

Introduction

Link Forsyth is Forsyth County's first ever public transportation master plan. The plan comes at a time of great innovation and advancement in technology, specifically as it relates to transportation and the growing ability and desire for people to access destinations within and outside of their communities through a variety of modes. Multimodal transportation is an essential component of a robust transportation network; this plan focuses specifically on public transportation options and improvements for Forsyth County.

About Forsyth County

Forsyth County is one of the northernmost counties in the larger metro Atlanta region (Figure 1). The county borders Gwinnett and Hall Counties to the east, Dawson County to the north, Cherokee County to the west, and Fulton County to the south. The County is largely unincorporated and has one city, Cumming, which is in the central portion of the county. In 2018, Forsyth was the 130th largest county in Georgia by area at 224 square miles and 7th largest in terms of population, with a total population of 219,880.



Figure 1. Forsyth County within Region

About this Report

The Link Forsyth Final Report serves as an executive summary that comes in two parts: Existing Transportation System and System Implementation Plan. The Existing Transportation System provides background and context on the existing transportation services available in Forsyth County today, along with other system components like technology, marketing, and operations. The System Implementation Plan is the primary focus of this report and outlines the recommendations in terms of short-range, mid-range and the long-range, which represents the County's 20-year vision. This report also offers a high-level overview of other plan components, such as fare policy, regional connections review, and a financial plan to help ensure feasibility and implementation of the recommendations for public transportation in Forsyth County. This plan is paired with a robust set of appendices that offer additional details.

Link Forsyth sets out to accomplish the following:



Understand who Forsyth County Public Transportation is serving today



Identify additional destinations and services inside and outside the County



Recommend short-range improvements and new services



Leverage the formation of the ATL for future connectivity

This planning effort stems from the recent formation of the Atlanta-Region Transit Link Authority (ATL). The ATL seeks to better connect public transportation options across the 13-county region of Atlanta. As the 13-county region, with the inclusion of Forsyth County, begins to see unprecedented growth in the coming years, building a connected, effective, and efficient public transportation system to support this growth will be more critical now than ever before. Public transportation will continue to support and enhance the community's health, wealth, and vibrancy through equitable access to jobs, education, and healthcare.

Background

Link Forsyth’s planning process occurred over a two-year phase from 2020 to 2021. Over the plan’s process, the Project Management Team (PMT), which included members from ATL, Forsyth Senior Services, Forsyth Public Transportation, and the consultant team, met regularly to help guide and shape the plan.

Previous Plans

Link Forsyth builds on past community and transportation efforts within Forsyth County as well as adjacent communities. These plans were reviewed in the initial phase of this plan and offered insight into community priorities. The plans included:

- North Fulton County Comprehensive Transportation Plan (2010)
- Cherokee County Comprehensive Transportation Plan – Transit Sustainability Appendix (2016)
- Forsyth County Comprehensive Plan (2017)
- Gwinnett County Comprehensive Transportation Plan (2017)
- Forsyth County Comprehensive Transportation Plan (2018)
- Forsyth County Economic Development Strategic Plan (2018)
- Fulton County Transit Master Plan (2018)
- Gwinnett County Comprehensive Transit Development Plan (2018)
- Forsyth County North Subarea Trails Master Plan (2019)
- The Atlanta Regional Commission’s Regional Transportation Plan (2020)
- Cobb County Comprehensive Transportation Plan (Ongoing)
- Georgia Department of Transportation’s (GDOT) Strategic Goals
- Fixing America’s Surface Transportation (FAST) Act
- SRTA Future Plans (Horizon 2 and 3)

Goals

Link Forsyth is driven by three specific goals that were initially defined through the county's previous plans. The goals were refined by the public through engagement and served as the driving force behind the recommendations that are presented through Link Forsyth. These goals are quality of life, balanced accessibility, and system productivity (Figure 2).

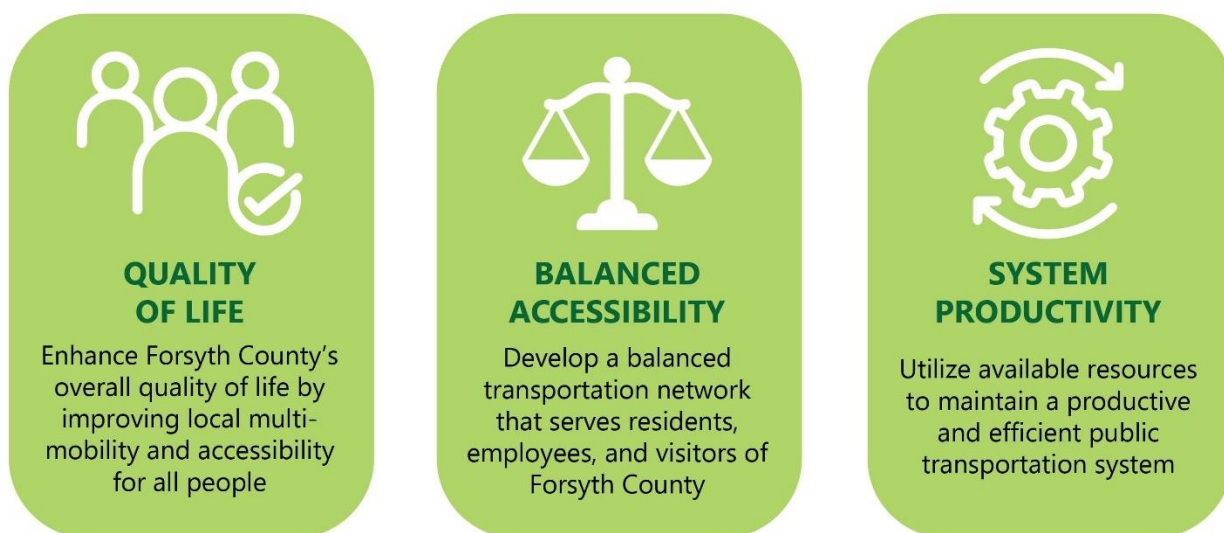


Figure 2. Link Forsyth Goals

Existing Services

Forsyth County currently provides three public transportation options: Dial-a-Ride, Rideshare, and Senior Services Transportation. Commuter bus service is provided by a regional public transportation provider that connects Forsyth County to employment destinations in Metro Atlanta.

- **Dial-a-Ride** is a county-operated on-call transportation service that connects residents directly from their origin to their destination.
- **Rideshare** is a service focusing on travel for seniors and other disadvantageded groups. Today, rideshare is provided by an external partner, Common Courtesy.
- **Senior Services Transportation** is a service that is provided by Forsyth County Senior Services to assist older adults to get to- and from- senior centers in the county.
- **Commuter Bus** is a regional service provided by Xpress Bus, which connects Forsyth County to downtown Atlanta and Perimeter.

Dial-A-Ride

Forsyth County Dial-A-Ride is operated by Forsyth County's Public Transportation Department and provides transportation for medical appointments, shopping, employment, education, and personal errands for any Forsyth County resident. Riders are typically picked up and returned to their residences. The service provides independence and an enhanced quality-of-life for many county residents who otherwise would have limited access to transportation. The Dial-A-Ride service details are listed below in Table 1.

Table 1. Forsyth County Dial-A-Ride Service Characteristics

Element	Details
Population Served	Service is available to any Forsyth County resident aged 18 years or older. Riders younger than 18 must be accompanied by an adult.
Service Area	The service area is limited to destinations within Forsyth County, and Emory Johns Creek Hospital, which is located just outside of the County's southern boundary.
Service Hours	8:30 AM to 3:30 PM – Monday through Friday
Scheduling Hours	8:00 AM to 3:30 PM – Monday through Friday
Scheduling Window	Appointments can be made up to 30 days in advance on a first come first serve basis.
Fee Schedule and Policy	Current fees are \$2.00 a trip. If time permits within a scheduled trip window a second destination may be served for an additional \$2.00 fee. Exact change is required. Cancellations are requested at least 24-hours in advance.
Vehicle Fleet	The service fleet consists of nine passenger vans. Passenger vans have a capacity of 10-persons and are equipped with wheelchair lifts. Eight vans are used in full-time operation and one is retained as a back-up vehicle.

Rideshare/Common Courtesy

Forsyth County has partnered with Common Courtesy to provide a ride sharing service for eligible Forsyth County residents, including any person who cannot, or should not, operate a vehicle. This program serves as a supplement to the Dial-A-Ride services and ensures that all eligible participants get from point A to point B quickly and easily. Rides can be scheduled via phone and are provided by a background check approved driver through Uber or Lyft. Rideshare operates Monday through Friday, from 7:30 a.m. until 5 p.m. and the per trip fare is \$2.00 per person.

Senior Services Transportation

Forsyth County's Senior Services department provides two specific transportation services for older adults in the county. These services include grant programs and the County's active adult program. Grant program service is primarily transportation to and from the County's senior centers for seniors who are no longer able to drive and have limited incomes. The active adult program provides group transportation in a large passenger bus for once-a-week day trips to hiking trails or other regional destinations. Details regarding the senior services in the County are located in Table 2.

FTA's Section 5310 is the grant program that provides mobility for seniors and individuals with disabilities. The goal of Section 5310 is to assist local service providers with the costs of passenger trips for the elderly and disabled. Local providers are reimbursed for senior transit trips at designated rates by the Georgia Department of Human Services (DHS). In Georgia, DHS administers Section 5310 funding grants. DHS uses subcontractors to oversee funding distributions and trip reimbursements to local transit agencies. Deanna Specialty Transportation Inc. manages the subcontract for DHS senior transit rides in Forsyth County and reimburses the county for Section 5310 eligible trips.

Table 2. Senior Services Transportation Characteristics

Element	Details
Service Area	<u>Grant programs</u> – Forsyth County <u>Active adult program</u> – Atlanta region and north Georgia
Service Hours	<u>Grant programs</u> - 7:30 a.m. to 2:45 p.m. – Monday through Friday <u>Active adult program</u> – 9:00 AM to 4:00 PM – Four days per month
Fare Rates	<u>Grant programs</u> – Fares are \$2 one-way. Low-income passengers ride for free. <u>Active adult program</u> – Hiking trips are \$10 per day and day trips range from \$10-25 per day depending on the destination.
Vehicle Fleet	The entire Senior Services fleet consists of eleven vehicles: <ul style="list-style-type: none"> • Two (13-person) passenger vans • Two (15-person) passenger vans • Two (10-person) passenger vans, equipped with wheel-chair lifts • One (28-person) passenger bus • Four (6-person) minivans (primarily used for staff needs) Two vehicles (strictly for staff use) include one cargo van equipped with homebound program supplies and a Hot-Cold truck for picking up and delivering meals
Staff	<u>Grant programs</u> - four full-time drivers (one is also a team leader) and one part-time driver. Currently in the process of hiring a second part-time driver. <u>Active adult program</u> - 32 staff members have received defensive driving instruction and may drive minivans for meetings and errands, or to fill-in as a grant program driver.

Xpress Bus

Commuter bus service in Forsyth County is provided by Xpress, Monday through Friday during peak morning and evening hours. Xpress Bus service was significant breakthrough in transit service for all of the “ring” counties around Atlanta. The service has been very successful all of the region and works in concert with GDOT’s MMIP program. Forsyth County service is offered through three Xpress bus routes. All three routes originate in the Xpress Blue Zone. Fares in this zone are \$4 for a one-way trip and \$7 for a round-trip. Monthly passes are available for \$125 and 10-trip packages for \$35. The ridership information for these three routes is outlined in Table 3.

The Xpress routes include:

- **Route 400** - Cumming Park and Ride to downtown Atlanta (North Avenue MARTA, Courtland Street at Auburn Avenue, Peachtree Center, Spring Street at Linden Street and Federal Center).
- **Route 401** - Cumming Park and Ride to Perimeter Center (Sandy Springs, Dunwoody, and Medical Center MARTA stations).
- **Route 408** – Emory Johns Creek Hospital to Chamblee MARTA station (SR 141 at Abbots Bridge Road, Market Place at Peachtree Parkway, and Publix at Peachtree Parkway). This route was discontinued as of January 2021.

Table 3. Ridership Analysis of Xpress Bus Routes (2018)

Xpress Route	Monthly Boardings	Trips per Day (2018)	Average Boardings per Trip (2018)	Trips per Day (in 2020)
400	4,050	6	31	7
401	3,242	6	25	6
408 (discontinued as of 2021)	2,072	10	9	8

Existing Demographics

Transit demand is influenced by a variety of demographic, socioeconomic, and employment factors. These factors are discussed at a high level in this document; details can be found in the Existing Conditions Report in Appendix A.

People

According to 2015 Atlanta Regional Commission (ARC) population data, the total population of Forsyth County was 211,950. The ARC predicts an upward trend in population for the 21-county metro area over the next 20 years. The ARC predicts the population of Forsyth County will grow by 170,943 between 2015 and 2040. That is an 80 percent increase in population over the next 25 years.

Like the rest of the region and the country, Forsyth County's older adult population is rapidly growing as people live longer and the Baby Boom generation ages. According to 2020 American Community Survey (ACS) data, 11.9% of Forsyth's population was age 65 years and older. By 2050, ARC forecasts the number of residents age 75 and over will grow to 12% of the Atlanta region, totaling just over 1 million people. As the population continues to grow and age, it will be even more important to provide public transportation options that will allow this segment of the population to remain mobile, active, and independent.

Forsyth County is home to a largely white population, and when compared to national averages, has higher median household incomes, educational attainment, home ownership rates and lower poverty rates. About 1,260 households (1.6% of total households) in Forsyth County are classified as zero vehicle households. While the demographics of Forsyth County do not align with what would traditionally be considered a "transit-dependent" population, it is important to consider the anticipated growth, aging of residents, and those without access to a vehicle.

Transit Reliant Populations

A transit propensity analysis was conducted for Forsyth County to understand the geographic distribution of population groups who are likely to be transit-reliant. This analysis was used to identify areas where transit service is particularly needed (Figure 3). This analysis focuses on four population groups considered to be more transit reliant. These groups include seniors (aged 65+), zero-car households, low-income persons (in-poverty status), and disabled persons (non-institutionalized individuals with a disability).

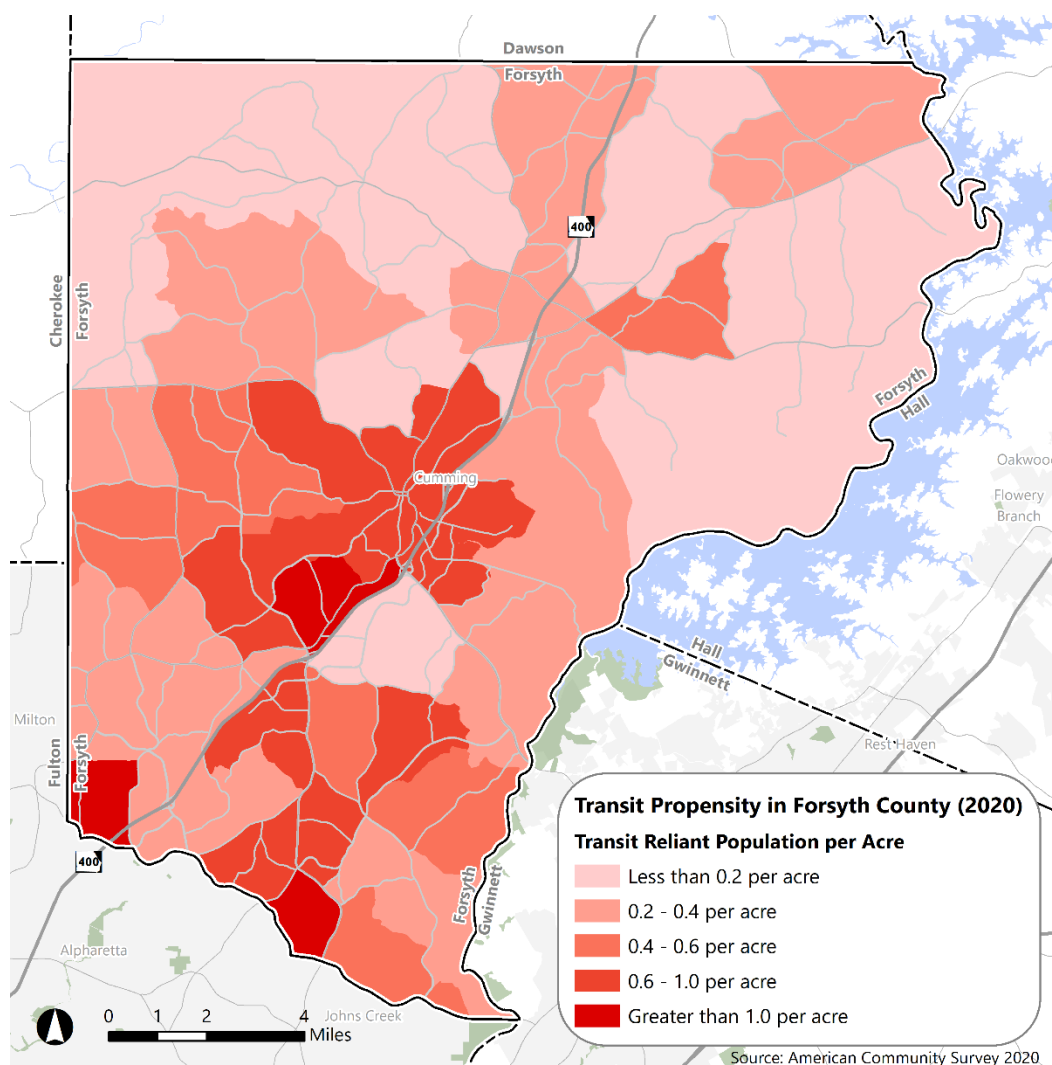


Figure 3. Transit Propensity – Transit-Reliant Populations

Activity Centers

Based on information from Forsyth County and the ARC, activity centers were identified for Link Forsyth. These activity centers reinforce the importance of creating public transportation connections within the county to connect to neighborhood, community, and regional centers. These activity centers provide different levels of activity. Regional nodes are regional employment/activity destinations that accommodate the most intensive land uses, generally industrial or mixed-use. Community nodes are more modest in scale and provide benefits for the immediate community. Neighborhood nodes are the smallest in scale and density and generally provide commercial uses for the surrounding residential area. Figure 4 identifies activity centers within the county to consider when planning for a connected and accessible public transportation system.

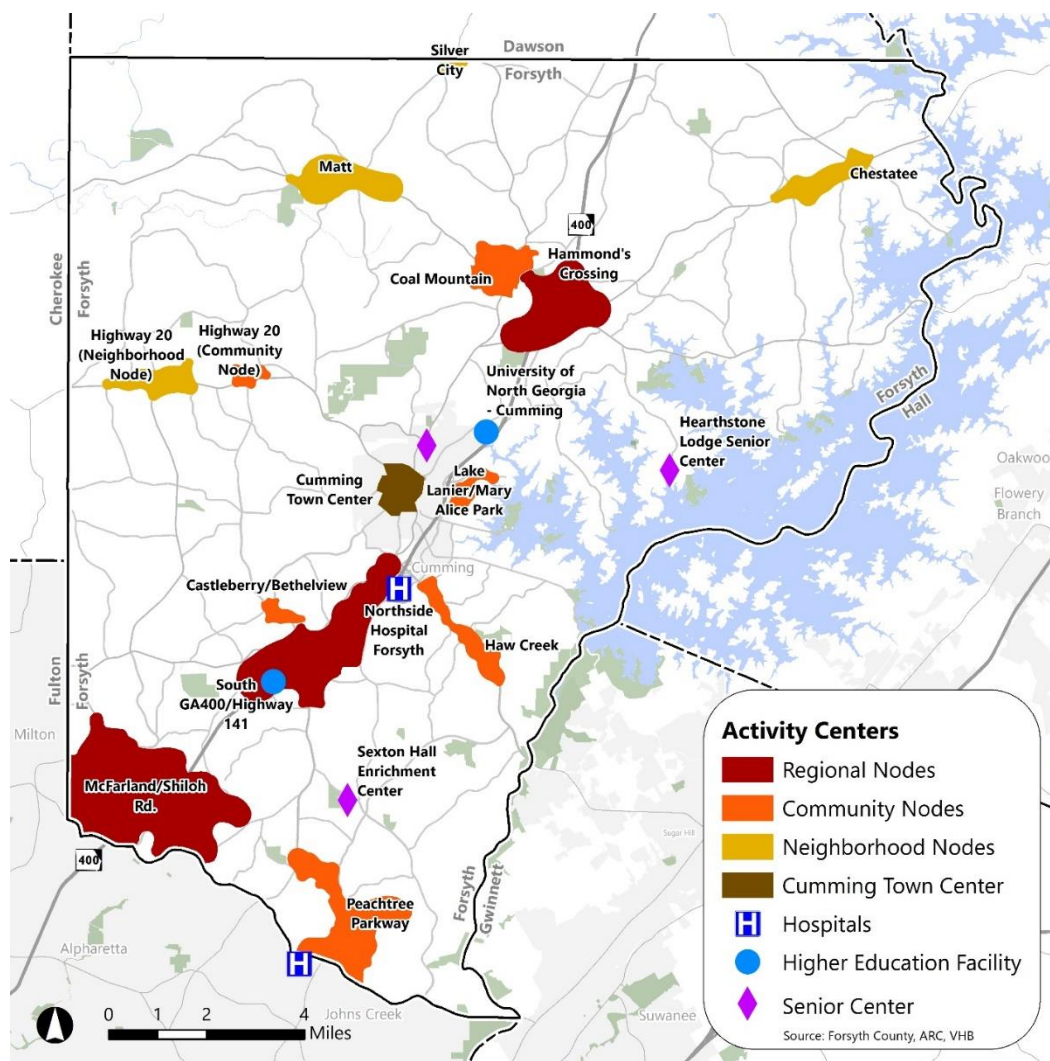


Figure 4. Activity Centers

Employment

Forsyth County's location makes it a desirable place to live for residents who commute to and from surrounding employment hubs in various counties throughout the metro region. The total number of jobs in the county itself is 82,408. The County is also home to 106,204 workers, the majority of which (75%) commute outside of the county for work (Figure 5).

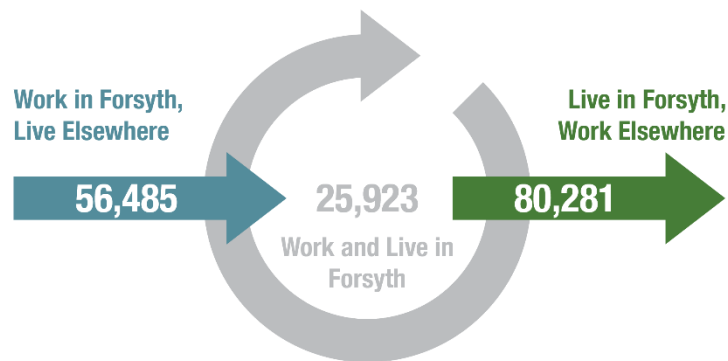


Figure 5. Forsyth Employment

Where Forsyth County Residents Work

Figure 6 highlights areas in Metro Atlanta where Forsyth County residents travel to for work. There are concentrations of residents who are traveling to some of the major employment destinations in Metro Atlanta that include: North Fulton; Perimeter; Cumberland; Peachtree Corners/Norcross; Buckhead; Midtown; and Downtown.

