

REQUEST FOR BOARD ACTION

**HENDERSON COUNTY
BOARD OF COMMISSIONERS**

MEETING DATE: September 6, 2022

SUBJECT: Feasibility Study for Apple Country Public Transit

PRESENTER: Janna Bianculli, Senior Planner

ATTACHMENTS: 1. AECOM Proposal

SUMMARY OF REQUEST:

In recent years, ridership on Apple Country Public Transit (ACPT) services declined significantly. The County seeks to increase ridership while optimizing the level of service to current and potential riders.

Henderson County received federal funding to evaluate the current transit system and to study possible changes to the system that will maximize the number of community members served. The federal funds are received via the Federal Transit Administration. The funding for the grant is 80%, so a 20% cost share is requested of the Board. This study is budgeted within the approved FY23 transit budget, so no amendment is needed.

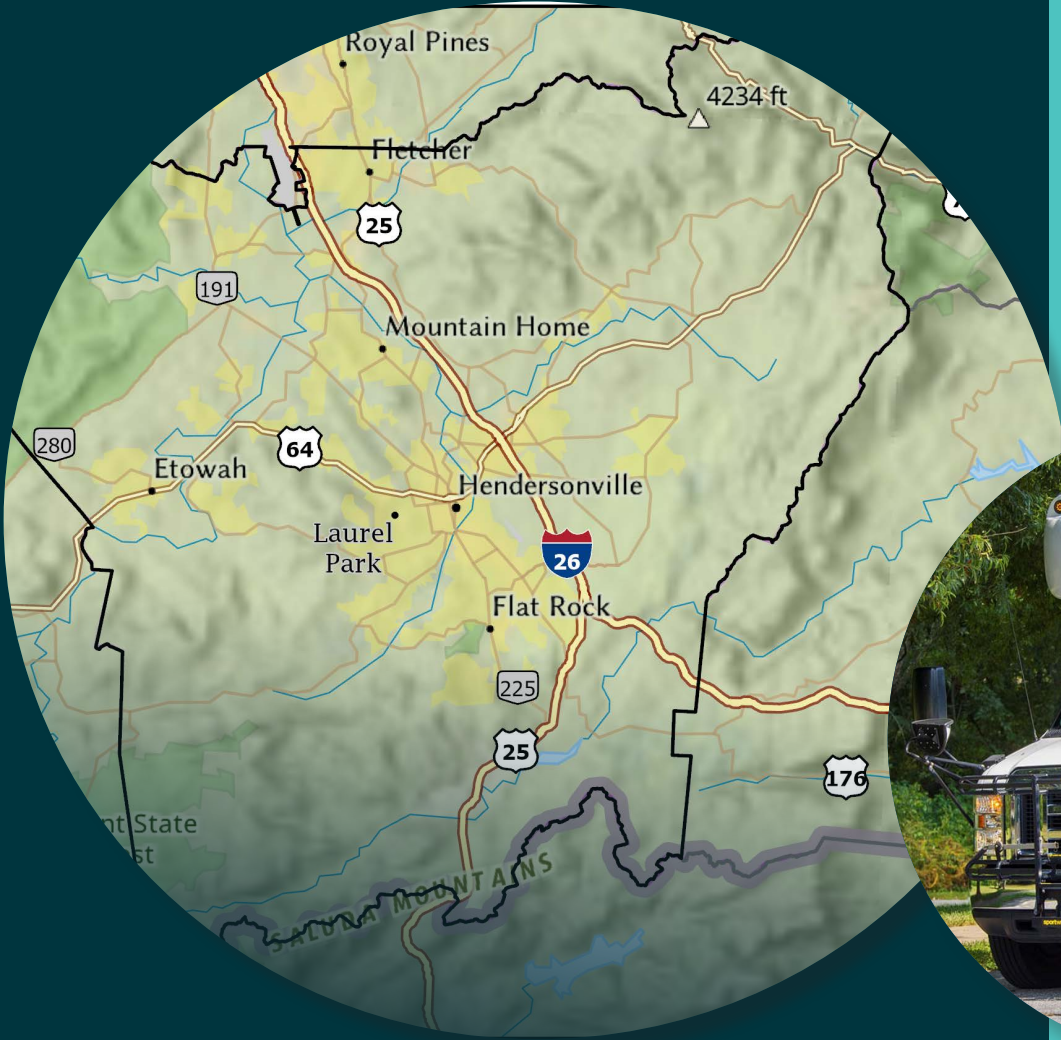
Staff received multiple proposals and evaluated them using the scoring methodology displayed in the RFP. AECOM proposes a robust public outreach initiative as well as data driven approach to recommendations. Staff would like to work with AECOM because of their high score and their staff's knowledge of this area.

BOARD ACTION REQUESTED:

The Board of Commissioners are requested to approve AECOM as the selected consultant and direct staff to proceed with all necessary paperwork.

Suggested Motion:

I move that the Board approve AECOM for the feasibility study of Apple Country Public Transit.



PROPOSAL

Henderson County Planning Department

Feasibility Study for Apple Country Public Transit

August 5, 2022

Ms. Janna Bianculli, Senior Planner
Henderson County Planning Department
1 Historic Courthouse Square
Hendersonville, NC 28792
jbianculli@hendersoncountync.gov

Subject: Feasibility Study of Apple Country Public Transit

Dear Ms. Bianculli and Selection Committee:

Henderson County's Apple Country Public Transit (ACPT) offers a vital service to the community and particularly to the underserved, providing essential trips to jobs, shopping, access to health services and education across the entire county. The development of the feasibility study and assessment of existing services is necessary to address gaps in service and to adapt to ever-changing circumstances, such as urban growth, traffic conditions, climate change and most recently, the effects of the COVID-19 pandemic.

The AECOM team is passionate about public transportation and the benefits it provides to the community in terms of mobility options, sustainability, and affordability. We have successfully developed similar projects nationwide that analyzed bus planning and operations, and created implementable plans supported by the community. AECOM is ready and committed to be your partner as you advance transit in Henderson County. We will bring our local and national expertise and experience in bus operational analysis and planning and innovative mobility solutions to this project.

After a thorough review of the Request for Proposals (RFP), we have assembled a knowledgeable, experienced, and diverse team of professionals to support Henderson County (County) with consulting services for the Feasibility Study. The AECOM team developed a coordinated management approach to meaningfully engage stakeholders, evaluate existing services and develop a comprehensive plan that integrates innovation and forward-thinking solutions. Our objective is to equitably enhance mobility options for commuters, local residents, and transit-dependent populations of Henderson County.

Expert Project Management

We are proposing a proven Project Manager, **Mariate Echeverry**, who brings more than 20 years of transit experience to lead this effort. She has managed bus planning projects across the country, developing feasibility studies and comprehensive operational analyses for systems that are similar in size; her planning efforts have a strong public engagement component, as she believes each transit plan needs to respond to the specific needs of the community. Before joining AECOM, Mariate managed Asheville Rides Transit, in Asheville, NC, and was responsible for a complete service overhaul that included operational improvements, branding and fleet replacement. She also managed the Federal Transit Administration (FTA) contracting and compliance processes, of which Henderson County was one of the City of Asheville's subrecipients, and is very familiar with federal regulations and compliance of fixed route services. Currently, Mariate is assisting the Georgia and North Carolina Departments of Transportation with their subrecipients' compliance with FTA regulations.

Mariate and all the task leads have collaborated on the development of multiple plans on transit projects across North Carolina and nationwide. This cohesive management team brings synergy to the project and will allow us to hit the ground running.

Planning for the Future

We have developed a strategic team based on the needs of Henderson County and believe our experience in transit planning, feasibility studies, stop location and safety, community engagement and innovative projects will provide valuable guidance. We believe our team is uniquely qualified for the project based on three key attributes:

- **Innovation.** Our team offers transportation professionals with expertise in innovative mobility solutions, incorporating microtransit/ shared mobility and technology into the planning process. Additionally, AECOM expands the reach of public outreach through virtual reality and other non-traditional engagement tools.
- **Transit Planning Experience.** The AECOM team brings technical expertise together with proven past performance on feasibility studies and comprehensive transit planning studies such as those in Newton County, GA, and Greenville, NC, which is considering extending transit county wide. Our experience serves to deliver a successful plan with the focus on implementation.
- **Equity Framework.** AECOM has extensive experience developing plans with an equity lens; this makes every plan unique, and tailored with the community in mind. We have recently done this for the Asheville region, Spartanburg (South Carolina) and the Sanford Microtransit service in North Carolina

At AECOM, we prepare our transit clients for the challenges of tomorrow. With a broad range of experience, we will deliver effective solutions that benefit those who matter most — the people living in your communities who need to utilize transit today and into the future.

In addition to this, Mariate's prior work with County staff has allowed her to become very familiar with the current transit service, ACPT's aspirations and needs, and how deeply it has been affected by the pandemic. As your partner in advancing the goals of the community, we commit to forging strong partnerships, bringing together a diverse set of ideas, and developing a plan that is practical and actionable. Accordingly, we commit to the fundamental management principles of team member availability, clear lines of communication, adherence to the schedule and budget, and delivering quality products.

The AECOM team is prepared to support Henderson County in your ongoing efforts to deliver more efficient and effective services. Mariate Echeverry and the team of dedicated professionals we have proposed are committed and available to you for the duration of this project.

We are in receipt of Addendum No. 1 dated July 21, 2022.

AECOM has reviewed the RFP for this project, and while we are in substantial agreement with the terms included therein, in the event of award, we respectfully reserve the right to negotiate final contractual provisions, in an effort to reach a mutually agreeable contract in line with appropriate industry standards. We appreciate the opportunity to submit our vision for and approach to this project.

Should you need any further information, please reach out to me or our Project Manager, Mariate, at 828.989.7904 or mariate.echeverry@aecom.com.

Respectfully yours,

AECOM Technical Services, Inc.

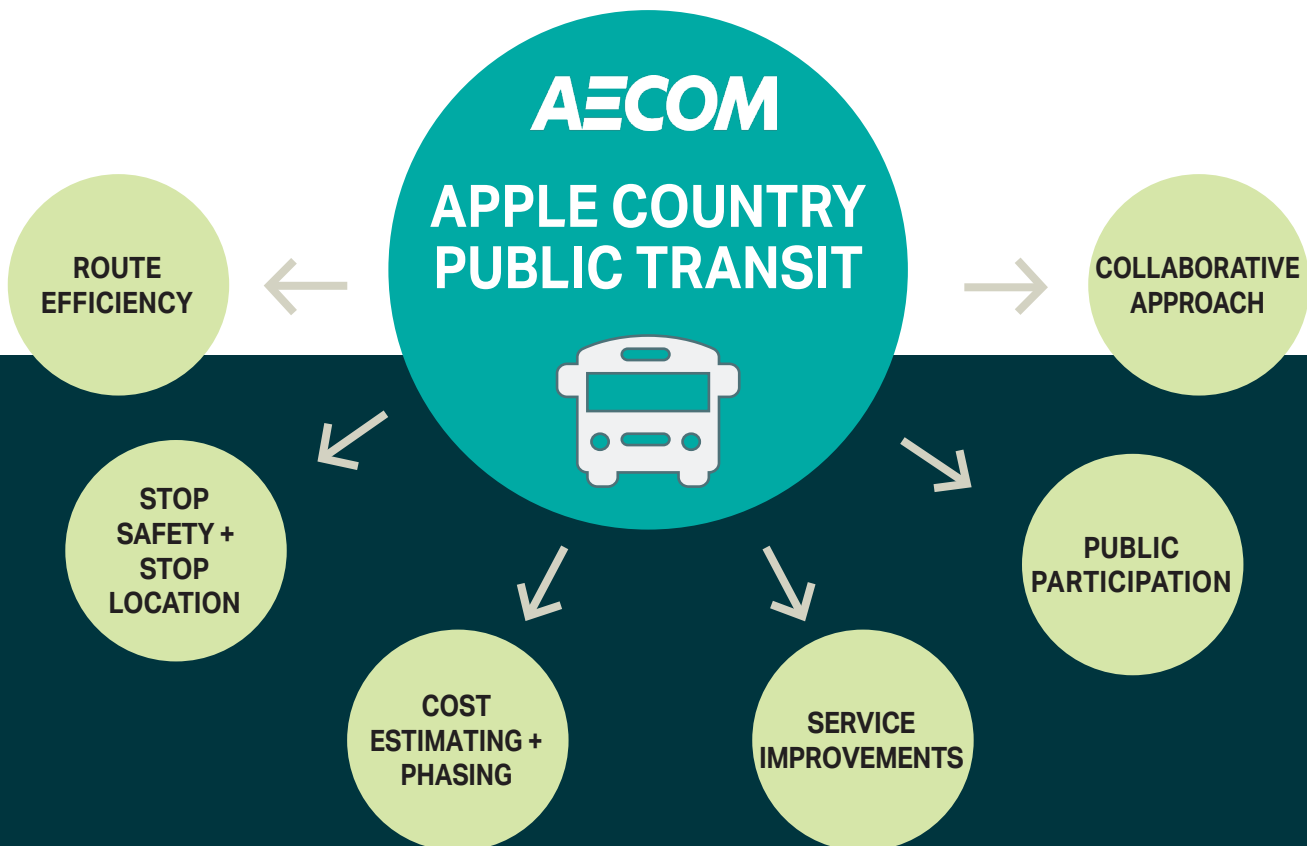


Mariate Echeverry | Project Manager
828.989.7904 | mariate.echeverry@aecom.com



Doug Tennant, AICP | Principal in Charge
615.224.2102 | doug.tennant@aecom.com

At AECOM, we believe that transit is paramount to achieving equity, affordability and sustainability in communities. Improving transit operations and providing mobility access to all citizens remains one of our most important goals.



1. INTRODUCTION

AECOM is a global professional services firm of over 50,000 professionals providing integrated design, planning, engineering, environment and construction management services to a broad range of clients.

A national leader in transportation, we have consistently ranked among the top three design firms by *Engineering News Record* (ENR) and are currently ranked #1 globally and #2 for the U.S. Southeast Region for engineering services. Our national capabilities have enabled us to work on some of the most complex infrastructure projects in the nation. AECOM employs approximately 145 transportation professionals in North Carolina specifically focused on delivering transportation planning and engineering services.

Our team has successfully completed planning, design and construction support services for projects ranging from small intersection improvements to large, complex transit facilities that provide the citizens of our North Carolina communities with functional and efficient mobility and transportation options.

AECOM enjoys a deeply rooted presence in North Carolina and the greater Southeast where we routinely connect best practices and insights into implementable plans. We engage with public and private sectors across geographies to help build more resilient, equitable communities and economies. Our work embraces a diversity of planning, engineering and design services, including transit and transportation master planning, traffic and travel demand modeling, corridor studies, feasibility studies, comprehensive operational analysis, facility analysis, traffic and Intelligent Transportation System (ITS) Engineering, land use and zoning, and bicycle and pedestrian planning.

Our experience in evaluating transportation and multimodal systems is an outgrowth of our diverse extensive experience evaluating cities, towns and counties. AECOM has recently completed studies across diverse markets ranging from mountains to coastal regions across the southeast region. We also work closely with NCDOT's Integrated Mobility Division. All our projects follow a robust public engagement strategy and go above and beyond to incorporate the voices of the communities.

AECOM has grown into a Fortune 500 firm with revenue of approximately \$20.2 billion during fiscal year 2019. Doug Tennant, AICP, Vice President, is authorized to enter into contract(s) with the County. AECOM is financially strong, as our contracts with major agencies and DOT's across the nation demonstrate.

IMAGINE TRANSIT

AECOM's mass transit expertise spans more than 100 years and includes work with a variety of clients such as bus companies, and major transit agencies around the globe.

Our interdisciplinary team includes transit planners, architects and engineers as well as urban designers and financial experts who use their talents to transform a conceptual design into a functioning system.

Our transit clients strive to provide operational systems that deliver uninterrupted, high-quality transportation service with everyday accessibility for all users. Their goal is to improve mobility options, manage costs and develop a first-class workforce.

At AECOM, we prepare our transit clients for the challenges of tomorrow. With a broad range of experience and an extensive global network, we deliver effective solutions that benefit those who matter most — the people living in our communities who need to utilize transit today and into the future.

Our team has worked with transit agencies in Western North Carolina such as the City of Asheville, Buncombe, Haywood and Henderson Counties and the French Broad River Metropolitan Planning Organization (MPO). Mariate served as Project Manager for the Regional Transit Feasibility Study that included Henderson County. Mariate has also assisted the county with their management and operations procurement process and is very familiar with the county and the challenges ACPT faces to provide transit service.

To meet Henderson County's needs, our team will use our knowledge and expertise to deliver an integrated, efficient and cost-effective study that engages stakeholders and residents throughout the planning process.

**Ranked #1
in Transportation**
in *Engineering News-Record's 2021*
"Top 500 Design Firms"



2. PROJECT APPROACH

The effects of the pandemic have left transit systems across the nation in a vulnerable stage. AECOM is working hand-in-hand with transit agencies re-imagining the future with more equitable service and better use of resources.

The following section proposes a detailed methodology for this study. We have incorporated a scope of work focused on providing a strong technical analysis with a comprehensive approach to public and stakeholder engagement, project development and implementation. Our approach incorporates evaluation and management tools successfully utilized on other projects that will allow us to maintain the overall project schedule and to stay on budget.

Project Management

The AECOM team understands the importance of effective project management. Our technical approach is bound by a firm commitment to provide a skilled project management team familiar with and attuned to the priorities of Henderson County. AECOM will provide a project management approach with local context as described below.

Project Work Plan

The AECOM team will join County and ACPT staff in a project kick-off meeting to review the project scope and previously developed materials and studies. Our Project Manager, Mariate Echeverry and her project management team will work with Henderson County continuously throughout the project to achieve the County's goals for creating a transit vision and providing a roadmap to implementation of operational improvements, including safety in the service area and building on those services to meet the needs of the county's residents, workers and visitors. Our technical approach begins with a commitment to the following principles originating from our past experiences:

- A single point-of-contact, our Project Manager, and Project Leads with previous experience working with county staff
- Commitment to provide dedicated and experienced Task Leaders, technical leaders, subject matter experts, advisors and support staff
- Development and implementation of a Project Work Plan (PWP) within the first 30 days
- Project controls and administration procedures to keep the work on schedule and within an agreed budget

Within 10 days of project execution, AECOM will hold a kick-off meeting with the County to address initial management coordination responsibilities and activities. Mariate will lead the development of a Project Work Plan (PWP) that defines the organizational, communications and project management protocols for the project. Mariate will also work with County staff's project manager to define the desired contents of the plan.

