

Rutherford County Transit

FIVE-YEAR PLAN: **Community Transportation Services Plan (CTSP)**

August 2015

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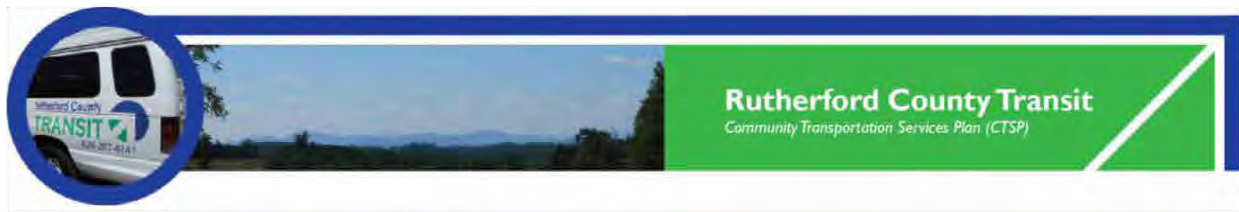


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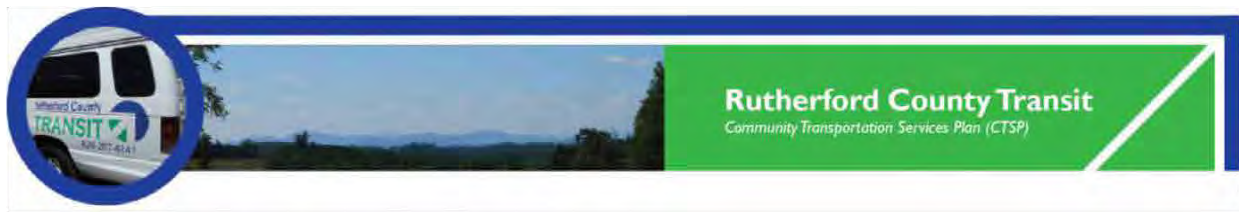


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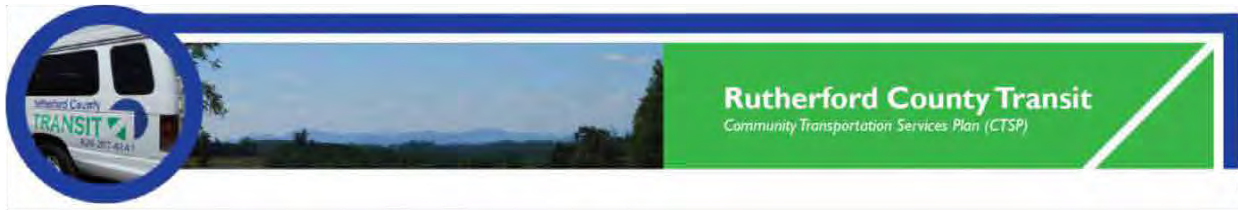
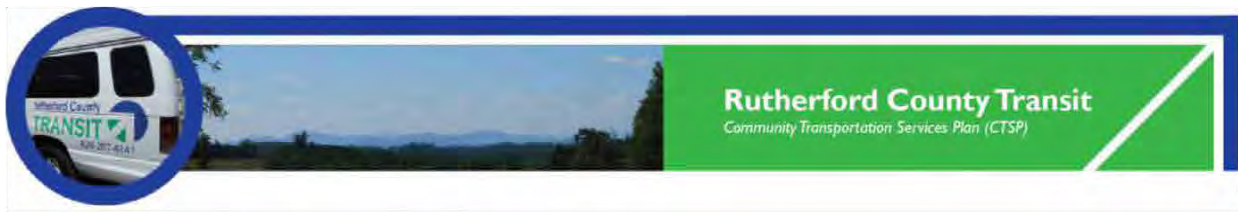


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EXECUTIVE SUMMARY

The North Carolina Department of Transportation (NCDOT) Public Transportation Division (PTD) has developed a comprehensive process to analyze the current performance and organizational structure of the Rutherford County public transit system and to recommend strategies of operating and managing that will improve and increase efficiency and effectiveness. This 5-year Community Transportation Service Plan (CTSP) was initiated in September of 2014 and included a comprehensive process that included public education and involvement, coordination planning meetings with stakeholders and private and non-profit transportation service providers, Rutherford County Transit System (RCTS) staff and input and guidance from the Rural Planning Organization (RPO) and NCDOT-PTD staff. The purpose of this study was to ensure that the RCTS can make strategic progress in meeting future mobility needs of the contracted services and the general public to include targeted populations within their service areas which would then expand to better coordinate with meeting regional transportation initiatives.

Three Steering Committee meetings were held at strategic times during the 9-month project:

- February, 2014
- March, 2015
- June, 2015

Presentations were made to review the existing conditions and current performance measures, review the operational and organizational direction of the system, look at growth areas for unmet service needs and provide a financial analysis that accommodates the 5-year implementation of recommended actions.

Two Technical Memorandums were presented as part of the scope of work for this project. Technical Memorandum #1 included a service characteristic summary, funding and financial management summary, a capacity analysis and the results of local surveys and interviews regarding existing services.

Technical Memorandum #2 summarized potential coordination opportunities, management and service alternatives and recommendations and costs associated with each recommended action.

The five-year plan included an implementation schedule, financial plan and budget tool and the public involvement event that took place at the Mayfest Craft Fair in Rutherfordton on May 2, 2015. Additionally, a performance measurement plan was developed to evaluate the impact and effectiveness of the CTSP recommendations in achieving the goals outlined in RCT's Systems Safety Program Plan (SSPP). This plan includes quantitative and qualitative benchmarks informed by Institute for Transportation Research (ITRE) for peer group analysis and from RCT's weekly transit service delivery statistics.





The current deviated fixed route is one element of the RCT service that needs to be addressed. The recommendation is to align the route with two vehicles to reduce the headway and improve the customer service to the riding public. However, there is an escalated cost associated with this recommendation, as noted in the financial section of this report. However, the deviated fixed route has the potential to provide a viable mobility option to the communities of Rutherfordton, Forest City and Spindale, if the following actions are implemented:

- Coordination with community groups along the deviated fixed route corridor;
- Coordination with the faith community that has the potential to impact awareness of the route;
- Coordination with Isothermal Community College to bring about connectivity options to their students;
- Coordination with Walmart and other businesses to promote use of the service.
- The implementation of a new advertising campaign, (painted buses, shelters, etc.) that would show the service as a “general public” responsive alternative to potential choice riders.

If these actions are implemented and no significant ridership has occurred, (after a 2-year period), then it is recommended to reassign the deviated fixed route resources to other areas of the system.

Extending senior services transportation to the senior centers in Ellenboro, Henrietta and Shingle Hollow should be explored. If funding is available, these sites could benefit from RCT provided transit service to and from these site locations. Each site serves approximately 25 seniors per day.

Alternative fuels and hybrid vehicles have become popular considerations, due to their perceived environmental and energy savings benefits. There have been studies that indicate that the use of alternative fuels can reduce emissions of harmful pollutants and greenhouse gases. Additionally, as prices of gasoline continue to fluctuate, there could be some cost advantages to using certain alternative fuels.

However, a number of barriers need to be considered in the evaluation of the installing an alternative fueled vehicle fleet. These considerations include:

- Higher capital costs of alternative fuel vehicles and supporting facilities
- Higher operating costs, including fuel and maintenance costs
- Reliability and durability concerns, especially in rural areas with both climate and terrain challenges
- Limited availability of alternative fuels
- Risk of interruptions in fuel delivery

RCT staff has initiated a peer request for data to determine the cost/benefits, maintenance costs and infrastructure to support a successful alternative fueled program. This information might lead to a consideration for the development of a pilot program for RCT in future years.

RCT will need to continue to increase the coordination with transit services in neighboring counties, specifically, the medical transportation services that are provided in McDowell County. This is a service that has increased over the past few months, and is expected to continue to increase in the future. Coordination with the Polk County Transit service will be key as the new Tryon International Equestrian Center begins its full operation. This may have a significant impact on the economic development potential for the region.



Economic Drivers

There are two new initiatives that have the opportunity to provide economic impacts for the community, through public transit. The first one is the potential shuttle service that would provide transit to those who would use the Thermal Belt Rails-to-Trails project. The proposed shuttle would provide a seasonal transit service to both cyclists and pedestrians who use the corridor for recreation. This service would focus on new riders to the RCT system and give these “choice riders” an opportunity to experience public transit, getting to and/or from their desired location along the route. The marketing of this service would be important, as this would include signage, shelter placements and advertising this option to the recreation community. Funding to support this initiative would come from Rural General Public (RGP) funds through the NCDOT Rural Operating Assistance Program (ROAP).

The second initiative would be a shuttle park-n-ride service to the Tryon International Equestrian Center, located in Polk County. This shuttle would depart from the Food Lion Shopping Center at the intersection of Alternate 74 and Alternate US 221 in Forest City, and provide work trips to and from the Equestrian Center. This service has the opportunity to greatly expand and provide workforce trips to a population that might not be able to make the 13-mile trip in a personal vehicle. The Equestrian Center facility will impact the entire region, and this would begin an effort to provide work-related trips that could increase employment opportunities to residents of Rutherford County. Funding for supporting this service would also come from RGP funds, however, there is the potential to request Workforce Innovation funding through the Department of Labor, which could assist in providing funding to support this service.

Implementation Plan and Schedule

The Rutherford CTSP makes recommendations for improvements in administration, transit service delivery, technology, and for the current Rutherford County Transit facility on Fairground Road in Spindale. These recommendations are prioritized according to each of the five CTSP years (FY 2016 – FY 2020) in Table ES-1 below. Specific action steps and stakeholders are identified for each recommendation.

Table ES-1: Implementation Plan and Schedule		
Improvement	Action Steps	Stakeholder
FY2016 (CTSP Year 1)		
IA. Deviated Fixed Route Service Changes	<ul style="list-style-type: none"> Assign an additional vehicle to the new deviated fixed route Coordinate with local neighborhoods and businesses and ICC to advertise the service 	Rutherford County Transit
IB. Repaint Deviated Fixed Route Buses with a new color scheme	<ul style="list-style-type: none"> Develop a new paint scheme in-house or through a third-party vendor Schedule the buses for repainting so as to minimize service disruptions 	Rutherford County Maintenance Department, Rutherford County Transit
IC. Install security cameras in the parking lot	<ul style="list-style-type: none"> Request security cameras from Rutherford County Maintenance or bid to a private 	Rutherford County Maintenance Department,



Table ES-1: Implementation Plan and Schedule

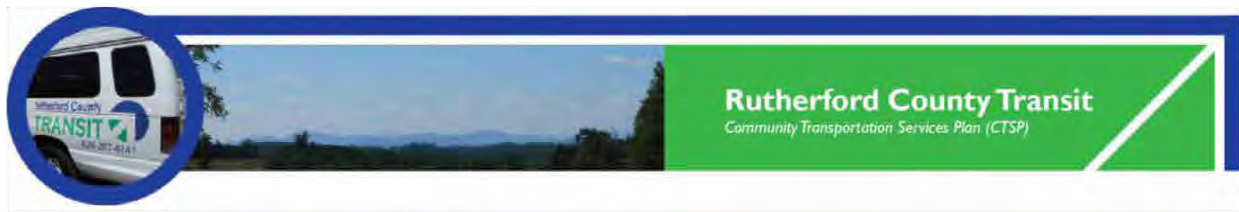
Improvement	Action Steps	Stakeholder
	contractor	Rutherford County Transit
1D. Improve the RCT Webpage	<ul style="list-style-type: none"> Identify ways to improve the organization of the RCT webpage by coordinating with Rutherford County Information Technology 	Rutherford County Information Technology, Rutherford County Transit
1E. Improve CTS Software	<ul style="list-style-type: none"> Work with CTS to improve CTS software by allowing deviated fixed route drivers to record on/off passengers 	CTS, Rutherford County Transit
1F. Maps and Schedules*	<ul style="list-style-type: none"> Update the maps and schedules with July service changes Translate maps and schedules into other languages as discussed on Page 2-16. Print hard copies to be made available on the buses and at the transit office 	Rutherford County Transit
FY2017 (CTSP Year 2)		
2A. Install bus shelters at Deviated Fixed Route Service stops	<ul style="list-style-type: none"> Prepare engineering documents for bus shelters Coordinate with Rutherford County Maintenance to construct the shelters or bid to a private contractor 	Rutherford County Maintenance Department, Rutherford County Transit
2B. Add transit services to Congregate Meal Sites (Ellenboro, Henrietta, and Shingle Hollow)	<ul style="list-style-type: none"> Assign vehicles to perform the new transit service 	Rutherford County Transit
2C. Tryon Equestrian Center Workforce Shuttle	<ul style="list-style-type: none"> Provide workforce shuttle between Rutherford County and the Equestrian Center in Polk County 	Rutherford County Transit
2D. Signage	<ul style="list-style-type: none"> Install signage at the Tryon Equestrian Center Workforce Shuttle stops and Deviated Fixed Route Service stops 	Rutherford County Transit
FY2018 (CTSP Year 3)		
3A. Install a key card system at the RCT Transit Office	<ul style="list-style-type: none"> Request a key card system to improve security 	Rutherford County Maintenance Department, Rutherford County Transit
3B. Install security cameras in the money counting room.	<ul style="list-style-type: none"> Request security cameras in the money counting room to improve security and transparency 	Rutherford County Maintenance Department, Rutherford County Transit
3C. Thermal Belt Rails to Trails Shuttle	<ul style="list-style-type: none"> Initiate seasonal transit service along the Thermal Belt Rail Trail 	Rutherford County Transit
3D. Install bike racks on buses	<ul style="list-style-type: none"> Install bike racks on four transit buses prior to initiating the Thermal Belt Rails to Trails Shuttle 	Rutherford County Transit
3E. Signage	<ul style="list-style-type: none"> Install signage at the Thermal Belt Rails to Trails Shuttle stops 	Rutherford County Transit



Table ES-1: Implementation Plan and Schedule

Improvement	Action Steps	Stakeholder
FY2019 (CTSP Year 4)		
4A. Fence the parking lot	<ul style="list-style-type: none"> Request fencing from Rutherford County Maintenance or bid to a private contractor 	Rutherford County Maintenance Department, Rutherford County Transit
FY2020 (CTSP Year 5)		
5A. Construct vehicle washbay	<ul style="list-style-type: none"> Prepare architectural and engineering documents for a vehicle washbay Coordinate with Rutherford County Maintenance to construct the vehicle washbay or bid to a private contractor 	Rutherford County Maintenance Department, Rutherford County Transit

*Maps and schedules should be updated and printed annually to reflect July service changes



Performance Measurement Plan

A Performance Measurement Plan was developed to evaluate the impact and effectiveness of the CTSP recommendations in achieving the goals outlined in RCT's System Safety Program Plan (SSPP), which is updated annually. RCT's current goals are:

1. Run an efficient system based on drivers' hours, revenue miles and passenger trips.
2. Maximize the number of passengers aboard all Transit vehicles.
3. Transport passengers to out of town appointments in a shuttle based system.
4. Create a proactive transit safety culture that supports employee safety and safe system operation through motivated compliance with agency rules and procedures and the appropriate use and operation of equipment.
5. Leverage revenues and grant funds to provide additional transportation services to the citizens of Rutherford County.
6. Improve image and understanding of service by the general public through a strong marketing program and public involvement plan and professional image for all employees.
7. Upgrade department's overall computer skills through training and equipment/software purchases

The Performance Measurement Plan identifies objectives for each of the goals and CTSP recommendations to achieve them. Qualitative and quantitative benchmarks are specified for each of the CTSP years, with a comparison between current conditions and projected conditions in FY 2020, the end of the five-year CTSP planning horizon.

Peer Group Analysis

Where applicable, objectives were included in the Plan that would allow for a peer analysis with other transit systems. Rutherford County is included in ITRE's Peer Group 4, which is comprised primarily of transit agencies operating in rural counties. The list of counties is shown on Figure 1-3 on page 1-13. Comparisons for the peer group are provided annually by ITRE and include: subsidy per trip, cost per trip, passengers per hour, and non-contract trips per non-urban population.

For each of the benchmarks ITRE has established a three tiered ranking:

- Superior = value at 85th percentile
- Median = value at 50th percentile
- Acceptable = Median - (Superior - Median)






RCT was consistently above the acceptable level in all four categories from 2011 to 2013 (the most recent data available). The Performance Measurement Plan proposes that RCT achieve a superior ranking in all four categories by FY 2020. CTSP recommendations are identified and quantified where possible that would assist in achieving a superior ranking.



RCT Transit Service Statistics

In addition to the ITRE peer group metrics, RCT collects and analyzes transit service delivery statistics on a weekly basis, such as the number of local trips. These statistics are provided to the Transportation Advisory Board (TAB). The Performance Measurement Plan identifies objectives that relate to these statistics so that their progress can be reviewed weekly.

