit service by projected population estimates for 2040. In areas outside of the flex and traditional bus service areas, a ride-hailing subsidy program will connect residents to the transit network.
- **Reduced travel times.** Capital improvements, including exclusive bus lanes, transit signal priority, queue jumps, and managed lane improvements combined with optimized bus routing and more frequent service will reduce transit travel times to make them more competitive with automobile travel times.
- **Improved amenities.** Upgrades to existing bus stops and park-and-rides, combined with improved access to transit and the proposed amenities at new stops, transit centers, and park-and-rides, will provide passengers with a more desirable transit experience and make transit more accessible.
- **Increased connections to regional transit.** The addition of new express and Direct Connect routes serving the multimodal hub and MARTA stations at Indian Creek, Medical Center/Dunwoody, and Buckhead in conjunction with new local bus and Rapid connections to MARTA buses in DeKalb and Fulton Counties will enhance connections to regional bus and rail systems, enabling passengers to access more destinations throughout the region.
- **Improved commuter connections.** The expansion of the express bus network—with improved frequencies, new park-and-ride locations, new destinations served, and the use of managed lanes—provides better access for Gwinnett residents to commute to employment centers throughout the region.

- Economic benefits.** Improved transit service has multiple economic benefits. It gives residents increased access to educations, jobs, and other important destinations, and can reduce the percentage of income that households spend on transportation. Improved transit access can increase quality of life and make Gwinnett County a more attractive place for new residents and businesses.

Table 4-7: Long-Range Plan Coverage (Existing vs. Future)

Service Coverage	Existing (¼-mile)	Future Full Network Including Flex (¼-mile)	Future High Frequency Network (½-mile)
Population Served*	196,000	294,000	312,000
Jobs Served*	185,000	273,000	385,000
Low Income Population+	31,000	40,000	35,000
Minority Population+	104,000	150,000	140,000

*Source: 2040 Atlanta Regional Commission Population and Employment Projections

+Source: 2015 American Community Survey

Table 4-8: Long-Range Plan Service Characteristics

Scenario	Service Type	Peak Buses	Fleet Required	Annual Revenue Bus-Miles	Annual Revenue Bus-Hours
Existing	Local	25	30	1,289,700	71,900
	Express	23	28	660,770	20,700
	Total	48	58	1,950,400	92,600
Long-Range Plan	Local	71	85	3,854,003	600,633
	Express	66	79	1,793,990	50,998
	Direct Connect	10	12	921,489	38,096
	Flex	30	36	684,519	93,605
	Rapid	61	73	3,388,657	215,936
	BRT	27	32	2,037,727	120,178
	Total	265	318	12,680,385	819,446
Percent Increase from Existing Service (%)		452.0%	448.3%	550.1%	784.9%