AECOM will conduct coordination meetings with the County's Project Management Team (PMT), a dedicated group of project representatives, in order to track progress of the Feasibility Analysis. Meetings will be held once every two weeks supplemented with any other necessary urgent situational meetings. The progress meetings will highlight specific tasks and issues that may affect orderly performance of the work plan.

Mariate's key priorities consist of maintaining the project schedule and highlighting critical path elements at the outset. The project schedule will be a standing discussion item at every project status and consultant team biweekly coordination meeting. Mariate will proactively discuss critical path items with each Task Lead in advance of approaching deadlines.

AECOM's project management team is focused on providing a value-added decision-making forum to develop comprehensive solutions and improvements that address the transportation needs of the County – in an innovative, responsive and cost-effective manner.

LEADERSHIP – COMMUNICATION – INTEGRATED PROJECT DELIVERY





The Project Work Plan will address:

Project Organization. Establish study goals, roles and responsibilities of key participants and work groups.

Work Scope and Schedule. Solidify the approach to each task and establish a schedule with key milestones.

Project Monitoring. Develop templates and expectations for regular reporting, including monthly progress reports, meeting agendas, document request forms and invoices.

Contact List. Prepare a project contact list of key Project Team members and project stakeholders, critical in achieving approvals and maintaining schedule momentum.

Quality Plan + Procedures. Documentation of the team's plan for QA/QC and document management, control and archiving for all documents and deliverables.

and to strive to exceed your requirements and expectations. Our team members will develop a tailored approach that responds to this project's unique needs, with quality identified as a critical component of this study.

Quality assurance and quality control will begin at project initiation with the creation of a Quality Control Plan, which will delineate the specific actions to be taken to verify that all deliverables are responsive to County's needs and are thorough, complete and meet the standards of professional care.

Monthly Progress Reports and Invoices

A month-to-month project schedule will be coordinated with the PMT early in the process. The schedule will define major project milestones/deliverables and proposed dates of project committee meetings and public involvement/outreach efforts. Each month, we will submit a progress report to the County Project Manager and PMT along with the invoice covering charges for that same time period.

Commitment to Quality

AECOM protects our clients and backs the integrity of our work by implementing a project-specific Quality Management Plan (QMP) aligned with our corporate Quality Management System (QMS). The QMS process and procedures will be managed by Mickey Geiser, PE and are implemented for every task and deliverable. AECOM approaches quality management in compliance of the ISO 9001 International Standard; this highly regarded standard is achieved by only 3% of companies in our industry. The AECOM project team is fully committed to the management principles underlying the ISO 9001 standard and to AECOM's QMS.

AECOM is committed to delivering best-in-class solutions and services to our clients. **Our Design and Consulting Services QMS has been certified to ISO 9001 in North America since 2012.** Our QMS is incorporated into all aspects of our work. To consistently deliver world-class services, we implement a QMS tailored to most effectively meet the needs of our clients. These principles emphasize understanding your needs and preferences



Proposed Schedule

Tasks	Months							
	1	2	3	4	5	6	7	8
Contract Approval / Notice to Proceed	●							
Project Management	▲							
Existing Conditions								
Stop Safety								
Service, Market and Facilities Analysis			▲					
Public Participation	▲							
Survey		■						
Stakeholder Interviews / Focus Groups								
Coordination meetings with the PMT	■	■	■	■	■	■	■	■
Oversight Committee			■		■	■		
Recommendations								
Cost Estimation, Prioritization, Phasing								
Draft / Final Reports							▲	▲

▲ PMP / PPP / Draft and Final Report ▲ Memorandum ■ Survey / Meetings



Route 1 - Stop 32 (Hendersonville YMCA)



Route 3 - Stop 17 (Fanning Bridge Road at Rutledge Road)

Existing Conditions

AECOM offers an integrated approach to understanding and analyzing existing conditions with community and stakeholder collaboration in order to develop implementable recommendations for improving transit service in Henderson County.

Existing Service and Market Analysis

Our team will review existing plans that can potentially affect transit performance and future alignment. Local and regional plans combined with the latest census demographic data will be considered to understand population needs, economic development and opportunities for job creation. Having prepared the French Broad River MPO

AECOM will utilize a demographic snapshot tool it designed to streamline analysis and provide important transit market insights.

Regional Transit Feasibility Study, we have a thorough understanding of the study's analysis and recommendations.

Too often, transit feasibility studies feature the development of detailed service plans without sufficient understanding of those travel markets that are currently served and those that could be served in the future.

The AECOM approach relies heavily on an analysis of various travel market segments, their demographic and travel characteristics and their propensity to use transit for work, school and other trips. As part of this plan, it is essential that we understand your existing travel markets and how they may react to network changes. It is also essential to understand potential travel markets and how service characteristics may affect travel choices.

The AECOM team will prepare a market analysis by collecting data on the current patterns of travel, analyzing existing and future land use, identifying major travel nodes and activity centers within the region and reviewing existing and planned community facilities. Employment commuting patterns will be analyzed using US Census Bureau Longitudinal Employer-Household Dynamics (LEHD) data. The market analysis will provide concise profiles of various travel markets and their propensity to use transit. Coupled with a service gaps analysis that identifies where potential transit demand is not served by existing ACPT routes, this market analysis will provide a basis for the study's recommendations.

Our team will assess first/last mile accessibility to determine barriers to mobility, including safety, and propose improvements needed to serve more people, especially in under-represented communities. Providing safe and convenient access is vital for effective service. We will evaluate opportunities and appropriate areas where on-demand mobility, or microtransit, may address first/last mile accessibility or serve the community more efficiently.

Table 1. Route Factbook Categories

Category	Description
Geospatial	A map of the route which highlights the existing (as well as proposed) major ridership attractors and generators
Operational	A general description of the route, as well as the level of service provided (to include headways, service and deadhead miles operated, recovery time, revenue miles to total miles, average operating speeds and cost)
Performance	A short description of the route’s service characteristics, productivity and performance. Includes: <ul style="list-style-type: none"> – on-time performance – ridership details – daily ridership, PPH by segment/time of day/type of day (level of detail will coincide with available data)
Demographic	General characteristics of existing riders (based on data collected from the Rider Survey)
Community	Identification of key community features, neighborhoods, employment centers, education and health services served by the route
Evaluative	A summary of Strengths, Weaknesses, Opportunities and Threats

Route Analysis

Our team will evaluate ACPT’s existing three fixed-routes, coordination with WNCSource for paratransit service and integration with Asheville Rides Transit (ART) by reviewing historical performance data related to ridership, expenses and revenue available from ACPT. The results of this analysis will be summarized in a route factbook that highlights the operating and performance characteristics of each route. This will allow for a detailed examination of routes that may need modifications or additional resources such as increased frequency to improve service and increase ridership. We will provide a factbook for each route based on the data available from ACPT. Depending upon data availability, the factbook may be organized according to the six categories shown in Table 1.

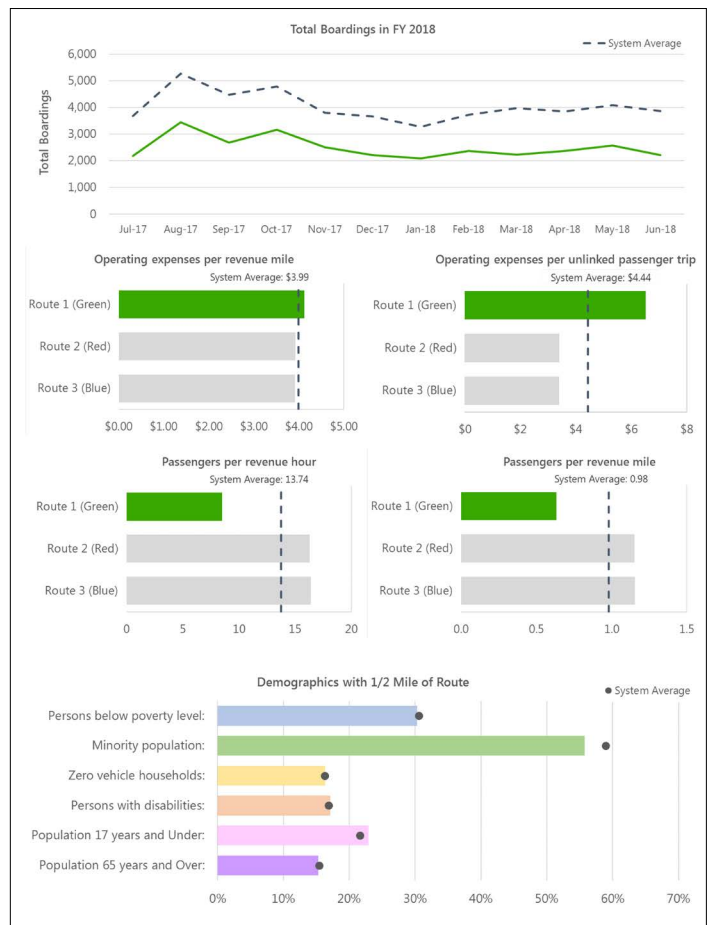
Recognizing that quantitative analysis alone does not tell the full story of a route’s benefit to the community, we propose including a “Community” category in the factbook to complement the quantitative categories.

Stop Safety

The existing ACT routes include a mix of urbanized and rural stop locations. These can have drastically differing traffic volumes, speed and vehicular type makeup. Urbanized areas generally have more accessibility via sidewalks and are located on higher volume routes. Urban routes generally afford more options for stop placement given their improved cross section and general geometric designs.

Rural routes tend to have geometric and terrain features that are not ideal such as narrow lanes, ditches, limited shoulders, issues with providing lighting etc. These can also be higher speed sections than urban downtown routes. Choosing safe stop locations aligned with rider demand locations can be a challenge.

Safety reviews of existing/proposed stop locations would include documentation of the existing traffic characteristics such as traffic volume, truck percentage and posted speed limits. A general desktop site review can be a good starting point to determine any areas that would need a more detailed field review. Many times, field reviews are more informative as the reviewer can better assess geometry, terrain and sight distance. A crash screening on the transit network can also be a useful tool to ensure that areas with crash histories are specifically reviewed. A pedestrian/transit safety audit form would be used for consistent documentation. These forms serve as a prompt to ensure all items are looked at. To help further informed decisions, pedestrian counts and transit boarding and alighting counts could also be gathered.

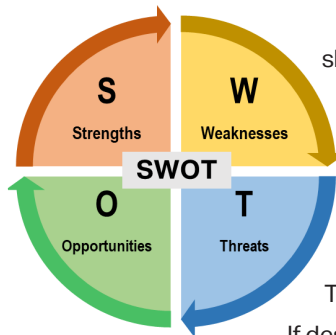


Example of the dashboard elements contained in a route factbook

Existing Transfer Station

Our team will also perform a Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis of the existing transfer station location in terms of its ability to serve the existing system and proposed recommendations. The SWOT model is useful in its flexibility and ability to identify systemic opportunities and challenges.

We will identify challenges and opportunities for adding amenities at the existing transfer station location by reviewing existing physical constraints and space requirements. This task will be coordinated with the Rider Survey to understand from riders’



perspectives which amenities should be prioritized at the station. We will also evaluate amenities and infrastructure needed to support the transit recommendations in this study such as connections between fixed route and microtransit services (these are recommended in the Regional Transit Plan Feasibility Study).

If desired by Henderson County, the AECOM team will explore opportunities for enhancing the transfer station into a mobility hub that would serve transit riders, pedestrians, bicyclists and micromobility users. Mobility hubs improve multimodal connectivity and further placemaking particularly in downtown settings such as Hendersonville.

Costs and phasing for installing amenities will be included in the Action Plan.

Current Vehicle Capacity

We will assess current vehicle capacity and ability to accommodate increased ridership using APC data provided by ACPT. This data will enable us to prepare load analyses by route and run to determine the maximum load point. The results of these load analyses will be provided in tabular and graphical form. Our recommendations related to vehicle fleet and size will be grounded in this quantitative analysis. Furthermore, the APC analysis will provide a framework for amenity recommendations.

Fare Analysis

The AECOM team brings experience and resources to assist Henderson County planning staff with a fare-free analysis of ACPT routes. We envision the route factbook and related quantitative analysis assisting planning staff in the fare analysis. In addition, our team of financial modelers can provide tools and guidance based on AECOM fare-free studies for evaluating the financial scenarios of going fare free.

Public Participation

At the initiation of the project (and within 15 days), the team, in conjunction with input from County staff, will develop a Public Participation Plan (PPP) to describe the engagement and outreach activities of the project. The strategy will identify the outreach audiences, tools and techniques, key messages, responsibilities of the project team, a proposed schedule and performance measures. The strategy will be considered a "living" document, evaluated periodically and updated as necessary for maximum effectiveness as the project progresses. The stakeholders should include, at a minimum, local businesses, community leaders and community groups that work with underrepresented communities, as *Companeros Inmigrantes de las Montañas en Acción (CIMA)*.

Surveys

The ridership survey would be a key component of the public input approach and will allow our team further the goal setting for this project and refine the vision. We believe the project will benefit from a comprehensive survey approach and is proposing to develop a survey instrument composed of three parts:



Social media photo for the North-South Rapid Transit project in Chapel Hill, NC

- Rider survey:** this survey will address customer satisfaction, gaps in service and additional needs not currently fulfilled by the service provided. We recommend applying this survey on the buses; the AECOM team will ride the buses, collecting riders' surveys and providing assistance when needed. The survey instrument will also be available online and QR codes will be posted on the buses and other key places, such as the Asheville Regional Airport Park and Ride. Surveys will be available in Spanish.
- Stakeholder survey:** this survey will collect information from social service agencies, advocates, business, community colleges and other stakeholders about their perception of transit, what they think needs improvement and shortcomings.
- Community survey:** this survey will collect general information from the community at large, helping us understand which elements will help increasing ridership and to address barriers to transit use. The survey could be posted in the County's website and social media. It could also be distributed through social service agencies and other stakeholders. We recommend distribution through the County's website, at established stops and through County's and elected officials' list serves to provide ample opportunities for participation.

A similar approach was used for the Sanford Microtransit Project and participation from public and stakeholders helped the project team understanding the community's needs and expectations.

Coordination Meetings with the PMT

In collaboration with the PMT, AECOM will schedule bi-monthly status update meetings. We believe regular communication is essential to the success of the project. However, these bi-monthly meetings would not preclude the need to have additional meetings throughout the course of the project. Meetings would be held virtually (via Microsoft Teams or software subject to the PMT's choosing) and in-person. The AECOM team will provide meeting minutes to the PMT via email within five calendar days of the bi-monthly meetings.



Stakeholder Interviews and Focus Groups

In some cases, when dealing with groups with different interests, is recommended that the team develop events in order to listen specifically to the group’s concerns and address their needs. We propose to hold interviews and focus groups to address those groups and to create trust in the process. We have followed this approach in our projects and include business communities and special groups such as drivers and key staff as part of focus groups and interviews. This approach is very successful, resulting in these groups supporting the final recommendations.

Analysis, Recommendations and Action Plan

Using the data and information collected in previous tasks, especially the comprehensive and extensive data collected and analyzed in the Existing Conditions Task, the AECOM team will conduct a holistic assessment of existing service, organization and policies, facilities, fleet, technology and develop integration options to expand and enhance ACP. The assessment will look at service, facilities, fleet and technology from a variety of angles – both separately and together – and develop a SWOT matrix. As previously mentioned, the SWOT model is useful in its flexibility and ability to bring systemic opportunities and challenges to the surface for further scrutiny.

The assessment will analyze, in detail, all aspects of the bus service from how the service is overseen and operated, to how customers use and perceive the service, to the fixed assets that make operating and accessing the service possible. The assessment will also look at the community’s transit market and how well the existing service is matched to the transit market.

The transit market will be outlined through the use of demographic and socioeconomic information, travel patterns, existing and future land use, existing and future zoning policy, existing and future economic development patterns, transportation infrastructure (including sidewalks, access and connectivity to bus stops, etc.) and local and state laws/ regulations/policies that impact the provision of and access to transit.

The assessment will be used to identify improvements to the existing service and identify different modes that may be more appropriate in certain circumstances, such as microtransit or other on-demand modes of transit service in areas of lower demand. With emerging mobility options and new technology, there are a lot of possibilities and the previous analyses and assessments will help in determining the best-suited solutions for Henderson County.

Service and Capital Improvement Plan: Short-, Medium- and Long-Term Recommendations

AECOM will assess future transit needs for the short-term (zero to three years), medium-term (four to eight years) and long-term (nine +) horizons to provide the County with a guiding document for each phase of transit implementation; the terms could be modified based on input from the PMT and Oversight Committee.

The AECOM team will utilize information from the prior tasks to develop a realistic an implementable list of desired transportation improvements and services, based on existing conditions, stakeholder input and projected capacity, safety, maintenance and mobility needs. Our team will then, create the implementation and project prioritization framework.

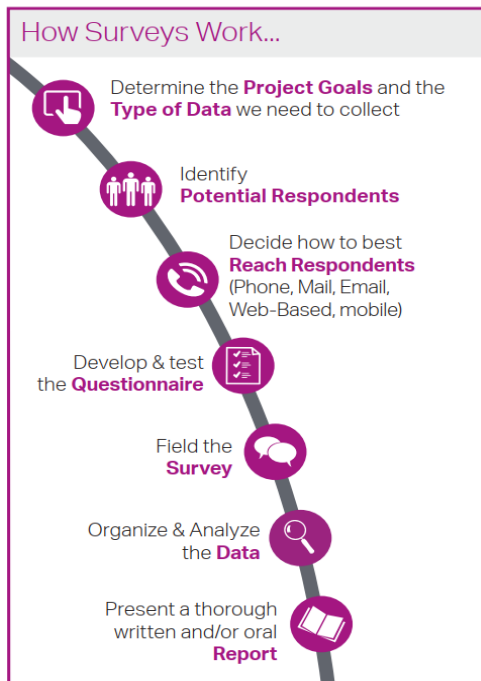
Oversight Committee

The AECOM team will work with the management team to identify the members of the Oversight Committee. The Oversight Committee will guide the efforts and provide advise as the tasks are planned and completed. We recommend that a cross-section of the community representatives serve on this committee, to bring diverse voices into the development of the study.

Typically, our projects have always had an Oversight Committee that oversees the development and deliverables and our proposed Project Manager, Mariate Echeverry, has experience managing the processes and expectations related to the functions of the committee.

We believe that transparency and frequent communication is the key to achieve consensus. Our meetings are always welcoming of new ideas, which reflects on the project outcomes.

The AECOM team recommends three meetings with the Oversight Committee, held at key stages in the process.