The ITRE peer group metrics and RCT transit service statistics are noted in the Performance Measurement Plan according to the following symbols:

Symbol	Metric
	ITRE Peer Group Metric Subsidy per trip
	ITRE Peer Group Metric Cost per trip
	ITRE Peer Group Metric Passengers per hour
	ITRE Peer Group Metric Non-contract trips per non-urban population
	Rutherford County Transit Weekly transit service delivery statistic

Annual Report

The Performance Measurement Plan should be reviewed at least annually to assess progress achieved in meeting RCT's goals. The evaluation may be included in annual report document to present to the TAB, Rutherford County officials, and NCDOT Public Transportation Division. Additionally, it may be made available to the public on RCT's website and in printed form at the transit office. The Performance Measurement Plan is included in Table ES-2 on the next page.



Table ES-2: Performance Measurement Plan

Objective	CTSP Recommendation	Current	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	CTSP Five-Year Change	
RCT Goal 1: Run an efficient system based on drivers' hours, revenue miles and passenger trips									
<p>P₁ Improve efficiency as measured by subsidy per trip and passengers per hour and achieve Superior Ranking (85th percentile) in ITRE Peer Group 4 by FY 2020</p> <p>P₂</p> <p>P₃</p> <p>R</p>	<p>1A. Deviated Fixed Route Service Changes: Lowers subsidy per trip by increasing number of passengers and fare revenue</p>	<p>One deviated fixed route with average headway of 1 hour, 53 minutes</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,914 - 5,431 trips +\$4,914 - \$5,431 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,791 - 5,567 trips +\$4,791 - \$5,567 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,672 - 5,706 trips +\$4,672 - \$5,706 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,555 - 5,849 trips +\$4,555 - \$5,849 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,441 - 5,995 trips +\$4,441 - \$5,995 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +23,373 - 28,548 trips +\$23,373 - \$28,548 fare rev.</p>	
	<p>2B. Add transit services to Congregate Meal Sites (Ellenboro, Henrietta, and Shingle Hollow): Increases number of passengers</p>	<p>No transit service provided to these locations</p>	<p>N/A</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$226,611 - \$292,560 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$235,269 - \$288,921 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$244,265 - \$285,336 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$253,614 - \$281,805 fare revenue</p>	<p>Transit service provided to three meal sites +60,000 - 90,000 trips +\$959,759 - \$1,148,622 fare revenue</p>	
	<p>2C. Tryon Equestrian Center Workforce Shuttle Increases number of passengers</p>	<p>No transit service provided to this location</p>	<p>N/A</p>	<p>Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue</p>	<p>Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue</p>	<p>Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue</p>	<p>Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue</p>	<p>Transit service provided to the Equestrian Center +11,200 - 22,400 trips +\$16,800 - \$33,600 fare rev.</p>	
	<p>3C. Thermal Belt Rails to Trails Shuttle Increases number of passengers</p>	<p>No transit service provided to this location</p>	<p>N/A</p>	<p>N/A</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +6,330 - 12,660 trips</p>	
<p>P₁ Increase the number of non-contract trips per non-urban population and achieve Superior Ranking (85th) percentile in ITRE Peer Group 4 by FY 2020</p> <p>R</p>	<p>1A. Deviated Fixed Route Service Changes: Lowers subsidy per trip by increasing number of passengers and fare revenue</p>	<p>One deviated fixed route with average headway of 1 hour, 53 minutes</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,914 - 5,431 trips +\$4,914 - \$5,431 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,791 - 5,567 trips +\$4,791 - \$5,567 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,672 - 5,706 trips +\$4,672 - \$5,706 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,555 - 5,849 trips +\$4,555 - \$5,849 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,441 - 5,995 trips +\$4,441 - \$5,995 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +23,373 - 28,548 trips +\$23,373 - \$28,548 fare rev.</p>	
	<p>3C. Thermal Belt Rails to Trails Shuttle Increases number of passengers</p>	<p>No transit service provided to this location</p>	<p>N/A</p>	<p>N/A</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +2,110 - 4,220 trips</p>	<p>Transit service provided along the trail +6,330 - 12,660 trips</p>	
RCT Goal 2: Maximize the number of passengers aboard all Transit vehicles									
<p>P₁ Increase total RCT ridership from baseline conditions by FY 2020</p> <p>P₂</p> <p>R</p>	<p>1A. Deviated Fixed Route Service Changes: Increases number of passengers</p>	<p>One deviated fixed route with average headway of 1 hour, 53 minutes</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,914 - 5,431 trips +\$4,914 - \$5,431 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,791 - 5,567 trips +\$4,791 - \$5,567 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,672 - 5,706 trips +\$4,672 - \$5,706 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,555 - 5,849 trips +\$4,555 - \$5,849 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +4,441 - 5,995 trips +\$4,441 - \$5,995 fare rev.</p>	<p>Two deviated fixed routes, average headway of 30 minutes +23,373 - 28,548 trips +\$23,373 - \$28,548 fare rev.</p>	
	<p>2A. Install bus shelters at Deviated Fixed Route Service stops Encourages ridership by providing riders with amenities and improves safety</p>	<p>No bus shelters</p>	<p>N/A</p>	<p>Six bus shelters installed along the deviated fixed routes</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Six bus shelters installed along the deviated fixed routes</p>
	<p>2B. Add transit services to Congregate Meal Sites (Ellenboro, Henrietta, and Shingle Hollow): Increases number of passengers</p>	<p>No transit service provided to these locations</p>	<p>N/A</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$226,611 - \$292,560 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$235,269 - \$288,921 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$244,265 - \$285,336 fare revenue</p>	<p>Transit service provided to three meal sites +15,000 - 22,500 trips +\$253,614 - \$281,805 fare revenue</p>	<p>Transit service provided to three meal sites +60,000 - 90,000 trips +\$959,759 - \$1,148,622 fare revenue</p>	



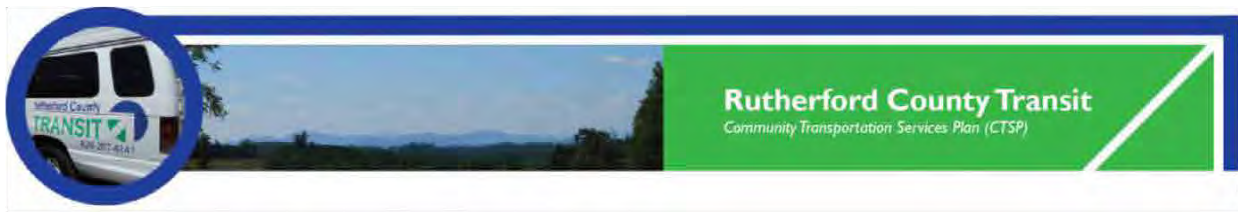
Table ES-2: Performance Measurement Plan

Objective	CTSP Recommendation	Current	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	CTSP Five-Year Change
	2C. Tryon Equestrian Center Workforce Shuttle Increases number of passengers	No transit service provided to this location	N/A	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +11,200 - 22,400 trips +\$16,800 - \$33,600 fare rev.
	3C. Thermal Belt Rails to Trails Shuttle Increases number of passengers	No transit service provided to this location	N/A	N/A	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +6,330 - 12,660 trips
	3D. Install bike racks on buses Encourages ridership by providing riders with the option to carry their bike	No bike racks provided on RCT vehicles	N/A	N/A		N/A	N/A	Bike racks installed on four RCT transit vehicles
RCT Goal 3: Transport passengers to out of town appointments in a shuttle based system								
Coordinate out-of-county trips with Cleveland, McDowell, and Polk counties throughout the CTSP planning horizon	Coordination opportunities with Cleveland, McDowell, and Polk counties were explored during the CTSP process. No additional opportunities were identified. Coordination should continue to be explored for potential opportunities.							
RCT Goal 4: Create a proactive transit safety culture that supports employee safety and safe system operation through motivated compliance with agency rules and procedures and the appropriate use and operation of equipment								
Improve safety for RCT employees and visitors at the transit facility through technology enhancements in FY 2018	3A. Install a key card system at the RCT Transit Office Improves safety by providing additional security at the RCT facility	Standard locks and keys, no advanced system	N/A	N/A	Key card system installed	N/A	N/A	Key card system installed
	3B. Install security cameras in the money counting room Increases transparency of the money handling functions of RCT	No electronic oversight of the money counting room	N/A	N/A	Security cameras installed	N/A	N/A	Security cameras installed
Improve security of RCT vehicles at the transit facility through infrastructure improvements in FY 2019	4A. Fence the parking lot Improves safety for RCT staff and security for RCT equipment	Parking lot unfenced	N/A	N/A	N/A	Parking lot fenced	N/A	Parking lot fenced
	1C. Install security cameras in the parking lot Improves safety for RCT staff and security for RCT equipment	No security camera surveillance	N/A	N/A	N/A	Security cameras installed in parking lot	N/A	Security cameras installed in parking lot
RCT Goal 5: Leverage revenues and grant funds to provide additional transportation services to the citizens of Rutherford County								
Enhance transportation options for the general public starting in FY 2016	1A. Deviated Fixed Route Service Changes Increases frequency of the deviated fixed route for the general public by leveraging Rural General Public operating funds and additional fare revenues	One deviated fixed route with average headway of 1 hour, 55 minutes	Two deviated fixed routes, average headway of 30 minutes +4,914 - 5,451 trips +\$4,914 - \$5,451 fare rev.	Two deviated fixed routes, average headway of 30 minutes +4,791 - 5,567 trips +\$4,791 - \$5,567 fare rev.	Two deviated fixed routes, average headway of 30 minutes +4,672 - 5,706 trips +\$4,672 - \$5,706 fare rev.	Two deviated fixed routes, average headway of 30 minutes +4,555 - 5,849 trips +\$4,555 - \$5,849 fare rev.	Two deviated fixed routes, average headway of 30 minutes +4,441 - 5,995 trips +\$4,441 - \$5,995 fare rev.	Two deviated fixed routes, average headway of 30 minutes +23,373 - 28,548 trips +\$23,373 - \$28,548 fare rev.



Table ES-2: Performance Measurement Plan

Objective	CTSP Recommendation	Current	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	CTSP Five-Year Change
Improve mobility for seniors by providing additional transportation services starting in FY 2017	2B. Add transit services to Congregate Meal Sites (Elleboro, Henrietta, and Shingle Hollow): Provides transportation services to three congregate meal sites and leverages ROAP funds for eligible FTA Section 5310 funds	No transit service provided to these locations	N/A	Transit service provided to three meal sites +15,000 - 22,500 trips +\$226,611 - \$292,560 fare revenue	Transit service provided to three meal sites +15,000 - 22,500 trips +\$235,269 - \$288,921 fare revenue	Transit service provided to three meal sites +15,000 - 22,500 trips +\$244,265 - \$285,336 fare revenue	Transit service provided to three meal sites +15,000 - 22,500 trips +\$253,614 - \$281,805 fare revenue	Transit service provided to three meal sites +60,000 - 90,000 trips +\$959,759 - \$1,148,622 fare revenue
Expand workforce options for Rutherford County residents starting in FY 2017	2C. Tryon Equestrian Center Workforce Shuttle Increases number of passengers	No transit service provided to this location	N/A	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +2,800 - 5,600 trips +\$4,200 - \$8,400 fare revenue	Transit service provided to the Equestrian Center +11,200 - 22,400 trips +\$16,800 - \$33,600 fare rev.
Encourage recreation, health, and wellness through transit services starting in FY 2018	3C. Thermal Belt Rails to Trails Shuttle Increases number of passengers	No transit service provided to this location	N/A	N/A	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +2,110 - 4,220 trips	Transit service provided along the trail +6,330 - 12,660 trips
RCT Goal 6: Improve image and understanding of service by the general public through a strong marketing program and public involvement plan and professional image for all employees								
Market the deviated fixed route through unique branding by FY 2016	1B. Repaint Deviated Fixed Route Buses with a new color scheme Improves the visibility and brand of the deviated fixed route	Deviated fixed route buses have regular RCT paint scheme	Deviated Fixed Route buses repainted with unique color scheme	N/A	N/A	N/A	N/A	Deviated Fixed Route buses repainted with unique color scheme
Increase visitors to RCT webpage by FY 2020	1D. Improve the RCT Webpage Makes RCT webpage more user-friendly and easier to navigate	Baseline number of webpage visitors	Increase number of webpage visitors	Increase number of webpage visitors	Increase number of webpage visitors	Increase number of webpage visitors	Increase number of webpage visitors	Increase from current levels
Publish maps and schedules of RCT services and update annually at a minimum	1F. Maps and Schedules Regularly updated and printed maps and schedules assists riders in accessing and using RCT services	Current deviated fixed route schedule, no map available	Publish maps of the deviated fixed routes and update schedules of RCT services	Update maps of the deviated fixed routes and schedules of RCT services	Update maps of the deviated fixed routes and schedules of RCT services	Update maps of the deviated fixed routes and schedules of RCT services	Update maps of the deviated fixed routes and schedules of RCT services	Maps of deviated fixed routes publishes and schedules of RCT services updated
Maintain a professional image of RCT services throughout the CTSP planning horizon	5A. Construct vehicle washbay Assists RCT in regularly washing and maintaining its vehicles, which affects the public perception of its services	No vehicle washbay	N/A	N/A	N/A	N/A	Vehicle washbay constructed	Vehicle washbay constructed
RCT Goal 7: Upgrade department's overall computer skills through training and equipment/software purchases								
Improve CTS software limitations by FY 2016	1E. Improve CTS Software Improving CTS Software enables RCT drivers to use technology in more accurately tracking deviated fixed route ridership	CTS Software does not record on/off passengers for deviated fixed route	CTS Software modified to record on/off passengers for deviated fixed route	N/A	N/A	N/A	N/A	CTS software modified to record on/off passengers for deviated fixed route

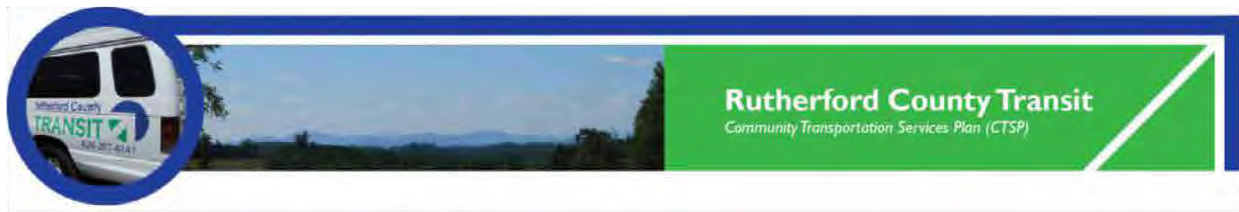


Capital Improvement Plan

Rutherford County Transit has developed a capital improvement plan for the next five years in order to maintain its commitment to safe, reliable, and efficient transit service. Table ES-3 outlines the vehicle replacement schedule with the yellow cells representing the vehicles scheduled to be replaced during that fiscal year. The total costs and local match associated with the vehicle replacements are included at the bottom of the table. Vehicles included in the Capital Improvement Plan are for the replacement of existing vehicles.

Table ES-3: RCT Vehicle Replacement Schedule

Vehicle #	Type	Cost	Proceeds from Vehicle Sale	FY 14 Mile/Yr	Replacement Year	Mileage FY 2015	Mileage FY 2016	Mileage FY 2017	Mileage FY 2018	Mileage FY 2019	Mileage FY 2020
580	22' LTV	\$ 65,000	\$ 3,000	8,313	FY 2015	156,670					
615	Lift	\$ 55,000	\$ 3,000	20,857	FY 2015	143,826					
582	Minivan	\$ 30,000	\$ 3,000	16,424	FY 2015	131,161					
579	Lift	\$ 55,000	\$ 3,000	4,984	FY 2015	130,555					
640	25' LTV	\$ 70,000	\$ 3,000	31,895	FY 2016		147,467				
612	Lift	\$ 55,000	\$ 3,000	21,344	FY 2016		133,327				
613	Lift	\$ 55,000	\$ 3,000	20,662	FY 2016		117,125				
578	Lift	\$ 55,000	\$ 3,000	24,247	FY 2016		117,004				
616	Lift	\$ 55,000	\$ 3,000	13,010	FY 2017		116,529	129,539			
614	Lift	\$ 55,000	\$ 3,000	20,394	FY 2017		110,190	130,584			
611	Lift	\$ 55,000	\$ 3,000	24,585	FY 2017		109,472	134,057			
635	Lift	\$ 55,000	\$ 3,000	16,411	FY 2018		94,766	111,177	127,588		
637	Lift	\$ 55,000	\$ 3,000	20,121	FY 2018		88,848	108,969	129,090		
638	Lift	\$ 55,000	\$ 3,000	22,233	FY 2018		88,528	110,761	132,994		
636	Lift	\$ 55,000	\$ 3,000	17,283	FY 2018		87,128	104,411	121,694		
658	Ctr Aisle	\$ 50,000	\$ 3,000	26,798	FY 2018		83,995	110,793	137,591		
647	Lift	\$ 55,000	\$ 3,000	17,740	FY 2019		75,728	93,468	111,208	128,948	
644	Lift	\$ 55,000	\$ 3,000	20,440	FY 2019		73,578	94,018	114,458	134,898	
645	Lift	\$ 55,000	\$ 3,000	20,060	FY 2019		68,429	88,489	108,549	128,609	
643	Lift	\$ 55,000	\$ 3,000	21,842	FY 2019		67,637	89,479	111,321	133,163	
646	Lift	\$ 55,000	\$ 3,000	20,679	FY 2019		64,902	85,581	106,260	126,939	
649	Lift	\$ 55,000	\$ 3,000	18,045	FY 2020		54,862	72,907	90,952	108,997	127,042
648	Lift	\$ 55,000	\$ 3,000	16,158	FY 2020		54,232	70,390	86,548	102,706	118,864
683	20' LTV	\$ 60,000	\$ 3,000	21,877			35,193	57,070	78,947	100,824	122,701
682	22' LTV	\$ 65,000	\$ 3,000	12,146			24,797	36,943	49,089	61,235	73,381
709	SUV	\$ 30,000	\$ 3,000	17,353			18,136	35,489	52,842	70,195	87,548
Vehicles Per Year				495,901		4	4	3	5	5	2
Proceeds from Sale						\$ 12,000	\$ 12,000	\$ 9,000	\$ 15,000	\$ 15,000	\$ 6,000
Cost Per Year						\$ 205,000	\$ 235,000	\$ 165,000	\$ 270,000	\$ 275,000	\$ 110,000
Local Match		10%				\$ 20,500	\$ 23,500	\$ 16,500	\$ 27,000	\$ 27,500	\$ 11,000



Financial Plan

A financial plan for Rutherford County Transit was developed based on recent RCT budgets and inflation factors provided by NCDOT, in order to assess the financial impacts and performance measures (ridership and fares) associated with the CTSP recommendations over the CTSP planning horizon (FY 2016 – 2020). The plan is modeled on two scenarios: Base Case and Base Case + CTSP Recommendations. The Base Case Scenario does not include the CTSP recommendations, but rather projects revenues and expenditures based on past RCT budgets and inflation. The Base Case + CTSP Recommendations Scenario includes the CTSP recommendations in projected expenditures and identifies potential sources of federal, state, and local revenues to cover the anticipated costs. The two scenarios are summarized in Table ES-4. Additional information including the methodology used to develop the financial plan is discussed in Chapter 3.0: Financial Plan.

