

# Northeastern Wake County – NC Rural Microtransit Service Plan

---

*Final Plan – March 2021*



# Table of Contents

## Executive Summary

Introduction.....	ES-1
What is Rural Microtransit? .....	ES-1
Northeastern Wake County Rural Microtransit Service.....	ES-2
<i>Study Tasks</i> .....	ES-4
<i>Implementation Steps</i> .....	ES-4
Key Takeaways & Recommendations .....	ES-5

## Chapter 1: Background

Introduction.....	1
<i>Northeast Wake County</i> .....	2
<i>Connecting to Transit</i> .....	3
<i>The Emergence of Microtransit</i> .....	4
<i>Service Concepts</i> .....	5
Implementation Steps .....	6

## Chapter 2: Communications Plan

Background .....	7
Stakeholder Interviews .....	8
Focus Groups & Informational Presentations .....	15
<i>Focus Groups</i> .....	15
<i>Informational Presentations</i> .....	19
Community Survey .....	20
<i>Survey Introduction</i> .....	20
Marketing New Microtransit Service .....	30

## Chapter 3: Service Plan

Background .....	32
Lessons Learned .....	32
Maintaining Service Reliability .....	33
Implementation Steps .....	33
<i>Determine the Service Delivery Model</i> .....	34
<i>Geo-Fenced Zone Characteristics</i> .....	35
<i>Operations Plan</i> .....	47

<i>Fare Structure</i> .....	49
<i>Ensure Compliance with Federal Civil Rights</i> .....	50

## Chapter 4: Capital & Technology Plan

Service Implications.....	51
Capital Needs .....	51
<i>Vehicles</i> .....	52
<i>Fare Collection</i> .....	53
Overview of Technology.....	53
<i>Mobile Application</i> .....	53
<i>Uber / Routematch Support</i> .....	54
<i>Customer Experience</i> .....	55
<i>Onboard Mobile Tablet</i> .....	57
<i>Reporting Requirements</i> .....	58

## Chapter 5: Five-Year Financial Plan

Background .....	59
Integrated Mobility Innovation (IMI) Grant.....	60
Potential Future Funding Sources.....	61
<i>Traditional Government Funding Sources</i> .....	61
<i>Non-Traditional Funding Strategies</i> .....	63
Farebox Recovery .....	64
Projected Capital Costs .....	64
Projected Operating Costs .....	64

## Chapter 6: Evaluation Plan

Background .....	67
Performance Assessment Context.....	67
<i>Traditional Performance Measures</i> .....	68
<i>Emerging Performance Measures for Microtransit</i> .....	69
Potential Performance Measures .....	70
<i>Productivity</i> .....	70
<i>Cost Effectiveness</i> .....	71
<i>Shared Ride</i> .....	72
<i>Connecting to Transit</i> .....	72
<i>Customer Satisfaction</i> .....	73
Performance Evaluation.....	74
<i>Data Collection</i> .....	74
<i>Establishing Performance Goals</i> .....	74

## Chapter 7: Procurement and RFP Considerations

Background .....	75
Technology Platform.....	75
<i>Build Upon Current Routematch Software</i> .....	75
Service Provider .....	76
<i>Contracting Services out to an Established Transit Company</i> .....	76
Future Considerations .....	77

## Appendix A: Example Microtransit Requests for Proposals

Greater Lafayette Public Transportation CityBus Microtransit Software RFP (Lafayette, IN)  
 Knox County Transit Planning Software as a Service (SaaS) RFP (Knoxville, TN)  
 Morrisville Smart Shuttle Mobility System Technology RFP (Morrisville, NC)

# Executive Summary

## Northeastern Wake County Rural Microtransit Service Plan

### Introduction

In 2020, Wake County was awarded the Federal Transit Administration's (FTA) Integrated Mobility Innovation (IMI) Grant to implement the Northeastern Wake County Rural Microtransit Service. The proposed microtransit service will greatly expand transportation access in northeastern Wake County by providing same day service to jobs, schools, healthcare, and other important community services. The pilot project will focus on service expansion for the most transit dependent population groups in the most underserved transit area in Wake County. The service has tremendous potential to increase transit ridership and expand opportunities for area residents. The Rural Microtransit Service Plan provides background on the proposed microtransit service and outlines the implementation steps; including summaries of current progress and future considerations as the pilot service is fine-tuned and launched.

### What is Rural Microtransit?

Microtransit uses app-based, real-time scheduling technology, to manage trip requests and provide constantly updated real-time arrival information. The service typology is similar to the commonly known services provided by Uber, Lyft, and other transportation network companies. By adopting this technology, public transportation providers can operate more efficient and customer focused service in low demand areas. Given the rural character of northeast Wake County, the Rural Microtransit Service will provide trips beyond the traditional first mile/last mile and up to 5 or 7 miles away from major destinations and regional transit connections. Key characteristics of the proposed rural microtransit service include:

- On-demand and real-time – book your trip when you are ready
- Dynamic routing and scheduling – your route may vary and you might share a ride
- Operates within a geofenced zone – shorter trips within the defined area
- App-based – leverages your smartphone for more direct and efficient service

Microtransit can provide more flexibility to customers than traditional fixed route and demand response service. Riders can individualize service by selecting both their pick-up and drop-off locations, while dynamic routing capabilities allow drivers to quickly adjust pick-up locations to provide more efficient service.

# Northeastern Wake County Rural Microtransit Service

Northeast Wake County, including the towns of Rolesville, Wendell, and Zebulon, was identified for this pilot project through previous planning efforts. The pilot project is derived from the goals, opportunities, and recommendations from the Wake County Coordinated Human Service Public Transportation Plan in addition to the Wake Transit Plan.

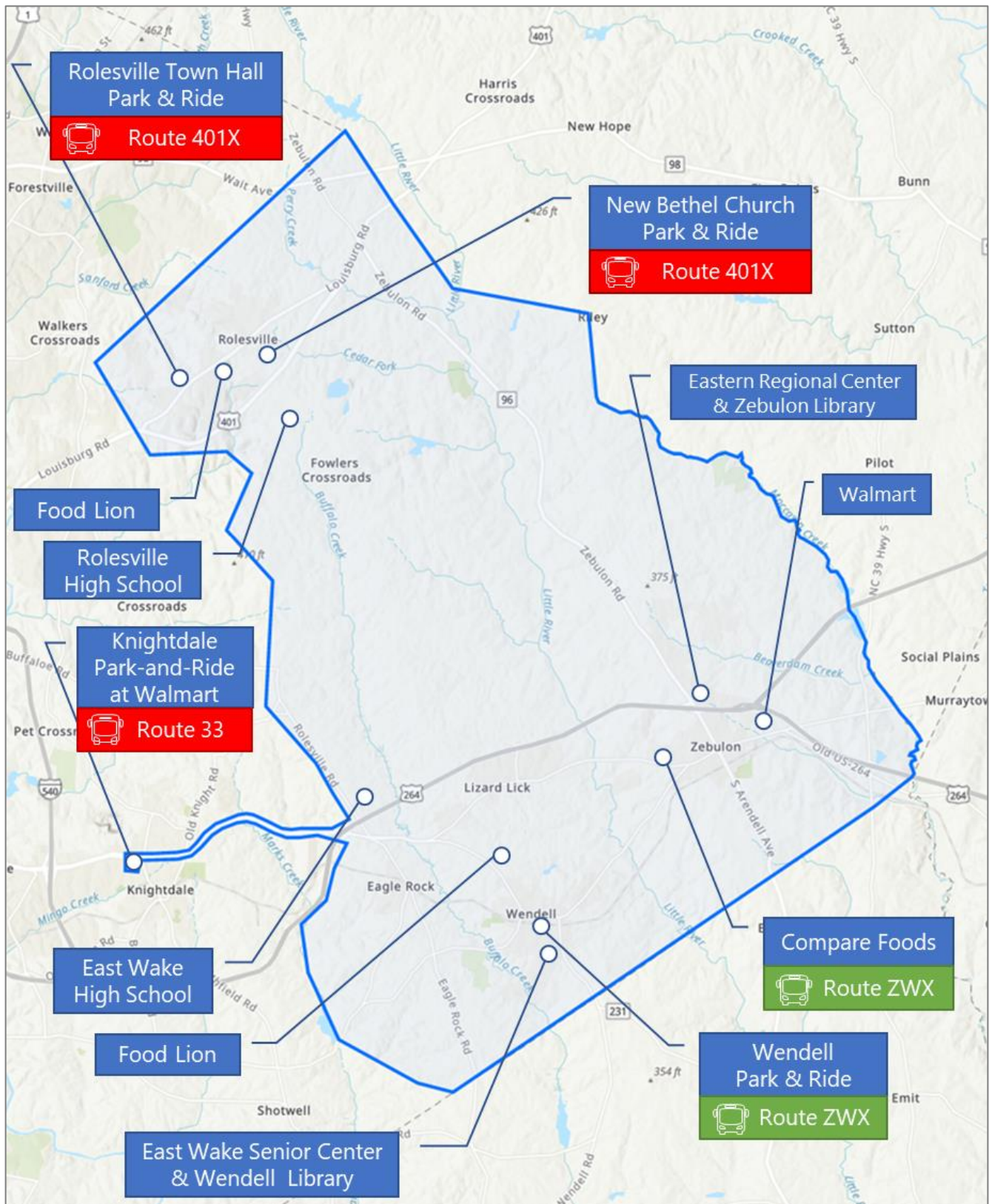
## Goals of the Northeastern Wake County Rural Microtransit Service

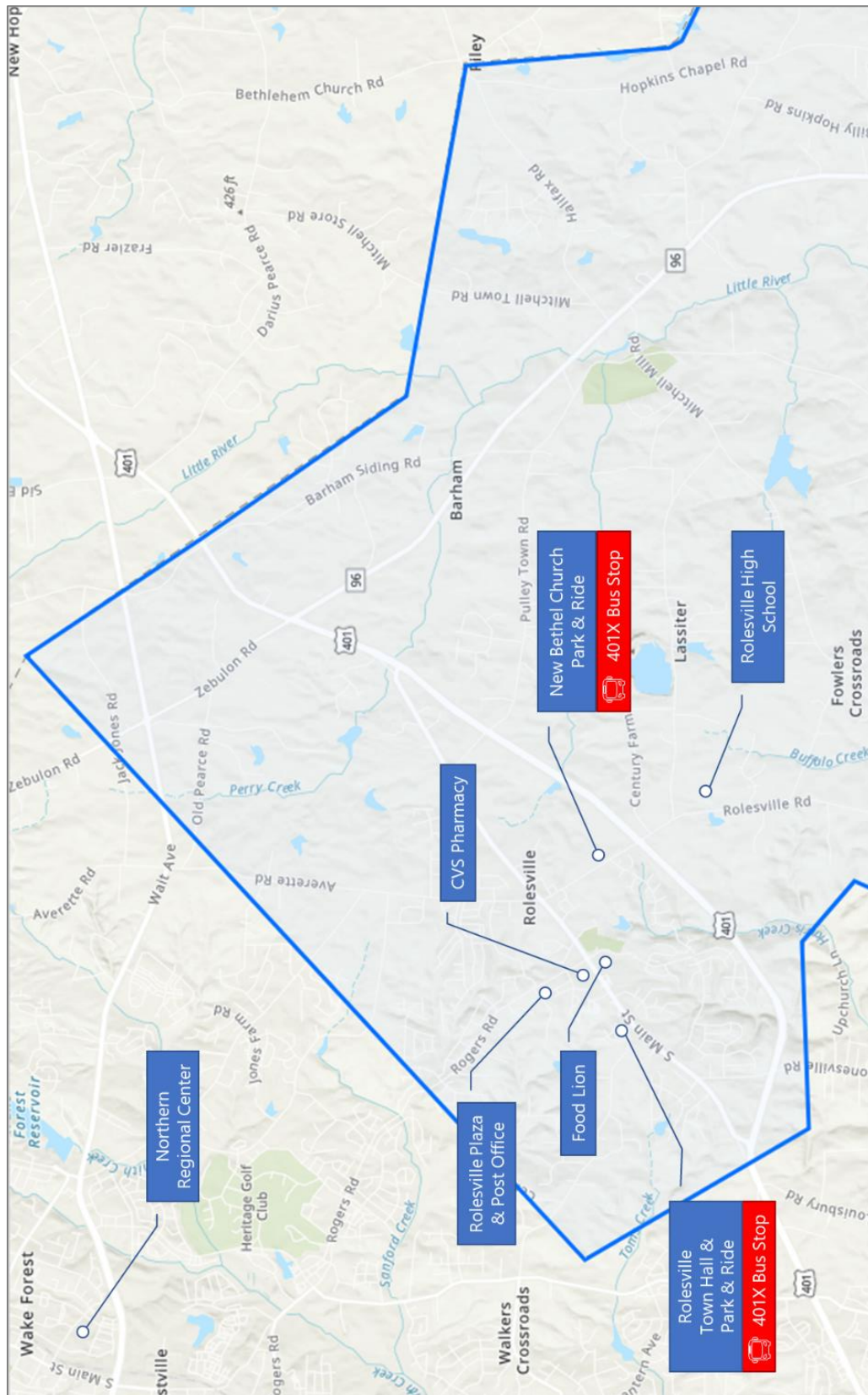
1. **Exceed in tripling the number of residents in the zone that utilize public transit.**
2. **Decrease average system operating costs by at least 25% in the Microtransit Zone.**

## Key Service Characteristics

- **Wait Times** – the rural microtransit service will be available in real-time, the amount of time that a customer must wait between their trip request and the vehicle's arrival is one of the most important aspects of the service. Customers, especially those traveling to work, need the assurance that their transportation is reliable.
- **Shared Trips** – the service must demonstrate that it can be as productive as other forms of public transportation in the region. This is typically captured in the number of trips provided per service hour or mile. The percentage of shared trips will play a big role in determining performance and future funding levels.
- **Regional Connections** – the service will only operate within a defined geofenced zone. This confined service area allows for faster response times and more direct trips. However, customers traveling beyond the zone will need to transfer to another transit service. Regional connections would be possible with GoRaleigh's Route 33 in Knightdale, Route 401X in Rolesville, and GoTriangle's Zebulon-Wendell-Raleigh Express.
- **Enhanced Service** – the rural microtransit service is an enhanced service to increase access and allow for flexible transit options. The service is not a replacement for the existing GoWake Access demand response service. Individuals requiring a single-seat regional paratransit trip will still be able to through GoWake.

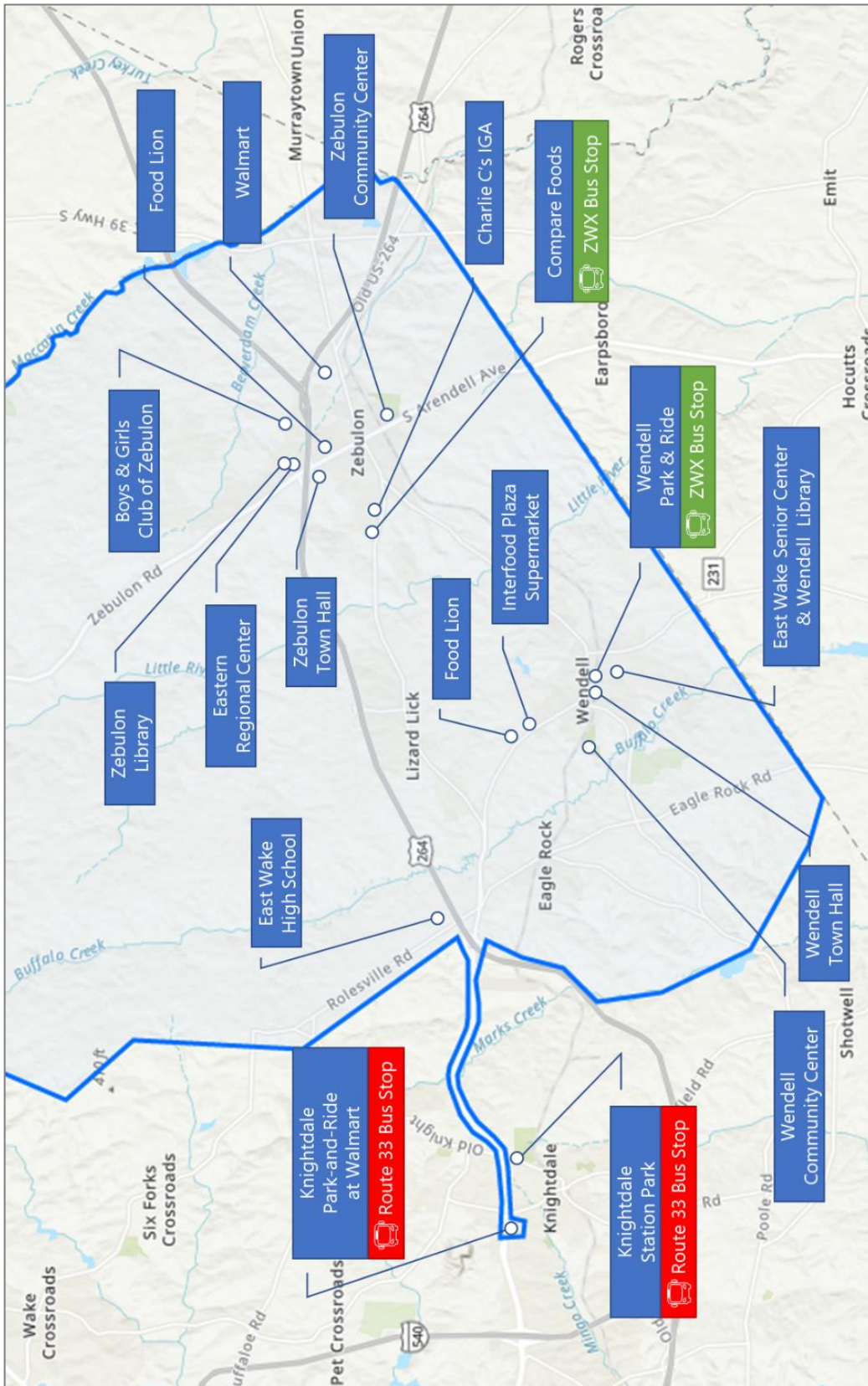


**Figure ES-1: Proposed Northeastern Wake County Rural Microtransit Service Zone**

**Figure ES-2: Proposed Microtransit Service Zone Northern Boundary**



### Figure ES-3: Proposed Microtransit Service Zone Southern Boundary



## Study Tasks

Several tasks were completed to assist Wake County in the planning and implementation of the Northeastern Wake County Rural Microtransit Service. These tasks included the following activities:

- Over a dozen stakeholder discussions were held to learn the views of a variety of northeast Wake County constituencies. Four community focus groups provided the perspectives of the Hispanic community, local economic development representatives, and committees from the county's regional centers. A community survey was conducted, with a total of 387 surveys submitted.
- A review of existing transit services and population demographics was conducted. This analysis was incorporated into a microtransit propensity index which was used to project the estimated geographic demand for the future microtransit pilot.
- An overview of the current service options, including operating, capital, and technology was prepared. This included meetings with representatives from Uber-Routematch.
- A five-year financial plan was created based on projected operating costs. A review of potential future funding sources through NCDOT and CAMPO is also provided.
- Review of microtransit performance measures, including traditional and emerging metrics. Overview of performance measure recommendations based on data availability.
- Procurement considerations and examples of other microtransit RFPs were collected for Wake County's future consideration.

## Implementation Steps

The service plan is structured to highlight the microtransit implementation steps that have been utilized by peer transit systems from across the country. The chapters of the plan follow these steps:

**Chapter 1: Background** and overview of existing conditions

**Chapter 2: Communications Plan** identifies key stakeholders and summary overview of public outreach

**Chapter 3: Service Plan** outlines service delivery model and operations plan options

**Chapter 4: Capital & Technology Plan** identifies options and requirements

**Chapter 5: Five-Year Financial Plan** including conceptual budget and identification of funding sources

**Chapter 6: Evaluation Plan** to determine preferred performance measures

**Chapter 7: Procurement and RFP Considerations**

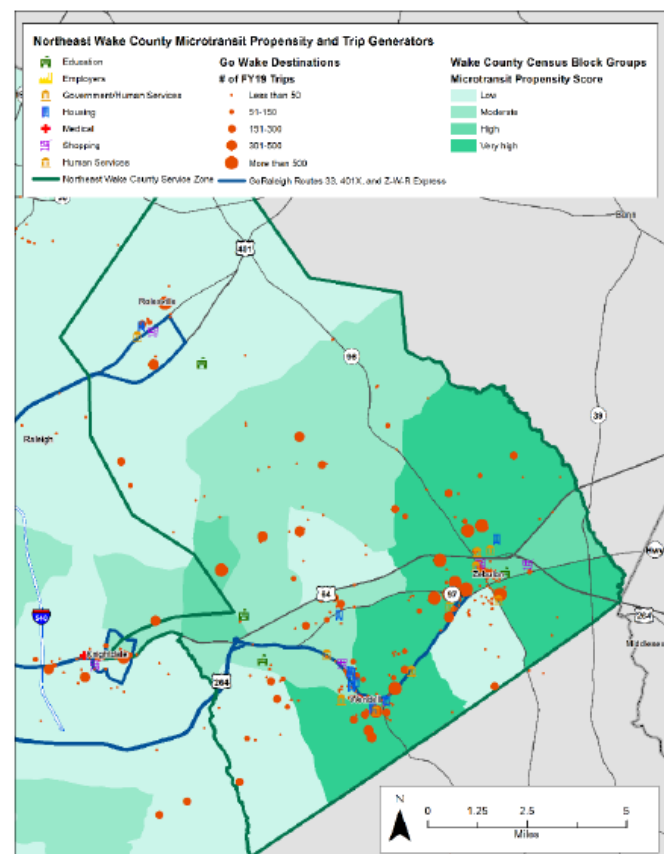
# Key Takeaways & Recommendations

## Communications Plan

- Microtransit service was well received by the community and is appealing to a wide range of ages.
- Outreach revealed that wait-times of 30 minutes or less would be preferred.
- A fare range of \$2 to \$4 per trip was commonly cited, and the need for regional fare integration.
- A service span of Monday to Friday from 7:00 a.m. to 6:00 p.m. was the ideal.
- Approximately 90% of survey respondents use a smartphone.
- Beyond marketing, public education on microtransit is needed.

## Service Plan

- Wait/response times are the major driving factor in designing microtransit service.
- Geofenced zones must balance service area size and the number of available vehicles.
- Microtransit can be implemented locally or through a third-party contractor.
- Operating the service in-house offers the transit agency the greatest level of oversight.
- Plans should be made for future transit expansion to the East Raleigh Transit Center.
- The microtransit propensity index projects strong demand for the service around Wendell and Zebulon, but low demand around Rolesville.
- To streamline service, customers will be picked up and dropped off at the closest corner to their location and desired destination.
- Some major destinations and areas of the service zone will require direct service due to safety concerns.
- Microtransit service can be tailored to meet transportation needs during off-peak hours and in low-demand areas.
- Like all other public transit services, ensure compliance with ADA and Title VI.
- Stakeholders from Knightdale and Wake Forest expressed interest in expanding microtransit service to those jurisdictions at some point in the future.



**Figure 2: Microtransit Propensity Index**

## Capital & Technology Plan

- A wide range of vehicles can be used in microtransit service, including vans and minibuses.
- It is very important to ensure that all vehicles are ADA accessible.
- GoWake is exploring options with their current contractor to utilize existing vehicles.
- If vehicles are unavailable, a vehicle procurement or third-party contractor would be necessary.
- GoWake is also exploring options with the City of Raleigh to share on-demand software.
- Software coordination is an ongoing process, and future software procurement is possible.
- Other capital needs include onboard tablets, fareboxes, and cameras.

## Financial Plan

- The FTA IMI Grant provides funding for software procurement, consulting services, and operations.
- Federal Section 5311 funding supports general public transit in Wake County; however, following the 2020 U.S. Census, it is anticipated that population growth will change this funding stream to Section 5307 which is administered locally through CAMPO.
- The service would be eligible for funding under the state's Rural Operating Assistance Program.
- Locally, the Community Funding Area Program could be a vehicle to secure funds/local match.
- Local jurisdictions can be a source of funding and partners on grant applications.
- The service must be cost effective to be competitive through local funding programs.
- Like the IMI Grant, federal and state agencies are promoting microtransit and mobility services through discretionary grants.
- Farebox recovery is also a source of local funding; typically, this accounts for 5-10% of operating costs.

## Evaluation Plan

- Microtransit is best evaluated through traditional and emerging performance metrics.
- Microtransit places an emphasis on creating valuable and equitable links.
- Wait-time, or response time, is a nearly universal performance measure for microtransit.
- Tracking the number of transfers to other transit providers is also a powerful metric.
- Smartphones and the app will provide a unique opportunity to engage with customers.
- Before performance goals are established, be sure the data is easily collectable.
- Monitor performance on a daily and weekly basis during the pilot service.
- Service modification and expansion should be considered as a part of on-going performance monitoring, meeting performance goals and assessing demand through community outreach and customer feedback.

# Chapter 1

## Background

### Introduction

A growing number of public transportation providers have begun operating service with an on-demand, e-hailing component. These services, called microtransit, use smaller vehicles and mobile technology to provide dynamic routing and curb-to-curb or corner-to-corner service. Customers use a smartphone application (app) to schedule and/or pay for a ride within a specific geofenced zone.

Microtransit service can provide more flexibility to customers than traditional fixed route and demand response service. Riders can individualize service by selecting both their pick-up and drop-off locations, while dynamic routing capabilities allow drivers to quickly adjust pick-up locations to provide more efficient service.

In 2020, Wake County was awarded the Federal Transit Administration's (FTA) Integrated Mobility Innovation (IMI) Grant to implement the Northeastern Wake County Rural Microtransit Service. The proposed service will go beyond the traditional first mile/last mile and provide trips up to 5 or 7 miles away from major trip generators and connections to other transit services.

### Goals of the Northeastern Wake County Rural Microtransit Service

- Exceed in tripling the number of residents in the zone that utilize public transit.
- Decrease average one-way passenger trip cost by at least 25%.

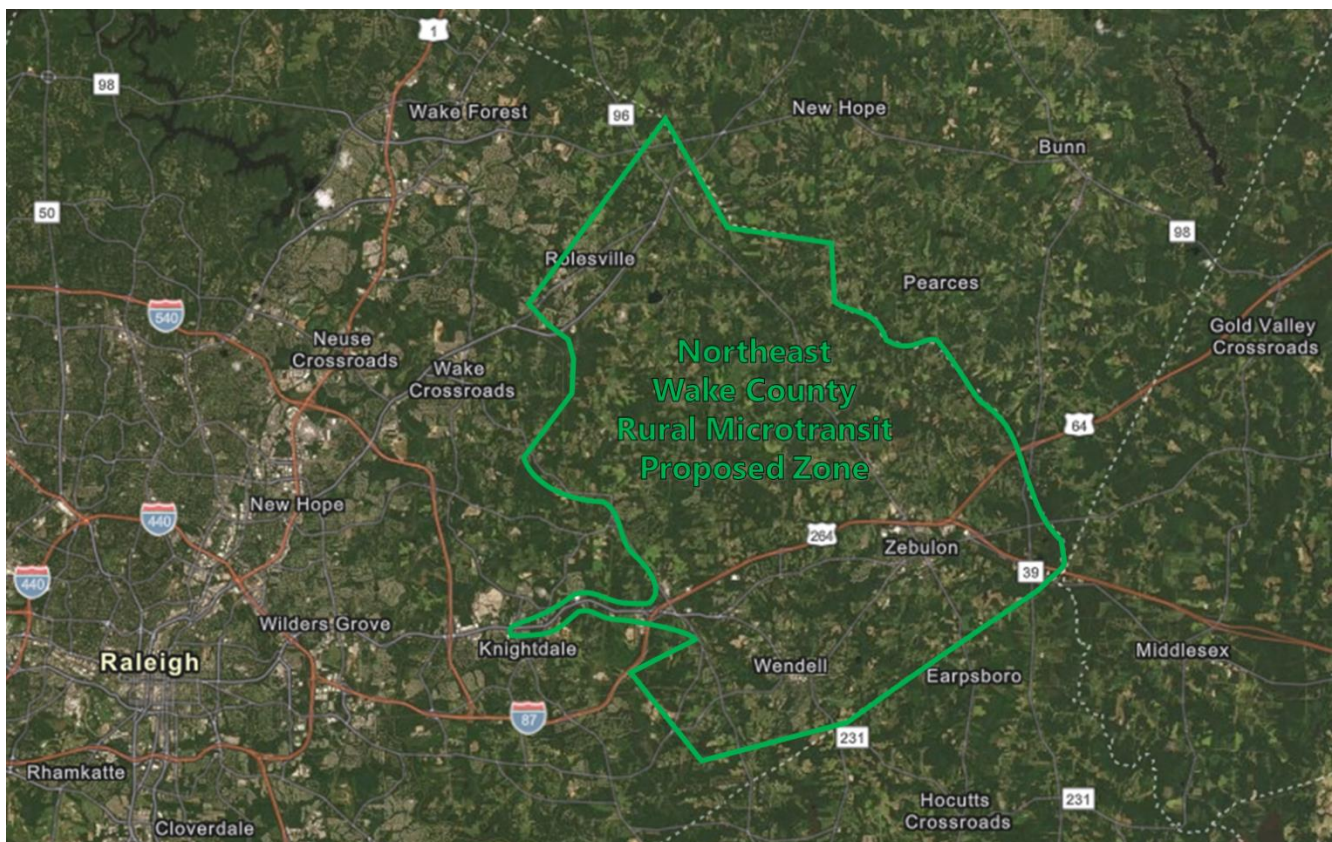


## Northeast Wake County

Northeast Wake County, including the towns of Rolesville, Wendell, and Zebulon, was identified for this pilot project through multiple planning efforts. The pilot project is derived from the goals, opportunities, and recommendations from the Wake County Coordinated Human Service Public Transportation Plan in addition to the Wake Transit Plan.

The microtransit pilot project will focus on service expansion for the most transit dependent population groups in the most under served transit area in Wake County. The IMI Grant will provide for service enhancements including quicker and easier trip scheduling via a smartphone app or by phone. Microtransit will make short trips convenient and enhance connections to employment opportunities. In northeast Wake County, the service has tremendous potential to increase transit ridership and expand opportunities for area residents.

**Figure 1-1: General Overview of the Northeast Wake County Rural Microtransit Zone**





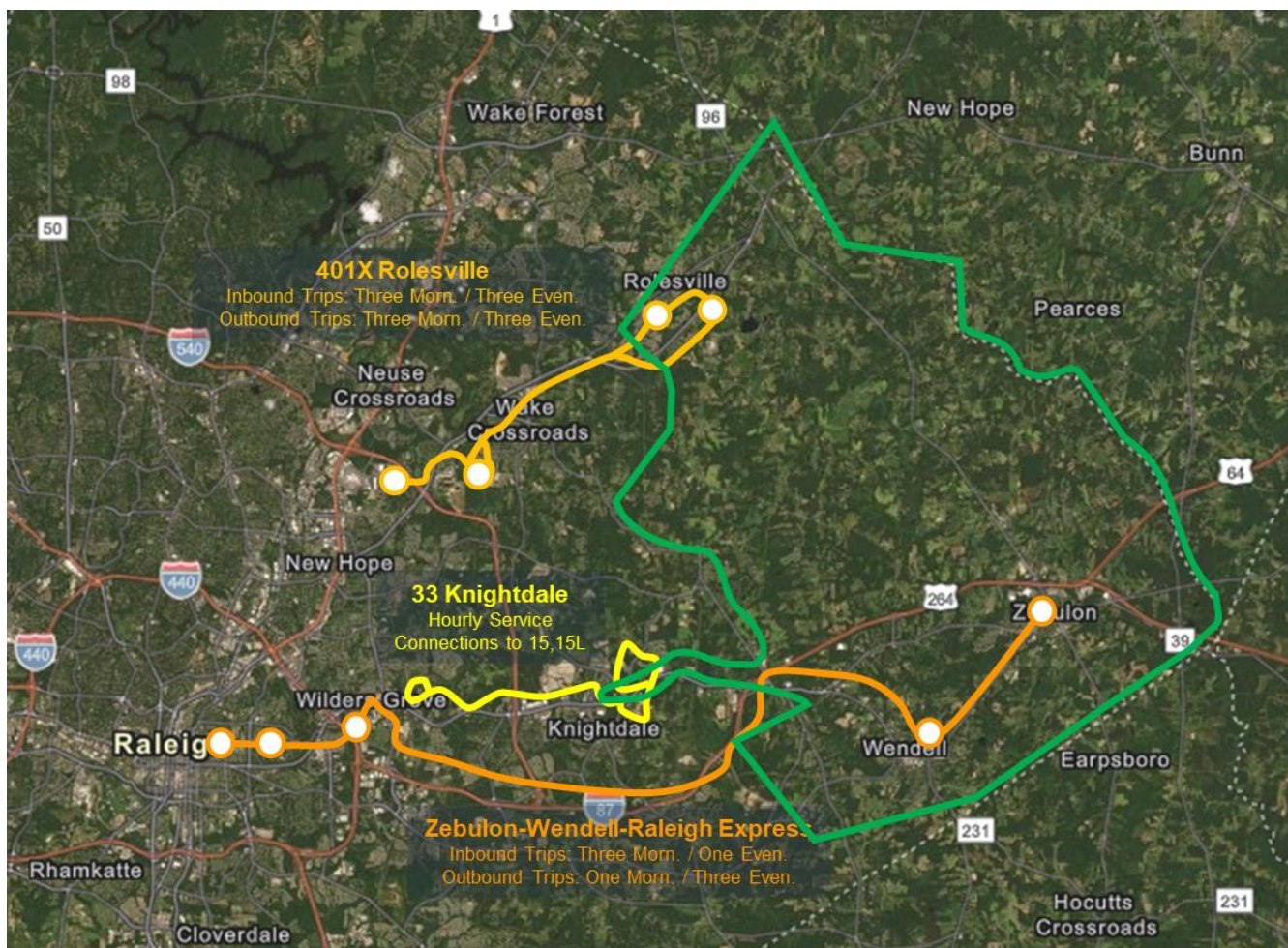
## Connecting to Transit

GoWake Access provides demand response transportation within the proposed zone. However, the demand for same day and next day trips outweighs the capacity of the existing service. The microtransit service will be contained to a specific zone to provide convenient, reliable, and notably short trips.

While many trips can be accomplished within the proposed zone, a key component of the service is the opportunity for making a connection to the regional public transit network. Illustrated in Figure 1-2, transit connections would be possible with GoRaleigh's Route 33 in Knightdale, Route 401X in Rolesville, and GoTriangle's Zebulon-Wendell-Raleigh Express.

Route 33 Knightdale provides hourly service from 6:00 a.m. to 10:00 p.m. Monday through Friday. The high frequency service makes Knightdale an important regional connection point for microtransit. Route 401X Rolesville and the Zebulon-Wendell-Raleigh Express are also valuable regional connections, but their service spans only include peak morning and afternoon commuting hours.

**Figure 1-2: Potential Connections with Regional Transit Service**



## The Emergence of Microtransit

The ability to use a smartphone app to plan, request, pay, and track curb-to-curb mobility services is transforming traveler's modal choices. Over the past decade, communities have been inundated with a menu of on-demand, e-hailing shared-use services. In 2009, Uber became the first private tech-based company to supply a private-for-hire e-hailing service, in which the company's business model quickly galvanized an enterprise of peer-to-peer e-hailing firms, which are now known as transportation network companies (TNCs).

In 2014, TNCs introduced ride splitting into the sharing economy, which pairs customers with similar trip origins/destinations in real-time, emulating the public transit demand response service delivery model. In recent years companies such as Via Transportation and RideCo have begun offering on-demand transit software and turnkey transportation solutions, and vendors of transit scheduling software are adapting their products to meet the microtransit emergence.