Figure 4-20: Service Levels (Frequencies) by Segment

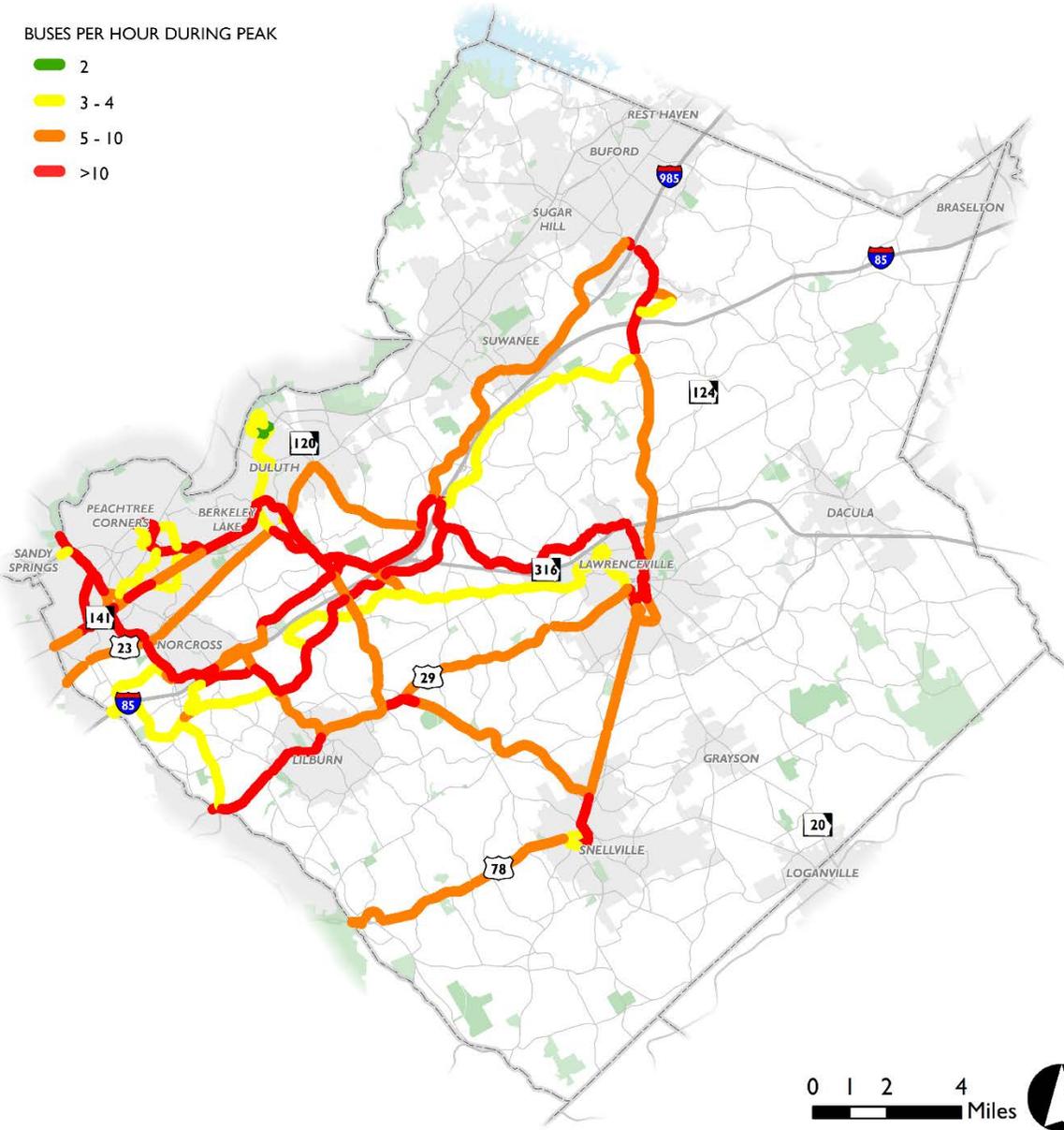
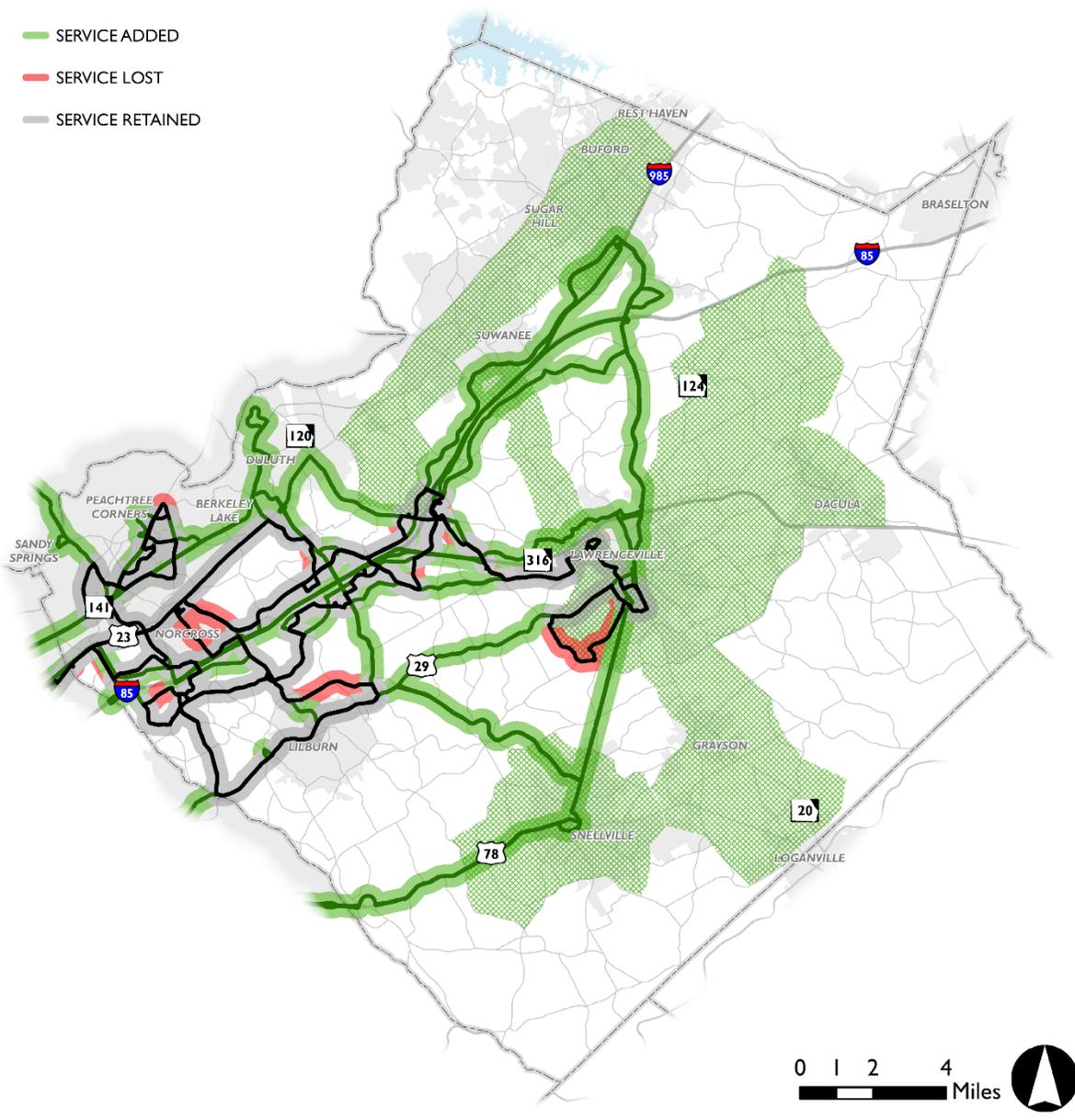


Figure 4-21: Service Plan Coverage



5 NEXT STEPS

The needs and resulting recommendations documented in this memorandum will be presented to the public and stakeholders for input and refinement. Based on that feedback, as well as a qualitative and quantitative evaluation of the effects of the proposed plan components, a financially constrained set of projects will be identified. The plan recommendations will include service characteristics, a capital program including cost projections, a phasing plan, and a financial analysis. These plans will be summarized in the Connect Gwinnett Final Report.