The framework will be used to verify that the service plans are reasonable and realistic, given available funding sources. Additionally, our team will prioritize recommended projects into tiers for implementation (this is discussed further in Tab 5). Based on the tiered recommendations, our team will facilitate a financial briefing to build consensus among the project stakeholders to support the proposed investment scenarios. The AECOM team will make certain all elements of each investment scenario are balanced within the local political, funding and geographic context, to result in the “best fit” for the County.

The project list will be a key product of the feasibility study, summarizing the County’s transit vision into a cost-constrained and prioritized list for implementation and to help identify funding from other sources. The project list will reflect the desired outcomes, accommodate future growth and be tied to financial realities developed in later tasks in order to gain support and successful implementation.

The short-term recommendations will include meaningful changes that the County can make quickly. These are service improvements or new services that can be implemented in the short-term that can be used to demonstrate to the public that they have been heard and that stakeholders can use to show that progress is happening. This analysis for the short-term strategies will rely on:

- Analyzing existing travel conditions and demands.
- Restructuring fixed routes to improve connectivity, travel time and on time performance and incorporating equity principles that take into consideration service to underserved communities. The restructured routes will be represented graphically in a fixed route system map that will assist riders in trip planning.
- Bus stop policy and location and facility improvements.
- A fleet inventory of transit vehicles available for implementing the revised transit services, including potential recommendations for other fuel technologies.

Medium and long-term recommendations may require additional planning or funding, new facilities and/or additional equipment.

Building of the data inventory and assessment from the prior task, internal and external input received by stakeholders and members of the public and the short-term needs, the AECOM team will prepare a medium-term needs assessment for the proposed transit investment projects that will outline the next level of service delivery implementation and determine the required financial and capital resources for deployment. This will also include estimated project costs and proposed revenue sources. Additionally, a data-driven approach will be employed in order to evaluate existing and future gaps in the transit network, which will inform and identify transportation projects and policies.

The team will develop service improvement scenarios for the County that cover three to eight years into the future. The scenarios will be presented first to key internal stakeholders and the Oversight Committee for input.

The AECOM team will outline the long-term needs and recommendations for 9+ years. AECOM’s data driven approach will be used to draft a series of recommendations centered around major, transformative transit projects that provide vital transit connections in the ACPT service area and in the Henderson County region. Our team will include results of the 2045 County Comprehensive Plan that affect transit service.



Long-term recommendations will include:

- A detailed framework of long-term project development options, that would represent a substantial enhancement in the role of transit within the County’s overall transportation network.
- A synopsis of operational requirements for these projects, including the construction of necessary infrastructure, the acquisition of property or rights-of-way and if new technologies are considered, the incorporation of hardware for emerging technologies and the corresponding infrastructure.
- Funding scenarios outlining the investment requirements for these projects, including detail on local contribution requirements, potential State contributions, Federal formula and grant funding availability and a roadmap of the Federal grant program processes.

Specific service strategies will be evaluated for appropriate areas in the service area. This will include, but not be limited to analysis of flex route (or deviated fixed route) service, as well as microtransit or on-demand service, for appropriate areas within the County that have higher density of activity, but may not be served efficiently by traditional fixed route service. Our team is working with the Integrated Mobility Division (IMD) and across the nation developing on-demand projects for small to large urban systems.

Transit Service Enhancements

Beyond implementation of new or modified services, potential improvements to the transit user experience and ability of operators and dispatchers to adapt and meet customer needs will also be addressed. Technological improvements to be evaluated will include but not be limited to: customer information enhancements (e.g. real-time information displays, mobile app and trip planner improvements) and operational/dispatch data improvements, using enhanced automatic vehicle location (AVL). Enhancements to the bus stop infrastructure, bus stop location guidelines and facilities would be included as part of this task.

First / Last Mile Service Implementation

The team will evaluate pedestrian access to ACPT bus stops identifying connections to transit and identify the gaps in the network that need to be considered to provide adequate access to the transit system. A database will be created with this information and prioritized with the help of the PMT, Oversight Committee and project stakeholders. Once prioritized needed improvements have been identified, bus stop and pedestrian network solutions will be developed and evaluated. Possible solutions could include bus shelters, safety improvements, comfort amenities, bus stop branding, roadway pads, ADA improvements, etc. The team will workshop the possible solutions with the PMT and develop recommendations. Once recommendations have been selected will be placed in the short, mid and long-term recommendations, as appropriate and cost estimates will be developed. Feedback on the recommendations will be requested from stakeholders and the public.

Recommended Capital Projects

It is important for the Capital Plan and Operations Analysis to be coordinated. Too often a Service Plan calls for changes that are not realistic within the capital procurement environment. The Capital Plan will focus on the short-, medium- and long-term periods and consider a fleet plan that will include bus capacity and size, life cycles, alternative fuel strategies and fuel capacity. Other elements of the Capital Plan will include high-capacity projects (i.e., Bus Rapid Transit), passenger amenity improvements such as facilities, shelters, lighting, benches, trash cans, security needs, new transit points and technologies in buses.

Once we have identified the capital fleet and facility improvement needs, the AECOM team will develop a corresponding short-, medium- and long-term capital improvement budget and schedule. Capital acquisition needs will be prioritized annually and compared to the projected capital fund. The AECOM team will identify potential funding sources to balance gaps between existing and required capital funds.

Draft and Final Reports

Upon completion of the tasks above, the AECOM will assemble a final draft of the Feasibility Study. This task will consolidate and synthesize findings and recommendations from previous tasks to produce the final document. All documentation related to all tasks including stakeholder involvement, data collection, evaluation of existing service, development of service changes and assessment of capital infrastructure and funding options will be included in the final draft Feasibility Study report. The final draft will feature a detailed 10-year program for implementation to assist in prioritizing proposed changes to transit in Henderson County. This Implementation Plan will be presented to the project Oversight Committee for review and comment. In addition, AECOM will provide printed copies and electronic copy containing all electronic materials as required by the RFP.

Executive Summary

The final report will be summarized in a graphically pleasing executive summary, designed specifically for elected officials and other stakeholders unfamiliar with transit.

Milestone Dates

Contract Approval / NTP	Marks the beginning of the project - expected within 30 days of award
Staff Meetings	Every two weeks after NTP, for the duration of the project
Stakeholder Meetings	Three meetings: Month 3, 5 and 6
First Draft Completion	Beginning of Month 7
County PMT review	10 days after delivery of first draft
Final Review	Beginning of Month 8
County PMT Final Review	10 days after delivery of Final Draft

Deliverables

AECOM is committed to provide the deliverables required in the RFP.

3. SIMILAR PROJECT EXPERIENCE



Investment in mobility improvements within our communities can unlock economic and social opportunities and transform the way we live. AECOM has been contributing to mobility improvements within small and large communities throughout North Carolina.

AECOM has delivered quality transportation projects across the state. We describe on the following pages recent and relevant projects completed successfully by the AECOM team. Client references, including telephone and email, are included for each project.

Relevant + Similar Project Experience

Greenville Area Transit Integrated Mobility + Enhancement Plan Greenville, North Carolina



Client

Kevin Mulligan, Public Works Director
252.329.4047
kmulligan@greenvillenc.gov

Completion
Ongoing

Project Team

Mariate Echeverry, Drew Joyner
Todd McAulliffe, Emily Scott-Cruz,
Adam Migliore Meyer

AECOM is assisting Greenville Area Transit (GREAT) with the Integrated Mobility and Enhancement Plan by reviewing the existing transit system for operational improvements, surveying emerging transit technologies and trends and engaging with stakeholders and the community. The plan will result in a redesigned system to maximize the effectiveness within resource constraints and identify innovative ways to provide service to the community.

Our team is assessing first/last mile accessibility to determine barriers to mobility and propose improvements needed to serve more people, especially in under-represented communities. Providing safe and convenient access is vital for effective service. Included in the evaluation is microtransit and Mobility-as-a-Service. Core to this project is the consideration of bicycle and pedestrian networks that connect neighborhoods and destinations with the transit system.

Short-, medium- and long-range route and system recommendations that meet the City's goals and objectives will be formulated based on the engagement with existing transit riders, stakeholders and focus groups as well as our review of existing conditions. Recommendations will be accompanied by a detailed five-year program for implementation to assist in prioritizing proposed changes to transit in Greenville.

Georgia Department of Transportation Transit Program Services Statewide, Georgia

Client

Georgia Department of Transportation
Patricia Smith, Ph.D.
Acting Transit Program Manager
404.347.0527
psmith@dot.ga.gov

Completion
Ongoing

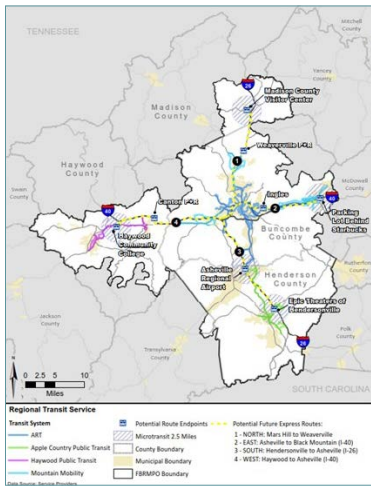
Project Team

Mariate Echeverry

AECOM was selected by the Georgia Department of Transportation (GDOT) Intermodal Division to provide management, planning, and engineering services in support of GDOT's administration of federal transit programs for small urban and rural transit systems across the state. As General Transit Consultant for GDOT, AECOM is providing on-site staff support and technical support for GDOT leadership and stakeholders, technical support for administering FTA Programs 5303, 5304, 5307, 5309, 5311, 5316, 5317 and 5339, developing FTA Section 5311 Program Training Guides for GDOT's subrecipients, developing a comprehensive statewide transit plan, preparing standard operating procedures that document the policies and procedures used by GDOT staff to administer the various FTA programs, and research and documentation of best management practices of peer state transit programs.

Regional Transit Plan Feasibility Study

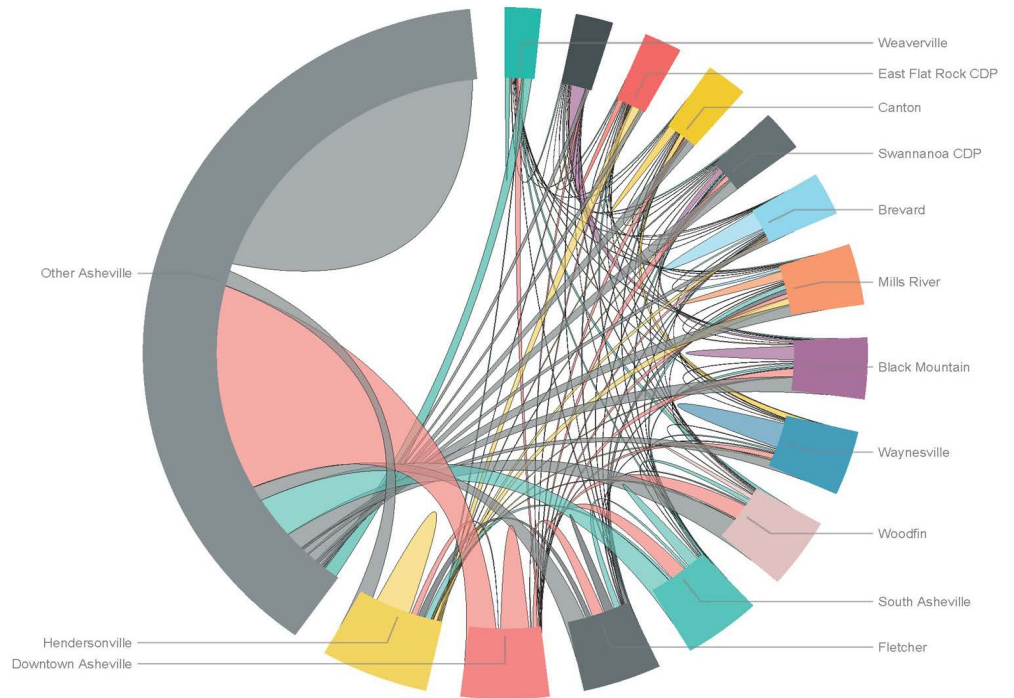
Asheville, North Carolina



Client
 French Broad River MPO
 Tristan Winkler, MPO Director
 828.251.7453
tristan@landofsky.org

Completion
 2020

Project Team
 Mariate Echeverry
 Jill Cahoon
 Todd McAulliffe
 Viktor Zhong
 Mickey Geiser
 Emily Scott-Cruz (Project Manager on the client side)



The French Broad River Metropolitan Planning Organization (MPO) hired AECOM to study the feasibility of creating regional connections among five counties in the urbanized area. The main focus of the study is to create a system that addresses equity across the region, providing quality service to underserved communities, removing transportation barriers and connecting them to employment, health services and educational opportunities.

The study looked at demographics, socio-economic data and commuting patterns; our team analyzed the potential for demand among all the counties, performing operational analysis and studying the models of governance among the transit agencies. AECOM is performing an analysis of regional transportation gaps to determine connections among the cities and towns that belong to the MPO.

The project has had a strong stakeholder coordination process and public involvement. The project, developed entirely on virtual environments, have included meetings every two weeks with the Steering Committee and the Project Management Team due to the project's high visibility. Public participation has included focus groups and an ambassador program where community leaders distribute information and collect feedback, particularly in underserved and vulnerable communities. This approach has been very successful and has drawn many people to the process. Virtual public meetings, online surveys and presentations have been held with broad participation.

The study will determine the feasibility of creating express routes, transportation demand management applications, such as vanpool, microtransit and overall coordination among the agencies.

Finally the study will propose models of governance, including recommendations to the MPO board as to how a regional entity should be structured.

Sanford Microtransit Project

Sanford, North Carolina



Clients

NCDOT Integrated Mobility Division
 Sarah Searcy, Deputy Director for
 Innovations and Data
 Integrated Mobility Division
 919.707.4694
sesearcy1@ncdot.gov

City of Sanford
 David Montgomery, AICP
 Senior Planner, Long Range Planning
 919.718.4657 X5392
david.montgomery@sanfordnc.net

Completion
 Ongoing

Project Team

Drew Joyner
 Mariate Echeverry
 Adam Migliore Meyer
 Emily Scott-Cruz
 Rachel Hamrick
 Andrew Ittigson
 Jill Cahoon



AECOM is currently assisting the NCDOT Integrated Mobility Division and the City of Sanford with a planning effort to address Sanford's education, workforce and general community mobility needs through a responsive and flexible mobility option. Through this planning process, the project team has conducted extensive surveys of current transit riders, employers, community college and residents to identify and understand existing mobility challenges. AECOM has prepared a market analysis based on demographics, employment commuting patterns and activity centers to develop several microtransit zone alternatives. As part of the Sanford Microtransit Project, the zone alternatives have been presented to the Sanford City Council and reviewed with stakeholders in order to identify a preferred zone for implementation.

A microtransit service is anticipated to result in the following benefits for the Sanford community:

- More efficient and responsive service that responds to rider demands with shorter wait times
- Increased flexibility when planning and scheduling trips
- Deployment off transit to low density and difficult to serve areas
- Accommodation of late-shift workers and those with unpredictable schedules
- Generation of robust data and insights on trip behavior
- Availability of a public, subsidized form of rideshare services

AECOM developed a financial plan and an implementation plan, key focuses of this planning effort, in order to launch service by 2024 contingent upon successful grant applications.

N. Roxboro Street / Avondale Drive Safety and Pedestrian Crossing Study

Durham, North Carolina



Client

City of Durham
 Leslie Tracey, Engineering Manager
 919.560.4366 X. 36437
Leslie.tracey@durhamnc.gov

Completion
 2021

Project Team
 Jimmy Hamrick

Avondale Drive and Roxboro Street safety analysis was conducted to provide an overview of the reported crashes during the five-year period between April 1, 2015 and March 3, 2020. The crash history study was prepared by NCDOT. This study covered two segments: US 501 Business (N. Roxboro Street) from Foushee Street to SR 1669 (Club Drive) and NC 55 (Avondale Drive) from US 501 Business (N. Roxboro Street) to Foushee Street.

The study provided general corridor-wide statistics as well as the identification of any cluster of crash locations. Where significant crash patterns existed, potential countermeasures were provided for consideration. The counter measures were provided in varying costs and scale for budgetary considerations.

Among the final recommendations was that the studied intersections have pedestrian refuge islands installed regardless of the inclusion of the continuous median islands and regardless of the chosen traffic control devices. The addition of a continuous median island simply bolsters the opportunity to increase corridor-wide safety and operations.

Salisbury Transit System Long Range Public Transit Master Plan

Salisbury, North Carolina



Client

City of Salisbury Transit Department
Rodney L. Harrison, Transit Director
704.638.5252, rlhar@salisburync.gov

Completion

2019

Project Team

Drew Joyner
Adam Migliore Meyer

AECOM led a five-month planning process to craft a long-range public transit plan to address city and regional mobility needs over the next 20 years. The process began with an assessment of existing transit service, demographics, land use and future trip generators. The study team conducted a peer analysis of similar transit systems, particularly those with recent experience in implementing microtransit. Surveys of Salisbury Transit System (STS) riders, community residents and stakeholders provided complemented the quantitative analysis and provided invaluable insights.

Interactive planning workshops were held with STS to collaboratively develop transit alternatives that would serve the needs of Salisbury residents. The process culminated in five scenarios that were presented to the Salisbury City Council for consideration. The scenarios were developed to provide the city with several options ranging in levels of investment and transit service. They included recommended fixed routes, microtransit zones, a rideshare program and regional transit service.

The long-range public transit plan included an interactive financial model to project operating, capital and administrative costs and revenues over the 20-year planning horizon. A detailed implementation plan was formulated to guide STS in making the plan a reality.

Mountain Mobility Improved Service Delivery Model

Asheville, North Carolina



Client

Buncombe County Planning and
Development Department
Denise Braine, Planner III
828.250.4838
denise.braine@buncombecounty.org

Completion

2016

Project Team

Adam Migliore Meyer
Jill Cahoon

AECOM assisted the Buncombe County Planning and Development Department in creating an improved service delivery model for its Mountain Mobility paratransit and route deviation services in western North Carolina. The AECOM team, supported by Chipley Consulting and SmartMaps, reviewed Mountain Mobility ridership and vehicle utilization, which included analyzing customer origin and destination data.

Stakeholders were engaged to provide feedback regarding service alternatives. Public outreach and education meetings were conducted to gain insight from area residents to assist in identifying key recommendations for improving the transit service. The eight-month process involved close collaboration with Buncombe County Planning and Development staff, the Mountain Mobility staff and outreach to the community.

Improved route schedules and maps were produced to include an updated Riders Guide. Recommended changes in the service were added to the printed materials and reflect the positive impact this study has had on the success of the new service delivery model.