### Defining Microtransit

**The Shared-Use Mobility Center (SUMC) defines microtransit as a technological evolution of dial-a-ride and paratransit, and refers to services with flexible routes and schedules and on-demand availability that use vehicles larger than personal autos but smaller than transit buses—generally vans or cutaways carrying up to 20 passengers.**

**SUMC notes that microtransit services require professional drivers who are usually employed through a purchased-transportation arrangement with a vendor or employed directly by a transit agency.**

**They also report that microtransit functions best when operating within or between moderate-density environments that lack pedestrian connectivity or fixed route transit between activity nodes, especially suburban areas with highly separated land uses and interrupted street grids. It is best suited for short-to-medium range trips (3 to 15 miles) where transit connections are needed, but where fixed route transit cannot operate productively. By its nature, microtransit rarely moves more than 3-5 passengers per vehicle revenue hour, but it may offer greater flexibility in well-defined corridors or zones of operation like residential subdivisions or strings of office parks.**

With the rise of on-demand, e-hailing shared-used services, numerous new terms have emerged that warrant further definitions. The following includes other key terminology associated with microtransit or on-demand transportation services:

- **Transportation Network Company (TNC) or Mobility Service Provider (MSP):** A company that provides transportation services using an online-enabled platform to connect passengers with drivers using their personal vehicles (California Public Utilities Commission, 2013).
- **Ridesourcing/Ridesharing/Ride(e)-hailing:** Adding passengers to a private trip in which driver and passengers share a destination. The arrangement provides additional transportation options for riders while allowing drivers to fill otherwise empty seats in their vehicles. (Conway et. al. 2018).
- **Ride-splitting:** A type of ridesourcing that allows customers requesting a ride for one or two passengers to be paired in real time with others traveling along a similar route. (TCRP Research Report 188)
- **Mobility on Demand (MOD):** An innovative, user-focused approach that leverages emerging mobility services, integrated transit networks, and operations, real-time data, connected travelers, and cooperative Intelligent Transportation Systems (ITS) to allow for a more traveler-centric, transportation system-of-systems approach, providing improved mobility options to all travelers and users of the system efficiently and safely. (U. S. Department of Transportation)
- **Shared Mobility:** Transportation services and resources that are shared among users, either concurrently or one after another. This includes public transit; taxis and limos; bikesharing; carsharing (round-trip, one-way, and peer-to-peer); ridesharing (i.e. non-commercial services like carpooling and vanpooling); ridesourcing; ride-splitting; scooter sharing (now often grouped with bikesharing under the heading of "Micromobility"); shuttle services and "microtransit"; jitneys and dollar vans; and more. (Shared-Use Mobility Center)

## Service Concepts

- Microtransit services have been well received by communities and are appealing to a variety of age groups that appreciate the flexibility and personal nature of the service. It has been reported by some communities that high school students use the service to commute to school and other activities; people in their twenties are using it for commuting and to run errands; and older adults use the service for shopping, medical appointments, and social or recreational activities.
- Depending on the arrangement, operating costs for microtransit services, versus other public transit services, will likely be cost neutral when replacing existing routes/services.
- Microtransit can result in greater efficiencies and on-time performance in certain circumstances but can have lower service productivity (i.e. trips per mile or hour) when measured by traditional performance metrics.

- The most successful applications of microtransit programs are either in the catchment area of major high-frequency public transportation hubs or as a supplement/ replacement for demand response transportation or ADA paratransit.
- One of the key concepts of microtransit services is a short response time, as convenience and reliability will drive ridership growth. Response time will need to be a guiding element for designing and implementing services.

## Implementation Steps

Considering the project team's research and conversations on microtransit and flexible transit services with peer transit systems from across the country, the following implementation steps were developed and are outlined within the various chapters of the plan:

**Chapter 1: Background** and overview of existing conditions

**Chapter 2: Communications Plan** identifies key stakeholders and summary overview of public outreach

**Chapter 3: Service Plan** outlines service delivery model and operations plan options

**Chapter 4: Capital & Technology Plan** identifies options and requirements

**Chapter 5: Five-Year Financial Plan** including conceptual budget and identification of funding sources

**Chapter 6: Evaluation Plan** to determine preferred performance measures

**Chapter 7: Procurement and RFP Considerations**



## Chapter 2

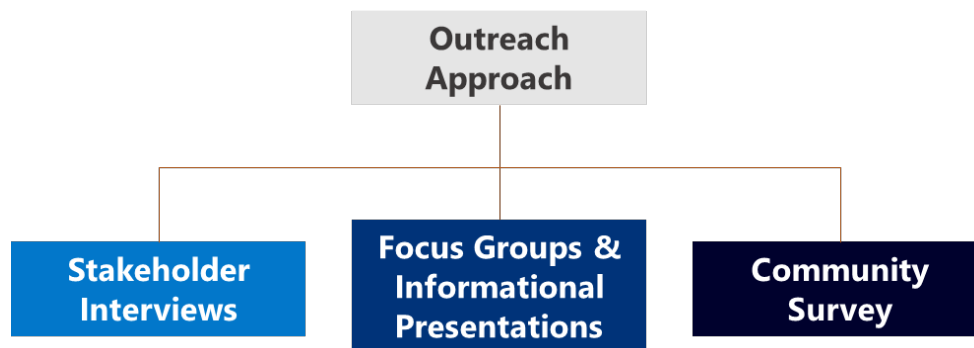
# Communications Plan

### Background

The Communications Plan is meant to be a brief but detailed plan on the project team's outreach activities, future recommended outreach activities and other communication aspects of the process. The Communications Plan intends to ensure participation and facilitate coordination from all major stakeholders, including Wake County, the Capital Area Metropolitan Planning Organization (CAMPO), the Transit Planning Advisory Committee, the Planning Board, and frontline staff.

The study's public outreach efforts encompass three unique approaches that are further detailed in this chapter. As seen in Figure 2-1, our approach included stakeholder interviews, focus groups & informational presentations, and a community survey. This chapter concludes with a discussion of potential marketing efforts that would build upon these outreach efforts.

**Figure 2-1: Microtransit Service Plan Outreach Approach**



## Stakeholder Interviews

To ensure participation and “buy-in” from all major stakeholders, individual interviews were conducted. The study team worked closely with Wake County to identify potential stakeholders and impacted populations. The following organizations and individuals were identified:

Project stakeholders are listed, in alphabetical order, in Table 2-1. Stakeholder interviews were conducted with each of the individuals listed below, in some cases additional staff also contributed during the interviews. The proceeding subsections include summaries of select stakeholder interviews conducted by the study team.

**Table 2-1: Stakeholder Contacts**

Organization	Contact	Contact Title
CAMPO	Bret Martin	Program Manager
City of Raleigh	David Eatman	GoRaleigh Transit Director
Eastern Wake Regional Center	Darryl Blevins	Regional Director
Housing Authority of Wake County	Tamario Howze	FSS Coordinator
North Carolina House of Representatives	Representative James Roberson	House District 39 Representative
Northern Wake Regional Center	Ross Yeager	Regional Director
Passage Homes	Lisa Crosslin	Chief Program Officer
Resources for Seniors	Mae Freeman	Transportation Coordinator
Town of Rolesville	Mical McFarland	Community & Economic Development
Town of Wendell	Bryan Coates	Assistant Planning Director
Town of Zebulon	Michael Clark	Planning Director
Wake County Dept. of Housing Affordability & Community Revitalization	Alicia Arnold	Director of Equitable Housing & Community Development Division
Wake County Social & Economic Vitality	Verna Best	Program Manager

## Capital Area Metropolitan Planning Organization (CAMPO)

The Capital Area Metropolitan Planning Organization (CAMPO) is the MPO for Raleigh. They focus on long range planning for all transportation modes. Our interview generally focused on potential service areas, long-range planning and project support.

### Service Area

- Connection with the Wake Forest Loop. Rolesville just completed a study on transportation connections to Wake Forest and Raleigh to connect residents to more destinations and more economic opportunities.
- Connection with future BRT terminus. Mobility impaired passengers may have issues (up to an hour wait for Route 33) when making connections to fixed route buses.
- Adapt service for the new East Raleigh Transfer Center and BRT terminus in 2023/2024.
- Much of the northeast county area is considered an area of remaining relative affordability, though it is not characteristically low-income.

### Service and Customer Characteristics

- Wait times between 20-30 minutes, ideally shorter.
- Suggested \$4 per trip fare. Consider coordination with GoPass fare system and discount fares. Still a lot cheaper than Uber. GoWake Access will likely remain the most effective service for grouped trips, however, it needs to demonstrate productivity through cost per trip to be competitive for local funding.
- Suggested service hours between 6 am – 12 midnight to account for shift workers and service workers returning home. Late night service is more important than early morning for most non-first shift workers. Morning trips are largely covered by the express service.
- Most environments in northeast zone will require curb to curb service due to a lack of pedestrian infrastructure.
- Important for the app to be user-friendly. The CAMPO Mobility Coordination Committee is working on an ultimate goal for transit providers to have a one-stop shop for trip requests.
- Second and third shift workers, and riders during traditional off-peak commuting hours would be potential customers

### Partnerships and Funding Considerations

- Northeast Wake Microtransit service could be funded through the Community Funding Area Program, requiring a 50% match. The Towns of Rolesville, Wendell and Zebulon could be potential funding recipients through this program, so it would be beneficial to get their buy-in early on.
- Service must be cost-effective to be competitive for funding. In Wake County alone, there are four ADA providers including GoWake Access, GoCary, GoRaleigh, and GoTriangle.
- Need a solid financial plan to fund service beyond IMI Grant.
- Cost-per-trip and the right marketing are very important.

## City of Raleigh / GoRaleigh

GoRaleigh is the primary public transportation provider in the Raleigh metro area. GoRaleigh provides approximately 1400 paratransit trips per day and is very familiar with the northeast Wake County service area and its challenges. About 80% of its paratransit trips are provided through taxicab companies. The interview generally focused on potential services areas, service characteristics and equity issues.

### Service Area

- Microtransit could cover areas of the 401X Rolesville Route, which may be scaled back due to the drop in ridership.
- The northeast area is an important service expansion area – the area primarily consists of bedroom communities.
- Some manufacturing and other trip destinations in Zebulon and Wendell, but mostly this area travels to Knightdale and into Raleigh for errands and essential services.
- Rolesville is more residential in character, while Rolesville has economic and employment connections with Wake Forest and Raleigh.
- Limited trips and low-demand between Zebulon/Wendell and Rolesville area (between north and south side of the zone).

### Service Characteristics

- Service spans of 6:30am to 6:30pm/7:30pm would be ideal. Monday – Friday service is essential. Weekend service is surprisingly high in the Raleigh area.
- In the unincorporated area of the service zone (rural center), a one-hour wait time would be a huge improvement. During peak hours some trips within the proposed zone could take up to an hour. Ideally, the wait time would be 15-30 minutes but it's probably not realistic across the whole zone.

### Equity

- Fares should compare to the current GoRaleigh paratransit fee (one-way) of \$2.50 or a \$5 day pass. The current political environment is for fare-free service.
- Smartphone use is dramatically increasing, so it is not a big equity concern. Call-in option should be included. Cellular connectivity in rural areas may be an issue, so calling-in may be necessary.
- A cash fare option is important as many seniors prefer this.
- Most likely customers are existing GoWake customers. Seniors and individuals with disabilities are the primary demographic.
- Service needs minimal wait time and short trip times to attract choice riders.

Additionally, GoRaleigh is looking forward to sharing the Routematch MOD tools. Planning is ongoing for a new facility to integrate some administrative and operations positions from both GoRaleigh and GoWake.

## Northern Wake Regional Center

Regional Centers (RCs) were established in the north, east, south, and west quadrants of the county to better serve the rural population. The RCs are a one-stop shop for county government. The RCs house sheriffs' stations, taxes, vital records, clinics, and other human service type functions – including housing assistance, energy assistance, food & nutrition (WIC, food stamps), employment services, Medicaid, psychology services, etc. The homeless population is one with the greatest need. These individuals struggle with various interconnected issues including housing, food, and transportation. There are supportive programs in Raleigh, but many find these unfamiliar and uncomfortable, coupled with a lack of outside supportive structure (family & friends) in Raleigh leads many homeless individuals to seek the support of the RCs. Providing transportation to the RC for area residents is a top priority for staff. The interview generally focused on service areas and characteristics.

### Service Area

- Solid demand for individuals who would rather travel to the RC to handle governmental business versus traveling into Raleigh.
- Important areas include rural places between Rolesville and Wendell/Zebulon. The RC has experienced challenges in better understanding the needs of the rural population. Due to a lack of technology, there are several isolated households in this rural area, such as the 98/96 corridor.
- There are three mobile home parks near Rolesville with a large percentage of RC service recipients. Spanish-speaking populations growing in these areas

### Service Characteristics

- RC staff mentions that demand will likely be very high.
- Service to senior centers and recreation centers is a priority for older adults.
- Wheelchair accessible vehicles should be a top priority.
- One hour advance notice/wait time is better than the current service. Advance notice would need to be shorter for return trips or there should be an option to book a return trip with an originating trip.
- \$2 - \$4 fare is reasonable. Cash will likely be the preferred fare medium. RC would be interested in providing passes or bus tickets to clients (such as a 10-ride pass).
- The vast majority of clients use a smartphone, not sure about bank account usage



## Wake County Housing Affordability and Community Revitalization Department

Wake County's Department of Housing Affordability and Community Revitalization supports housing affordability strategies and homeless services that are not supported by the housing market. Unmet housing needs are growing rapidly in the county. Currently, 56,000 low-income households are unable to find affordable housing. Current trends show that the number may increase to as many as 150,000 households over the next 20 years. The interview focused on three key themes: mobility challenges and needs, service characteristics, and beyond the planning study.

### Mobility Challenges and Needs

- The eastern portion of Wake County provides more affordable housing options but it is not an area with significant job opportunities. Access to jobs outside their region for all population groups is important.
- Even trips to grocery stores or other services inside their region are difficult without a car due to the lack of infrastructure such as sidewalks.
- Microtransit would be most useful for older adults (especially lower income seniors) that could be connected to healthcare and other community locations, and for individuals with lower incomes that could be connected to job opportunities (particularly those outside the northeast region of the county)

### Service Needs

- Affordability is critical and needs to be low or subsidized.
- Need to look at transportation hubs to help increase coordination between services and reduce inefficiencies.

### Beyond the Planning Study

- The Wake County Affordable Housing Plan outlines three essential strategies to address Wake County's growing housing crisis. In terms of land use the plan notes that Wake County is growing rapidly and must successfully address the rising housing needs of its residents. It calls for adjusting land use requirements to allow for higher density residential projects in exchange for the provision of affordable units, and that municipalities and the county can provide a financial incentive to create new affordable housing.

Partnerships could support the supply of subsidized affordable housing. Wake County can establish or modify programs to leverage limited public funds, outside resources and specialized expertise to meet residents' changing housing needs. Coordination can also be strengthened between the county and municipalities, while partnerships can be established with nonprofits and lenders.

## Representative James Roberson – NC House District 39

Representative James Roberson is a new member of the North Carolina State Legislature. He is a former two-term Mayor and former two-term City Council Member of Knightdale. The interview focused on three key aspects: mobility challenges, needs and service characteristics.

### Mobility Challenges and Needs

- Heard many complaints about transportation as Mayor, existing transit does not serve distressed communities and limits some individual's social and economic options.
- New Bern Avenue is planned to be supported by BRT, but this will not serve Eastern Wake directly.
- Some individuals who want to go to school or pursue technical training cannot go because of a lack of transportation.
- There is a community college 8 miles away from Knightdale in northeastern Wake County, but it is challenging to access for some. It is even more so challenging for students attending Wake Tech's southern and western campuses. Many have had to drop out, such as single parents or those with limited income.
- Wake County Human Services Eastern Regional Center staff has noted many residents in the region face challenges reaching the Center.
- Asked why Knightdale was not included in the proposed Service Zone (Consultant identified high transit dependence zone in GoWake Access Plan). Would like to broaden service to Knightdale, which is quickly growing, and new development typically requires residents to drive.
- East Wake Educational Foundation, which serves pre-K and mostly Hispanic/Latinx children, would be a great partner. They actively look for transportation solutions and also assists families who face major challenges in securing dependable transportation.
- High school students would like the service, many of whom are from vulnerable communities. Most walk, which is dangerous with limited sidewalks. Some community members and business owners share this safety concern.
- For many seniors, such as those who live along the Hodge Road corridor, traveling to a grocery store is a major hassle. The grocery store is about 3 miles away and there are no sidewalks or public transit options. Many seniors do not drive and depend on others.
- WakeMed is a big resource. Wake Tech's planned Wendell campus is a big deal. I hope that making transit connections to this campus will be easier than current connections to Wake Tech's other campuses, which may involve multiple transfers. Most residents from Knightdale attending Wake Tech's Northern Campus travel on NC 540. Students can't walk along that bypass.

### Service Characteristics

- Service will be scaled back with the pandemic. But there are needs from at least 5 am to midnight. But demand typically tapers off after 7pm. A 6am to 8pm service window would be preferred.
- Wait time ideally is 15 minutes. 30 minutes should be okay, but once you get past that it can be counterproductive. People don't want to wait for a long time for the return trip home (example - waiting to be picked up at a grocery store).

- Representative Roberson talked with a resident that walks 4 miles each to work at a grocery store – he likes it. But that type of travel would be more challenging if it is raining and it would not be feasible for most seniors.
- Older individuals don't like to drive at night or deal with heavy traffic.
- There will be millennial demand and high demand overall, as many have voiced a need for this service.

## Wake County Human Services

Wake County Human Services programs and services help people with basic needs. Among its collaborative initiatives, this local government agency focuses on socio-economic vitality aiming to eliminate poverty and support thriving businesses and communities. The interviewee's focus of work is on Eastern Wake, not the northern portion or other areas. The discussion focused primarily on service area and characteristics.

### Service Area

- Transportation is one of the biggest issues for E. Wake. Residents from southeast Raleigh, where there was a lot of gentrification, moved to E. Wake county or elsewhere.
- There is one route from Zebulon to Raleigh but they have to stay there the whole day to return.
- Partners like Wake Tech said some people call to say they are interested in classes but can't get there due to lack of transportation.
- Faith-based groups have vans to shuttle people but it's a one-off thing.
- Lack of service at night, as there aren't many Uber/Lyft drivers.
- Many small towns in southeast Wake County. Its residents have pride in their towns and would like access to resources, but they usually need to go to Raleigh for services or errands.
- Lots of resource disparity in Knightdale and Amber Acres.

### Service Characteristics

- Some commuters and other residents want to take night classes, but they are unable to find reliable transportation.
- The possible need for mid-day service.
- There is a lack of sidewalks and bus stops flexibility would help.

### Equity

- Some residents don't have smartphones. Makes it challenging to work virtually. Sometimes there's a lack of access to smartphones and access to reliable internet. Estimate that 10% don't have access to smartphones but don't really know.
- Kramden Institute is a great community resource that does tech classes for people 65+.
- We have a financial literacy program (mindset) that works with people at all financial levels, some

of whom started out as homeless. A lot of people don't have a credit card.

- The likeliest customers are from low-income communities, like those in Amber Acres which are resource scarce. Closest store was a dollar store 2.5 miles away, while the actual grocery was 5 miles away. Not very walkable.
- Town of Wendell is trying to get more sidewalks, but that also takes funding!
- Lack of funding compared to nonprofits in Raleigh, in-kind donations are more likely.
- Though overall ridership is low compared to middle of downtown, there's high need in areas from Knightdale to Raleigh.

## Beyond the Planning Study

- One funding idea is to get church buses which would cut down on costs at the start.
- Possible partner is Wake Tech, they have an eastern branch in Zebulon but they're building a much larger campus in Wendell. Bryan Coates from Wendell has been very helpful.
- Another possible partner is Wendell Chamber of Commerce, which we want to partner with the town on to build a collaborative workspace in southeast Raleigh, eastern Wake.
- Wendell is working on their 2021 budget, could be a source of funding.
- Developing Amber Acres project on resource disparity.

## Focus Groups & Informational Presentations

The study team has completed a total of nine focus groups and informational presentations to solicit input on the plan and promote the future service. Input gathered during the focus groups is presented in the following sections.

### Focus Groups

The study team completed four focus groups as a part of this study. The focus groups were facilitated community organizations and Wake County staff. The focus groups included Wake County's Northern and Eastern Regional Councils, the Latinx community, and local economic development representatives. Information and input from the focus group participants are outlined in the following subsections.

### Eastern Regional Center Community Advocacy Committee

The Eastern Regional Community Advocacy Committee (ERCAC) is an advocacy group for the eastern Wake County area including the Towns of Knightdale, Wendell, and Zebulon. The ERCAC coordinated with the study team for a special session to introduce the planned service and solicit community input. Our discussion generally focused on three elements, the service area, service hours, and equity & safety. The following comments and ideas were noted during the ERCAC focus group.

## Service Area

- Participants thought that the service zone should be extended to include a greater portion of Knightdale.
- Some participants also pitched the idea of constructing an enhanced bus stop or transfer location for microtransit riders to transfer to Route 33 in Knightdale.
- It was noted that some Knightdale residents take Uber to get to the Knightdale Walmart where they can catch a GoRaleigh bus.

## Service Hours

- Concerns were raised about the availability of the service for students who are enrolled in after school programs. For example, the Boys and Girls Club is a popular destination that is open until 8 p.m. on weekdays.
- The group generally agreed that a 6 a.m. to 8 p.m. service span would be ideal.

## Equity and Safety

- According to participants, eastern Wake County is a designated food desert and predominately low-income; the microtransit service needs to be affordable to provide equitable connections. (Current GoWake Access fares range between \$2 and \$4 – the majority of participants indicated that this was reasonable).
- Given the potential requirement to walk/travel to a nearby intersection for pickups and drop-offs, some participants mentioned specific safety concerns related to pedestrian infrastructure, traffic safety, and a lack of lighting during winter months and early morning trips.
- Concerns were noted that the number of shared trips/individuals on the vehicle should be limited during the pandemic.

## Northern Regional Center Community Advocacy Committee

The Northern Regional Center Community Advocacy Committee (NRC CAC) is an advocacy group that represents the Rolesville and Wake Forest areas. The NRC CAC is made up of local government officials and residents of the area. The NRC CAC provided the opportunity for our study team to present at a regularly scheduled NRC CAC meeting. Following the presentation, there was a group discussion that focused on three key themes: service area, the outreach process, and looking beyond the planning study. The following comments and thoughts were captured during the NRC CAC focus group:

## Service Area

- Many residents make connections between Rolesville and Wake Forest, but Wake Forest is outside of the proposed northeast zone.
- Intra-zone travel is very important. Most residents do not travel into Raleigh, they are able to



complete their errands and access essential services in the northeast Wake area.

- Access to grocery stores, pharmacies, and the post office were noted as priority destinations to be included within the service zone.

## Outreach Process

- “The real time trip request is a huge selling point.” – participants encouraged the study team to emphasize this during the outreach process.
- There is a growing population of Spanish speaking individuals, they should be included as a component of the outreach process.
- Participants also recommended reaching out to churches, alumni associations, and other groups that are still gathering to spread the word about the study and the service.

## Beyond the Planning Study

- Some officials recognized the financial commitment needed beyond the pilot project and encouraged a strong marketing effort to promote the service.
- The evaluation of the service, following the start of service, was also touted as a key priority to ensure the successful continuance of the service and local funding contributions.
- Participants recommended incorporating the results of the currently ongoing Northeast Wake County Transportation Planning Study.
- It was also recommended that the study team references the 2018 Wake County Coordinated Plan to take note of the transit desert map and analysis.

## Hispanic/Latinx Community Focus Group

Members of Northeastern Wake County’s Latinx community were invited to a focus group on the evening of Tuesday, January 26<sup>th</sup>, 2021 to discuss a potential microtransit service in northeastern Wake County. After KFH Group presented the service to the group, attendees discussed the microtransit service area, focusing primarily on three service aspects: fare payment, the outreach process, and scheduling.

## Fare Payment

- Community-members believed that a flat fare was better than a variable fare.
- Having a flat fare makes the service easier to explain.
- Cash fare options are very important for the Spanish-speaking community.
- A Spanish language option should be provided within the app, and riders should be able to toggle between English and Spanish within the app.
- The application should use graphics and symbols to help overcome any language barriers.

## Outreach Process

- Marketing is extremely important and should include practical examples of how to use the service.
- The Spanish-speaking community is often less familiar with Uber and Lyft type services, so marketing should make sure to be specific about what the service is.
- The community is interested in the service, but many questions about how to use the service remain.
- Community organizations are eager to assist in promoting this service and would consider participating in a travel training program.
- Ensuring that service is safe and reliable is important, community members thought that deploying Spanish-speaking drivers could help riders feel more comfortable using the service.

## Scheduling

- Riders should have the option to schedule a ride in advance.
- 30 minutes should be the maximum wait time for service.
- Large group or family trips should be available to schedule within the interface.

## Northeast Wake County Economic Development Focus Group

The Northeast Wake County Economic Development focus group was made up of different stakeholders from throughout the potential service areas, including representatives from local Chambers of Commerce, Wake Tech, and Eastern Wake economic development councils. After the service was presented to the group, a discussion took place focusing on three key aspects: the service area, outreach, and service hours.

## Service Area

- Focus group members thought that shift employment opportunities at restaurants and stores could warrant a zone extension into Wake Forest.
- Wake Tech is building a new campus in Wendell, which should be considered a future major destination in the service area.
- More transit dependent commuters may have jobs in Wake Forest, rather than in Raleigh.
- The size of the zone made some group members question how on-time performance could be maintained when considering how long some trips could take.
- Creating several geo-fenced zones could be the best option to maintain a 30 minute maximum wait time.

## Outreach Process

- Emphasize that the microtransit service will be cheaper than Uber, this is a big selling point for the service.
- Important to make the public understand how this service is similar to Uber and where it is different.
- Make outreach clear, provide real-life examples of how transit services can be used.

## Service Hours

- Wake Tech class schedules often include night classes, so there may be a market for extended hours to help get students to and from school.
- Overall, group members agreed that the 6am-7pm service span is a good start.
- The City of Wilson's new microtransit service was mentioned as a potential collaborator, and their service structure should be emulated where it is appropriate.

## Informational Presentations

The study team has presented at numerous board and committee meetings throughout the course of the study. These presentations have promoted the planning study and the concept of microtransit in the northeast Wake County area. These presentations have also provided opportunities to promote project outreach, notably the survey. Informational presentations were provided to the organizations outlined below.

**Table 2-2: Information Project Presentations**

Organization	Date
GoWake Access Advisory Board	December 2, 2020
Mobility Coordination Committee – CT Subcommittee	December 4, 2020
Transit Planning Advisory Committee	December 9, 2020
Local Reentry Council	December 17, 2020
Wake County Planning Board	January 6, 2021

## Community Survey

Much of the emphasis on public outreach has been placed on the community survey. The survey was developed based on examples of national microtransit surveys and tempered with Wake County's interests and needs.

The community survey was launched on December 16, 2020, and closed on February 15, 2021, providing a 62-day survey period. The community survey received a total of 383 responses.

The survey is available online through SurveyMonkey and printed paper versions were circulated in the community by Wake County and project stakeholders. GoWake Access' Customer Experience Team has also directly reached out to their transportation clients within the northeast Wake County area to notify them of the survey.

Given the study's timeline, survey respondents were encouraged to take the survey online using a QR code and weblink that is provided on every printed survey. Online surveys are preferred as they reduce the need for post-survey data entry. The survey is provided in English and Spanish – both the online and printed versions. Figure 2-2 provides a survey advertisement with the QR code for access to the online version of the survey.

**Figure 2-2: Community Survey Notification**



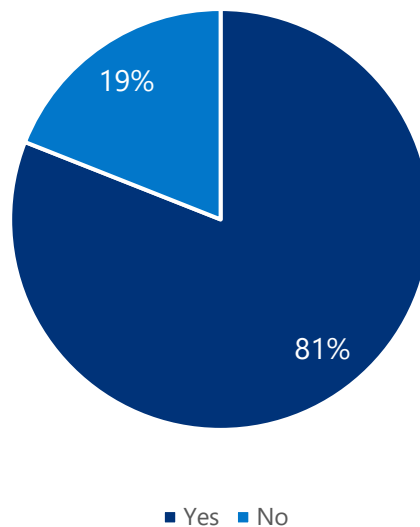
## Survey Introduction

Microtransit is a new type of public transit service that many individuals are not aware of. Due to this, the study team took great care in writing a survey introduction that explained how the new service will work and its service characteristics. The survey introduction included the following:

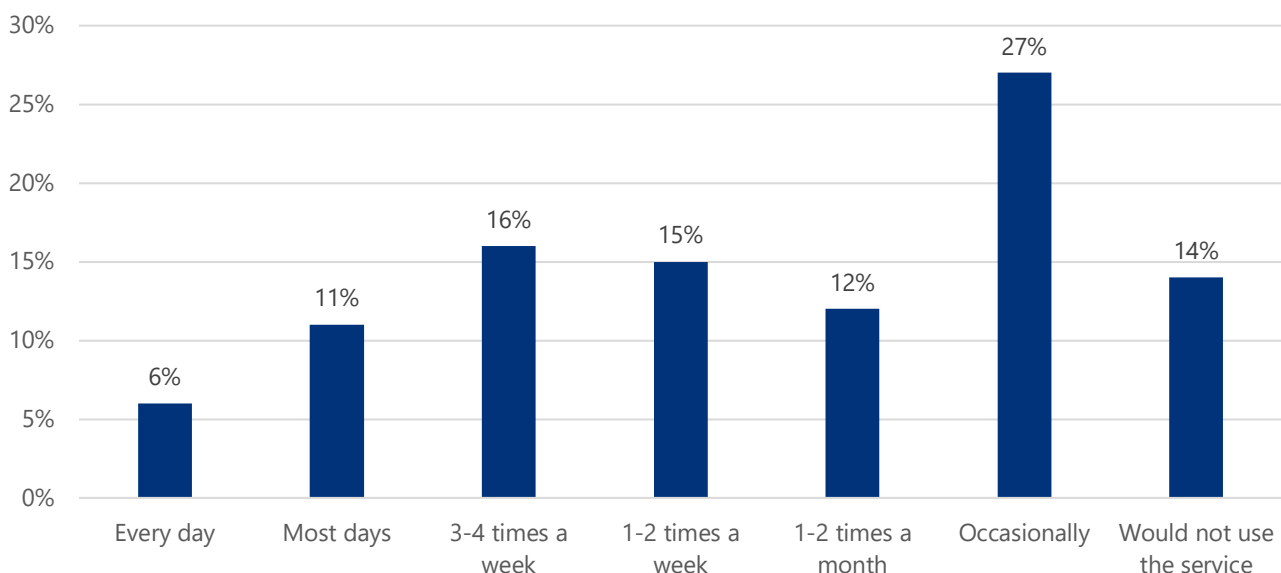
Wake County is considering launching a new transportation service in the northeastern portion of the county (including the towns of Rolesville, Wendell, and Zebulon). This would be an on-demand real-time ride-sharing service that would provide short trips within northeastern Wake County. This would be a new service in addition to the current GoWake Access service. You would be able to

book and pay for your ride with a mobile app or by phone. Once booked, you could track the progress of the vehicle until it arrives at your designated pickup location. You may ride with other people along the way to your destination. The service is similar to Uber or Lyft but will be more affordable and transfers will be provided to GoRaleigh and GoTriangle services.

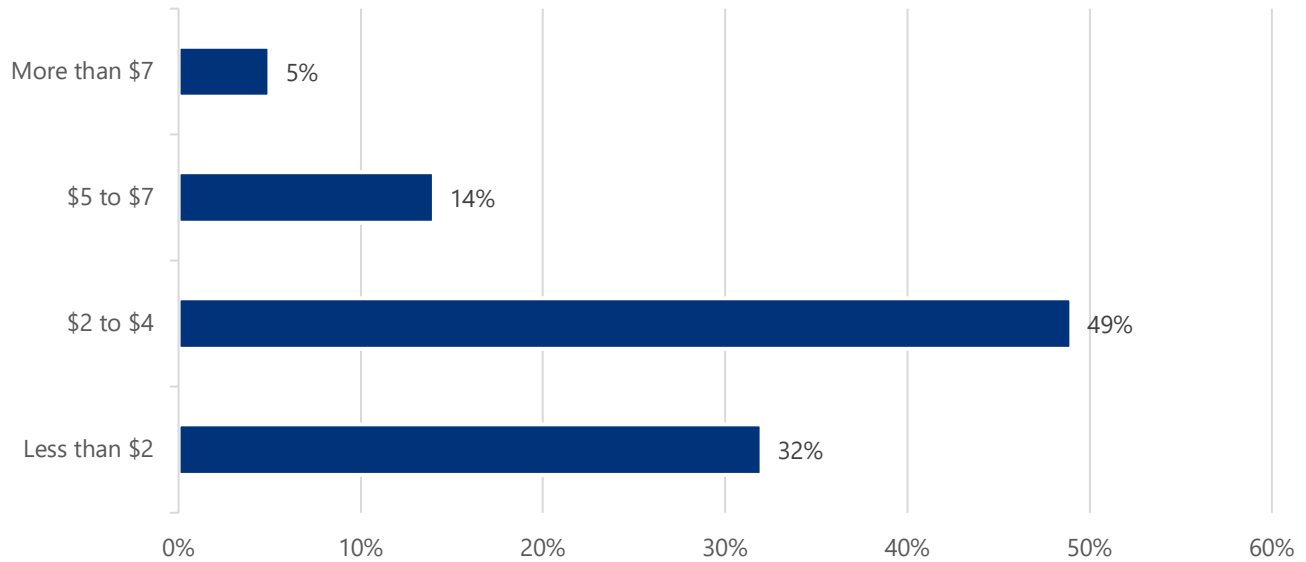
### Question 1: If this on-demand service existed would you use it?