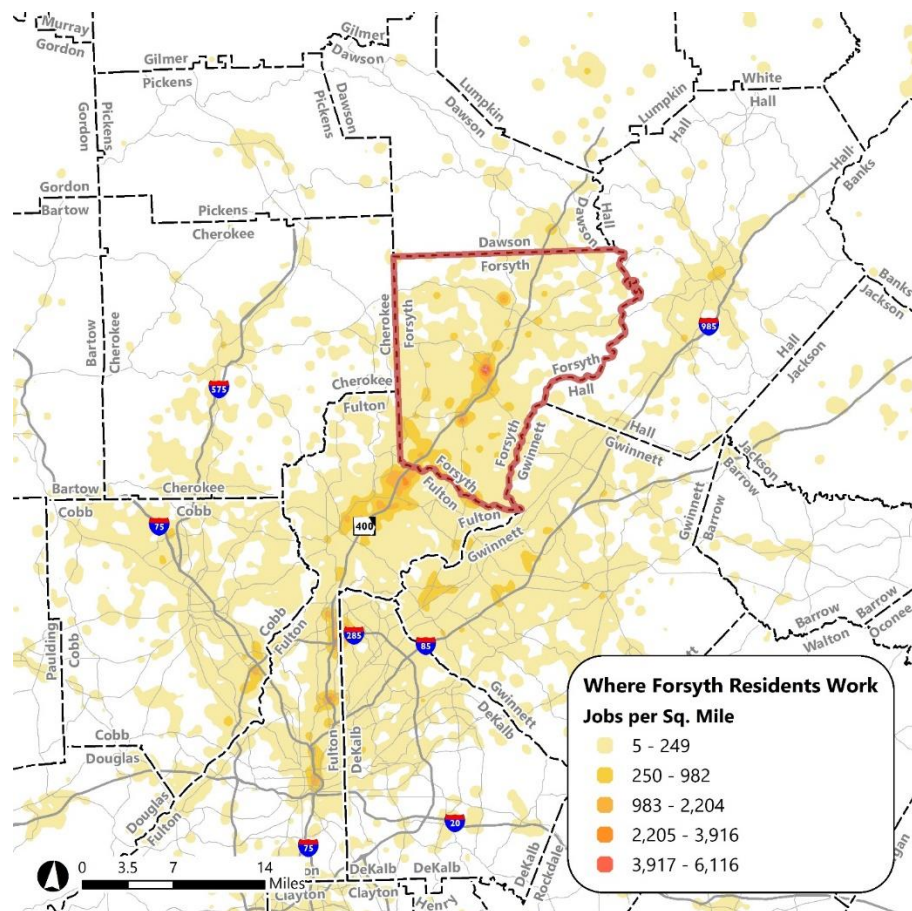


Figure 6. Where Forsyth County Residents Work

Where Forsyth County Workers Live

Figure 7 highlights areas where workers who are employed within Forsyth County live. Workers are traveling to Forsyth from all over metro Atlanta, but particularly from nearby counties: Cherokee; North Fulton; and Gwinnett. There is also a concentration of workers who both work and live in Forsyth County, which is evident by the figure.

Looking forward to the next 20 years, ARC estimates that the number of jobs in Forsyth County will increase to 103,159 by 2040. That is a 27 percent increase

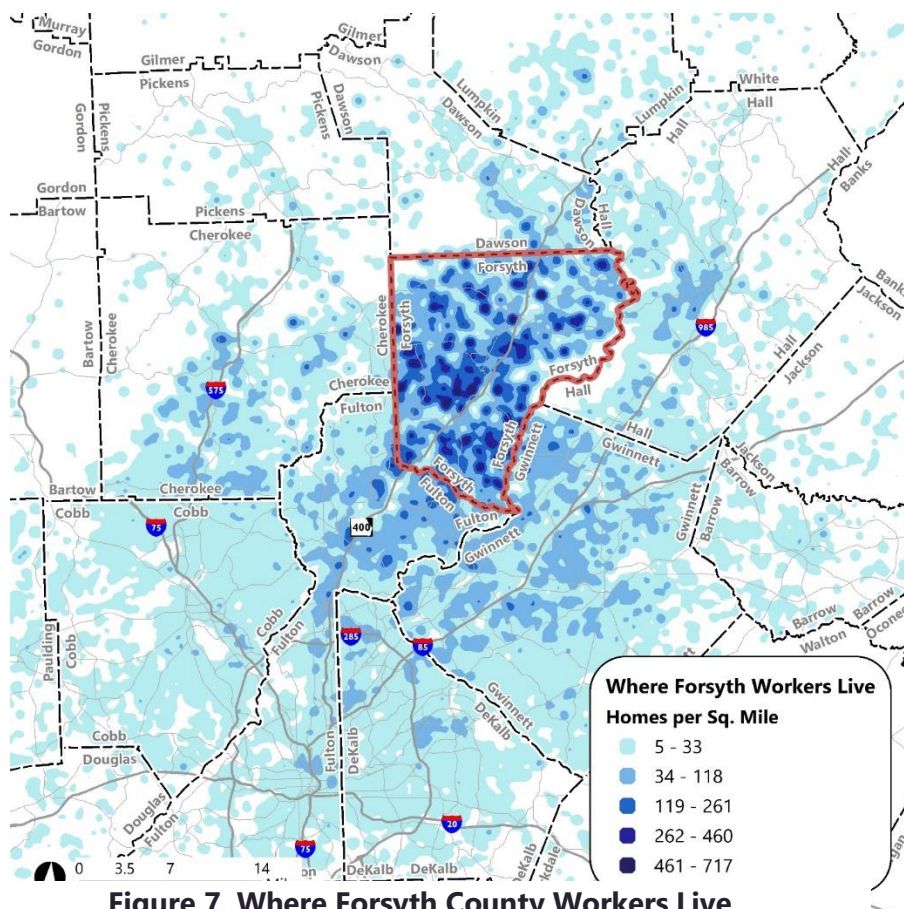


Figure 7. Where Forsyth County Workers Live

in the number of jobs. In effort to combat congestion and negative environmental externalities, it will be critical to start planning for this influx in workers traveling to and from Forsyth in the coming years. The ARC forecasts 1.2 million jobs will be added to the region as a whole by 2050, making regional connections via public transportation critically important.

Travel Patterns

According to the ARC's 2019 Regional Commuter survey, the average commute time for Forsyth residents is approximately 48 minutes and the average commute distance is 24 miles. The average for the region is 39 minutes and 19 miles. While many Forsyth residents travel within the county or to nearby job centers in North Fulton, the relative location of the county to the largest job centers in the region is most likely the reason for Forsyth residents having longer average commute times and distances than the rest of the region. Transit service will not be able to change the distance between the region's major job centers and Forsyth County, but it may be able to provide Forsyth residents with a comfortable, time-competitive alternative to driving.

Public Involvement – Round 1

Link Forsyth's public involvement process was multi-faceted and adaptive to enable a wide range of input and perspectives as well as respond to the COVID-19 pandemic. The project kickoff meeting was held on February 24th, 2020, a few weeks before the COVID-19 pandemic vastly altered the public involvement landscape. The new reality of the project required innovative approaches to protect the Forsyth County population from exposure to the virus, while still collecting vital community perspectives on public transportation in Forsyth County.

Public involvement was critical to the planning process as it allowed the project team to better understand unmet transportation needs in Forsyth County and identify potential solutions to meet the community's needs. The schedule for public involvement mirrored the overall study in its strategy by assessing existing conditions, clarifying vision and goals, and establishing recommendations.

The first round of public involvement laid the groundwork for the existing conditions and needs assessment, as it helped identify who Forsyth County public transportation serves today and who it should serve in the future as well as the public's vision and goals for public transportation in Forsyth County. The full summary of the first round of public involvement can be found in Appendix G: PI Summary Round 1. The second round of public involvement focused on the long-range needs and is included in the Long-Range System Implementation Plan section of this report.

Participation

The study solicited feedback from a wide range of perspectives in Forsyth County, including County leadership, stakeholders, and residents of Forsyth County. This included engagement with Forsyth County staff, Forsyth County commissioners, interest groups (e.g., advocacy/non-profit, healthcare, seniors), Forsyth County residents and workers, as well as representatives from Xpress service.

Methods

While the initial outreach strategy included extensive plans to engage Forsyth County's public and civic life, including attending festivals and hosting multiple in-person focus groups and meetings, the COVID-19 pandemic forced a revision of these methods to successfully solicit and receive comprehensive feedback. The methods of gathering feedback varied and included techniques like individual interviews, focus groups, virtual Public Information Open Houses (PIOHs), Senior Services outreach, and lastly, widely promoting a uniform survey, available online and in paper format.

The public involvement sought to solicit feedback regarding services that currently exist today such as Dial-A-Ride, Senior Services, and Xpress Bus. The project team also used public input to best anticipate future needs. The study sought to understand the unique perspective of Forsyth County, based on the County's population, land use, future development plans, and current road network.

Virtual Public Information Open Houses

During the first round of public engagement, virtual PIOH sessions took place on August 12, 2020 and included two identical sessions offered in the morning and the evening. The PIOH meetings began with a PowerPoint presentation that introduced the Public Transportation Master Plan and its draft goals. A summary of the existing transportation services and demographics of Forsyth County was also presented to provide context. The second half of the presentation included an interactive polling activity where participants could vote using an online, real-time polling tool, Mentimeter. The polling questions and answer choices included the following:

How familiar were you with Forsyth County Public Transportation before today?

- I've heard of it but do not use it
- A family member or friend uses the service
- I am unfamiliar

What should the purpose of public transportation be in Forsyth County?

- Get people to jobs
- Get seniors and people with disabilities to places they need to go
- Get students to school (K-12)
- Get students to school (colleges, universities, vocational)
- Provide people with an alternative option to driving
- Connect County residents and workers to other regional public transportation services

Rank the importance of proposed goals regarding the desired vision for public transportation in Forsyth County.

- Quality of Life
- Balanced Customer Needs
- Cost Effectiveness

What have we missed? (open ended)

Key Takeaways

Quality of Life was the leading priority selected among the three presented to the public. Quality of Life prioritizes enhancing Forsyth County's overall quality of life by improving local multi-mobility and accessibility for all people. In the morning and evening polls, the other two categories, Balanced Accessibility and System Productivity, alternated between the second and third positions. Participants also ranked their top three purposes of public transportation and the results from both meetings were the same with connecting to regional transportation as number one, getting seniors to where they need to go second, and getting people to jobs third.

Key issues that came up during the virtual meetings included:

- **Service Hours** – Connecting to the airport outside of regular bus hours, extending weekend and evening service, etc.
- **Marketing and Communications** – Enhancing publicity of service, automated scheduling capabilities, etc.
- **Additional Service Areas** – Connecting to the airport, MARTA, and hospitals/organizations outside of the County
- **Fare Pass Offerings** – Creating an option for monthly passes

Survey

As part of the Link Forsyth public involvement campaign, a comprehensive survey was made available to county residents. It was distributed through various outlets, including senior centers, county offices, and Georgia Highlands Medical Services. The survey promotion resulted in 507 online surveys submitted and 151 paper surveys received, totaling 658 completed surveys. A Spanish survey was also made available in paper and online. 16 percent of respondents were ages 18 to 40 and the rest of respondents were over 40 years of age. In terms of transit usage, 50 percent of respondents took the user survey and most used MARTA (55 percent) while the others used Forsyth or Xpress services.

Survey Takeaways

The key takeaways from the survey included the following:

- Quality of Life was the highest priority over the other two (Balanced Accessibility and System Productivity)
- There was a high level of support for:
 - Transportation for seniors, low-income residents, and individuals with disability
 - Regional connections to MARTA, Xpress

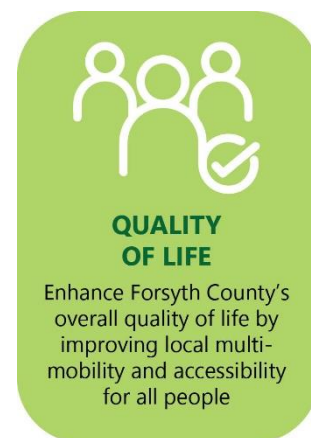


Figure 8. Survey Takeaways

- Connections to school/work, retail destinations, and medical facilities were priorities
- The following needs came up frequently:
 - Better information regarding available services and coordination with other services (timetables)
 - A longer service span (serving later into the evenings, weekends)
 - Better service reliability (scheduling, pick-ups)
 - A wider range of fare options and products
- When asked about expansion of public transportation and if they supported it, 71 percent said yes, 5 percent said no, and the remaining were unsure

Summary

Many of Forsyth County residents who participated in the public involvement process showed support for public transportation that connects to regional transportation services such as MARTA, and Xpress. Consistently, the public shared a positive response to continuing to invest in a public transportation system that prioritizes the needs of older adults and residents with disabilities; transport people to places of employment; and connect to specialized services in Forsyth and to surrounding areas. Public involvement helped to inform and confirm the vision and goals for public transportation in Forsyth County as well as the people it should serve, which in turn helped shape the service recommendations outlined in the following sections.

Short-to Mid-Range System Implementation Plan

The System Implementation Plan is separated into two phases, the short and mid-range, and the long-range. Needs and recommendations have largely been informed by the system evaluation, community-identified needs, and trip analysis needs (Figure 9).

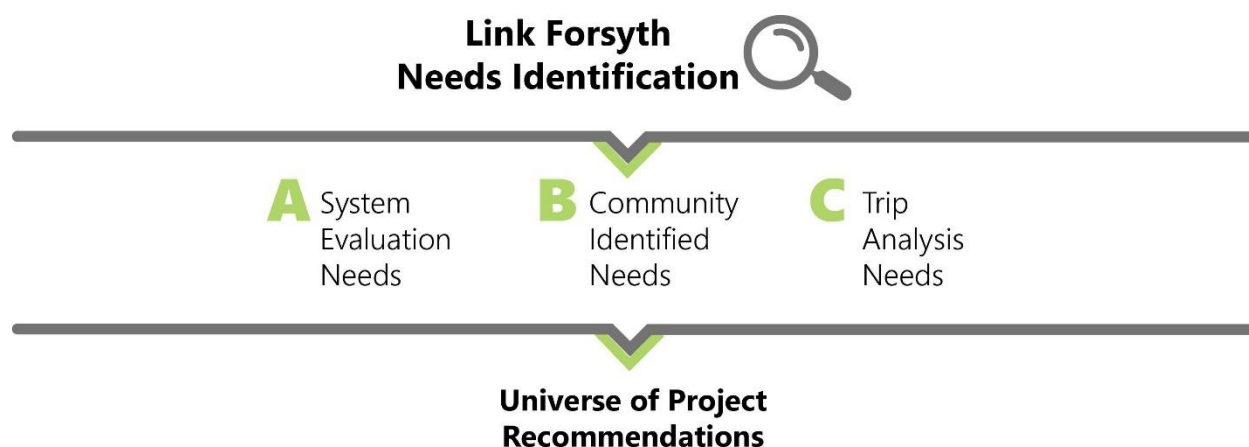


Figure 9. Short Range Needs Analysis Components

Based on findings for the short- and mid-range needs, four primary challenges are identified in Figure 10.

- **Cost Per Trip** – Forsyth County’s cost per trip was found to be 2 times higher than its peers after reviewing peer agencies (Cherokee and Bartow Counties).
- **Distance Per Trip** – Forsyth County’s distance per trip was found to be 2 times higher than its peers after reviewing peer agencies (Cherokee and Bartow Counties).
- **Vehicle Usage** – The system evaluation found Forsyth vehicles run empty 50 percent of the time between trips.
- **User Experience** – Community identified needs included better user experience, including scheduling, website, marketing, etc.

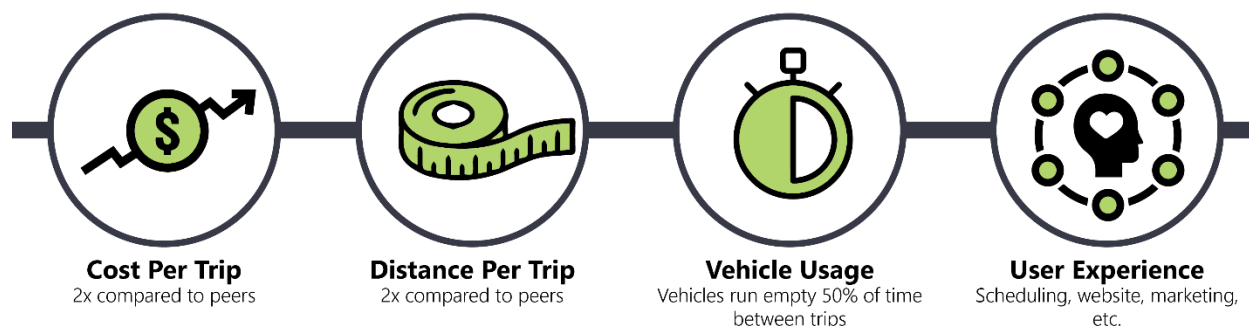


Figure 10. Forsyth County Needs

Trip Analysis

As a part of the short- and mid-range needs, current trips taken through Dial-a-Ride and Common Courtesy were analyzed. Understanding how current riders are using the system today allows for Link Forsyth to analyze where there may be opportunity for service to be more efficient.

Trip Purpose

Table 4 highlights the top four, most common trip purposes for Dial-a-Ride trips. The most common trip purpose is medical by a large margin, which comprises 38 percent of all trips. This is followed by employment (18 percent), adult day care (16 percent), and education (13 percent) as other common trip purposes.

Table 4. Summary of Dial-a-Ride Trip Purposes (12/2019 – 2/2020)

Trip Purpose	Number of Trips	Percentage of Total Trips
Medical	2,779	38%
Employment	1,314	18%
Adult Day Care	1,136	16%
Education	978	13%

Dial-a-Ride

Figure 11 and Figure 12 highlight where Dial-a-Ride pick-ups occurred during a three-month period from December 2019 to February 2020. There is a concentration of Dial-a-Ride users who are either starting their trips or ending their trips in the City of Cumming and the immediately surrounding areas. Many Dial-a-Ride trips are dispersed within the County and follow several of the County's largest corridors.

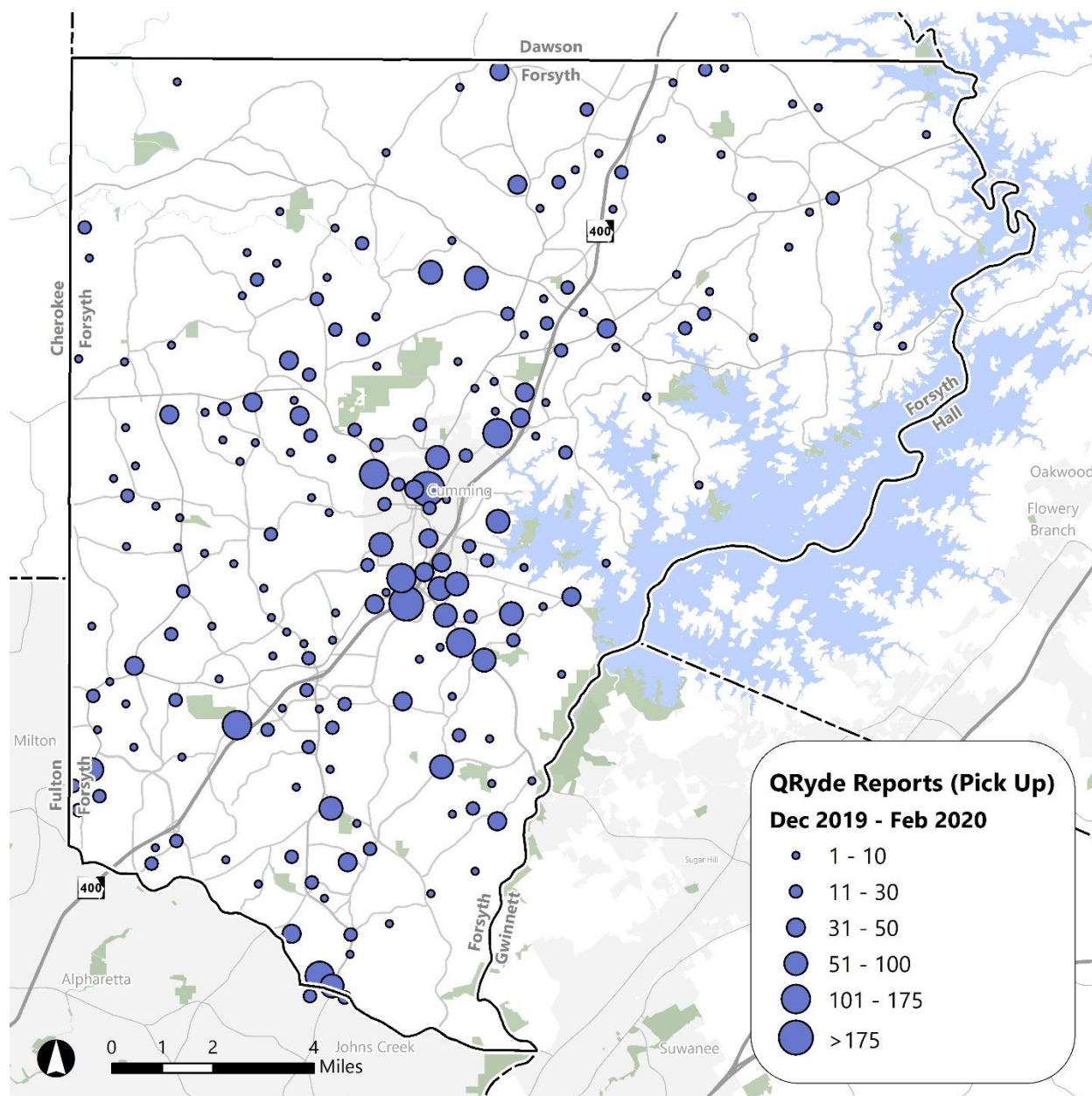


Figure 11. Dial-a-Ride Pick Up Locations

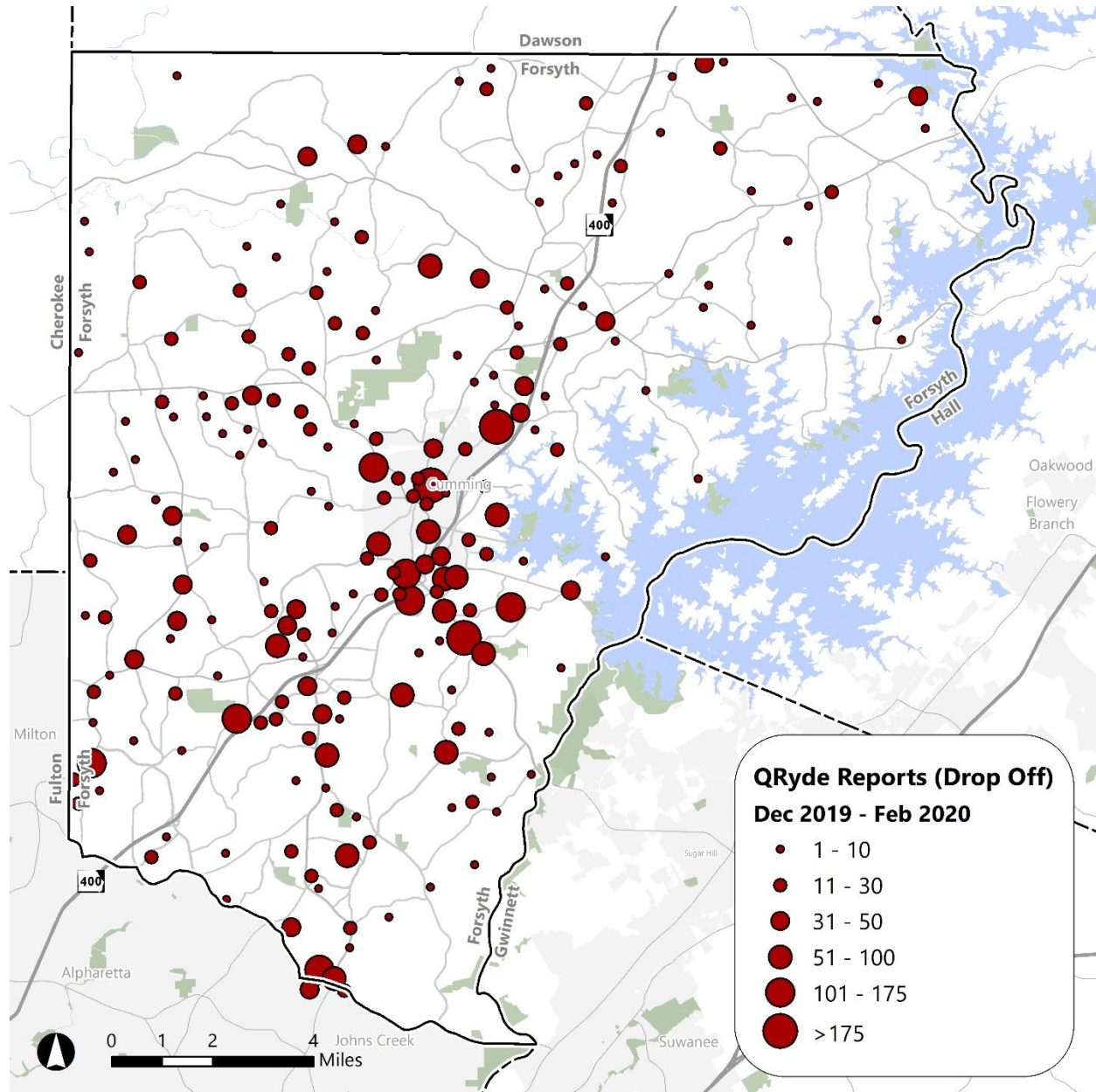


Figure 12. Dial-a-Ride Drop Off Locations

Common Courtesy

As discussed in the previous section, Common Courtesy is the rideshare program that is offered as a complementary service to Dial-A-Ride for non-ambulatory, eligible riders. Based on the same three-month span from December 2019 to February 2020, Figure 13 and Figure 14 highlight pick-up and drop-off locations within the County.