Key recommendations included:

- Increase efficiency by partnering with the City of Asheville's fixed route transit system (ART) to complement the coordination of general public demand response trips
- Manage vehicle demand by modifying the community service route schedules in order to maximize vehicle capacity availability
- Modify deviated fixed routes to improve safety and target potential ridership along the deviated fixed route corridors
- Consider implementing demand response service zones to manage trip scheduling and transit demand. This would also allow sponsoring agencies to better forecast fare revenues.

Palmetto Breeze Transit Plan

Bluffton, South Carolina



Client

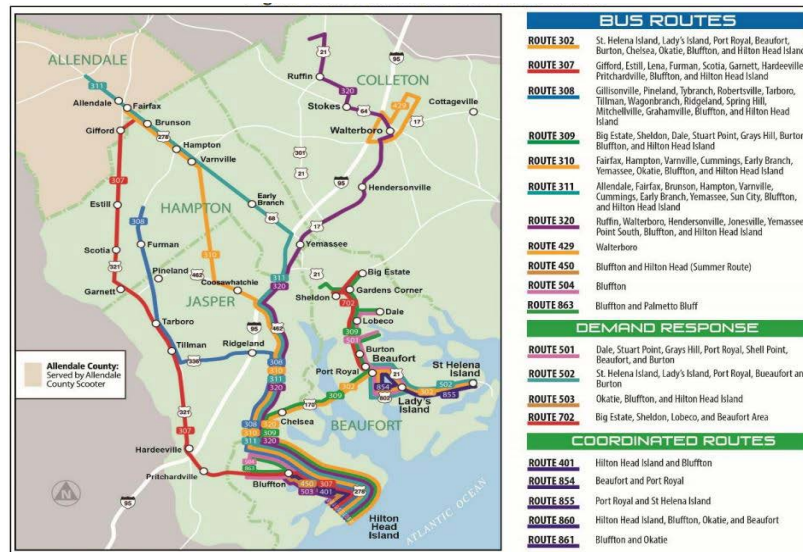
Palmetto Breeze
 Ginnie Kozak, Planning Director
 Lowcountry Council of Governments
 843.473.3958
gkozak@lowcountrycog.org

Completion

2018

Project Team

Mariate Echeverry
 Todd McAulliffe
 Will Calves



In December 2017, Palmetto Breeze retained AECOM to determine the most feasible new public transportation services in the Hilton Head Small Urbanized Area. The area, including the Town of Bluffton and the Town of Hilton Head Island, was officially designated a Census Small Urban Area in March 2012 with a population of approximately 68,998 at that time. Due to this change, federal regulations required the designation of a Metropolitan Planning Organization (MPO) to provide transportation planning within the census-designated area.

The Lowcountry Area Transportation Study (LATS) was established as the MPO in 2013 to provide transportation planning of the urbanized areas of Beaufort and Jasper Counties, including the municipalities of the Town of Beaufort, the Town of Bluffton, the City of Hardeeville, the Town of Hilton Head Island and the Town of Port Royal. The MPO’s area includes currently urban areas as of the 2010 Census, as well as the areas anticipated to be urbanized by the year 2030.

The Lowcountry Regional Transportation Authority (LRTA), also known as Palmetto Breeze, has been providing public transportation within the Lowcountry Region for four decades, with service in four counties. With the designation of Bluffton/The Town of Hilton Head Island as an urbanized area, new public transit funds – urban area formula funds are now available from the Federal Transit Administration (FTA). The LRTA is the region’s designated recipient for those funds. Palmetto Breeze conducted this study in order to effectively utilize the funds by planning new and expanded transportation services and anticipating vehicle and operational needs for the future.

The emphasis of this study was to determine the most feasible new public transportation services in the Hilton Head Small Urbanized Area. These economically viable new services will link residents and visitors to the area’s major employers, shopping areas, health care services, recreational and tourist attractions and educational facilities.

The approach to achieve the overall project goals included:

- Building upon the success of existing Palmetto Breeze operations
- Developing a realistic transit plan for the urbanized area of Bluffton and Hilton Head Island
- Establishing consensus and mutual understanding among the areas’ stakeholders, which hold the key to service implementation
- Identifying resources necessary to support service recommendations.

AECOM provided Palmetto Breeze:

- Detailed demographic and existing conditions analysis
- Innovative new services recommendations
- Recommendations for implementing future transit services.

SPARTA Comprehensive Operational Analysis

Spartanburg, South Carolina



Client
 City of Spartanburg
 Dennis Locke, Finance Director
 864.596.2119
dlocke@cityofspartanburg.org

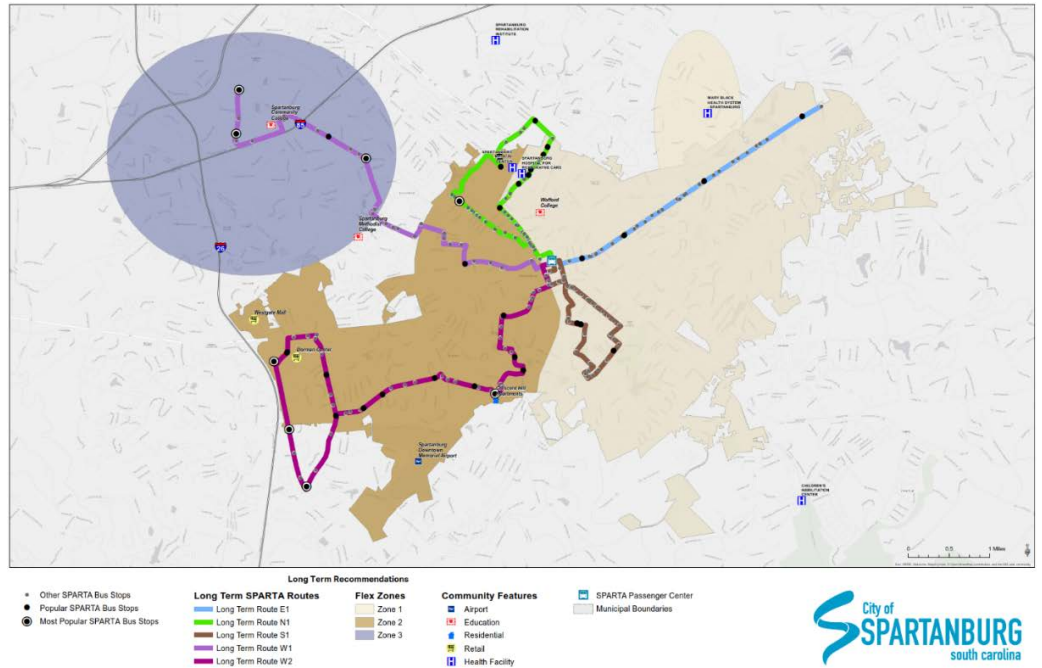
Completion
 2020

Project Team
 Mariate Echeverry
 Todd McAulliffe

The City of Spartanburg engaged AECOM to help them reversing the declining ridership and introduce changes that would better allocate the resources. AECOM team looked at existing conditions to determine needs and understand the gaps; this included a demographic and development patterns analysis that showed inefficiencies and redundancies. Our team developed recommendations in the short (0-5 years) and long-term (5 years +) that streamlined current routes and reallocated resources within the fiscal constraints the Spartanburg Area Regional Transit Agency (SPARTA) established. During the transitional years, increase in service hours at night and weekend service were considered.

In the long-term, a complete overhaul was proposed, reducing eight routes to four cross-town routes with frequencies of 15 minutes and the creation of areas served by microtransit. This long-term plan doesn't require additional funding and provides a more efficient service and use of resources and at the same time satisfies the City's goals of providing quality transit service with frequencies of at least 15 minutes to appeal to choice riders and making emphasis in improving service to the core riders. This effort included an analysis of first and last miles and proposed policies to be implemented to improve conditions to access the transit system.

A robust public engagement process informed the process, surveys, focus groups, pop-up events and public meetings were part of this effort. The study also included involvement from area employers to determine alternative ways to serve specific trips, such as work trips and second and third shifts.



Newton County Transit Master Plan

Newton County, Georgia



Client
 Newton County Department of
 Transportation
 Aaron Wadley
 678.625.1325
awadley@co.newton.ga.us

Completion
 Ongoing

Project Team
 Mariate Echeverry

Proposed Services

Project Priority

- The project team created transit project recommendations and evaluated these services for potential ridership, estimated cost, and stakeholder and public support.
- These projects have been organized by implementation timeframe: short-term, medium-term, and long-term.

Short-Term Projects

- These projects are designed to be implemented within five years of approval.
- Proposed projects include countywide demand-response service, shuttle service to Conyers, and a park-and-ride shuttle to connect commuters with Xpress bus service in Rockdale County.

Medium-Term Projects

- These projects require more advanced planning and are designed to be implemented within six to ten years.
- Proposed projects include microtransit on-demand service, the extension of Xpress commuter bus service into Newton County, and a Downtown Covington circulator service.

Long-Term Projects

- Long-term projects are intended for implementation in 11 to 20 years.
- These projects consist of fixed-route bus service in the Covington area.
 - Downtown Covington to Northeast Covington via Industrial Park Blvd
 - Downtown Covington to Porterdale via State Route 81

<http://www.movingnewton.com>

AECOM is working with the Newton County Department of Transportation to draft the county's first Transit Master Plan (TMP). This Plan provides analysis and concrete steps toward the creation of transit service in Newton County, advancing the overall transportation vision established in Newton County's Comprehensive Transportation Plan.

The TMP, scheduled to be finalized in Summer of 2022, uses multiple methodologies to provide a robust analysis of both local and regional transit markets. Examining population and employment density thresholds show what level of transit service specific areas may support. The transit propensity analysis examines the concentration of specific communities more inclined to use transit to ensure that proposed transit services are equitable and reach those most likely to use the services. Finally, a county-wide and regional origin-destination analysis uses advanced modeling to analyze trip patterns, which is especially useful in identifying potential demand for regional commuter service.

Transit needs identified in these analyses were synthesized into a series of transit service strategies. Potential cost and ridership estimates were paired with data from the needs assessment to generate a series of performance metrics. In selecting from the highest-scoring projects, AECOM took into consideration the universe of potential funding open to Newton County, as well as the vision and goals statement drafted by stakeholders, to advance a number of service strategies into a series of implementable recommendations.

Public and stakeholder outreach was a key component throughout the project. The AECOM team provided flexible outreach solutions during COVID conditions to solicit input well beyond statistical significance through a variety of in-person meetings, virtual meetings, surveys, and email and text message campaigns.

Ben Franklin Transit On-call Transit Consultant Services

Kennewick, Pasco and Richland Counties, Washington



Client

Ben Franklin Transit
Bill Barlow
509.734.5104
bbarlow@bft.org

Completion
2019

Project Team

Mariate Echeverry
Will Calves
Jill Cahoon
Adam Migliore Meyer



AECOM provided on-call transit consultant services to Ben Franklin Transit, the public transportation operator in the Tri-Cities region (Kennewick, Pasco and Richland) of Washington State.

Task Order 1 - Comprehensive Service Plan Study

Under Task Order 1, AECOM assisted Ben Franklin Transit (BFT) with the implementation of the Comprehensive Service Plan Study (CSPS). The purpose of this task order was to produce all the documents needed to change existing routes and implement new routes according to the CSPS. Due to budgetary constraints and implementation pressures, the operational documents (run-cutting) had to be expedited and delivered in four months. This included a revision of the Title VI program to ensure compliance with FTA requirements. Other tasks followed the implementation: identification, consolidation and relocation of bus stops and development of the Bus Stop Guidelines and Amenities Policy. This fast-paced project involved the following elements:

- Development of final route alignments for 19 routes (expedited for delivery)
- Final turn-by-turn sheets (expedited for delivery)
- Headway schedules (expedited for delivery)
- Final route schedules (expedited for delivery)
- Run-cutting (expedited for delivery)
- Evaluation of ridership post-implementation
- Title VI Service Equity Analysis
- Passenger amenities and bus stop assessment and recommendations
- Development of bus stop guidelines and amenities' policy in compliance with ADA regulations and bus stop installation prioritization process
- Task 1.A (Run-cutting Analysis): AECOM performed an analysis of BFT operational documents as follows:
 - Run-cutting adjustments outlining key events occurred at each bid that may have an impact on vehicles schedules or the work pieces.
 - Evaluation of efficiencies to determine how to improve the bids.
 - Evaluation of the changes to understand trends, links and causes and effect that have led to changes in performance stats, in particular the pay-to-plate ratio. Recommendations on how to adjust the run-cut to improve performance standards.

This project was completed on time and within budget. AECOM implemented project management and quality control practices, quality reviews, frequent schedule and budget check-ins and regular meetings with the client to monitor project progress. The implementation and operational work was completed in four months (regular schedule was 10 months) to respond to the accelerated implementation and budgetary processes.

Imperial County Public Transit Fare Analysis

Imperial Valley, California



Client
Imperial County Transportation
Commission
David Aguirre
760.592.4494
davidaguirre@imperialctc.org

Completion
2021

Project Team
Will Calves
Stuart Geltman

AECOM conducted and prepared the Public Transit Fare Analysis in 2019 for the Imperial County Transportation Commission (ICTC). AECOM examined the existing fare structure for all the transit services sponsored by the ICTC and proposed a new future fare structure that will not only simplify the fares throughout the various ICTC-sponsored services, but that will also leverage investments in new technology to collect fares more effectively and efficiently.

Work involved a variety of public outreach techniques, including stakeholder interviews, drop-in sessions, public meetings and technical and policy presentations. These efforts helped identify community needs for the future fare structure and build consensus for its implementation. The public outreach process was conducted in both English and Spanish afforded most users of Imperial Valley Transit (IVT) the opportunity for more meaningful input into the planning process. Of particular note was the analysis of IVT's revenue sources, including fares and the ability of revenue sources to fund current and planned services.

Southern Maine Long-Range Public Transportation Plan

Cumberland and York Counties, Maine



Client
Greater Portland Council of
Governments
Rick Harbison, Planner
413.244.7690
rharbison@gpcog.org

Completion
2020

Project Team
Jill Cahoon
Will Calves



The AECOM team is supporting the Greater Portland Council of Governments (GPCOG) in a new strategic planning process: the development of a long-range (30 years) public transit plan called "Transit Tomorrow". The plan focuses on the intersection of multimodal public transportation planning and land use scenario modeling. It includes an analysis of existing plans, visioning process, scenario planning and recommendations and strategies that will transform the region and will guide future prioritization of projects and investments in Southern Maine and strategic land use decisions. The project identifies recommendations and strategies to coordinate transportation modes and guide development along priority corridors and in priority centers. With seven transit providers, hundreds of stakeholders and private operators and 18 municipalities over two counties in the region, a collaborative approach is key to achieving buy in and making the vision a reality.

Transit Tomorrow will build a shared vision for the region's public transportation network of buses, trains, vans, carpools, bikes, pedestrians and ferries and lay out an investment plan for how to improve and expand the network over the next 30 years. AECOM is working with the GPCOG to help develop a vision through a series of stakeholder and public workshops, meetings and pop up tables in order to identify priority investments and growth areas to boost public transit ridership and efficiency and improve mobility. A key aspect of the scenario planning will be to identify how to leverage and prepare for mobility management and to assist with the Mobilitics™ platform, an innovative tool designed by AECOM, specifically to answer questions around the future impacts of emerging trends and technologies on the transportation system.

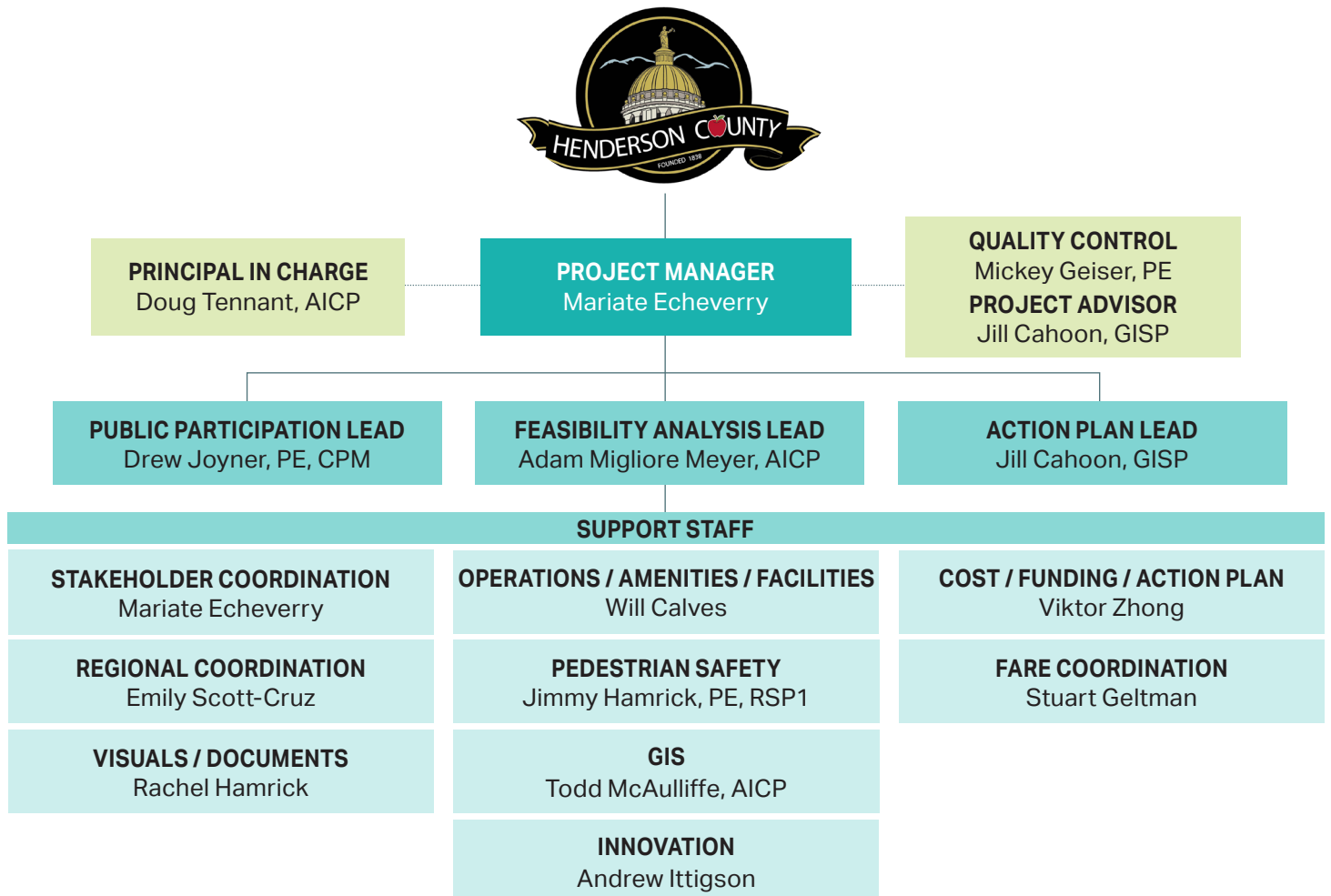
4. THE AECOM PROJECT TEAM



The AECOM team has been carefully selected to bring local transit-related expertise and strong project management skills to match the requirements outlined in the RFP and to meet the County's budget and schedule expectations.