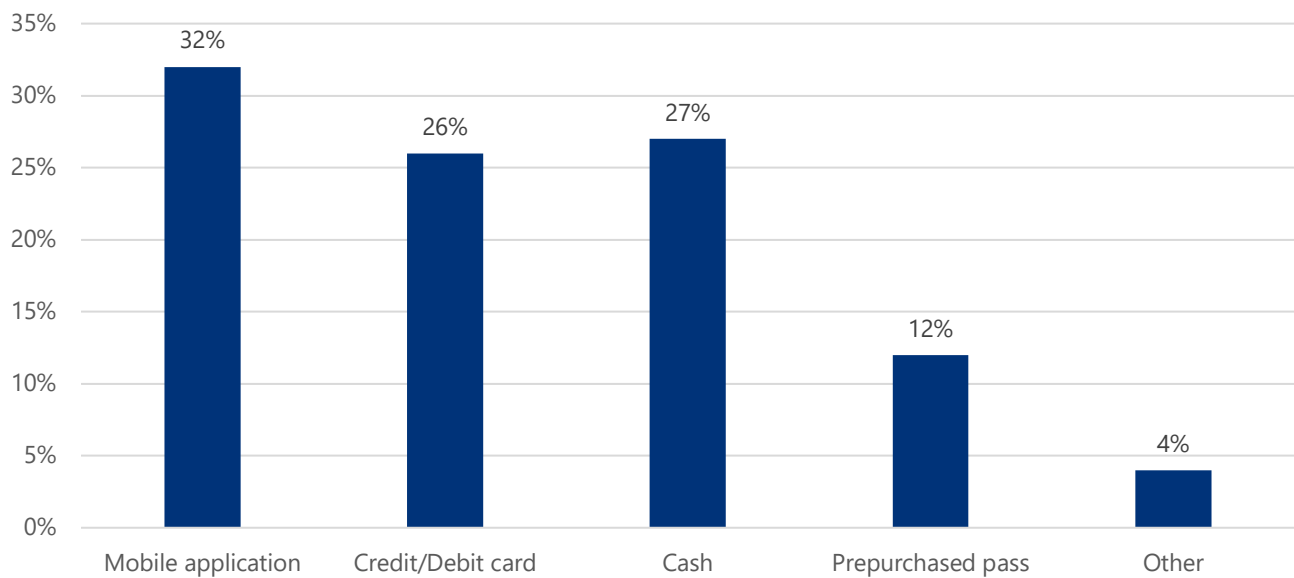
### Question 2: If you checked “Yes” for Question #1, please indicate how often you would use the service:



### Question 3: How much would you be willing to pay for a one-way trip for an on-demand trip using an app to schedule?

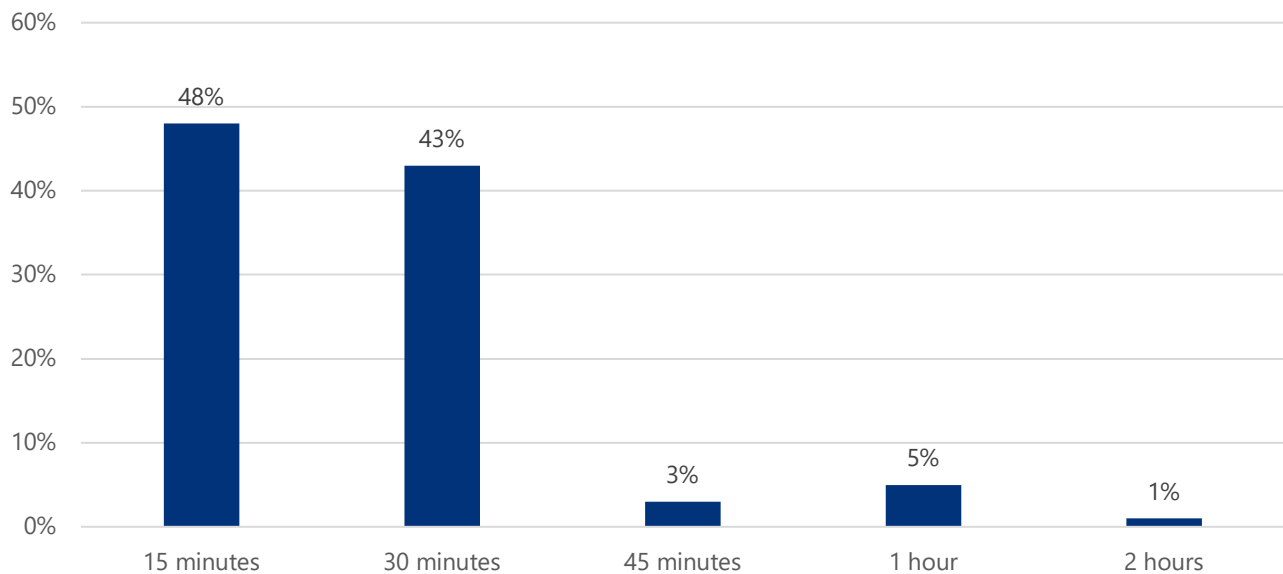


### Question 4: How would you prefer to pay for the trip?

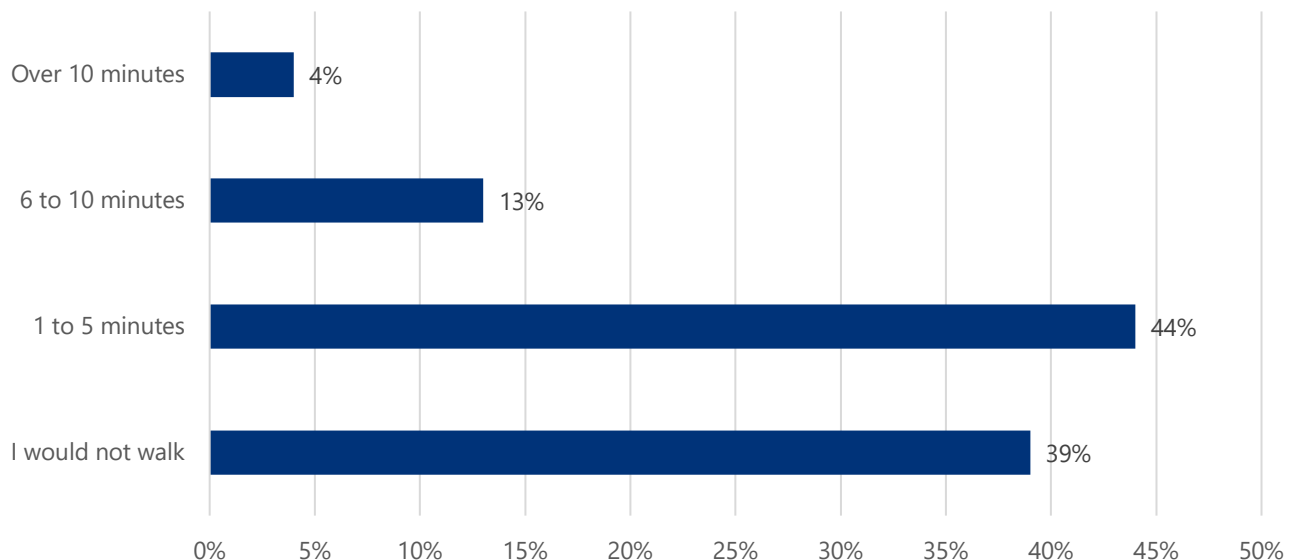




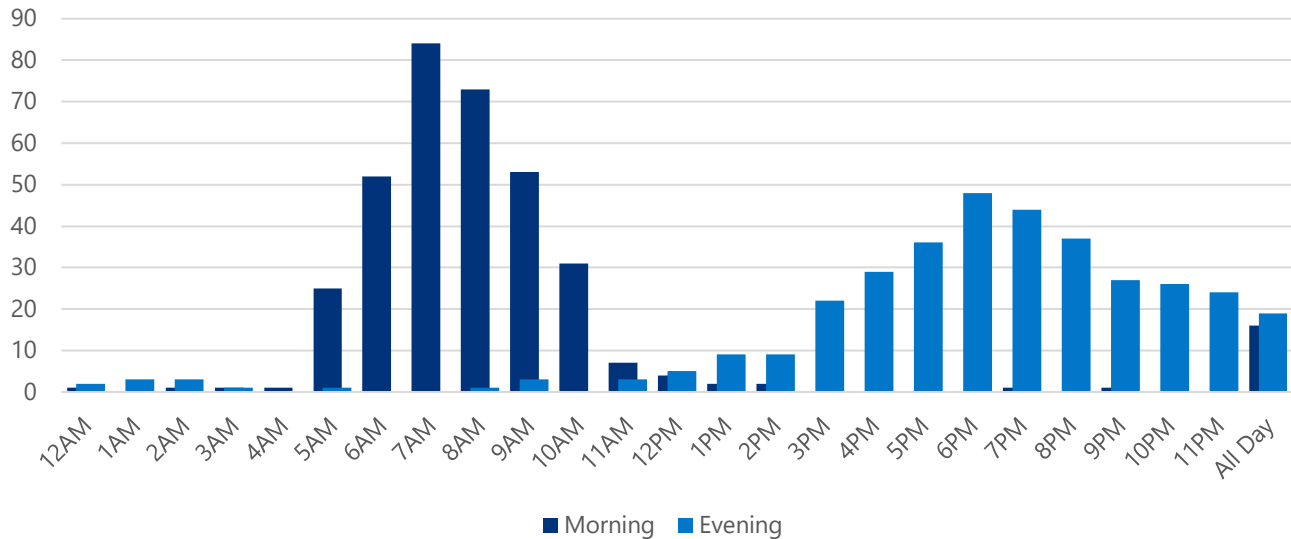
### Question 5: What is a reasonable time to wait for your pick up after using your smart device to schedule the trip?



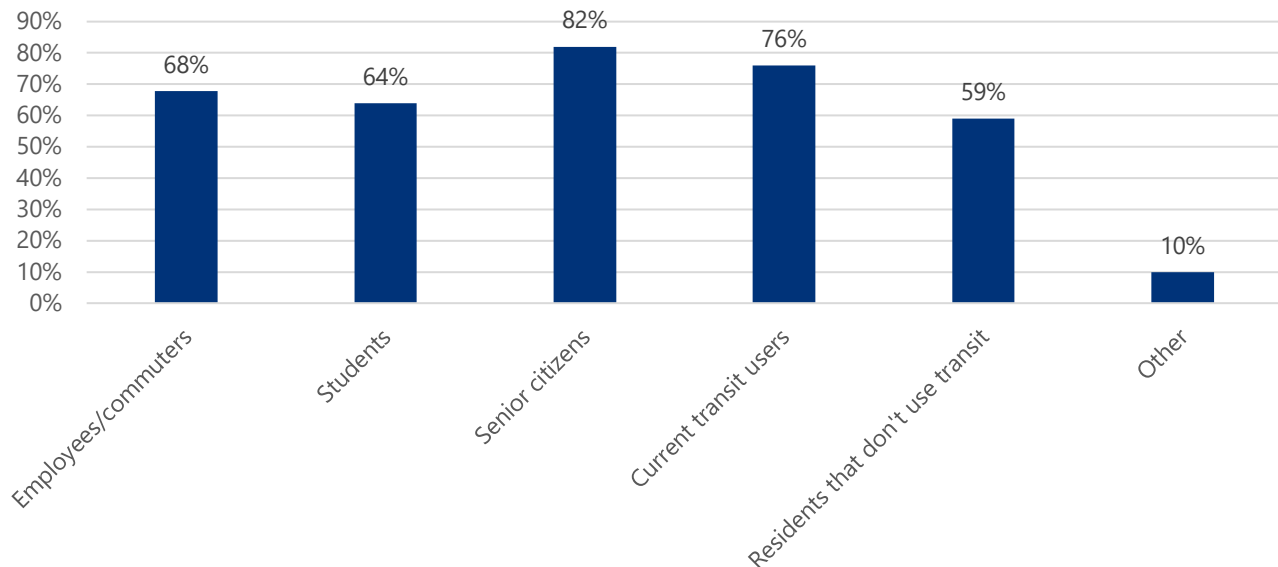
### Question 6: Depending upon your trip request, you may have to walk to a nearby intersection to meet your vehicle, how far would you be willing to walk?



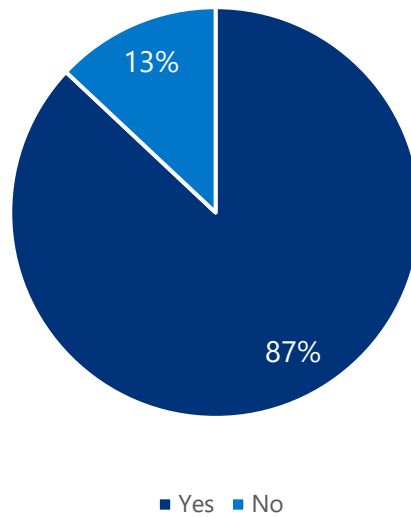
**Question 7: How early in the morning and how late in the evening would you use the service? Example: 5AM, 6AM, etc.**



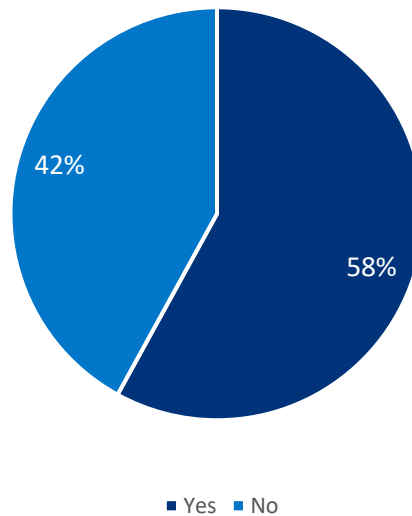
**Question 8: Who do you think would use this service? Check all that apply**



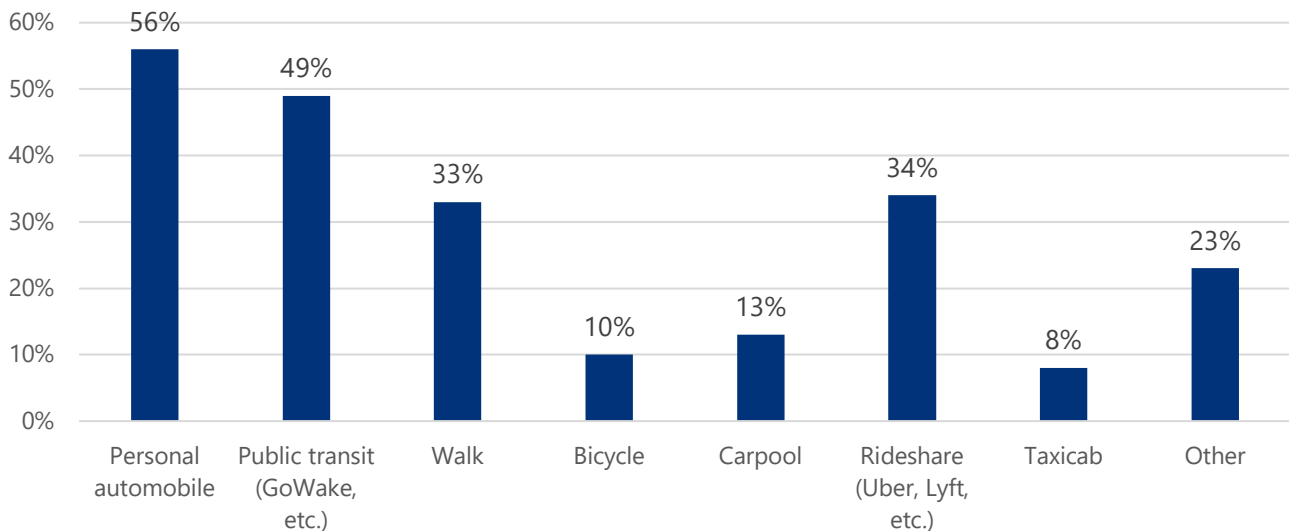
**Question 9: Do you own and use a personal smartphone or smart-device (iPhone, iPad, etc.)?**



**Question 10: Do you currently have access to a personal vehicle?**



### Question 11: What are the top three ways you get to places you need to go? Please choose up to 3



### Question 12: What are the top three destinations in Wake County you travel to most often?

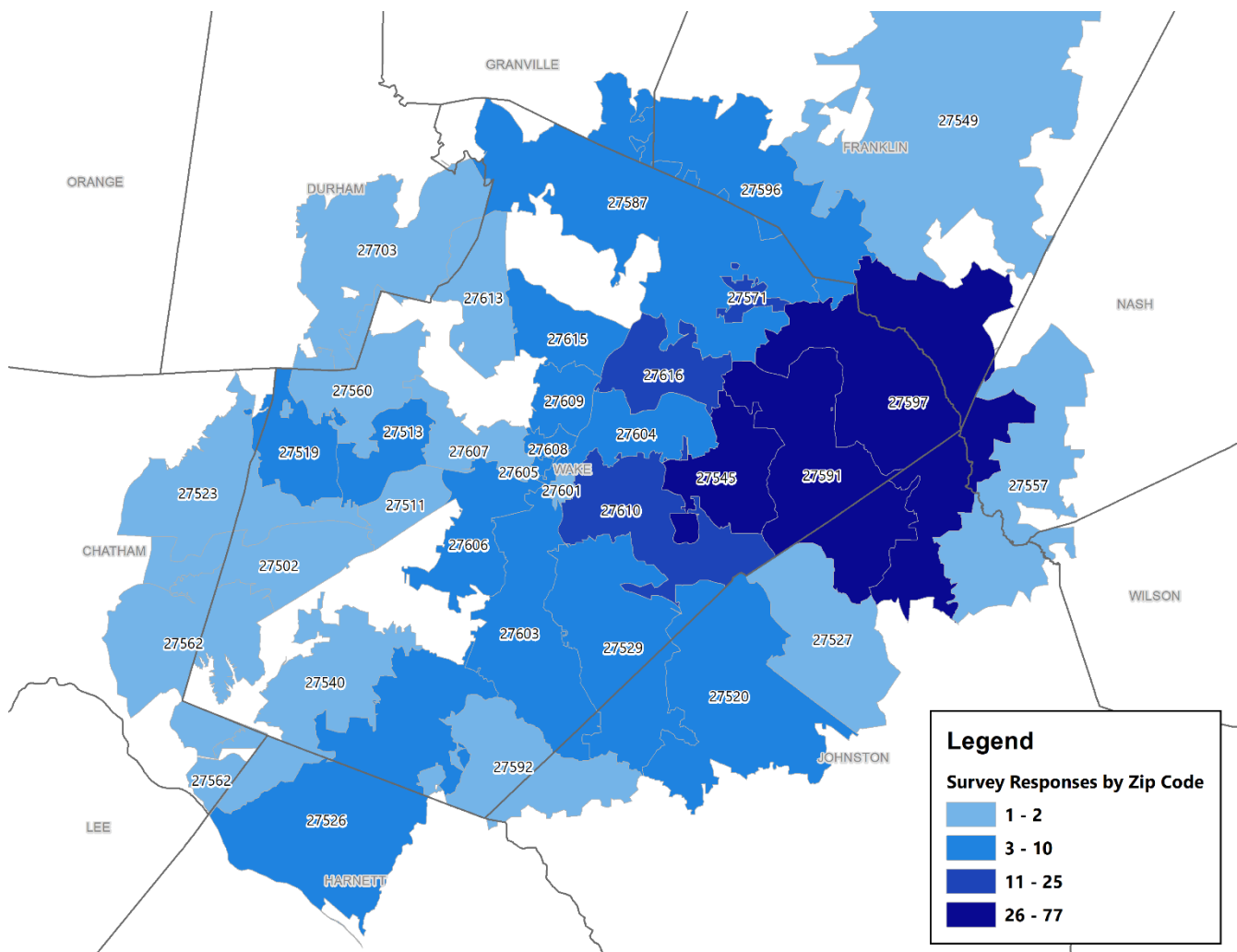
As shown in the word cloud below, "doctor's office" was a very popular response. However, "Raleigh" and "Downtown Raleigh" were the top two most frequent responses. The top three most desired destinations are listed below and followed by a word cloud symbolizing the most frequent responses.

1. Raleigh – downtown, doctor's appointments, shopping, work
2. Zebulon – grocery store, Walmart, downtown, doctor's office
3. Knightdale – grocery store, Walmart, shopping, doctor's office



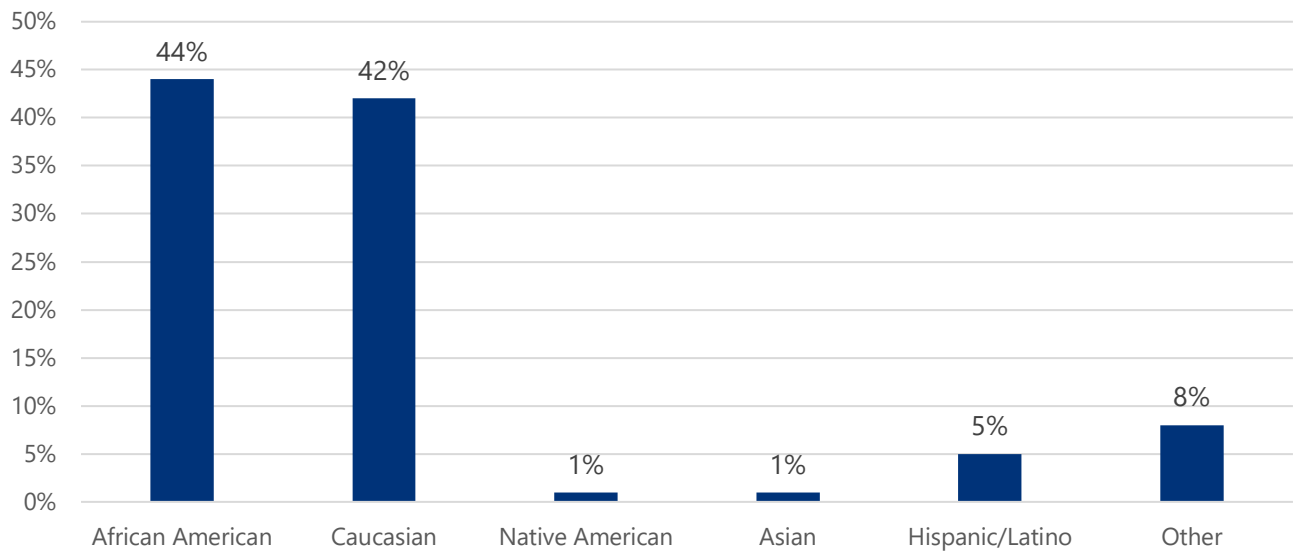
### Question 13: Where do you live?

City and Zip Code	Responses
Wendell - 27591	77
Zebulon - 27597	73
Knightdale - 27545	26
Rolesville - 27571	22
Raleigh (southeast side) - 27610	16
Raleigh (northeast side) - 27616	12
All Others	101

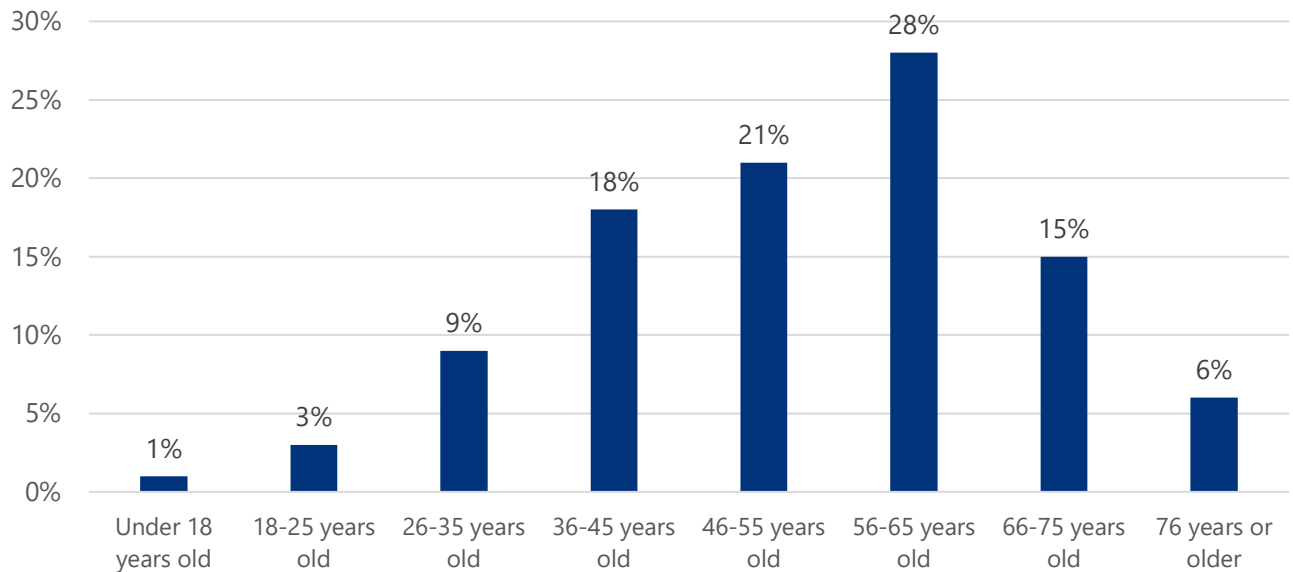




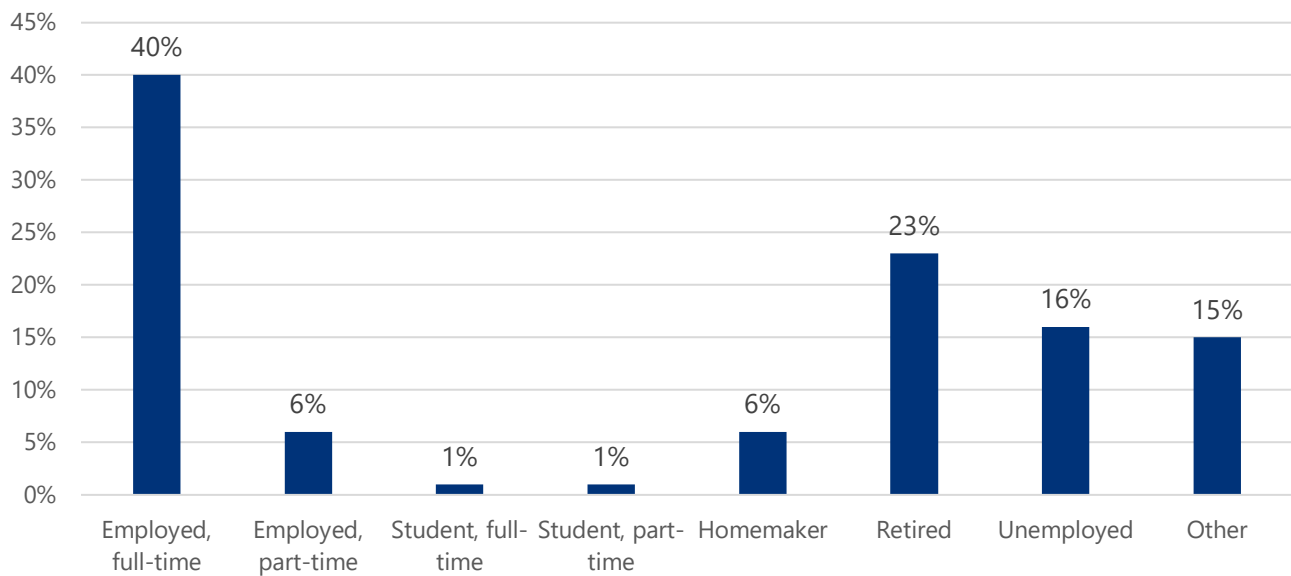
### Question 14: How would you classify yourself?



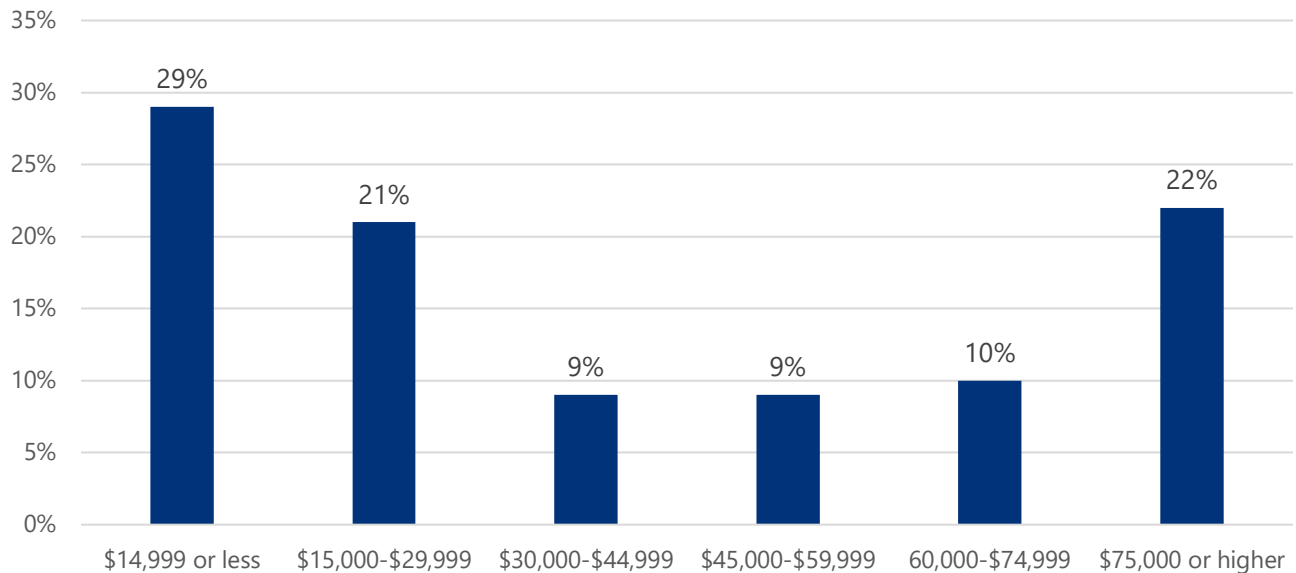
### Question 15: Please indicate your age group.



**Question 16: Which of the following best describes your current employment status? *You may check more than one.***



**Question 17: What is your annual household income level? *Please check only one.***



## Marketing New Microtransit Services

Before the planning for microtransit services, Wake County had already engaged numerous stakeholders, so the outreach process provided the opportunity to build upon these existing relationships. Outreach efforts during the project also included the ability to discuss the microtransit concept with other audiences, furthering educating key community members on the potential service. These outreach efforts will be an important component in the future marketing of microtransit in Northeastern Wake County, and will greatly help to spread the word about the service.

In addition to this word-of-mouth marketing, Wake County can consider a variety of education and outreach efforts that have been used by other communities to publicize new microtransit and flexible transportation services. Some of these tactics will be more effective during COVID restrictions and others can be employed once restrictions are lifted. These tactics should start to be crafted and developed right away and implemented as soon as the ride hailing application is procured. These efforts include:

- **Press releases/Newspaper articles:** Press releases and PSA targeted to media outlets that transit users are likely to consume are an effective way to get the word out. Newspaper and local television news outlets can be an effective way to reach people, but don't forget local community radio.
- **Flyers/Pamphlets:** As soon as the ride hailing platform is secured, printed promotional material should be developed and distributed. The printed material should be high quality, pleasing to the eye, and informative. Information on how to download the app, use the app to hail the ride and locations served should be included. Additional information can include websites and phone numbers for additional information and questions.
- **Websites:** Website pages specific to the microtransit service should be developed. An example from the DART GoLink service in the Dallas, Texas area that includes specifics on booking a trip, a map of the service area, hours of operation, and fares, is available at [DART.org - GoLink](http://DART.org - GoLink).
- **Promotional videos:** Some communities have promoted new services through on-line videos, including some that feature elected officials supporting the service.
- **Travel Training:** Many of the human service organizations that participated in the outreach effort expressed the desire to partner with this effort. Working with these organizations to show them how to download the app and use it to schedule a trip will be important. These individuals can assist their organization and caseworkers in helping their clients understand how this new service works and ensure that the people that need transit service the most are ready to use the new system when it comes online.
- **Coordination:** Working and coordinating with local community partners is a great way to market service to residents. Congregate meal centers, senior centers, workforce agencies, health and human service departments, libraries, and community education centers all come into contact with several community residents every day. It is important to engage these organizations to ensure

staff know about the new microtransit service and have promotional/educational materials on hand to share with the community.

- **Meetings and Presentations:** Brief promotional presentations detailing the new service and how to use it can be a good way to get information out to the public and answer any questions they may have. Presentations at senior centers, schools or other places where several people are likely to congregate are good locations for meetings and presentations.

## Chapter 3

# Service Plan

### Background

This chapter is the first step in the process of identifying the implementation steps and discussing the variety of considerations related to the Northeastern Rural Wake County Microtransit Pilot Project. The chapter begins with a background on major lessons learned from other microtransit providers and then provides a guide with the necessary steps for implementing a microtransit pilot service.

### Lessons Learned

Since microtransit is a recent service model, many programs are still in their infancy, and little historical data is available for these services. Additionally, microtransit services should not be evaluated under the same criteria as traditional fixed route services. Since microtransit functions similarly to traditional demand response but also provides first and last mile connections, a combination of metrics is needed to assess the performance of the service. Potential performance measures will be discussed in more detail in a future chapter.

Despite the lack of historical data, the following overall lessons learned have been identified through research and review of current microtransit services:

- Microtransit services have been well received by communities and are appealing to a variety of age groups that appreciate the flexibility and personal nature of the service. It has been reported by some communities that high school students use the service to commute to school and other activities; people in their twenties are using it for commuting and to run errands; and older adults use the service for shopping, medical appointments, and social or recreational activities.
- Depending on the arrangement, operating costs for microtransit services, versus other public transit services, will likely be cost neutral when replacing existing routes/services.
- Microtransit can result in greater efficiencies and on-time performance in certain circumstances but can have lower service productivity (i.e. trips per mile or hour) when measured by traditional performance metrics.
- The most successful applications of microtransit programs are either in the catchment area of major high-frequency public transportation hubs or as a supplement/replacement for demand response transportation or ADA paratransit.



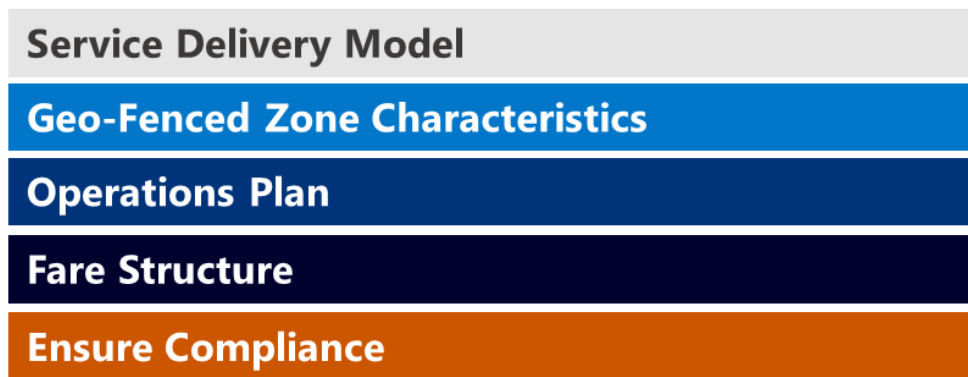
## Maintaining Service Reliability

One of the key concepts of microtransit services is a short response time, as convenience and reliability will drive ridership growth. Response time will need to be a guiding element for designing and implementing service, as is configuring a zone so that a vehicle can reach every destination in the zone within this response time. The size and layout of each zone are therefore heavily influenced by the local street network, location of vehicle staging areas, and anticipated demand. With a defined zone, service planners must ensure service reliability by providing an adequate number of vehicles within the zone.

## Implementation Steps

Taking into account the project team's research on microtransit and flexible transit services from across the country, and Wake County's input on current conditions and potential areas for microtransit and on-demand transit, this section presents a potential process for implementing microtransit service in the northeast Wake County area. Future discussions with Wake County will further define these steps so that they can serve as a guide for future service implementation.

**Figure 3-1: Service Plan Implementation Steps**



## Determine the Service Delivery Model

Due to the need for e-hailing capabilities, microtransit services typically require the public transportation entity to partner with a mobility-based technology company. These partnerships can take many forms, differing in who operates the service, ensures compliance, and provides technology. Considerations when establishing a public-private partnership include:

- **Technological Platform:** The technology company needs to develop both a customer app and an onboard software system for service operators. These platforms should allow for on-demand scheduling, dynamic routing, payment, and vehicle tracking. The technology product should be simple to use for customers and operators alike, and preferably collect trip data to store in a database to improve trip efficiency and analysis.
- **Service Provider:** There are three broad choices for operating a microtransit service – 1) maintaining the service in-house using agency vehicles and employees; 2) contracting the service out to an established transit contractor; or 3) contracting with the technology company to both create the mobile app and operate the service.

The companies that are currently promoting microtransit services typically break them into these categories:

- **Software-as-a-Service (SaaS)** that offers a localized version of the vendor's platform, allowing transit systems to use their vehicles, drivers, and support staff to operate an on-demand service.
- **Transportation-as-a-Service (TaaS)**, which offers a turnkey approach through which the vendor provides the on-demand technology – plus the drivers, vehicles, and overall operations.

Each service delivery model has its unique advantages or disadvantages:

- Providing the service in-house offers the transit agency the most control, and best guarantees Title VI and ADA compliance. However, it results in capital costs to procure new vehicles if they are not available within the current fleet. The need to procure vehicles to operate a microtransit service would also delay service implementation.
- Contracting to an established industry leader or technology company for a turnkey operation provides the opportunity to more quickly implement a microtransit service but could complicate public oversight and federal compliance. Service and data requirements need to be outlined during the procurement process.