Table ES-4: Summary of Financial Plan

Base Case Scenario	Actual FY 2014	Projected FY 2015	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016 - 2020
Expense								
Administrative	\$ 218,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 1,179,755
Operating	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 3,415,945
Capital	\$ 4,660	\$ 247,200	\$ 280,602	\$ 222,000	\$ 312,000	\$ 357,000	\$ 152,000	\$ 1,323,602
Expense Subtotal	\$ 906,800	\$ 1,166,340	\$ 1,199,742	\$ 1,141,140	\$ 1,231,140	\$ 1,276,140	\$ 1,071,140	\$ 4,595,700
Revenue								
Federal	\$ 160,852	\$ 354,933	\$ 381,655	\$ 334,773	\$ 406,773	\$ 442,773	\$ 278,773	\$ 1,844,747
State	\$ 208,095	\$ 202,659	\$ 205,999	\$ 200,139	\$ 209,139	\$ 213,639	\$ 193,139	\$ 1,022,055
Local - RCT	\$ 646,965	\$ 679,200	\$ 704,393	\$ 712,718	\$ 721,168	\$ 729,744	\$ 738,450	\$ 3,606,473
Revenue Subtotal	\$ 1,015,912	\$ 1,236,792	\$ 1,292,047	\$ 1,247,630	\$ 1,337,080	\$ 1,386,156	\$ 1,210,362	\$ 6,473,275
NET (Revenue - Expenses)	\$ 109,112	\$ 70,452	\$ 92,305	\$ 106,490	\$ 105,940	\$ 110,016	\$ 139,222	\$ 1,877,575

Base Case + CTSP Recommendations Scenario	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016 - 2020
Expense						
Administrative	\$ 246,559	\$ 246,983	\$ 247,425	\$ 247,884	\$ 247,884	\$ 1,236,735
Operating	\$ 779,904	\$ 915,440	\$ 983,667	\$ 995,687	\$ 995,687	\$ 4,670,386
Capital	\$ 327,638	\$ 388,583	\$ 324,621	\$ 374,900	\$ 295,196	\$ 1,710,938
Expense Subtotal	\$ 1,354,101	\$ 1,551,006	\$ 1,555,713	\$ 1,618,471	\$ 1,538,767	\$ 7,618,059
<i>Change from Base Case Scenario</i>	13%	36%	26%	27%	44%	66%
Revenue						
Federal	\$ 476,127	\$ 548,038	\$ 529,534	\$ 574,264	\$ 510,501	\$ 2,638,464
State	\$ 211,233	\$ 200,801	\$ 210,975	\$ 216,026	\$ 193,736	\$ 1,032,770
Local - RCT	\$ 704,393	\$ 712,718	\$ 721,168	\$ 729,744	\$ 738,450	\$ 3,606,473
Local - Contract	\$ -	\$ 89,906	\$ 93,508	\$ 97,249	\$ 97,249	\$ 377,912
Revenue Subtotal	\$ 1,391,753	\$ 1,551,463	\$ 1,555,185	\$ 1,617,283	\$ 1,539,935	\$ 7,655,619
<i>Change from Base Case Scenario</i>	8%	24%	16%	17%	27%	18%
NET (Revenue - Expenses)	\$ 37,653	\$ 456	\$ (528)	\$ (1,188)	\$ 1,168	\$ 37,560



1.0 TECHNICAL MEMORANDUM I

1.1 Overview

Rutherford County Transit

Rutherford County Transit (RCT) was established in 1990; this is the 25th Anniversary year of this self-funded department within the Rutherford County Government. RCT provides services to eligible Medicaid patients, senior citizens, persons with disabilities and the general public riders.

Deviated Fixed Route (TARC)



Rutherford County Transit's Deviated Fixed Route, known as TARC, operates through the communities of Rutherfordton, Spindale and Forest City on a set schedule (Figure 2-8). TARC stands for the Transportation Authority of Rutherford County, but this term is no longer in use. The route runs from 8:00 AM - 5:40 PM and the fare for a one way trip is \$1.00. Deviations can be made up to 1/2 mile from a set bus stop and stops may also be made along the route as long as it is a safe location for the bus to stop. Monthly passes are available for \$32.00. They can be bought in person at the RCT office, which is a stop on the deviated fixed route. This service is supported by the

Rural General Public (RGP) Program. The RGP program is a part of the state-funded Rural Operating Assistance Program (ROAP) administered by the NCDOT Public Transportation Division. Refer to Table 1-1 on the next page for eligibility criteria and eligible activities.

Medicaid Demand-Response Transportation

Medicaid funded demand-response transportation is provided to passengers who have been approved for Medicaid Transportation through the Rutherford County Department of Social Services (DSS). Passengers must call the DSS office to initiate their approval process. DSS must verify that the client has full Medicaid through the state Medicaid system. Once approved, appointments can be scheduled in advance.

Elderly & Disabled Transportation Assistance Program (EDTAP)

RCT has grant funds available from the Elderly & Disabled Transportation Assistance Program (EDTAP), part of ROAP, to transport individuals over the age of 60 or who have a disability. If they have a disability, an application must be completed and a doctor must certify the application. Currently, eligible applicants are allowed four trips per month at no charge under this service. The number of trips per month is subject to change based on available program funding. Grant funds, available through NCDOT, FTA and local resources, are available to subsidize this service on an annual fiscal year or calendar basis from July 1 - June 30. Refer to Table 1-1 on the next page for eligibility criteria and eligible activities.



Employment Transportation Assistance Program (EMPL)

Funding from NCDOT through the Employment Transportation Assistance Program (EMPL), part of ROAP, is also available to provide employment transportation assistance to eligible riders. In the past this funding was part of the Job Access and Reverse Commute program (JARC), it is now under the Urbanized Area Formula program (FTA Section 5307). RCT has implemented these grant funds to transport individuals to work. This process involves an application that needs to be signed by the rider and employer. The fare for this service is based on frequency and distance of trips required. Grant funds, if available through NCDOT, are available to subsidize this service on an annual basis from July 1 - June 30. Refer to Table 1-1 below for eligibility criteria and eligible activities.

Table 1-1: ROAP Funding Program Summary	
Eligibility Criteria	Eligible Activities
Rural General Public (RGP) Program	
<ul style="list-style-type: none"> Cannot be used for transportation within an urban area (Rutherford County is non-urban.) For riders that do <i>not</i> have a human service agency or organization that will pay for transportation service 	<ul style="list-style-type: none"> Funds may not be used for capital or administrative expenses Fares may be charged and must be used to provide more RGP service
Elderly & Disabled Transportation Assistance Program (EDTAP)	
<ul style="list-style-type: none"> Elderly person defined as 60 years or older Person with a disability defined as one who has a physical or mental impairment that substantially limits one or more major life activity 	<ul style="list-style-type: none"> Provides up to four trips per month (RCT EDTAP application) More than four trips per month may be arranged upon referral by a medical professional Provides in-county transportation except in cases in which a medical professional makes a referral to an out-of-county facility Funds may not be used for capital or administrative expenses Fares may be charged and must be used to provide more EDTAP service
Employment Transportation Assistance Program (EMPL)	
<ul style="list-style-type: none"> Individuals that have transitioned off the Work First or Temporary Assistance for Needy Families program within the last 12 months Participants in Workforce Development Programs The transportation disadvantaged public. Requires certification by employer or Isothermal Community College as proof of employment/enrollment 	<ul style="list-style-type: none"> Transportation assistance to work, employment training, and/or other employment related destinations Funds may not be used for capital or administrative expenses. Fares may be charged and must be used to provide more EMPL service

Sources: NCDOT Rural Operating Assistance Program State Management Plan; Rutherford County Transit Application for Elderly and Disabled Transportation Assistance Program; Rutherford County Application for Employment Transportation Assistance Program



The allocation formulas for these programs are discussed in the Funding and Financial Management section.

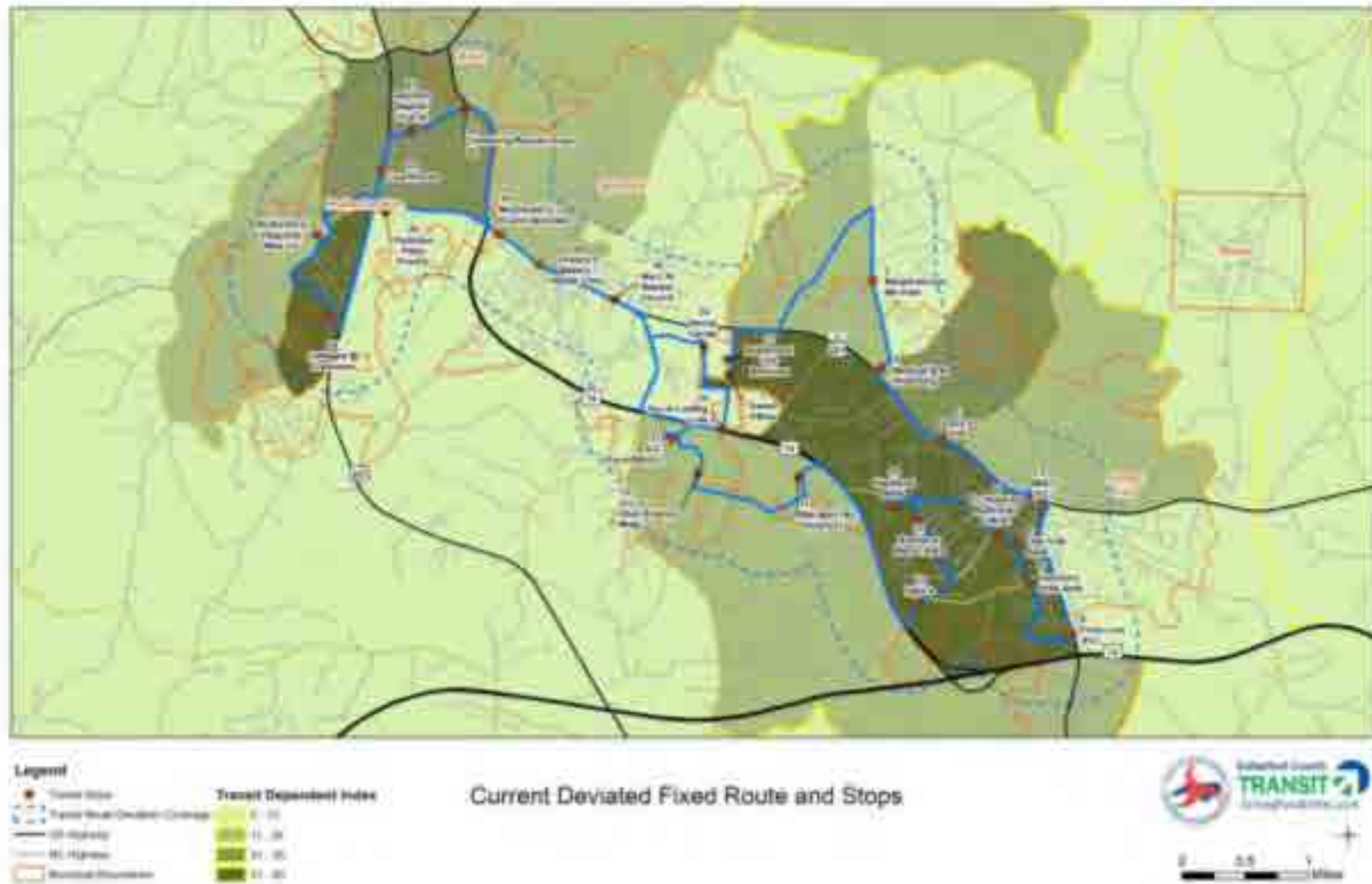
Out-of-County Medical Transportation

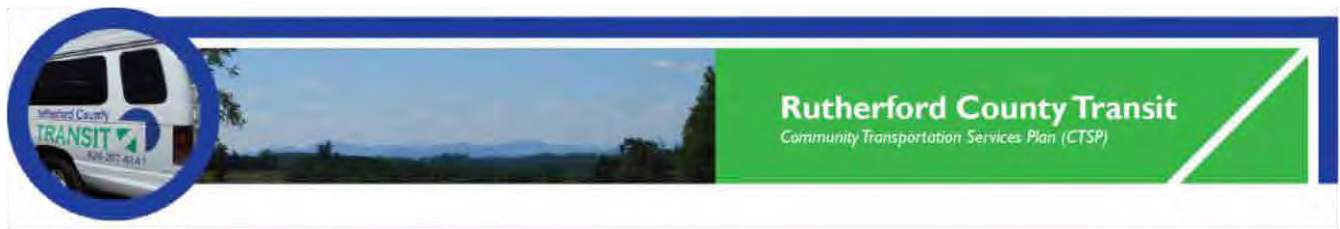
Out-of-County medical transportation is an important aspect of the RCT service. This service is provided on a set schedule to best meet the service demands of those passengers requiring out-of-county medical transportation. RCT requires all out-of-town medical visits be made between 9:00 am -12:00 pm and transports these riders to cities listed in Table 2-14.

There are a limited number of seats available on each van and additional passengers must be approved for medical reasons. General requests to use this new shuttle service for non-medical appointments are reviewed on a case-by-case basis.

Day of the Week	Location Served
Monday	Asheville, Columbus, Hendersonville, Hickory, Morganton, Shelby
Tuesday	Charlotte, Gastonia, Mooresville, Shelby, Winston-Salem
Wednesday	Charlotte, Gastonia, Kings Mountain, Shelby
Thursday	Asheville, Durham/Chapel Hill, Hendersonville, Shelby, Spartanburg, SC
Friday	No service

Figure 1-1: Rutherford County Transit Deviated Fixed Route (TARC)





Planning Context

Community Transportation Service Plan Overview

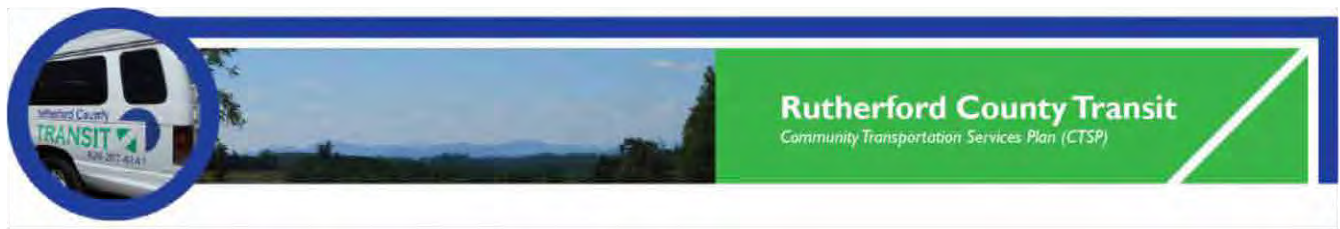
The CTSP will describe the current performance and organizational direction of the Rutherford County public transit system and recommend strategies of operating or managing the mobility options for passengers and improve the efficiency and effectiveness of the organization and transportation services. This five-year community transportation services plan (CTSP) is developed through a public education and involvement process that includes the general public, private and non-profit transportation providers, human service providers and targeted populations that include individuals with disabilities, low incomes and limited English proficiency (LEP). The result of this planning effort is to produce overall growth and expansion goals that the community can support. Rutherford County Transit system staff, in partnership with the NCDOT Public Transportation Division (PTD), have agreed to work together to develop this CTSP five-year planning study.