The AECOM team members have been selected due to their experience with similar projects and knowledge of Henderson County area. The below organization chart shows the structure of our proposed team and is followed by resumes for key staff and bios for additional staff.

Organization Chart



Meet Our Team...



Mariate Echeverry Project Manager / Stakeholder Coordination

Mariate Echeverry serves as a Senior Transportation Planner in AECOM Charlotte, North Carolina office. She has 26 years developing and implementing innovative transportation strategies focused on the integration of land use and multi-modal transportation systems, transit planning and operations. As the Transportation Planning Manager for the City of Asheville, Mariate managed the transit system for ten years. In that capacity she was responsible for developing the first City's Transit Master Plan which provided guidance for the system's growth for the foreseeable future. This study involved a complete system overhaul that included frequency increase on main corridors, development of bus stops and amenities policy, bus stop analysis and consolidation, and system's rebranding and financial plan. Mariate also managed the FTA program for the City and its subrecipients, including Henderson County.

Since joining AECOM, Mariate has been assisting transit agencies across the southeast with their long-range and system integration needs.

Education

- + MSc, Urban Transportation, Universidade de Brasilia
- + BS, Architecture, Universidad Simon Bolivar

Select Experience

French Broad River MPO Regional Transit Plan Feasibility Study, Asheville, NC. Project Manager. Completed a connectivity, governance and funding sources analysis to evaluate the feasibility of implementing regional service, including a governance model.

GREAT Integrated Mobility and Enhancement Plan, City of Greenville, NC. Project Manager. Performed a comprehensive analysis of transit services and develop a plan that provides an integral approach to mobility and includes bicycle and pedestrian networks.

ADA Comprehensive Operational Analysis, City of Greensboro, NC. Project Manager responsible for performing an operational analysis to determine service efficiencies, better use of resources and greater customer service and develop an implementation and action plan.

Newton County Transit Master Plan, Newton County, GA. Investment Scenario Task Lead. The transit master plan evaluates the transit market and demand in the county and provides recommended transit solutions and services for implementing a new transit system that meets current and future needs.

N-CATT Using Technology to Advance Equity and Justice. DC. Principal Investigator responsible for developing a guidebook that assesses how technology impacts equity and justice and established best practices for the future applications.

Regional Transit Plan Feasibility Study, French Broad River Metropolitan Planning Organization, NC. Project Manager responsible for performing a connectivity, governance and funding sources analysis to evaluate the feasibility of implementing regional service, including a governance model.

SPARTA Comprehensive Operational Analysis, City of Spartanburg, NC. Project manager responsible for performing operational and productivity analysis to determine ways to improve efficiencies for the provision of transit service. Develop recommendations in the short and long term to fulfill community needs. This project has followed a robust public involvement process with key stakeholders, community members and agencies.

CAT Grants Administration and General Technical Assistance, Chatham Area Transit, Savannah, GA. Project Manager for the preparation grants in TrAMS and assist with discretionary funds applications, Title VI, and general tasks, as needed.

Cabarrus County Long Range Transportation Plan, Cabarrus County, NC. Project Manager. Developed a vision for transit services in Cabarrus County to respond to the area's needs and growth. The vision includes an analysis of consolidation opportunities for the demand response and fixed route system. This project included a robust public engagement process that involved key stakeholders such as community members, social service agencies and city and town managers.

Transit On-Call, GDOT, Statewide, GA. Technical assistance for 5307 and 5311 programs, including FTA compliance for operating and capital projects, procurement, operational analysis, and special projects, including the TDP Guidebook development.

I-40 Transit Priority Facility Pre-Feasibility Study, Regional Transit Agency, Raleigh, NC. Transit Planning Advisor. The project evaluated the feasibility of creating a bus on shoulder lane along I-40 between Raleigh and Chapel Hill.

SouthPark Comprehensive Neighborhood Improvements Program (CNIP), City of Charlotte, NC. Planning Lead. Led the planning process that guided the decision-making to enhance mobility in the area through the addition of pedestrian and bicycle infrastructure and multi-use path solutions. Project assessed barriers to walking and biking and proposed recommendations. Based on an extensive public engagement process, AECOM helped identify and prioritize more than 100 area projects.

Mud Creek Greenway Feasibility Study, Henderson County, NC. Project Manager. This project is studying the feasibility of developing a greenway to connect the communities south of Hendersonville to the Ecusta Trail. Public engagement was conducted entirely in virtual environments.

City of Asheville Transportation Planning Manager, NC. Managed the Asheville in Motion, the City's mobility plan, which developed a multimodal vision to guide improvements to the city's transportation system to respond to growth and social equity challenges through integration of land uses and development of transformative corridors that incorporate complete streets and livable communities' principles. This project had extensive public involvement in the way of symposiums, Charrettes, focus groups and open houses and was the recipient of the 2016 North Carolina Marvin Collins Award for outstanding planning effort.



Mickey Geiser, PE

Quality Control

Dominic “Mickey” serves as Transportation Department Manager in the Charlotte office. For over 22 years, Mickey has worked for clients such as the City of Charlotte, NCDOT,

South Carolina Department of Transportation (SCDOT) and numerous municipalities. His work has focused on roadway, transit, greenway, stormwater design, utility coordination and construction services. Mickey has developed the understanding necessary to implement holistic solutions for difficult urban and rural corridors. Mickey led the planning and design phases of the CityLYNX Gold Line – Phase 2 Streetcar Project, an FTA-grant funded multi-million-dollar transit project that installed 2.5-miles of streetcar infrastructure in central Charlotte, while replacing aging infrastructure, including water and sewer, stormwater, utility, roadway pavement and sidewalk facilities. This challenging design provided a new transit service and enhanced utility infrastructure while improving ADA accommodations and the multimodal functionality.

Education

+ BS, Civil Engineering, North Carolina State University

Professional Certification

+ Professional Engineer, NC

Select Experience

CityLYNX Gold Line Phase 2, City of Charlotte Engineering and Property Management, NC. Project Manager for a 2.5-mile extension to the CityLYNX Gold Line system. Guided the design of this challenging project with the goal of delivering a new transit service and enhancing utility infrastructure while improving ADA accommodations and the overall multimodal functionality of the corridor. Project included design of 22 intersections, five intersections between City and NCDOT-owned roadways and implementation of nearly 170 wheelchair ramps designed to ADA standards.

Transit Technology Feasibility Study, City of Raleigh, NC. In a subconsultant role, AECOM developed Technical Memoranda to review the existing conditions, cost considerations, and connectivity opportunities in three primary city corridors considered as part of the Transit Technology Feasibility Study. Each corridor was then studied for the potential improvements that could be recognized with the implementation of three transit technologies – bus rapid transit, modern streetcar, and light rail transit. AECOM reviewed discrete segments of each corridor to identify the impacts and potential benefits, and included these findings in the Technical Memoranda, which were attachments to the teams’ final submittal.

The Tide Before and After Study Project, Hampton Roads Transit, Norfolk, VA. AECOM worked with Hampton Roads Transit to develop and complete the study of the Tide light rail system for submittal to FTA. This study documented the evolution of The Tide light rail project from the time of receipt of the Full Funding Grant Agreement, through construction, and to present day, discussing the physical project, cost implication, and ridership projections and current day use. Led the review of the physical infrastructure and capital costs of the constructed project. The Study was completed and submitted to FTA in late 2014.

Crystal City Streetcar Environmental Planning and Preliminary Engineering Project, Arlington County, VA. AECOM performed the Preliminary Engineering and NEPA review for a modern streetcar system that will connect Pentagon City, Crystal City, and Potomac Yard in Arlington. Responsible for development of the Utility Rules of Practice – a planning document providing a basis for coordination between the County and impacted utilities on the corridors. Led utility coordination efforts and assisted with the development of Design Criteria, conceptual alignment selection, and various other tasks.

Urban Rail Program – Utility Rules of Practice, City of Austin, TX. The Austin Urban Rail is a planned 16-mile rail transit system to connect a large redevelopment near the University of Texas with downtown Austin and the airport. Assisted the City in development of the Utility Rules of Practice planning document which provides a basis for coordination between the Urban Rail and impacted public and private utilities throughout the corridor.

Mud Creek Greenway Feasibility Study, Henderson County, NC. AECOM was selected to review the feasibility of a greenway connection between the communities south of Hendersonville, and the Ecusta Trail. The study included public engagement (through virtual environments), alternatives analyses, and environmental considerations. Provided engineering guidance during the study, and performed QC for final deliverables.

SouthPark CNIP, City of Charlotte, NC. Served as the Project manager to engage the public and private entities in SouthPark, develop a full understanding of the myriad dynamics of the neighborhoods, generate a list of project concepts that could address the mobility needs of the community, and assist the City in sorting and ranking of those potential projects for future implementation. The list of potential SouthPark CNIP projects, captured in a detailed planning document known as the PlayBook, is now being used by the City to help leverage public infrastructure investments with other public/private partners to strategically improve the community moving forward. Original contract estimated 21 months for completion, but high visibility of the project required compression of the schedule to 13 months.

Highway 115 Feasibility Study, Phase II – Washam Potts Road to Highway 73, Town of Cornelius, NC. Project Manager. Study of NC 115 between the Towns of Cornelius and Huntersville investigating the ability to provide bike/ped facilities, analyzing current and future traffic operations and improving the safety of rail crossings along the 2.5-mile corridor immediately adjacent to an existing NS Rail line. Included stakeholder, NCDOT and railroad coordination as well as public engagement, traffic analysis, alternatives analysis, conceptual designs and estimates.

Charlotte Streetcar Project, City of Charlotte, NC. Project Engineer managing multiple tasks and responsible for development of the 10-mile Charlotte streetcar project (now known as the CityLYNX Gold Line) conceptual design and preliminary engineering, including design criteria, track alignment and roadway impacts, conceptual utility relocation and coordination and management of the environmental assessment, which received a FONSI in 2011. Involved in development of a range of project designs, including stop locations, systems considerations and project constructibility.



Jill Cahoon, GISP

Project Advisor / Action Plan Lead

Jill operates in several capacities including project manager and senior transit planner with experience in a wide variety of geographies and project types with a particular focus on bus operations

planning, effective community engagement and robust technical analyses. Jill is also a certified Geographic Information Systems (GIS) Professional with extensive experience gained through project work and teaching GIS at the university level. Jill serves as AECOM's Transit Planning Lead for New England as well as the National Coordinator of Rural and Human Services Transportation Planning Studies.

Education

- + MA, Geography, University of Maryland
- + BS, Geography and GIS, University of Maryland

Professional Certification

- + Geographic Information Systems Professional

Select Experience

Long Range Public Transportation Plan for Southern Maine – Transit Tomorrow, Greater Portland Council of Governments, Portland, MN. Project Manager. The AECOM team supported the Greater Portland Council of Governments in a new strategic planning process – the development of a long-range (30 years) public transit plan. The plan focuses on the intersection of multimodal public transportation (bus, ferry, rail, demand response, microtransit, bicycle, pedestrian, micromobility, etc.) planning and land use. The plan included the development of a vision that will guide future prioritization of projects and investments in Southern Maine.

Five-Year Transit System Plans, Minnesota Department of Transportation, Southwest and Northeast MN. Project Manager. The AECOM team led the development of rural transit assessments across the southwest and northeast regions of Minnesota. Work included evaluation of existing transit services, primarily demand responsive services, community outreach to prioritize needs and plans and the development of strategies to work towards meeting the legislative mandate of meeting 90% of transit needs in Greater (Rural) Minnesota by 2025.

Vista Transit Operational Efficiency Study, Sierra Vista MPO, Sierra Vista, AZ. Paratransit Task Lead. AECOM supported the analysis, evaluation and development of recommendations for service and fare structure modifications within the Vista Transit service area. The primary focus of the Paratransit Task was an evaluation of trips currently operated inside and outside of the ADA-mandated complementary zone of 3/4 mile.

Cabarrus County Long-Range Transportation Master Plan, Rider and Cabarrus County, NC. Operations Task Lead. The AECOM team recently completed the long-range transportation plan for Cabarrus County which is one of the fastest growing counties

in America. The team worked with the fixed route operator (Rider) and the demand response operator (Cabarrus County Transportation Service) to evaluate short, medium and long-range options for the future. The study also contained a consolidation component, an extensive community outreach component and sought to help both agencies to plan/prepare for the future.

Five-Year Comprehensive Regional Transit Plan Updates, Massachusetts Department of Transportation Regional Transit Authorities (MassDOT), Commonwealth-wide, MA. Project Manager. The AECOM team is working for the MassDOT Rail and Transit Division with all 15 Regional Transit Authorities commonwealth-wide to develop and update comprehensive regional transit plans. Work includes evaluation of existing transit routes and services, community outreach to prioritize needs and plans and developing strategies to improve public transit in communities across the state, focusing on performance.

Best Practices in Rural Transit Service Assessment, National Cooperative Highway Research Program Project 20-65, Nationwide. Principal Investigator. The AECOM team is conducting nationwide research on best practices in rural transit assessment and producing a guidebook for use by State Departments of Transportation and rural transit service providers in conducting effective performance-based service assessments.

Brunswick Transit Study, Town of Brunswick, MN. Project Manager. The AECOM team is working with the Town to conduct a comprehensive transit study. The study focuses on redesigning the Brunswick Explorer deviated fixed route service to better meet the current and future needs of the community. The service was originally designed and implemented 10 years ago, during which time a military base closed, the population grew, new development occurred and two new regional transit services were implemented, but the routing had never been updated.

Transit Planning Services, Toledo Area Regional Transit Authority (TARTA), OH. Client Coordinator. The AECOM team has an on-call planning, engineering and architectural contract with TARTA. Under this on-call program, AECOM has provided a financial analysis and projection for the agency, a staffing level analysis, contract reviews for Toledo Public Schools and the University of Toledo services, Board presentations, asset valuation, fall and winter assignment implementation support and National Transit Database reporting support.

Sullivan County Transit Short-Range Transit Operations Plan Development, NH. Project Manager. AECOM assisted Southwestern Community Services, the operator of Sullivan County Transit, to develop a near-term operations plan for bus service in Claremont, Charlestown and Newport, NH. The project involved the evaluation of existing services and the development of operational improvements, including the designation and improvements of bus stops, to enhance the service.



Drew Joyner, PE, CPM

Public Participation Lead

Drew serves as North Carolina Transportation Planning Department Manager and has more than 25 years of transportation experience. Prior to joining AECOM, Drew managed the NCDOT's Human

Environment Section/Public Involvement Group responsible for guiding public engagement efforts of the department statewide. He has led high-profile transportation projects, facilitated interagency meetings, developed comprehensive public involvement plans and provided guidance on all aspects of public/stakeholder engagement. Since joining AECOM, Drew has administered public hearings for the Durham-Orange Light Rail, the Bonner Bridge Replacement, the Winston-Salem Northern Beltway, the I-26 Connector in Asheville and the US 1 Rockingham Bypass projects. Drew had a major public involvement role in the Business 40 Improvement Project in Winston Salem, which included an extremely comprehensive public outreach plan that was recognized by FHWA.

Education

+ BS, Civil Engineering, North Carolina State University

Registration

+ Professional Engineer, NC

+ Certified Public Manager

Select Experience

ADA Operational Analysis, Greensboro Transit Agency (GTA)

NC. Public Involvement Lead for an operational analysis of the City of Greensboro/GTA's paratransit service. Outreach includes developing and implementing a comprehensive public engagement plan that consists of virtual public meetings, stakeholder interviews, stakeholder focus groups, website/media/social media content, surveys and educational materials.

Integrated Mobility and Enhancement Plan, GTA, NC.

Public Involvement Lead on the development of an Integrated Mobility and Enhancement Plan for Greenville Area Transit. Overseeing outreach including developing and implementing a comprehensive public engagement plan that consists of virtual public engagement, stakeholder interviews, stakeholder focus groups, website/media/social media content, public meetings, unmanned public surveys and educational materials.

NCDOT Public Involvement Manual and Guidance, NC.

Project Advisor for the development of NCDOT's Public Involvement Manual and accompanying guidance. Included review and guidance in completion of NCDOT's comprehensive public engagement manual. Also included creation of an interactive public involvement guidance resource.

NCDOT Merger Process Improvement, NC.

AECOM Project Manager leading the effort to improve NCDOT's Section 404/NEPA Merger Process. Process improvement includes leading multi-disciplinary teams, leading focus/working groups, developing/administering surveys, updating an interagency memorandum of understanding, writing process/procedures and providing training/guidance.

US 70 (Glenwood Avenue) Improvements Near Brier Creek,

NCDOT, Raleigh, NC. Project Manager for a project development study to upgrade the portion of US 70 from T.W. Alexander Drive to I-540 by replacing at-grade intersections with interchanges and limiting control of access. Project study involves design/traffic engineering challenges, public involvement, state/federal agency coordination and negotiation with businesses and property development companies.

I-95/US 70 Innovative Technology and Rural Mobility Corridor Improvements: INFRA Grant Application, NCDOT.

Project Manager. The project team engaged extensively with NCDOT to define the project, collect/analyze a wide array of data, run scenarios in the Statewide Travel Demand Model and estimate the benefit-cost analysis. The scope of work included completing accompanying technical memorandum, the grant application narrative and draft application package. NCDOT was awarded a \$147M grant.

US 70 Kinston Bypass, NCDOT, Kinston, NC.

Project Advisor for the Kinston Bypass project, a four-lane, median divided freeway with full control of access in Lenior, Jones and Craven counties. Assisted with completion of the Draft EIS and agency/project team coordination. Assisted with various public outreach events including booths at local festivals, interactive public workshops, project videos, online engagement, open-house public meetings and a formal public hearing.

Business 40 Improvement Project, City of Winston-Salem, NC.

NCDOT Project Manager for the Environmental Assessment for the improvement of Business 40/US 421 freeway through the heart of Winston-Salem. Project includes replacement of 11 bridges; re-alignment and/or removal of ramps, loops and interchanges; and rehabilitation of pavement. During construction, Business 40 will be closed to through traffic. Project study involved extensive public outreach and business coordination efforts that were recognized by FHWA as a case study in avoiding Environmental Justice impacts.