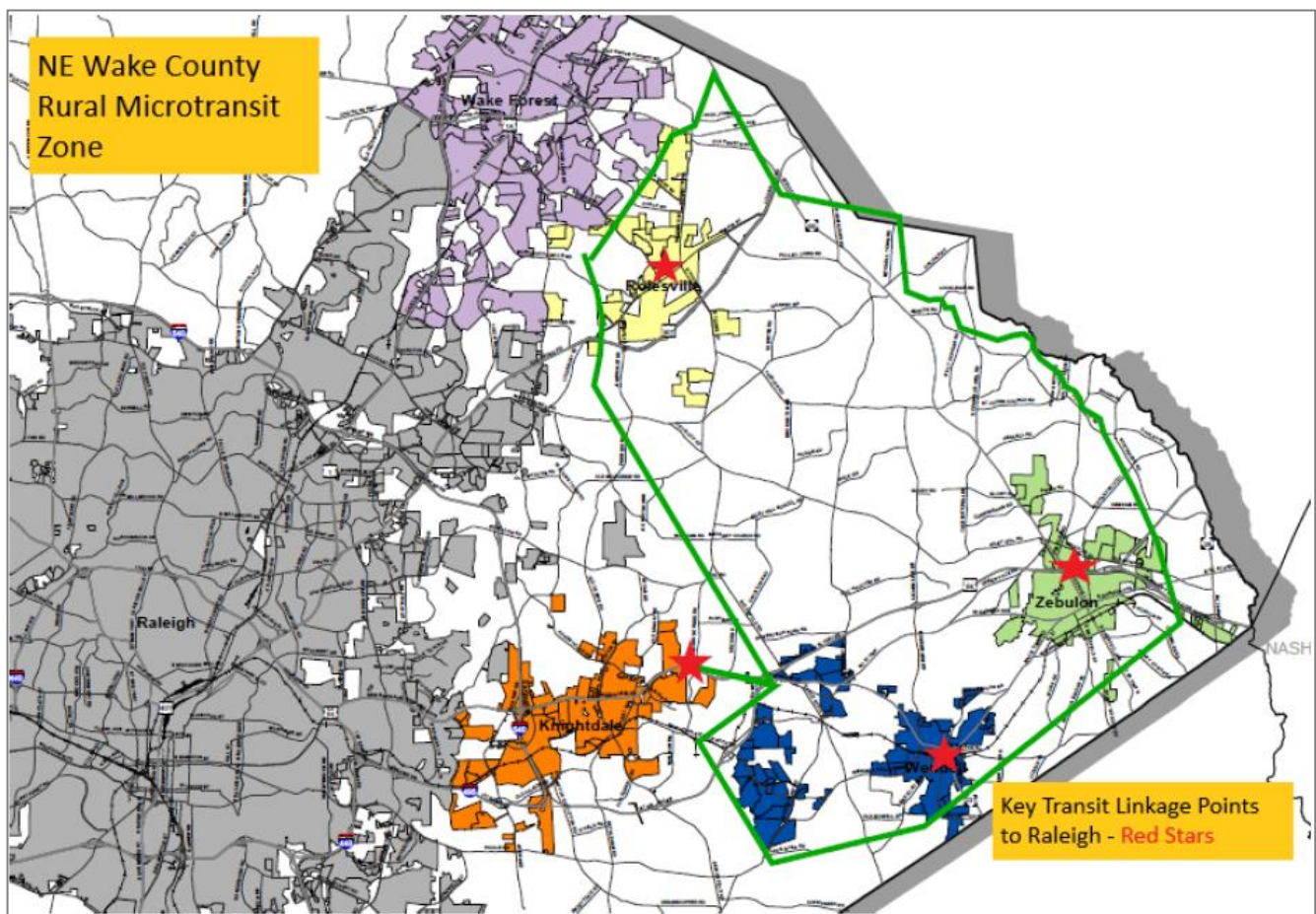
It is important to decide on a service model before developing a solicitation for microtransit services. A Request for Proposals (RFP) can be developed strictly for the technology component, or for the broader turnkey approach. The project team is collecting examples of both and will be working closely with Wake County on the appropriate language to be used in order to ensure a successful solicitation process.

## Geo-Fenced Zone Characteristics

A microtransit service needs a clear, well-reasoned geographic area to operate within. If a service area is too large, on-time performance will suffer and the cost per trip will likely increase. Due to the variety of socioeconomic, infrastructural, and operational factors that influence microtransit service efficiency, there is no ideal size for a geo-fenced zone. Some service areas are less than a square mile while others are over 25 square miles. Establishing and monitoring on-time performance standards for microtransit projects can be used to refine both service area size and vehicle deployment.

At the outset of the study, the northeast microtransit zone was defined as shown in Figure 3-2. The proposed microtransit zone includes the majority of Rolesville, Wendell, Zebulon, and the unincorporated areas between the three towns. The zone also provides a jog into Knightdale to provide a connection GoRaleigh's Route 33.

**Figure 3-2: Initially Proposed Northeast Wake County Rural Microtransit Zone**



SOURCE: WAKE COUNTY REQUEST FOR PROPOSALS (#20-045) NORTHEASTERN WAKE COUNTY, NC RURAL MICROTRANSIT SERVICE PLAN

## Zone Boundary Considerations

Through the project's community and stakeholder outreach, a variety of zone expansions have been proposed and discussed. Of these, three specific expansions were regularly mentioned:

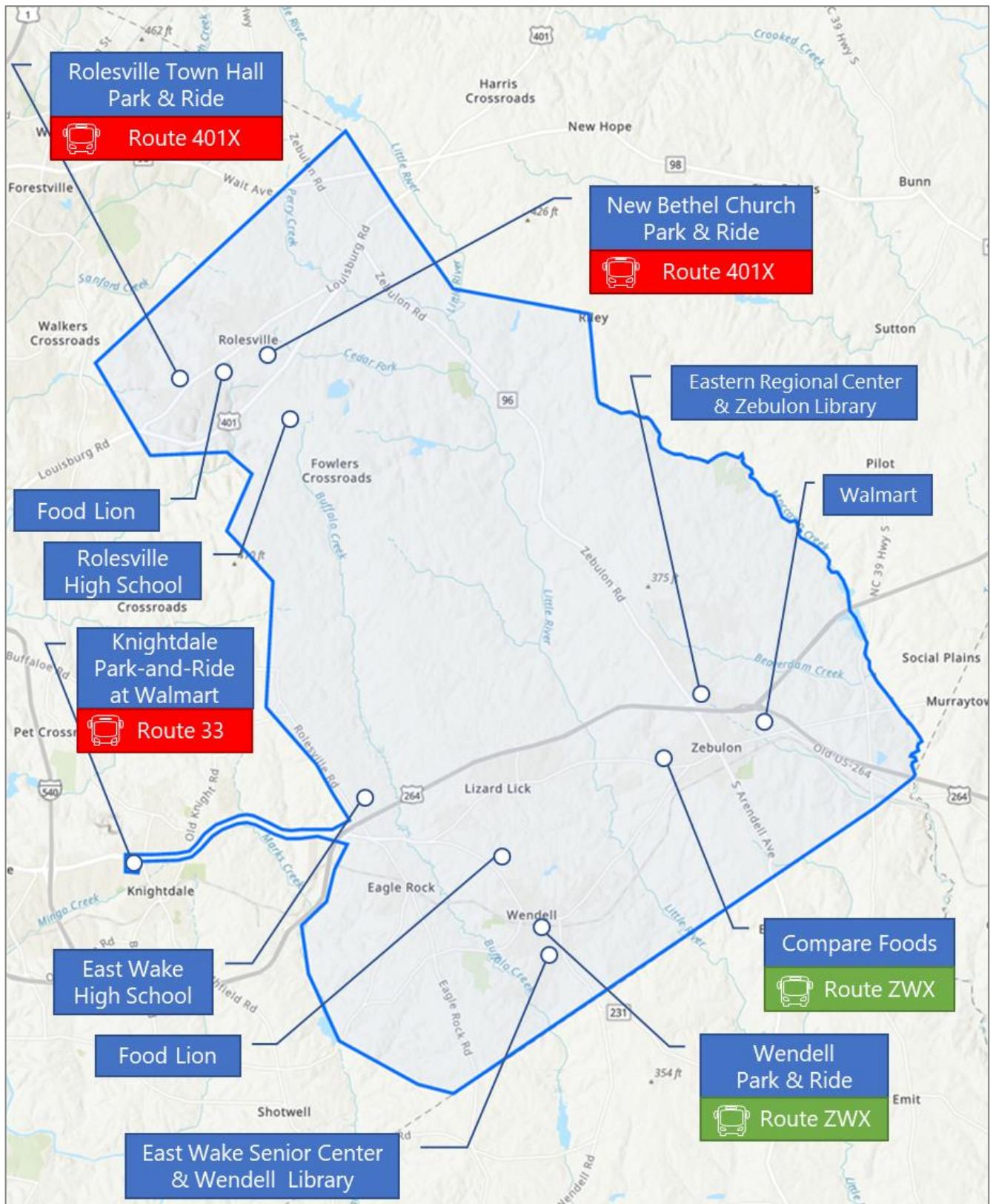
- Extending to the Eastern and Southern Wake County Border** – The initially proposed zone had a minor gap in some areas between the service boundary and the county border. The decision was made early in the planning process to expand the zone to the Wake County border to ensure service availability for all rural Wake County residents.
- Connect to the Planned East Raleigh Transit Center** – The City of Raleigh is moving forward on a new bus rapid transit (BRT) line along New Bern Avenue in East Raleigh. The planned East Raleigh Transit Center will be the eastern terminus of the new BRT line, scheduled for completion in 2023. Expanding service to the new transit center will greatly expand access for microtransit customers. However, the future transit center is approximately 5 miles to the west of the currently proposed transfer location at the Knightdale Park & Ride. As a potential future expansion, this would need to be studied in greater detail along with other aspects of the pilot program.
- Connect to the Wake Forest Loop** – Several stakeholders reported that Rolesville residents would likely want to travel into Wake Forest for essential services, retail, and recreation. A connection to the Wake Forest Loop would provide customers with high frequency service around Wake Forest. The closest Loop bus stop to the zone is located at the intersection of Heritage Lake Road & Rogers Road, adjacent to Walgreen's Pharmacy and other retail outlets. This is approximately 3 miles from South Main Street in Rolesville. However, this bus stop and many of the adjacent bus stops are not ADA accessible and do not feature any type of passenger amenities. More viable transfer locations are located closer to Wake Forest, but this distance could result in excessive deadhead mileage during the pilot service. If demand is demonstrated through customer and public feedback, this should be considered as a potential expansion.

These proposals serve to highlight the need for improved transportation connections in northeast Wake County. As service implementation continues other needs are likely to arise. One of the great benefits of microtransit service is its flexibility in meeting emerging needs. Maximizing this benefit will require a willingness to be flexible and to experiment with the service.

## Proposed Zone Boundaries

The zone boundaries presented in this section are proposed based on community input and an evaluation of the road network. As planning and implementation activities continue, boundary modifications are likely. The proposed zone boundary follows the Wake County border along the east and south sides of the zone. To the north and west, the boundary generally follows the street network or natural features, including creeks and forested areas. A map of the proposed zone is shown in Figure 3-3. The following sections provide additional details on the northern and western zone boundaries.



**Figure 3-3: Northeast Wake County Rural Microtransit Zone**

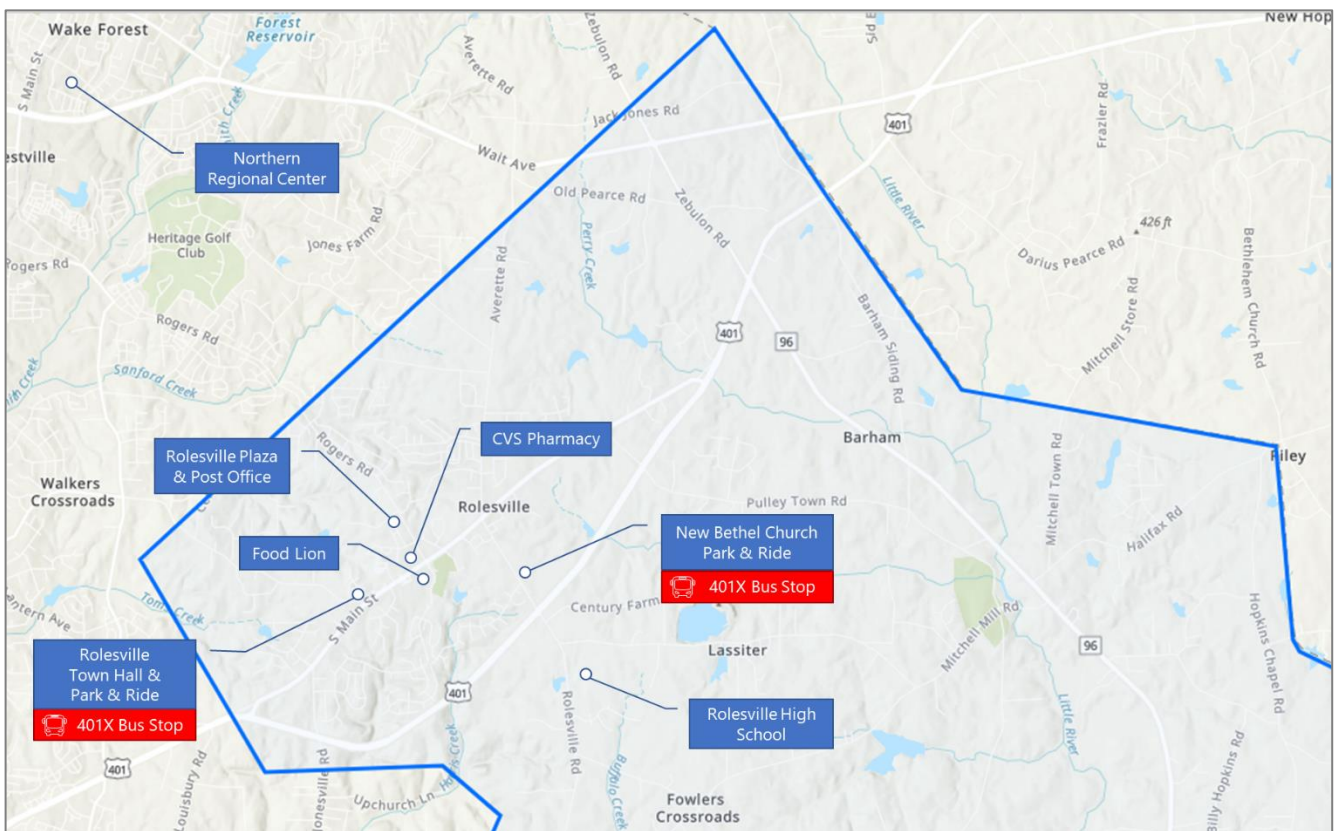


## Northern Area

The northern boundary originates at a vertex in the Wake County border close to the intersection of Zebulon Road (NC 96) and Walt Avenue (NC 98). From this area, the border runs towards the southwest, staying north of Rolesville and roughly parallel to US 401. The northwestern boundary begins around Tom's Creek and runs just south of the US 401 Rolesville Bypass. To the immediate south of Rolesville, the boundary follows Rolesville Road (SR 1003) until it reaches US 64. Figure 3-4 provides a map of the northern proposed microtransit zone boundary.

The Wake County Northern Regional Center is outside of the zone but is included on the map as it was identified to be a popular destination for county residents. A potential future expansion to the Wake Forest Loop could provide a connection to the regional center. However, expanding microtransit service beyond the currently proposed zone will require additional funding and resources.

**Figure 3-4: Proposed Microtransit Zone Northern Boundary**

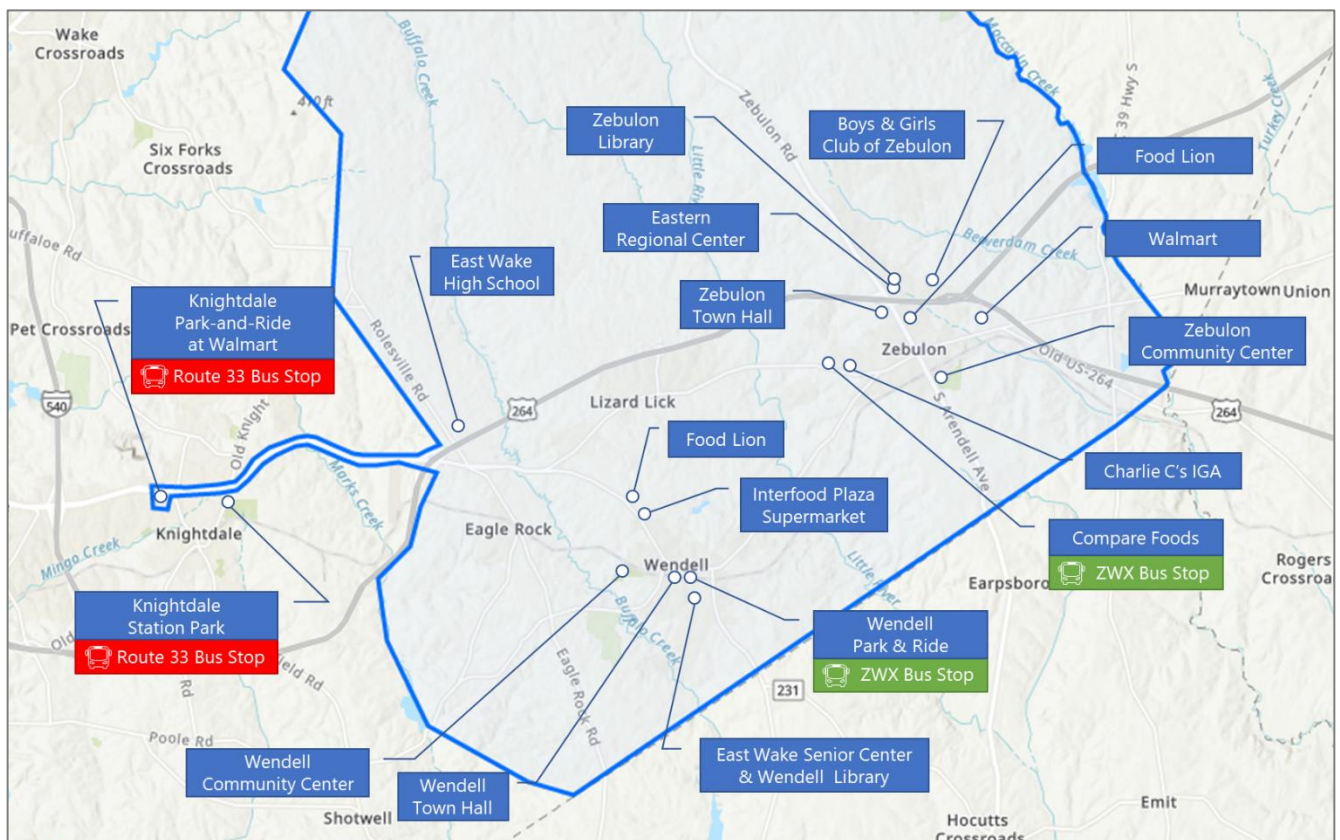


## Southern Boundary

The western boundary is generally defined as Rolesville Road (SR 1003) until it reaches the US 64 and US 264 interchange. From this location, the zone “jogs” into Knightdale to make a connection with GoRaleigh’s Route 33. With GoRaleigh’s service operating hourly in Rolesville, the microtransit service will only operate within a narrow corridor to provide transfer opportunities to northeast county residents. South of the US 64/264 interchange, the zone boundary follows US 264/Interstate 87 to Wendell Falls Parkway. Mark’s Creek and Lake Myra form a natural barrier for the service zone which continues to the Wake County line.

There are two practical transfer locations to Route 33 in Knightdale, the Park & Ride at Walmart and Knightdale Station Park. The Park & Ride bus stop was generally considered to be the preferred transfer location given the surrounding retail and shopping opportunities. However, the Knightdale Station Park bus stop is approximately 1 mile closer to the zone.

**Figure 3-5: Proposed Microtransit Zone Southern Boundary**



## Service Zone Size

Transit systems that have implemented microtransit services typically create smaller zones that are meant to be served by one or two vehicles. As demand grows additional vehicles can be assigned to that zone. This creates zones that are reasonably sized and lend themselves to less deadhead and more convenient trips for customers.

Large service zones are more likely to be successful in lower demand areas and during lower demand hours. In some instances, larger zones are an appropriate solution. However, zone sizes should be tempered with the realities of response times, capacity, and convenience. Larger service zones may result in longer, less efficient service but may attract a larger pool of riders and provide a wider variety of trip types.

The initially proposed service zone size is approximately 90 square miles. To provide reliable service with realistic wait times, the service will need to balance zone size with the number of vehicles available for service. After implementation, and as microtransit services mature and performance data becomes more readily available, service zones boundaries will need to be reexamined based on demand and customer requests.

## Drive Times

Presented in Figure 3-6, on the following page, are average drive times in northeast Wake County. The map analysis assumes that one vehicle is based in each of the three towns (Rolesville, Wendell, and Zebulon). Through this arrangement, the entire northeastern service area is within a 15 minute drive. However, drive time is just one of many variables that will impact service availability and a customer's wait time.

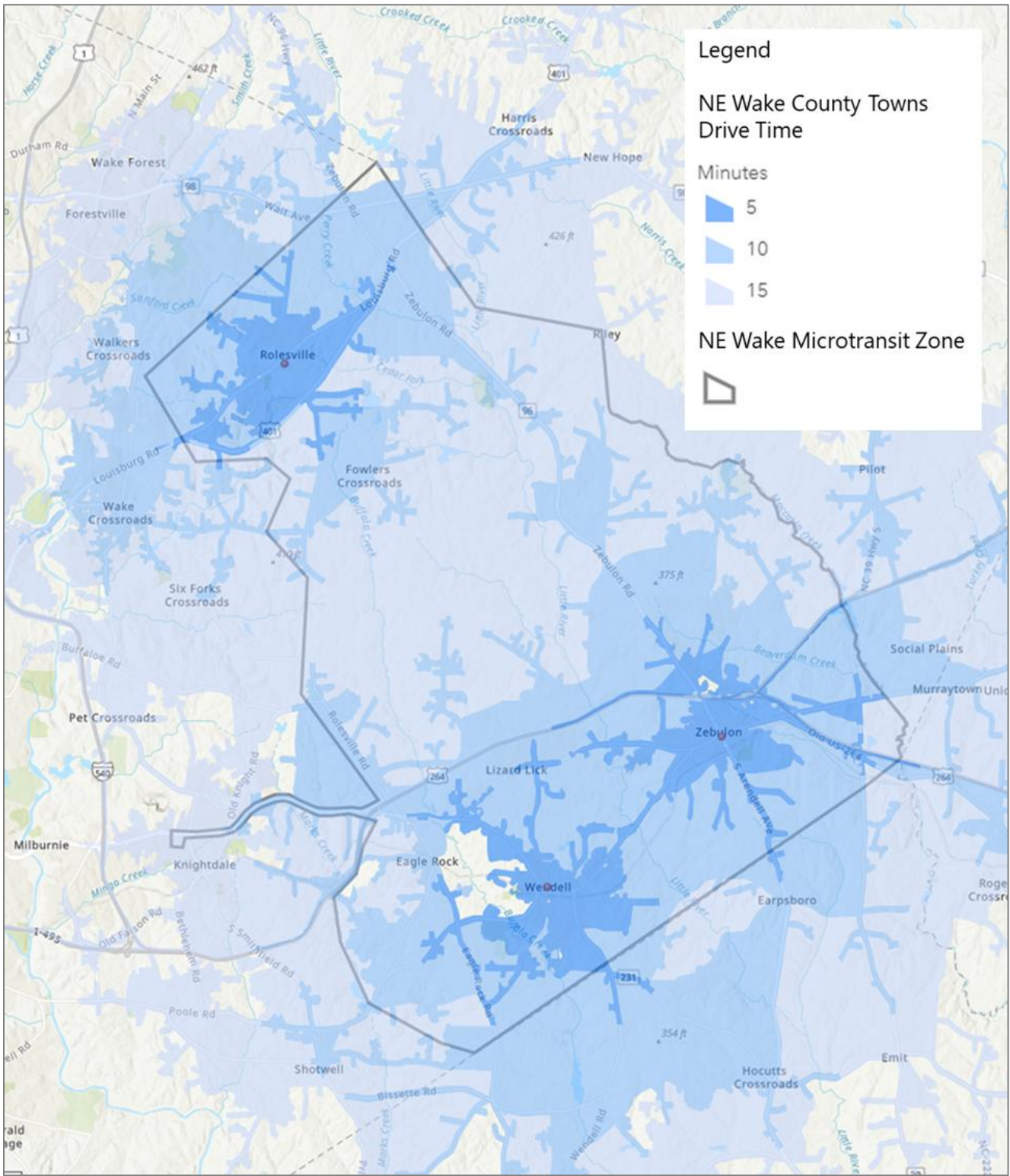
The map includes drive time intervals of 5, 10, and 15 minutes, it should be noted that these areas overlap due to the assumed placement of vehicles. These travel times will correlate with average wait/response times:

- **5 Minute** drive time areas could anticipate an average 10 to 15 minute wait time
- **10 Minute** drive time areas would likely be a 20 to 30 minute average wait
- **15 Minute** drive time areas could average a 30+ minute wait time

The map also reveals that the drive time to GoRaleigh's Route 33 connecting service in Knightdale is about 15 minutes or more from the zone's three towns.



Figure 3-6: Average Drive Times from Northeast Wake County Towns



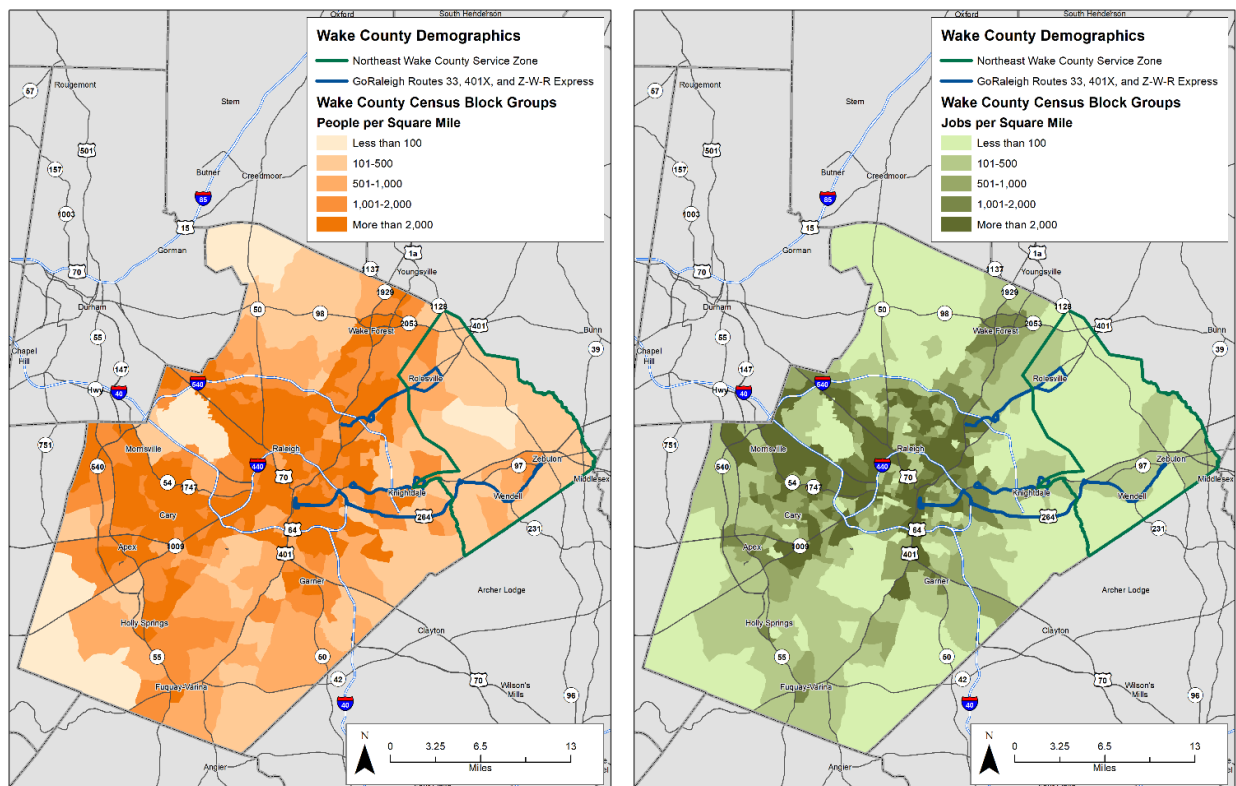
## Microtransit Propensity Index (MPI)

When assessing potential microtransit services a detailed demographic analysis should be undertaken to determine which areas are more likely to support a microtransit service. The Microtransit Propensity Index (MPI) was developed to assist with this analysis and to evaluate areas for their suitability for microtransit service. The following sections provide a breakdown of select MPI variables including demographic, geographic, and infrastructural factors that may impact an area's propensity for service. Data was collected from the 2014-2018 U.S. Census Bureau American Community Survey 5-year estimates (ACS) and 2017 Longitudinal Employer-Household Data (LEHD) datasets.

### Population and Job Density

Connecting residents to employment opportunities is one of the top priorities for public transit. The first set of demographics provides an overview of where residents live and where jobs are located. Within the northeast zone, higher population densities are located in the towns of Rolesville, Wendell, and Zebulon. All three towns are considered bedroom communities to Raleigh where many residents commute into the city. The town of Rolesville is also considered a bedroom community to nearby Wake Forest and benefits from relatively higher surrounding population densities. Relatively, employment density in the zone is concentrated along the major arterial roads connecting Wendell and Zebulon as well as the northwestern areas of Rolesville which are in close proximity to Wake Forest.

**Figure 3-7: Population and Job Density**

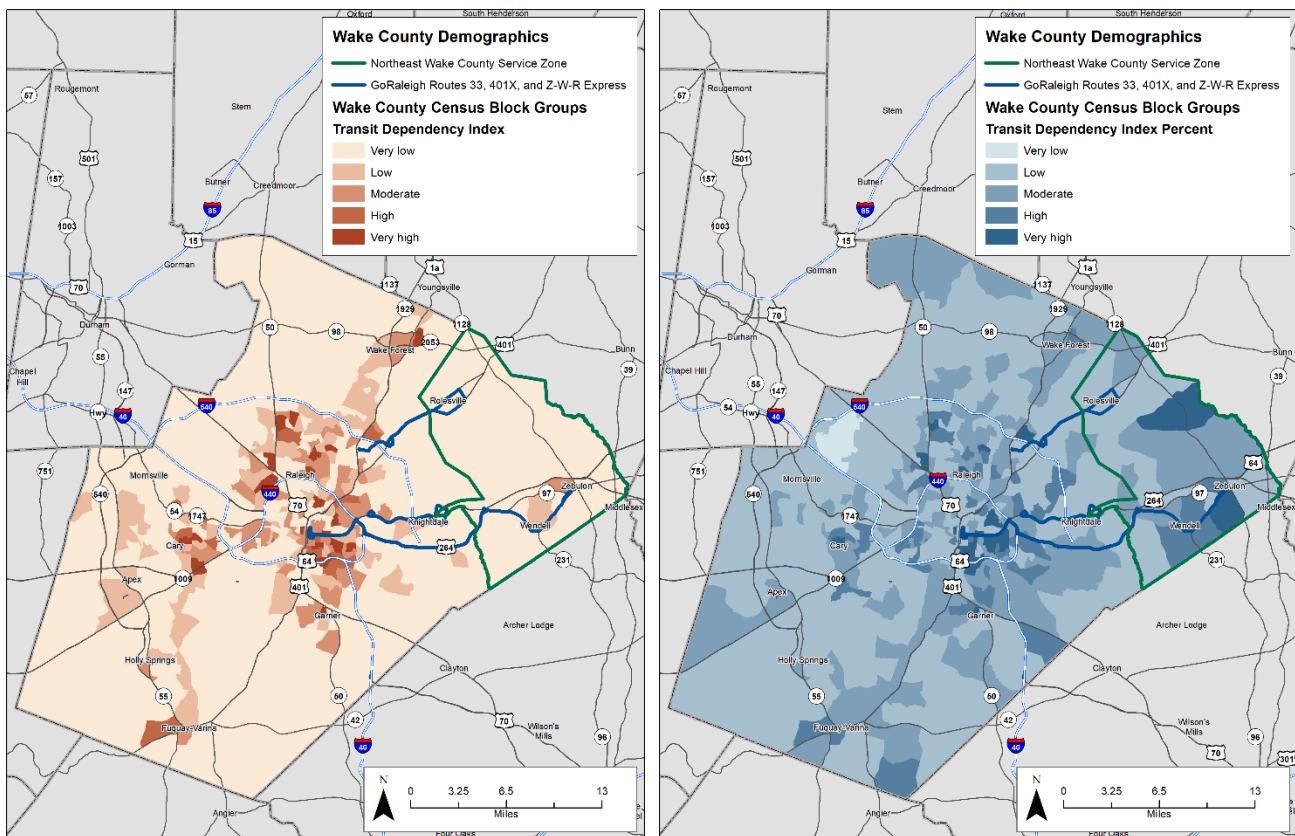


## Transit Dependent Populations

Public transportation needs are defined in part by identifying the relative size and location of those segments within the general population that are most likely to use transit services. These transit dependent populations include individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or income status. Determining the location of these populations assists in the evaluation of current transit services and the extent to which the services meet community needs.

The transit dependence index shown in Figure 3-8 consists of five factors, including population density, autoless households, senior population (aged 65 and above), youth population (aged 10 to 17), and below poverty populations. The map on the left identifies areas with larger densities of potentially transit dependent individuals. Higher concentrations are found in the Wendell and Zebulon areas. The map on the right removes the population density factor to highlight transit needs in areas with smaller populations by utilizing absolute population numbers from the four demographic groups.

**Figure 3-8: Transit Dependence Population Index and Percent Index**

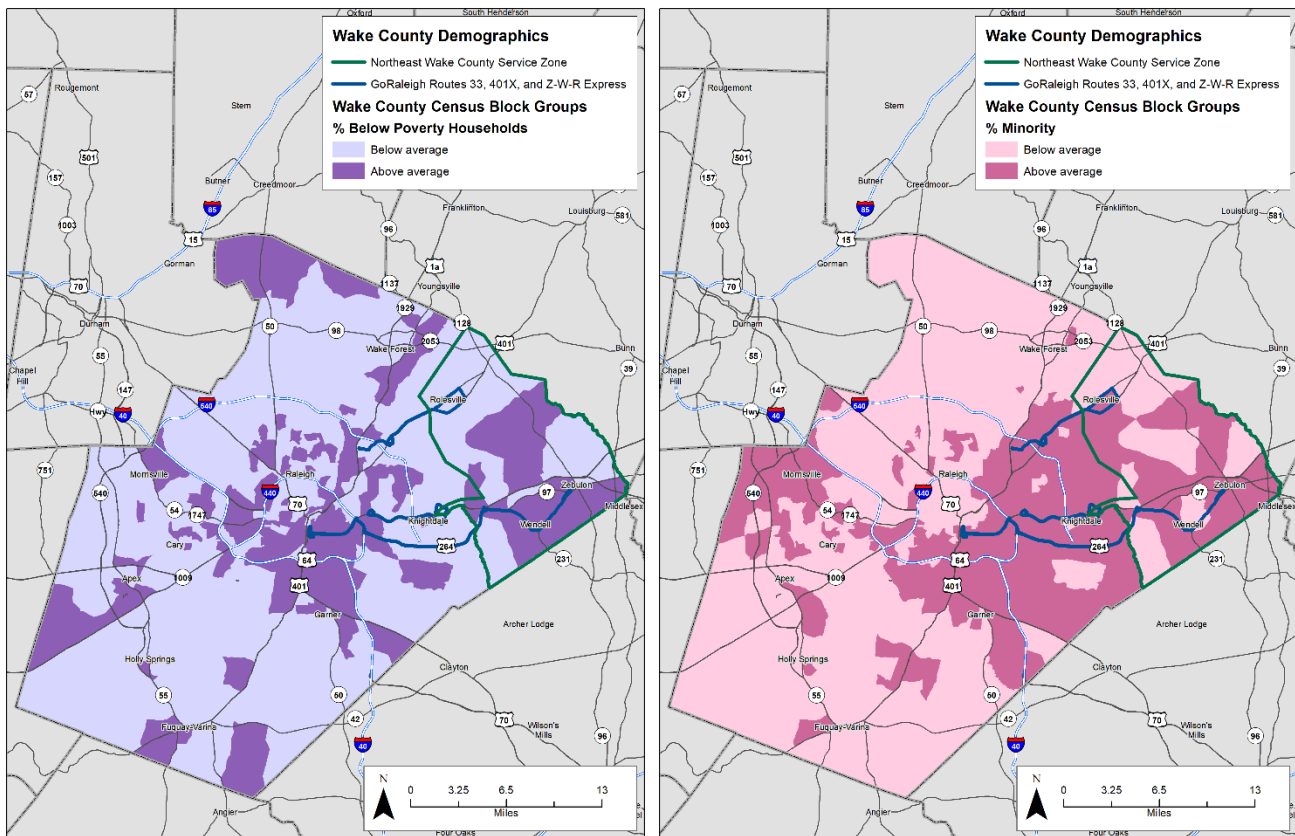




## Title VI Populations

As part of the Civil Rights Act of 1964, Title VI prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following Figure 3-9 examines the distribution of low-income and minority populations of Wake County. The maps reveal that a large percentage of the proposed northeast zone is comprised of above average low-income and minority populations.