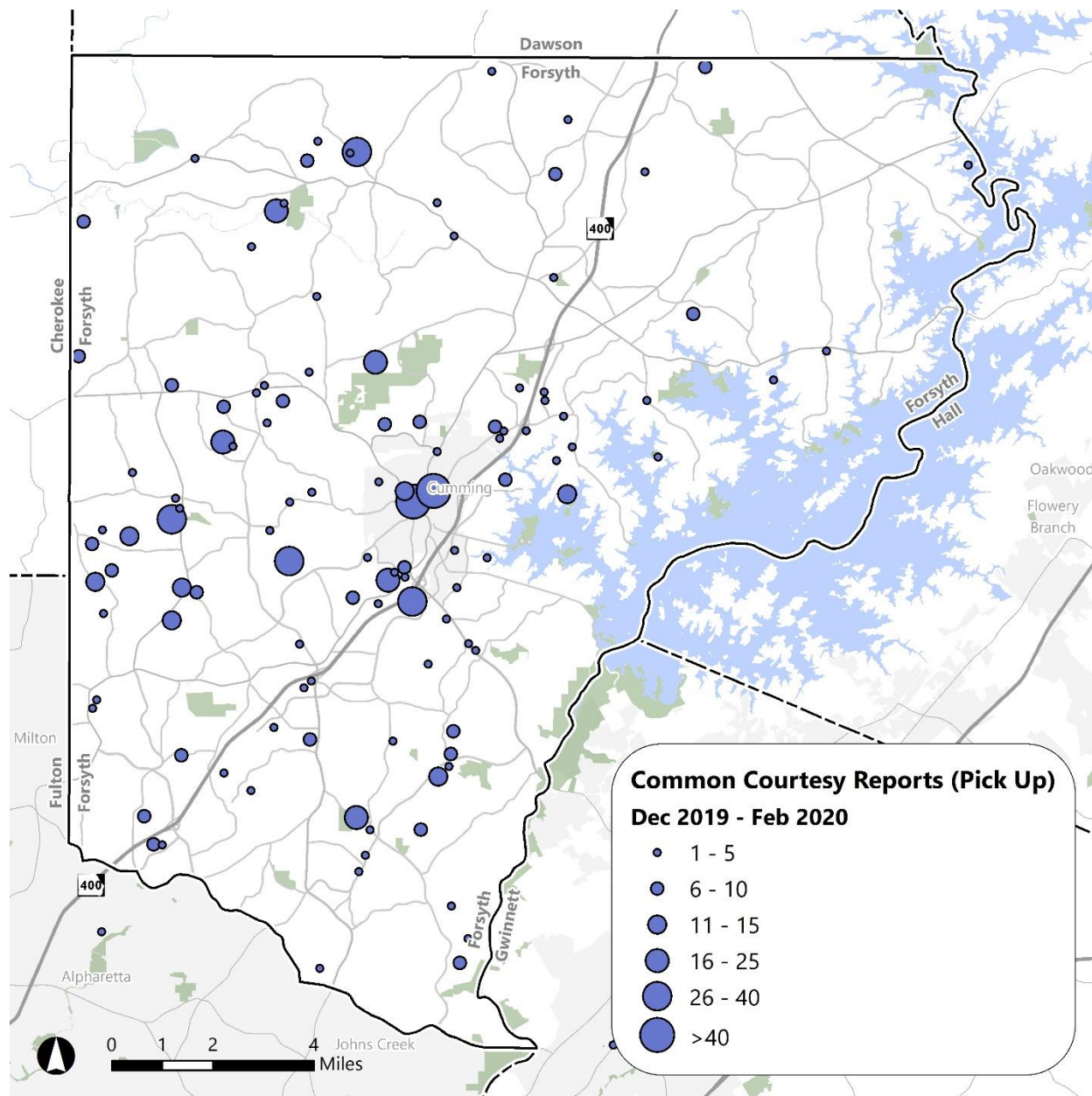


Figure 13. Common Courtesy Pick-Up Locations

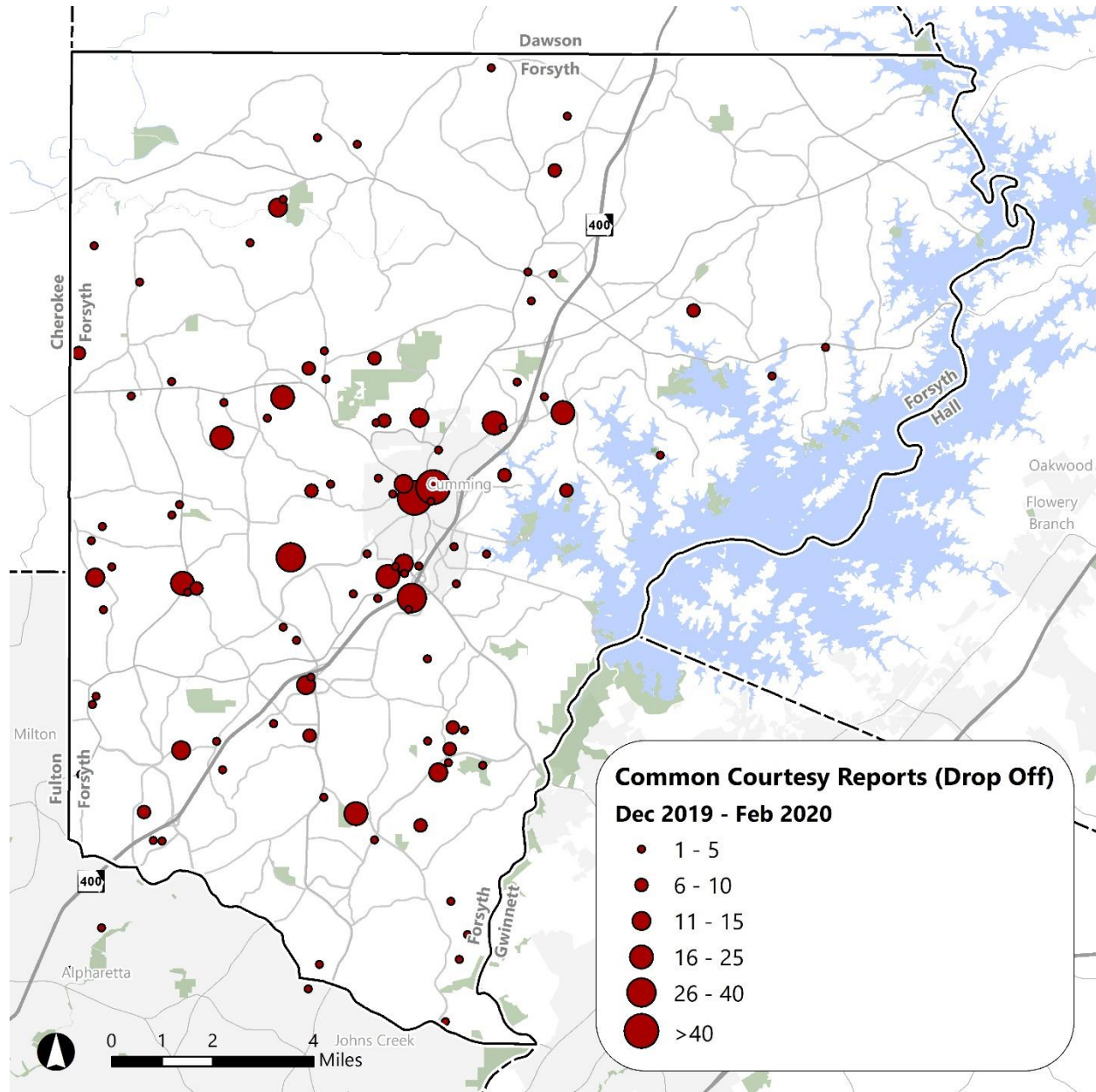


Figure 14. Common Courtesy Drop-Off Locations

System Evaluation

The system evaluation analyzed a variety of performance metrics for Forsyth County's Dial-a-Ride and Senior Services transportation. These performance metrics were compared to peer systems in nearby Cherokee and Bartow Counties. This evaluation identified service areas in need of improvement where additional study and recommendations are warranted. The following highlights the most significant needs identified from Appendix B: Short-Range Needs Memo.

Trip Denials

Trip denials highlight when Forsyth County Dial-a-Ride was unable to accommodate for a requested ride. Table 5 shows trip denials for the past five years. When two additional service vehicles were added in 2018, a target was set to reduce trip denials to fewer than 10 per day. This target was reached in 2019, with a 53 percent reduction from 19 per day in 2017 to 9 per day in 2019. While this represents a significant improvement, additional improvements could be made to reduce this further, as the high number of denials has been identified as an on-going issue through community input.

Table 5. Dial-a-Ride Service Trip Denials (2015-2019)

	2015	2016	2017	2018	2019
Trip Denials	2,623	3,493	4,682	2,724	2,225
Trip Denials per 1,000 Trips Requested	121	154	198	115	89
Trip Denials Per Service Day	11	14	19	11	9

Key Performance Metrics

Forsyth County Dial-a-Ride, in comparison to some of its peer systems, highlight high operating and maintenance (O&M) costs per passenger trip, long average trip lengths, and low vehicle efficiency.

Table 6 details a comparison of these performance metrics to peer systems and illustrates significant disparities. The data suggests that vehicles are frequently traveling long distances with very light passenger loads or deadheading (no passengers on board). In fact, further analysis shows that after the vehicles enter service, 46.7 percent of vehicle time is spent deadheading, with no passengers on board. This reflects 34.4 percent of all trip segments with no passengers on board. Altogether, this suggests the need for improvements to scheduling, dispatching and route planning procedures.

Table 6. Key Service Performance Metrics Peer Comparison

Transit System	O&M Costs per Passenger Trip	Service Miles per Passenger Trip	Daily Passenger Trips per Vehicle in Operation
Forsyth Dial-a-Ride	\$37.06	12.5 mi	11
Forsyth Senior Services - Grant Programs	\$13.91	7.6 mi	--
Cherokee Area Transportation System (CATS) - Demand Response	\$18.46	5.1 mi	14
Bartow County Transit	\$12.24	8.8 mi	14

Community Identified Needs

Community outreach has also served as a major source of needs identification, particularly related to the user experience. The main sources of community identified needs include stakeholder interviews, focus groups, a PIOH, and an online survey. The full summary can be found in Public Involvement – Round 1.

Dial-a-Ride

A high-level of consensus was heard and this has been summarized in relation to Dial-a-Ride, Common Courtesy, and general transit needs. The most frequently heard needs, concerns, and issues for Dial-a-Ride service include:

- **Service hours** – The most heard desire was to expand service hours to late afternoons, evenings, and weekends. Services ending at 3:30 p.m. are viewed as a barrier to accessing employment opportunities with a standard 9-to-5 work schedule.
- **Scheduling** – The desire for same day trip reservations was often heard. There were also noted issues with scheduling return trips, on-time performance and problems with numerous pick-ups and drop-offs at one place and time (i.e., at Creative Enterprise).
- **Capacity not meeting demand** – A higher demand for trips than can be served with the current system was often heard. The lack of available capacity has resulted in a significant number of trip denials per day. In 2019, the Dial-a-Ride service experienced an average of nine trip denials per service day.

Common Courtesy

The community consensus regarding Common Courtesy service has been overwhelmingly positive. As a service that started at the end of 2019, it is viewed as being a popular and successful pilot program. The ability to schedule rides on the same day without making a reservation 24-hours in advance was frequently cited as a desirable feature. This service was noted as not being able to fully meet demands due to popularity. Limitations were noted in the ability to meet some Americans with Disabilities Act (ADA) trips but not those with significant mobility needs (i.e., wheelchair trips).

Consensus Items

There were several consensus items heard in relation to general transit needs and services. These consensus items include:

- **Priority transit markets and growing senior and disabled populations** – The desire for transit services to serve all residents in the County with a priority for seniors, disabled and low-income individuals was frequently heard. The need to proactively plan for increasing senior and disabled populations was noted.
- **Advertising, marketing and branded services** - The need to better market and advertise services was often noted by residents unaware of the County's transit offerings. The need to brand services with a unique identity and logo was cited numerous times, particularly from community stakeholders.
- **Transit technology** – The need to incorporate advancements in transit technology to modernize services was noted often. Specific transit technologies were not directly mentioned through stakeholder and public input but are directly tied to the other transit needs that were mentioned.
- **Improve user experience** – The need to make services more user-friendly was heard in in a variety of ways, including improving the reservation process, narrowing pick-up windows, and providing real-time vehicle information and trip planning tools.

Short- and Mid-Range Recommendations

Short- and mid-range recommendations were derived from technical analysis and public involvement and focus on relatively lower-cost ways that Forsyth County can improve existing services. The recommendations are organized around system components: marketing, technology, administrative components, operations, and agency coordination (Figure 15). The following provides descriptions of the short- and mid-range recommendations at a high level; details regarding each can be found in Appendix B: Short-Range Needs Memo.

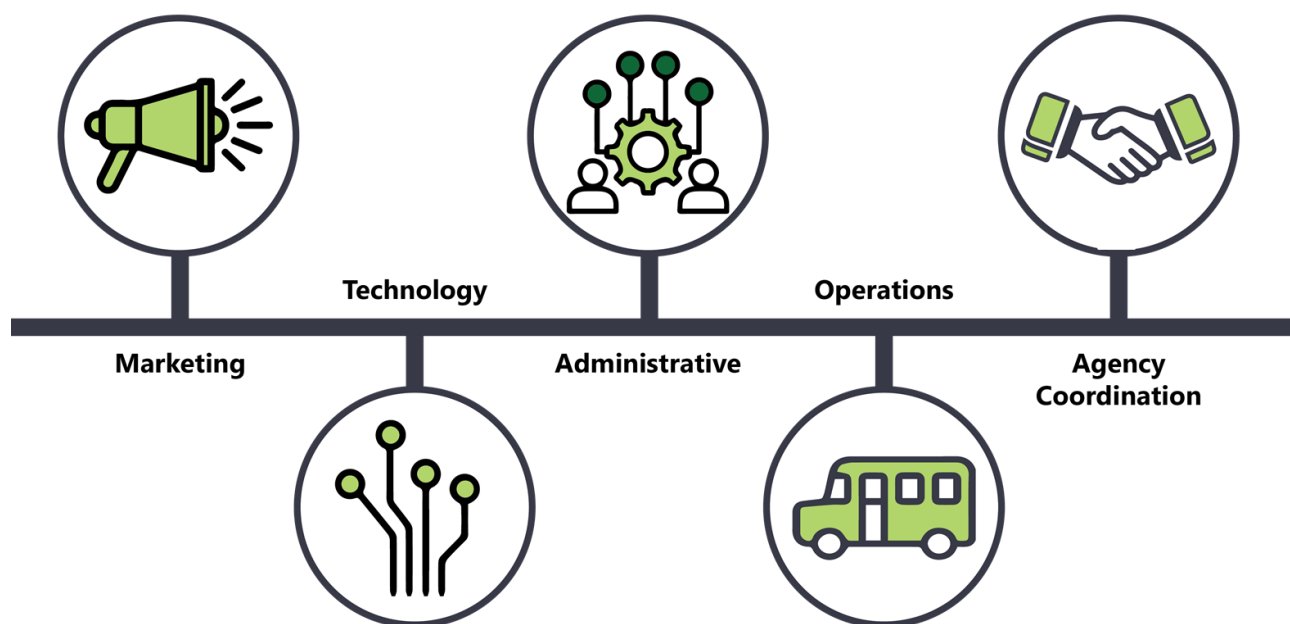


Figure 15. Transit System Components

Marketing Recommendations

Marketing is extremely important in creating awareness of the different types of public transportation services available in Forsyth County. Marketing recommendations focus on systemwide rebranding, marketing and promotional campaigns, and website updates and improvements (Figure 16). These recommendations, described in detail below, will help improve the customer interface, making it easier to use public transportation due to the enhanced accessibility of information and ease of use.

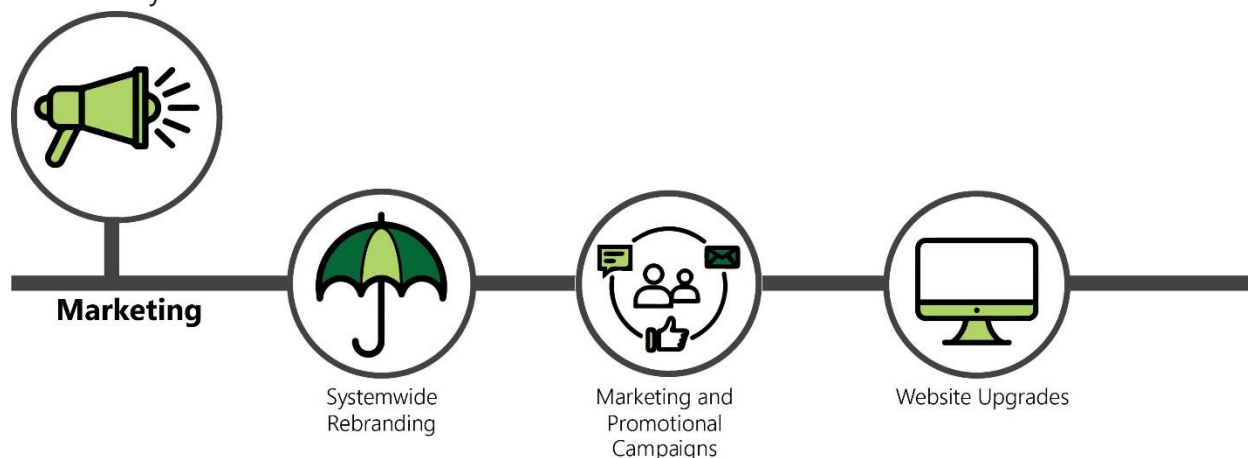


Figure 16. Marketing Recommendations

Systemwide Rebranding

A systemwide rebranding of transit services in Forsyth County is recommended to align current and future services under one umbrella brand with a common identifier. Aligning services under one brand would serve as a one-stop resource to the County's transportation offerings. This would include branding Dial-A-Ride, Senior Services, Common Courtesy, and future transit offerings under a shared identity. Rebranding would include developing a new system name and logo that features a refreshed design, attractive color scheme and local identity.

Marketing and Promotional Campaign

A marketing plan should be developed to promote the new brand and transit service offerings. Target markets for existing and new transit services should be identified and specific strategies to communicate with each target market should be developed. A key goal of the marketing plan should be to increase knowledge of transit services in target markets to encourage transit use. The marketing plan should also provide guidance on how the new brand will be featured throughout the system. Specifically, the plan should identify where the brand will be visible across all potential advertising venues including the County's website, mobile applications, vehicles, signage, maintenance facilities and other Forsyth County properties.

Improve and Update Website

It is recommended that when the systemwide rebranding occurs the Public Transportation website is reorganized under the new branding/logo and transit offerings. Incorporating the new system name in the website URL is recommended to make the site easy to find for county residents. To achieve this recommendation, the County should determine if the internal resources are available to develop a new website that reflects a modern transit system with trip planning tools, real-time vehicle information, an online reservation system, compatibility with mobile applications, and the ability to pay/purchase fares online.

Technology Recommendations

Technology recommendations for Link Forsyth span needs identified by the public to those that enhance service efficiencies. Recommendations to upgrade the department's technology, software, and computer systems to meet existing and future transportation needs include new dispatch software, Automatic Vehicle Location (AVL) system, a mobile application and entering into agreements with regional planning agencies for access to planning software, shown below in Figure 17.

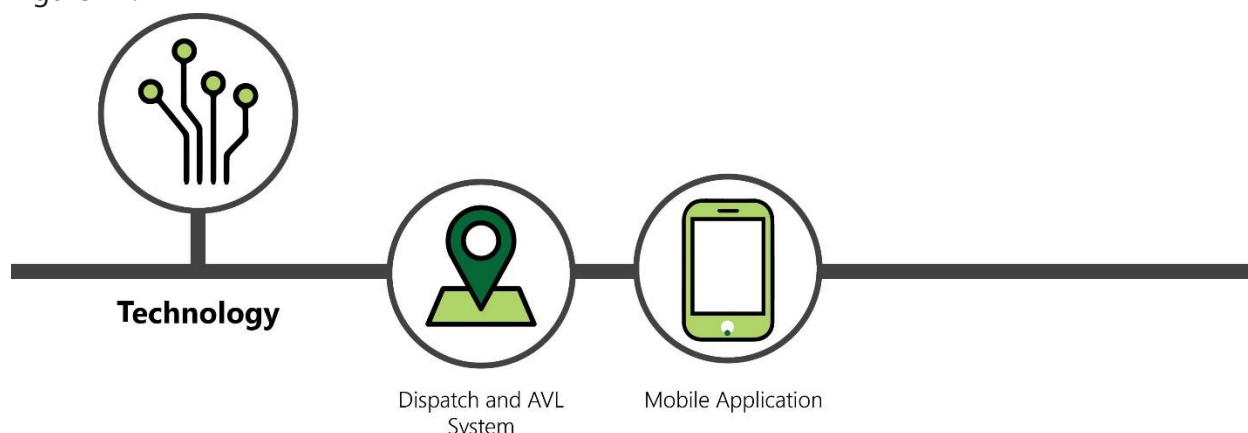


Figure 17. Technology Recommendations

Dispatch/AVL System

An assessment of the current scheduling, dispatch and NTD reporting system and software was conducted to determine if the present system is meeting the County's existing and future needs. This assessment identified areas that need improvement. It is recommended that Forsyth County consider a different dispatch/AVL system than it is currently using today.