Previous Studies

The Isothermal Regional Human Service Regional Transportation Coordination Plan, 2009. This document provided an analysis to help area transit agencies maximize efficiency through better coordination and improve the levels of service they provide. It also included some ideas for future regional and local service to meet the needs of a changing region, such as vanpooling and or funded by job access reverse commute (JARC) grant funds. The planning process identified opportunities for efficiencies through coordination, which included improved marketing to increase utilization of existing services. This was especially apparent in car and van pooling, as well as the development of park and ride lots throughout the Study Area. Logical linkages for better connectivity with existing transit services were encouraged to develop a regional approach to coordinated transportation.

The Isothermal Regional Human Service Regional Transportation Coordination Plan, 2013. The Isothermal Planning and Development Commission updated the 2009 Local Coordinated Plan. The update involved inventorying public transportation service providers in the Isothermal region, conducting a needs and service gaps analysis, and prioritizing transit improvements. Some of the needs and service gaps include: regional transit call center, schedule coordination between the three counties, transit access for veterans, and better access for remote/underserved clients. The improvements noted consisted of acquiring additional transit vehicles, dedicating public parking lots for carpools, vanpools, and park-and-rides, and increasing deviated fixed-route service.

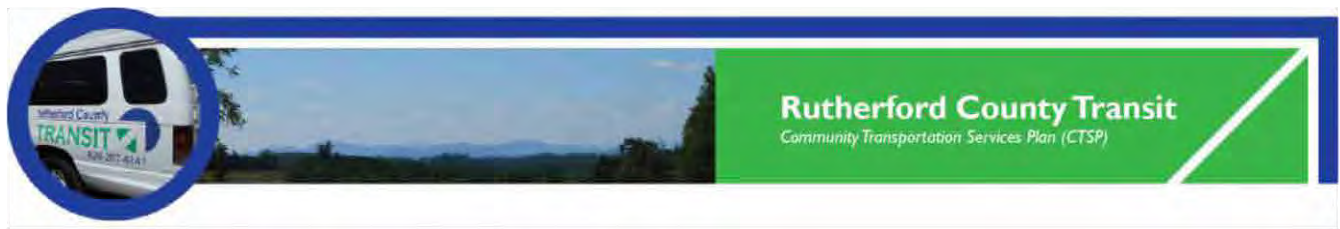
The LCP noted that one area of potential mobility shifts could be in the utilization of the Thermal Belt Rail Trail. This trail extends nearly 8 miles from Oakland Road in Spindale west and north to the community of Gilkey. The trail surface is paved for 1.8 miles from downtown Spindale to Whitesides Road and then transitions to crushed gravel for the remainder to Gilkey. The trail is approximately 6 feet wide. The trail is mostly flat with only a gentle rise if traveling towards Gilkey. Only the paved surface is suitable for road bike



usage and the best places to access the trail are in the Town of Spindale, the Bechtler Mint Site Historic Park and at the Tanner Companies parking area past the former Tanner Store.

The trail currently has very little on-site signage and no printed maps. The trail is managed by Rutherford County. This trail offers the opportunity to expand mobility options for biking enthusiasts, and could create some connectivity to the Rutherford County transit service. Once the trail improvements have been made, a future study to analyze potential ridership connectivity could be initiated.





CTSP Update

The last Community Transportation Services Plan for Rutherford County Transit was conducted in 1999. Therefore, NCDOT –PTD recommended that this current plan not be predicated on the previous one, due to the length of elapsed time and the changes in local demographics, funding and coordinated services.

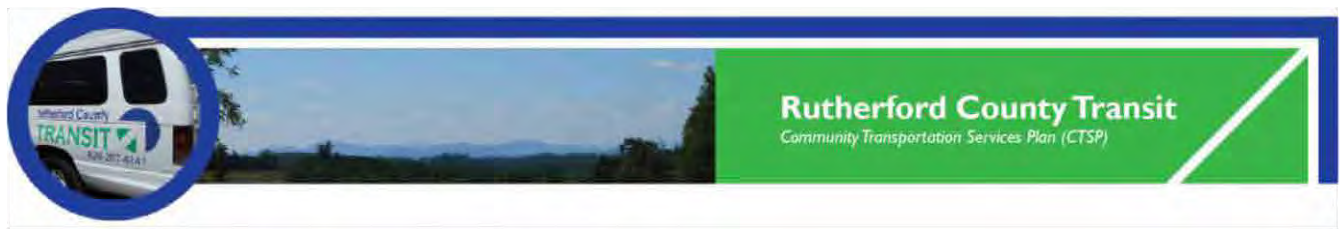
Planning Process, Purpose and Goals

Purpose

The purpose of the study is to review, analyze and recommend strategies of operating or managing the transit services to increase efficiency and effectiveness of the organization and improve mobility options and the delivery of transportation services. This is a five-year plan that will address service characteristics, funding, capacity analysis, public satisfaction and community needs, future services, coordination opportunities and a financial plan.

The demographics of Rutherford County and its economy provide both opportunities and challenges for creating a balanced and efficient community transportation system. The RCT service provides mobility to specific populations, while advancing the need for an enhanced general public service. This plan is for a 5-year timeframe that will put into place efficiencies that promote the purpose of the service and provide a convenient operational approach that meets future community mobility needs.

Community transportation in Rutherford County largely is provided by the RCT service. The system primarily serves a diverse set of clients, though the majority of subscription trips that are taken by the elderly, persons with disabilities, and clients of Rutherford County Department of Social Services. The CTSP evaluates the system's current management and operations methodology while assessing its current administrative, operational and maintenance support, and identifies strengths, challenges and implementable recommendations. The resulting CTSP will assist NCDOT's Public Transportation Division in allocating specific resources to facilitate continuous improvement of the system over a 5-year planning horizon. It is important to note that the CTSP is intended to be a "fluid, working document" with a flexible framework that will allow the recommendations to be revisited as the community's priorities, needs and resources change.



Guiding Principles

The following guiding principles will direct the existing conditions analysis for the phased improvements and recommendations. NCDOT PTD has specific statewide guidance for CTSP's and the future planning of community transportation services. The principles include:

- **Mobility** – To maintain transportation options for the general public, low income individuals, elderly persons and persons with disabilities to foster independence and enhance quality of life.
- **Integration** – To integrate the community transportation system with other federal, state and local programs that support public and human service transportation.
- **Efficiency** – To enhance the efficiency and effectiveness of community transportation.
- **Coordination** – To develop the seamless delivery of transportation services across geographies, jurisdictions and program areas.
- **Measureable** – To create a phased implementation schedule that supports measureable results.
- **Resourcefulness** – To utilize and identify appropriate resources (personnel, funding, vehicles, and technology) to sustain a level of service that fulfils the transportation needs of individuals.

Steering Committee

The Steering Committee will meet three (3) times during the process (February-June 2015) to provide oversight and to monitor the progress on the work plan. The committee members are listed in Table 1-3.

INITIAL STEERING COMMITTEE WORKSHOP

- Present and discuss data on system operations, previous strategic plans, mapping, surveys, public input and consultant's assessment. Engage steering committee members to provide comments and input.
- Summarize and present the findings from the system inventory and confirm the consultant understands the current provision of transportation in the service area.
- Allow the Steering Committee to share their knowledge or perception of unmet needs and the problems and/or concerns associated with the operation and/or management of the existing transportation system.

SECOND STEERING COMMITTEE WORKSHOP

- Summarize and present the alternatives recommended for management, service and coordination analysis of transit system.
- The Steering Committee will discuss the alternatives, recommend changes and/or select the alternatives they feel should be included in the final report.

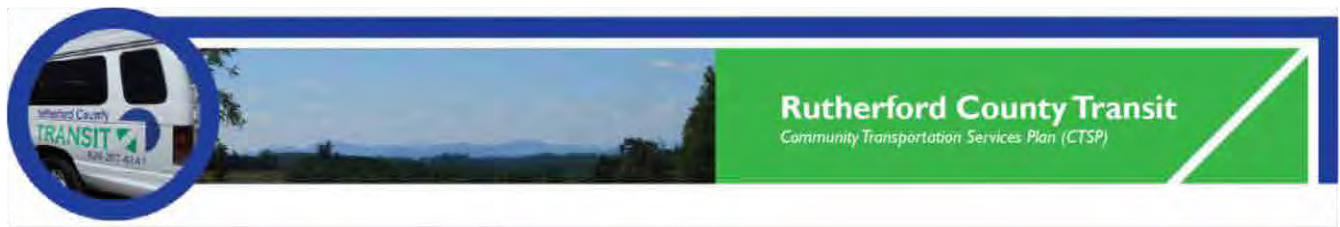
FINAL STEERING COMMITTEE WORKSHOP

A presentation of the Draft Plan will be made to the Steering Committee, TAB members, authorized official, county manager, county finance manager, members of the public governing body, and/or other interested groups. Comments will be solicited and considered for incorporation into the Final Plan.



Table 1-3: Steering Committee Members

Name	Affiliation
Chair	
Kerry Giles	Transportation Director
Human Service Agencies	
Brandy Gowan/Vic Martin	DSS Medicaid
Jerry Wease	Parkway
Philip Melton	Health Department
Stephanie Cole	Dialysis
Marie Champion	Veterans
Economic Development	
Tim Mathis	IPDC Workforce
Mary Taylor	EDC Existing Industry
Sandra Millet Camp	Employment Security
Seniors	
Angela Ezell	Senior Center
Persons with Disabilities	
John Jarret/Amanda Freeman	Rutherford Life Services
Planning	
Jerry Stensland	Outdoor Coalition/Rails to Trails
Karyl Fuller	RPO / Planning
Blake Bostic	County Planning (CTP)
Transportation Providers	
Dennis Hampton	Hampton Cabs
Jeff Hill	Transit Operations Manager
Transit Riders	
Shirley Broughton	Transit Rider
Patty Eisenhardt	Transit Rider
NCDOT Public Transportation Division	
Phillip Vereen	Assistant Director for Mobility Development - Western Region
Nicholas Scheuer	Mobility Development Specialist



Goals

The primary goals of the plan are to:

- 1) Analyze and recommend strategies that can improve community transportation services; and
- 2) Produce coordination and efficiency efforts that the community can support.

Project Timeline:

- ❖ Technical Memo 1 Deliverable in January, 2015
- ❖ Technical Memo 2 Deliverable in March, 2015
- ❖ Draft Plan/Summary Report Deliverable in May, 2015
- ❖ Final Report Deliverable in June, 2015

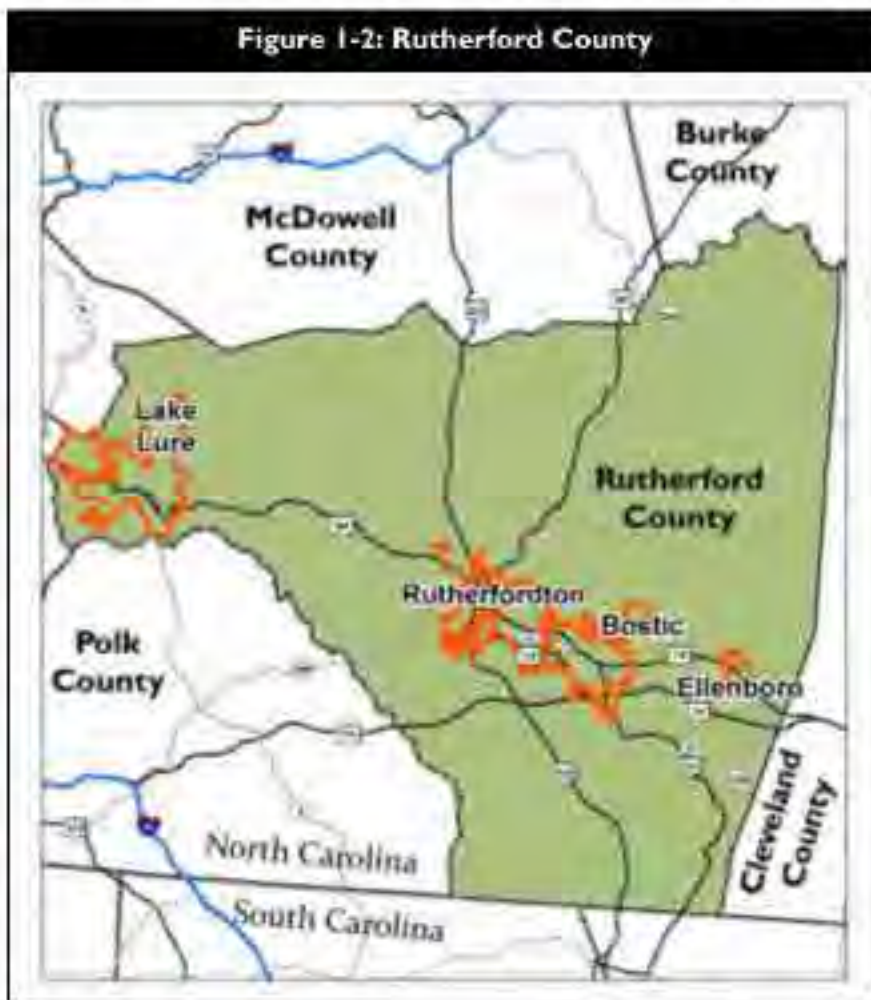


1.2 Service Characteristics, Funding and Service Capacity

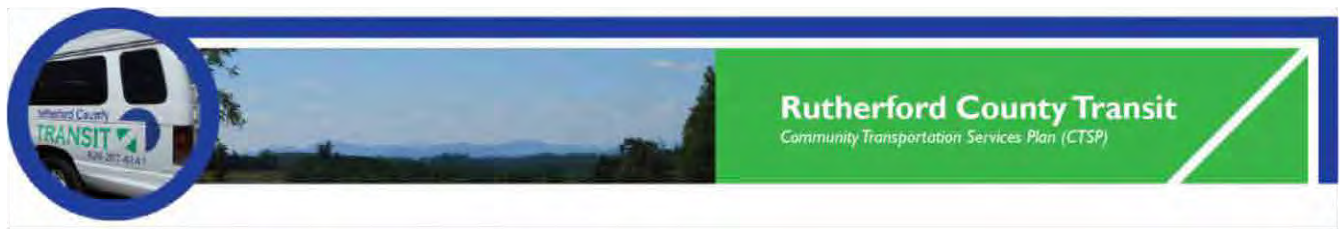
Service Characteristics

Rutherford County Transit (RCT) provides transportation services to Rutherford County through demand response service and a deviated fixed route service. The majority of the ridership is supported by Medicaid funding. Medicaid trips provide 49.2% of RCT revenue and constitute 34.6% of RCT trips. The department provides transit services to the following individuals: individuals over age 60, disabled riders and rural general public (RGP) passengers on the deviated fixed route. The mission of Rutherford County Transit is to "provide efficient and effective utilization of all available resources in the provision of safe, convenient, and reliable transportation services, and to facilitate mobility choices for all individuals including the elderly, disabled, and clients of human service agencies."

Rutherford County is located in the foothills of North Carolina, southeast of Asheville, and on the border of South Carolina. While the county is considered part of the foothills, the western part of the County is much higher in elevation than the eastern part.



The County is 567 square miles, and includes a total of eight municipalities and several census-designated places. Six of the Municipalities, Rutherfordton, Ruth, Spindale, Forest City, Bostic and Ellenboro are located relatively proximate to one another, while Chimney Rock Village and Lake Lure are located in the western part of the County. Rutherford County is part of the Isothermal RPO, which also includes McDowell and Polk Counties. Figure 1-2 shows the geography of the County.



Operating Statistics

The Institute for Transportation Research and Education (ITRE) at North Carolina State University on behalf of NCDOT created a series of five peer groups across the state for comparison of operating statistics. Rutherford County falls within Peer Group 4 (Figure 1-3 on the following page). Comparing Rutherford County's operating statistics to Peer Group 4 (Table 1-4 on the following page) provided an important initial step to understanding the operating efficiency of the system.

- Based on funding type, Rutherford County Transit has a much more balanced trip distribution than other Counties within its peer group, meaning that trips are more equally split between Medicaid, other contract, and non-contract. Medicaid trips make up the majority of the trips in Rutherford County compared to the other peer counties.
- Demand response efficiency indicators are mixed in the County compared to the peer counties with passengers per mile being similar, but slightly higher; and passengers per hour being lower.
- Trip subsidies within Rutherford County have fluctuated during the period of 2011-2013 dipping slightly in 2012 from 2011, but returning to similar levels in 2013. This trend was mirrored by the peer counties.
- According to the comparison table below, local funding support for administration and operations exceeds the Peer Group 4 average.