**Figure 3-9: Title VI Populations**



## MPI Results

The MPI was calculated using Census block groups and indexed through comparison to all of Wake County. The following factors were incorporated and are deemed positive indicators of microtransit propensity in calculating the MPI:

- Population density
- Job density
- Household density
- Percent below poverty
- Percent no vehicle households
- Percent individuals with disabilities
- Intersection density
- Sidewalk or pedestrian infrastructure
- Proximity to GoRaleigh and GoTriangle bus stops
- GoWake Access trip density

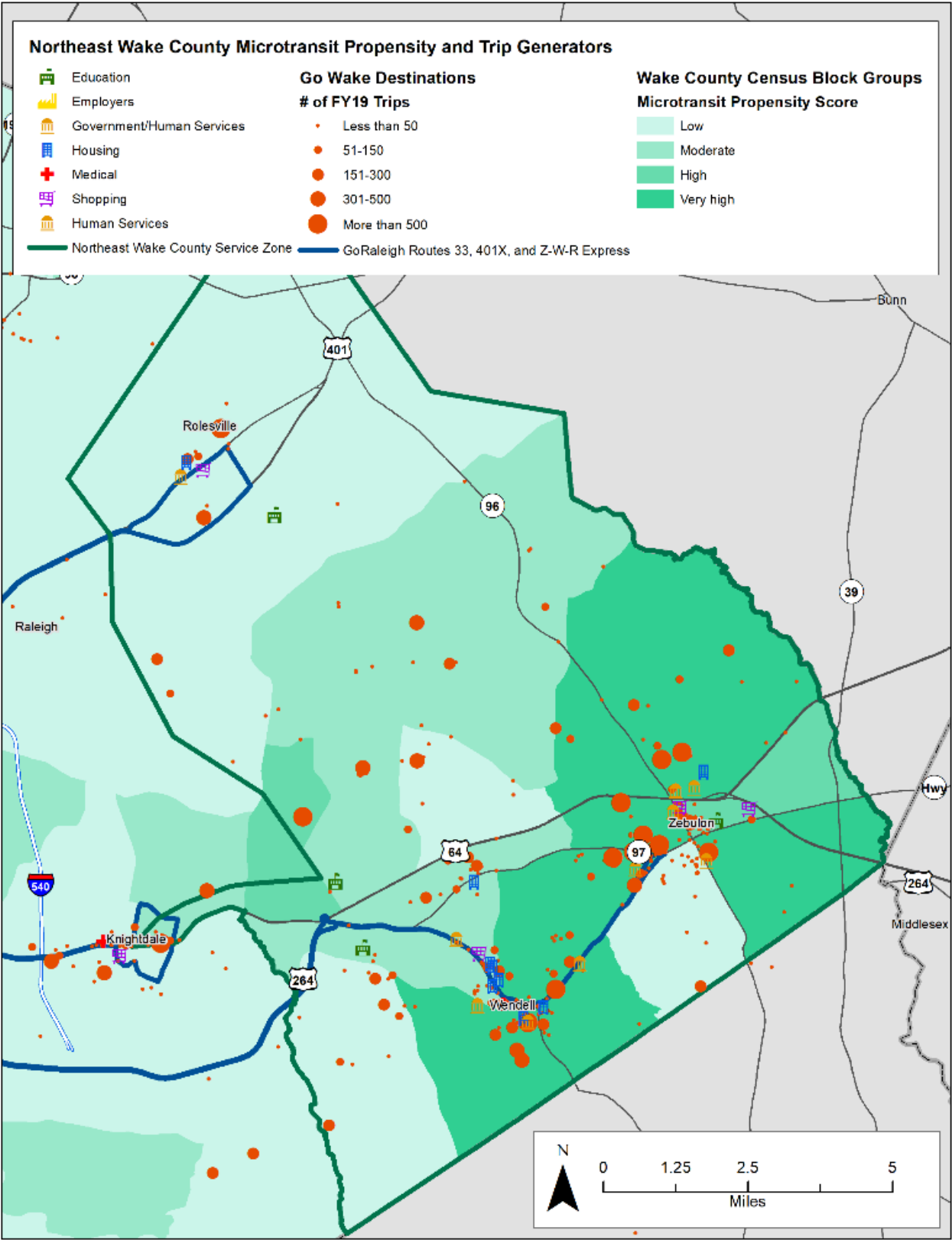
Areas within 5 miles of a bus stop connection to GoRaleigh or GoTriangle bus stops received a multiplier score to indicate a first mile-last mile connection could be made with higher frequency transit. Census block groups with a high number of GoWake Access trips were also given a multiplier score. The MPI was calculated using Census block groups and their area's relation to the county wide mean and standard deviation of each metric as shown in Table 3-1.

**Table 3-1: Microtransit Scoring Table**

Microtransit Propensity Scoring System	
<b>1 - Below average</b>	Metric is below the study area average
<b>2 - Above average</b>	Metric is greater than the study area average
<b>3 - High</b>	Metric is greater than one standard deviation from the mean
<b>4 - Very high</b>	Metric is greater than two standard deviations from the mean

Figure 3-10 shows the MPI results within the proposed NE Wake Microtransit zone. The areas around Zebulon and Wendell show very high propensities for microtransit. Even the more rural area of the zone receives a moderate MPI score. One of the interesting observations is a rather low score in the Rolesville area and adjacent locations closer to Raleigh or Wake Forest.

Figure 3-10: MPI in the Northeast Microtransit Zone



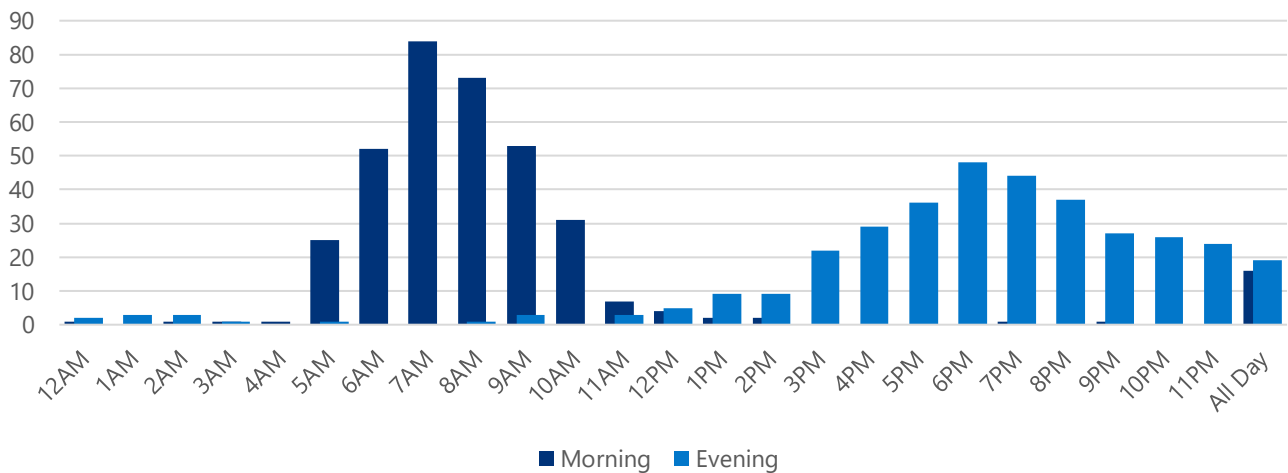
## Operations Plan

Operational capabilities will be heavily influenced by the service model and characteristics of the geo-fenced zone. Within the proposed zone, the MPI tool suggests that travel demand will be the greatest in the southern area, around Wendell and Zebulon. The distribution of vehicles within the zone will need to strike a balance between meeting the needs of high and low travel demand areas. For example, providing reliable service in and around Rolesville may require a dedicated vehicle in a potentially low-demand area.

## Service Days and Hours

For the pilot project, the service days and hours will be Monday to Friday with service starting during the morning peak and ending towards the end of the evening peak travel periods. The community survey included a question for hours of operation, the results suggested a span of 7:00 a.m. to 6:00 p.m. (shown in Figure 3-11). This service span was supported by project stakeholders and focus group participants.

**Figure 3-11: Community Survey Data on Service Spans**



During outreach efforts, many indicated a need for late evening and weekend service. Based on the results of the pilot project, expansions will be considered moving forward. However, evening and weekend service typically exhibits the lowest ridership of the week. During the pilot project, service performance is key, expanding service into lower demand times will require a demonstratable travel demand. Specific recommendations collected during the outreach process included:

- First mile/last mile connections between major employment locations and existing transit routes, the microtransit service may operate during morning/evening peak periods or for specific work shift times.

- Microtransit could provide transportation for service industry workers who commute during off peak hours (late night and weekends).
- Microtransit services in rural areas could operate longer hours that allow for access to public services and other social/recreational activities.
- Evening/late night service could also generate trips to commercial areas to allow access to bars, restaurants, movie theaters, and other nightlife.

## Pickup and Dropoff Locations

Many microtransit services require customers to be picked up at the closest corner to their origin and dropped off at the closest corner to their destination. For customers that utilize a mobility assistance device, the microtransit app provides an ADA option for curb-to-curb service. This is the approach that currently under consideration for the northeast service zone.

Other communities have implemented microtransit services that utilize designated bus stops, where customers are required to travel to and from virtual bus stops within the zone. For example, Ozark Regional Transit (Springdale, Arkansas) recently replaced a low-demand fixed route with microtransit that uses the former route's bus stops. Other communities have used a combination of physical and virtual bus stops, with passenger pickup and drop-off locations within the zone ranging from specific bus stops to locations within a two block distance from a stop.

Given the rural nature of northeast Wake County, several stakeholders expressed concerns for rider safety in the more rural areas. Many of the rural roads are narrow with speeding vehicles and a lack of street lighting; some areas of the zone may require service to operate curb-to-curb.

## Response Time

As noted earlier, one of the key concepts of microtransit is a short response time, and therefore a designated goal for the response time should be a guiding element when designing and implementing these services. Previous research conducted by the project team on a variety of microtransit services indicated that the average response time is usually between 12-15 minutes. However, of the review's peer services, the largest service areas were approximately 20 to 30 square miles. Given the size of the northeast Wake zone, at 90 square miles, a 30 minute average response time goal is being considered.

Response time is a major component of operations planning, the average response time is highly dependent on configuring the correct size and layout of the zone as discussed in the previous implementation steps. Response times are generally influenced by the local street network, location of vehicle staging areas, and anticipated demand.

## Fare Structure

There are several options to ensure that farebox recovery is adequate while at the same time riders will not be discouraged by high prices. Other microtransit services have taken a range of approaches, including:

- Fare-free service
- Fare consistent with other demand response services (GoWake Access)
- Fares that mirror GoRaleigh or GoTriangle services connected to the zone
- A premium fare that is slightly higher than other area services

Considerations should also be made for special fares that offer discounts to older adults, people with disabilities, and other high need groups. Additionally, there could be special fares offered to the public, including first ride free, discounted ride vouchers, and others. It is important to note that any fare discounts offered on a mobile app must be made available to those who do not have access to the app.

Regional fare integration is a proven strategy to improve microtransit performance. Existing public transit customers are more likely to use microtransit if they can use the same fare payment that they are accustomed to using on their local bus. Future fare coordination with GoRaleigh, GoTriangle, and other area service providers could assist in publicizing the service and improving convenience for customers.

Based on public feedback, a fare in the range of \$2.00 to \$4.00 was the most desirable. With three operators, there is a wide range of public transit fare structures in northeast Wake County. The fare structures for the three public transit providers are outlined below:

- **GoWake Access**
  - \$2.00 per one-way trip for in-town service
  - \$4.00 per one-way trip for travel to a different town
- **GoRaleigh**
  - \$1.25 per one-way trip
  - \$0.60 per one-way trip for persons with disabilities
  - Free for those aged 65 or older and those aged 12 or younger
  - \$2.50 day pass (\$1.25 day pass for persons with disabilities)
  - \$12.00 weekly pass (\$6.00 weekly pass for persons with disabilities)
  - \$40.00 monthly pass (\$20.00 monthly pass for persons with disabilities)
- **GoTriangle**
  - Free for those aged 65 or older and those aged 12 or younger
  - Regional Routes
    - \$2.25 per one-way trip (\$1.00 per trip for persons with disabilities)
    - \$4.50 day pass (\$2.00 for persons with disabilities)
    - \$16.50 7-day pass (\$7.50 for persons with disabilities)
    - \$76.50 3-day pass (\$34.00 for persons with disabilities)

- **GoTriangle (continued)**

- Express Routes
  - \$3.00 per one-way trip (\$1.25 per trip for persons with disabilities)
  - \$6.00 day pass (\$2.50 for persons with disabilities)
  - \$22.00 7-day pass (\$9.25 for persons with disabilities)
  - \$102.00 31-day pass (\$42.50 for persons with disabilities)
- ACCESS Cards & Passes
  - \$45.00 ACCESS 11 Ride Card
  - \$153.00 ACCESS Monthly Pass

## Ensure Compliance with Federal Civil Rights

To assure that a microtransit program complies with the federal civil rights requirements, Title VI of the 1964 Civil Rights Act (Title VI), and the 1990 Americans with Disabilities Act (ADA), demographic analyses and initiatives must be undertaken. Title VI compliance requires that any service change does not have a disparate impact or disproportionate burden on minority or below-poverty populations. A full Title VI analysis is only required for fixed route bus service, but a service equity analysis is warranted for a new microtransit system. ADA accessibility requirements for microtransit are the same as those for demand response; a vehicle, payment system, and information distribution that is accessible to all potential riders. Additional Title VI and ADA considerations include:

- Reducing fares for disadvantaged socioeconomic groups to ensure they can access the service. Typically the reduced fares adhere to the respective agency's reduced fare policy.
- Ensuring that customers with no smartphone or internet access can use the service. Transit systems allow customers to use their existing call center to reserve a trip. or as part of their partnership, the tech-based company hosts a call center for customers to book and reserve a seat.
- For unbanked customers, there should be a farebox for those who cannot pay via the mobile app. If the program is cashless customers are permitted to use cash to purchase pre-paid and reloadable credit cards that can then be used to pay for a trip.
- For Limited English proficiency (LEP) populations, there should be translations and interpretation services made available at the service call center, translated documents posted on the service's website, and Google Translate made available on the website.
- In compliance with ADA guidelines, all vehicles used for microtransit service must be wheelchair accessible. If a technology provider is providing the service, there must be a dedicated number of accessible vehicles.



## Chapter 4

# Capital & Technology Plan

### Service Implications

Many of the capital and technology needs will be based on decisions concerning service provision. As an example, there are major differences in the capital investment for a SaaS (software only) or TaaS system (third-party contractor/turnkey approach). Wake County is currently exploring all options, and is looking to pursue a partnership approach for the new service.

Through a planned partnership with the City of Raleigh, Wake County is planning to utilize Routematch's Mobility on Demand (MOD) Software. It should be noted that Routematch was recently acquired by Uber. Beyond the ubiquitous ridesharing service, Uber also provides contracted microtransit service in various locations across the country. To further learn about and document Routematch's MOD Software and its capabilities, an introductory meeting was conducted with Uber – Routematch representatives in late January 2021. The meeting was beneficial in providing a greater understanding of the software, but at this point in the implementation process some questions remain regarding the contracting requirements and the potential for sharing the City of Raleigh's MOD Software.

Wake County is also working with their GoWake Access service contractor to determine the feasibility of operating the new microtransit service with existing fleet and staff resources. These discussions are ongoing.

This chapter provides an overview of the capital and technology needs for the future microtransit service in northeast Wake County. As contracting and planning is further discussed and ultimately decided, the following sections will provide some reference points for consideration.

### Capital Needs

Typical capital needs for microtransit include vehicles, fareboxes, and vehicle mounted tablets. These needs are variable, based on the service approach and contracting as mentioned above. However, Wake County needs to consider the options. If a specific vehicle type is desired, it should be outlined in a potential request for proposals. Considerations for vehicle mounted tablets are provided in the Overview of Technology section. Other capital needs could include onboard cameras, vehicle branding, and other system specific technologies.

## Vehicles

Cutaway buses are perhaps the most versatile vehicle in any transit provider's fleet and are the vehicle of choice for many transit systems when implementing microtransit services. Small enough to operate within a narrower right-of-way but with enough seating to provide fixed route service, they provide maximum flexibility. Cutaway buses are also capable of providing ADA compliant public transit services. This is the type of vehicle predominately used by GoWake Access.



However, despite their utility across a wide range of service types, cutaway buses with twelve seats may be an inefficient vehicle, especially during off-peak hours. Through other microtransit projects, we have learned that some residents have raised issues with the operation of cutaway buses in their neighborhoods and have expressed concerns about the noise and pollution caused by the bus's engine. Additionally, cutaway buses have lower average gas mileage than more compact vehicles. In low-density areas during off-peak hours, smaller vehicles may be better utilized for microtransit services.

Other communities have looked to passenger vans to provide microtransit, including the City of West Sacramento (pictured right). Vans are lower capacity vehicles that can be equipped with ADA accessible ramps. Built on a smaller vehicle chassis, they allow for more maneuverability in tight areas. Microtransit drivers have mentioned that the technology platform's routing algorithm does not consider how large a cutaway bus is and using passenger vans minimizes some safety risks and could increase the service's efficiency.



Conversely, passenger vans lack the utility and capacity of cutaway buses, being unsuitable for high-demand areas and service zones. The limited capacity of passenger vans may be far less efficient during specific rush hours.

In certain operating arrangements, taxi cabs are the primary service vehicles rather than cutaway buses or passenger vans. For instance, the Neighborhood Connect service in Washington, D.C. is operated by the city's Department of For Hire Vehicles. Before a temporary service suspension due to COVID-19, Neighborhood Connect's operating model utilized existing taxicab companies by subsidizing service to various grocery stores, hospitals, universities, and other major destinations in two service areas. The

various taxi companies in the District are contracted to provide a subsidized taxi service to individuals using the Neighborhood Connect Service. While some passenger vans have been acquired and branded for the service, cab companies are allowed to use unbranded vehicles so long as they are still ADA accessible.

## Fare Collection

Many microtransit services, even those with app-based fare payment, have opted to install standard fareboxes onboard their vehicles. The fareboxes allow passengers the option of paying cash and incorporating other fare payment methods. Many of the most successful microtransit programs make use of regional fare systems or establish fare reciprocity agreements with connecting transit providers. Coordinating fare systems with GoRaleigh and GoTriangle would be beneficial given the potential for transferring between the services.



## Overview of Technology

Through a partnership with the City of Raleigh and the use of Routematch software, specific service possibilities and constraints will be dependent upon their platform's capabilities. Depending upon contracting possibilities, sharing the city's platform may require additional startup costs that could necessitate the need for a competitive bid for a software vendor. Additional information on this subject and potential pricing is forthcoming. Any additional information collected during the study team's review will be incorporated into this section. The following sections provide an overview of the processes used when requesting a trip, utilizing real time arrival information and onboard mobile equipment.

## Mobile Application

The public's interface with the NE Wake Microtransit will be primarily the service's Mobile Application (app). The app must be publicly available for customers to download through common app outlets include the Apple App Store and Google Play Store. Utilizing the Routematch software will allow for two distinct options in developing the mobile app. The first option is a unique app that would be branded and marketed for the Northeast Wake Microtransit service. The second option is to incorporate the Northeast Wake Microtransit service into the Uber app.

## Option 1: Build Your Own App

This option provides a range of customization opportunities. Everything from the branding to the customer satisfaction surveys can be modified and tweaked as needed. The app can also be customized to showcase regional transit connections and the extent of the service zone. This option provides a great amount of creative control, but it will require another app for the customer to download.

## Option 2: Uber App Integration

This option has been recently made possible through Uber's acquisition of Routematch. Through this option, the Northeast Wake Microtransit service would be accessed through the Uber app. This reduces the amount of branding and customization of the app, but it makes the service easily accessible by regular Uber users and provides Uber as a back up if the microtransit service is unavailable. This option also benefits from the many settings on the Uber app, including the integration of 40 language options.

An interesting consideration of this option is that all microtransit drivers would need to become registered Uber drivers. While the background checks and screenings for professional public transit drivers far supersede the Uber driver requirements, the drivers would be subject to Uber's driver rating system. If a driver's rating declined to an unacceptable level, Uber could opt to suspend that driver. Considerations would also need to be reviewed for the potential implications of a transit driver "moonlighting" as an Uber driver.

## Uber | Routematch Support

During the startup consultation phase with Uber – Routematch, the data analytics team will model the service around the specific needs outlined in the service plan. Nearly any variable can be accounted for during the modeling process including multiple geo-fenced zones, connecting different service areas, virtual bus stops, etc. Typically, there is a sizeable startup fee for this type of software. Routematch representatives are currently investigating the contractual possibilities of sharing the City of Raleigh's system.

Following the launch of the service, the support team will continue to make recommendations to Wake County to address zone boundaries, service times, and the number of vehicles. Beyond the startup fees, monthly subscription costs are typically calculated based on the number of vehicles or the number of zones. The typical SaaS contract also includes approximately 20 hours of monthly technical support.

## Customer Experience

### Alternative Interfaces

In addition to the microtransit app, Wake County must also ensure that individuals without a smartphone or internet connection can still access the service. Other microtransit services provide a phone number for a call center or local dispatcher to schedule real time trips. Some services have set up websites for trip requests, but this should be done in addition to a call-in option.

### Registration Process

Like other online services, customers will need to create an account to utilize the service. First time users of the app will typically be greeted with a home screen that allows them to log in to an existing account or to sign up with a new account. The account registration process must be simple and straightforward. Typically, providers require personal information that includes the user's first and last name, email address, and cell phone number. The user must also create a password for their account to keep it secure. Wake County should consider including an option for wheelchair accessibility which, depending upon the service model, could provide wheelchair customers with a more direct "curb-to-curb" service versus a "corner-to-corner" service that could potentially be provided to other users.

### Requesting a Trip

Once the customer is a registered user, the app then navigates them to a map that highlights their current location. This map will also show the user the location and boundary of the zones. If the customer attempts to request a trip pickup or drop-off that is outside of the zone, the app will not allow for that request and will generate an out-of-zone message.

Customers should be able to request their trip through two methods:

1. Manually entering their pickup and drop-off locations via address or landmark.
2. Select the app's drop pins to select their pickup and drop-off locations on the map.

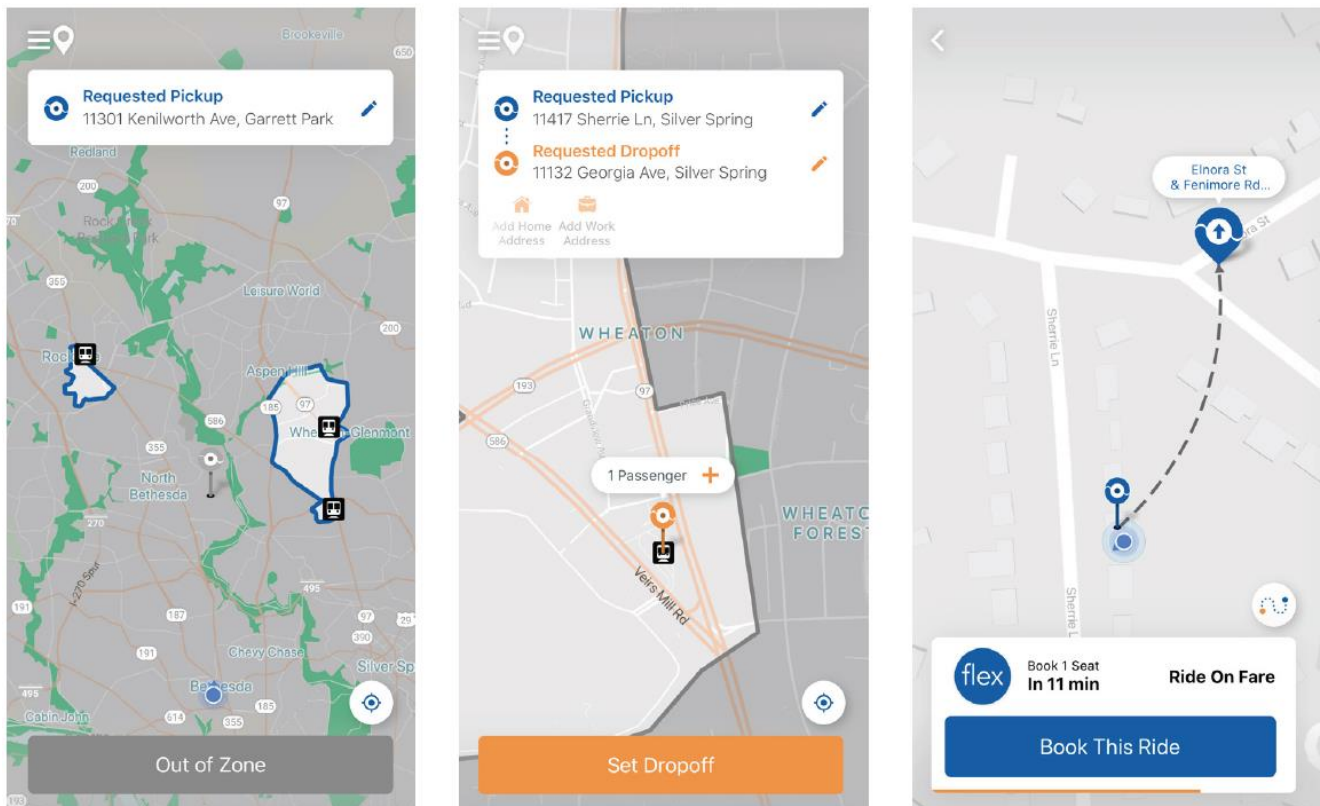
Group trips should be encouraged as they will go a long way with productivity measures. During the pickup and drop-off selection process, it is important to include an option for the user to increase the number of passengers that will be traveling with them. Limits on the number of groups will be largely determined by the vehicle's capacity and COVID-19 related social distancing guidelines.

Once the customer submits their trip request the app will then generate an estimated wait time until pickup and identify a nearby location that the user must travel to in order to board the vehicle. If the wait time and location are suitable for the customer, they will then confirm their request which will go



directly to the closest vehicle. During a previous study, the project team was able to sample the Flex microtransit service in Montgomery County, Maryland, Figure 4-1 provides an overview of the trip request process through the Flex app.

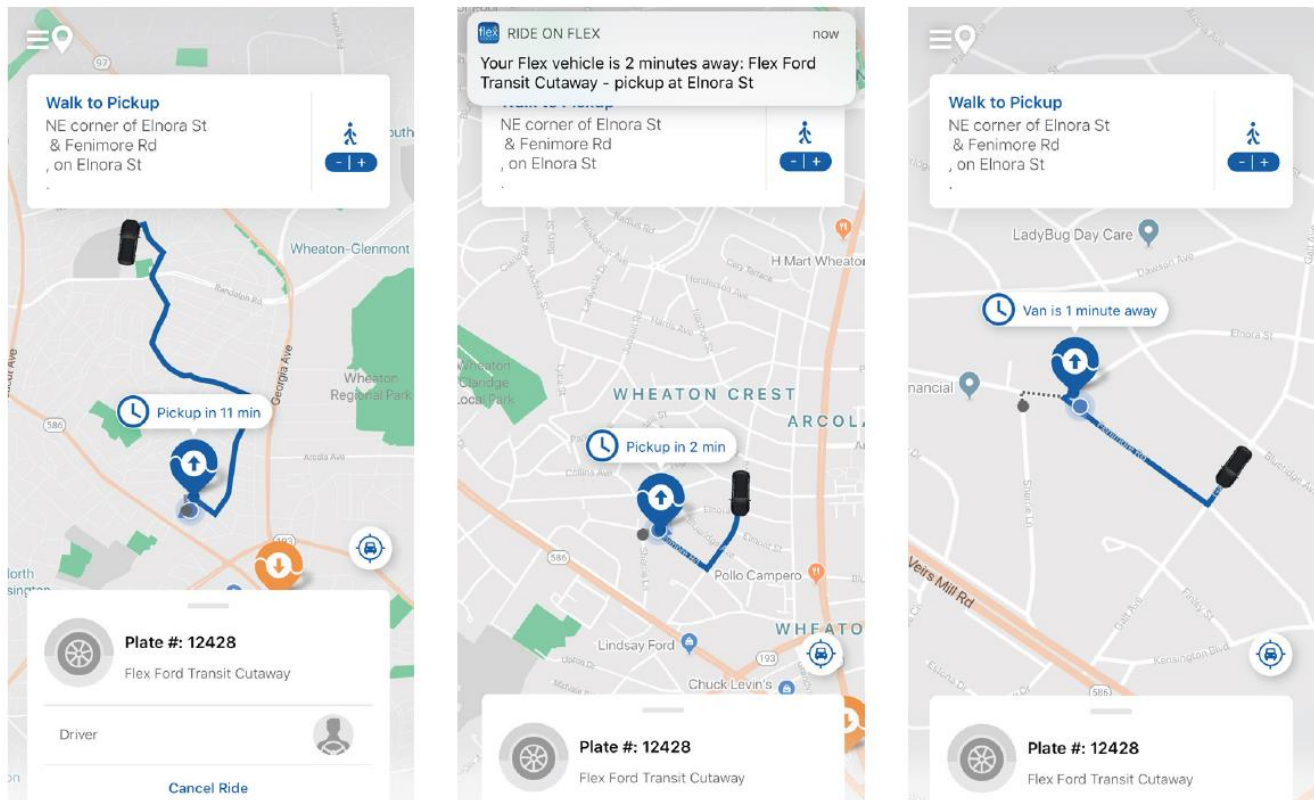
**Figure 4-1: Sample Trip Reservation Process**



## Real Time Arrival Information

One of the most exciting elements of a microtransit app is the real time arrival information. After a customer has booked their trip, the app then allows them to track their vehicle and receive real-time updates on the vehicle's estimated time of arrival. The app can be configured to send pop-up notifications to the customer's smartphone once the vehicle is a certain distance away, once it has arrived, or if it experiences delays. An overview of the real-time arrival process for the Montgomery County Flex microtransit service is detailed in Figure 4-2.

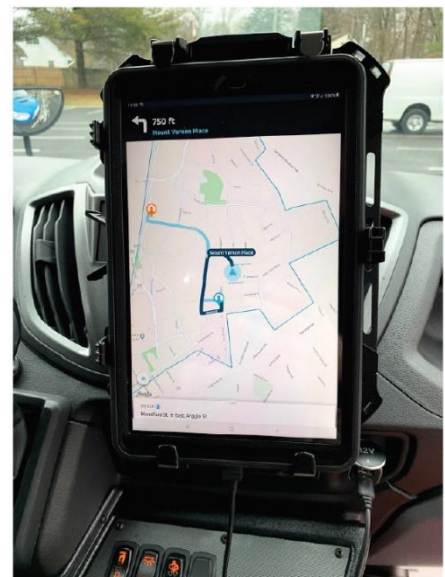


**Figure 4-2: Sample Real Time Arrival Information**

## Onboard Mobile Tablet

The onboard mobile tablet is the driver's connection to the microtransit service. Most microtransit providers either purchase tablets and vehicle mounts from the partnering technology company or another sales outlet. Routematch's software was built for Android tablets but can be uploaded onto Apple tablets.

The tablet provides a constantly updated itinerary with turn-by-turn directions for the driver. The tablet also provides an interface for drivers to accept trips, mark no-shows, and view cancellations. In between trip requests, the tablet will even instruct the driver to return to a predetermined staging area to await a future request. The locations of these staging areas are key when considering response times and they can be modified in real time based on other vehicle's locations. The key is to ensure service is evenly distributed throughout the zone.



The tablets are relatively expensive capital equipment and will require additional monitoring. Many

microtransit services require their drivers to check out and return the tablets to a supervisor. The tablets will need charging capabilities onboard the vehicles and a charging station in the dispatch office/transit facility. The tablets should be kept in a locker or safe; there are many options for secure tablet storage with charging capabilities.

## Reporting Requirements

Microtransit is typically funded through standard FTA operating grants including Section 5307 and Section 5311. Through discussions with the North Carolina Department of Transportation (NCDOT), the study team has confirmed that the reporting requirements for microtransit are the same as any other federally funded transit service. GoWake Access staff are familiar with the existing reporting requirements and are in regular contact with NCDOT representatives should requirements change in the future. The Routematch team is familiar with FTA and NCDOT reporting requirements. Standard performance measures are required to be tracked; including but not limited to trips per hour, cost per trip, trips per mile.

## Chapter 5

# Five-Year Financial Plan

### Background

Since many microtransit programs across the country are still in their initial stages, there is limited data from peers to help determine a financial plan for operating these services in Wake County. What is known is that the costs for a microtransit service are determined by multiple factors, such as the use of a contractor, service zone size, and the number of dedicated vehicles. If a service is operated in house there may also be capital costs to acquire vehicles. Ultimately, the projected costs for a microtransit service are based on the preferred service model and the level of service.

Recognizing these caveats, this chapter discusses considerations as part of developing a financial plan and the potential costs for a new microtransit service in Northeastern Wake County. This plan takes into account these key findings from the planning process:

- Through the partnership with the City of Raleigh, Wake County was originally planning to utilize Routematch's Mobility on Demand (MOD) software. However, Wake County has expressed the potential need to procure new microtransit technology. Therefore the financial plan includes cost projections for obtaining this technology, in case the use of the Routematch software is not feasible.
- Wake County plans to use a current contract with MV Transportation to operate the microtransit services. As a result, the operating cost projections included in this chapter are based upon current contract rates with MV. The use of MV to provide the future microtransit eliminates a possible turnkey approach employed by other communities, through which a technology company provides both the microtransit software and operates the services. As a result the proposed financial plan does not include potential costs for this type of arrangement.

There are several questions related to future funding for the microtransit services, and therefore this chapter is meant to serve as the resource for Wake County staff as they adapt the potential service plan to available financial resources. The financial plan begins with information on the Integrated Mobility Innovation (IMI) grant obtained by Wake County through the federal Integrated Mobility Innovation (IMI) grant, and then discusses a variety of other potential funding sources that will support the transition from this federal funding to other sources and maintain the microtransit service beyond this award. This review of possible funding opportunities sources is based on the project's team's experience working with various programs that support various mobility services in communities across the country, as well as the Shared-Use Mobility Center's (SUTC) funding Learning Module that provides information on both traditional and more innovative strategies.

## Integrated Mobility Innovation (IMI) Grant

The Federal Transit Administration's (FTA) Integrated Mobility Innovation (IMI) Program funds projects that demonstrate innovative and effective practices, partnerships, and technologies to enhance public transportation effectiveness, increase efficiency, expand quality, promote safety, and improve the traveler experience. FTA notes that innovations in information, communications, and transportation technologies are transforming personal mobility, and now a diverse mobility ecosystem exists that provides unprecedented flexibility and modal choices, including public transit, bikeshare, ride-hailing, electric scooters, and microtransit. Through the IMI program, FTA is conducting research on new service options in combination with available technologies that allow for greater individual mobility. Goals for the IMI program include:

- Explore new business approaches and technology solutions that support mobility
- Enable communities to adopt innovative mobility solutions that enhance transportation efficiency and effectiveness
- Facilitate the widespread deployment of proven mobility solutions that expand personal mobility

In March 2020, FTA announced selections for \$20.3 million in FY19 IMI projects, including a successful application from Wake County Human Services to initiate an on-demand service to provide residents in rural areas with greater access to jobs, school, healthcare, and other services. Table 5-1 provides the funding through the FTA IMI grant award:

**Table 5-1: Wake County IMI Grant Award Details and Project Components**

Item	Federal Amount	Wake Transit	Program Income	Total
Contract Transit Services	\$227,664		\$105,155	\$332,819
Software	\$132,363	\$15,000	\$30,000	\$177,363
Transit Consulting	\$33,500	\$15,000	\$1,500	\$50,000
Travel and Misc.	-		\$2,000	\$2,000
Total	\$393,527	\$30,000	\$138,655	\$562,182

Source: Wake County

## Potential Future Funding Sources

While the FTA IMI grant will provide the foundation for the implementation and initial operation of the new microtransit service in Northeastern Wake County, other funding sources will need to be explored. This section provides a review of those that can be considered, and involve:

- Traditional Government Funding Sources
- Non-traditional Funding Strategies

## Traditional Government Funding Sources

### Federal Funding

SUTC notes that federal funding is often the primary source for both the capital and operations components of a shared mobility project like microtransit. The IMI program, as well as previous ones through FTA, have served as the foundation for jump starting microtransit services in various communities across the country.