Mobile Application

A mobile application is recommended to provide access to transit services and information that would mirror the recommended website upgrades described in previous sections. Mobile application features could include fare payment options, trip reservation capabilities, a trip

planning tool and real-time vehicle tracking feature. Forsyth County may desire to use mobile applications provided through vendors of Computer-Aided Dispatch (CAD)/Automatic Vehicle Location (AVL) software.

Administrative Recommendations

Administrative recommendations focus on efficiently and effectively managing the Public Transportation Department and include recommendations for staff training and development, as well as coordination with the ATL. Recommendations for staff training and development focus on streamlining the staffing and training for all Forsyth County transportation services to conserve resources and promote interoperability and efficiency (Figure 18). Streamlining also includes ongoing efforts occurring within the County to integrate Senior Services and Dial-A-Ride Services under one “roof.” Lastly, continuing coordination with the ATL is also an important factor in terms of funding, fare policy, and coordination with transportation services outside of the County.

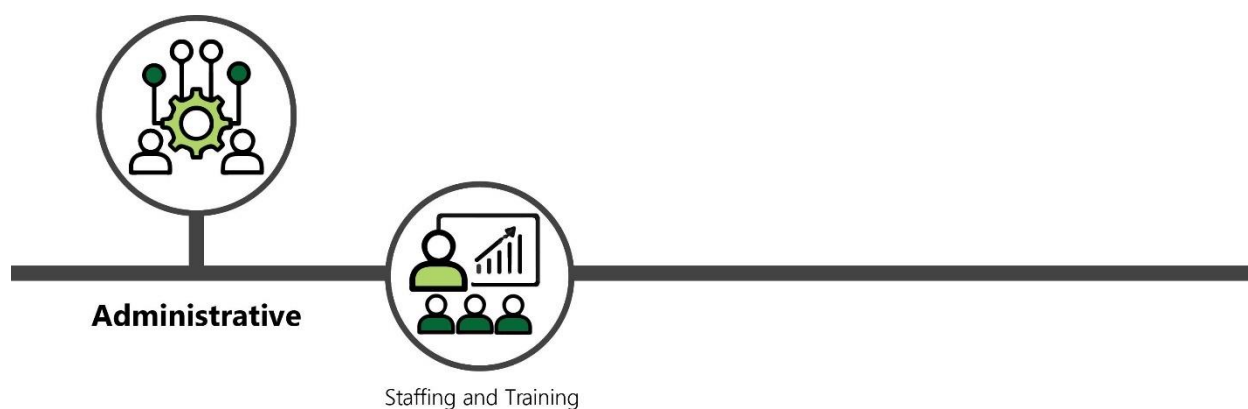


Figure 18. Administrative Recommendations

Staffing, Training and Development

Staff training and development is an important component of a successful public transportation system. The County should identify training needs for both dispatch support and administrative functions. This will include training items for Common Courtesy trip scheduling, new software programs, and dispatch procedures. Items for Senior Services coordination and NTD trip reporting procedures will also be included. Combined staff trainings for Dial-A-Ride and Senior Services will also help promote interoperability between the two services and the potential for staff to fill in service gaps where needed. This is consistent with ongoing efforts to integrate the two services into one overall service delivery operation. The integration, and supportive training elements, will build redundancy in staffing skills and will further efforts to increase efficiency in the day-to-day operation. Hiring an additional staff member to handle administrative tasks for the group is also recommended.

Agency Coordination

Coordination between Forsyth County and surrounding local and regional transportation agencies is extremely important as Forsyth and the broader Metro Atlanta region continue to grow and expand. Coordination with the recently formed ATL will help inform Forsyth’s funding plan and fare policy. Additional coordination with agencies like Xpress will help improve commuter bus service in the Forsyth area (Figure 19). There are also numerous lessons learned, best practices, and technologies that can be shared between agencies for better integration and service.

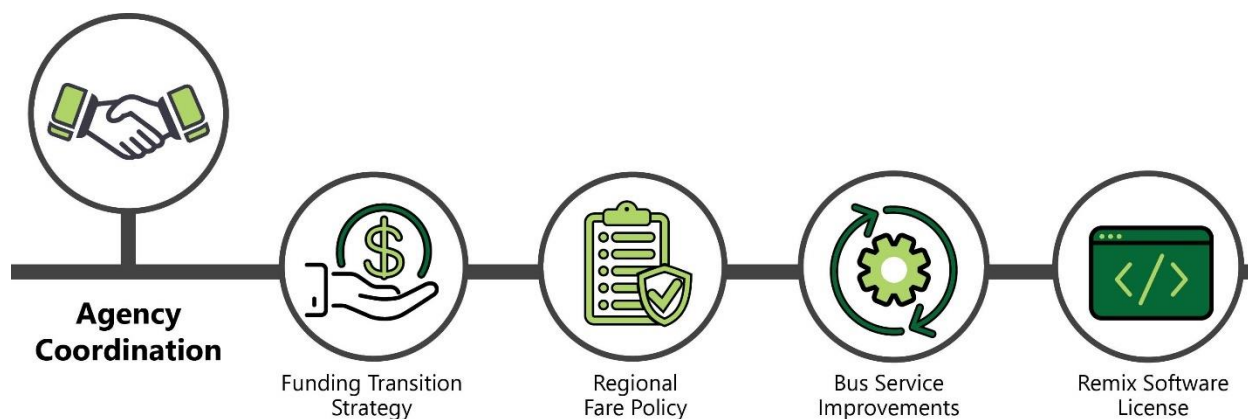


Figure 19. Agency Coordination

Funding Transition Strategy

The expanded urbanized area, from the 2020 US Census, is anticipated to apply to FTA’s FY 2022 funding allocations. The ATL will become a direct recipient of Forsyth County’s FTA 5307 funding and the County will become a subrecipient. The main administrative burden of NTD trip reporting will be assumed by the ATL starting in January 2022.

Aligned with this plan’s recommendations, Link Forsyth has begun to report to NTD to include some trips as ‘urban’ in 2020.

Regional Fare Policy Study

The ATL is currently conducting a regional fare policy study to establish guidelines for setting a uniform, fair, and equitable regional fare structure consistent with revenue-producing requirements and established budgets. On-going coordination with ATL has allowed this study to incorporate the recommendations for regional fare policy into the final recommendations. The Fare Policy section covers this in more detail below.

Xpress Bus

In addition to the transit services provided by Forsyth County, short-range recommendations were examined for Xpress Bus service in the County. In 2018, an operational analysis of Xpress Bus service in the County was conducted. The study examined ridership on the three routes that served Forsyth County (Routes 400, 401, and 408) and made a series of service recommendations. Route 408 has since been discontinued by the ATL. Routes 400 and 401 currently operate out of a park—and-ride facility that the ATL currently owns and maintains on Deputy Bill Cantrell Memorial Road.

The ATL does not currently have available funding sources to finance significant improvements to Xpress bus services. Local jurisdictions desiring improvements to Xpress services are presently being required to fund these improvements through local sources. Given the low-cost nature of short- to mid-range recommendations, no recommendations are anticipated for Xpress bus services in the short-range. In addition, service changes have been recently implemented to align with commuter demand and no other service needs have been identified.

Remix

The Remix software program is a powerful transportation planning tool that is used by many transit agencies nationally. Remix is a versatile tool with many functions and capabilities. It can be used to plan new services and present information clearly to the public, elected officials, and decision makers. It can measure the access benefits of existing and proposed transit services. It also can overlay potential improvements with demographic, land use and development information. The ATL maintains a Remix license and can provide access to local jurisdictions for transportation planning purposes. It is recommended that Forsyth County pursue a software agreement with the ATL to gain access to Remix's transit planning capabilities to assist with on-going and future planning efforts.

Operations Recommendations

Operations recommendations are primarily focused on Dial-A-Ride service, as this was identified as being in the greatest need of improvement. Recommendations for changes to Common Courtesy have also been made to improve the efficiency of the Dial-A-Ride system, through serving as a complementary adjunct service.

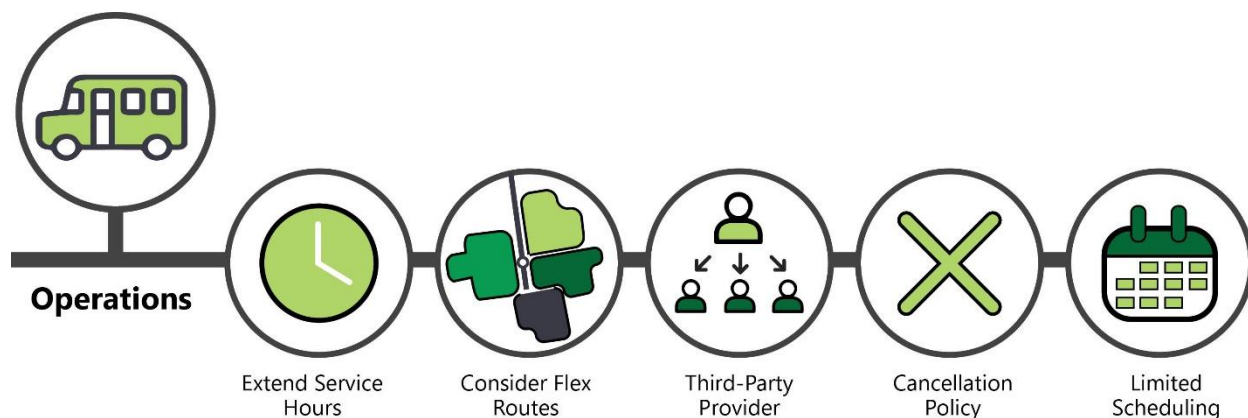


Figure 20. Operations

Based on data analysis, opportunities to serve more passengers with the existing resources was identified. There are several recommended approaches that can result in a greater number of passengers per vehicle trip, which include:

- Distribute vehicles based on high trip-generating locations
- Operating a portion of the service area with flexible services
- Utilize a third-party provider (such as Common Courtesy) for atypical and further removed trips
- Revise the passenger trip cancellation/no-show policy
- Add limited scheduling hours on Sundays

A discussion of each of these approaches, and how they can be applied to Forsyth’s transit service, follows. At the conclusion of this discussion, Table 18 details the recommended implementation steps and timelines for these operational changes.

Extend Service Span

One of the needs identified by the public as well as Forsyth County Public Transportation Staff was the need for extended service hours to better serve the population and a wider range of trip types. To that end, Forsyth County staff is actively working to implement a service span expansion that will include service between 6:30 a.m. and 6:30 p.m. A budget request that would support that service expansion was made to the BOCC earlier this year (2021).

Consider Flex Routes

Flex routes combine the advantages of fixed-route service's defined schedules with paratransit's flexibility in serving customers from curb-to-curb. The service is designed to operate on a fixed schedule at one fixed point where the flex vehicles can connect with each other, and then provide curb service to any address within a five to seven square mile area (Figure 21. Illustration of a Flex Route Service).

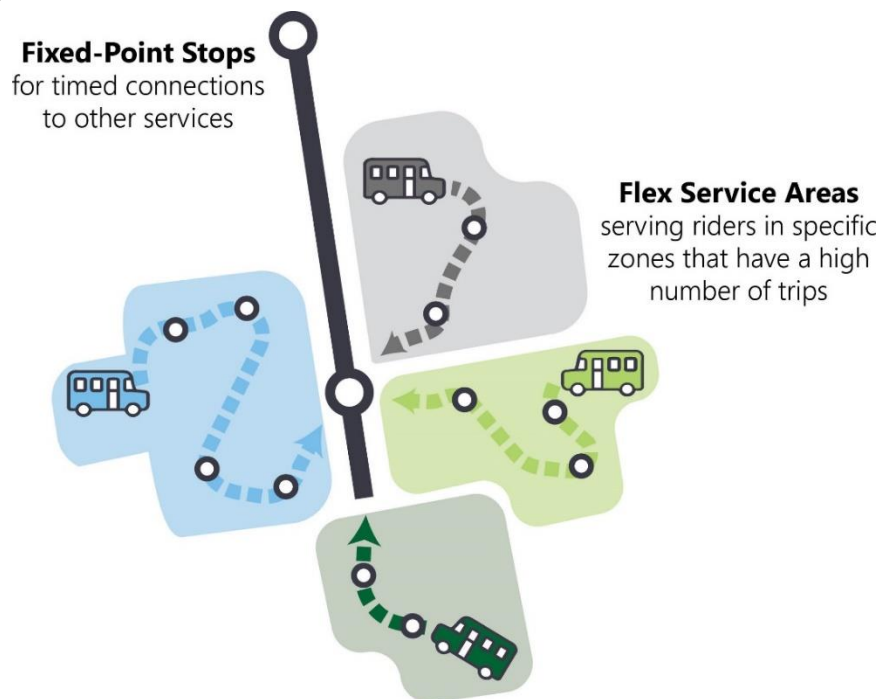
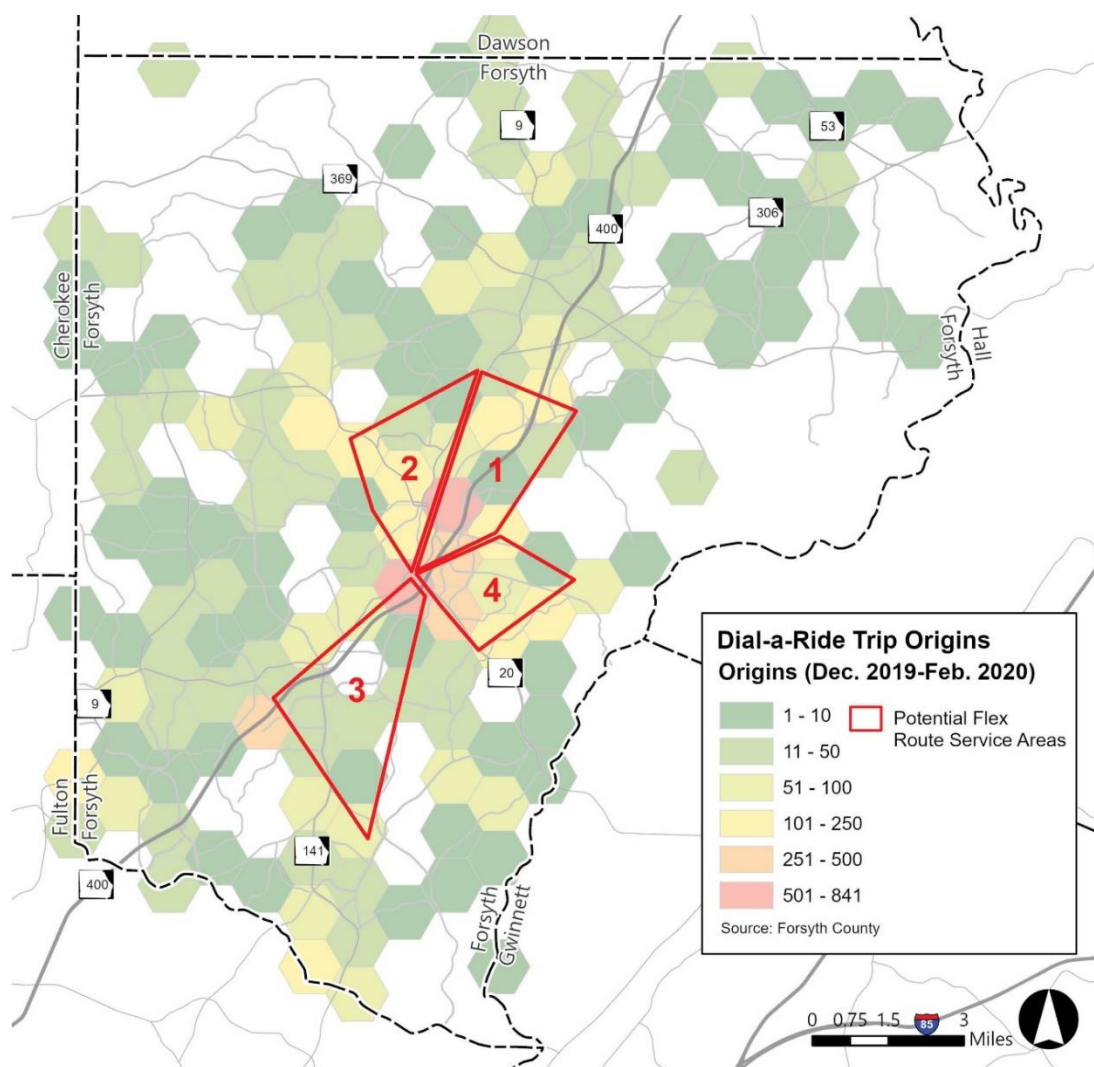


Figure 21. Illustration of a Flex Route Service

As most trips (64 percent of confirmed trips) occur within a sub-area of the county that is roughly centered on Northside Hospital Forsyth, applying a flex route style vehicle scheduling approach could achieve greater efficiencies. In this approach, a vehicle would be assigned a zone of up to approximately seven square miles. Each of these zones would originate/terminate at a central point, in this case, Northside Hospital Forsyth. With this zone size, one vehicle can make a complete round trip back to the hospital each hour.

There are four proposed zones illustrated in Figure 22, which include:

- Northside Hospital / University of Georgia-Forsyth
- Northside Hospital / Forsyth County Senior Center (Providence Presbyterian Church/Creative Enterprises)
- Northside Hospital / SR 141 (Peachtree Parkway) – Sexton Hall
- Northside Hospital / SR 20 (Buford Highway) – Cruse Marketplace



Source: Forsyth County, VHB

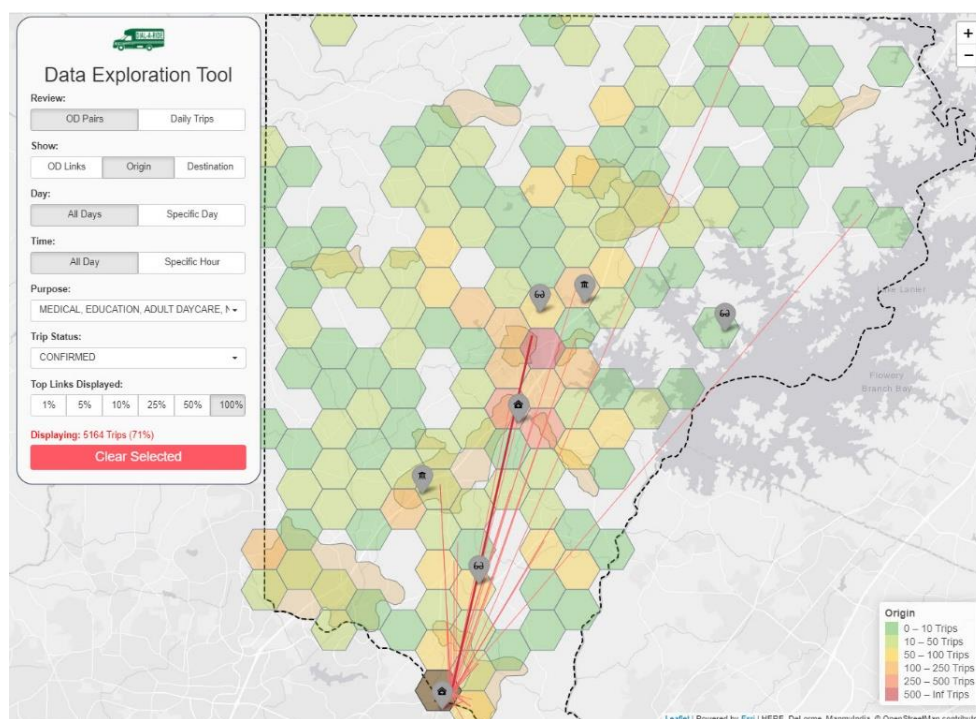
Figure 22. Potential Flex Route Service Areas

These four proposed flex zones cover approximately 3,200 of the 5,169 confirmed trips provided by Dial-A-Ride from December 2019 through February 2020, or 64 percent of the confirmed trips. This share should permit the remaining four existing Dial-A-Ride vehicles to cover the passenger trips that travel to or from areas of Forsyth County outside of the four proposed flex zones.

Distribute Non-Flex Service Vehicles Based on Higher Trip-Generating Locations

Approximately 3,100, or 36 percent, of Dial-a-Ride confirmed trips occur across Forsyth County that extend beyond the four recommended flex route service areas. The trip analysis revealed that approximately 150 confirmed trips during the December 2019-February 2020 period traveled to and from Emory Johns Creek Hospital and Johns Creek Town Center adjacent to the

Forsyth/Fulton County line. Figure 23 illustrates that these trips are fairly concentrated to the north and northeast into Cumming. To improve trip efficiencies, one vehicle could be assigned to this area so that it cycles back to it throughout the service day rather than moving to other areas of the County. This vehicle would also pick-up and drop off passengers at intermediate points, essentially creating a service zone that is less formal than the flex routes but that should assist in reducing the amount of deadhead time and distance. This approach would leave the remaining three vehicles to be scheduled throughout the county to handle trips outside the flex route zones to the north and west of Cumming.



Source: Forsyth County, VHB

Figure 23. Dial-a-Ride Trips Originating from the Emory Johns Creek Hospital Area

Use a Third-Party Provider for Atypical and Further Removed Trips

Today, Common Courtesy is used to fill trip requests that are beyond the existing Dial-A-Ride capacity when reserved at least 24-hours in advance. To provide more capacity through the Dial-A-Ride vehicles, Common Courtesy can be more strategically deployed to deliver trips that are either atypical from the typical service day in terms of their origin and/or destination or where the deadhead time for a Dial-A-Ride vehicle to provide the trip is equal to or greater than the time it will take between the passenger pick-up and drop off. These atypical trips are ones that are like those identified in the trip analysis where just one trip occurred throughout the entire December 2019 to February 2020 period. These trips make up less than five percent of the total confirmed trip volume and add a significant amount of deadhead time.

Revise the Passenger Trip Cancellation/No-Show Policy

In reviewing the Dial-A-Ride trip reservation data, 29.4 percent of all reservations were either cancelled or no-shows. Table 7 provides the number of confirmed trips and number of cancellations and no-shows by day of the week. While Wednesdays have the greatest trip volume, Mondays have the greatest number of cancellations and no-shows.

Table 7. Confirmed Trips, Cancellations and No-Shows by Day (Dec 2019- Feb 2020)

Service Day	Confirmed Trips	Trip Volume Rank	Advanced Cancellations	Cancelled on Arrival & No Shows	Total Cancellations & No Shows	Cancellations & No-Show Rank
Monday	987	4	577	62	639	1
Tuesday	927	5	294	26	320	5
Wednesday	1,115	1	308	26	334	4
Thursday	1,063	2	346	29	375	3
Friday	1,072	3	427	56	483	2
Total	5,164		1,952	199	2,151	

Source: Forsyth County, VHB

The total volume of cancellations and no shows (29 percent overall) suggests that the cancellation / no show policy should be revised to discourage passengers from canceling trips. The current policy listed in the *Forsyth County Dial-A-Ride* brochure states, "Excessive no-shows or cancelations may result in the loss of riding privileges." A more specific policy may help discourage passengers from making trip reservations that they are less certain of making. For example, the policy could be worded, "Canceling or not showing for more than three trips in a 90-day period will result in the loss of riding privileges."