North-South Bus Rapid Transit, Chapel Hill Transit, NC.

Public Involvement Lead for the development of a Bus Rapid Transit system on Martin Luther King, Jr., Boulevard. Outreach efforts include media/social media, pop-up meetings, online citizen participation, neighborhood and small-group meetings and advertised open-house public meetings.

Growing Rural Economy and Agriculture Through Transportation and Technology Enhancement or Replacement: BUILD Grant Application, NCDOT.

Project Manager. The team engaged extensively with NCDOT to define the project, collect/analyze a wide array of data, estimate the benefit-cost analysis and coordinate with internal and external stakeholders. The scope of work included completing accompanying technical memorandum, the grant application narrative and draft application package. NCDOT was awarded a \$23M grant.



Adam Migliore Meyer, AICP

Feasibility Analysis Lead

Adam is a Senior Transportation Planner experienced in transit grant preparation and management, particularly the FTA Capital Investment Grant (CIG) Program.

He has prepared numerous Small Starts and New Starts grant applications, including warrants analyses. Adam has assisted recipients with managing discretionary and formula grants in the FTA Transit Award Management System (TrAMS). In addition, Adam has completed transit comprehensive operations analyses, developed bicycle and pedestrian plans and created interactive tools for comparing and communicating transit performance metrics and selecting locally preferred alternatives.

Education

- + BS, Environmental Science, Minor in Geography - Concentration in City and Regional Planning
- + Morehead-Cain Scholar/UNC Chapel Hill

Professional Certification

- + Certified Planners, American Institute of Certified Planners

Select Experience

Sanford Microtransit Project, City of Sanford, NC. Project Manager leading the development of a microtransit planning effort to address Sanford's education, workforce, and general community mobility needs through a responsive and flexible mobility option.

Microtransit Planning Assistance, NCDOT, NC. Currently assisting NCDOT with the planning and implementation of several microtransit services across the state, including the recent launch of the RideMICRO service in Wilmington, NC and designing a new service in Sanford, NC. Assistance has included initial microtransit service design, transit agency coordination, grant application development, and FTA grant management and reporting.

GREAT Integrated Mobility and Enhancement Plan, Greenville, NC. Task lead responsible for performing a comprehensive analysis of transit services, redesigning fixed routes, analyzing potential microtransit service zones, and developing a plan that provides an integral approach to mobility and includes bicycle and pedestrian networks

North-South Corridor Study, City of Chapel Hill, NC. Assisted with an Alternatives Analysis to identify BRT as the appropriate high-capacity transit option for an eight-mile corridor in Chapel Hill, NC. Responsibilities included GIS analysis and mapping, pedestrian and bicycle coordination, demographic analysis and technical report documentation associated with the purpose and need and fatal flaw analysis. Assisted with the capital cost estimates and request to enter project development.

Salisbury Transit Long Range Public Transportation Master Plan, Salisbury Transit System, NC. Served as the Deputy Project Manager to develop a 20-year plan for the Salisbury Transit System, including a redesigned fixed-route system, microtransit zones, and budget model.

NC 54 Transit Options Feasibility Study, Orange and Durham Counties, NC. Project Manager to assess the feasibility and capital costs of implementing transit signal priority, queue jumps and dedicated transit lanes in the NC 54 corridor.

NCHRP Project 20-65 Research Task 82: "Providing Customized, Client-Based Transportation Services," NC. Developing an interactive decision-making tool to identify applicable funding sources for transportation services based on funding requirements.

Siler City Feasibility Study, NCDOT, Siler City, NC. Led a sidewalk feasibility study for the Town of Siler City and NCDOT to assess the existing infrastructure, travel patterns and corridor demographics for selecting a preferred sidewalk alternative.

North-South BRT Small Starts Application, Town of Chapel Hill, NC. Served as Task Lead in the preparation of an FTA Small Starts application for a Small Starts Grant Agreement to fund the BRT project. Responsibilities included preparing the project justification criteria and developing the project financial plan. Conducted a ridership analysis using GTFS data to determine eligibility for Small Starts warrants.

Craven Area Rural Transit System Transit Development Plan, City of New Bern, NC. Prepared a Transit Development Plan for the small-urban and rural transit system with recommendations for growing the transit service and improving customer service over the next 5 years.

East-West Bus Rapid Transit Project, City of Milwaukee, WI. Assisted with the preparation of a request to enter FTA Small Starts Project Development for a 7-mile bus rapid transit project in Milwaukee and grant request. Responsibilities included Small Starts documentation, capital cost estimates in the FTA SCC format, comparison of environmental benefits and analysis of demographics and land use. Currently assisting with updates to the Project Management Plan and subplans.

Five-Year Transit System Plans, Minnesota Department of Transportation, MN. Led the development of an interactive performance dashboard to allow transit systems to better gauge and communicate their services.

Cabarrus County Long Range Public Transportation Master Plan, Cabarrus County, NC. Authored a route factbook analyzing and comparing productivity and performance. Proposed a redesigned fixed-route system in collaboration with the transit agency.

Seagrove Pedestrian Plan, NCDOT, Seagrove, NC. Project Manager to improve pedestrian safety and connectivity within Seagrove with a special focus on enhancing the town's local arts and tourist economy.

Morristown Deviated Fixed Route Study, TDOT, Morristown, Tennessee, 2018. Designed a new fixed-route system for Morristown, TN, by assessing the mobility needs residents through public meetings, community surveys, and stakeholder involvement.

Jacksonville Transit System Development Plan Update, Jacksonville, North Carolina, 2018. Provided a redesigned fixed-route system in preparation for the new Multi-Modal Center. Involved coordinating transit services with the region's military installations.



Emily Scott-Cruz

Regional Coordination

Emily is a Transportation Planner with AECOM and brings experience in regional governments. Prior to AECOM, Emily was a Regional Transportation Planner for the French Broad River MPO in Asheville, NC. She specializes in transit planning, managing FTA Section 5310 and 5307 funding, conducting special studies related to transit and bicycle/pedestrian networks, organizing effective community engagement, programming projects in the STIP and MTIP and facilitating local, regional and statewide committee meetings. While obtaining her Masters in Public Administration from UNC-Charlotte, Emily served as Centralina Regional Council's Planning Intern, where she analyzed zoning ordinances, created demographic reports, conducted public engagement for CONNECT Beyond and hosted events for the Clean Fuels Coalition.

Education

- + MS, Public Administration, University of North Carolina - Charlotte
- + BA, Women Studies, Salem College

Select Experience

Sanford Microtransit Project, City of Sanford, NC. AECOM is creating a microtransit plan for the City of Sanford. The plan consists of an analysis of existing conditions and demographics, public engagement to identify mobility needs, a service model and operating plan. Ms. Scott-Cruz compiled the demographic profile for the City of Sanford and evaluated the service area demographic in the three proposed microtransit zones.

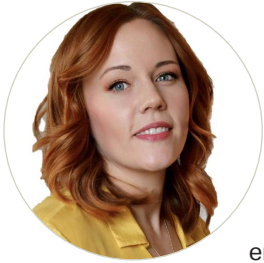
ADA Comprehensive Operational Analysis, City of Greensboro NC. Transportation Planner. Through this analysis, AECOM evaluated service delivery, financial performance and eligibility processes and identified ways to strengthen the system's best practices. Responsible for developing a scoring methodology for prioritization of recommendations, writing the final report and facilitating focus group meetings to understand the priorities of stakeholders and riders.

Gatlinburg Comprehensive Operational Analysis, City of Gatlinburg TN. Transportation Planner. AECOM is analyzing Gatlinburg's trolley system operations in order to propose system changes to improve efficiency and effectiveness of operations. Reviewed the data collected from the City and analyzed existing conditions of the transit system along with demographic data for the City.

Regional Transit Plan Feasibility Study, Asheville, French Broad River MPO, NC. Transportation Planner. The study created a vision for the future of public transportation in the French Broad River region through collaborative development seeking to create a regional network that connects people to opportunities and provides mobility options to residents, employees and visitors.

2045 Metropolitan Transportation Plan (MTP), French Broad River MPO, Asheville, NC. Transportation Planner. The MTP is a multimodal, fiscally-constrained required document that reflects planned transportation investments over the next 25 years. It forecasts changes in the region and seeks to identify transportation improvements and investments needed to keep travelers and goods moving smoothly. Analyzed transit data, conducted public engagement and contributed large sections of the plan's narrative.

FTA Section 5310 and Jobs Access Reverse Commute (JARC), French Broad River MPO, Asheville, NC. Transportation Planner. Revised the application and scoring processes for Section 5310 (Enhanced Mobility for Seniors and Individuals with Disabilities) and JARC. While the City of Asheville is the direct recipient for both grants, the MPO is responsible for holding annual competitive Call for Projects.



Rachel Hamrick

Visuals / Documents

Rachel is an Architectural and Urban Designer Rachel's with a passion for public space as a place for community enrichment and wellbeing. Coupled with her experience in municipal planning, which includes experience working with the planning staff of Benchmark CMR for the City of Kannapolis, her design experience is strengthened by an understanding of unified development, ordinances, government and public processes. Rachel recently worked on the Greenville, NC Area Transit Integrated Mobility and Enhancement Plan, the Small Transportation Area Plan (Better Block) in Greensboro, NC and the Comprehensive Land Use Plan Update project in Lumberton, NC. Rachel is located in Charlotte.

Education

- + Master in Urban/Environmental Planning, University of North Carolina
- + BS, Arts/Architecture, University of North Carolina

Select Experience (While Employed at Neighboring Concepts)

LYNX System Update Mecklenburg, Charlotte Area Transit System (CATS,) Gaston and Iredell Counties, NC. Provided community outreach services for the expansion of CATS' county wide system plan along with place making design at potential transit stations. The goal of this project was to gauge potential transit routes and determine scale and capacity of transit options along two predominate corridors in the Charlotte region.

CityLYNX Gold Line, CATS, Charlotte, NC. Designer. Provided photo simulations of station area plans along then future streetcar line to support a larger planning effort completed by Neighboring Concepts, in association with AECOM.

West Trade/Rozzelles Ferry CNIP Five Points Plaza and NCDOT I-77 Underpass Enhancement, City of Charlotte, NC. Provided community outreach services, small area planning, 3D Modeling and illustrative renderings for several CNIP projects throughout the City.

Independence Boulevard Sidewalk and Bike Facilities CNIP - North Ped/Bike Boulevard, City of Charlotte, NC. Provided community outreach services, small area planning, 3D Modeling and illustrative renderings for several CNIP projects throughout the City of Charlotte.

SouthPark CNIP, City of Charlotte, NC. Provided community outreach services, small area planning, 3D Modeling and illustrative renderings for several CNIP projects throughout the City of Charlotte.

Charlotte Center City, 2040 Vision Plan, Charlotte, NC. Supported community engagement, illustrative renderings of high-level place making ideas and helped refine goals defined through community engagement in conjunction with City Officials.

Future 2040 Comprehensive Plan, City of Charlotte, NC. Performed an equity audit of previous plans and provided early community engagement.

Comprehensive Land Use Plan Update, Town of Blowing Rock, NC. Supported GIS mapping, photo simulations, hand drawn graphics and data analysis for multiple projects while at Benchmark Planning CMR.

Comprehensive Land Use Plan Update, City of Lumberton, NC. Supported GIS mapping, photo simulations, hand drawn graphics and data analysis for multiple projects while at Benchmark Planning CMR.

Shepherdstown Land Use Plan Update, Shepherdstown, WV. Supported GIS mapping, photo simulations, hand drawn graphics and data analysis for multiple projects while at Benchmark Planning CMR.



Will Calves

Operations / Amenities / Facilities

Guillermo (Will) Calves is a Senior Transit Planner and Project Manager with more than 26 years' experience performing transit planning studies for public transportation agencies throughout the nation. He brings a background in urban geography and planning with a specialization in urban transportation systems. As a Project Manager, he has been responsible for the conduct of all aspects of transit planning studies, from public outreach to service planning to service implementation. He has managed projects for a variety of clients, ranging from studies focused on a particular aspect of a transit system to corridor studies to comprehensive transit system redesigns.

Will has been responsible for compiling and analyzing data regarding public transportation agencies around the nation, and for the preparation of system route, operations and marketing plans utilizing the data results. He has participated in the development of public transportation improvement programs throughout the nation in various types of metropolitan areas and transit service environments. As part of these studies, he has conducted public participation programs which involve various customer survey efforts, ridership counts and interviews with both local community leaders as well as people who are not regular users of the public transportation system. Will has also assembled peer groups for numerous public transportation agencies and conducted research to obtain data from peer systems to analyze transit operations. Will also has extensive experience in the development and compilation of data and its use in the development of new and refined transit service plans, including data gathered from the fare collection process. Finally, as an integral part of these efforts, he can synthesize all of these various inputs into implementable, cohesive and comprehensive transit system operating plans.

Education

- + MA, Urban Planning, University of Pennsylvania
- + BA, Geography, George Washington University

Select Experience

Transit Tomorrow, Transit Tomorrow, Portland, ME. Senior Transit Planner and task leader for the Development of Recommendations and Strategies on this important project, which is developing a long-range plan for transit services – including potential bus rapid transit (BRT) and regional rail corridors – throughout the Greater Portland area. This project has made extensive use of scenario planning methods to help develop and understand the potential future direction of the transit services in the area. Emphasis was placed on the role emerging technologies and new mobility management methods (including new fare collection technologies) may also have in the development of alternative recommendations.

Imperial County Short Range Transportation Plans, Imperial County Transportation Commission, El Centro, CA. Project Manager for these engagements, and has participated and managed every aspect of the development of these Short Range Transit Plans, including data collection, public outreach, and the preparation and development of various possible service alternatives. Of particular note is the public outreach process,

which is conducted in both English and Spanish, thus affording most users of Imperial Valley Transit the opportunity for more meaningful input into the planning process.

Ben Franklin Transit On-Call Transit Consultant Services, Kennewick, Pasco and Richland, WA. Assisted with the implementation of the Comprehensive Service Plan Study (CSPS). The purpose of this task order was to produce all the documents needed to change existing routes and implement new routes according to the CSPS. Due to budgetary constraints and implementation pressures, the operational documents (run-cutting) had to be expedited and delivered in four months. Mr. Calves was directly involved in the implementation process, including verifying route alignments and proposed bus running times. Mr. Calves also confirmed the identification, consolidation, and relocation of bus stops and led the development of the Bus Stop Guidelines and Amenities Policy.

Imperial County Fare Analysis, ICTC, El Centro, CA. Project Manager for this study, which examined the existing fare structure for all the transit services sponsored by the Imperial County Transportation Commission (ICTC). The study has proposed a new future fare structure that will not only simplify the fares throughout the various ICTC-sponsored services, but that will also leverage investments in new technology to more effectively and efficiently collect fares.

Lehigh Valley Enhanced Bus/BRT Study, Lehigh and Northampton Transportation Authority Allentown, PA. Project Manager for this study, which examined the various trunk corridors in the Lehigh Valley and their ability to host enhanced bus or bus rapid transit (BRT) services. The study carefully examined the current and projected land uses along the corridors, including the impact of Muhlenberg College and Lehigh University on the downtowns of (respectively) Allentown and Bethlehem, as well as possible modifications to those land uses that may assist in the development and support of the enhanced bus/BRT services.

Connecting Services to Ferries Study, New Jersey Transit, NJ. Project Manager responsible for leading the consultant team on this study effort. This study analyzed the transit system in northern New Jersey and determined ways in which connections (including rail transit links) to trans-Hudson River ferry services can be made more attractive. A specific area of focus was the analysis of the existing fare structures and fare collection methods to determine how a more “seamless” travel experience could be developed. The intent is to develop a series of improvements that will increase ferry utilization and relieve pressure on the currently overburdened Hudson River crossings into New York City.

Passive Data Collection Guidebook, National Center for Applied Transit Technology. Primary task leader and researcher for the development of this Passive Data Collection Guidebook, which will assist small-to-medium size transit systems in selecting and implementing passive data collection technologies, including those that utilize fare collection and boarding/alighting data to develop various metrics used in the planning process. This effort includes interviews with both technology vendors as well as transit agencies throughout the nation to develop case studies.



Jimmy Hamrick, PE, RSP1

Pedestrian Safety

Jimmy has almost 30 years of experience in the transportation industry and served over 23 years at NCDOT. Throughout his career, Jimmy has worked in many areas of traffic engineering including signing/marketing implementation, contract management, signal timing/coordination, speed limit studies, school traffic studies, traffic impact reviews, crash analysis, road safety audits, recommendations for safety countermeasures, project scoping and safety benefit cost analysis. As Regional Traffic Engineer for NCDOT, Jimmy completed thousands of safety studies to improve safety in a 14-county region for all modes of travel. He was also responsible for the development of hundreds of safety projects for the state's Highway Safety Improvement Program. At AECOM, Jimmy leads the safety team in crash analysis studies, predictive crash analyses, field investigations, Highway Safety Improvement Program analysis/investigation, fatal crash analysis/investigation. He serves on the National Governor's Highway Safety Initiative in North Carolina and as a subject matter expert in the area of traffic safety..

Education

+ BS, Civil Engineering, University of North Carolina, at Charlotte

Professional Certification

+ Professional Engineer, NC

+ Road Safety Professional 1 Certification

Select Experience

National Governor's Highway Safety Initiative, North Carolina Governor's Safety Office. Leading a group of local stakeholders through the process of creating multidisciplinary safety coalitions in Cleveland and Gaston counties. Presented local data trends to bring awareness of potential areas to focus on such as crash causal factors. Through multiple meetings, provided guidance on using the multiple discipline approach to safety. Led the group on a road safety field audit and developed strategies to improve NC 150 from an engineering standpoint as well as enforcement, education, emergency response.

18TMS Highway Safety Improvement Program - 2020, NCDOT, Statewide, NC. Traffic Engineer, providing services associated with Highway Safety Improvement Program locations.

Highway Safety Improvement Analysis and Investigation, NCDOT, Statewide, NC. Project Engineer responsible for crash analyses in various formats, conducting field investigations and preparing recommendations for improvement projects to NCDOT.

NCDOT Transportation Mobility and Safety Division Limited Services Contract - 2021 - Division 10 Curve Signing, Statewide, NC. Lead Engineer. Investigated and made recommendations for over 200 horizontal curves in rural areas to support the County's Vision Zero efforts to reduce roadway departure crashes.

TMSD Limited Services Contract 2021-2023 - 21 Fatal Crash Analyses, NCDOT, Statewide, NC. Project Engineer. Provided crash history reports to support fatal crash field investigation and review program.