However, these programs are highly competitive – and are not ongoing like other federal programs that support public transit services. There is the possibility that FTA will issue additional funding programs through the current Accelerating Innovative Mobility (AIM) program that produced the IMI grant opportunity. As noted by FTA, this program highlights its commitment to support and advance innovation in the transit industry and is intended to drive innovation by promoting forward-thinking approaches. While any future funding through the AIM program may be targeted towards new services and pilot projects, Wake County can monitor these FTA opportunities and apply when appropriate.

Another consideration is the FTA Section 5311 program that supports general public transit services in rural areas. This program is administered by the North Carolina Department of Transportation (NCDOT) Integrated Mobility Division, and Wake County is a current recipient of these funds. However, it is anticipated that the results of the 2020 U.S. Census will impact the region, and Wake County may no longer be eligible for these funds beyond FY2023. At the same time, Wake County may become eligible for increased funding through the FTA Section 5307 Program that supports public transit services in urban areas.

### State Funding

The project team interviewed the NCDOT Integrated Mobility Division staff person who is the contact for Wake County. She confirmed the uncertainty regarding Section 5311 Programs funds for Wake County. She also noted that the administration of the Section 5307 Program is done locally, as FTA funds flow directly to the urbanized area, and are outside NCDOT oversight.

The NCDOT Integrated Mobility Division did express strong support for microtransit services, highlighting the transition in Wilson to this model. While unable to make any commitment to funding these services in Wake County, the NCDOT representative did note that the Rural Operating Assistance Program (ROAP) would be a potential source for funding microtransit services. ROAP is a state-funded public transportation program, and eligible applicants include local county governments. Funding project categories under ROAP include the Rural General Public (RGP) Program. Funds distributed through ROAP must be used in a manner consistent with the county's Coordinated public Transit-Human Services Transportation Plan. Wake County receives funding through this program that supports GoWake Access services for residents of Wake County who live in a rural zone or are traveling to a rural zone. NCDOT also stated that ROAP could potentially be used for the microtransit program to fund the cost of the trip if a flat rate per trip is determined for eligible riders.

## Local Funding

Through competitive processes, CAMPO allocates federal funds for local use and some additional sources of local revenue to transit providers and local jurisdictions. In discussions with their staff as part of the stakeholder interviews, they noted that projects like the Northeast Wake Microtransit service could typically be funded through the Community Funding Area Program (CFAP). This program provides an opportunity for areas in Wake County that would otherwise have limited fixed-route transit services to create or accelerate public transportation services and programs and was created as part of the "Four Big Moves" that resulted from Wake County voters' approval of major investments in public transit services over a 10-year period between 2018 and 2027.

The CFAP requires all projects to provide a minimum funding match of 50% of the total project costs. Project sponsors are required to identify their source of matching funds and demonstrate sufficient funding to fully execute the proposed project. The CFAP Management Plan states that the program is funded entirely with Wake Transit Plan resources, which means that from the perspective of the state and federal government the CFAP funds are local tax revenues. Therefore, applicants may use federal, state, or local funding sources to meet the CFAP match requirements.

The Wake County Transit Planning Advisory Committee (TPAC) coordinates the planning and implementation of the Wake Transit Plan, including the development of the CFAP Management Plan. The Wake Transit Plan identifies Wake County municipalities as eligible community funding areas, and that includes the Towns of Rolesville, Wendell, and Zebulon. CAMPO staff noted that it would be beneficial for these communities to have the TPAC engaged early in the process, and to have a solid financial plan in place to fund the Northeast Wake Microtransit service beyond the IMI grant. They also mentioned that the service will need to be cost effective to be competitive through the CFAP selection process, and therefore marketing and promotion of the new service will be critical.

According to the CFAP Management Plan, funding for the program is anticipated to increase over time by approximately \$250,000 a year, going from \$100,000 in FY2019 to \$1.75 million by FY2027. Therefore, while the program is highly competitive, it is anticipated that the CFAP could become a key funding source for the Northeast Wake Microtransit service after the federal IMI funds are expended.



SUTC also noted the importance of local government partnerships in the implementation and operation of microtransit and other shared-use services, and how success is often the product of local governments and key stakeholders working together to develop and deploy new technologies and resources. Through the IMI grant and the current planning process Wake County has formed an impressive partnership foundation, one that can serve as the basis for expanded efforts in the future that can result in identifying additional funding opportunities.

## Non-Traditional Funding Strategies

SUTC notes that while traditional sources of funding through the government play an important role in funding microtransit and other share use services, these sources do not always cover the entire cost of a project or provide sustained resources needed to turn a pilot into a sustainable long-term program. Therefore other revenue sources need to be explored to help fund microtransit services and to offset any deficit from revenue streams. The following are possible opportunities beyond the traditional funding programs:

- Other federal agencies beyond FTA have funding programs that can be explored by Wake County. For instance, the U.S Department of Energy's Office for Energy Efficiency and Renewable Energy (EERE) offers funding programs for electrical vehicles and charging infrastructure that could be used for microtransit services. The EERE website notes that new funding opportunities are announced regularly, and one is currently open. More information is available at <https://www.energy.gov/eere/funding-opportunities>.
- With a new administration in the White House, other new federal funding programs and partnerships may be created that could be explored by Wake County. For example, the Partnership for Sustainable Communities, a joint project between the Environmental Protection Agency, the U.S. Department of Housing and Urban Development, and the U.S. Department of Transportation, has in the past provided grants to improve regional and local planning efforts that integrate housing and transportation.
- Some communities have explored private sector partnerships to support their innovative programs. These efforts include sponsorship programs through which companies receive recognition for their support (such as subsidizing fares), or contracts that generate revenues through advertising on microtransit vehicles.
- Another key strategy for finding funding is managing an aggressive marketing campaign that helps explain the service to the general public. If there is a large amount of vocal support for microtransit, local decision-makers may provide additional funding. If a microtransit zone is within a major business development district, there may be funding options available from local businesses.

## Farebox Recovery

As noted in Chapter 3: Service Plan, an important component of any new microtransit program is finding the proper fare structure. It is anticipated that a fare will be charged for the new service, comparable to GoWake Access fares. This farebox recovery will help to offset operating costs, and based on typical demand response type services this would result in approximately 5-10% of overall operating costs.

## Projected Capital Costs

As noted in the introduction to this chapter there is the possibility that Wake County will need to procure technology if unable to build upon and use the Routematch software employed by the City of Raleigh. While a formal Request for Proposal (RFP) process will determine final costs, one of the vendors that is currently supplying microtransit technology to other communities across the country reported that cost estimates would be approximately \$50,000 for installation, plus a user fee of between \$400-\$700 per month per vehicle. They noted that these price ranges are very general, and tailored simulations with associated costs would be determined in consultation with specific agencies.

## Projected Operating Costs

As also noted in the introduction to this chapter there are a variety of variables that will impact the projected budget for microtransit services. That being said, this section provides projections for operating microtransit services using the current hourly rate with MV Transportation reported by Wake County of \$42.17.

Table 5-2 provides a variety of different scenarios for potential operating costs, and as noted in the table all based on assumptions on the number of service hours/days and number of vehicles that would be needed to operate services. As shown in Table 5-2, project annual operating costs range from a low of \$175,427 for eight hours of service for five days a week, using two vehicles; through to \$554,114 when operating service seven days week for twelve hours. It should be noted that these costs are strictly for the operations, and do not include monthly user fees that would be required if the procurement of new technology is needed.

**Table 5-2: Projected Operating Costs**

Service Options	Level of Service			Annual Service Days	Projected Annual Revenue Service Hours	Projected Annual Operating Costs
	Service Span	Revenue Vehicles	Projected Daily Service Hours			
Monday - Friday Service						
Option 1	8 hours	2	16	260	4,160	\$175,427
Option 2	8 hours	3	24	260	6,240	\$263,141
Option 3	10 hours	2	20	260	5,200	\$219,284
Option 4	10 hours	3	30	260	7,800	\$328,926
Option 5	12 hours	2	24	260	6,240	\$263,141
Option 6	12 hours	3	36	260	9,360	\$394,711
Monday - Saturday Service						
Option 7	8 hours	2	16	312	4,992	\$210,513
Option 8	8 hours	3	24	312	7,488	\$315,769
Option 9	10 hours	2	20	312	6,240	\$263,141
Option 10	10 hours	3	30	312	9,360	\$394,711
Option 11	12 hours	2	24	312	7,488	\$315,769
Option 12	12 hours	3	36	312	11,232	\$473,653
Seven Day a Week Service						
Option 13	8 hours	2	16	365	5,840	\$246,273
Option 14	8 hours	3	24	365	8,760	\$369,409
Option 15	10 hours	2	20	365	7,300	\$307,841
Option 16	10 hours	3	30	365	10,950	\$461,762
Option 17	12 hours	2	24	365	8,760	\$369,409
Option 18	12 hours	3	36	365	13,140	\$554,114

For projecting potential operating costs over time, options 2, 8, and 14 were used to develop a five-year financial plan. Provided in Table 5-3, this plan takes these different scenarios and builds in an inflationary rate to provide Wake County with estimated costs for the operating the service. Again, these costs are strictly for operations and do not include monthly user fees that would be required if the procurement of new technology is needed.

**Table 5-3: Conceptual Five-Year Financial Plan for Operations**

Projects	Years				
	1	2	3	4	5
<b>Option 2:</b> Service Operates: Mon. to Fri., 8 hours a day, using 3 vehicles	\$263,141	\$271,035	\$279,166	\$287,541	\$296,167
<b>Option 8:</b> Service Operates: Mon. to Sat., 8 hours a day, using 3 vehicles	\$315,769	\$325,242	\$334,999	\$345,049	\$355,401
<b>Option 14:</b> Service Operates: 7 days a week, 8 hours a day, using 3 vehicles	\$369,409	\$380,491	\$391,906	\$403,663	\$415,773

## Chapter 6

# Evaluation Plan

### Background

Microtransit services have placed a new emphasis on the rider through an innovative and user-focused approach to public transportation. This new service model has presented challenges in how to quantify the performance of these services versus traditional Demand Response Transportation (DRT) service and fixed routes. Microtransit's user-focused approach favors flexibility, coverage, and efficiency, all common themes in many DRT services.

This chapter provides a context for the performance assessment of the future microtransit pilot by exploring traditional and emerging microtransit performance metrics.

### Performance Assessment Context

Performance measures provide quantifiable, data-driven answers to the question of whether a transit service is successful or not. For a microtransit pilot program, defining these performance measures is a crucial step in determining the future of the service. When examining traditional performance metrics, microtransit would be closely related to DRT; similar to the existing GoWake Access service that is currently provided. However, microtransit is a new service model that allows the general public to travel on-demand (GoWake Access provides limited transportation service to the general public in the more rural areas of the County and requires advanced reservations). On-demand capability can generate greater ridership than a traditional DRT service; however, it also faces the challenge of unpredictable demand that could result in under-utilized vehicles or a lack of vehicle capacity during peak periods.

Microtransit is best assessed through a combination of traditional metrics and a new class of performance measures that have emerged from similar on-demand mobility services (e.g. bikeshares, carshares, e-scooters, microtransit, TNCs, etc.). Never before have there been so many options available for transportation - these "new age" metrics provide a greater focus on an integrated transportation system and the specific needs of customers. The role of microtransit is not to compete with public transit or private operators, but rather to provide a valuable and equitable linkage in a highly diverse transportation environment.

## Traditional Performance Measures

A comprehensive set of traditional public transit performance measures is conveniently compiled into the Federal Transit Administration's (FTA) National Transit Database (NTD). The NTD provides consistency across all transit systems when evaluating performance metrics. While the NTD requires a wide range of data, the primary performance measures focus on operating cost and total passenger trips (displayed in Table 6-1). These performance measures are essential for all public transit services as they are required by the FTA.

In the realm of traditional performance measures, microtransit is more akin to DRT services which have a more tailored set of performance indicators. The Transit Cooperative Research Program's (TCRP) Guidebook for Measuring, Assessing, and Improving Performance of Demand-Response Transportation (TCRP Report 124) outlines key performance measures for DRT; including those required by the NTD and expanding to measures that track safety and on-time performance. These measures are also included in Table 6-1.

Traditional performance measures are essential and valuable for comparing microtransit to other services. However, new metrics made possible through mobile technology can provide a broader illustration of the service's impact on the community. These metrics draw heavily upon the traditional performance measures but place a greater emphasis on the customer's experience.

**Table 6-1: Traditional Performance Measures**

Performance Indicator	Definition	Standard/Goal
<b>National Transit Database</b>		
Operating Cost per Vehicle Revenue Miles	Operating cost / revenue miles	Minimize
Operating Cost per Vehicle Revenue Hour	Operating cost / revenue hours	Minimize
Operating Cost per Passenger Mile	Operating cost / passenger miles	Minimize
Operating Cost per Passenger Trip	Operating cost / passenger trips	Minimize
Trips per Vehicle Revenue Mile	Passenger trips / revenue miles	Maximize
Trips per Vehicle Revenue Hour	Passenger trips / revenue hours	Maximize
<b>Key DRT Performance Measures, TCRP Report 124</b>		
Passenger Trips per Revenue Hour	Passenger trips / revenue hours	Maximize
Operating Cost per Revenue Hour	Operating cost / revenue hours	Minimize
Operating Cost per Passenger Trip	Operating cost / passenger trips	Minimize
Safety Incidents per 100,000 Vehicle Miles	(NTD major + non-major safety incidents) / (vehicle miles) x 100,000	Minimize
On-Time Performance	(On-time trips + no-shows + early trips) / (completed trips + no-shows + missed trips)	Maximize



## Emerging Performance Measures for Microtransit

Microtransit programs are in their infancy and currently, there are no formal industry standards for productivity and performance. It is anticipated that over time more performance measures and established standards will be available from maturing programs. As these measures are forthcoming, several studies have been released that investigate effective microtransit performance measures.

Notably, in February 2020, the FTA published Mobility Performance Metrics (MPM) for Integrated Mobility and Beyond (MPM Report), authored by TransitCenter. The MPM Report provides a comprehensive summary for developing performance metrics specifically for Mobility on Demand (MOD) Sandbox Projects. The report highlights the need for a new set of performance metrics that:

- Measures how well an integrated public/private mobility system meets the needs of individuals
- Evaluates the system's performance while meeting overall travel demand
- Addresses the service's impact locally, regionally, and nationally
- Evaluates the service in relation to the agency's overarching goals and objectives

The FTA has taken a customer centric perspective in its approach to developing performance measures for MOD projects. The MPM Report has outlined five specific customer experiences and stages of travel with a microtransit service; including:

- Offset time – the difference between the preferred departure time and actual departure time
- Spontaneity time – earliest departure, how far in advance do passengers have to book their trip?
- Wait time – the amount of time between the trip request and boarding the vehicle
- Travel time – the amount of time spent in the vehicle and walking to an access point
- Time prediction accuracy – reliability, is the real-time prediction accurate?

The MPM Report and other research studies provide an excellent resource for developing potential performance metrics. These studies have also identified the challenges in collecting and tracking new types of performance data. Many of the potential performance measures included in the following section are derived from the MPM Report.

## Potential Performance Measures

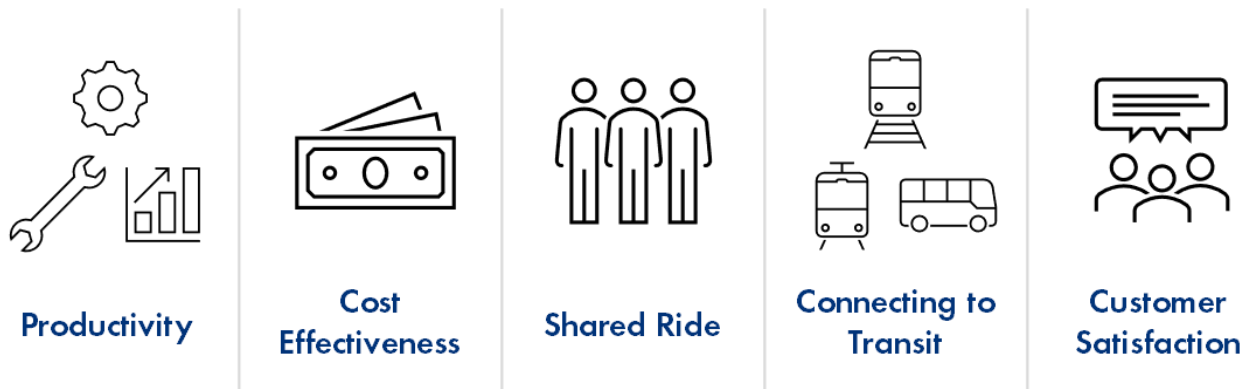
Microtransit providers have used a wide range of performance indicators to measure the success of their programs. At the outset of the pilot program, Wake County has identified two key goals:

- Exceed tripling the number of residents in the zone that utilize public transit
- Decrease average one-way trip cost by at least 25%

The following categories provide an outline of potential performance measures that Wake County should consider for future use. These measures have been developed by other microtransit providers and/or documented in previously noted studies. These potential measures are intended to provide Wake County with a menu of options; tracking each and every performance metric listed would be cumbersome. The following metrics are also useful in informing a discussion around the long-term goals for the service.

The following five categories were used to group the potential metrics as they captured popular and emerging themes in microtransit. Displayed in Figure 6-1, the five potential performance measure categories are productivity, cost effectiveness, shared ride, connecting to transit, and customer satisfaction.

**Figure 6-1: Potential Performance Measure Categories**



### Productivity

The potential productivity metrics shown in Table 6-2 highlight traditional performance measures while also considering the nature of microtransit service. While shared ride metrics are covered in a later section, minimizing the number of deadhead miles and hours per day is a key performance metric for an on-demand service. Using the advantages of app-based data, these metrics could also be easily tracked.

**Table 6-2: Potential Productivity Performance Measures**

Performance Measure	Definition
Completed daily trips	Total or average daily trips
On-time performance	On-time performance of response time, the time between the trip request and the vehicle's arrival
Passenger trips per revenue hour	Passenger trips / revenue hours
Passenger trips per revenue mile	Passenger trips / revenue miles
Peak capacity	Maximum number of passenger trips per hour
Number of deadhead miles per day	Miles driven per day without customers onboard
Number of deadhead hours per day	Hours driven per day without customers onboard
Impact on Accessibility	New trips possible due to microtransit service
Mobile app downloads	Number of App downloads
Percentage of regular app users	Percentage of app users that regularly use the service

## Cost Effectiveness

Microtransit operating costs are very similar to the existing DRT service. Cost-effectiveness is achieved through increased service efficiency on a per hour, per mile, and per trip basis. Well-designed microtransit services need to balance high costs by adopting appropriate standards that properly balance farebox recovery with overall costs. The subsidy ratio shows how much of the operating costs are being offset by fare revenue. Re-evaluating the fare may be necessary if farebox recovery is negligible. Rider satisfaction with the current cost of service as well as a fare change's Title VI implications should be considered in any fare evaluation.

**Table 6-3: Potential Cost Effectiveness Performance Measures**

Performance Measure	Definition
Operating cost per revenue hour	Operating cost / revenue hours
Operating cost per revenue mile	Operating cost / revenue miles
Operating cost per passenger trip	Operating cost / passenger trips
Fare collected per passenger trip	Farebox recovery / passenger trips
Annual subsidy	Required operating funding

## Shared Ride

Shared rides are trips made with more than one passenger onboard. The microtransit software will direct the driver to take the most efficient and effective path to provide transportation to as many individuals as possible. Given the size and scope of the service, shared trips can have a major impact on the service's performance measures. Table 6-4 provides some sample performance measures.

**Table 6-4: Potential Shared Ride Performance Measures**

Performance Measure	Definition
Percentage of shared rides	Percentage of total rides where there are more than one passengers onboard
Utilization of vehicles	Riders in a vehicle / vehicle capacity
Percentage of multi-passenger trips	Percentage of completed trips with more than one passenger per reservation

## Connecting to Transit

Tracking transfers and connectivity with other transit modes is a powerful metric in illustrating the regional impact of the new service. Generating additional transit trips can go a long way in strengthening partnerships with regional transit providers. Trip tracking could be accomplished through fare cards or a user's cell phone location data. A method for tracking trips should be established early in the launch process.

**Table 6-5: Potential Connecting to Transit Performance Measures**

Performance Measure	Definition
Number of trips to/from specific stations	Number of daily trips linked to and from a selected high frequency transit line
Number of linked trips per day	Number of daily trips linked to other transportation modes (bus, rail, bikeshare, carshare, etc.)
Number of linked trips per vehicle revenue mile	Number of linked trips / revenue miles
Number of linked trips per vehicle revenue hour	Number of linked trips / revenue hours

## Customer Satisfaction

Customer satisfaction is a major element for every microtransit service. Positive word-of-mouth reviews are typically the primary marketing tool. Regular customers can make or break the success of the service. Wake County must be responsive to their experiences and complaints. The best performance metrics are the ones that matter the most to the customer. Tracking satisfaction and being responsive to customer requests will ensure continued community support.

**Table 6-6: Potential Customer Satisfaction Performance Measures**

Performance Measure	Definition
Returning customers	Percentage of customers who returned to the service after their first trip
Customer complaints	Timeliness of responses to customer complaints
Wait time	On-time performance of response time, the time between the trip request and the vehicle's arrival
Number of trips canceled	Number of trips canceled following the reservation request
Ease of use	How easy is the app and service to understand
Missed trips	Number of trips that are unable to be completed due to demand
Fatality or serious injury per 100,000 trips	$(\text{NTD major} + \text{non-major safety incidents}) / (\text{vehicle miles}) \times 100,000$
Incidence of crime per 100,000 trips	$(\text{Criminal conduct with police involvement}) / (\text{vehicle miles}) \times 100,000$

## Performance Evaluation

Typically, new transit services should be in operation for at least 12 to 18 months before a full performance assessment is conducted. However, with the extensive data available through microtransit software, an assessment can be conducted at any time. Evaluating the performance of the service within the first few months can be key to ensuring increased productivity throughout the pilot period. A key characteristic of the service is flexibility, this allows for minor changes to meet trip demand.

It is important to place these performance metrics in context. Microtransit is a new service for Wake County and a completely new service model. Productivity over the first few months will likely be relatively low. Marketing campaigns and reliable service will be the key to consistently growing ridership. And high ridership is the key to improving the productivity measures.

## Data Collection

Regularly tracking performance data will provide a much more detailed understanding of the impacts of the service and customer trends. Before selecting performance measures, Wake County should consider the amount of time and effort that will be required to collect and analyze each metric. For example, calculating the percentage of linked transit trips will require coordination with regional transit providers and will require Wake County to designate a staff member who can analyze and summarize that data for decision makers. Even metrics that involve operating cost and vehicle information will require some level of manual tracking. The ease of data collection should be a primary factor when selecting performance measures.

## Establishing Performance Goals

For each selected performance measure, Wake County should establish a performance goal. For example, a common microtransit performance measure is average response time. This measure can tell you a lot about reliability, capacity, and customer satisfaction. If the average response time is over the goal, reevaluating the service in the short-term is incredibly important in ensuring continued success.

The nearly universal use of response times as a performance measure highlights the importance of the customer's experience in microtransit. When establishing performance goals for the new service, Wake County should consider how those goals contribute to the county's overall goals and objectives.



## Chapter 7

# Procurement and RFP Considerations

### Background

As outlined in previous chapters, there are a variety of decision points in the implementation of microtransit services in Northeastern Wake County. In addition, there are multiple factors that will ultimately impact any procurement process, primarily the software that will be needed and how the service will be operated. This chapter provides a summation of these considerations based on the project team's work with microtransit services across the country, and importantly ongoing discussions with Wake County throughout the project.

### Technology Platform

With the need for e-hailing capabilities, the Northeastern Wake County microtransit service will require the acquisition of a customer app and an onboard software system for service operators. These platforms will allow for on-demand scheduling, dynamic routing, payment, and vehicle tracking. At the same time, the technology must be user-friendly and have the ability to collect trip data for ongoing analysis of the service. In recent years a variety of companies have begun offering on-demand transit software, and vendors of transit scheduling software are adapting their products to meet the microtransit emergence.

### Option 1: Build Upon Current Routematch Software

One of the transit scheduling software vendors that is adapting their software to microtransit services is Routematch, the technology program currently in use by GoWake Access and the City of Raleigh. In 2020 Routematch was acquired by Uber, and as noted on their website with the intent to "combine Uber's expertise in on-demand global mobility technologies with Routematch's proven capabilities across paratransit, payments, fixed-route tools, and trip planning services". The Routematch website notes that their mobility platform can integrate a microtransit service with an existing program (those similar to GoWake Access), and this was highlighted during a presentation by Routematch to Wake County staff and the project team.

Therefore, a natural consideration in regard to the microtransit technology platform is to integrate it into the existing Routematch software, and through the planning process Wake County expressed their preference for this arrangement.

Advantages to this approach include:

- Builds upon Wake County's long term relationship with Routematch.
- Utilizes a software program familiar to Wake County staff.
- Depending on the current contract with Routematch and existing Wake County purchasing policies, has the potential to eliminate a procurement process by adding a software component to the existing agreement with Routematch.

The main disadvantage to this approach is that the Uber/Routematch partnership is fairly new, and therefore Wake County may be a test site for the integration between the different software programs.

## **Option 2: Conduct a Procurement for Microtransit Technology**

While the Wake County preference is to use the Routematch technology program currently in use by GoWake Access and the City of Raleigh, near the conclusion of the planning process they noted that there may be a need to procure new technology that would serve as the platform for microtransit services. If Wake County chooses to explore other companies that offer technology to support microtransit services a formal Request for Proposal (RFP) process can be conducted. While a RFP will need to be developed to meet Wake County needs and be finalized in consultation with appropriate county procurement staff, three sample RFPs that can be used as examples are provided in Appendix A.

## **Service Provider**

The Service Plan in Chapter 3 discussed the broad choices for operating a microtransit service. Taking into account current conditions and input from Wake County staff, the following option was determined to be the preferred one.

## **Contracting Services out to an Established Transit Company**

Through this option Wake County will build upon and expand the existing relationship with MV Transportation, as MV currently operates GoWake Access services.

If it is needed to look for a new vendor beyond the current arrangement with MV, Wake County could contract services out through a formal procurement process. It is anticipated that in this case, Wake County would use an RFP similar to the one through which MV Transportation was selected to operate GoWake Access services.

## Future Considerations

While it is currently logical and advantageous for Wake County to use existing resources and contracts in the implementation of microtransit services, at some point in the future there may be a need to consider other options. One would be a turnkey approach, through which the vendor that provides the on-demand technology would also supply the drivers, vehicles, and overall operations. As Wake County is aware, the City of Wilson recently contracted with a technology company for a turnkey approach for operation of their microtransit services. Companies such as Via Transportation and RideCo offer this service. It is anticipated that with the Uber acquisition of Routematch, they will also provide a similar option or one that employs Uber-type services.

The advantages of contracting out both the technology and operation to the same company include the convenience of dealing with just one vendor for the entire microtransit service. Conversely, one of the disadvantages of contracting to a technology company for a turnkey operation is a loss of control, with a third party handling both technology and operations. Wake County staff expressed concerns about this situation. However, the county is already accustomed to overseeing a third party contract through the current MV Transportation agreement, so oversight of a turnkey operation may not be as challenging as anticipated and one that could be considered in the future depending on the success of using the Routematch software for the technology and MV Transportation as the service provider.

Wake County also noted concerns about the branding of microtransit services, as often turnkey operations seem to highlight the technology company more than the transit system that operates the service or the community that it serves. Other communities have resolved this concern through the branding of the microtransit service, with a name that is connected to the existing transit system or reflects characteristics of the area. It can also be addressed through the stipulations in the RFP during the procurement process.

## Appendix A

# Microtransit Technology: Example Request for Proposals

# 2020

## RFP 2020-03 MICROTRANSIT SOFTWARE



Procurement Office

Greater Lafayette Public Transportation  
CityBus

12/28/2020

## Contents

I.	Background .....	3
II.	Scope of Work .....	3
	Product Features .....	3
III.	Timeline .....	6
IV.	Contents of Proposal .....	6
	Firm Qualifications .....	6
	Cost .....	7
	References .....	7
V.	Evaluation Criteria .....	7
VI.	Proposal Questions/Requests for Clarifications .....	7
VII.	Proposal Submission Format and Delivery Information .....	7
VIII.	Federal Clauses for Materials & Supplies Procurements .....	9
	Lobby Restrictions .....	17
	Certification of FTA Required Clauses .....	20



# Request for Proposals for Microtransit/On-Demand Transit Software

## I. Background

The Greater Lafayette Public Transportation Corporation (CityBus) is requesting proposals from qualified firms to provide a microtransit software solution for a one (1) year period, with options to extend up to five (5) years.

## II. Scope of Work

CityBus completed a mobility study in the summer of 2020 to analyze several scenarios that would modify unproductive fixed route services and incorporate alternative modes of public transportation. The final recommendation from the report suggested the use of on-demand microtransit as an effective alternative in geographies served by underperforming traditional fixed routes. The agency will deploy this new service mode in August of 2021 as part of a pilot project. If the pilot is successful, CityBus may choose to expand microtransit service to other underserved geographies in the transit district.

CityBus wishes to improve upon the inherent operational inefficiencies of an on-demand service by comingling microtransit and paratransit riders using a single, expanded fleet of vehicles. CityBus is seeking a qualified vendor to provide a comprehensive suite of software services to meet this need, including a dispatching platform and mobile applications for both vehicle operators and customers.

## Product Features

The successful vendor will provide an on-demand transit software solution that meets the following specifications. All features described below are required unless otherwise indicated:

### • **General Specifications**

- The administrative/dispatching platform shall be internet browser/cloud-based SaaS with a minimum of 8 user accounts **(preferred)**.
- The platform shall be built on an open API for integration into other services **(preferred)**.
- The platform shall be customizable for the comingling of multiple service modes and passenger categories, including microtransit, paratransit, and first mile last mile. If this feature is not live at the time of proposal submission, it must be available for use by the agency by July 1, 2021.
- The platform shall offer scalability of service, with the ability to modify existing zones and create new zones. These functions must be available to the agency within the platform.
- The suite of products available within the solution shall include a dispatching platform and mobile applications for vehicle operators and customers.

- The platform shall provide service performance reporting, such as ridership, schedule adherence, and other standard reports. The reports shall be exportable to an interactive file format such as Excel. The system will differentiate on-demand and paratransit passenger trip data.
  - The platform shall provide reports that meet National Transit Database requirements. The reports shall be exportable to an interactive file format such as Excel. The system will differentiate on-demand and paratransit passenger trip data.
  - The vendor shall provide user and technical support via a regular support line during published support hours.
  - The platform shall allow the agency to customize branding elements of the customer mobile application **(preferred)**.
  - The vendor shall provide marketing and advertising materials designed to inform customers of the availability of a new service type and training for those interested in using the new service.
- **Customer management**
    - The platform shall allow manual entry of customer information by agency staff. When entering data, the system shall alert the user if there is an existing customer account entry under the same name.
    - The platform shall allow entry of relevant customer health information, including disability aid tools such as mobility devices, service animals, ect. The platform shall allow entry of the name, address and phone number and the information of a caregiver for paratransit customers, if applicable.
    - The platform shall allow the agency to create accounts on behalf of customers.
    - The platform shall allow entry of a certification date and expiration date (as applicable) defining when the client is authorized to begin receiving paratransit service.
    - The platform shall automate paratransit customer eligibility status correspondence by sending emails or other appropriate functions regarding customer assessments, appeals, eligibility denial, and/or eligibility approval **(preferred)**.
- **Trip Booking & Scheduling**
    - The platform shall support booking both subscription/recurring and pre-scheduled demand response trips.
    - The platform shall store multiple address entries for frequently used destinations to allow dispatchers to quickly complete manual trip bookings.
    - The platform shall allow trips to be booked only within predetermined scheduling windows.
    - The platform shall allow trips to be booked by desired arrival or departure times.
    - The platform shall allow customers to book reservations free of agency intervention.
    - Paratransit customers shall be protected from denials and have safeguards in place for guaranteeing a return trip.
    - The system shall accept trip reservations submitted up to fourteen days in advance of the trip time for paratransit customers.

- The platform shall enable automated itinerary creation for each day, taking into consideration the recurring trip bookings and scheduled trips. The system shall optimize for least distance and travel time, based on the street network segment parameters stored in the system.
  - The system shall be capable of continuous routing and itinerary optimization to improve efficiency.
  - The platform shall allow dispatchers to manually submit and modify reservations as needed.
  - The system shall indicate all relevant client information such as client name, gender, and fare type along with any relevant client-linked notes for each reservation.
  - The platform must automatically schedule on-demand reservations within 15 seconds of request submission.
- **Dispatching Interface**
    - The platform shall have a map-based user interface and shall display real-time vehicle location, vehicle load, schedule adherence, driver status, and vehicle status.
    - The platform shall allow for communication between the dispatcher and vehicle operator, with predetermined question and response options. The platform shall also allow the dispatcher to send custom messages to vehicle operators.
    - The platform shall include a searchable historical event log database. The database shall be exportable to an interactive format such as Excel.
    - The software shall provide replay controls to view the entire sequence of reported locations for a given time frame.
- **Vehicle Operator Interface**
    - The operator application shall be available for installation and compatible with Apple or Android devices (*preferred*).
    - The operator application shall display turn-by-turn directions with street names and mileage until next movement while the operator is en route to a passenger pick up and/or while a trip is in progress.
    - If the platform adds a passenger pick up mid-trip, the directions will automatically update with minimal input from the operator.
    - The operator application shall display a map showing the current location of the vehicle alongside routing directions to the next pick-up or drop-off location.
- **Customer Interface**
    - The customer application shall be available for download from the Google Play Store and Apple App Store. The application shall be compatible for Android and Apple devices.
    - The application shall allow customers to create and modify their account and store personal and payment information free of agency intervention.
    - The application must detect the customer's current location upon login.

- Customers must be able to select pickup and drop off by either entering a street address into a search bar, searching for a Point of Interest, directly selecting locations displayed on a map, or based on the user's current location.
- The customer application shall display a map showing the current location of the requested vehicle, estimated time of arrival for pick up, and descriptive information about the vehicle such as fleet number, make, or model before pick up. While a trip is in progress, the application shall display estimated time of arrival to the destination and current vehicle location.
- If enabled by the customer, the application shall send notifications to the customer's mobile device as the on-demand vehicle approaches the pickup location.
- The customer application shall allow customers to book reservations by desired arrival or departure times.
- The customer application shall prevent customers from booking trips that do not meet predetermined service criteria, including trips booked outside of a service area or span of service, or trips that do not meet minimum distance requirements.

### **III. Timeline**

December 28, 2020	Public notice issued and RFP package available for download at <a href="http://www.gocitybus.com/about/procurement">www.gocitybus.com/about/procurement</a> .
December 28, 2020 – January 31, 2021	RFP available
February 1, 2021	Requests for clarifications, specification exceptions, and other questions or clarifications are due
February 8, 2021	Agency responses are due
February 15, 2021	Proposals are due by 4:00 PM (EST)
February 17, 2021 – February 19, 2021	Vendor demonstrations
February Board Meeting (est. 03/03/2021)	Selection of Proposal by Board of Directors

### **IV. Contents of Proposal**

#### **Firm Qualifications**

Firms shall be evaluated based upon experience and success of the firm in implementing on-demand/microtransit software solutions for public transportation service operators in the United States. This section should identify the number of active partnerships, frequency of upgrades to the application in the past five years, experience and size of staff dedicated to developing and supporting the transit planning application. Vendors should provide the resumes and qualifications of the project manager, training staff, and support staff who will be assigned to the project.

## **Cost**

Firms shall state the fee structure required for CityBus to retain the software licensing as requested. The cost section of the proposal shall include any additional fees for services that may be provided beyond the licensing fee, including hourly rates for training, custom software development, etc.

## **References**

Firms shall identify at least three and no more than five transit systems using the software solution including names, phone numbers and email addresses of the references. References should directly relate to the microtransit software services requested within this document within the past five years.

### **V. Evaluation Criteria**

- |                                                                                        |           |
|----------------------------------------------------------------------------------------|-----------|
| 1. Firm Qualifications                                                                 | 50 points |
| 2. Effectiveness of solution/functionality                                             | 30 points |
| 3. Demonstration: Ability to meet client needs, flexibility of system, and ease of use | 30 points |
| 4. Cost                                                                                | 30 points |
| 5. References                                                                          | 10 points |

Proposals will be scored based on the criteria above. A maximum of 150 points are available. The CityBus General Manager and Manager of Development will review all proposals. CityBus will select a minimum of the top 40 percent of proposals using evaluation criteria 1, 2, 4, and 5 to move forward with a product demonstration. Firms should prepare a presentation no greater than 30 minutes to demonstrate the features of the software. An additional interview maybe required to discuss the proposals.