Add Limited Scheduling Hours on Sundays

As provided in Table 7, the greatest share of cancelled and no-show trips occurred on Mondays. A contributing factor for this Monday volume is that the latest riders can call to cancel Monday trips currently is on Fridays up until 3:30 PM before the scheduling office closes. If limited scheduling hours were offered on Sunday afternoons, this change would permit riders to cancel their trip in advance. This change would also require that Monday schedules are developed on Sundays to remove any Sunday cancelations.

Long-Range System Implementation Plan

A long-range system implementation plan for Forsyth County has been prepared to address travel needs anticipated to occur both within the County and from Forsyth County to other regional activity and employment centers over the next 20 years. This represents an aspirational response for the County's public transportation needs that both responds to technical analysis and reflects the desires of the community. Implementation elements of the plan include consideration of future growth and travel patterns, public involvement, Forsyth County staff input, and feedback from the Link Forsyth Project Management Team. While they were influence by community leader and community desires, long-range needs are consistent with analysis found in the Existing Conditions Report included in Appendix A.

The second round of public involvement focused on informing long-range system implementation recommendations for Forsyth. Similar to round one, the second round of public involvement included stakeholder meetings, commissioner meetings, public meetings, focus groups, an online and paper survey, and a market-based focus group. Feedback from the public helped prioritize microtransit zones, park-and-ride locations, and regional destinations as key elements of Forsyth County's long-range public transportation strategy. A more complete summary of the public input gathered during round two is included in Appendix H.

The long-range system implementation plan began with a definition of long-range needs in the County and translation of those needs and community desires into an aspirational public transportation network. The full long-range needs memorandum can be found in Appendix C: Long-Range Needs Memo. Specific steps undertaken to develop the long-range aspirational network are illustrated in Figure 24.

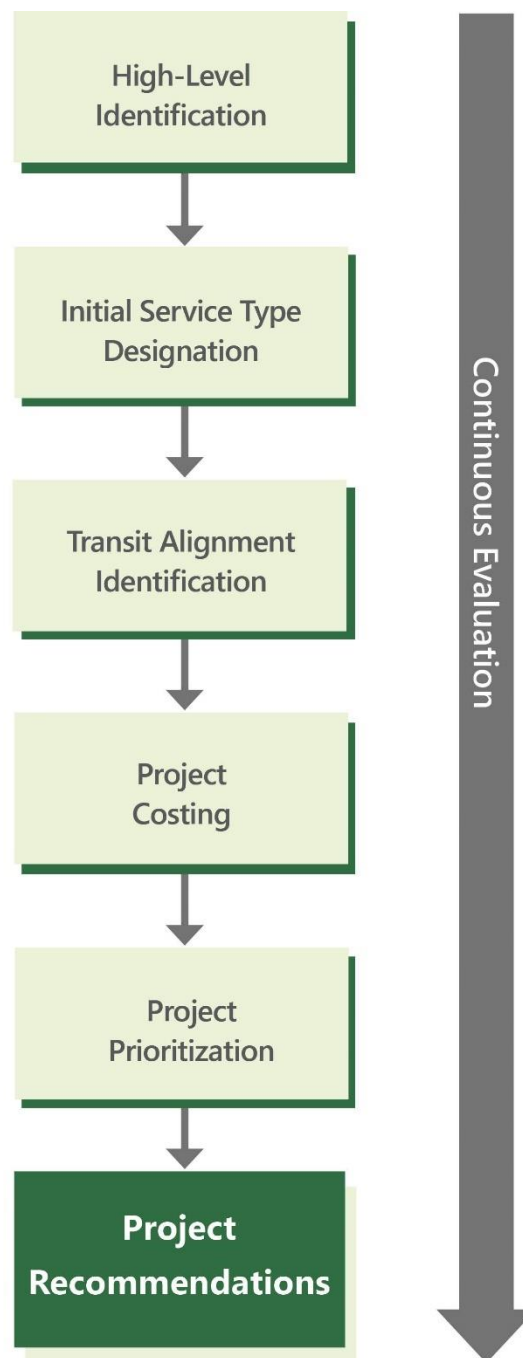


Figure 24. Project Recommendation Process

Planning Considerations

Understanding the relationship between where people live, where jobs are located, and how people travel led to the development of the proposed service types and alignments included in the Long-Range Plan. The evaluation of demographics, socioeconomic data, and travel demand resulted in a travel flow assessment that provided an initial guide for determining demand for public transportation services.

Sufficient development densities are needed to support public transportation investment, as documented in *TCRP Report 167: Making Effective Fixed Guideway Transit Investments*. This document provides guidance on when to invest in a higher level of public transportation service (i.e., traditional fixed bus route service versus higher-capacity transit service) and was leveraged as a guide for Link Forsyth's long-range recommendations.

Figure 25 indicate under what employment and household density conditions specific modes of public transportation should be considered. Figure 25 indicates that local bus service is appropriate for areas that have an employment density of 15 to 20 jobs per acre. Employment densities that are higher than 20 jobs per acre are likely to be able to sustain higher capacity transit options, while employment densities that are lower than 15 jobs per acre, are likely to sustain a more coverage-based service, like demand response.

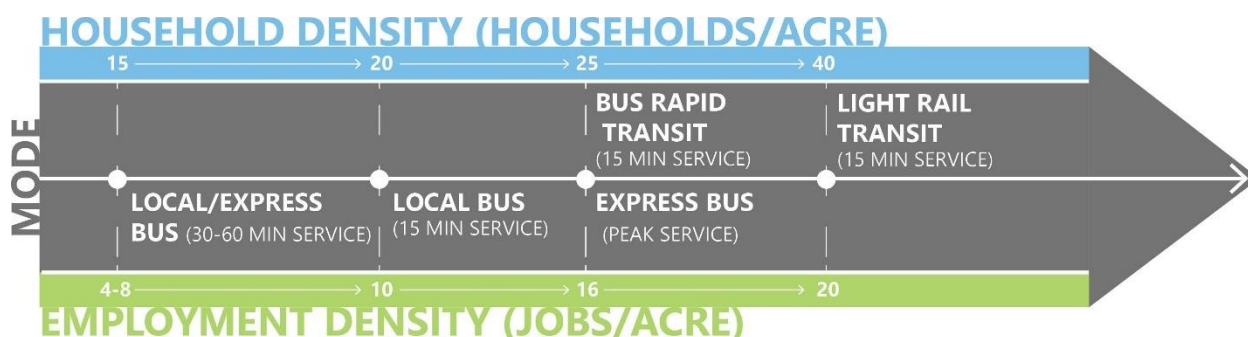


Figure 25. Employment and Household Density by Transit Mode

Figure 25 also indicates household densities that would be appropriate for different mode types. Household densities between 4 to 10 are likely to sustain local bus service. Areas where household densities are between 10 to 16 can likely be considered for a higher capacity transit service; areas where household densities are below 4 are likely to sustain a more coverage-based service, such as demand response.

When compared to the existing employment and population densities in Forsyth County it is apparent that a different public transportation service model may be required to meet the community's needs. Figure 26 shows population density in Forsyth County in 2015, based on ARC data. Most of the County is below 4 households per acre; the only area within Forsyth County that sustains higher densities is near the Cumming area. Figure 27 uses ARC's household projections for 2050 and shows a limited number of other areas in the County greater than the 4 households per acre threshold. Most of these areas are concentrated in and around the City of Cumming and in proximity to the GA 400 corridor.

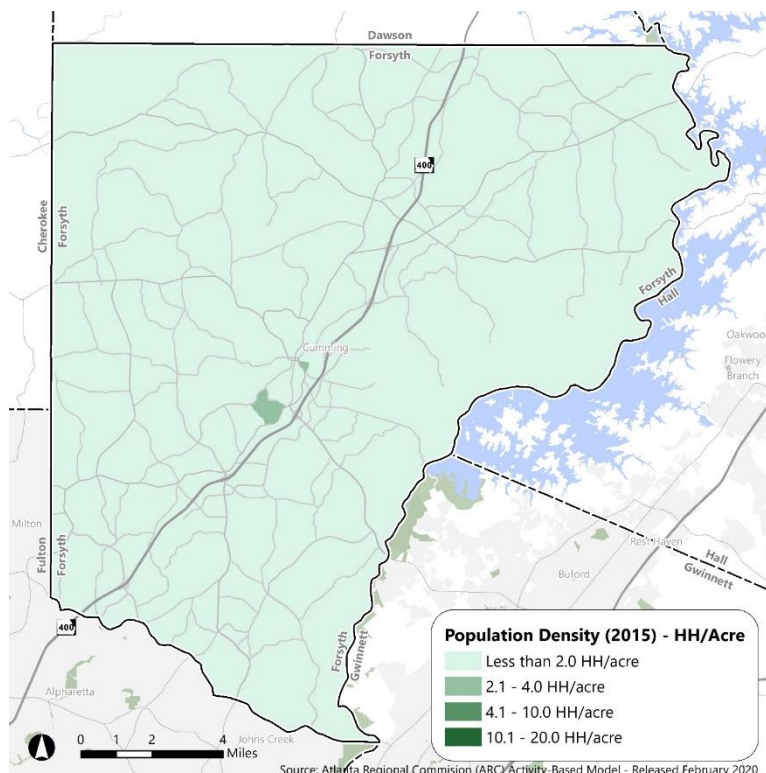


Figure 27. Population Density (2015)

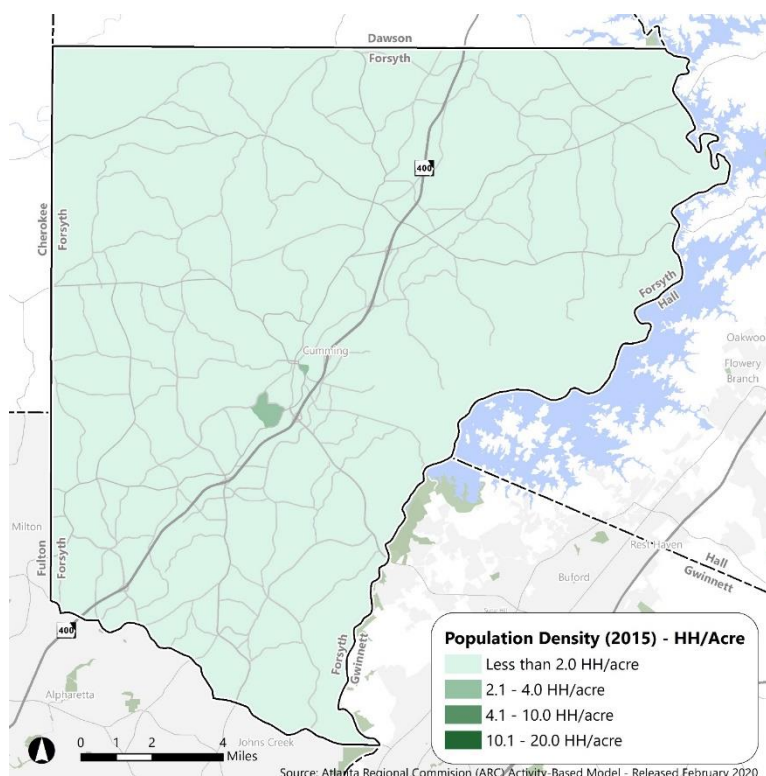


Figure 26. Population Density (2050)

Figure 28 illustrates employment density in Forsyth County as of 2015, based on ARC data. Most of the County has an employment density of less than 5 jobs per acre; the only area that sustains higher densities is near the Cumming area and south of the county near North Fulton. Figure 29 uses ARC's employment projections for 2050 and highlights similar areas with a slightly higher concentration compared to 2015.

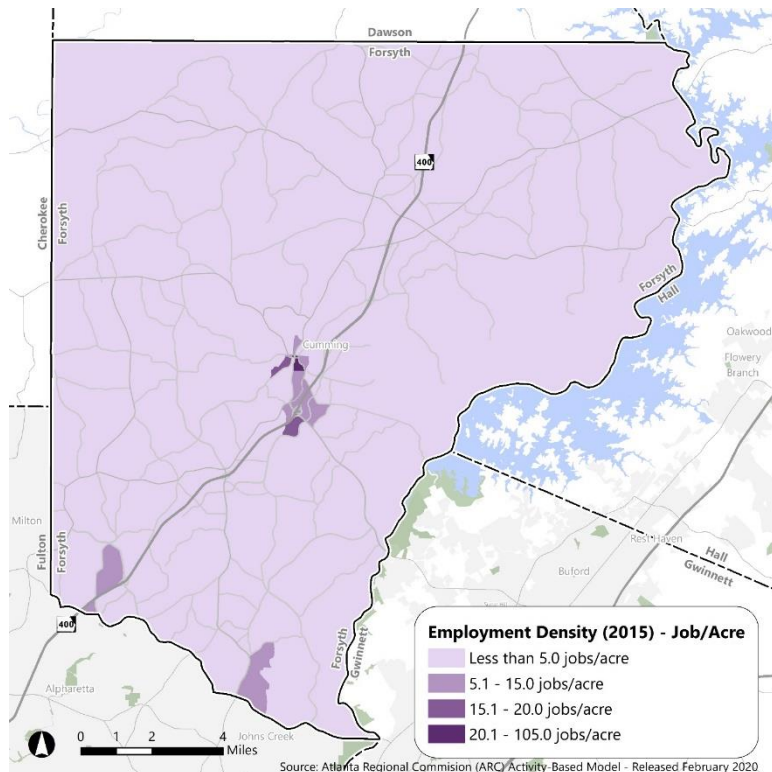


Figure 28. Employment Density (2015)

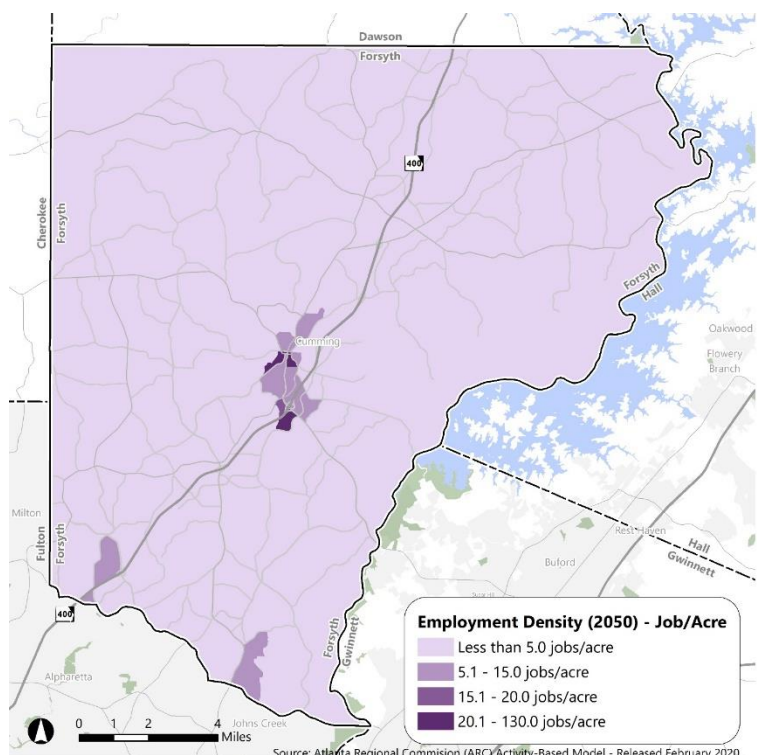


Figure 29. Employment Density (2050)

Transit Modes Considered

An array of transit modes was initially considered for Forsyth County's priority corridors based on the existing conditions analysis. The service modes identified stem from the distribution of land use activity and travel patterns observed in the initial analyses. This is important as it serves as the basis for a simplified organization of a more robust countywide public transportation service delivery. That organization consists of two distinct geographic elements, employment and activity along the SR 400 corridor and employment and activity centers beyond the SR 400 corridor.

- **SR 400** – SR 400 serves as the most significant transportation artery within Forsyth County. The highest concentrations of commercial and residential activity are located along the north-south corridor. As a result, this corridor, and adjacent residential and commercial activity, is considered to have the greatest potential for public transportation.
- **Geographic Coverage** – Beyond the activity concentrated along the SR 400 corridor, there is a strong desire to provide some level of public transportation service throughout the entire County.

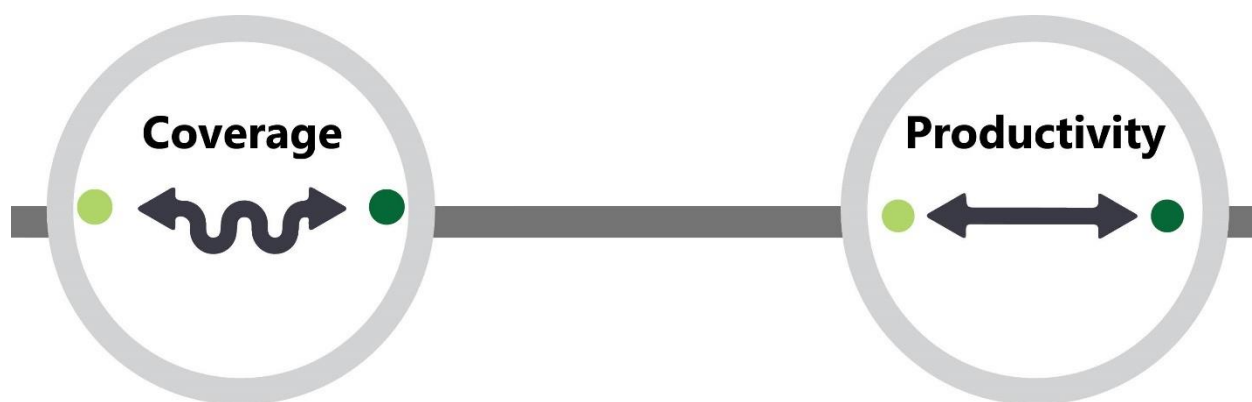


Figure 30. Transit Mode Continuum

It is important to emphasize that the two service plan elements of coverage and productivity are not mutually exclusive but must be considered and balanced to establish an appropriate long-range public transportation service network. The plan elements reflect opposite ends of a transit service continuum, often considered opposing transit policy directives (Figure 30). The different service types identified within the Forsyth program of improvements will overlap within that continuum and, more importantly, should overlap in terms of their interoperability. This is paramount from a customer perspective. More detail regarding service interoperability and service integration (i.e., fare policy) will be detailed in later sections of this report.

Land use, activity center, and population and employment density information reviewed in the existing conditions assessment point to an operating environment where fixed-route operations will not likely be productive within Forsyth County. This was particularly true moving further away from the SR 400 corridor. That conclusion led to the consideration of new and innovative forms of public transportation delivery that can provide countywide geographic coverage while enhancing mobility to a broad cross-section of the community, shown below in Figure 31.

The resulting service types identified to provide geographic coverage include Microtransit and third-party services, in combination with an expansion to the existing Dial-a-Ride operation. In all, five initial service modes were identified to address the travel needs within the two major elements of the service plan. Table 8 lists the initial service modes and provides a description for each.

Table 8. Transit Modes

Plan Element	Service modes	Description
SR 400	Commuter Bus	Point-to-point, peak hour express service typically targeting long distance work trips. Commuter services are currently being served in Forsyth County by the regional provider, Xpress Bus.
	Regional Connector	All-day, bidirectional, limited stop service operating on SR 400 and connecting to major activity hubs within the County. An example of this type of service in the region is offered through CobbLinc's Rapid 10 service.
Geographic Coverage	Microtransit	Blended curb-to-curb and fixed-route service that operates within a defined geographic zone and that targets lower density areas. These services typically employ the use of technology to provide same-day trip requests. An example of this service in the region is in Hall County, GA, offered through WeGO.
	Third-Party	Taxi voucher programs that are supplemented with service agreements with Transportation Network Companies (TNC). Forsyth County currently leverages Common Courtesy, which is a third-party transportation provider.
	Demand Response	Door-to-door service with broad geographic coverage and which commonly requires special eligibility. This service is most closely associated with the existing Dial-a-Ride service.

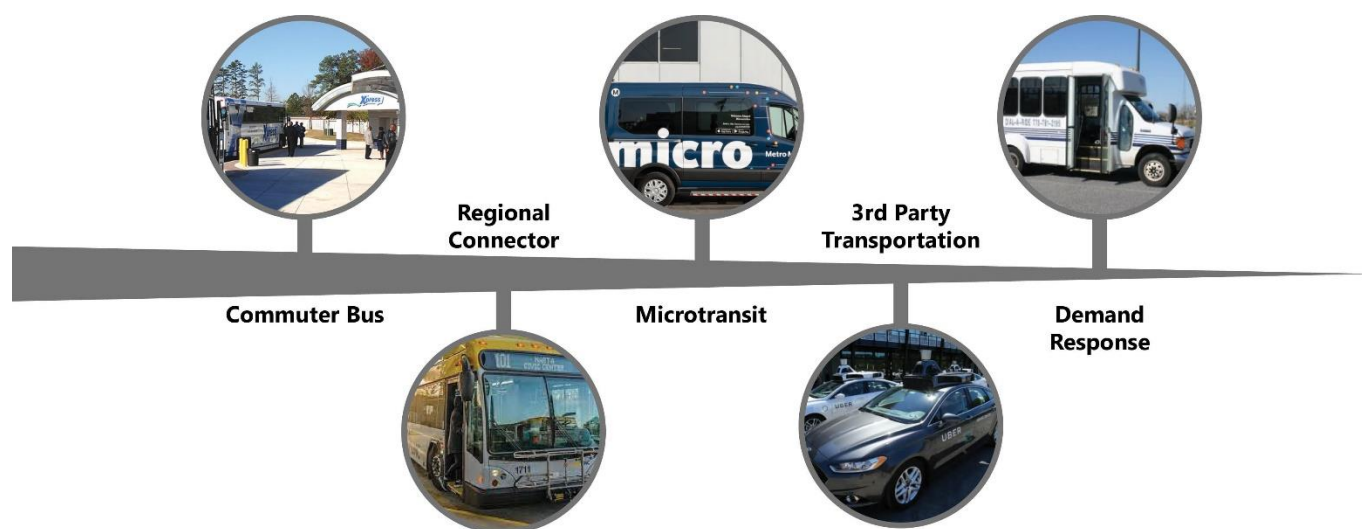


Figure 31. Transit Modes Considered

Long-Range Network Design

Development of the final long-range network design is based on the technical analysis completed and included in Appendix A: Existing Conditions that provide an overview of demographic, socioeconomic, and travel pattern analysis. The streamlined efforts assisted in the identification of a complementary range of transit services that leveraged all five transit modes considered.

Commuter Bus

Commuter bus services require consideration of how trips begin and end, as they serve as a one-seat ride for workers on weekdays during morning and evening peak periods. An examination of commuter travel patterns informed the identification of travel markets and locations that are best suited to serve as stop locations. For Forsyth County, Link Forsyth considered where park-and-ride facilities should be located within the County as well as the most likely Metro Atlanta destination points.