On-Call Crash Analyses, NCDOT, Statewide. Project Engineer. Provided crash analyses for special projects/requests as assigned by NCDOT.

Road Safety Audits, Georgia Department of Transportation, Statewide. Project Engineer. Co-facilitated two road safety audits with presentation of safety data and diagrams along SR 133 in Valdosta and SR 35 in Moultrie, GA. These audits involved meeting with local stakeholders to gain local input and knowledge about each corridor. A field review was also conducted with the team to develop a list of recommendations for short term and long-term improvements.

Road Safety Audit, SCDOT, Statewide. Project Engineer. Team Member on a road safety audit of a portion of US 29 (Wade Hampton Boulevard).

Nogal Canyon Bridge Replacement, NM. Provided predictive crash analyses of no build and seven alternative designs.



Todd McAulliffe, AICP GIS

Todd brings 20 years of experience delivering multi-modal transportation planning projects for NCDOT and municipalities throughout North Carolina and the U.S. southeast region. Todd uses the analytical power of GIS to help identify barriers to mobility and accessibility as well as opportunities to provide improvements for all modes of travel. Todd is a strategic planner who can help set the priorities and goals of communities through the evaluation of public input and other methods and identify the actions needed to achieve success.

Education

- + MA, Geography, University of North Carolina, Charlotte
- + BS, Sport Management, Western Carolina University

Professional Certification

- + Certified Planner, American Institute of Certified Planners

Select Experience

SouthPark CNIP, City of Charlotte, NC. Planner/GIS Analyst. SouthPark neighborhood in Charlotte is a rapidly urbanizing neighborhood within the City that received \$10M in bond money in 2016 intended to make the neighborhood more walkable and bikeable. Developed mapping and using spatial data, help identify infrastructure projects that would help connect surrounding residences to an activity center that includes businesses, a mall and other retail centers and numerous restaurants.

Regional Transit Plan, French Broad River MPO Fairfax, VA. Planner/GIS Analyst. As part of a study on potentially consolidating several local transit service providers within the FBRMPO footprint into a regional transit organization, reviewed the existing conditions of the individual transit service providers. This included a review of service characteristics (hours of service, ridership, etc.), the socio-economic characteristics of the service provider's footprint and commuting patterns in the region. The analysis served as foundation for the study.

Active Fairfax Transportation Plan, Fairfax County, VA. Planner/GIS Analyst. Fairfax County, a large and developing suburb of Washington, DC, is currently developing an Active Transportation Plan to improve for non-motorized transportation in the County. As part of the planning process, reviewed existing planning documents, most notably the Fairfax County Comprehensive Plan and the associated 36 small area plans throughout the County to assemble the various recommendations made in the plans into a GIS database, as well as a separate document that would be the basis for recommendations in the plan.

Downtown Catalyst Study, City of High Point NC. Planner/GIS Analyst. In 2017, the City of High Point identified an area of downtown to be revitalized in order to create a vibrant, mixed use center. AECOM was hired to provide traffic, land use and bicycle and pedestrian improvements within the district. Conducted the land use analysis for the district, including developing a future land use layer that was used as an input into the traffic forecast model. Todd also helped develop recommendations for bicycle and pedestrian improvements in the district, including recommendations for complete street conversions.

Elkin Bicycle and Pedestrian Plan, Town of Elkin, NC. Project Manager. Led planning to produce a bicycle and pedestrian plan for the Town of Elkin, a municipality of 4,000 residents approximately 75 miles north of Charlotte. Goals of the project included improving mobility, safety, connectivity and economic development within the City. The planning process included meeting with stakeholders to identify opportunities and strengths for improving bicycle and pedestrian infrastructure within the community. Based on field work and input from the committee, a series of infrastructure, policy and programmatic recommendations were made and vetted through the stakeholders and general public. Recommendations included a sidewalk, bicycle, greenway, improvements and connections to trails and parks. The recommendations were presented to the Town in the form of a planning document and GIS database.

Rutherfordton Bicycle and Pedestrian Plan, Town of Rutherfordton, NC. Project Manager. Led development of a bicycle and pedestrian plan for a small town in the foothills of NC. The planning process included a robust public involvement phase that included meetings with a steering committee, public workshops, an on-line survey and input from other stakeholders. The planning document identified 12 corridors that needed bicycle and pedestrian infrastructure upgrades and made specific recommendations for those upgrades.

Winston-Salem Bicycle Plan, City of Winston-Salem NC. Deputy Project Manager. As part of a city-wide project to identify bicycle-related infrastructure improvements, developed a Bicycle Stress Level layer in GIS. The layer and associated map showed the stress levels for bicyclists on city streets based on traffic volumes, pavement width, vehicular speeds and other variables. The stress level mapping was used, in part, to identify hot spots where improvements could be concentrated to maximize investment of city dollars.

Independence Boulevard Corridor Study, City of Charlotte, NC. Planner/GIS Analyst. AECOM provided advanced bicycle and pedestrian planning services for a corridor within the city that had become increasingly dense and congested. As a result of the study, four projects that would improve bicycle and pedestrian conditions were identified and presented to the City Council and were advanced to the design phase.

NCDOT Safe Routes to Schools (SRTS), Wilson, NC. Planner/GIS Analyst. Supported the preparation of a SRTS Action Plan for three elementary schools and one junior high school. Field reviews were conducted and combined with public/stakeholder outreach to identify barriers and opportunities. In addition to providing planning support on the project, provided GIS analysis and mapping for the project and assisted in public outreach.



Andrew Ittigson

Innovation

Andrew is a highly experienced planner who specializes in service and operations planning for bus, streetcar and light rail. He has managed Comprehensive Operations Analyses, Transit Development Plans, bus rapid transit and rail studies throughout the United States. He has over 17 years of experience working on all facets of transit planning including service evaluation, bus stop design, microtransit planning, route network design, implementation and public outreach.

Education

- + MS, Community and Regional Planning, Transportation, University of Texas at Austin
- + BA, History, University of Texas at Austin

Select Experience

San Pablo Corridor Rapid Bus Study, AC Transit, Oakland, CA. Completed a system performance overview of all routes serving the San Pablo corridor before and after the introduction of Rapid Bus. The project included a series of three ride checks and passenger surveys over a 2-year period that found a significant ridership increase on the new Rapid Bus compared to the ridership on the previous limited-stop service. Rapid Bus incorporated bus rapid transit features such as headway-based schedules, stop consolidation, transit signal priority, real-time information and queue jump lanes at major intersections.

Winter Park and Grand County Transit Plan, City of Winter Park – City of Grand County, CO. Facilitated service planning and public outreach for the mobility and transportation plan for the towns of Winter Park and Fraser. The final plan included recommendations for fixed-route (The Lift), private ski shuttle and demand response services.

Alternatives Study, Union City Transit, CA. Led portions of a study that examined various short- and long-term strategies to increase Union City Transit's ridership, productivity and visibility. The study presented a detailed implementation plan that included bus stop improvements, route restructuring with an emphasis on productivity and an enhanced marketing program.

Short-Range Transit Plan, Union City Transit, CA. Completed a comprehensive operations analysis of the bus system, including a route-by-route analysis, service plan and capital and operations plans. Worked with city staff to develop a new route structure, including flex routes and commuter express service with better connections to the Union City Bay Area Rapid Transit station. Facilitated stakeholder interviews and public outreach meetings.

Santa Clara/Alum Rock Bus Rapid Transit (BRT) Planning Study, Santa Clara Valley Transportation Authority (VTA), San Jose, CA. Managed the project for the VTA Planning Department which finalized the environmental impact report and conceptual engineering phases of the first BRT line in Santa Clara County. Worked with VTA environmental planning and City of San Jose staff to complete 10 percent design. The corridor includes one and one-half miles of dedicated busway in east San Jose and the introduction of off-board fare collection. Facilitated community and stakeholder outreach.

Greater Downtown Oklahoma City Circulator Alternatives Analysis, City of Oklahoma City, OK. Participated in an alternatives analysis to determine a transit mode and alignment for downtown circulator services. Worked with the project team to assess the effectiveness of recommended improvements from the various alternatives, including a rapid bus circulator and a modern streetcar.

Service Planning Support (Microtransit and Downtown Transit Center), Dallas Area Rapid Transit (DART), Dallas, TX. Project manager responsible for providing support for the Service Planning Department on projects ranging from regional community outreach to planning for mobility on demand zones and microtransit. Andrew recently completed an assessment of the relocation of the West End Downtown Transit Center to multiple locations in downtown Dallas. A key focus is to incorporate bus, rail and microtransit while allowing for transit development opportunities.

Transit Planning On-Call Planning Services, Topeka Metro, Topeka, KS. Project Manager responsible for leading the service and operations planning efforts for a four-year on-call services contract. Andrew led the service planning effort which introduced a cost-neutral system re-design with more direct routing with fewer route deviations and loops in neighborhoods. The plan included Topeka's first mobility on-demand zone. The focus of the plan was to increase ridership and productivity and for Metro to begin the process of defining and tracking service goals, objectives and performance measure.

Comprehensive Operations Analysis (COA), Suburban Mobility Authority for Regional Transportation (SMART), Detroit, MI. Project Manager who managed the first COA for the three-county regional transit agency in Detroit. The focus of the plan was to implement more direct routing, improved frequencies and system optimization with the introduction of new service delivery options including a microtransit pilot in four zones.

Project Connect Long Range Transit Plan, Capital Metro, Austin, TX. Task Lead responsible for the development and evaluation of alternatives for high-capacity transit solutions in the central core of Austin and throughout the region. Development of phased evaluation process and criteria for over 30 alternative corridor alignments including all high capacity modes such as BRT, LRT, streetcar and commuter service. Phase 1 evaluation includes an assessment of conceptual cost estimates, frequency of service, guideway, demographics, land use, reliability and community input. This effort includes an assessment of existing transit services, identification of transportation issues and opportunities, feasibility, development of Purpose and Need Statement and development of the evaluation process.



Viktor Zhong

Cost / Funding / Action Plan

Viktor provides management solutions for the public transit industry for organizational management, governance and funding analysis, financial planning and procurement and contracting. Viktor brings an interdisciplinary education background in economics, finance and transportation planning and policy.

Education

- + MRP, City + Regional Planning, Cornell University
- + BSc, Economics + Finance, Hong Kong University of Science and Technology
- + JD, General Law, George Mason University

Select Experience

French Broad River Region Transit Governance Study, French Broad River MPO, Asheville, NC. AECOM was retained to support a regional transit governance study. Viktor conducted a peer study of regional transit governance, including three peer regions in North Carolina and two peer regions outside of the state. Based on the peer study, he developed potential levels of integration by transit function for the region and facilitated workshops with key stakeholders (a steering committee formed for this study to identify an appropriate level of integration. The steering committee opted for high-level integration in regional transit service operation, a regionally integrated fare system, mobility management, employee training, funding administration and vehicle maintenance with an option for opt-out, while each local municipality maintains its local service, brand and customer service function. Based on the steering committee's preference for regional transit integration, identified statutory options for the region, including forming a Regional Transit Authority pursuant to G.S. 160A Article 25, or seeking a special legislation for a regional entity customized for the region.

State Transit Program Evaluation and Five-Year Budget, NCDOT, NC. Evaluated NCDOT's existing transit funding program structure, grant distribution method and grant recipients funding needs, especially the needs of rural transit operators. He developed a funding alternative with more effective and equitable funding allocation methods and a five-year budget for PTD based on the finalized funding alternative. He also developed a spreadsheet-based budgeting tool, which is to be adapted by PTD for its grant recipients to develop their financial plans as part of their Community Transportation Service Plan.

North Carolina Community Transportation Service Financial Plan, NCDOT, NC. Developed a financial plan for Cumberland County Community Transportation as part of a five-year transportation service plan for the county. He worked with the AECOM team to identify capital needs, defining service expansion alternatives, analyzing past operating statistics and assessing possible funding sources and levels. As a final product, he developed a five-year financial plan that projected the operating and capital expenditures and revenues for the Program.

State Transit Program Evaluation and Five-Year Budget, NCDOT, Public Transportation Division, NC. Evaluated NCDOT's existing transit funding program structure, grant distribution method and grant recipients funding needs, especially the needs of rural transit operators. He developed a funding alternative with more effective and equitable funding allocation methods and a five-year budget for PTD based on the finalized funding alternative. He also developed a spreadsheet-based budgeting tool, which is to be adapted by PTD for its grant recipients to develop their financial plans as part of their Community Transportation Service Plan.

Financial Planning for Pulaski Area Transit Facility Funding Analysis and Financial Planning, Virginia Department of Rail and Public Transit, Richmond, VA. Developed a cost and funding allocation plan for a new office and vehicle maintenance facility to be shared by three entities in Pulaski, VA, including the local transit operator. He projected operating costs of the three entities and allocated operation and capital costs to each of the three entities. He identified and projected revenues including possible Federal, state and local funding and developed a model for funding allocation among the three entities.

FTA Section 5307 Funding Allocation Formula Redesign for Small Urbanized Area Subrecipients, Tennessee Department of Transportation (TDOT), Nashville, TN. Part of an AECOM team that advised TDOT in redesigning its formula for allocating 5307 funds among small urban subrecipients. He designed a framework for identifying and prioritizing criteria for allocating 5307 funds, including demand for transit service, level of transit service provided, social equity factors, regional connectivity, local funding contribution and operation efficiency. The consulting team surveyed the subrecipients and conducted workshops with the subrecipients to select and prioritize the criteria for funding allocation. Based on the subrecipients' feedback as well as TDOT leadership's policy objectives, he developed a number of alternative formulae for TDOT's consideration. Three alternatives were formulated for final decision.

Altamont Corridor Express (ACE) Capital Expansion Project Financial Plan, ACE, Stockton, CA. Assisted ACE with identifying potential federal, state and local funding (capital and operating) for ACE's proposed service expansion, as part of their application for the State of California's Transit and Intercity Rail capital Program. He analyzed planned service statistics, federal program formulas and the geography of MPOs involved. He explored ways to allocate incremental federal funds generated by the expansion project among the benefited MPOs in order to maximize the federal funding amount ACE receives. He supported meetings with MPO officials to discuss local funding contribution and federal funding allocation for the ACE project. Based on the analysis, he created a 20-year financial plan to projects ACE's capital and operating expenditures and revenues.



Stuart Geltman

Fare Coordination

Stuart is a Senior Transit Planner who has worked on fare policy and analysis for transit agencies throughout the country over the past 20 years. Stuart has conducted analyses of current fare policies with modifications based on changing service paradigms. He has developed multiple scenarios for fare increases and modifications, including introductions of new pass type instruments. Stuart is keenly aware of the delicate balance that needs to be made between maximizing ridership and fare revenues, including meeting farebox recovery targets.

Education

- + MS, Transportation, New York University
- + BA, Urban Studies, University of Minnesota

Select Experience

Regional Transit Plan, Massachusetts Regional Transit Authority, MA. Transit Planner. Led the fare analysis and policy chapters for the recent Statewide Regional Transit Plans. The analysis was based on the memorandum of understanding between MASSDOT and all of the RTAs to ensure that a fare policy was developed that codified fare structure and fare increase schedules. Stuart worked with each RTA, as needed, to help craft this fare policy.

Year Round Service Feasibility Study, Nantucket Regional Transit Authority (NRTA) Nantucket, MA. Transit Planner. Feasibility study of extending transit services to operate year-round on this small island off the coast of Massachusetts. Supported the second phase of the study was a fare analysis, a review of available fare technologies and a review of innovative funding strategies to help in implementing year-round service.

Regional Service Efficiency Study, Rochester-Genesee Regional Transportation Authority, Rochester, NY. Transit Planner. Led the fare policy review of each of the rural RTS systems that are a part of the Authority. Developed fare alternatives designed to create a unified fare policy throughout the RTS system and compatible with the RTS Monroe fare policy system.

Imperial County Fre Study, El Centro, CA. Primary Investigator developing fare policy and levels for all of the services ICTC operates. In this study Stuart identified which services should have the same fare level in an effort to streamline fares. He developed a schedule for fare modifications with the goal to maximize both ridership and revenue.

Victor Valley Comprehensive Operational Analysis, Victor Valley Transit Authority, Victorville, CA. Project Manager. Study follows the successful implementation of recommendations from the previous comprehensive operational analysis. Responsible for addressing issues such as on-time performance and ridership growth. Analyzed ridership patterns and the route network to develop a new route network that would provide improved coverage to the area without significant cost increases.

Barstow Comprehensive Operational Analysis, San Bernardino Association of Governments, San Bernardino, CA. Project Manager. Project included analysis of all services in order to provide more user friendly services, including city fixed route services, evening and early dial-a-ride services, county dial-a-ride services and ADA paratransit services. Other aspects of this study included simplifying a complex fare structure and looking at

management and capital needs for this transit system.

Short-Range Transit Plan, City of San Luis Obispo, CA. Project Manager. Led efforts to update the transit plan. This involved an in depth analysis of all routes in the system to determine route issues and identify crowding on the system. Developed strategies to address overcrowding in the near term on buses serving the campus of California Polytechnic University as well as improve services to the city as a whole and add new traffic generators to the transit system.

Greenwich/Norwalk Bus Rapid Transit Study, Southwestern Regional Planning Agency, Southwestern CT. Senior Planner. Project consisted of implementation of BRT service for the Route 1 corridor to provide travel time savings over existing local bus services; more schedule reliability; a more comfortable trip using enhanced buses, stops/stations, ITS applications; an attractive alternative to congested rail service in the corridor and extra capacity on the busiest bus corridor in southwestern Connecticut. The two major components included bus operations analysis and traffic engineering, enhanced by ITS and fare technologies, urban design and smart growth considerations.

Springfield Night Time Bus Service Study, Illinois Department of Transportation, Springfield, IL. Deputy Project Manager responsible for analysis and development of a plan to provide night time bus service. The study was conducted in three phases, with the first phase a feasibility study involving extensive public outreach, as well as analysis of various indicators to determine if night bus service was feasible, where it should operate and how late it should operate. Phase two consisted of a bus route service design and a response to security concerns for bus patrons. The third phase consisted of a financial plan that identified strategies to fund night time bus service after initial grant money expires.

I-78 Corridor Transit Study, North Jersey Transportation Planning Authority, Various Locations, NJ. Transit Planner responsible for analyzing transit service and needs for the corridor to reduce congestion along the I-78 corridor. From the analysis, provided alternative transit services which included changes to rail operations, commuter bus operations and implementation of additional local services and park and ride locations. Work included analysis of all local and commuter services along the corridor, comparing transit service with origin/destination surveys for travel through the corridor and analysis of potential park and ride locations.