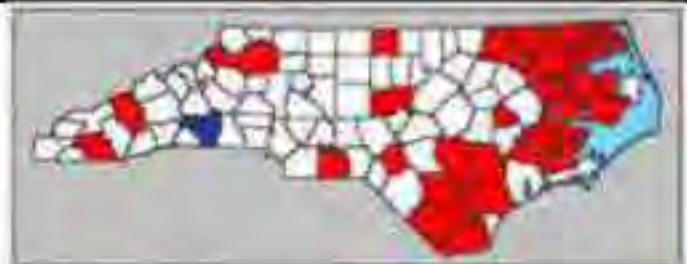
Table 1-4: Comparison of Operating Statistics with Peer Group 4

	Rutherford County	Peer Group 4
Trips by Funding Type		
Medicaid	39%	9%
Other Contract	37%	17%
Non Contract	24%	74%
Weekday		
	100%	96%
Weekend		
	0%	4%
Demand Response Efficiency		
Passengers per Mile	0.110	0.108
Passengers per Hour	1.97	2.33
Subsidy Per Trip By Year		
2011	\$6.10	\$3.94
2012	\$5.51	\$3.44
2013	\$6.39	\$3.67
Cost Per Trip By Year*		
2011	\$17.38	\$7.75
2012	\$15.40	\$7.34
2013	\$17.59	\$7.71
Administrative and Operating Funding Sources		
Federal	16%	24%
State	20%	23%
Local	64%	53%

Source: TTRF, 2014

*Note that the cost per trip by year does not factor Rutherford County Transit's surplus. Taking into account this surplus would lower the cost per trip and be more comparable to the peer group average.

Figure 1-3: Peer Group



Counties included in Peer Group 4:

- Anson
- Beaufort
- Bertie
- Bladen
- Brunswick
- Camden
- Caswell
- Charlotte
- Chowan
- Columbus
- Craven
- Currituck
- Duplin
- Gates
- Greene
- Halifax
- Haywood
- Hertford
- Hoke
- Hyde
- Jones
- Macon
- Martin
- Northampton
- Pamlico
- Pasquotank
- Pender
- Perquimans
- Rutherford
- Sampson
- Tyrrell
- Washington
- Watauga
- Wake



Service Area Demographics

Population data can be obtained from the US Census Bureau for decennial data, and from the NC Office of State Budget and Management for interim years. The population of Rutherford County grew by 4,698 individuals (7.4 percent) between the 2000 and 2010 Censuses. During this time, municipal growth varied. The largest municipality within the County, Forest City, decreased in population between 2000 and 2010 by 73 individuals (1.0 percent) while some of the smaller municipalities such as Ellenboro, Ruth and, to a lesser extent, Bostic and Lake Lure have grown in population. Growth since 2010 has been relatively flat within the County and the municipalities. Table 1-5 shows the growth rates in both the County and the individual municipalities.

Table 1-5: Population Change

	2000	2010	Pop. Change, 2000-2010	Pct. Change, 2000-2010	Population 2013	Pop. Change, 2010-2013	Pct. Change, 2010-2013	Pop. Change, 2000-2013	Pct. Change, 2000-2013
Rutherford County	63,063	67,763	4,698	7.4%	67,807	44	0.1%	4,742	7.5%
Municipalities									
Bostic	328	386	58	17.7%	385	-1	-0.3%	57	17.4%
Clumney Rock Village	175	113	-62	-35.4%	113	0	0.0%	-62	-35.4%
Ellenboro	479	873	394	82.3%	879	6	0.7%	400	83.5%
Forest City	7,549	7,476	-73	-1.0%	7,427	-49	-0.7%	-122	-1.6%
Lake Lure	1,027	1,192	165	16.1%	1,210	18	1.5%	183	17.8%
Ruth	329	440	111	33.7%	445	5	1.1%	116	35.3%
Rutherford	4,134	4,200	66	1.6%	4,200	0	0.0%	66	1.6%
Spindale	4,022	4,321	299	7.4%	4,331	10	0.2%	309	7.7%

Transportation Dependent Population Profile

While the automobile is the primary transportation mode in the Rutherford County, many people rely on transit as the primary mode of travel because of physical or socioeconomic constraints. These individuals are referred to as transportation disadvantaged, and the federal government identifies three subsets of the population as transportation disadvantaged groups — the elderly, persons with disabilities, and low income individuals. Though not identified by the federal government, households without access to a personal vehicle also are transportation disadvantaged, as are young people under the age of 16. Data from the 2012 American Community Survey (ACS) was used to determine transportation disadvantaged groups within Rutherford County. This information, along with comparative data from North Carolina as a whole is shown in Table 1-6 on the following page.



Table 1-6: Transportation Dependent Population

	Rutherford County		North Carolina	
	Number	Percentage	Number	Percentage
Elderly (65 and Older):	11,763	17.4%	1,247,969	13.1%
Persons with Disabilities	4,198	6.2%	429,512	4.5%
Poverty	13,384	19.8%	1,563,464	16.4%
No Vehicle	1,675	2.5%	241,438	2.5%
Youth Population	7,602	11.3%	1,016,092	10.6%

Elderly Population

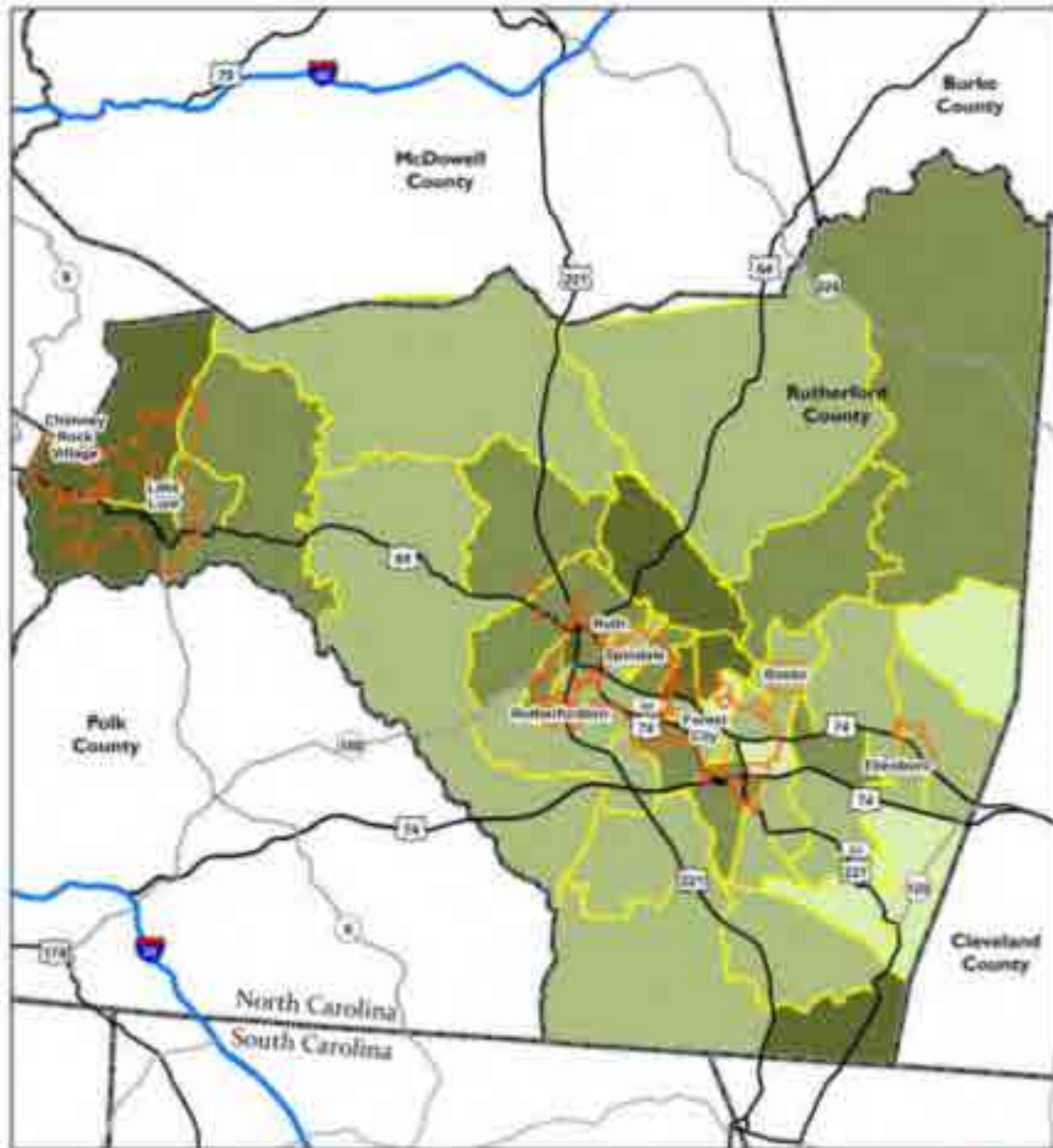
The elderly population rate in Rutherford County is higher than the state as a whole, with 17.4 percent of the population over age 65 compared to 13.1 percent at the state level. Concentrations of elderly populations (areas where elderly individuals account for greater than 30 percent of the population) are found to the north of Spindale and Forest City and along the Alternative US 221 corridor in the southern part of the County along the South Carolina state line. There is also a large number of elderly individuals in the northwestern part of the County, in the vicinity of the towns of Chimney Rock Village and Lake Lure. Chimney Rock Village and Lake Lure have a number of retirement communities, and is a popular retirement destination. North of Spindale and Forest City, close to the South Mountains, is where a significant number of retirees and people with vacation homes are known to reside. Elderly residents in this part of the County are likely retirees who have moved to the County. Elderly population by census block group is shown in Figure 1-4 on the following page.

Data Description

Figure 1-4 shows the rate of elderly residents (age 65 and over) by block group. There are a total of 11,763 elderly residents in the county or 17.4 percent of the overall population. The block group with the highest rate of elderly population is located adjacent and to the north of Spindale and Forest City.



Figure 1-4: Elderly Population



Legend

Interstate	Elderly Population
US Highway	
NC Highway	
Municipal Boundaries	
County Boundaries	
	0 - 10%
	10.1% - 20%
	20.1% - 30%
	30.1% +





Disabled Population

Rates of persons with disabilities are higher in Rutherford County than in the State as a whole. According to the ACS, a total of 4,198 individuals, or 6.2 percent of the population, have disabilities within Rutherford County. Disabled individuals are located throughout the County, but are more prevalent in the eastern part of the County. Concentrations of disabled individuals are located in the vicinity of, and to the north of Spindale and Forest City and along the US 221 corridor in the southern part of the County along the South Carolina state line. These populations may be located in these areas in order to be closer to services, which would be located in more populated areas of Spindale and Forest City. Disabled population by census block group is shown in Figure 1-5.

Data Description

The Census Bureau collects data on disability primarily through the American Community Survey (ACS) and the Survey of Income and Program Participation (SIPP).

The questions introduced in 2008 remain the same questions found in the current ACS questionnaires. They cover six disability types:

- Hearing difficulty - deaf or having serious difficulty hearing.
- Vision difficulty - blind or having serious difficulty seeing, even when wearing glasses.
- Cognitive difficulty - Because of a physical, mental, or emotional problem, having difficulty remembering, concentrating, or making decisions.
- Ambulatory difficulty - Having serious difficulty walking or climbing stairs.
- Self-care difficulty - Having difficulty bathing or dressing.
- Independent living difficulty - Because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping.

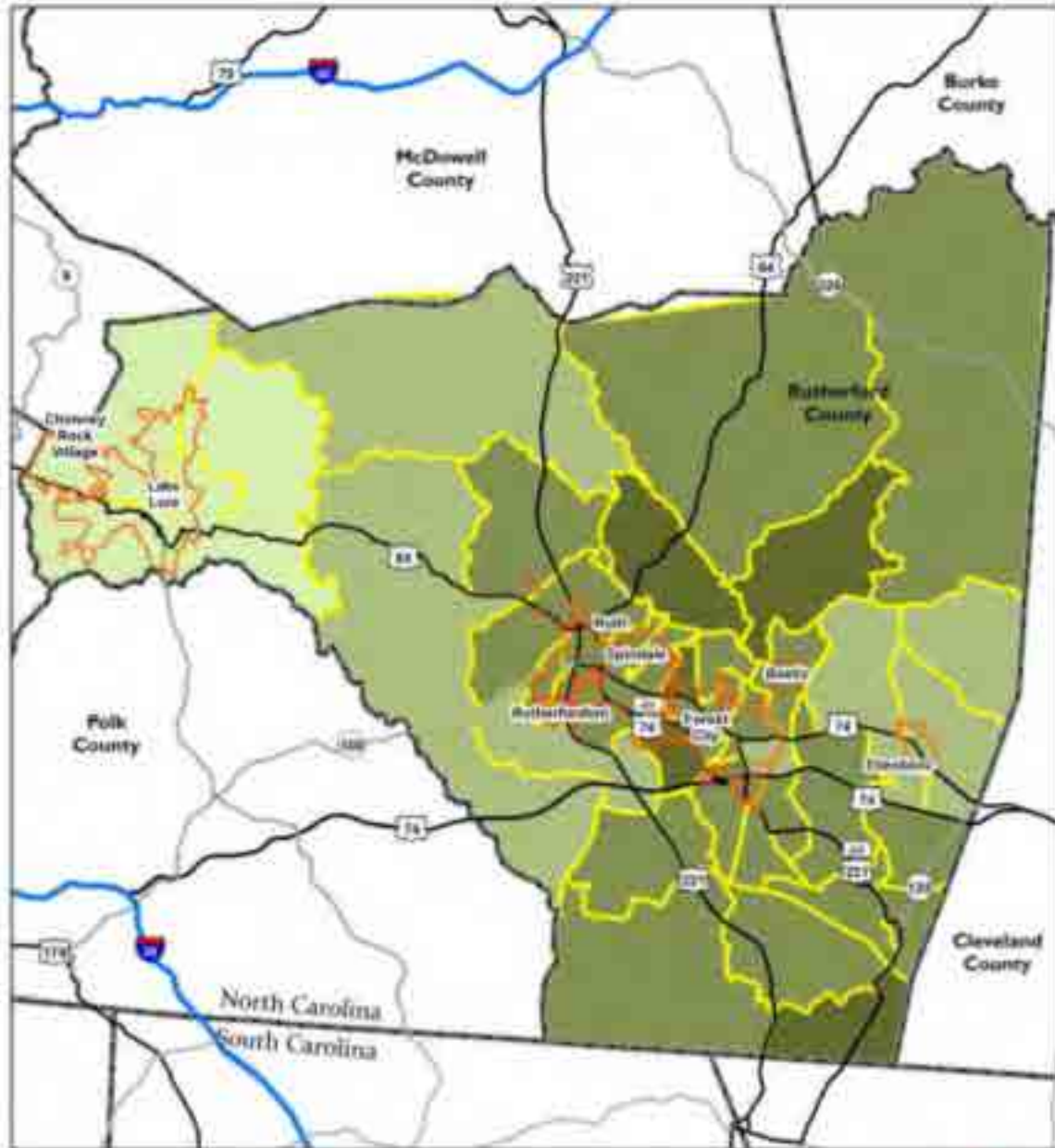
Respondents who report anyone of the six disability types are considered to have a disability.

Figure 1-5 shows the percentage of the population within each block group that is classified as disabled. The block group with the highest rate of disabled persons (13.9%) is located to the north of Spindale along US 64. Note that because disability is not reported at the block group level, ITRE had to make the following calculations to compute disability at the block group level:

The tract level disability population numbers are given in 4 age groups (18-34, 35-64, 65-74, 75&up) by sex. Total population in B01001 is given in many age ranges by sex. These many age ranges were summed to arrive at the male and female population in each of the 4 age ranges for both the tract and block group levels. This gave the distribution of the population between tract and block group. The disability population was then distributed to the block group level in the same proportion (according to age and sex).