Forsyth County has one existing park-and-ride location that Xpress own, operates, and maintains. Beyond the existing park-and-ride at Cumming, additional locations were considered for the long-range plan. When identifying future park-and-ride locations and destinations, Link Forsyth considered the following:

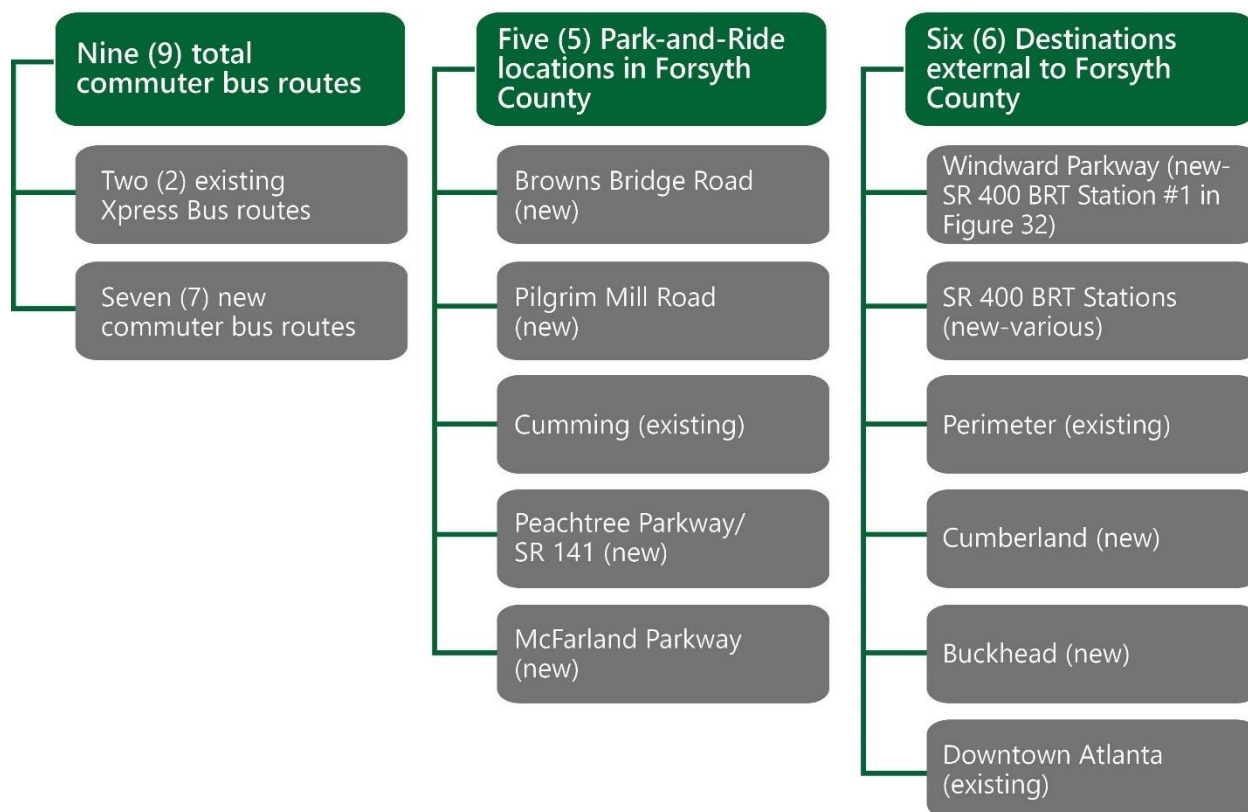
- What is the Forsyth County commuter market?
- How much of the market can be captured by a new park-and-ride facility?
- What is the proposed park-and-ride's relationship with associated interchanges?
- How will the proposed park-and-ride access GA 400 and what are the implications of the SR 400 Express Lanes project?

Origins and Destinations

Based on technical analysis and public feedback, four origin locations beyond the Cumming Park-and-Ride were identified: Browns Bridge Road; Pilgrim Mill Road; Peachtree Parkway/SR 141; and McFarland Parkland. An additional four destinations were identified to connect from Forsyth County: Windward Parkway Park-and-Ride*; GA 400 Bus Rapid Transit (BRT) Stations (various); Buckhead; and Cumberland.

Note: The Fulton County Transit Master Plan (TMP) identified the Windward Parkway Park-and-Ride as the end of line, or terminus, of a BRT extension from the existing MARTA North Springs heavy rail station. This proposed commuter connection from Forsyth County would provide a direct connection to the proposed, by as of yet unfunded, BRT line.

The resulting service alignments and corresponding stop locations are shown in Figure 32. Stop locations are illustrated in Figure 33. The final set of commuter services consists of the following:



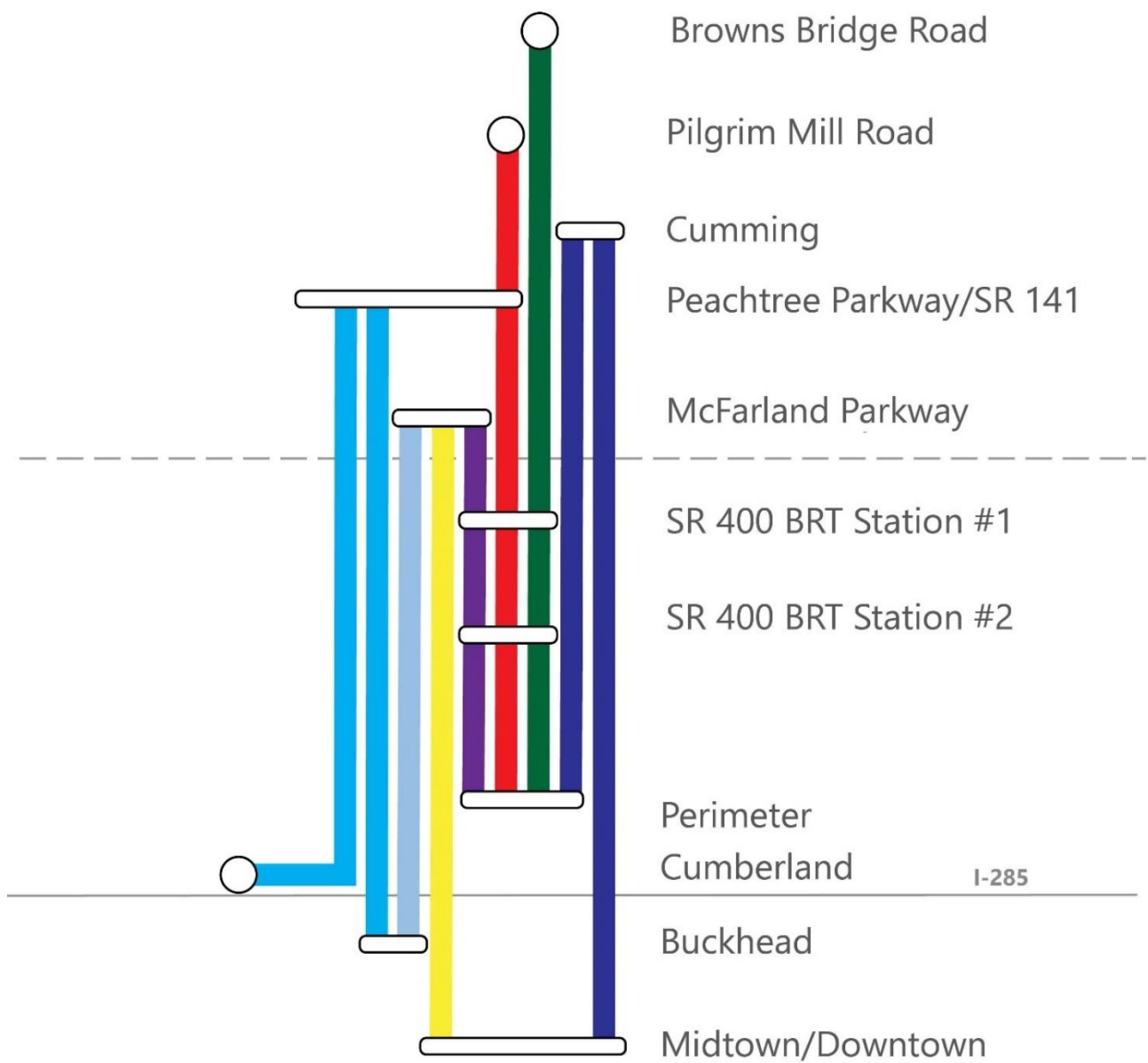


Figure 32. Proposed Commuter Bus Origins and Destinations

Regional Connector

In addition to commuter services to areas outside of the County, it is recognized that there are high levels of travel internal to Forsyth County along GA 400. GA 400 serves as the major transportation artery within the County and a regional connector service is proposed to operate on the corridor to address those intra-county travel needs.

The regional connector would operate all-day, bi-directional service and would supplement commuter services with that all-day connectivity between Browns Bridge Road and Windward Parkway (Figure 33). The initial service is proposed to operate on weekdays with service to be added on Saturdays in later years as warranted.

Regional connector service stops would serve as hubs where customers can connect to other regional and Forsyth County public transportation services. That connectivity will create multiple travel options and service combinations for public transportation system customers.

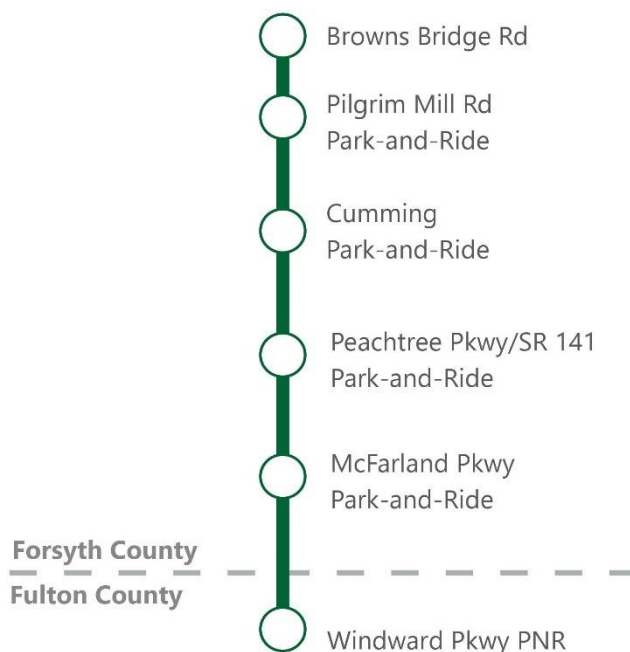


Figure 33. Forsyth SR 400 Regional Connector

Microtransit

Microtransit is a new and innovative form of public transportation service delivery that is recommended for Forsyth County to consider as an integral component of its long-range network. This service aims to provide countywide geographic coverage and enhance mobility to a broader cross-section of the community. This service combines curb-to-curb and fixed-route operations within defined geographic zones. These services typically employ on-demand technology to provide same-day trip requests.

Microtransit, and variations of other on-demand transit modes, have become more prevalent over the last several years and are a response to the growing use of micromobility in the form of rideshare/ride hail technology platforms. That growing transportation trend has impacted and changed travel behavior and user expectations, prompting transit agencies across the country to bridge traditional transit service with new technology to fill unmet travel needs. In practice, many transit agencies across the nation are piloting, or have fully implemented microtransit services to support first/last mile objectives and to better serve lower density areas. Details and additional information regarding microtransit services are included in the microtransit whitepaper in Appendix F.

Six microtransit zones are identified for the long-range plan. Final delineation of these zones is consistent with the travel patterns within Forsyth County that exhibit the highest levels of travel activity and have been vetted by Forsyth County staff and the public. The six zones are illustrated in Figure 34 and Table 9 lists key demographic and transit service metrics, general operating requirements, and major destinations for each zone.

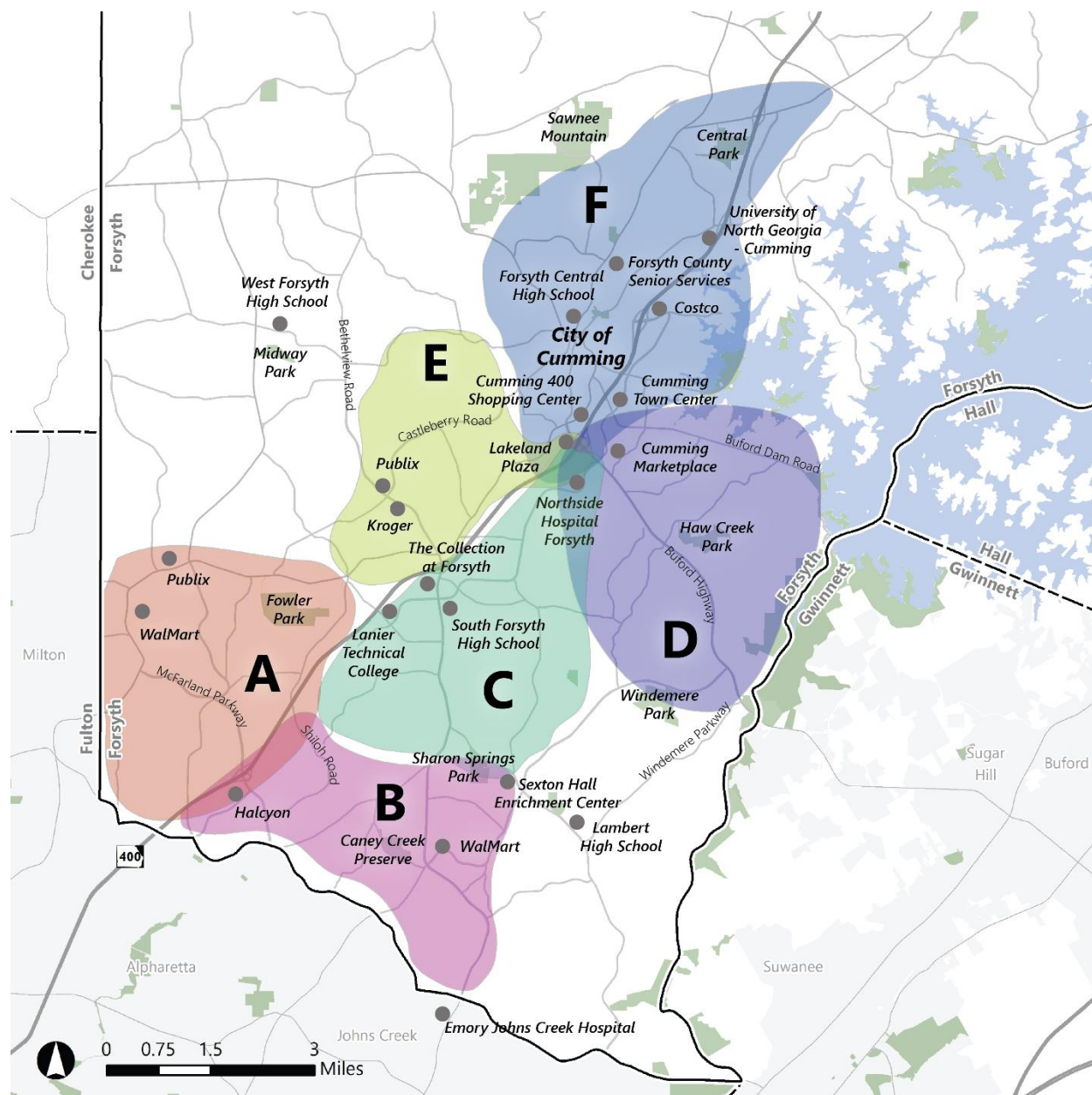


Figure 34. Microtransit Zones

Table 9. Microtransit Zone Metrics, Operating Characteristics, and Major Destinations

	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
Metric (# per square mile)						
Future Population Density (2040 ARC)	2,019	2,387	1,767	1,844	2,402	2,093
Future Employment Density (2040 ARC)	1,654	1,995	1,058	664	947	1,996
Senior Population Density (2017 ACS)	83	143	171	166	163	161
Low Income Population Density (2017 ACS)	85	57	49	49	185	111
Dial-a-Ride Trip Density (Dec 2019 to Feb 2020)	54	72	77	137	91	305
Common Courtesy Trip Density (Dec 2019 - Feb 2020)	4	8	15	8	22	82
Zone Size (square miles)						
Zone Size (square miles)	16	13	10	15	9	13
Vehicle Requirement ^{1,2}	5	4	4	5	3	4
Major Destinations						
Proposed McFarland Parkway Park-and-Ride	•	•				
Halcyon (near McFarland Parkway)	•	•				
Fowler Park	•					
Proposed Peachtree Parkway Park-and-Ride			•			
Lanier Technical College			•			
Sexton Hall Enrichment Center		•	•			
Emory Johns Creek Hospital		•				
Existing Cumming Park-and-Ride				•	•	•
Northside Forsyth Hospital			•	•	•	•
Smithfield Foods					•	•
Downtown Cumming						•
Forsyth County Senior Services						•
Aquatic Complex/UNG-Cumming						•
Proposed Pilgrim Mill Park-and-Ride						•
Cumming Marketplace			•	•		•
Center at Charles Place						•
Hearthstone Lodge Community Center						
Center at Central Park						•

¹Vehicle requirement based on a 30-minute response time

²Microtransit fleet is assumed to consist of light to medium duty, wheelchair accessible vehicles such as what are currently being used for the Dial-a-Ride service

Key service characteristics for a Forsyth microtransit service are defined in Table 10. The table describes the customer service and operational components of the service. In addition to the procurement of a preferred reservation and trip planning software platform, the Forsyth team will need to develop specific service delivery and operational procedures, including how to handle cash fare payments and provide for wheelchair accessible vehicles.

Table 10. Forsyth Microtransit Service Characteristics

Service Characteristic	Description
Service Type	On-Demand Curb-to-Curb Shared Ride
Days/Hours of Service	Weekday: 16 Hours Daily Weekend: 14 Hours Daily
Service Area	Trips begin and end within respective service zones (See Figure 34)
Reservations	Mobile Application By Phone Online
Payment Type	Credit/Debit Card Cash
Wait/Response Times	Immediate Response – 30-Minute Window No Advanced Bookings
ADA	Wheelchair accessible vehicles (WAV) will be available

3rd Party Transportation

Given the priority to provide broad service coverage throughout the entire County, third-party services are proposed for operation in areas outside of the microtransit zones, as shown below in Figure 35. Third party services are operated by an entity outside of the County and are used by transit agencies to supplement existing public services. The services are a voucher-based program and can make use of existing Transportation Network Companies (TNC) such as Lyft and Uber, and/or taxicab companies.

This service structure is ideal for reaching more remote areas within Forsyth County that are costly to the agency on an individual trip-by-trip basis. By providing a subsidy for each trip taken through a voucher, Forsyth County residents would have access to public transportation for their travel needs. The level of subsidy will allow users to define what trips are most important and how often the service is used. This allows overall demand to be defined by the user and program costs can be more closely monitored and controlled.

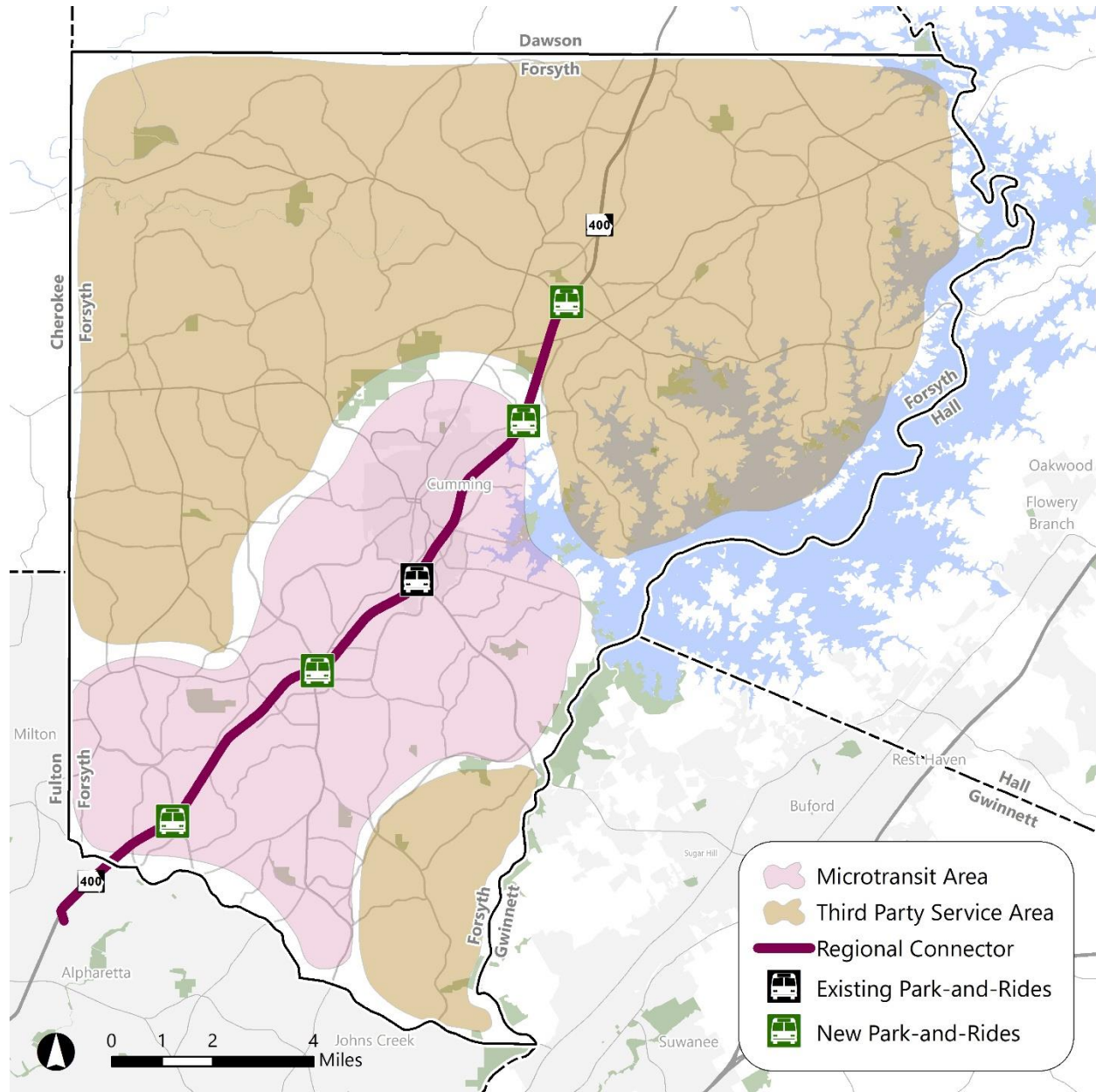


Figure 35. Third Party Service Area

Forsyth County Public Transportation leverages Common Courtesy, which is a third-party broker for trips on Uber and Lyft for eligible clients. If Forsyth County continues to partner with Common Courtesy, the County should consider procuring another provider to be able to cover riders who are not eligible for Common Courtesy trips today.

In the Long-Range Needs network, third party services would be expanded and available to everyone and anyone traveling outside of the microtransit zones. Forsyth County staff would work with the third-party service providers to define eligible trips, establish a process for reimbursement or payment for services, and how to define those elements within their respective software platforms (Figure 38). Separate service providers may be required to facilitate cash fare payment and provide for wheelchair accessible vehicles. Examples of similar applications exist throughout the country including a Pinellas County, Florida example which is documented in Appendix F: Microtransit White Paper.