### **VI. Proposal Questions/Requests for Clarifications**

Any questions submitted by a Proposer must be submitted in writing, either via email to [procurement@gocitybus.com](mailto:procurement@gocitybus.com) or postal mail. All responses to questions/requests for clarifications will be distributed electronically via an addendum and posted on [www.gocitybus.com/about/procurement](http://www.gocitybus.com/about/procurement). Oral explanations, instructions, or interpretations will not be binding upon CityBus.

### **VII. Proposal Submission Format and Delivery Information**

Each firm is to provide three hard copies of their proposal and one electronic version, enclosed in a single, sealed Proposal package submittal. The Proposer's name and address must be clearly visible on the outside of the package. Proposer should also include in the package the Proposer's telephone number and email address. The Proposal submittal package must be

labeled "RFP 2020-03 Proposal for Microtransit Software". Proposals are due on February 15, 2021 by 4:00 PM EST.

Proposals are to be sent to the attention of:

Greater Lafayette Public Transportation  
Bryce Gibson, Manager of Development  
1250 Canal Rd  
Lafayette, IN 47904



## **VIII. Federal Clauses for Materials & Supplies Procurements**

### **1. NO GOVERNMENT OBLIGATION TO THIRD PARTIES**

GLPTC and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to GLPTC, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

### **2. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS**

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

### **3. ACCESS TO RECORDS AND REPORTS**

- a. Record Retention. The Contractor will retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, data, documents, reports, statistics, subagreements, leases, subcontracts, arrangements, other third party agreements of any type, and supporting materials related to those records.
- b. Retention Period. The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.

- c. Access to Records. The Contractor agrees to provide sufficient access to FTA and its contractors to inspect and audit records and information related to performance of this contract as reasonably may be required.
- d. Access to the Sites of Performance. The Contractor agrees to permit FTA and its contractors access to the sites of performance under this contract as reasonably may be required.

#### **4. FEDERAL CHANGES**

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

#### **5. CIVIL RIGHTS and EQUAL OPPORTUNITY**

GLPTC is an Equal Opportunity Employer. As such, GLPTC agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, GLPTC agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

Under this Agreement, the Contractor shall at all times comply with the following requirements and shall include these requirements in each subcontract entered into as part thereof.

- a. Nondiscrimination. In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.
- b. Race, Color, Religion, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e *et seq.*, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- c. Age. In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621-634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 *et seq.*, U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332,

the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

- d. Disabilities. In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 *et seq.*, the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

## **6. DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

Overview. It is the policy of GLPTC and the United States Department of Transportation ("DOT") that Disadvantaged Business Enterprises ("DBE's"), as defined herein and in the Federal regulations published at 49 C.F.R. part 26, shall have an equal opportunity to participate in DOT-assisted contracts. It is also the policy of GLPTC to:

1. Ensure nondiscrimination in the award and administration of DOT-assisted contracts;
2. Create a level playing field on which DBE's can compete fairly for DOT-assisted contracts;
3. Ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. Ensure that only firms that fully meet 49 C.F.R. part 26 eligibility standards are permitted to participate as DBE's;
5. Help remove barriers to the participation of DBEs in DOT assisted contracts;
6. To promote the use of DBEs in all types of federally assisted contracts and procurement activities; and
7. Assist in the development of firms that can compete successfully in the marketplace outside the DBE program.

This Contract is subject to 49 C.F.R. part 26. Therefore, the Contractor must satisfy the requirements for DBE participation as set forth herein. These requirements are in addition to all other equal opportunity employment requirements of this Contract. GLPTC shall make all determinations with regard to whether or not a Bidder/Offeror is in compliance with the requirements stated herein. In assessing compliance, GLPTC may consider during its review of the Bidder/Offeror's submission package, the Bidder/Offeror's documented history of non-compliance with DBE requirements on previous contracts with GLPTC.

Contract Assurance. The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 C.F.R. part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as GLPTC deems appropriate.

Prompt Payment. Contractors shall pay subcontractors for satisfactory performance of their contracts no later than 30 days from receipt of each payment from GLPTC.

DBE Participation. All prime or general Contractors are hereby notified that they must show that all reasonable good faith efforts were made to have DBE participation or meet the minimum DBE participation goals on this contract, if applicable.

For a list of qualified DBEs please visit the State of Indiana's web site at <http://www.in.gov/indot/2748.htm>.

Please contact the DBE Liaison Officer, (765) 423-2666, if you need assistance.

## **7. TERMINATION (Contracts > \$10,000)**

### **Termination for Convenience (General Provision)**

GLPTC may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in GLPTC's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to GLPTC to be paid the Contractor. If the Contractor has any property in its possession belonging to GLPTC, the Contractor will account for the same, and dispose of it in the manner GLPTC directs.

### **Termination for Default [Breach or Cause] (General Provision)**

If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, GLPTC may terminate this contract for default. Termination shall be effected by serving a Notice of Termination on the Contractor setting forth the manner in which the Contractor is in default. The Contractor will be paid only the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract. If it is later determined by GLPTC that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, GLPTC, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

### **Opportunity to Cure (General Provision)**

GLPTC, in its sole discretion may, in the case of a termination for breach or default, allow the Contractor [an appropriately short period of time] in which to cure the defect. In such case, the Notice of Termination will state the time period in which cure is permitted and other appropriate conditions

If Contractor fails to remedy to GLPTC's satisfaction the breach or default of any of the terms, covenants, or conditions of this Contract within [10 days] after receipt by Contractor of written notice from GLPTC setting forth the nature of said breach or default, GLPTC shall have the right to terminate the contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude GLPTC from also pursuing all available remedies against Contractor and its sureties for said breach or default.

### **Waiver of Remedies for any Breach**

In the event that GLPTC elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this contract, such waiver by GLPTC shall not limit GLPTC's remedies for any succeeding breach of that or of any other covenant, term, or condition of this contract.

### **Termination for Default (Supplies and Service)**

If the Contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension, or if the Contractor fails to comply with any other provisions of this contract, GLPTC may terminate this contract for default. GLPTC shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of GLPTC.

## **8. PROVISIONS FOR RESOLUTION OF DISPUTES, BREACHES, OR OTHER LITIGATION (Contracts > \$150,000)**

### **Rights and Remedies of GLPTC**

GLPTC shall have the following rights in the event that GLPTC deems the Contractor guilty of a breach of any term under the Contract.

1. The right to take over and complete the work or any part thereof as agency for and at the expense of the Contractor, either directly or through other contractors;
2. The right to cancel this Contract as to any or all of the work yet to be performed;
3. The right to specific performance, an injunction or any other appropriate equitable remedy; and
4. The right to money damages.

### **Rights and Remedies of Contractor**

Inasmuch as the Contractor can be adequately compensated by money damages for any breach of this Contract, which may be committed by GLPTC, the Contractor expressly agrees that no default, act or omission of GLPTC shall constitute a material breach of this Contract, entitling Contractor to cancel or rescind the Contract (unless GLPTC directs Contractor to do so) or to suspend or abandon performance.

### **Remedies**

Substantial failure of the Contractor to complete the Project in accordance with the terms of this Agreement will be a default of this Agreement. In the event of a default, GLPTC will have all remedies in law and equity, including the right to specific performance, without further assistance, and the rights to termination or suspension as provided herein. The Contractor recognizes that in the event of a breach of this Agreement by the Contractor before GLPTC takes action contemplated herein, GLPTC will provide the Contractor with sixty (60) days written notice that GLPTC considers that such a breach has occurred and will provide the Contractor a reasonable period of time to respond and to take necessary corrective action.

## **Disputes**

Disputes arising in the performance of this Contract that are not resolved by agreement of the parties shall be decided in writing by the authorized representative of GLPTC's General Manager. This decision shall be final and conclusive unless within [10] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the General Manager. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the General Manager shall be binding upon the Contractor and the Contractor shall abide by the decision.

## **Performance during Dispute**

Unless otherwise directed by GLPTC, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

## **Claims for Damages**

Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of its employees, agents or others for whose acts it is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

## **Remedies**

Unless this Contract provides otherwise, all claims, counterclaims, disputes and other matters in question between GLPTC and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which GLPTC is located.

## **Rights and Remedies**

The duties and obligations imposed by the Contract documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by GLPTC or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

## **9. DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION (Contracts > \$25,000)**

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

- a) Debarred from participation in any federally assisted Award;



- b) Suspended from participation in any federally assisted Award;
- c) Proposed for debarment from participation in any federally assisted Award;
- d) Declared ineligible to participate in any federally assisted Award;
- e) Voluntarily excluded from participation in any federally assisted Award; or
- f) Disqualified from participation in any federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by GLPTC. If it is later determined by GLPTC that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to GLPTC, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

#### **10. RECYCLED PRODUCTS**

**(Contracts > \$10,000/yr for items designated by EPA)**

The Contractor agrees to provide a preference for those products and services that conserve natural resources, protect the environment, and are energy efficient by complying with and facilitating compliance with Section 6002 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6962, and U.S. Environmental Protection Agency (U.S. EPA), "Comprehensive Procurement Guideline for Products Containing Recovered Materials," 40 C.F.R. part 247.

#### **11. CARGO PREFERENCE – USE OF UNITED STATES-FLAG VESSELS**

**(Contracts that involve property that may be transported by ocean vessel)**

The contractor agrees:

- a. to use privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels;
- b. to furnish within 20 working days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the FTA recipient (through the contractor in the case of a subcontractor's bill-of-lading.); and
- c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

## **12. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (Contracts > \$150,000)**

The Contractor agrees:

- 1) It will not use any violating facilities;
- 2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities;"
- 3) It will report violations of use of prohibited facilities to FTA; and
- 4) It will comply with the inspection and other requirements of the Clean Air Act, as amended, (42 U.S.C. §§ 7401 – 7671q); and the Federal Water Pollution Control Act as amended, (33 U.S.C. §§ 1251-1387).

## **13. ENERGY CONSERVATION**

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

## **14. SAFE OPERATION OF MOTOR VEHICLE**

- a. **Seat Belt Use.** The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company-rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or GLPTC.
- b. **Distracted Driving.** The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this agreement.

## **15. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS**

These provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any GLPTC requests which would cause GLPTC to be in violation of the FTA terms and conditions.

## 16. LOBBYING RESTRICTIONS (Contracts > \$100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

\_\_\_\_\_ Signature of Contractor's Authorized Official

\_\_\_\_\_ Name and Title of Contractor's Authorized Official

\_\_\_\_\_ Date

**17. FLY AMERICA REQUIREMENTS (Contracts that involve property that may be transported by air or foreign transport)**

**a) Definitions.** As used in this clause--

“International air transportation” means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.

“United States” means the 50 States, the District of Columbia, and outlying areas.

“U.S.-flag air carrier” means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

**b)** When Federal funds are used to fund travel, Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118) (Fly America Act) requires contractors, recipients, and others use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.

**c)** If available, the Contractor, in performing work under this contract, shall use U.S.-flag carriers for international air transportation of personnel (and their personal effects) or property.

**d)** In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:

**Statement of Unavailability of U.S.-Flag Air Carriers**

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons. See FAR § 47.403. *[State reasons]:*

---

(End of statement)

**e)** The Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract or purchase under this contract that may involve international air transportation.

(End of Clause)

## 18. BUY AMERICA (Contracts > \$150,000)

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. part 661, which provide that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. § 661.11. **The contractor must submit to GLPTC the appropriate certification of Buy America (see below).**

The [bidder or offeror] must submit to GLPTC the appropriate Buy America certification below with its [bid or offer]. Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

***In accordance with 49 C.F.R. § 661.6, for the procurement of steel, iron or manufactured products, use the certifications below.***

### *Certificate of Compliance with Buy America Requirements*

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 C.F.R. part 661.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

### *Certificate of Non-Compliance with Buy America Requirements*

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirement pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in 49 C.F.R. § 661.7.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**GREATER LAFAYETTE PUBLIC TRANSPORTATION CORPORATION (GLPTC)  
CERTIFICATION OF FTA REQUIRED CLAUSES**

Background

Greater Lafayette Public Transportation Corporation (GLPTC) is funded, in part, by the Federal Transit Administration (FTA), an agency within the Department of Transportation, of the United States of America. Various Federal Statutes and Regulations govern the purchasing procedures of GLPTC. Basic requirements and the associated required documents and responsibilities will be found in **49 CFR 18.36 and in FTA Circular 4220.1F**. The Statutes, Regulations, and Circulars governing the procurements by GLPTC require among other things that purchases be made according to approved plans and specifications, which will become part of the contractual documents between GLPTC and the successful vendor(s).

GLPTC, as a condition of receiving FTA funds, is subject to FTA oversight in the form of a Triennial Review once every three years. (In addition, GLPTC may be subject to FTA oversight reviews in specific areas, including procurement, financial management, civil rights, and drug and alcohol.) During the review, FTA will examine documentation on file to assist in their evaluation of how well GLPTC has met its statutory and administrative requirements. We respectfully request your assistance in this process. Please contact Amy Burnett, Controller/Manager of Administration, with any questions at (765) 423-2666. Thank you.

**PLEASE SIGN BELOW:**

**I certify that \_\_\_\_\_ (Vendor) will comply with all applicable Federal Transit Administration (FTA) Circular 4220.1F third party contract clause requirements, for the period of \_\_ / \_\_ / \_\_\_\_ – \_\_ / \_\_ / \_\_\_\_ . These requirements are available at: <http://www.gocitybus.com/About/Procurement>.**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

Vendor should be aware that the contents of the purchase order (PO) constitutes a sound and complete contractual agreement. Additionally, the contractor should be aware of the contents of any certifications and guidelines in addition to the purchase order, that it will be required to execute as required by the Federal Transit Administration (FTA) and Greater Lafayette Public Transportation Corporation.

Failure of contractor to accept these obligations will result in the rejection of its quote, bid, proposal or cancellation of any award. The model clauses set forth in these requirements are adopted and expressly made part of the purchase order, contract and agreement; and in construing such clauses, all references to the Recipient or government shall be referenced to all participating agencies and/or GLPTC, and all references to the vendor/contractor shall refer to the party awarded any contract as a result of this procurement transaction.

## **REQUEST FOR PROPOSALS**

### **TRANSIT PLANNING SOFTWARE AS A SERVICE (SaaS)**

Knoxville Knox County Planning (Planning) in cooperation with Knoxville Area Transit (KAT) seeks proposals for the provision of a transit planning web-based Software as a Service (SaaS) to assist in planning and analyzing transit and other types of transportation planning efforts for the Knoxville Metropolitan Planning Area (MPA). For contracting purposes, Planning and the Knoxville Regional Transportation Planning Organization (TPO) are one-in-the-same agency. The TPO is an independent agency engaged in the performance of meeting the required federal transportation planning regulations for urbanized areas greater than 50,000 population, however, it is housed within the agency known as Knoxville Knox County Planning, which provides the professional transportation planning staff for the TPO and acts as the contracting agency for grant-funded projects and services.

The TPO serves as the federally designated Metropolitan Planning Organization for the Knoxville Urbanized Area. The TPO's MPA includes an area defined as all of Knox County and parts of Anderson, Blount, Loudon and Sevier counties, including the municipalities of: Clinton, Oak Ridge, Alcoa, Maryville, Farragut, Knoxville, Loudon, and Lenoir City.

The SaaS must have an online platform that requires no demographic data or software updating by users. The SaaS must also portray demographic and cost calculations in real time as changes are made to routes, schedules and stops. The SAAS must not require advanced training and must have the ability to demonstrate the impact of changes immediately for the benefit of the public and decision-makers.

This will be a two-year agreement with an option to renew for (up to) three additional years.

### **SCOPE OF SERVICE**

#### **A. Scope of Service**

This software shall be an off-the-shelf web-based geospatial mapping tool that streamlines multi-step functions of the operations planning process by providing instant geospatial analysis, scheduling information, resource requirements, and cost estimates as routes and schedules are modified for different scenarios.

The software should provide the following benefits to Planning/KAT:

- Optimize traditionally time-consuming multi-step processes that are core functions of the service planning workflow, ultimately resulting in better transit service for the public;
- Support faster and more frequent analysis of potential route or schedule changes;
- Provide the opportunity to give more expedient, accurate, and detailed responses to service requests;
- Allow staff the freedom and time-savings to be more creative in developing solutions to route and scheduling problems through scenario planning;



- Give all staff the opportunity to complete instant transit-related geospatial demographic analyses without special GIS software or expertise for the Knoxville regional metropolitan planning area;
- Allow more efficient communication to internal staff for a faster decision-making process;
- Enhance communication and participation with the public; and
- Provide Title VI Analysis of Scenarios based on current FTA regulations.

**B. Location of Service(s)**

Under a cloud-based platform, this software shall be hosted remotely with the ability to be used both inside and outside of Planning and KAT Administrative Offices via a web browser and login.

**C. Software Requirements**

**1) General Requirements**

- a) Planning/KAT is **not** seeking advanced long-range planning, GIS, or ridership modeling software;
- b) The software shall already be developed; Planning/KAT is not soliciting new software development;
- c) The software shall perform functions specifically for the purpose of short-range transit service/operations scenario planning;
- d) The software shall be delivered via a cloud-based or Software as a Service (SaaS) model hosted by the contractor via a web-based application; the software should not require in-house hosting or maintenance;
- e) The software shall be stand-alone, and shall not require the purchase of additional software in order to function;
- f) The software shall be map-based, allowing for geospatial visualization of data layers, such as transit data, demographic information, sidewalk, bus stop, and similar data layers;
- g) The software shall be able to import, read, and display existing route and schedule data via the General Transit Feed Specification (GTFS), which is the standard data format for transit data;
- h) The software shall be able to import, read, and display additional data layers as requested and provided by Planning/KAT, such as bus shelter locations, boarding and alighting data, etc.;
- i) The software shall feature geospatial analysis opportunities for demographics such as minority (including specific layers of African-American Latinx, etc. as well as overall minority), LEP populations, job locations, commute patterns, housing, density, and low-income populations, as well as other key information related to transit planning such as land use and trip generators, political boundaries, and transportation infrastructure,
- j) The software shall translate route concepts into timetables, allowing for export, and

- k) The software shall allow for the user to select specific regions for analysis, in addition to specific routes.

## **2) Required Functions of the Software**

The software shall be able to complete the following functions:

- a) The software shall allow the user to easily create new route scenarios and edit existing routes on a web-based map through a drag-and-drop interface;
- b) As routes are modified, the software shall generate instant demographic and accessibility analyses through built-in or importable layers/shapefiles;
- c) As routes are modified, the software shall compute instant and accurate cost and resource utilization estimates, based on agency inputs and built-in industry-standard calculations;
- d) The software shall provide the ability to easily share information both internally and with the public; and
- e) The tool shall function in such a way that it does not require technical expertise, special skills, or advanced training to use. Any transit planner or scheduler should be able to use the application with limited training.

## **3) Licensing, Hosting, Maintenance, and Software Updates**

- a) As a cloud-based Software as a Service (SaaS), the software shall be hosted, maintained, and updated by the Contractor;
- b) The software should allow an unlimited number of users with a single perpetual license via an annual subscription fee for the duration of the contract; and
- c) Any future updates, upgrades, or new versions of the software shall be provided with the subscription at no additional cost for the duration of the contract;

## **4) Training**

- a) Contractor is to provide one training session via webinar for all potential users within 20 days of an executed Agreement.

## **5) Customer Support**

- a) Contractor shall include unlimited customer support during the term of the Agreement and any extension thereafter.

## **D. Deliverables**

### **1) Contractor:**

- a) Fully-functioning software as described above, customized with KAT's route and schedule data as well as other applicable GIS layers, accessible via the web through

- user-login;
- b) Training; and
- c) Customer Support Plan.

Planning/KAT shall provide KAT's route and schedule data provided in GTFS format as well as any other Planning/KAT-specific data that the software requires in order to function properly.

#### **E. Additional Restrictions**

The contractor must provide a web-based solution which is pre-programmed; generally available; i.e. not in beta or test; and currently in production and in use by existing transit customers of the contractor's company/organization. Prototypes or items in test production and not formally announced for market availability shall not be considered. New, not yet built, or software/web applications still under development shall not be considered. Systems under test with no reputable transit system users shall not be considered.

The support plan must include support for issues or changes in software. This must also include ongoing processing of future GTFS data. The support plan must also provide for training on future enhancements made to the software, specifying whether it is included in the proposal cost, or an additional cost option.

### **SCHEDULE**

Proposal Release Date: Wednesday, January 27, 2021

Questions Due Date: Friday, February 12, 2021 at 3:00 PM (EST)

Answers to Questions Posted Date: Thursday, February 18, 2021 at 3:00 PM (EST)

Proposals for SaaS Due Date: Thursday, February 25, 2021 at 3:00 PM (EST)

Services Start Date: March 20, 2021

Project constraints and contracts may cause these dates to change. Planning/KAT reserves the right to amend this RFP (SaaS). Any amendments will be posted on the web at <https://knoxplanning.org/rfp>. If you download the RFP (SaaS) from the website it is your responsibility to periodically check to see if an amendment has been posted. Planning/KAT reserves the right to determine which response is in its best interest and to reject any and all responses or waive any irregularities in the process. Late submittals will not be considered.

Answers to questions or additional information may be obtained by contacting:

Doug Burton  
Knoxville Knox County Planning  
400 W. Main St., Suite 403  
Knoxville, TN 37902  
E-mail: [Doug.Burton@knoxplanning.org](mailto:Doug.Burton@knoxplanning.org)

Questions will be accepted through **February 12, 2021 (3:00 PM, EST)**. All questions must be in writing and submitted via e-mail. Questions and responses will be compiled and posted by **February 18, 2020 (3:00 PM, EST)**, on the following website: <https://knoxplanning.org/rfp>.

## **CONTENTS OF PROPOSAL & HOW TO SUBMIT**

All submissions shall comply with the following instructions. These instructions ensure that (1) submissions contain the information and documents required by this request; and (2) the submissions have a degree of uniformity to facilitate evaluation. Failure to include ANY of these items or to comply with these instructions may result in a submission of qualifications being rejected. To enable consistent evaluation, the following Contents/Format requirement has been developed. Failure to submit the requested documents could result in determining the submission as Non-Responsive and rejected.

- **Signed and completed Price Proposal Form – Attachment A**
- **Signed and completed FTA & TDOT Regulatory Clauses and Forms – Attachment B**
- **Business Organization & History** – State the full name and address of your organization, years in business, and a brief history of your business, such as number of employees and aspirations for the future of your company.
- **Professional Personnel** – Identify key personnel who will be assigned to service this contract.
- **Prior Experience** – 3 - 5 references of similar contracts that you or your company has performed in the past 5 years.
- **Schedule** – Indicate the time frame in which you would be prepared to begin this proposed service if your company is awarded this contract.
- **Proposal** – State in precise terms the services you propose to provide. Please include a description of the key attributes or features of the service. Provide the following information that is pertinent to your firm's ability to perform this contract as indicated below:

Please answer the following questions related to User Information:

- Is there a limit on the number of users that can access your program?
- Is there a limit on the number of passwords that can be used?
- Is user assignment and accessibility solely up to Planning/KAT discretion, or would we have to gain permission to alter or change a user's access or permissions?

Please answer the following technical questions:

- Can our current browsers be used with your solution?
- Can files be imported or exported within your solution?
- How are your solutions updates performed? If there is a change in our browser or files- (Upgrade to our system), will the change affect the performance or compatibility of your solution?
- Is the solution supported 24/7?
- What, if any IT requirements are needed for your solution?

- All proposals shall state it is valid for a period of not less than ninety (90) days from the date of receipt.
- All proposals shall become the property of Knoxville Knox County Planning and will not be returned.

Submittals shall be in the following format:

Must be limited to 20 pages, excluding the appendix (which should be limited to 10 pages) and cover letter (maximum of 2 pages), utilize 11-point font. Proposals will be submitted electronically. The required signed forms do not count against the total page requirement.

Planning makes no commitment to any firm which responds to this request and will not reimburse any firm for costs incurred in preparing its initial information; or for its interview, if held; or for any costs incurred prior to notice to proceed to a firm to perform the designated work.

The forms in Appendix B must be signed and included with the submittal.

Electronic Submission Procedures : Each Proposal must be submitted electronically as a PDF document as follows:

1. Go to the direct link of: <https://knoxplanning.org/rfp>.
2. Click on Transit Planning Software as a Service (SaaS) link
3. Click on Submit Proposal button
4. Follow the prompts to upload and submit the full PDF version of your Proposal to the Dropbox account provided.
5. Files MUST use the following naming convention of first including the firm's name followed by the title of the project, followed by the word "Proposal".
  - a. Example: ABC Company-Transit Planning SaaS-Proposal.pdf.

### **Evaluation Criteria & Selection Process**

A selection panel comprised of Planning and KAT staff members will be convened to expeditiously evaluate the proposals based on selection criteria. The selection criteria are based on the proposal sections, and weighting percentages are:

- Firm qualifications and history – 20%
- Proposal – 60%
- References – 20%

### **Disadvantaged Business Enterprises Notice**

Planning/KAT notifies all respondents that it will affirmatively ensure, that, in regard to any contracts entered into pursuant to this notice, Disadvantaged Business Enterprises (DBE) will be afforded full opportunity to submit material in response to this RFP. Planning/KAT will not discriminate on the grounds of race, color, sex, religion, national origin, or disability, in consideration for an award. Planning/KAT hereby notifies all respondents that in connection with the performance of any resultant contract, the

firm(s) or individual(s) will cooperate with Planning/KAT in meeting its commitments and goals with regard to the maximum utilization of disadvantaged business enterprises and will use their best efforts to ensure that DBE shall have the maximum practicable opportunity to compete for subcontract work. The Planning/KAT has historically had a goal of ten (10) percent for DBE participation. Planning/KAT notifies all respondents that all firm(s) or individual(s) shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation's Title VI of the Civil Rights Act of 1964, as amended.

## ATTACHMENT A

### PRICE PROPOSAL FORM

Provide a cost proposal for the services as defined in the Scope of Services. Planning/KAT is requesting an all-inclusive annual fee for the services. The annual fee is as follows:

Year One All-inclusive Fee: \$:\_\_\_\_\_

Year Two All-inclusive Fee: \$:\_\_\_\_\_

Year Three All-inclusive Fee: \$\_\_\_\_\_ (Option Year)

Year Four All-inclusive Fee: \$\_\_\_\_\_ (Option Year)

Year Five All-inclusive Fee: \$\_\_\_\_\_ (Option Year)



## ATTACHMENT B

### FTA & TDOT REGULATORY CLAUSES & FORMS

#### **Federal Transit Administration & Tennessee Department of Transportation Required Procurement Clauses & Forms**

Funding to purchase these services comes from the Federal Transit Administration and the Tennessee Department of Transportation. Therefore, the vendor must be able to meet the federal and state regulations specified and must complete all of the required forms.

Planning = Knoxville Knox County Planning

FTA = Federal Transit Administration

TDOT = Tennessee Department of Transportation

#### **FTA Special Terms & Conditions**

**A. ACCESS TO RECORDS & REPORTS (49 U.S.C. § 5325; 18 CFR Part 18.36(i); & 49 CFR Part 633.17):**

Contractor agrees to provide the Planning, TDOT, FTA Administrator, Comptroller General of the United States, or any of their duly authorized representatives with access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to maintain all books, records, accounts, and reports required under this contract for a period of not less than three (3) years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives have disposed of all such litigation, appeals, claims, or exceptions related thereto. Reference 49 CFR Part 18.39(i)(11).

**B. APPLICATION OF FEDERAL AND STATE LAWS & REGULATIONS:** The Contractor understands that Federal and State laws, regulations, policies and related administrative practices applicable to this Contract on the date the Contract was executed may be modified from time to time. The Contractor agrees that the most recent of such Federal and State Requirements will govern the administration of this Contract at any particular time, except if there is efficient evidence in the Contract of a contrary intent. Such contrary intent might be evidenced by express language in this Contract or a letter signed by the FTA, or the language of which modifies or otherwise conditions the text of a particular provision of this Contract. Likewise, new Federal and State laws, regulations, policies and administrative practices may be established after the date the Contract has been executed and may apply to this Contract. To achieve compliance with changing Federal

requirements, the Contractor agrees to include all sub-assistance and third-party Contracts financed with FTA assistance specific notice that Federal requirements may change and the changed requirements apply to the project as required. All limits or standards set forth in this Contract to be observed in the performance of the project are minimum requirements.

**C. BREACH OF CONTRACT & DISPUTE RESOLUTION (49 CFR Part 18):** The following provisions provide guidance on allowable legal remedies in instances where the Contractor violates or breaches contract terms or a dispute occurs between the Contractor and Planning.

1. Disputes – Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of Planning. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Executive Director. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Executive Director shall be binding upon the Contractor and the Contractor shall abide by the decision.
2. Performance During Dispute – Unless otherwise directed by Planning, the Contractor shall continue performance under this Contract while matters in dispute are being resolved.
3. Claims for Damages – Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.
4. Remedies – Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between Planning and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State of Tennessee.
5. Rights & Remedies – The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by Planning or the Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

**D. CIVIL RIGHTS (29 U.S.C. § 623; 42 U.S.C. § 2000, 6102, 12112, & 12132; 49 U.S.C. § 5332; 29 CFR Part 1630; & 41 CFR Part 60):** The following requirements apply to the underlying Contract.

1. Nondiscrimination – In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.
2. Equal Employment Opportunity – The following equal employment opportunity requirements apply to the underlying Contract:
  - a. Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 CFR Parts 60 *et seq.*, (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
  - b. Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
  - c. Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 CFR Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

3. Inclusion of Civil Rights Requirements in Sub-contracts - The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

**E. DISADVANTAGED BUSINESS ENTERPRISE (DBE) (49 CFR Part 26):** The Contractor and its sub-contractors agree to ensure that DBEs have the maximum opportunity to participate in the performance of Contracts and sub-contracts. In this regard the Contractor shall recognize that:

- This Contract is subject to the requirements of 49 CFR Part 26 - Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs.
- The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this Contract or such other remedy as Planning deems appropriate. Each sub-contract the Contractor signs with a sub-contractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).
- The Contractor shall maintain compliance with “DBE Approval Certification” throughout the period of Contract performance.
- If the Contractor is using DBE sub-contractors as part of this Contract they should include as part of the quote package the following information:
  - a. The names and addresses of DBE firms that will participate in this contract;
  - b. A description of the work each DBE will perform;
  - c. The dollar amount of the participation of each DBE firm participating;
  - d. Written documentation of the Contractor’s commitment to use a DBE subcontractor whose participation it submits to meet the contract goal;
  - e. Written confirmation from the DBE that it is participating in the contract as provided in the prime contractor’s commitment; and
  - f. If the contract goal is not met, evidence of good faith efforts to do so.
- The Contractor is required to pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than 30 days after the contractor’s receipt of payment for that work from Planning.
- The Contractor must promptly notify Planning, whenever a DBE sub-contractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The contractor may not terminate any DBE

subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of Planning.

- F. **ENERGY CONSERVATION REQUIREMENTS (49 CFR Part 18):** The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
- G. **FEDERAL CHANGES (49 CFR Part 18):** Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the most current (FTA) Master Agreement as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.
- H. **GOVERNMENT-WIDE DEBARMENT & SUSPENSION (49 CFR Part 29):** This quote and any subsequent contract is a covered transaction for purposes of 49 CFR Part 29. As such, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. The Contractor must sign and include with the quote the appropriate forms that certifies compliance. By signing the forms and submitting its quote, the Contractor certifies as follows:
- The certification in this clause is a material representation of fact relied upon by Planning. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to Planning and the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 CFR, Subpart C while this offer is valid and throughout the period of any contract that may arise from the quote or offer. The Contractor further agrees to include a provision requiring such compliance with its lower tier covered transactions.
- I. **INCORPORATION OF FTA & TDOT TERMS:** The preceding provisions include, in part, certain standard terms and conditions required by the U.S. DOT, FTA, and TDOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by U.S. DOT and FTA, as set forth in FTA Circular 4220.1G are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any Planning requests which would cause them to be in violation of the FTA or TDOT terms and conditions.
- J. **NO GOVERNMENT OBLIGATION TO THIRD PARTIES:** Planning and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express

written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

- K. **PRIVACY ACT (5 U.S.C. 552):** The following requirements will apply to any Contractor or sub-contractor and its employees that administer any system of records on behalf of the Federal Government under any contract.

The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. 552(a). Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

- L. **PROGRAM FRAUD & FALSE OR FRAUDULENT STATEMENTS & RELATED ACTS (49 CFR Part 31):** The Contractor will comply with 31 U.S.C. § 3801 et seq., 49 CFR Part 31, 18 U.S.C. § 1001, and 49 U.S.C. § 5307 by agreeing to the following:

1. The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
2. The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C.

§ 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

3. The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

**M. RECYCLED PRODUCTS (40 CFR Part 247):** The Contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

**N. TERMINATION & OPPORTUNITIES FOR CURE (49 CFR Part 18):** The following provisions outline rules for termination and opportunities for cure.

1. Termination for Convenience: Planning may terminate this Contract, in whole or in part, at any time by written notice to the Contractor when it is in Planning's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to Planning to be paid the Contractor. If the Contractor has any property in its possession belonging to Planning, the Contractor will account for the same, and dispose of it in the manner Planning directs.
2. Termination for Default: If the Contractor does not deliver the services in accordance with the contract delivery schedule, if the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, Planning may terminate this contract for default. Termination shall be effected by serving a notice of termination on the Contractor and setting forth the manner in which the Contractor is in default. The Contractor will only be paid the contract price for services delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

If it is later determined by Planning that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, Planning, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.



## **TDOT Special Terms & Conditions**

- A. Conflicts of Interest. The Contractor warrants that no part of the contract amount shall be paid directly or indirectly to an employee or official of Planning or the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to Planning in connection with any work contemplated or performed relative to this Contract.
- B. Lobbying. A portion of this funding is through the FTA and the TDOT. The Contractor certifies, to the best of its knowledge and belief, that:
- a. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
  - b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
  - c. The Contractor shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352.

- C. Nondiscrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by Federal, Tennessee State constitutional, or statutory law. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award of this Contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract, or such other remedy as Planning deems appropriate. The Contractor shall, upon request, show proof of

nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

- D. Public Accountability. If the Contractor is subject to *Tennessee Code Ann. § 8-4-401 et seq.*, or if this Contract involves the provision of services to citizens by the Contractor on behalf of the State, the Contractor agrees to establish a system through which recipients of services may present grievances about the operation of the service program. The Contractor shall display in a prominent place, located near the passageway through which the public enters in order to receive supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating:

NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE TENNESSEE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454.

The sign shall be on the form prescribed by and obtained from the Comptroller of the Treasury of the State of Tennessee.

- E. Public Notice. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by the Contractor shall include the statement, "This project is funded under an agreement with the Federal Transit Administration and the Tennessee Department of Transportation." All notices by the Contractor in relation to this contract shall be approved by the State and Planning.
- F. Records. The Contractor and any approved sub-contractor shall maintain documentation for all charges under this contract. The books, records, and documents of the Contractor and any approved sub-contractor, insofar as they relate to work performed or money received under this contract, shall be maintained in accordance with applicable Tennessee law. In no case shall the records be maintained for a period of less than five (5) full years from the date of the final payment. The Contractor's records shall be subject to audit at any reasonable time and upon reasonable notice by Planning, FTA, the Comptroller of the Treasury of the State of Tennessee, or their duly appointed representatives.

The records shall be maintained in accordance with Governmental Accounting Standards Board (GASB) Accounting Standards or the Financial Accounting Standards Board (FASB) Accounting Standards Codification, as applicable, and any related AICPA Industry Audit and Accounting guides. In addition, documentation of grant applications, budgets, reports, awards, and expenditures will be maintained in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. Contract expenditures shall be made in accordance with local government purchasing policies and procedures and purchasing procedures for local governments authorized under state law.

The Contractor shall also comply with any recordkeeping and reporting requirements prescribed of the Comptroller of the Treasury of the State of Tennessee. The Contractor shall establish a system of internal controls that utilize the COSO Internal Control – Integrated Framework model as the basic foundation for the internal control system. The Contractor shall incorporate any additional Comptroller of the Treasury of the State of Tennessee directives into its internal control system. All other required records or reports which are not contemplated in the above standards shall follow the format designated by Planning, TDOT, the Central Procurement Office of the State of Tennessee, or the Commissioner of Finance and Administration of the State of Tennessee.