Figure 1-5: Disabled Population



Legend

Interstate	Disabled Population
US Highway	
NC Highway	
Municipal Boundaries	
County Boundaries	
	0 - 2.5%
	2.6% - 5%
	5.1% - 10%
	10.1% +



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Poverty

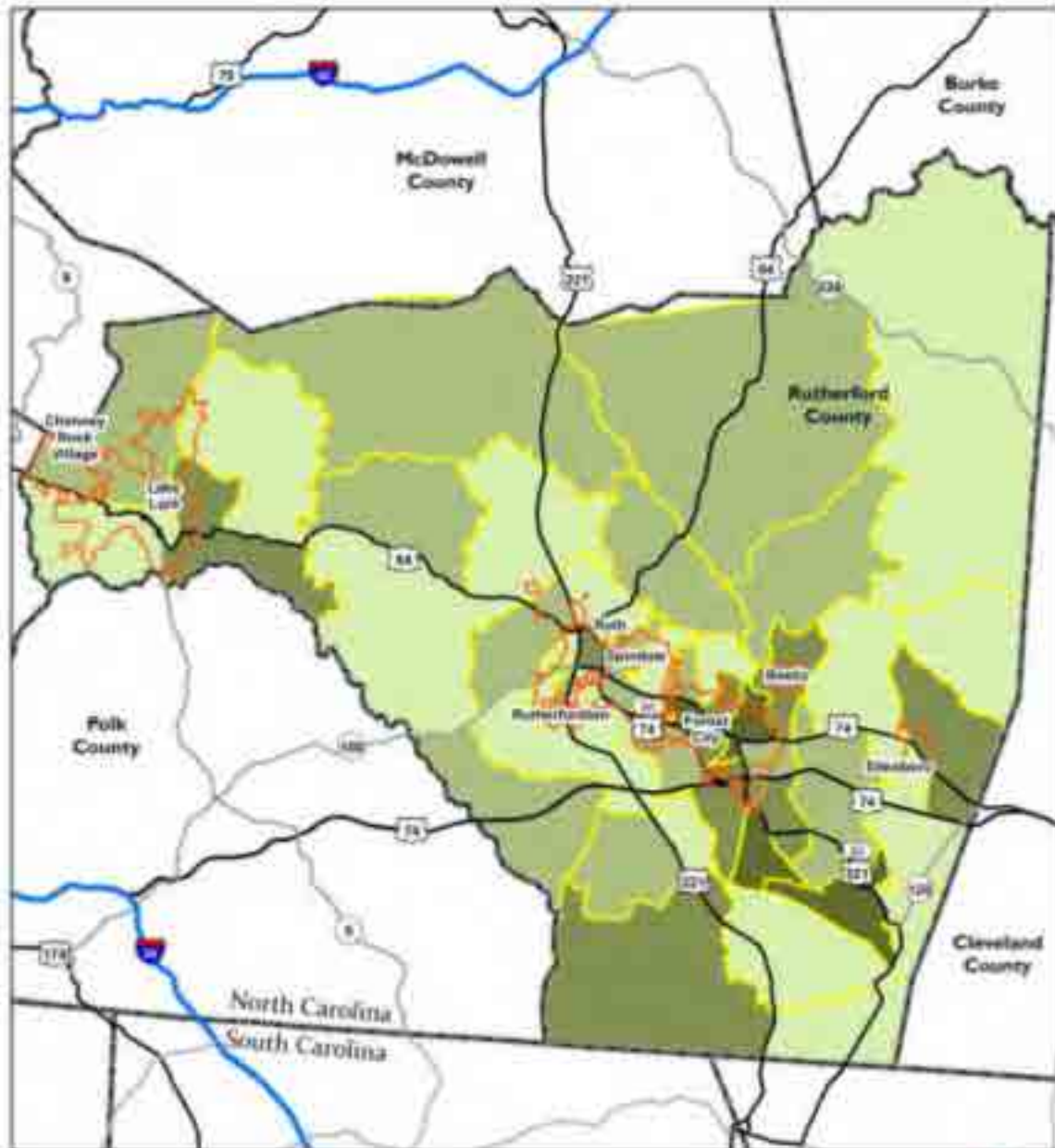
Overall, poverty rates are higher within Rutherford County (19.8 percent) than the state as a whole (16.4 percent). The highest concentration of low-income individuals is within Forest City in Block Groups that contain Section 8 housing complexes maintained by the Forest City Housing Authority. Additional populations of low income residents are located to the south and east of Forest City along Alternative US 221 in the vicinity of the areas known as Caroleen and Henrietta. This area has historically been lower income. Cone Mills textile plants were located in these communities and when they closed the area became more impoverished. Census Block Groups with high poverty rates are shown in Figure 1-6.

Data Description

Figure 1-6 shows the percentage of each block group's population that is below the poverty. In 2012 the poverty threshold for an individual, which is the dollar amount the Census Bureau uses to determine a person's poverty status, was \$11,720. The Block Group with the highest poverty rate is the same Block Group described in the TDI index (see Figure 1-9 description).



Figure 1-6: Poverty



Legend

	Interstate	Poverty Population	
	US Highway		0 - 10%
	NC Highway		10.1% - 20%
	Municipal Boundaries		20.1% - 30%
	County Boundaries		30.1% +



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Population with No Vehicles

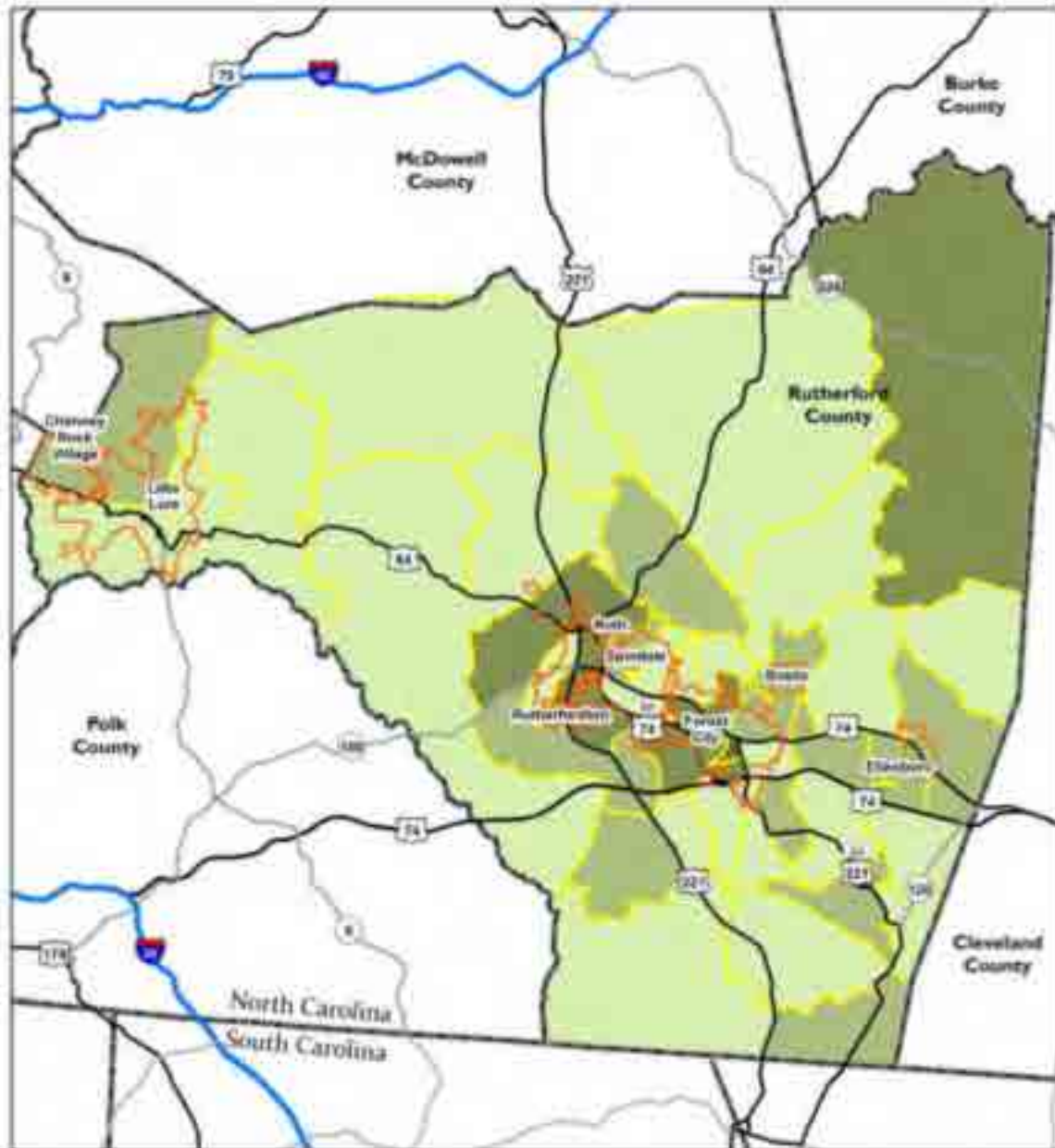
The ACS also gathers data on households with no vehicle available. According to the ACS, vehicles refer to passenger cars, vans, and pickup trucks kept at home and available for use by members of the household. The rates of vehicle-less households within Rutherford County is the same as the state as a whole, with both occurring in 25 percent of the households. The Block Group with the highest rate of vehicle-less households (20.1 percent) is in Forest City, and is also the location of the three Section 8 housing complexes managed by the Forest City Housing Authority. Census Block Groups showing the rate of vehicle-less households are shown in Figure 1-7.

Data Description

Figure 1-7 shows the percent of residents within the block groups that have no vehicle. According to the ACS, vehicles refer to passenger cars, vans, and pickup trucks kept at home and available for use by individuals. The Block Group with the highest population with no vehicles (20.0%) is the same Block Group described in the TDI index and also has the highest poverty rate (see Figure 1-9 description).



Figure 1-7: Population with No Vehicles



Legend

- Interstate
 - US Highway
 - NC Highway
 - Municipal Boundaries
 - County Boundaries
- Population with No Vehicles**
- 0% - 2%
 - 3% - 4%
 - 5% - 6%
 - 9% - 20%





Population Under 16

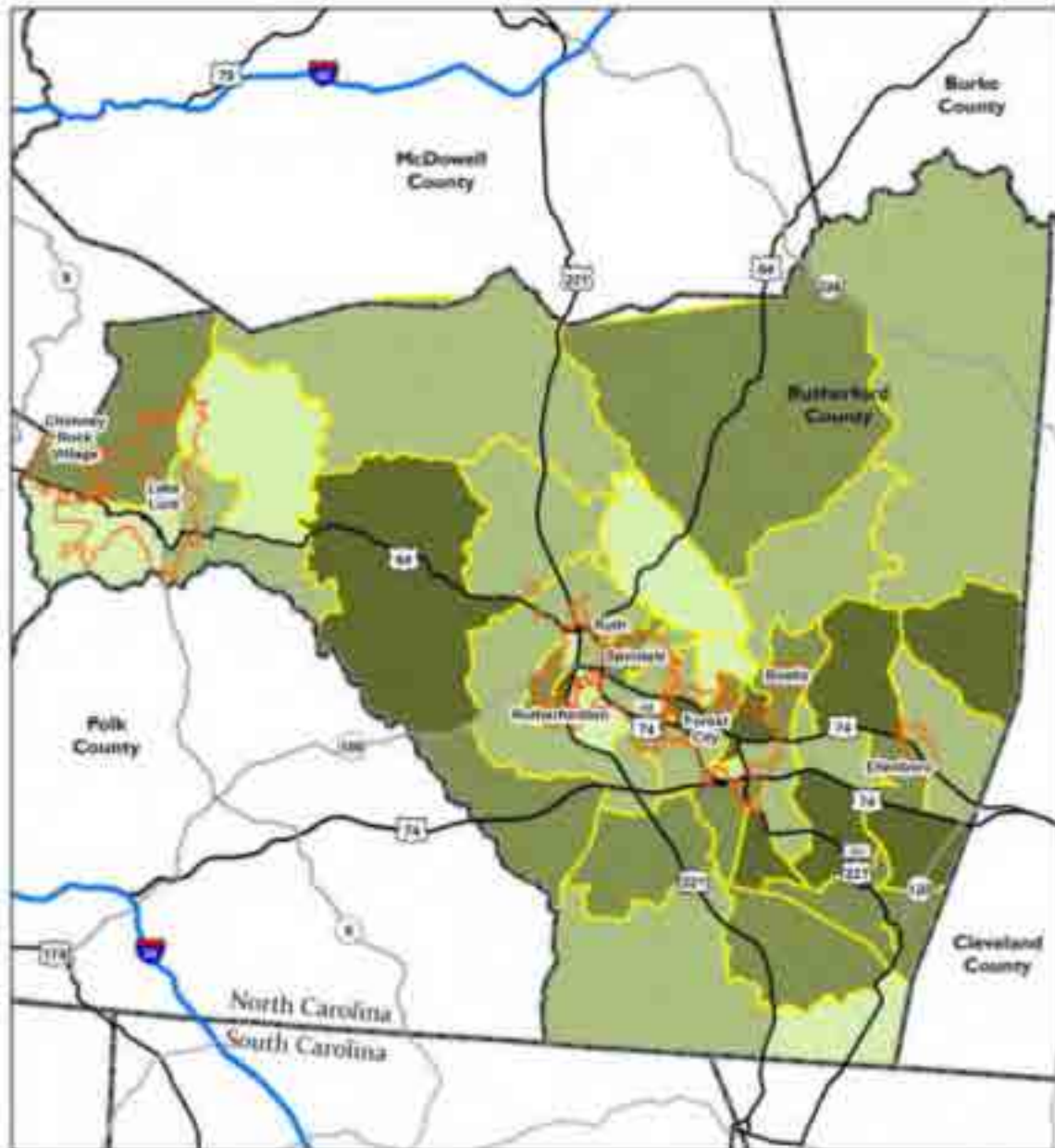
Finally, the youth population of Rutherford County accounts for 11.3 percent of the overall population. This is slightly higher than the overall state youth rate of 10.6 percent. There is no notable concentration of youth populations, and they are dispersed throughout the County. This is not necessary surprising as more citizens live outside city limits than within them. Census Block Groups showing youth population rates are shown in Figure 1-8.

Data Description

Figure 1-8 shows the percent of residents within the block groups that are under the age of 16. The block group with the highest youth rate in the county (24.9%) is in the northwest part of the County along US 64.



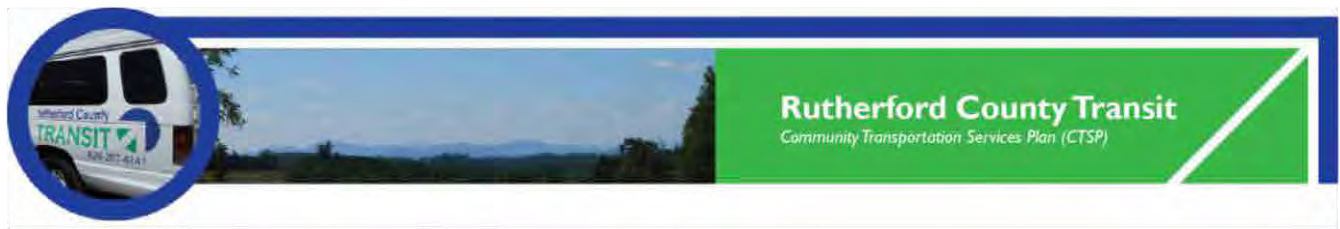
Figure 1-8: Population Under 16



Legend

- Interstate
 - US Highway
 - NC Highway
 - Municipal Boundaries
 - County Boundaries
- | Population Under 16 | |
|---------------------|---------------|
| | 1.2% - 5% |
| | 5.1% - 10% |
| | 10.1% - 15% |
| | 15.1% - 24.3% |





Service Gap Analysis

The transportation disadvantaged groups discussed above are used to create a Transportation Dependent Index (TDI) that can be used to display relative concentrations of transit dependent populations within a study area, or, in this case, within Rutherford County. In addition to the five transportation disadvantaged groups described above, the TDI also includes population density in its formula. The TDI is developed at the Census Block Group level, and can be used to analyze existing service to determine if there are any service gaps, or if any there are any opportunities for transit service to be expanded to capture additional riders.

TDI scores at the Block Group level in North Carolina range from 0 to 88 with higher scores typically concentrated in urban counties such as Mecklenburg and Wake Counties. The average TDI score in North Carolina is 22. Within Rutherford County, scores range from 5 to 60, with the average being 13. TDI scores are shown in Figure 1-9. The highest scoring Block Group is located in Forest City, and higher scores are generally concentrated in Rutherfordton, Spindale, and Forest City, as well as along Alternative US 221 in the vicinity of the areas known as Caroleen and Henrietta.

Rutherford County currently operates a deviated fixed route, known as TARC, which operates through Rutherfordton, Spindale and Forest City on a set schedule. The route has approximate two hour headways, and runs Monday thru Friday between 7:00 AM - 5:30 PM except New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving and the day after, Christmas Day and the working day before and after Christmas. As shown in Figure 2-8, this route passes through all of the block groups that scored greater than 20 in the TDI index.

Rutherford County also provides a demand response service for pre-qualified residents of the County for Medicaid Transportation. This service allows residents to arrange transportation from their home to a medical facility (i.e. a doctor's office or a kidney dialysis office), and back home. The County also provides transportation services to elderly and disabled residents, as well as home to work travel. As part of the service gap analysis process, Demand Response data was requested from Rutherford County Transit which included the home address of the resident and the destination. A month of data was provided (October, 2014), and from that data, a weeks' worth of home addresses was extracted and geocoded (the week of October 5th-12th). (This data did not include the out-of-town medical trips to the clinic in Marion, as that service was not yet under contract.)

Since the demand response service is available county-wide, customers are geographically dispersed throughout a wide area, however some concentrations of customers exist in the vicinity of Rutherfordton, Spindale and Forest City, as well as along US 221 Alternative and US 221 in the vicinity of the areas known as Caroleen and Henrietta. These areas also coincide with higher rates of transit dependent populations.

To further address service gaps, we reviewed the usefulness of the current transit facility and the condition of the shared space for administrative support and the parking of vehicles. Additionally, there is ample vehicle availability during the mid-days which (if budget allowed) could be utilized for potential additional



service trips. An example of increased service could come from the medical clinic appointments in Marion and coordination to serve three satellite senior citizens centers in Ellenboro, Henricetta and Shingle Hollow as shown in Figure 1-10.

Data Description

Maps showing the Transit Dependent Index (TDI) scores show the scores of the individual block groups within the county. The TDI GIS data provided by ITRE included the following description of the data:

The Transit Dependence Index (TDI) is an aggregate measure that may be associated with mapping software to effectively display relative concentrations of transit dependent populations within a study area. The framework for the TDI is based on the findings of a 2004 National Cooperative Highway Research Program (NCHRP) report that examined the process of assessing environmental justice persons and, subsequently, produced an index to locate concentrations of minority and low-income populations. The NCHRP report introduced the Environmental Justice Index (EJI), which the report's authors stated may be modified to include additional protected population factors).