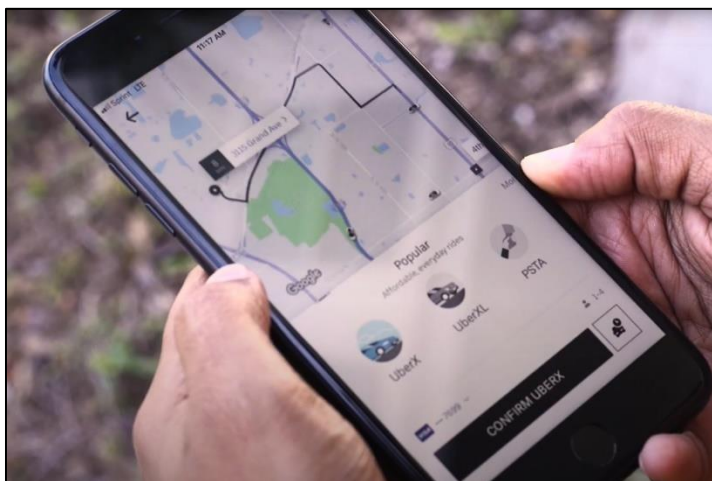


Figure 36. Mobile Technology in Transit

Important considerations for deployment of the third-party services include:

- **Level of subsidy** – A recommended third-party service subsidy level is outlined in a separate fare policy memo.
- **Monthly cap on number of trips** – Monthly limits on the number of trips that can be taken by any one user will assist in controlling costs.
- **Data Reporting** – Trip-by-trip reporting detail, including specific pick and drop off locations, should be required for payment for services.
- **Wheelchair accessible vehicles** – May require a separate service provider.
- **Cash fare payment options** – May require a separate service provider.

Demand Response

The Long-Range Needs network emphasizes the continued operation of dial-a-ride services, but with more strict eligibility requirements. (Table 11) This will target the availability of low-cost, door-to-door transportation service for those with the greatest need, such as persons with disabilities and the elderly within the County; as shown below in Figure 37. Users of the existing demand response service that do not qualify under the new eligibility requirements would be transitioned to one or more of the new service options identified in the plan.

Table 11. Demand Response Service Eligibility Requirements

Service Characteristic	Description
Forsyth County Resident Age 18 or Older	Forsyth County Resident Age 18 or Older <i>AND ONE OF THE FOLLOWING:</i> Person with a disability Older adult

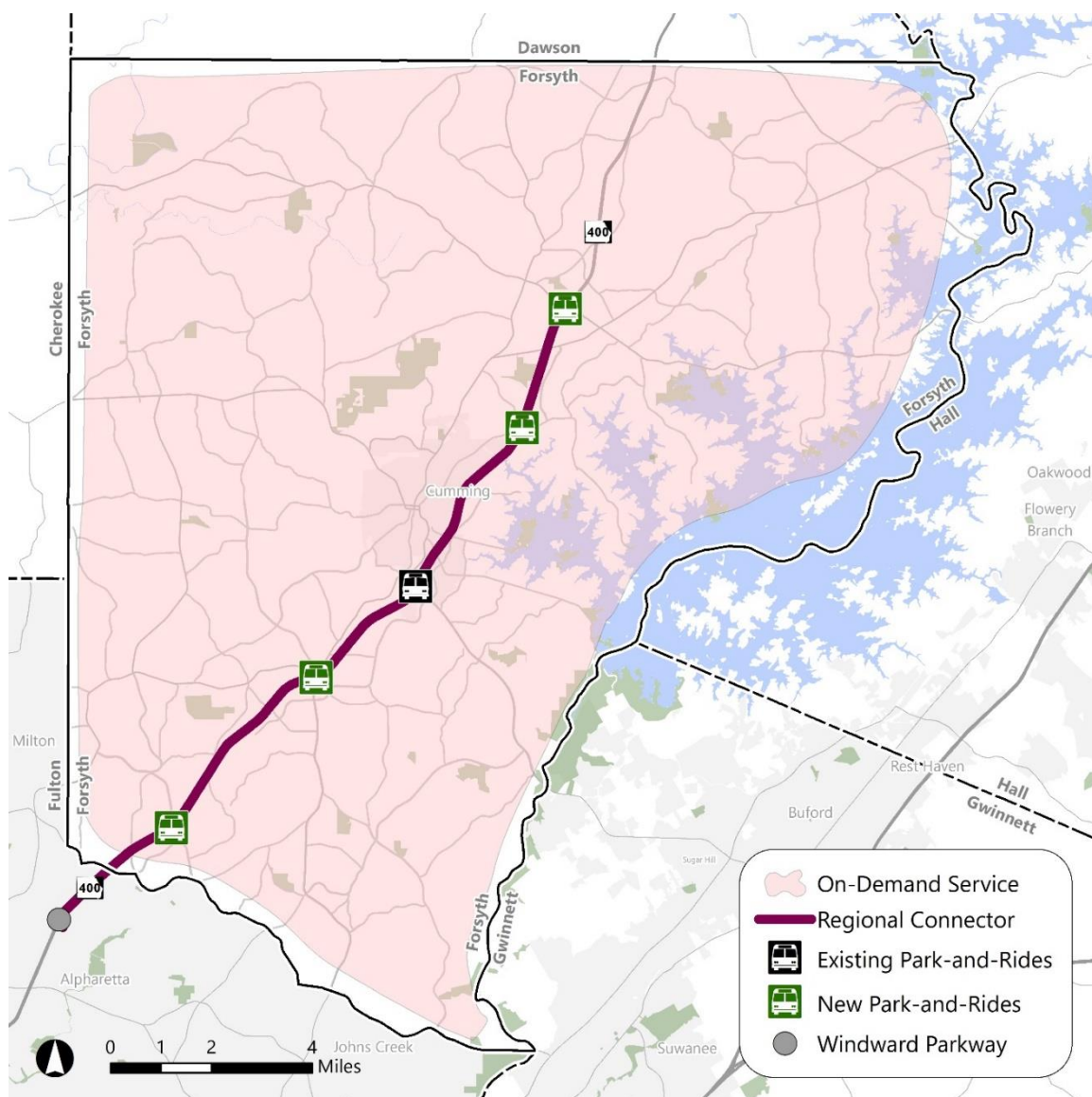


Figure 37. On-Demand Service Area

Public Involvement – Phase 2

The second round of public involvement for Link Forsyth, Forsyth County's Public Transportation Master Plan, began in the spring of 2021 and continued through the end of July 2021. Public involvement efforts engaged stakeholders, Forsyth County Commissioners, focus groups, and community members. Due to the ongoing Covid-19 pandemic, the second round of public involvement remained virtual. During virtual meetings, interactive polling was used to gain input from participants. Participants were also invited to engage in open discussion as well as communicate via the chat feature. Additionally, physical surveys were distributed to key locations throughout the County and an online survey was also available on the County's website.

The second round of public involvement focused on presenting key findings and preliminary recommendations based on research and analysis and feedback from the first round of public involvement. From this, the project team hoped to gain feedback on the short-, mid-, and long-range needs to help finalize recommendations for inclusion in the final report.

The second round of public engagement presented the public with key questions regarding the menu of services presented in the Long-Range System Implementation Plan. The prioritization of the menu of services allowed for the project team to understand what services were important for the public, and thus be implemented first if funding allows.

The public was largely supportive of the six identified microtransit zones with the central/north Cumming area being the most preferable. Areas like Browns Bridge Road and connections to North Fulton, Downtown, and Midtown were also preferred for park-and-ride locations and regional destinations. Ultimately, feedback received from the public was very supportive of the 20-year vision for public transportation in Forsyth and helped to make recommendations that cater to the growing needs of Forsyth residents.

Types of Engagement

During this phase of public engagement, the following types of outreach were utilized:

- Virtual Stakeholder Meetings
- Commissioner Meetings
- Interactive Public Meetings
- Focus Groups
- Online and paper surveys
- Market-based research

Public Input

As part of the second round of public outreach efforts, the residents of Forsyth County were surveyed to gather input on their needs and priorities for public transportation. The survey was provided in an online format, as well as on paper. Paper surveys were used to gather responses from residents that may not have access to the internet.

Responses were collected from May 21, 2021 to July 15, 2021. Surveys were distributed across the County at libraries, senior centers, assisted living facilities, community non-profits, doctor's offices, and churches. Locations included Sexton Hall Enrichment Center, Forsyth County Senior Services, Forsyth County Library, The United Way, The Place at Forsyth, Forsyth Dial-a-Ride, and many others. In total there were 485 total submissions, 360 from the online survey and 135 from the paper survey.

Results of Online Survey

Menu of Service Options

Multiple questions were asked about the menu of service options and how the community would prioritize specific services among others. Link Forsyth asked the public to think about how public transportation services would support three different types of riders.

- Rider 1 - a retired individual using transportation for shopping and medical appointments
- Rider 2 – an individual who works non-traditional hours outside 8:00 a.m. to 5:00 p.m. and does not have a vehicle
- Rider 3 – a commuter who travels to an office location south of Forsyth County and works traditional business of 8:00 a.m. to 5:00 p.m.)

The six microtransit zones were shown on a map of the County. The participants were asked to prioritize the zones for certain rider types (Riders 1 and 2). Additionally, the seven regional destinations were presented to the survey participants and were asked to prioritize travel to these destinations for various rider types. Based on feedback from the online survey, microtransit zones C, D, and F were determined to be the community's highest priorities. Feedback from the public also indicated a need to extend microtransit zone F further north to cover Browns Bridge Road.

Questions were also asked regarding the array of commuter bus services that were presented in the menu of service options in the context of Rider 3. The participants were asked to prioritize park-and-ride locations within Forsyth County that included: Browns Bridge Road; Pilgrim Mill Road; Peachtree Parkway/ SR 141; and McFarland Parkway. Browns Bridge Road and McFarland Parkway were the highest indicated priorities by the public to supplement the existing Cumming Park-and-Ride facility. Participants were also asked to prioritize destinations that the commuter

bus services would serve. This included destinations along GA 400 in North Fulton, Perimeter, Downtown/Midtown, Buckhead, and Cumberland. Of the responses received, Perimeter and Downtown/Midtown continued to be the priorities (and are aligned with existing Xpress bus services provided today).

Public Transportation Services – If Available

Multiple questions were asked regarding their likelihood to use transit within and outside of Forsyth County if new transit services and connections were provided. 52 percent responded that they or someone they know would use new transit services inside Forsyth County and 57 percent responded that they or someone they know would use new transit services outside of the County. Roughly 23 percent of the respondents said they would not use new transit services outside the county. Overall, the results from this question indicate that there is a majority interest in using new transit services that serve destinations outside of Forsyth County. There is also slightly more interest in using new transit services to destinations outside the County than within the County (57 percent to 52.5 percent, respectively).

Making Public Transportation a Viable Option

Lastly, the survey participants were asked what else would make public transportation a more viable option for travel in Forsyth County. Out of the 485 submitted surveys, 216 respondents answered the open-ended question. Although each entry was unique, there were common themes present across all responses that aligned with when this question was asked during the first round of public engagement. The most common theme was the need to increase public transportation services to destinations outside of Forsyth County. There were mentions of service to the airport, as well as commuting options to into downtown Atlanta. A significant amount of these responses also recommended connecting Forsyth’s public transit system to existing MARTA stations and routes outside of the County.

The other most prevalent theme was improving services within Forsyth County. Many respondents suggested more frequent service, as well as more stops at important commercial centers. Others requested that Dial-a-Ride be easier to order, and that the reliability be improved. Lastly, many people requesting improvements to services within the County recommended increasing the span of service to better serve commuters and workers with traditional 9-to-5 shift schedules and non-traditional shift structures.

Finally, there were three other themes that were prevalent in responses, but not as common as the two previous themes. A grouping of respondents expressed that they are not supportive of public transit expansion in Forsyth County. Another small group expressed that they are

concerned about the safety and security of public transit. Lastly, a small group of respondents mentioned that the affordability of public transportation options should be made a priority.

Market-Based Research Focus Group

To get a broader cross section of opinions regarding public transportation in Forsyth County, a focus group with participants selected through market-based research was conducted. Participants of the market-based research were screened and recruited before taking part in the bulletin board discussions. An online discussion board was used to communicate with the participants. Moderators posted topics and questions twice a day for three days. Participants were asked to go to the Bulletin Board at least twice daily at their convenience, first to answer the questions, and then to review and comment on answers posted by other participants. Objectives for the market-based research included the following:

- To introduce and educate Forsyth County residents to Link Forsyth and their role in the comprehensive traffic planning project.
- To evaluate Forsyth residents' current transportation behavior within Forsyth, into adjacent counties, and throughout the Metro Atlanta area.
- To evaluate residents' interest in and willingness to consider public transportation for their own and others' needs.
- To understand key messaging that might be used to further communicate the Plan to Forsyth residents.

Key takeaways from the Bulletin Board included the following:

- All the participants in the discussion owned or had access to a vehicle
 - None of the participants used Forsyth's public transportation options.
 - Only one participant was aware of Forsyth County's Dial-A-Ride/Rideshare or Senior Services Transportation Services.
- About half of the participants travel outside Forsyth County daily or frequently and most of the participants used MARTA when traveling in the Metro Atlanta area.
- After reviewing information about Link Forsyth, nearly all the participants agreed somewhat or strongly with the focus of the Plan.

Menu of Service Options

Based on the rider profiles presented (Riders 1, 2, and 3), the following indicated the input received from the focus group. For Rider 1, a retired individual using transportation for shopping and medical appointments), the focus group shared that Rider 1 would best be served by transportation services in Areas F (around Cumming), E (Castleberry Road to the Collection), and C (Northside Hospital), in rank order. For Rider 2, an individual who works non-traditional hours

outside 8:00 a.m. to 5:00 p.m. and does not have a vehicle) would be best served with transportation services in Areas D (Marketplace) and C (Lanier Tech), in rank order. For Rider 3, a commuter who travels to an office location south of Forsyth County and works traditional business of 8:00 a.m. to 5:00 p.m. would be supported by new park-and-ride locations at Location A (Browns Bridge at GA 400) and Location D (MacFarland Parkway at GA 400) (tied). In addition, the focus group shared that Rider 3 would also be supported by new transit connections at Location C (Perimeter), B (somewhere in North Fulton County near Roswell/Alpharetta) and Location A (Windward Parkway), in rank order.

To understand the level of priority between the modes presented, participants were given an overview of five public transportation service options (including Commuter Bus, Regional Connectors, Microtransit, Third-party Transportation, and Demand Response Transportation). Participants were most interested in Commuter Bus, Regional Connectors, and Third-Party Transportation, followed by Microtransit. Participants acknowledged that Microtransit was a new terminology, and most had not encountered that service delivery strategy prior. In terms of effectiveness in meeting Forsyth County's needs, participants rated Commuter Bus highest.

Public Transportation Services – If Available

Most participants were unsure whether they would personally use the new public transportation service options for travel inside Forsyth County, but most believed that they knew people who would use them. When traveling outside of the County, most of the respondents said that they would personally and that they knew people who would use the services as well.

Making Public Transportation a Viable Option

When asked what would motivate them to take public transportation, an app that would make using public transportation easier, if the total cost of driving is too expensive, and if taking public transportation to their destinations is faster than driving was mentioned equally.

Public Transportation

Attitudes about public transportation improved slightly from the first day of the bulletin board until the end. After participating in the bulletin board and learning about Link Forsyth plan and the options under consideration, participants attitude toward public transportation and improved the number who did not feel positively towards transportation decreased.

Fare Policy

Link Forsyth proposes a dynamic and varied approach for the delivery of public transportation services throughout Forsyth County. Implementation of the variety of proposed services bears an impact on all aspects of the operation. Fares and fare policies are critical areas that affect not just how users will access the system but also day-to-day operational activities, procedures, and workflows.

Fare recommendations, and a corresponding implementation strategy, are included to meet the proposed long-range transit service program for the County. Fare recommendations are based on including peer agency reviews, stakeholder input, and fare survey data recently completed by the ATL. Figure 38 outlines the four steps used in developing fare structure and fare policy recommendations.



Figure 38: Fare Policy Update Process

Peer Review

A peer review of agencies that operate comparable services to the long-range vision of Link Forsyth was conducted. The peer review offered Link Forsyth background information regarding new types of public transportation services that are not currently offered by the County today. The goal of the peer agency review was to gain an understanding of what fare policy elements (i.e., payment options, transfer policies, etc.) are the most critical for Forsyth County to prioritize.

Agencies

A group of representative transit agency peers were selected for each transit mode proposed in the Long-Range Needs Plan. Peer agencies reviewed consist primarily of regional partner agencies located within the greater Atlanta area. To augment the list of peers for some of the proposed service types, several out-of-state peers are also included. A summary of peer agencies by service mode is shown in Figure 39. Fare Policy Update Peer Transit Agencies. Major elements of the peer review include the following:

- Full Cash Fare
- Reduced Fare Programs
- Pass Programs
- Payment Options
- Transfer Policies
- Miscellaneous Policies



Figure 39. Fare Policy Update Peer Transit Agencies

Major Takeaways

Although there is broad variation in fare structure and policy among the peer agencies reviewed, there are several major takeaways that can be drawn that are applicable in the case of Forsyth. Those key conclusions include the following:

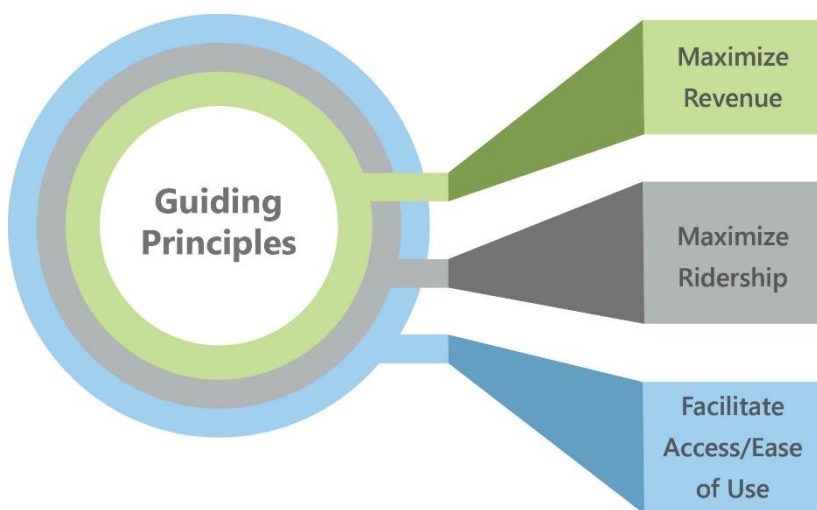
- **Interoperability** – The level of interoperability varies between service types.
 - The ability to transfer for free or use an interoperable fare payment type between different types of services varies. Generally, most agencies do not allow free transfers to and from microtransit, flex, and other demand response services.
 - Of the peer agencies, three do allow for free transfers between service modes that are directly operated by the agency and this allows for more uniform application of fares that are easier for customers to understand and follow (i.e., CobbLinc, LYNX, Denver RTD).
 - The opportunity to transfer between “local” and regional services is generally facilitated via the use of a recognized fare pass (i.e., Breeze Card)
- **Cost Range** – The range of costs for the full cash fare and pass options, by mode, is largely narrow and any significant variations, or outliers, were observed for large transit agencies that provide a more robust set of services, including rail and commuter services. Examples of those outliers include RTD and the Maryland MTA.
- **Reduced Fares** – In most cases, there is no discount or reduced fare offered for third-party or microtransit services. In some instances, where microtransit services are directly operated by the same agency, the agency can afford reduced fare options and transfers by allowing users to present and use that agency’s corresponding fare passes.

- **Payment Options** – Agencies employ a variety of technologies to deploy services and each service offering, by mode, offers its own options for customers to pay fares including the use of cash, credit/debit card, and even by check. Importantly, an exact fare cash payment is accepted on several of the microtransit and third-party services (i.e., PSTA, HART, and BCRTA).
- **Technology** – Many agencies use pre-payment options via the mobile applications and other technology which allow for credit card and debit card payment. This is true for all modes of service.

Several examples from the peer review provided a good precedent for the program of improvements proposed for Forsyth County. Critical for a small operation is a simplified and uniform fare structure that facilitates a seamless transition between the various service modes. This will be particularly true in terms of connectivity to regional services that could ultimately be operated by a different entity.

Fare Policy Guiding Principles

The variability across fare policy elements is reflective of the goals of the individual transit agency and more complex programs and policies will require more technology and back-end administrative work. More importantly, fare policy will influence who and how many people will choose to use the system.



Guiding Principles

Three guiding principles were developed to provide

a context for fare policy direction for Link Forsyth. The guiding principles are shown in Figure 40 and are defined as follows.

Figure 40: Fare Policy – Guiding Principles

- **Maximize Revenue** – What policies will increase revenue and farebox recovery?
- **Maximize Ridership** – What policies will encourage more ridership?
- **Facilitate Access/Ease of Use** – What policies will lower barriers to entry?

Examples of policies associated with each guiding principle are listed in Table 12. As illustrated in Figure 42, the guiding principles reflect critical elements that need to be balanced in order to achieve transit agency fare policy objectives as they are both in tension and complementary to each other. For example, policies that maximize revenue, such as high one-way fares, will impact ridership levels.

Table 12. Fare Policy Guiding Principles – Examples

	Longer trips are more expensive
Maximize Revenue	Limited free transfers between services
	Limited reduced fare/fare pass programs
Maximize Ridership	More/enhanced reduced fare programs
	Discounted multi-ride passes
	Consistent fares regardless of distance
Facilitate Access/Ease of Use	Free/discounted transfers between local and regional services
	Uniform fare structure across service modes
	Shared fare payment platform/passes between service providers

Forsyth Proposed Fare Structure

Table 13 includes the proposed fare structure and related policies for Link Forsyth. The table is organized by service type/mode and by fare policy element. Consistent with the County's fare policy guidance, the proposed fare structure attempts to facilitate access to the system and encourage ridership while still ensuring a modest farebox recovery.

Table 13. Proposed Fare Structure

	Demand Response	3rd Party Transportation	Microtransit	Regional Connector
Fare	\$2.00 one-way; maintain existing one-way fare	Up to \$10.00 off trip through one of the approved vendors; cap at 24 one-way trips per month	\$2.00 one-way	\$2.00 one-way
Pass Programs	None	None	Daily Pass Weekly Pass Monthly Pass Purchase in App and at Central Location	Daily Pass Weekly Pass Monthly Pass Purchase in App and at Central Location
Payment Options	Cash payment; visual validation of mobile ticket	Provide for both app-based fare payment and scheduler/dispatcher call in number	Cash Payment; visual validation of mobile ticket	Cash Payment; visual validation of mobile ticket
Reduced Fare Programs	None	None	Half fares for seniors, persons with disabilities, and Medicare eligible populations	Half fares for seniors, persons with disabilities, and Medicare eligible populations
Transfer Policies	No free transfers	No free transfers	Free transfers to Regional Connector with a pass; encourage use of passes for multi-leg trips	Free transfers to Microtransit with a pass; encourage use of passes for multi-leg trips
Other Policies	Service is limited to specific populations; eligibility determinations are required	Trips must start or end in 3rd party transportation service area AND start and end in Forsyth County or in a designated location outside the County	No free transfers between microtransit zones.	None

*Fare structure assumes implementation of mobile ticketing.