West Midtown Bus Parking and Staging Study, New York City Economic Development Corporation, New York, NY. Transit Planner, helped to manage all aspects of the bus parking and staging study. The work included managing field data collection as well as assembling existing data. Also assisted in the analysis of current commuter and charter bus activity in the western portions of Midtown Manhattan to determine the best location for a bus parking and staging facility.

Greater Newark Bus Systems Study, New Jersey Transit, Newark, NJ. Transit Planner that led the entire survey data collection effort for all bus services in the Greater Newark area. Included two surveys, a ridecheck survey and an origin/destination survey.

5. COST ESTIMATING + PHASING PROCEDURES

Accurate and dependable cost estimating is essential for the implementation and phasing strategy for any transportation plan. AECOM's cost estimation and phasing procedures provide this path.

Utilizing our extensive NCDOT expertise and recent similar efforts, AECOM will provide cost estimations for the recommendations proposed in the study development. Costs will be developed based on information provided by the County, such as operational costs, industry databases and our experience with similar projects.

AECOM proposes to develop a framework inclusive of a robust project prioritization process that not only scores and prioritizes projects in a systematic and transparent way, but also provides a clear implementation path, for the short-, mid- and long-terms (0 to 10 years), an approach we have successfully implemented in Transit Tomorrow, in Portland, Maine, SPARTA Comprehensive Operational Analysis, in Spartanburg, South Carolina and several other locations.

Potential Enhancements

Our team anticipates that after the initial identification of project recommendations, there will be refinements and enhancements that can be made along the way. Potential enhancements may include:

- Evaluating and understanding trade-offs and sensitivity of current evaluation criteria and prioritization results;
- Refining evaluation criteria, which could potentially more explicitly include equity and return on investment;
- Developing an easy-to-use interface to allow periodic updates of project information.

Our team has extensive experience estimating costs, evaluating, phasing and prioritizing transit projects. For example, transit projects can be grouped into any configuration. Three types commonly utilized include:

- Expansion
- Enhancement
- and State of Good Repair

Projects are then evaluated based on an agreed-upon set of criteria, such as market potential, deliverability and performance, and placed in the timeline for implementation. These criteria would be defined with the PMT and Oversight Committee and applied to the projects and recommendations. Finally, the projects are broken into one of several tiers compared with several factors providing a documented, quantitative prioritization process, informing and guiding the decision-making process.

Mariate and her team have performed a similar exercise for the Greensboro ADA Comprehensive Operational Analysis, where the criteria was weighted against the priorities set by the Task Force and the Riders and Agencies Focus Groups. This allowed us to identify low to high priority projects for each one of the scenarios, in the short, mid and long terms.



Evaluation of Alternatives and System Growth Scenarios

Our AECOM team is positioned to offer financial scenarios to best assist the County and its partners in identifying, prioritizing and producing successful and transformative projects most appropriate for the community in collaboration with the key stakeholders. Our team has extensive experience developing funding strategies that feed directly into the phases proposed for this study: short, mid and long term, as specified in the Project Methodology. We know the ins and outs of FTA funding sources and have experience leveraging funding for transit projects. Our approach for establishing a refreshed framework for future investments, transit growth and enhanced project delivery relies on three key elements in this approach. Similar to the 3C process of Urban Planning, AECOM's three essential elements to our team strategy are Comprehensive, Collaborative and Creative.

- **Comprehensive:** The AECOM team will identify needs and opportunities through a multi-phased approach that includes data collection, operational study results, market analysis, funding analysis, review of federal legislation and regulations and other efforts. Our team will also evaluate existing services and proposed new services based on a number of applicable criteria (e.g. site and alignment selection and sustainability) that will clearly drive the future of transportation in this region. With a solid planning foundation, we can work together collaboratively to develop creative solutions that result in the most effective and efficient transit services possible, under various funding scenarios.

- **Collaborative:** Our team is able to deliver the planning and programming support needed to understand the local transportation network conditions and efficiently implement projects. AECOM offers a team providing competent financial forecasting and evaluation of investment scenarios to determine the merits of any one project or group of projects. Our team will work in close collaboration with the County and the project stakeholders throughout the life of the program so that recommendations have full client support.
- **Creative:** Transportation services can be provided in many ways, but to offer the very best, they must be matched with the appropriate market demand serving the needs of the community. Our team will work collaboratively with stakeholders and community organizations, to develop both straightforward and creative scenarios that consist of different service approaches. Each scenario will be thoroughly vetted to verify they are consistent with various service delivery approaches that are environmentally responsible and fiscally feasible. With some recommended service changes, it will also be necessary to consider potential secondary effects.

For example, a GIS analysis will be needed to assess any changes in transit service coverage to make sure there are no equity issues and that Title VI impacts or adjustments warranted to the Americans with Disabilities Act (ADA) complementary paratransit service area. Recommendations are then developed that blend the best elements of each scenario, based on analysis results and stakeholder input.

This proposed approach highlights the key elements of our process and our expertise that have been used successfully in prior transportation planning efforts completed across the U.S., including numerous transportation studies and vision plans, short-range and long-range transit plans and comprehensive operations analyses. Our data-driven approach is infused with our project team’s inclusive engagement techniques to make sure the resulting program products have consensus support and approval, and truly establish a tangible vision for effective future transportation services for this region.

Additionally, the AECOM team will analyze the most effective way to blend new transportation services, as there are many transportation providers involved in this region, and incorporate the recommendations of the Regional Transit Plan Feasibility Study.

Greensboro ADA Comprehensive Operational Analysis - Prioritization Process

Criteria and Weight	Score	Value
Critical	Yes/No	1/0
Cost (10%)	Neutral	No cost or cost savings
	Low	Less than \$25K annually or \$125K over 5 years
	Medium	\$25K to \$100K annually or \$125K to \$500K cumulative over 5 years
	High	Over \$100K annually More than \$500K over 5 years
Complexity (20%)	Low	0 to 1 barrier to implementation
	Medium	2 barriers
	High	More than 2 barriers
Cost (10%)	Neutral	No cost or cost savings
	Low	Less than \$25K annually or \$125K over 5 years
	Medium	\$25K to \$100K annually or \$125K to \$500K cumulative over 5 years
Focus Groups (40%)	Low	0 – 2 people selected recommendation
	Medium	3 – 5 people selected recommendation
	High	6+ people selected recommendation

6. COLLABORATIVE SCOPE

The key to project success lays in involving key stakeholders, the public and other organizations all the way throughout the development of the study.

The AECOM team is very familiar with the stakeholders that would be involved in this study. Mariate is a long-term resident of Asheville and as part of her previous role with the City of Asheville, she had the opportunity to foster relationships with different municipalities and stakeholders. In addition, Mariate led the development of the Regional Transit Feasibility Study and had the opportunity to work closely with the municipalities, counties and the French Broad River MPO, as well as different advocacy organizations. Mariate and her team have great relationships with NCDOT's Integrated Mobility Division and with FTA Region IV and has frequent communications with their planners as they are assisting other agencies in the region with their projects and compliance.

In addition, we are proposing a comprehensive approach to public participation, that would allow the team to understand the needs and expectations of the community. This approach has been very effective in creating trust and producing change, as stakeholders and public are included in the decision making process. We have used this approach in other studies with great level of success. For instance, we hosted focus groups with neighborhood associations in the SPARTA COA, which gave us a great opportunity to understand the profile and needs of transit users.

For the Greensboro ADA COA, we hosted focus groups with social service agencies, and riders, and this produced excellent results during the prioritization process. Finally, we used a collaborative approach for the Regional Transit Feasibility Study, meeting with the Steering Committee every two weeks, which helped moving the project through the MPO TCC Committee and the Board reaching consensus for final recommendations.

We believe that through collaboration it is possible to achieve better results that benefit the Henderson County community and the entire region and we are ready to assist the County in fostering and leveraging those relationships.

Stakeholder Coordination – Getting to “Yes”



Regardless of how robust and technically sound a project prioritization and phasing framework is, it must be messaged in a way that the general public, elected officials and other vital stakeholders can understand and appreciate. As part of the public participation effort, the AECOM team will focus on developing messages and graphics that will resonate and message appropriate information. We will incorporate goals and vision into our messaging, so it is clear they have been addressed every step of the way in the transit feasibility study and planning process.



7. ATTACHMENTS

ATTACHMENT 1

APPENDIX A, 31 C.F.R. PART 21 – CERTIFICATION REGARDING LOBBYING

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 subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
4. 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.

The Consultant, **AECOM Technical Services, Inc.** certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Consultant understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Consultant's Authorized Official

Doug Tennant, AICP, Vice President

Name and Title of Consultant's Authorized Official

August 4, 2022

Date

ATTACHMENT 2

SUSPENSION AND DEBARMENT FORM

DEBARMENT CERTIFICATION FORM The Consultant certifies that, neither the Consultant firm nor any owner, partner, director, officer, or principal of the Consultant, nor any person in a position with management responsibility or responsibility for the administration of federal funds, nor any subconsultants or suppliers:

- (a) Are presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any federal or state department/agency:

- (b) Have within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- (c) Are presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or

- (d) Have within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

- (e) The Consultant is “Actively” registered with SAMS (Service for Award Management) and has been assigned the following Unique Entity Identification Number: EPUXNLX5EYC4

The Consultant further certifies that it shall not knowingly enter into any transaction with any subconsultant, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

Dated this _____ 4th _____ day of August _____, 2022



By _____
Authorized Signature for Consultants

Doug Tennant, AICP, Vice President

Printed Name and Title

**ADDENDUM #1
TO
HENDERSON COUNTY, NORTH CAROLINA
REQUEST FOR PROPOSALS FOR FEASIBILITY STUDY OF
APPLE COUNTRY PUBLIC TRANSIT**

July 21, 2022

This is Addendum #1 to the Request for Proposal for the feasibility study of public transportation services issued by Henderson County, NC (“the RFP”) on July 5, 2022. The original RFP Document remains in full force and effect, except as modified by this Addendum, which is hereby made part of the RFP. Proposers shall take this Addendum into consideration when preparing and submitting their Proposals.

The County received the following written questions before 5 pm on July 15, 2022, which was the deadline for questions. The County hereby provides answers to the questions as follows:

1. *What ridership data does the County or contractor have for the current fixed routes services and how is that data collected? Is it possible to capture ridership by stop by time of day?*

Answer: We collect ridership data through installed APCs and are in the process of having them NTD certified. Results are in real time, so yes, we can capture ridership by stop and time of data.

2. *What safety data does the County or contractor have?*

Answer: The safety data is mostly related to the vehicles (pre and post inspections, camera maintenance, accident reports, etc.). We do not have data about the safety of stops aside from any accidents that occurred there.

3. *Who owns the vehicles used to provide the existing service? Can you provide an inventory of the current vehicle fleet?*

Answer: The County owns the vehicles, which makes the third-party contract a Tier 1 contract. There are 6, 25’ LTVs that run solely on CNG (2020 models) and there is one paratransit vehicle, which is a 2016 Ford Transit van (gasoline).

4. *Is there a particular reason for the eight-month timeline suggested in Section 8.2 of the proposal? Is the County flexible about that timeline?*

Answer: The eight-month time frame allows us to include any suggested changes in the budget for the next fiscal year. Prolonging the study would delay any system

improvements, but we are open to a firm presenting a longer time frame if there is clear justification.

5. *Pre-covid, did the ACPT do an analysis of ridership trends? Is this analysis available for review?*

Answer: No, the County hasn't completed an analysis of ridership trends, aside from tracking ridership. The County can provide ridership numbers based on each fiscal year as far back as 2008, upon request.

6. *How does ACPT count riders?*

Answer: Riders are counted using Passio Technologies automatic passenger counters, and via driver performed tic sheets.

7. *How is safety defined? Will the county provide crash data? Or is this analysis focused more on passenger and operator security (i.e. perceived safety and crime)?*

Answer: The analysis should primarily be focused on rider safety at stops and along bus routes. Other safety factors should include perceived safety as well. The county or service provider can provide crash data if requested.

8. *Who owns the transfer station (300 N Grove St, Hendersonville, NC 28792)? Does it use the courthouse parking lot or just the curbside lane and the waiting area adjacent to sidewalk on N Grove St?*

Answer: The current transfer station is at Martin Luther King Jr. Memorial Park. The park is owned by the City of Hendersonville. Currently, the curbside lane and waiting area are the only space utilized for the transfer station.

9. *Why is the county interested in assessing the transfer station location, and has the county already identified alternative locations?*

Answer: The transfer station is uncovered with no facilities for riders or bus drivers. The County is currently in communication with the City of Hendersonville to improve the site and provide a transfer station facility.

10. *Is the county interested in changing fuel source?*

Answer: The County owns a public Compressed Natural Gas fuel station. The fleet utilizes CNG as a fuel source. County staff have considered diversifying the fuel source for the fleet, but that will likely not be a part of this study.

11. *Is the ridership survey expected to be an on-board intercept survey or an online survey that is advertised on buses and supplemented with some in-person surveying?*

Answer: The winning consultant would demonstrate the best method to survey riders or potential riders. The County would like to ensure the survey reaches the most riders and potential riders possible. Any method could be used, but it is up to the proposer to provide an equitable and far-reaching method.

12. *The RFP includes a link to Henderson County Terms and Conditions (02.23.22). The RFP stated any proposal submitted would be bound to the terms and conditions contained in that link. However, this document appears to be more for the purchase of materials than for professional services and much of the T&C's seem not to be applicable to the services required under the RFP scope. Could the conditions applied to the current RFP be revised to be more applicable to professional services (rather than the purchase of materials). If the county does not have other more applicable terms and conditions, should the proposal include exceptions to the County Terms and Conditions document that was provided in the link?*

Answer: The proposal may contain requested exceptions to the Terms and Conditions.

13. *Regarding, is there a specific format that the county would like to receive the pricing proposal?*

Answer: An itemized spreadsheet or table would be preferred.

14. *What performance or efficiency data is available? What efficiency measures would the County want to consider?*

Answer: Currently, the County utilizes Passio Technologies to track ridership and on-time performance. The County would like to better utilize the APC data and create obtainable efficiency measures.

15. *Who are some of the key stakeholders that the County anticipates including in this process?*

Answer: Key stakeholders would include the current service provider, WNCSOURCE, as well as the municipalities currently served by ACPT (the City of Hendersonville, Town of Laurel Park, Town of Fletcher). The Town of Mills River and Village of Flat Rock should also be included to determine the desirability and need of adding stops/routes to these municipalities. Major employers, commercial centers, and residential areas should be contacted as well.

16. *Regarding the oversight committees and "other committees" that will provide input on the Action Plan, what "other committees" does the County expect to be involved in review and input to the plan?*

Answer: The Transportation Advisory Committee, the French Broad River Metropolitan Planning Organization, the City of Asheville, and NCDOT Integrated Mobility Division will participate in some capacity with the study.

END OF ADDENDUM

A handwritten signature in black ink, appearing to read 'DT', with a long horizontal flourish extending to the right.

Doug Tennant, AICP, Vice President
AECOM Technical Services, Inc.

August 4, 2022

Henderson County Feasibility of Apple Country Public Transit

Adjustments to the scope and fee

Existing conditions:

SWOT analysis: Since the county wants to assess feasibility of services and routes, SWOT analysis will be performed at system level instead of route level.

Stop Safety: AECOM will perform a desktop review of existing bus stops and develop three different stop typologies, urban, suburban and rural. Treatments will be developed for these typologies that can be extrapolated to the entire system. Data attributes need to be in an editable database or GIS.

This will not affect the transfer station, which will be analyzed separately.

Vehicle capacity: Bus stop data attributes need to be in an editable database or GIS and include stop order field for each route.

Public participation:

Rider surveys: these surveys will be developed by the AECOM team along with input from the Oversight Committee and PMT. The surveys will be distributed by the drivers or other personnel identified by the PMT or filled online.

Focus groups/interviews: up to three focus groups/interviews will be held.

Oversight Committee: this meetings will be conducted virtually.

Recommendations:

First/Last Mile Service Implementation: AECOM will develop recommendations based on the three typologies identified in the stop safety task. AECOM will provide general guidelines for bus stop location, shelters and amenities that can be replicated across the entire system.

Report:

1 printed copy

Fee

Tasks	Project Management	Existing Conditions	Service, Market and Facilities Analysis	Public Participation	Recomm.: Cost Estimation, Prioritization Phasing	Draft / Final Reports	Personnel Rates	Person-hours	Total/person
Mariate Echeverry	16	6	4	12		8	151.54	46	\$ 6,970.77
Mickey Geiser	6					6	188.09	12	\$ 2,257.13
Jill Cahoon	16	2	2	8	16		193.96	44	\$ 8,534.24
Drew Joyner	10			8			207.75	18	\$ 3,739.51
Emily Scott-Cruz				8		36	92.14	44	\$ 4,054.34
Rachel Hamrick				8		28	124.29	36	\$ 4,474.45
Adam Migliore Meyer	16	16	10	3	24		143.18	69	\$ 9,879.20
Will Calves		4	6	3	24		169.46	37	\$ 6,269.93
Jimmy Hamrick		4	6		18		156.35	28	\$ 4,377.90
Todd McAulliffe		18	8				116.90	26	\$ 3,039.30
Andrew Ittigson					12		190.94	12	\$ 2,291.33
Viktor Zhong		2		4	20		144.41	26	\$ 3,754.77
Stuart Geltman		4	4		4		148.72	12	\$ 1,784.64
Planner/Analyst Administration		32	40	18	40	24	119.51	154	\$ 18,405.24
	8						102.00	8	\$ 816.00
Sub-total								410	\$ 79,832.75

Direct Costs			
Type	Quantity	Unit Price	Subtotal
Printing and reproduction 8.5 x 11 B&W	300	\$ 0.09	\$ 27.00
Printing and reproduction 8.5 x 11 Color (1 reports)	150	\$ 0.83	\$ 124.50
Printing and reproduction 11x17 Color	100	\$ 1.66	\$ 166.00
Binding	150	\$ 0.50	\$ 75.00
Meals - Breakfast	4	\$ 8.60	\$ 34.40
Meals - Lunch	2	\$ 11.80	\$ 23.60
Meals - Dinner	2	\$ 20.50	\$ 41.00
Lodging	2	\$ 130.00	\$ 260.00
Car rental	4	\$ 50.00	\$ 200.00
Gas for rental	1044	\$ 0.20	\$ 208.80
Sub-total			\$ 1,160.30

Total Cost \$ 80,993.05



About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of \$13.3 billion in fiscal year 2021. See how we are delivering sustainable legacies for generations to come at [aecom.com](https://www.aecom.com) and @AECOM.

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