The TDI utilizes data from the American Community Survey (ACS) five-year estimates, which permit an analysis of socioeconomic characteristics at the block group level, in addition to geographic information (e.g., block group boundaries) supplied by the United States Decennial Census. An exception to the use of ACS five-year block group data is made when measuring disabled populations, which was only available at the tract level for 2008 - 2012.

Transit Dependence Index Calculation:

The aforementioned factors need to be calculated at both the selected geography of analysis (e.g., block group) and the overall study area (e.g., county) for comparison purposes. Once the values for all six factors are computed, the analyst must insert the values into the TDI formula to calculate the overall index. Scores of the resulting TDI will range from 0 to 100, with a higher score indicating an area where a large number of transit dependent persons are present in an area with a high population density.

Transit Dependence Index Formula and Factors:

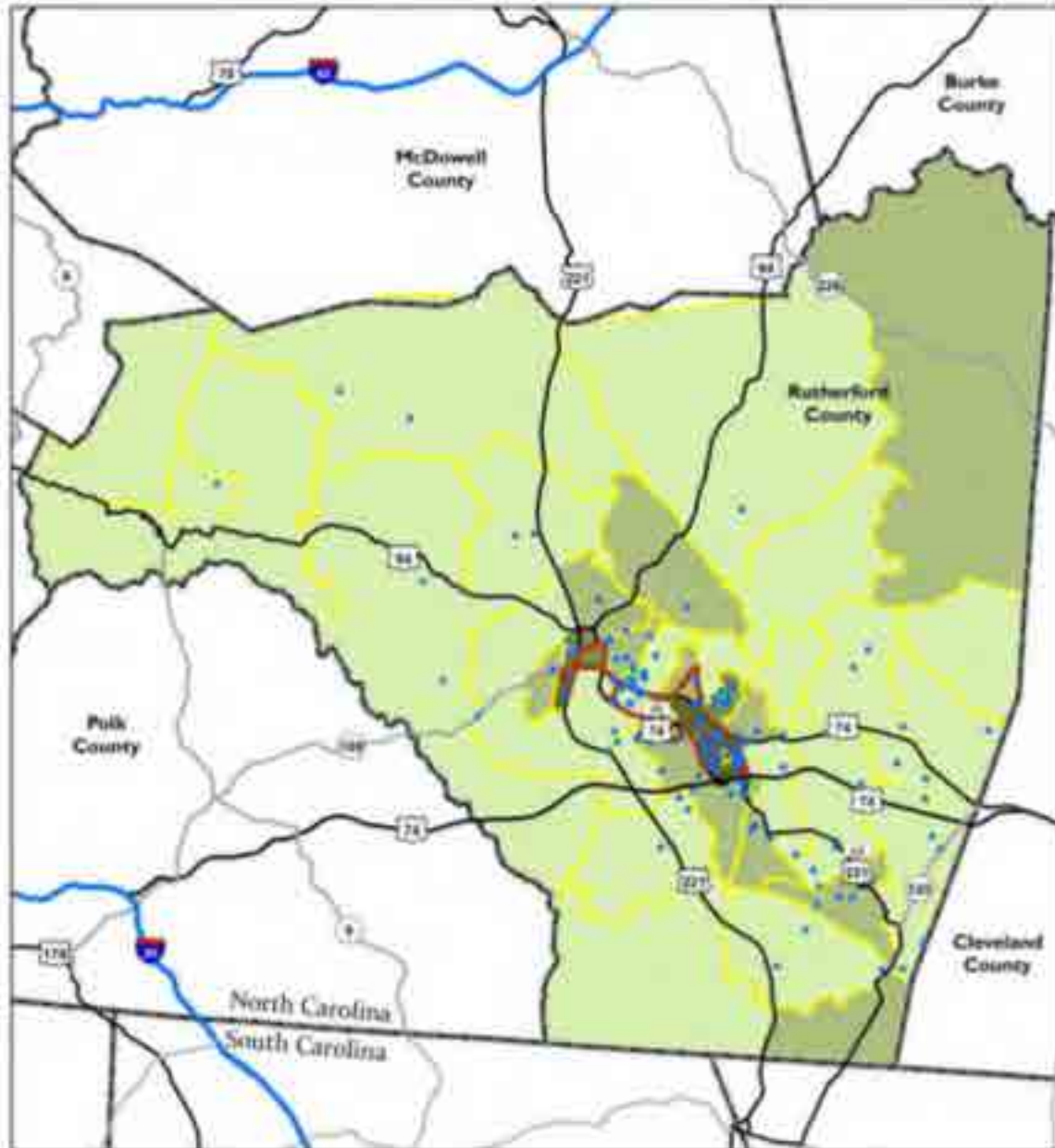
$TDI = PD \times [AVNV + AVE + AVY + AVD + AVBP]$, where:

- PD = population per square mile
- AVNV = amount of vulnerability based on presence of no vehicle households
- AVE = amount of vulnerability based on presence of older adult population
- AVY = amount of vulnerability based on presence of youth population
- AVD = amount of vulnerability based on presence of disabled population
- AVBP = amount of vulnerability based on presence of below-poverty population

The average TDI score in Rutherford County is 13.06 with a maximum score (implying the highest amount of transit dependent residents) of 60. The Block Group with the score of 60 is bounded by S. Church Street to the west, US 74 (Alt) to the north and east, and Brackett Road to the south. This Block Groups contains the Oak Villa Apartments, and the Forest City Housing Authority Office. For North Carolina as a whole, the average TDI score is 22.39, and the maximum score is 88.



Figure 1-9: Transit Dependent Index



Legend

- Demand Response Points*
 - Transit Route
 - Interstate
 - US Highway
 - NC Highway
- | Transit Dependent Index | |
|-------------------------|---------|
| | 9 - 10 |
| | 11 - 20 |
| | 21 - 30 |
| | 31 - 60 |

* Locations of demand response points for week of October 8th, 2014

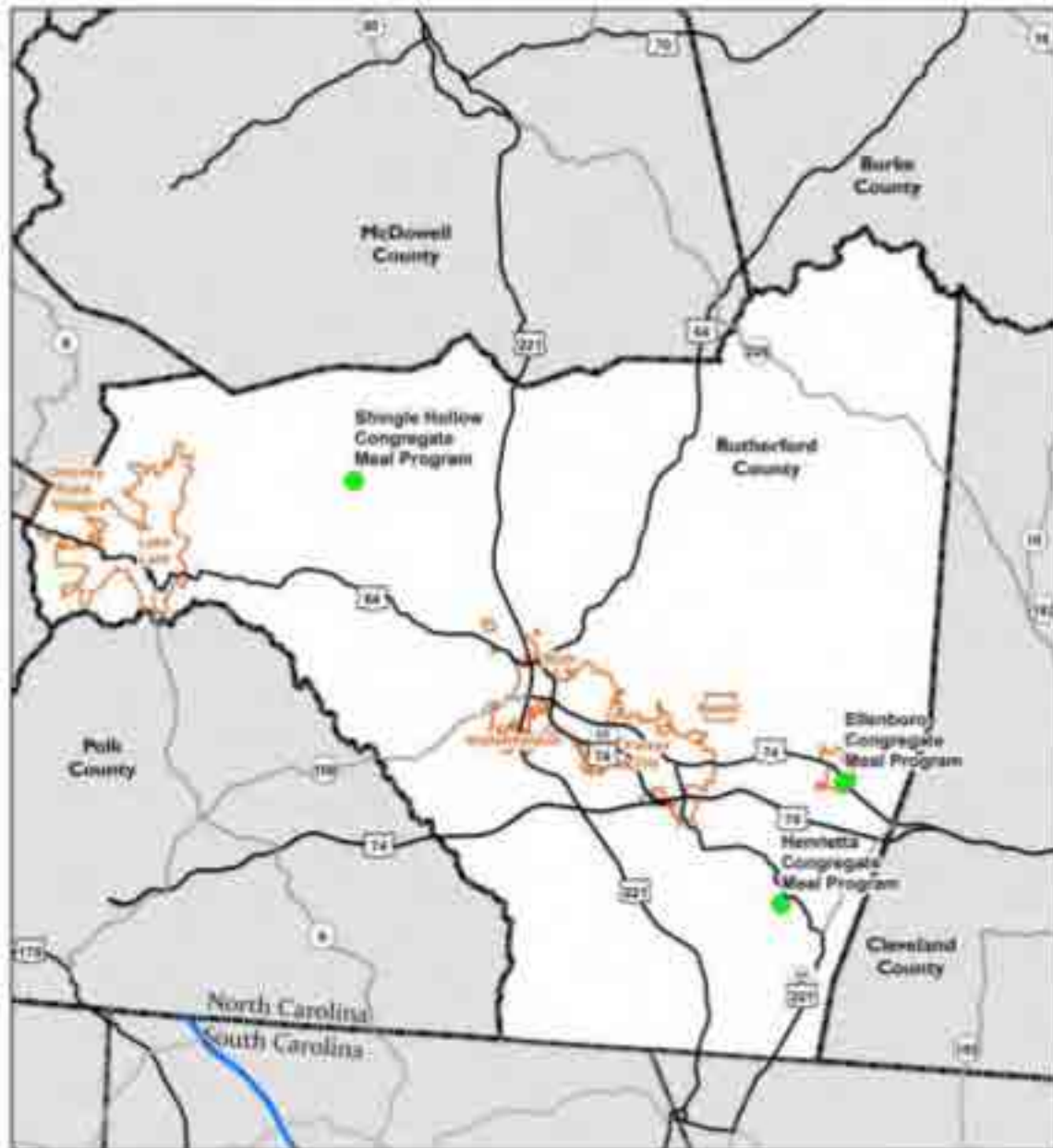


Rutherford County
TRANSIT
Strong Connections





Figure 1-10: Congregate Meal Programs



Legend

- Senior Meal Program Locations
- US Highway
- NC Highway

Congregate Meal Programs
without Transit Service





Service Area Travel Patterns

Determining locations of potential transit users also includes going beyond identifying users that fit the socioeconomic characteristics of transit users to identifying locations that attract large number of people. Identifying these locations may also allow for service improvements by indicating where gaps exist, or where potential new service could be provided. These locations include major employers, medical centers and other facilities. Specifically, transit service may be considered between the two Isothermal Community College campuses. RCT currently serves the Rutherford County campus, but transit service is nonexistent between this campus and the ICC campus in Polk County. Service could also be expanded to the Lake Lure and Chimney Rock areas where the retired population has increased over the past decade. There may also be a recreational demand for transit in this area with visitors arriving from around the region to enjoy the lake and state park.

Major Employers

Table 1-7 indicates the top 25 employers in Rutherford County as of June, 2014 according to data provided by the Employment Security Commission of North Carolina. While many of the companies operate in a single location, many do not, and have employees spread out throughout the County. An example of this is Rutherford County Schools, which has employees both at the administrative offices in Forest City, and at schools all over the county. Most of the largest employers with a single, central employment location are located in the vicinity of Rutherfordton, Forest City and Spindale, as well as along US 74. Figure 1-11 shows the location of major employers in Rutherford County.

Table 1-7: Top 25 Employers in Rutherford County

Rank	Employer	Industry	Employees
1	Rutherford County Schools	Education & Health Services	1,000+
2	Rutherford Hospital Inc.	Education & Health Services	500-999
3	County Of Rutherford	Public Administration	500-999
4	Isothermal Community College	Education & Health Services	250-499
5	American Greetings Corporation	Information	250-499
6	Wal-Mart Associates Inc.	Trade, Transportation & Utilities	250-499
7	A G Industries Inc.	Information	250-499
8	Inglis Markets Inc.	Trade, Transportation & Utilities	250-499
9	The Trinken Company	Manufacturing	100-249
10	Heritage Healthcare Inc.	Education & Health Services	100-249
11	Watts Regulator Company (A Corp)	Manufacturing	100-249
12	Staffmasters Inc.	Professional & Business Services	100-249
13	Rutherford Management Corp	Leisure & Hospitality	100-249
14	Town of Forest City	Public Administration	100-249
15	Rumbling Bald Resort	Leisure & Hospitality	100-249



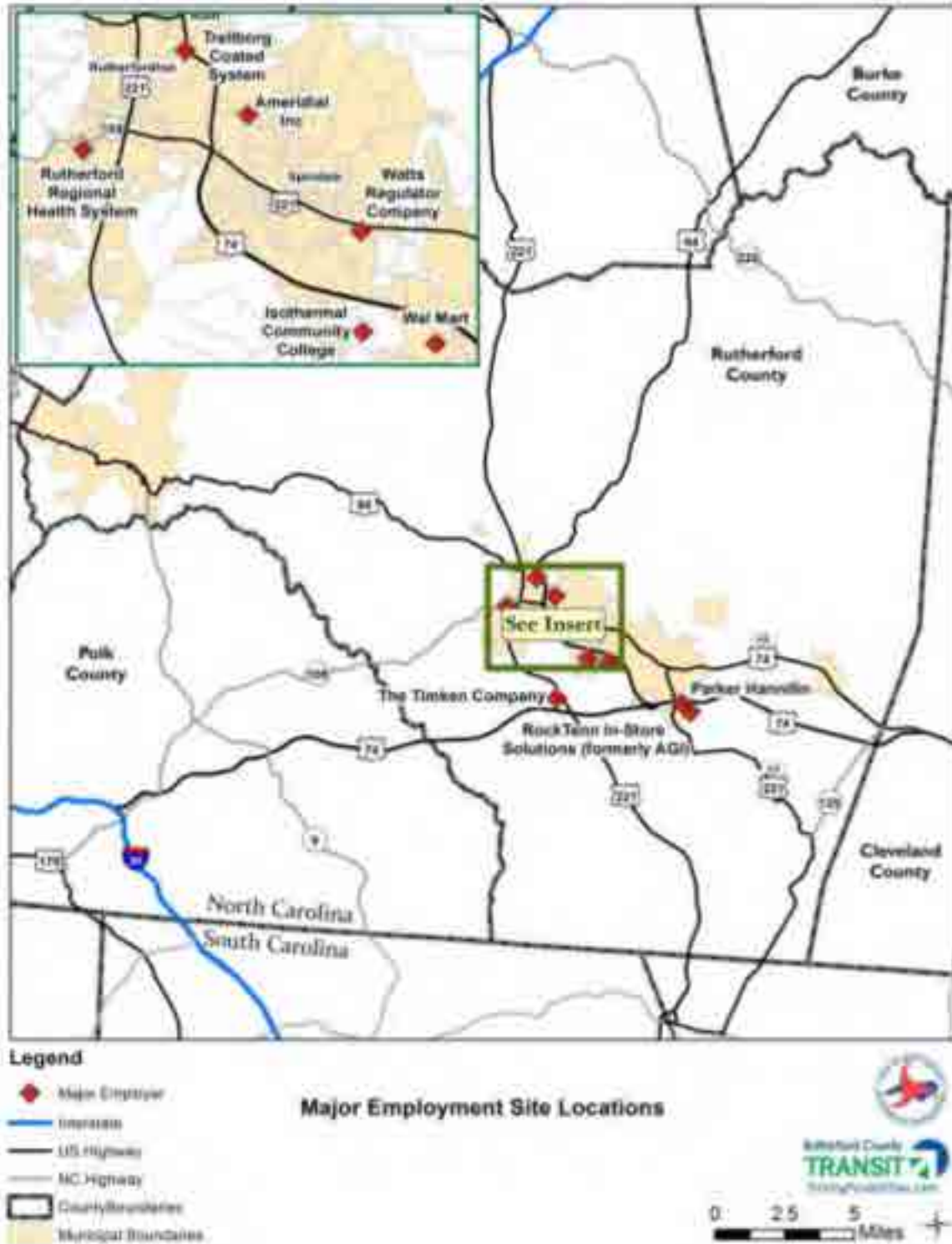
Table 1-7: Top 25 Employers in Rutherford County

Rank	Employer	Industry	Employees
16	Amenial Inc.	Professional & Business Services	100-249
17	Parker Hannafin Corporation	Trade, Transportation & Utilities	100-249
18	Duke Energy Carolinas LLC	Trade, Transportation & Utilities	100-249
19	Professional Transportation Inc.	Trade, Transportation & Utilities	100-249
20	Lowes Home Centers Inc.	Trade, Transportation & Utilities	100-249
21	Trellborg Coated System	Manufacturing	100-249
22	Allied Die Casting Co Of NC	Manufacturing	100-249
23	Parton Lumber Co Inc.	Manufacturing	100-249
24	Peoplease Corporation	Professional & Business Services	100-249
25	Hospice of Rutherford County Inc.	Education & Health Services	100-249

Source: NCESC, second quarter 2014 data



Figure 1-11: Major Employment Site Locations





Funding and Financial Management

The Rutherford County Transit Financials Report (2014) provides a detailed synopsis of all revenues and expenditures, both capital and operational. This information is used to define a baseline of existing funding and costs associated with Transit operations for the County. Table 1-8, Table 1-9, and Table 1-10 detail this information according to administrative and operating expenses and revenues, capital expenses and revenues, and federal/state/local revenue sources, respectively. Trends identified include:

- Total expenses and revenue declined 10% between fiscal year 2013-2014 and 2012-2013
- The largest increases in expenses were in transit safety programs, retirement payouts, and professional services
- The largest decreases were in unemployment compensation, nearly a 98% decrease
- Advertising and promotion expenses, including paid advertising, declined by just under 40%
- The sale of transit property resulted in a revenue increase by over 300% percent
- Fare rates are defined by zoned base pricing and ranges from \$3 (0-5 miles) to \$20 (over 20 miles).