Key benefits afforded by the proposed fare structure include the following:

- The price point of the full cash fare is equal to the existing Dial-A-Ride fare and allows for consistency for users and facilitates the transition of riders to the new services.
- Microtransit and Regional Connector fare structures are the same and allows for an interoperable set of local services where passengers can move between the two modes using the same fare payment system, passes, and pricing.
- A variety of multi-use passes are offered for Microtransit and Regional Connector services and this further supports efforts to provide discounts for regular users of the system.
- Half-fare programs are consistent with FTA requirements for fixed-route service operators.
- Half-fares will be honored in the microtransit service operation and this facilitates use of the same fare structure across all local services, Microtransit and Regional Connector.
- The fare structure for third-party services, which is directed to areas outside of the microtransit zones and into more rural parts of the county, is designed to control demand. This is reflected in the subsidy amount and in the restriction on free transfers.
- A mobile ticketing platform is assumed for implementation of the proposed fare structure. Additionally, visual validation of the mobile ticket is recommended and the benefits of such an implementation are further described under Recommendations and Implementation Strategies.

Financial Plan

Introduction

A financial plan was developed to help facilitate the implementation of the Link Forsyth's priorities. Link Forsyth is an aspirational plan and was developed in a financially constrained manner based on potential sources of future funding. The proposed phasing of projects in Link Forsyth was heavily driven by public priorities indicated during Public Involvement – Phase 2. This section documents cost, revenue, and policy assumptions used to develop the financial plan and is followed by cost and revenue summaries. Cost forecasts were based on a planning-level phasing of plan elements. Information detailing when, or in what long-range phase, specific services will be implemented is documented in this section.

Operating Cost Assumptions

Numerous assumptions were made to develop and forecast transit operating expenses from 2022 through 2040. These assumptions are based on a variety of factors including existing operating expense data and discussions with Forsyth County staff. The key operating cost assumptions are summarized below.

- **Operating cost per revenue hour.** Operating cost per revenue hour assumptions form the basis for the operating cost estimates developed for the plan. A separate cost per hour assumption is used for each service mode in Link Forsyth and those cost per hour assumptions are shown in Table 14.
- **Total annual revenue hours of service.** To annualize operating expenses, a service plan for each mode of service was determined. The service plan defines the days of operation, service span, service frequency and vehicle requirement for each service in the plan (i.e., each commuter route, each Microtransit zone, etc.). The combination of these elements results in an estimated amount of annual service hours which is then multiplied by the cost per hour assumption to obtain an annual operating expense for each service identified in the master plan. Total annual revenue hours for each Master Plan service are shown in Table 15.
- **Phasing and programming.** The division of long-range services is organized into three phases and each phase reflects a period within the long-range planning horizon. Services were programmed based on priorities identified through the public outreach efforts. In addition, programming of services, particularly the programming of commuter express services, are contingent on supporting capital expenditures (i.e., park-and-ride facilities) and available funding. Importantly, cash flows were also monitored to ensure that no shortfalls in funding existed through the life of the plan. Any major shortfalls required adjustments to the implementation of services and associated facilities. The long-range

implementation phase for each Master Plan service is indicated in Table 15. Figure 41 through Figure 43 illustrate the cumulative set of services included within each phase.

- **Operating Expense Inflation Rate.** The annual operating expense inflation rate is 3 percent. This assumption allows for consideration of the increase in operating expenses over time and through the life of the Plan. Additionally, the inflation rate allows for a better forecasts of Year of Expenditure (YOE) costs.

Table 14. Operating Cost per Revenue Hour Assumptions

Service Mode	Operating Cost Per Revenue Hour
Commuter Express	\$130
Regional Connector	\$60
Microtransit	\$60
Demand Response	\$60
Senior Services	\$60

Table 15. Long-Range Services – Operating Requirements and Implementation Phase¹

Service	Service Mode	Long Range Phase	Annual Revenue Service Hours	Peak Vehicle Requirement
Peachtree Pkwy/ Buckhead	Commuter Bus	Phase 3	2,470	3
Peachtree Pkwy/ Cumberland	Commuter Bus	Phase 3	2,540	3
Pilgrim Mill/Perimeter	Commuter Bus	Phase 3	3,370	4
McFarland/Perimeter	Commuter Bus	Phase 3	2,260	3
McFarland/Buckhead	Commuter Bus	Phase 3	2,250	3
McFarland/Downtown	Commuter Bus	Phase 3	3,900	5
Browns Bridge/ Perimeter	Commuter Bus	Phase 3	4,810	6
Regional Connector	Regional Connector	Phase 1	6,100	2
Microtransit Zone A	Microtransit	Phase 2	25,290	5
Microtransit Zone B	Microtransit	Phase 2	22,480	4
Microtransit Zone C	Microtransit	Phase 1	16,860	3
Microtransit Zone D	Microtransit	Phase 1	22,480	4
Microtransit Zone E	Microtransit	Phase 2	16,860	3
Microtransit Zone F	Microtransit	Phase 1	19,670	4
Enhanced Demand Response	Demand Response	Phase 1	20,880	10

¹Although not listed in this table, Existing Xpress services, Routes 400 and 401, are assumed to continue operation through the plan horizon.

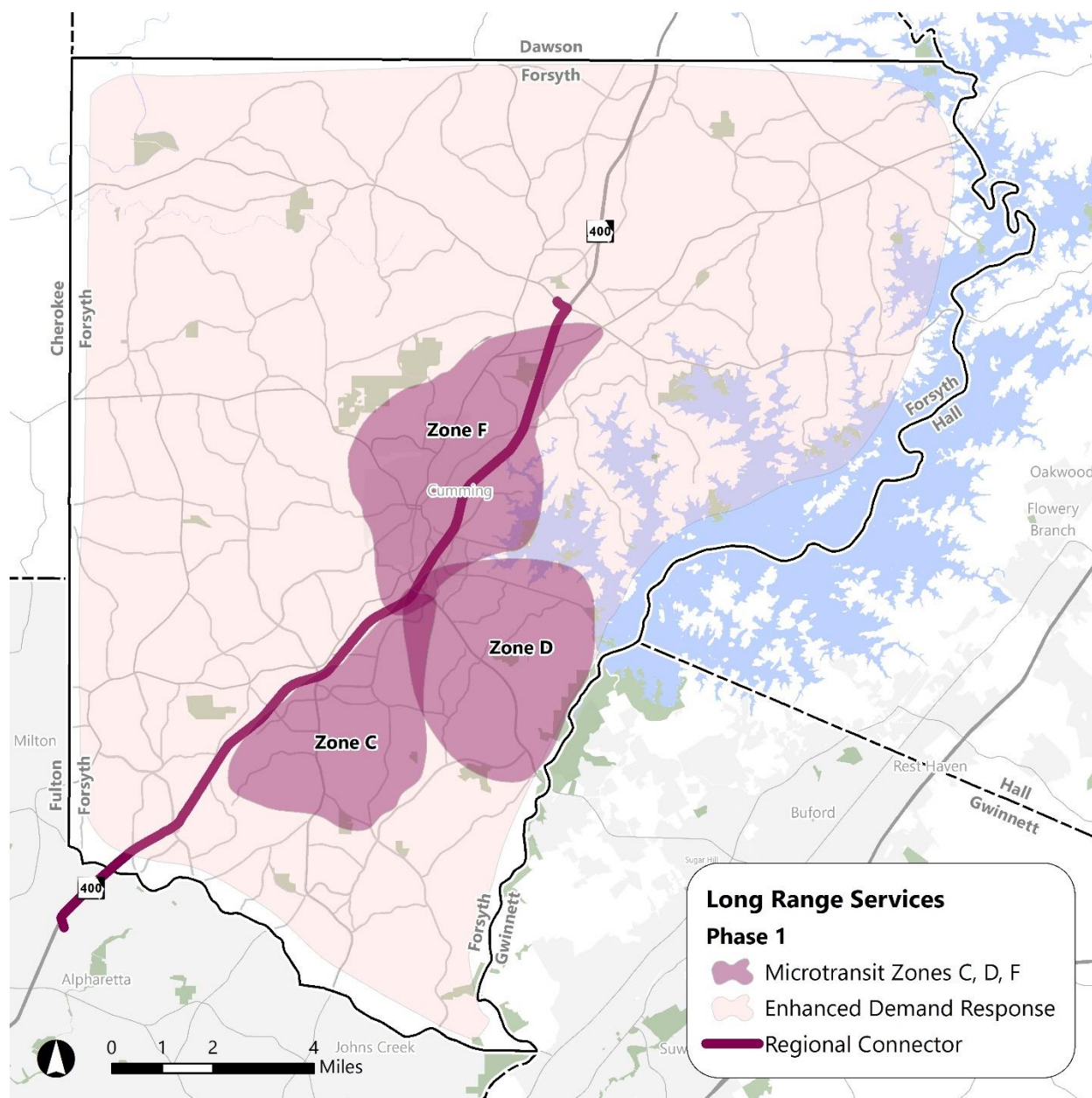


Figure 41. Phase 1 Long-Range Services

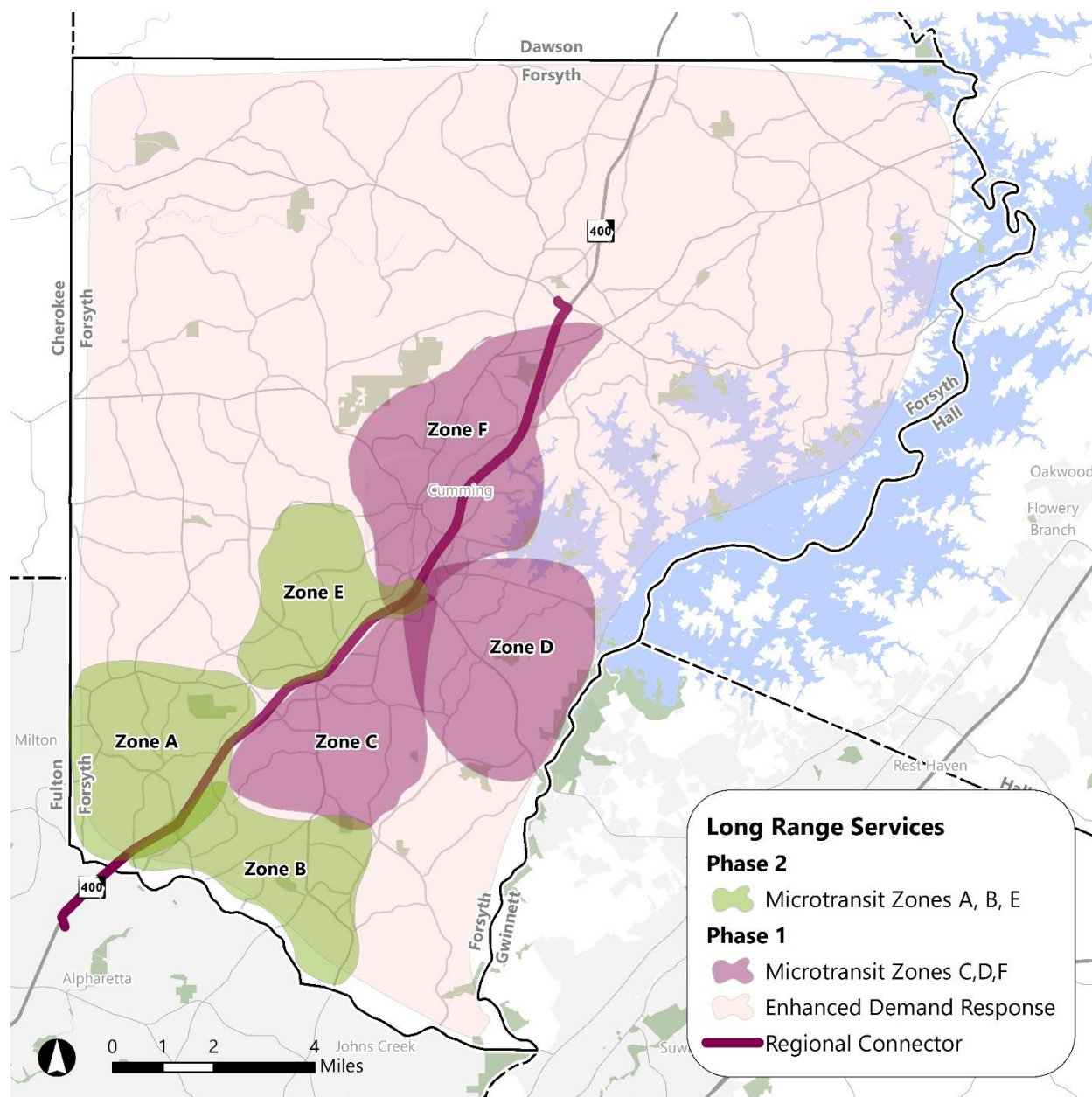


Figure 42. Phases 1 and 2 Long-Range Services

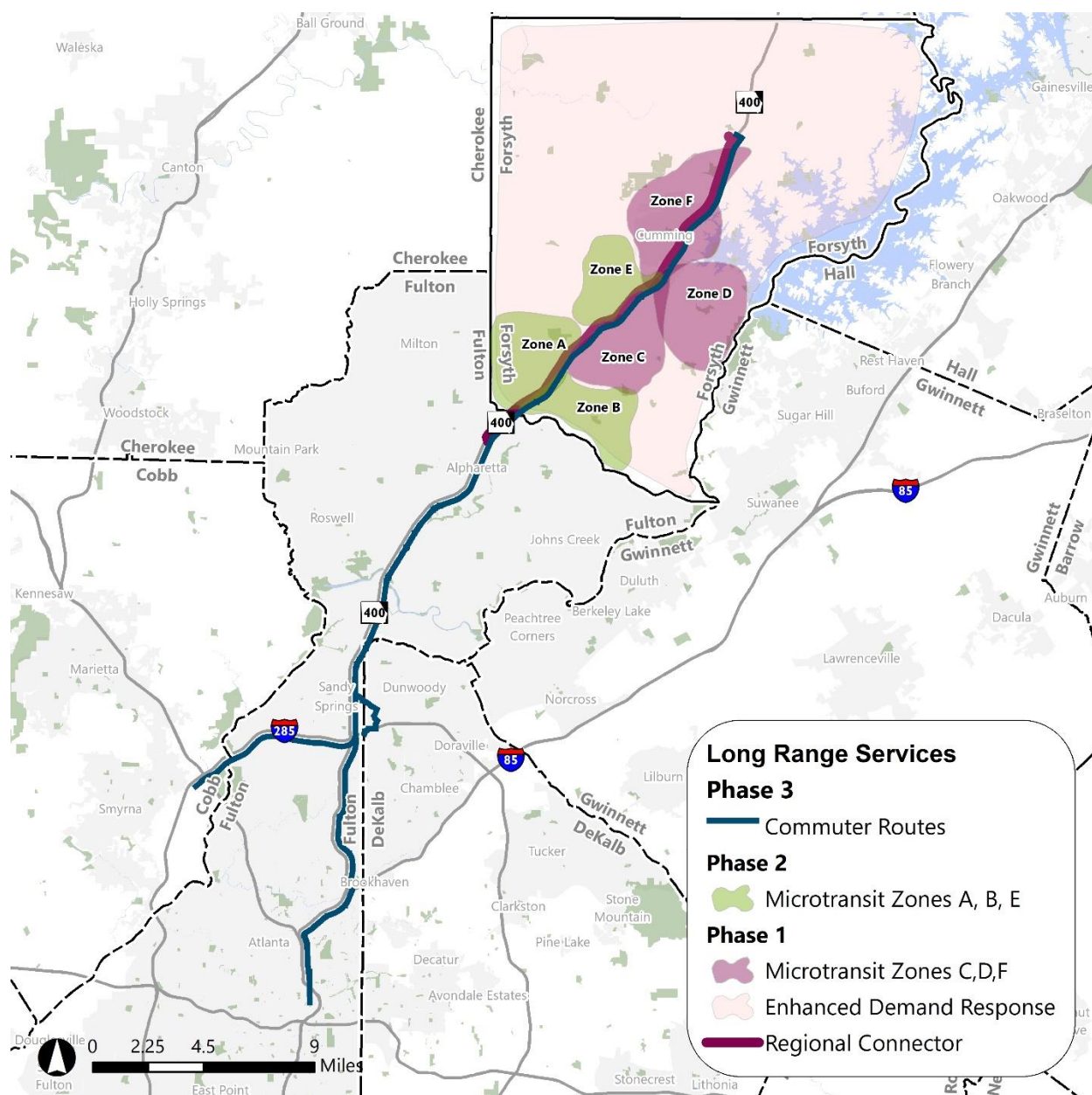


Figure 43. Phases 1, 2 and 3 – Long-Range Services

Capital Cost Assumptions

Several assumptions were developed to project costs for the capital/technology needed to support the implementation of the Plan presented previously. These capital cost assumptions are summarized below.

Expansion and Replacement Vehicles. New vehicles planned to be purchased include those necessary to replace vehicles within the existing fleet that will reach the end of their useful life, additional vehicles needed to implement the Plan’s prioritized service enhancements, and additional vehicles to ensure a 20 percent spare ratio.

Vehicle costs. Vehicle cost assumptions are summarized in Table 16. Those assumptions are based on State of Georgia statewide vehicle contract average for similar vehicles (i.e., coach bus, medium, and light duty vehicles) and includes a 20 percent contingency.

Table 16. Vehicle Cost Assumptions

Service Mode	Cost Per Vehicle (2021\$)
Commuter Express	\$700,000
Regional Connector	\$160,000
Microtransit	\$80,000
Demand Response	\$80,000
Senior Services	\$80,000

Facilities. Facility costs are shown in Table 17 and reflect the estimated cost for development of park-and-ride facilities and a new maintenance facility. Maintenance facility costs also include a subsequent expansion given the scale of new services. The basis for these costs includes cost comparisons for comparable park-and-ride facility peers and generalized costs per revenue fleet vehicle (i.e., \$400,000 per vehicle) to be housed/maintained at the new maintenance facility and associated expansion. Importantly, two capital projects are excluded from the Plan, the Peachtree Parkway Park-and-Ride and Windward Parkway Access Ramps. These projects are anticipated to be funded through partnerships or other funding sources.

Note: As of 2021, the current express lane design at the Windward Parkway interchange does not include north facing express lane access. That design may preclude access to the nearby Windward Parkway Park-and-Ride facility. Direct southbound access to the Windward Parkway Park-and-Ride facility from the express lanes will require a modified design.

The cost for development of each capital project is distributed over a two-year period, 50 percent of the cost in the first year and 50 percent of the cost in the second year. This distribution is more reflective of the time it takes to develop similar capital projects.

Importantly, the proposed service phasing shown in Table 18 places the Regional Connector service in operation prior to the implementation of several supporting park-and-ride facilities (i.e., Browns Bridge, Pilgrim Mill, Peachtree, and McFarland). It is anticipated that shared-parking or access agreements that allow for minor bus stop improvements would be developed with nearby property owners in order to facilitate connections to the Regional Connector service.

Table 17. Capital Facility Cost Assumptions and Implementation Phase

Project	Long-Range Phase	Project Cost (2021\$)
Initial Maintenance Facility	Phase 1	\$12,000,000
Pilgrim Mill Park-and-Ride	Phase 3	\$5,000,000
Cumming Park-and-Ride Upgrades	Phase 1	\$2,500,000
Peachtree Parkway Park-and-Ride	Long-Range Plus	\$15,000,000
McFarland Parkway Park-and-Ride	Phase 3	\$20,000,000
Windward Parkway Access Ramps	Long-Range Plus	\$75,000,000
Maintenance Facility Expansion	Phase 1	\$8,000,000
Browns Bridge Park-and-Ride	Phase 3	\$5,000,000
Maintenance Facility Expansion 2	Phase 3	\$15,000,000

Technology/Transit Amenities. Technology upgrades include a new CAD/AVL system along with the same-day reservation platform required to implement Microtransit services. Furthermore, an assumption of \$25,000 per year is assumed for passenger amenities and infrastructure at stations. Passenger amenities include bike racks, shelters, benches, signage, trash cans, and other amenities that facilitate comfortable waits, improve the passenger experience, and improve access to the public transportation system.

Capital Cost Inflation Rate. An annual growth rate of 2.5 percent was used for capital cost projections. Like the operating expense inflation rate, this growth rate allows for a better estimate for YOE capital costs.

Implementation Phasing

Table 18 organizes a potential phasing of the Master Plan that includes the proposed services, corresponding implementation years, and proposed capital projects into three plan periods. This results in a phased implementation of the program of projects identified in the Link Forsyth Master Plan through year 2040.

Table 18. Phased Implementation Plan

Implementation Period	Project	Description
Phase 1		
Microtransit	Implement 3 new microtransit services	Cumming (Zone F) Central Forsyth (Zone C) East Forsyth (Zone D)
Regional Connector	Implement new regional connector service	Weekday service only
Park-and-Ride	Upgrade Cumming park-and-ride facility	Build direct bus access
Maintenance Facility	Develop/construct new fleet maintenance facility	New construction
Implementation Period	Project	Description
Phase 2		
Microtransit	Implement 3 new microtransit services	Southwest Forsyth (Zone A) Southeast Forsyth (Zone B) South Cumming (Zone E)
	Enhance one microtransit service ¹	TBD
Regional Connector	Enhance regional connector service	Increase weekday service span Add Saturday service
Maintenance Facility	Develop/construct fleet maintenance facility expansion	Facility expansion
Implementation Period	Project	Description
Phase 3		
Park-and-Ride	Develop/construct 3 park-and-ride facilities	Browns Bridge McFarland Pilgrim Mill
Commuter Bus	Implement 6 new commuter bus routes ²	See Figure 21
Microtransit	Enhance remaining microtransit services	TBD

Funding

Funding is a constraint for all public agencies across the nation in their efforts to satisfy ever growing community needs. Today, Forsyth County public transportation services are funded by FTA's Section 5307 and 5311 programs, in addition to local dollars from the County's general fund. Implementation of Link Forsyth's program of projects is contingent on the availability of funding beyond what is forecasted to be available through the federal and local funding sources currently in use.

There are several funding sources legally available to Forsyth County leverage but require a sales tax referendum (i.e., ballot/vote) for the county to be able to levy. These funding sources include a Transportation Special Purpose Local Option Sales Tax (SPLOST) and a Transit SPLOST.

- **Transportation SPLOST** – The Transportation SPLOST is a funding mechanism that was passed by the State of Georgia's General Assembly in 2017 (HB 170) that allows counties to impose a levy of up to 1 penny (in increments of 0.05 penny) for a period not to exceed 5 years. The projects funded as a part of HB 170 must be for transportation purposes, which can include capital, operating, and maintaining public transportation.
- **Transit SPLOST** – The Transit SPLOST is a funding mechanism that was passed by the State of Georgia's General Assembly in 2018 (HB 930) that allows a levy of local county dollars for transit-specific purposes. HB 930 allows for up to 1 penny (in increments of 0.05 penny) for up to 30 years. The projects funded must be included in the ATL's Regional Transit Plan and be approved by the entity as well.

Conclusion

Link Forsyth, Forsyth County's first public transportation master Plan has been prepared at a critical moment in the development of the County's public transportation services. Forsyth County is in a unique position to take advantage of the innovation and technology advancements occurring within the public transportation industry. In addition, the County also is actively working to address both the growth occurring within its boundaries and the diverse set of transportation needs that comes with that growth.

By combining these elements, Link Forsyth sets forth a program of improvements designed to capitalize on the changing transportation environment in a manner that is innovative, broad, and inclusive of all Forsyth county residents. This is a significant aspect of the Plan that could not be accomplished efficiently with traditional public transportation choices.

The Plan also establishes a framework for public transportation beyond the County's borders. That recognition on the part of the County as a regional partner with strong economic and social drivers throughout the greater Atlanta region is important. This approach allows the County to address transportation needs within its boundaries and positions the County in constructive and positive relationships with regional transportation partners.