#### **Required Forms and Certifications**

Exhibit 1 – AGREEMENT WITH FTA & TDOT CLAUSES

Exhibit 2 – INELIGIBLE CONTRACTORS CERTIFICATE

Exhibit 3 – CERTIFICATION OF PRIMARY PARTICIPANT REGARDING DEBARMENT, SUSPENSION

Exhibit 4 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, & OTHER RESPONSIBILITY

Exhibit 5 – AFFIDAVIT OF NON-COLLUSION

Exhibit 6 – DISADVANTAGED BUSINESS ENTERPRISE INFORMATION

**Exhibit 1**

**AGREEMENT WITH FTA & TDOT CLAUSES**

The undersigned (print name) \_\_\_\_\_ as  
a representative

of the Contractor (print name) \_\_\_\_\_  
hereby certifies that

the Contractor has read and understands the following FTA and TDOT Procurement clauses  
and will comply with each of these.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name Authorized Representative of Contractor

## Exhibit 2

### INELIGIBLE CONTRACTORS CERTIFICATE

The \_\_\_\_\_ (name of the third party Contractor) hereby certifies that it is it is/is not (underscore one) included on the US Comptroller General's Consolidated List of Persons for firms currently debarred for violations for various Contracts incorporating labor standards provisions.

\_\_\_\_\_  
Company

\_\_\_\_\_  
By

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

### **Exhibit 3**

#### **CERTIFICATION OF PRIMARY PARTICIPANT REGARDING DEBARMENT, SUSPENSION, & OTHER RESPONSIBILITY MATTERS**

Contractors (at any level) are required to verify and then certify that they (the Company as well as its principals and affiliates) and any sub-contractors they propose to include in this work is not excluded or disqualified, debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by Federal department or agency. This verification is accomplished by: (a) checking the Excluded Parties List System, (b) collecting a certification from that person, or (c) adding a clause or condition to the contract or sub-contract. Contractors and sub-contractors who enter into working agreement for this project must require the entities they contract with to comply with 49 CFR 29, subpart C and include this requirement in their own subsequent covered transactions (i.e., the requirement flows down to sub-contracts at all levels).

#### **Suspension and Debarment**

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. If it is determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to Planning and the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

#### **Certification of Primary Participant**

By signing, the Contractor certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department of agency.
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receive stolen property.
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, local) with commission of any of the offenses enumerated in paragraph (2) of this certification.

4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, local) terminated for cause or default. If the primary participant (potential third-party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.

Firm Name: \_\_\_\_\_

\_\_\_\_\_  
Signature of Company Official

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Company Official

\_\_\_\_\_  
Official's Title

#### Exhibit 4

### **CERTIFICATION REGARDING DEBARMENT, SUSPENSION, & OTHER RESPONSIBILITY MATTERS LOWER TIER COVERED TRANSACTIONS**

#### **Certification of Lower Tier Participant**

By signing this form, the potential Lower Tier Participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Where the potential Lower Tier Participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

Date

---

Firm Name

---

Signature of Company Official

---

Printed Name of Company Official

---

Official's Title



## Exhibit 5

### AFFIDAVIT OF NON-COLLUSION

I hereby swear (or affirm) under the penalty for perjury:

1. That I am the Contractor, a partner in the company, or an officer or employee of the corporation having authority to sign on its behalf.
2. That the contents of the quote or proposal have been arrived at the Contractor independently and have been submitted without collusion and without an agreement, understanding, or planned common course of action with any other Contractor of materials, supplies, equipment, or service described in the Invitation for Quote, designed to limit independent quotes or competition.
3. That the contents of the quote or proposal have not been communicated by the Contractor or its employees or agenda to any person not an employee or agent of the Contractor or its surety on any bond furnished with the quote or quotes, and will not be communicated to any such person prior to the official opening of the quote or quotes; and
4. That I have fully informed myself regarding the accuracy of the statements made in the affidavit.

Signed: \_\_\_\_\_

Firm Name: \_\_\_\_\_

Subscribed and sworn to before me this day of \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Proposer's E.I. Number: \_\_\_\_\_  
(Number used on employer's Quarterly Federal Tax Return)

## **Exhibit 6**

### **DISADVANTAGED BUSINESS ENTERPRISE INFORMATION**

The Contractor and its sub-contractors agree to ensure that DBEs have the maximum opportunity to participate in the performance of Contracts and sub-contracts. If the Contractor is using DBE sub-contractors as part of this Contract they should include as part of the quote package the following information:

DBE Information:

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Dollar Amount of Total Service Cost Attributed to DBE Firm: \$ \_\_\_\_\_

A description of the work the DBE performed:



Morrisville  
Live connected. Live well.

**REQUEST FOR PROPOSALS**  
**For**  
**Morrisville Smart Shuttle Mobility System Technology**

**DATE ISSUED**  
**December 8, 2020**

**DUE DATE**  
**January 4, 2021**  
**3:00 P.M.**

**E-Mail Address Submittal**  
**[kbass@townofmorrisville.org](mailto:kbass@townofmorrisville.org)**

**TABLE OF CONTENTS**

<b>I.</b>	<b>Introduction.....</b>	<b>3</b>
<b>II.</b>	<b>General Information .....</b>	<b>3</b>
<b>III.</b>	<b>Smart Shuttle Service Design .....</b>	<b>4</b>
<b>IV.</b>	<b>Project Scope.....</b>	<b>4</b>
<b>V.</b>	<b>Content and Format of Proposal Package .....</b>	<b>6</b>
<b>VI.</b>	<b>Submittal Process Details.....</b>	<b>8</b>
<b>VII.</b>	<b>Questions and Clarifications: .....</b>	<b>8</b>
<b>VIII.</b>	<b>Proposal Submittal:.....</b>	<b>8</b>
<b>IX.</b>	<b>Anticipated Review Schedule:.....</b>	<b>8</b>
<b>X.</b>	<b>Selection Process: .....</b>	<b>9</b>
<b>XI.</b>	<b>Evaluation Criteria.....</b>	<b>9</b>
	<b>APPENDIX A .....</b>	<b>10</b>

**I. Introduction**

The Town of Morrisville (further referred to as “the Town”) is soliciting Proposals from qualified vendor(s) to provide a mobility system technology that will be used on existing transit vehicles to provide on-demand transit service in Morrisville and the surrounding area.

The Town seeks to identify qualified companies that can offer the desired technology for use on existing transit vehicles operated by GoCary (transit provider for the Town of Cary, a neighboring municipality), which will be providing a new service (“Morrisville Smart Shuttle”) that will serve 15 designated nodes, or bus stops, in Morrisville and the surrounding area. The technology is expected to allow citizens to request transit services through a mobile application, website, or the GoCary Dispatch Center, as well as allow for the collection and reporting of specific data by the Town and GoCary. The chosen vendor will also be expected to assist with marketing and rider training as the service begins operation in June 2021.

This Request for Proposals (RFP) seeks to identify potential providers for the above-mentioned services. All respondents to this RFP are subject to instructions communicated in this document and are cautioned to completely review the entire RFP and follow instructions carefully.

**II. General Information**

Morrisville is a thriving community in the heart of the Triangle area of North Carolina. The Town is a crossroads in the region with great access to Research Triangle Park, major transportation hubs like Interstate Highways 40 and 540, the Raleigh-Durham International Airport, and the State Capital. The Triangle area has been repeatedly ranked among the top regions in the country to live, work, start a business, raise a family and/or retire. Morrisville has approximately 10 square miles within its borders and according to the Office of State Budget and Management, the population was 26,973 as of July 1, 2019. Town staff estimates the population is 29,294 as of July 2020, with a potential to grow to 36,250 by 2023 and reach nearly 47,000 by 2030.

The Town is located in Wake County, which has adopted a countywide Transit Plan (the Wake Transit Plan) identifying future local and regional bus, bus rapid transit and commuter rail transit services for the Count, funded through a ½ cent county sales tax and other sources such as vehicle registration fees. The Wake Transit Plan includes plans for regional bus service and commuter rail transit service in Morrisville, which are proposed to be funded using federal, state, and local funds. The Wake Transit Plan also includes a Community Funding Area program, which will allow the Town to apply for the local transit funds (funded by the ½-cent sales tax) for additional community-focused transit services that are not identified in the countywide transit plan. For more information on the Wake Transit Plan and the Community Funding Area Program, please visit [www.goforwardnc.org/wake](http://www.goforwardnc.org/wake).

In 2017, the Town conducted a National Citizens Survey of residents through the National Research Center, in which public transportation and transit was one area listed by citizens in which the Town could improve. More information on the National Citizens Survey, as well as the results, is available on the Town’s website: <https://www.townofmorrisville.org/residents/national-citizen-survey>. Starting in 2017 and adopted in April 2018, the Town’s Strategic Plan, Connect Morrisville, builds on the National Citizen Survey and provides a strategic direction for the Town. The first goal in the Strategic Plan is Improved Transportation Mobility, including improving mobility for non-drivers and enhancing public transportation options. More information about the Strategic Plan is available on the Town’s website: <http://www.townofmorrisville.org/StrategicPlan>.

In March 2019 the Town adopted a Comprehensive Transportation Plan (as an update to the Town's 2009 Transportation Plan), which called for the Town to study public transportation options for the Town's citizens that would supplement and complement the regional public transportation service the Town is receiving through the Wake Transit Plan. The Town completed a Public Transportation Study (available online at <https://www.townofmorrisville.org/publictransit>) in 2019 that recommended the smart shuttle project as the mode for transit service within the Town. The study further recommended partnering with GoCary as the service provider, utilizing GoCary contracted staff and vehicles to operate the service, with technology that would allow citizens to request rides through a mobile application, online, or by phone.

### III. Smart Shuttle Service Design

The Smart Shuttle service will be administered by the Town of Morrisville and is partially funded through the Wake Transit Community Funding Area Program, with approximately half of the cost covered by Wake Transit funds. The Town of Cary's transit provider, GoCary, will operate the service as part of its overall contracted operations agreement, utilizing GoCary-branded passenger vehicles that are leased by the Town of Cary's operations contractor, all of which are ADA-accessible. The service will operate on the schedule below, with the exception of the 11 following holidays: New Year's Day, MLK Jr. Day, Good Friday, Easter Sunday, Memorial Day, 4<sup>th</sup> of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Eve and Christmas Day.

Day(s)	Time	Number of Vehicles in Revenue Service
Monday – Friday	7:00AM – 9:00AM	2 Vehicles
Monday – Friday	9:00AM – 4:00PM	1 Vehicle
Monday – Friday	4:00PM – 6:00PM	2 Vehicles
Monday – Friday	6:00PM – 9:00PM	1 Vehicle
Saturday	8:00AM – 8:00PM	1 Vehicle
Sunday	8:00AM – 7:00PM	1 Vehicle

The service will be operated fare-free, initially serving 14 nodes within Morrisville and 1 node outside of Morrisville at the Regional Transit Center located at 901 Slater Road in Durham, NC, and is expected to begin operation in June 2021. Note that the service design is subject to change after the first full year of operation (June 2021 – June 2022).

The technology provided by the selected vendor is expected to include a mobile application that can be used by citizens to request pick-up service from one node and drop-off service at another node, with the ability to track the transit vehicle once a request is made. It is also expected that a website will be provided that citizens can use to request service, or they will have the option to call the GoCary Dispatch Center to make a ride request, which the GoCary dispatchers can enter into the system. Marketing for the service shall be focused on utilizing the mobile application or website. The technology should include the ability to “pool” multiple pick-up and drop-off requests and route the vehicle along the most efficient route to service all requests.

### IV. Project Scope

To be considered for selection, the Vendor shall be qualified and able to deliver the following services for the identified project. The following scope outlines the requirements the Town expects the proposed mobility system technology to meet, and the deliverables that the Town expects to be included in any response to this Request for Proposals.

**Technology Capabilities**

- Limit service geographically to the identified 15 nodes for pick-up and drop-off. Ability to expand to future nodes if demand for service increases.
- Ability for citizens to utilize a mobile application, available for current mobile telephone operating systems in use in the United States (i.e. Android, Apple/iOS, etc.), to make pick-up and drop-off requests at designated nodes.
- Any mobile application or online interface shall be accessible (i.e. large type, voice response, etc.) and include language translation abilities. For Morrisville, translation would be requested into Hindi based on the population of Limited English Proficiency Asian Speakers in the area.
- The system shall include requirements for riders to set up an account/user profile.
- Ability for riders to track transit vehicles from the time of request for pick-up until the vehicle reaches the requested drop-off node. The technology shall also be able to provide an estimated wait-time from the time of a request until the transit vehicle arrives at the pick-up node, and an estimated ride time from the time of pick-up to the time of drop-off at the requested node.
- The system shall also include a website or online dashboard that can be accessed by citizens to request service.
- The system shall also allow for GoCary dispatchers to enter in ride requests received through a phone call to the dispatch center, utilizing a desktop or laptop computer.
- The system shall include real-time routing of vehicles for requested pick-ups and drop-offs at identified nodes, including “pooling” of multiple requests, and routing the bus along the most efficient route to service all requests.
- While all vehicles are equipped for ADA accessibility (i.e. ADA-accessible ramps), the system shall include the ability for citizens to indicate whether a certain trip will require the use of a mobility device to ensure that adequate space is available on the vehicle.
- The system shall allow for the extraction of data for reporting to funding partners and the National Transit Database. At a minimum, the following data shall be able to be extracted:

Revenue Hours	Origin and Destination Node Pair Frequency
Revenue Miles	Onboard Time
Ridership by Time of Day and Day of Week	Average Wait Time
Average Load	Average Number of “No Shows”

- The system shall include a robust open API (Application Programming Interface) to allow for third-party integration.
- The technology shall integrate, and not interfere with, the existing technology on the transit vehicles operated by GoCary, as shown in the chart below.

Name	Purpose	Vendor
CAD/AVL	Route Verification and Tracking, Dispatch Software	Tripspark
Ranger	Driver Interface Hardware for CAD/AVL	Trapeze
APC	Passenger Counting	Tripspark
T box	Signs, Passenger Notification, Annunciator	Tripspark
Farebox	Fare Data	Genfare
Streets	Dispatch	Tripspark
Luminator	Headsigns	Luminator
Drive cam	Video	Lynx
Mobile Eye	Collision Avoidance	Mobile Eye
IBR900 Router	Modem/Access Point	Cradlepoint
Touchpass/UMO	Passenger Fares	Cubic/Delerrok
Seon	Video Surveillance	Safefleet
WiFi	Passenger WiFi	Net Cloud

### Vendor Requirements

- Vendor will provide any necessary hardware/software or other infrastructure needed for the technology use on GoCary vehicles and at GoCary's Dispatch Center (including any necessary back-up hardware/infrastructure).
- Vendor will provide training materials on how to use technology – this may also include potential in-person public training at one or more community events in Spring 2021.
- Vendor will assist with and/or provide marketing materials, and these marketing materials shall be able to be translated.
- Vendor will provide detailed information about account/user profile information citizens will be required to provide to use service and provide information on data security of system.
- The Vendor shall provide read-only access to the database where the data is stored.
- Vendor will provide an explanation of how technology efficiently schedules and determines route patterns and origin/destination calibration.

The Technology Capabilities and Vendor Requirements above should be outlined in the proposal, with each capability and requirement fully addressed in the response. Graphics and pictures (including screenshots) included in the proposal will also be helpful.

### V. Content and Format of Proposal Package

Vendors submitting proposals shall have no association with elected officials or appointed officials that could be considered a conflict of interest. Any such relationship will subject the vendor to immediate disqualification in consideration for this project. A selection committee of Town and GoCary staff will evaluate the submittals and may elect to select the most qualified vendor based on the proposals as submitted or elect to conduct interviews with multiple vendors prior to recommending a vendor.

The submission shall be a maximum 15 pages printed front & back or 30 single-sided. Submittals shall include the following:

#### Letter of Interest:

The letter of interest included in the proposal shall include the following:

- The name and address of the vendor and the state in which it is incorporated and chiefly located.



- A brief description of the vendor and its interest in providing the mobility system technology for the Morrisville Smart Shuttle.
- The name, address, phone, and e-mail address of the designated contact for the vendor.
- A statement indicating any judgments against the vendor within the last five (5) years, or pending litigation, related to its products or services.
- All addenda to the RFP document (each addendum must be identified), if applicable.
- Signature of a duly authorized official of the vendor or other person fully authorized to act on behalf of the vendor.

**Vendor Proposal:**

The proposal shall include a general description of the vendor and its background as it relates to this project. Specific information regarding the vendor and mobility system technology shall be submitted and include:

- Information regarding the vendor's previous experience with similar or related projects, performed within the last 5 years, including a brief description of these projects and how these projects used the vendor's mobility system technology.
- Information demonstrating the vendor capabilities to perform all aspects of this particular project, including the vendor's background with mobility system technology.
- Information regarding the vendor's mobility system technology and how it meets or exceeds the technology capabilities listed in Section III of this RFP.
- A detailed plan for how the vendor will meet or exceed the Vendor Requirements listed in Section III of this RFP.
- Three references including client name, address, contact person, telephone number, email, project start and end date as well as a project description. References should be for similar or related projects in which the vendor's mobility system technology has been used.

**Project Approach:**

The proposal shall include a project work plan outlining how the vendor will approach the implementation of its mobility system technology for use by the Morrisville Smart Shuttle, including how the vendor will meet the requirements listed in this RFP.

**Cost Proposal**

The vendor will include a detailed cost proposal outlining the mobility technology system cost, including up-front and ongoing (maintenance) costs, hardware or other infrastructure costs, and any costs related to integrating the system into GoCary's vehicles and dispatch center. The cost proposal shall also include any contractual requirements, and initial timeframe for initial contract, with any ongoing costs guaranteed during the initial timeframe. In addition, the cost proposal shall include information about potential cost inflation after the initial contract timeframe.

**Anticipated Implementation Schedule:**

The vendor shall include a detailed implementation schedule, beginning no later than March 1, 2021 and an operation start date no later than June 14, 2021, indicating milestones and timeframe to set up the mobility system technology and integrate any necessary hardware or other infrastructure into GoCary's vehicles and dispatch center. This schedule shall include expectations of Town and GoCary staff in the implementation effort and indicate approximate amount of time required by Town and/or GoCary staff in each implementation step or milestone.

**Work Samples:**

The proposal shall include recently implemented projects, similar in scope and form to the Morrisville Smart Shuttle, for jurisdictions comparable to the Town in terms of existing services and demographics.

**VI. Submittal Process Details**

Vendor selection will be based on the letter of interest, vendor proposal, project approach, cost proposal, anticipated implementation schedule and work samples related to implementing mobility system technology in a microtransit service.

The Town of Morrisville reserves the right to reject any responses to this RFP that do not comply with the content and format of proposal requirements. The Town can also conduct discussions with any or all respondents. The Town accepts no financial responsibility for any costs or expenses incurred by any entity in responding to this RFP. All submissions may be kept by the Town and may be disclosed to third parties at the Town's discretion.

**VII. Questions and Clarifications:**

All questions shall be submitted to Ben Howell, Long Range Planning Manager, via email ([bhowell@townofmorrisville.org](mailto:bhowell@townofmorrisville.org)), no later than 5:00 PM on Friday, December 18, 2020. Questions submitted later than this date may not be considered. An addendum with questions and answers, if necessary, will be emailed to those vendors submitting questions and published on the Town website by Tuesday, December 22, 2020 at 5:00 PM.

**VIII. Proposal Submittal:**

The deadline for vendors submitting proposals is 3:00 PM on Monday, January 4, 2021. No submissions will be accepted after this deadline. Submittals should be emailed to [kbass@townofmorrisville.org](mailto:kbass@townofmorrisville.org).

Submittal emails shall have the subject line: **REQUEST FOR PROPOSALS – MORRISVILLE SMART SHUTTLE MOBILITY SYSTEM TECHNOLOGY.**

All proposal packages and materials submitted hereunder become the exclusive property of the Town of Morrisville.

**IX. Anticipated Review Schedule:**

*Please note that the Town will move quicker than the schedule shown below if possible.*

- 01/04/2021: Submission deadline
- 01/04/2021 – 01/13/2021: Town and GoCary staff review of submittals
- 01/18/2021 – 01/22/2021: Interviews conducted with selected vendors, if necessary
- 01/29/2021: Selected vendor notified
- 02/26/2021: Contract finalized
- 03/01/2021: Project commences

**X. Selection Process:**

This RFP provides information necessary to prepare and submit a proposal for consideration and ranking by the Town. It is the intent of the Town to appoint a selection committee to review the submitted Proposals. This committee will review each proposal and rank the proposal based on the criteria requirements specified within this RFP. The Town may invite vendors for interviews, but this is not a required step in the selection process. At the conclusion of the interviews (if held), the selection committee will rank the vendors based on the selection criteria and the interviews. The Town will provide written notification to all firms regarding final selection.

Upon completion of the selection process, the highest ranked vendor will be asked to begin contract negotiations with the Town. By submitting its Proposal in response to this RFP, respondent accepts the evaluation process as outlined in the following section, acknowledges, and accepts that determination of the selected vendor may require subjective judgments by the Town.

**XI. Evaluation Criteria**

1. Vendor/Company Background: Outline and specify the capabilities of the vendor to provide the requested product(s) and services as outlined in the scope of work. (20%)
2. Project Approach: Details on vendor's mobility system technology meeting the capabilities and the vendor's ability to meet the requirements outlined in this RFP. (25 %)
3. Cost Proposal: Details on the cost for the mobility system technology as outlined in this RFP. (25%)
4. Implementation Schedule: Reasonableness of implementation schedule and ability to meet final deadline for implementation of June 2021. (20%)
5. Relevant Experience, including references for similar projects. (10%)

# APPENDIX A

**I. General Contract Terms and Conditions**

- The selected vendor will report directly to the Town of Morrisville Planning Department. The selected vendor is to administer the contract and to ensure that all work is performed in accordance with the contract requirements. The selected vendor will be responsible for providing staff with the appropriate skills and qualifications to ensure contract compliance.
- The selected vendor will be notified by the Town and will enter into contract negotiations for the project. A contract will be negotiated with the selected vendor based on the proposed scope of work outlined in their proposal. Appendix A is the Town's standard professional services agreement that will serve as a basis for any contract with the selected firm/contractor.
- To the maximum extent allowed by law, the VENDOR shall defend, indemnify, and save harmless the Town of Morrisville, its agents, officers, and employees, from and against all charges that arise in any manner from, in connection with, or out of the acts or omissions of the VENDOR or subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable except for damage or injury caused solely by the negligence of the Town, its agents, officers, or employees. In performing its duties under this section, the VENDOR shall at its sole expense defend the Town of Morrisville, its agents, officers, and employees with legal counsel reasonably acceptable to the Town. As used in this subsection – "Charges" means claims, judgments, costs, damages, losses, demands, liabilities, duties, obligations, fines, penalties, royalties, settlements, expenses, interest, reasonable attorney's fees, and amounts for alleged violations of sedimentation pollution, erosion control, pollution, or other environmental laws, regulations, ordinances, rules, or orders. Nothing in this section shall affect any warranties in favor of the Town that are otherwise provided in or arise out of this contract. This section is in addition to and shall be construed separately from any other indemnification provisions that may be in this contract. This section shall remain in force despite termination of this contract (whether by expiration of the term or otherwise) and termination of the services of the Contract under this contract.
- The vendor must have the financial ability to undertake the work and assume the liability. The selected vendor will be required to furnish proof of insurance coverage and shall be maintained at all times; the limits are as follows:

<b>Coverage</b>	<b>Minimum Limits</b>
General Liability	\$1,000,000 per occurrence (\$2,000,000 aggregate)
Automobile Liability	\$1,000,000
Professional Liability (E & O)	\$1,000,000 per occurrence (\$2,000,000 aggregate)
<b>Workers' Compensation</b>	<b>Statutory Limits</b>
Employers' Liability	\$ 500,000

- The selected VENDOR shall provide the Town with a Certificate of Insurance for review prior to the issuance of any contract or Purchase Order. All Certificates of Insurance will require thirty (30) days written notice by the insurer or VENDOR's agent in the event of cancellation, reduction or other modifications of coverage. In addition to the notice requirement above, the VENDOR shall provide the Town with immediate written notice of cancellation, reduction, or other modification of coverage of insurance. Upon failure of the VENDOR to provide such notice, the VENDOR assumes sole responsibility for all losses incurred by the Town for which insurance would have provided coverage. The insurance certificate shall be for the initial contract period of one (1) year and shall be renewed by the contractor for each subsequent renewal period of the contract.

- The Town shall be named as an additional insured and the statement should read “Town of Morrisville is to be added as an additional insured as evidenced by an endorsement attached to this certificate.” Only “A” rated insurance companies will be acceptable to the Town.
- The vendor must have an adequate accounting system to identify costs chargeable to the project.
- In no event shall there be any of the following unless Town’s express prior written agreement is obtained: (i) any limitation on, or disclaimer of, implied or express warranties or the liability of Vendor; (ii) any limitation on damages, including a limitation on consequential damages; (iii) any requirement for arbitration or for mandatory mediation; (iv) any requirement that Town officials or employees keep information confidential or any requirement that records be kept confidential by the Town, unless the requirement for confidentiality meets the requirements of the Public Records Law.

**Conflict of Interest Statement:**

It is the policy of the Town of Morrisville that the conduct of officers, directors, project managers, and all other persons acting as its representatives should be at all times in the best interests of the Town, its members and the general public. In performing their duties, Town representatives should not be influenced by desire for personal gain. Conflict of interest is defined as a situation in which professional judgment or behavior concerning a primary interest (in this case the integrity of Town) has been improperly influenced by a different interest (such as for financial gain). The prompt disclosure of possible conflicts of interest or of those situations where such a perception could reasonably be anticipated to arise helps to avoid injury to an agreed upon primary interest.

Vendor(s) selected for these advertised services shall become aware of and comply with state laws related to gifts and favors, conflicts of interest and the like, including N.C.G.S. 14-234, N.C.G.S 133-1, and N.C.G.S. 133-2.

Vendor(s) selected for Planning and Design Services by the Town will be required to disclose any conflicts of interest for 18 months prior to the submission of the Proposal package to the Town.

If a conflict of interest is not disclosed by the vendor and a conflict of interest is determined by the Town of Morrisville to exist at a later time, the vendor will not be compensated for their prior work and will be required to reimburse the Town of Morrisville for any payments received. The vendor would be immediately dismissed from the contract.

**Changes in Personnel:**

Changes to personnel on project team(s), particularly a project manager, are to be avoided wherever possible. The vendor must request in writing to the Town for all changes to project team members. The Town will consider requests and may accept the new personnel changes, or may deny the request and consequently, the contractor may no longer be considered for Planning and Design Services with the Town.

**II. Notifications****Public Records Notice:**

Records received by the Town of Morrisville in response to a bid solicitation or a request for proposal/qualifications are public records and subject to public inspection and copying. Some bid records are public as soon as received by the Town, others become public at bid opening and others at bid award.

The Public Records law (N.C.G.S. 132-1 *et seq.*) authorizes the Town to withhold from public inspection and copying legitimate and properly marked 'trade secrets'. If a record meets all of the following conditions, then the Town may withhold that particular trade secret from a public record inspection request:

- It is a "trade secret" as defined in G.S. 66-152(3); and
- It is the property of a private "person" as defined in G.S. 66-152(2); and
- It is disclosed or furnished to the Town in connection with a bid or proposal; and
- It is marked as "confidential" or as a "trade secret" at the time of its initial disclosure to the Town.

If as part of your bid or proposal, you submit to the Town any record, or portion of a record, that you consider to be a trade secret meeting the definition contained in G.S. 66-152 (2), you may clearly mark the particular record, or portion of the record, that meets the definition of trade secret as TRADE SECRET or CONFIDENTIAL TRADE SECRET, and the Town will be authorized to withhold that particular record or portion thereof, from public inspection. In the event the Town receives a public records request for records you designate as 'trade secret' the Town will notify you and give you the opportunity to, within one week of such notification, confirm in writing that the specific record, or portion of record, that you designated as TRADE SECRET meets the requirements of G.S 132-1.2 and G.S. 66-152, and the reasons therefore. The Town will require that you indemnify the Town in the event a challenge is brought for the withholding of a record based on your having designated it a trade secret.

**Addenda Notice:**

If you have received this solicitation from a source other than the Town of Morrisville, it is the respondent's responsibility to ensure that all addenda have been received. Please visit <http://www.townofmorrisville.org/businesses/bid-proposal-opportunities> for the most current information.



Morrisville  
Live connected. Live well.

---

**Morrisville Smart Shuttle Mobility System Technology RFP  
ADDENDUM #1**

**DATE ADDENDUM ISSUED**  
**December 22, 2020**

**PROPOSAL DUE DATE**  
**January 4, 2021  
3:00 P.M.**

**E-Mail Address Submittal for Proposals**  
**[kbass@townofmorrisville.org](mailto:kbass@townofmorrisville.org)**



### **Answers to Submitted Questions**

**Question 1:** Can you include additional annexes with additional RFP-related information that exceed the page limit in the RFP?

**Answer 1:** The response/proposal will only be evaluated based on the information included within the response/proposal that meets the page limits identified in the RFP.

**Question 2:** The RFP notes that the Smart Shuttle Service will be operated utilizing GoCary-branded passenger vehicles. How many passengers can these vehicles hold? (Section 3: Smart Shuttle Service Design)

**Answer 2:** The vehicles will be cutaway vehicles with 19 seats and the capability of holding up to two mobility devices.

**Question 3:** The RFP requests a system that “shall include a robust open API (Application Programming Interface) to allow for third-party integration.” Can Morrisville explain in more detail what types of integrations will be requested and what the requirements for such integrations are? (Section 4: Project Scope - Technology Capabilities)

**Answer 3:** At this time there are no integrations being planned, but an open API will allow for future integrations if the Town so chooses.

**Question 4:** Please can you provide details on the level of anticipated integration with the existing technology currently used by the fleet and the goals of the integration? (Section 4: Project Scope - Technology Capabilities)

**Answer 4:** The integration with the Cradlepoint modems on the GoCary vehicles is the most important integration. The goal of the integration is that the technology under this proposal does not interfere with the existing technology on the GoCary fleet, as listed in the RFP.

**Question 5:** The RFP notes that “the Smart Shuttle service will be administered by the Town of Morrisville and is partially funded through the Wake Transit Community Funding Area Program, with approximately half of the cost covered by Wake Transit funds.” What is the approximate budget for the Smart Shuttle Mobility System Technology? (Section 3: Smart Shuttle Service Design)

**Answer 5:** The Town has not set a budget specifically for the technology at this time, but has set the project budget as follows:

- Capital Budget (includes bus stop/node infrastructure, initial technology set-up and marketing): \$450,000
- Operating Budget (includes operation of service and any maintenance/subscription fee(s) for technology): \$616,000 for FY2022 (July 1, 2021 – June 30, 2022).

**Question 6:** Will the trips be restricted to pick up and drop-offs at the 15 nodes or will there also be some form of a door-to-door feature now or in the future? (Section 1: General information)

**Answer 6:** The service is expected to operate with pick-ups and drop-offs only at the 15 nodes, with no plans for door-to-door service at this time. It is anticipated that the service will operate as proposed in the RFP until at least June 30, 2022. The service will be evaluated every year for potential changes, which would likely occur on or around July 1<sup>st</sup> each year.

**Question 7:** Could the Town please elaborate on the process for contract negotiations with the selected vendor?

**Answer 7:** Following selection of a preferred vendor, the Town will work with the vendor and the vendor's legal team to ensure the contract terms are acceptable to both parties. During this process, the Town will ensure the vendor has an opportunity to coordinate with GoCary as well to ensure GoCary's requirements for their existing technology and vehicles can be met.

**Question 8:** Can the Town confirm that the contract term is one year?

**Answer 8:** The Town expects the initial contact term to last until at least June 30, 2022 (end of the first full year of operations) but is open to a longer contract term based on the needs of the vendor, Town and GoCary. At a minimum, the contract shall have four one-year options following the initial term.

**Question 9:** Can the Town elaborate on its future plans for the Smart Shuttle service (e.g., geographic expansion, new use cases, fleet expansion)?

**Answer 9:** There are no future plans for expansion of the service at this time, but the service will be regularly evaluated for potential changes based on demand and citizen response to the service. The Public Transportation Study, on which the service is based, recommended 19 nodes (17 within the Town's corporate limits, 1 located on Kit Creek Road in Research Triangle Park and the node at the Regional Transit Center). The Study also recommended the service run seven days per week from 6 a.m. to 9 p.m., with 2 buses running during the AM and PM Peak periods on weekdays, and Mid-day and PM Peak periods on the weekends.

**Question 10:** Can the Town share the budget for this contract?

**Answer 10:** The Town has not set a budget specifically for the technology at this time, but has set the project budget as follows:

- Capital Budget (includes bus stop/node infrastructure, initial technology set-up and marketing): \$450,000
- Operating Budget (includes operation of service and any maintenance/subscription fee(s) for technology): \$616,000 for FY2022 (July 1, 2021 – June 30, 2022).

**Question 11:** The RFP asks for technology that "shall integrate, and not interfere with, the existing technology on the transit vehicles operated by GoCary." Could the Town please specify which systems the selected vendor is required to integrate with, versus which systems we should simply avoid interference with? For the systems that do require integration, for each scenario, can the Town please provide more detail on the use case and the API format of the third-party system vendor?

**Answer 11:** The technology shall integrate with the Cradlepoint modems, and the hardware for the on-demand platform shall be located in an unobtrusive location for the driver (i.e., not physically interfering with the Ranger or other systems that they use onboard. Outside of these requirements, the vendor should ensure that this technology does not interfere with the existing technology on the GoCary vehicles as listed in the RFP.

**Question 12:** Page #6 – Chapter “Vendor Requirement” – Could you please confirm that the expected number of devices to provide is 2 plus spare?

**Answer 12:** Based on discussion with GoCary staff, it is requested that the vendor provide five (5) devices: Two (2) devices that would be installed on the vehicles dedicated to the Smart Shuttle Service, two (2) devices that would be installed on spare vehicles for the service, and one (1) spare device that would be kept in the GoCary garage ready for installation on a vehicle if needed.

**Question 13:** Page #3 – Chapter “introduction” – Could you please provide us with information on the type of vehicles that will be used and the number of seats available? Will these vehicles be dedicated to the on-demand service?

**Answer 13:** The vehicles that will be utilized are cutaway vehicles with 19 seats and the capability of holding up to two (2) mobility devices. It is anticipated that two (2) vehicles will be dedicated to the service, with up to two (2) additional spare vehicles dedicated to the service.

**Question 14:** Page #4 – Chapter “Smart Shuttle Service Design” – Could you please precise if the Marketing budget is the responsibility of the vendor of the Town?

**Answer 14:** The Town has identified funds within the project budget for marketing of the service.

**Question 15:** Page #5 – Chapter “Technology Capabilities” – In all the technology solutions available on the vehicles, what is their Android Devices that can be mutualized for the service? If so, would you happen to know the type and Android OS version used?

**Answer 15:** Technology under this RFP should be a standalone system and should not “piggyback” on existing technology in the GoCary vehicles. The technology may integrate with the Cradlepoint modems on the GoCary vehicles but cannot interfere with other technology.

**Question 16:** Page #5 – Chapter “Technology Capabilities” – It is stipulated that “The technology shall integrate, and not interfere with, the existing technology on the transit vehicles operated by GoCary”. Is there any specific integration the Town is looking for? Could the Town or GoCary can provide GTFS and GTFS-RT to the vendor?

**Answer 16:** Integration with the Cradlepoint modems on the GoCary vehicles is most important. GoCary staff can provide GTFS information upon request – please contact Kevin Wyrach via email at [kevin.wyrach@townofcary.org](mailto:kevin.wyrach@townofcary.org) for the GTFS information.

**Question 17:** Could you please confirm the length of the project? How many years of service operating should we build into our estimate?

**Answer 17:** The Town anticipates that the project will be initially funded for five (5) years, beginning in June 2021. The initial contract term, at a minimum, shall be through June 30, 2022 with four additional one-year options. The Town is open to a longer initial contract term based on the needs of the vendor, Town and GoCary.