Table 1-8: Administrative and Operating Expenses

FY 2014-2015

Administrative	
Salaries and Wages (G121, G127)	\$93,539
Fringe Benefits (G181-G185, G189)	\$32,703
Professional Services (G197)	\$1,000
Office Supplies and Materials (G261)	\$4,000
Travel and Transportation (G311, G312)	\$1,400
Communications (G321)	\$2,000
Advertising and Promotion Media (GG371, G372)	\$6,875.00
Training for Employee Education (G395)	\$2,500
Service and Maintenance Contracts (G442, G449)	\$13,200
Insurance and Bonding (G452)	\$38,750
Other Deviated fixed Charges/Current Expenses (G491)	\$500
Total Administrative Expenses	\$330,984
Operating	
Salaries and Wages (G121, G126)	\$378,908
Fringe Benefits (G181-G189)	\$132,387
Professional Services (G197, G199)	\$24,607
Household and Cleaning Supplies (G212)	\$1,200
Vehicle Supplies and Materials (G251, G252, G254)	\$150,858
Office Supplies and Materials (G261)	\$3,690



Table I-8: Administrative and Operating Expenses

	FY 2014-2015
Travel and Transportation (G312)	\$2,350
Communications(G321)	\$1,561
Utilities (G334)	\$251
Repairs and Maintenance (G353, G357)	\$22,000
Advertising and Promotion Media (G372)	\$625
Other Services (G391, G395)	\$1,400
Service and Maintenance Contracts (G449)	\$7,200
Indirect Costs (G481)	\$8,000
Other Deviated Fixed Charges/Current Expenses (G491)	\$1,502
Debt Services (G821)	\$30,000
Total Operating Expenses	\$706,303
Total Expenses	\$1,037,207

Source: TIRE Rate Setting Model FY 2014-2015, Rutherford County Transit

Funding Sources

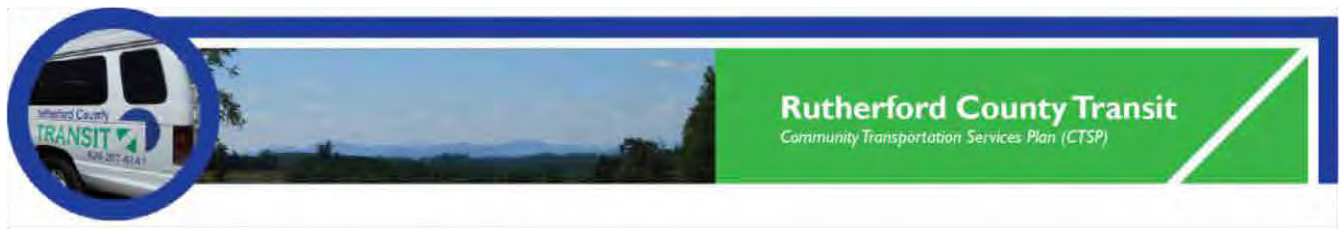
Federal, State, and Local Support

Rutherford County Transit is funded through a variety of sources including federal, state, fare revenue, contract revenue and local funds. Federal funds are administered by the NCDOT within the state of North Carolina for transit providers serving urbanized areas with less population than 200,000. These programs include: Section 5303, 5304, and 5305 (Metropolitan Planning Program), Section 5307 (Urbanized Area Formula Grants), Section 5326 (Asset Management Provisions), and Section 5339 (Bus and Bus Facilities Program).

The largest source of federal funds for rural areas is the Federal Transit Administration (FTA), which defines rural areas as areas with population less than 50,000. Rural transit programs include: Section 5311 (Formula Grants for Rural Areas) and Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities).

NCDOT administers various funding programs that distribute state Rural Operating Assistance Program (ROAP) funds to rural transit providers throughout North Carolina.

- Elderly & Disabled Transportation Assistance Program (EDTAP) Program provides operating assistance for the public transportation of elderly and disabled citizens.
- Employment Transportation Assistance Program (EMPL) provides operating assistance for the public transportation of persons with employment related transportation needs.
- Rural General Public (RGP) Program provides operating assistance for the public transportation of persons living in non-urban areas of the county.



ROAP funds and any additional funds supplementing the ROAP programs are allocated to each county by a formula, shown on the following page. As a general rule, each county is eligible to receive an allocation from each program; however, counties that do not provide transportation services to the general public are not provided a RGP allocation. Rutherford County Transit does provide transportation services to the general public so it is eligible to receive a RGP allocation. ROAP funds are to be used for the operating cost of trips, but not for administrative or capital costs. All eligible ROAP recipients must submit an annual application to receive ROAP funds.

EDTAP Allocation Formula

The following formula was used to determine the county allocation of the funds available:

- 50% divided equally among all counties;
- 22 ½ % based upon the number of elderly (60 years or older) residents per county as a percentage of the state's total elderly population;
- 22 ½ % based upon the number of disabled residents per county as a percentage of the state's total disabled population; and
- 5% based upon a population density factor that recognizes the higher transportation costs in rural, sparsely populated counties.

EMPL Allocation Formula

The following formula was used to determine the county allocation of the funds available:

- 10% divided equally among all counties;
- 45% based upon the population of each county as a percentage of the total state population*; and
- 45% based upon the number of Work First caseloads per county as a percentage of the number of Work First caseloads in the state as of January prior to application distribution.

RGP Allocation Formula

The following formula was used to determine the county allocation of the funds available:

- 50% divided equally among all eligible counties; and
- 50% based upon the rural population of each county as a percentage of the total state rural population.*

*Excludes the population of any municipalities where an urban or small urban transit system is operating in counties with urbanized areas within their boundaries.

RCT received approximately \$163,000, \$209,000, and \$211,000 between FY 2011 and FY 2014, Table 1-9, shown as state grants. Total, RCT received \$399,000 in FY 2014 in state and federal grants, down from



\$507,000 in FY 2013. The primary reason the decrease in FY 2014 was that RCT purchased three new vehicles, a capital expenditure only necessary every few years as vehicles reach the end of their useful life

Table I-9: Administrative and Operating Revenue

	FY '11-'12	FY '12-'13	FY '13-'14	% Change
Federal				
FTA 5311 Administrative Funding (80%)	\$158,622	\$156,822	\$157,174	-0.91%
FTA 5311 Capital Funding (80%)	\$35,790	\$141,916	\$30,674	-14.29%
Subtotal Federal	\$194,413	\$298,738	\$187,848	-5.38%
State				
ROAP EDTAP (State Grant – E & H Tag Funds)	\$75,043	\$68,584	\$79,684	6.18%
ROAP RGP (State Grant – RGP)	\$70,455	\$81,797	\$96,654	37.19%
ROAP EMPLOYMENT (NCDOT ROAP – Work First Grant)	\$0	\$30,738	\$21,471	100%
State 5311 ADMIN 5% (State Administration Grant)	\$8,349	\$9,801	\$9,823	17.67%
State 5311 CAPITAL 10% (State Grant – Vehicle Purchase)	\$4,474	\$12,938	\$0	-100%
State 5311 CAPITAL 10% (NCDOT – Equipment Grant)	\$4,474	\$4,801	\$3,834	-14.29%
Subtotal State	\$162,794	\$208,660	\$211,467	29.90%
Local				
Sale of Transit Property	\$20,112	\$2,672	\$11,668	-41.98%
Insurance Claims and Refunds	\$585	\$5,461	\$2,301	293.33%
General Public (Riders)				
RGP Receipts from Riders	\$10,080	\$10,276	\$10,831	7.45%
Contribution – Riders	\$318	\$0	\$0	-100%
Contribution – Non Contracted SVCS	\$263	\$72	\$0	-100%
Contract Services				
Rutherford Life Services	\$137,298	\$121,854	\$102,643	-25.24%
Senior Center	\$26,069	\$21,462	\$21,006	-19.42%
DSS Medicaid Transportation	\$455,166	\$453,515	\$463,671	1.65%
Fund Balance Surplus	-\$72,622	-\$76,240	-\$99,244	36.66%
Subtotal Local	\$577,269	\$539,092	\$511,876	-11.33%
Foundations				
Western Highlands Transportation Grant	\$0	\$0	\$28,668	100%
Subtotal Foundations	\$0	\$0	\$28,668	100%
TOTAL	\$934,476	\$1,046,490	\$939,859	0.58%

Source: 2011-2014 Transit Financial, Rutherford County Transit



Rutherford County Transit Fare Structure

In FY 13 and FY 14 Rutherford County Transit received just over \$10,000 in fare revenue. Rutherford County Transit fare structure is determined by monthly fuel costs and zone based pricing. Billing rates include passenger mile, flat rate, and zone based. The zone based operational policy is for contracted services and was adopted recently for agencies to quickly determine cost to add a passenger to a subscription route.

The zone based pricing allows quick daily cost estimates as well as the requesting individual to be picked up closer to the agencies, reducing overall cost.

In the past, a fuel surcharge was included in the contracts with agencies. It was based on the base fuel rate of \$2.30/gallon. If the average monthly price of gas was \$0.10 over the base rate, then the funding agencies' mileage rate increased \$0.01. If it was \$0.10 under the base rate, then the funding agencies' mileage rate decreased \$0.01. This was only used for Medicaid who uses passenger miles. The fuel surcharge is not included in the current fiscal year contracts. There is also a clause in the zone based contracts that allows for an increase if gas prices increase significantly. This zone based pricing has allowed contracting agencies to anticipate their transportation costs for their clients. The result of this fare structure has been very positive and has begun to lead the discussion for the grouping of trips to increase agency cost effectiveness.

Food Pantry Thursday: A fare free service is provided for demand-response trips to the county food pantry. This service is provided to riders on Thursdays, scheduling their respective trips by passengers' their last name. This service began in January, 2013 and the evaluation of its effectiveness will be part of the future services recommendations.

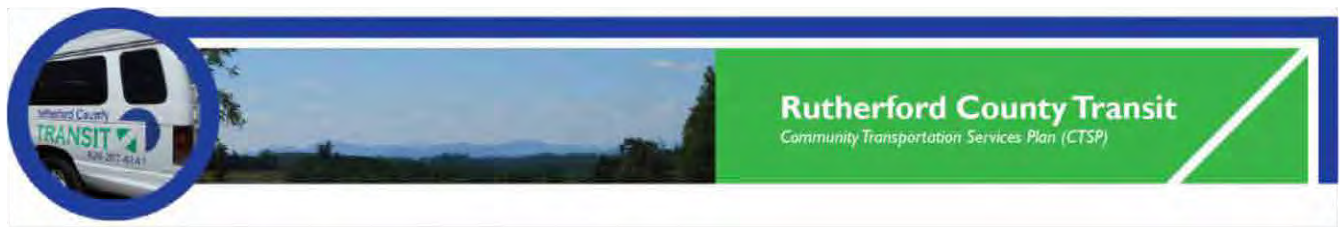
The National Association of County Officials cited the Food Pantry shuttle program as a national award recipient. This service was recognized for its community innovation for providing necessary community transportation services.

Zone	Miles	Rate
Zone 1	0.0 - 5.0	\$3
Zone 2	5.1 - 10.0	\$5
Zone 3	10.1 - 15.0	\$10
Zone 4	15.1 - 20.0	\$15
Zone 5	20.1 +	\$20

Source: RLS Zone Based Pricing, January 2014, Rutherford County Transit

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(828)





Wal-Mart Friday: This service began in March, 2013. This demand-response shopping trip initiative provides mobility access to general public riders who want to shop at the Wal-Mart Plaza area. All reservations must be made by 5:00 PM on Wednesday each week. The scheduled passenger pick-up times are between 7:30 AM and 9:00 PM.

On December 6, 2014, a **Christmas Shuttle** was provided to support local businesses and promote transit. This was a fare-free promotional shuttle to transport general public riders to downtown shopping locations and local eateries. Specific bus stops included Main Street Park in Rutherfordton, the Hickory Log BBQ and Spindale House in Spindale and the Brew House and Santa’s House in Forest City. Riders received local store coupons and were treated to a great new experience that hopefully will become an annual transit tradition. Rutherford County

Transit, in conjunction with the Rutherford County Chamber of Commerce worked with the Merchants Associations in Rutherfordton, Spindale and Forest City to coordinate the event. This was an excellent initiative to bring about a new understanding of the RCT public transit service and provided invaluable marketing of the service and the value to the area communities.



A **Laundry Shuttle** service is planned to begin in February, 2015. This will target potential public rides in the areas of Ellenboro, Rutherfordton, Spindale and Forest City. This will be a demand response service and require advanced reservations for trip requests. Again, this is a progressive program to meet a local need for low income populations who need transportation to and from laundry site locations.

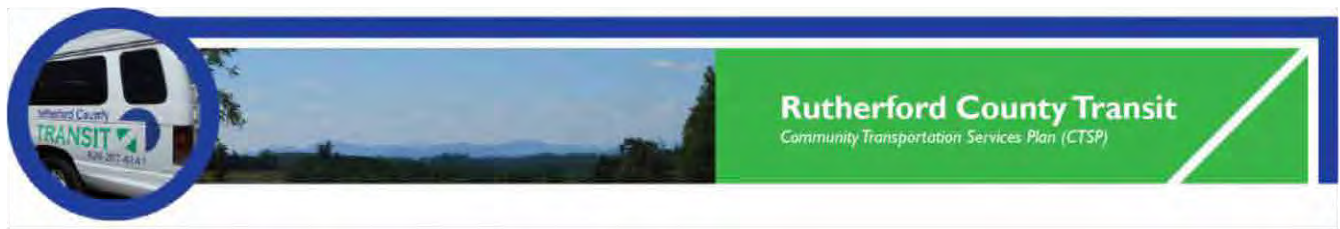
Third-Party Contracts

In addition, state and federal funds RCT also receive a large amount of its funding from contracts for service or contributions from third parties, FY 2013 \$597,000 and FY 2014 \$586,000. RCT has contracts for service with DSS Medicaid, Red Life Services, and the Senior Center.

Funding Opportunities

In addition to FTA Section 5311 federal funds that RCT currently receives through NCDOT, it also receives FTA Section 5310 funds, which are designated for “enhanced mobility of seniors and individuals

with disabilities.” This is a formula grant program whose purpose is to provide transit service to both seniors and persons with disabilities. The intent of this funding is to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act



(ADA) complementary paratransit services. The Statutory References are 49 U.S.C. Section 5310 / MAP-21 Section 20009.

Eligible recipients of this funding would include:

- “States (for all areas under 200,000 in population) and designated recipients
- Subrecipients: states or local government authorities, private non-profit organizations, or operators of public transportation that receive a grant (purchase of service) indirectly through a recipient.”¹

Eligible activities are specifically noted and include: capital projects (including purchase of service), public transportation projects that exceed the requirements of the ADA, improve access to fixed-route service, and alternatives that assist seniors and individuals with disabilities. The funding stipulates that:

- “At least 55% of program funds must be used on capital projects that are for public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable.”¹

The remaining 45% may be used for:

- “Public transportation projects that exceed the requirements of the ADA
- Public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit.
- Alternatives to public transportation that assist seniors and individuals with disabilities.”¹

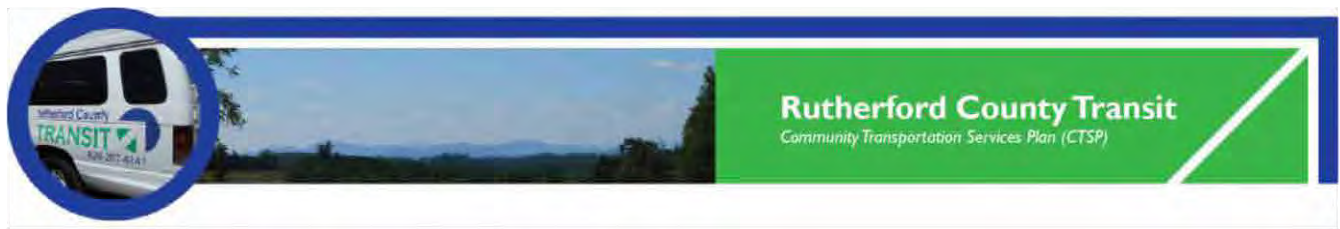


Future phases of this study will include the applicability of the NCDOT’s 5310 funding allocations to RCT.

RCT also receives a grant from Western Highlands, which provides necessary funds to support transportation for behavioral health initiatives.

RCT has applied for \$78,000 grant from the Appalachian Development Public Transportation Assistance Program for operational funding. The purpose of this program is to provide capital, planning, and operating assistance to states to support public

¹Fact Sheet: Enhanced Mobility of Seniors and Individuals with Disabilities Section 5310, http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Enhanced_Mobility_of_Seniors_and_Individuals_with_Disabilities.pdf



transportation in rural areas of the Appalachian Region with populations less than 50,000, where many residents often rely on public transit to reach their destinations. It is a \$20 million formula program created under Section 5311 as a part of Moving Ahead for Progress in the 21st Century (MAP-21) legislation. This funding would be provided through 49 U.S.C. Section 5311 / MAP-21 Section 20010, to the NCDOT for distribution to qualifying transit agencies throughout the state.

Eligible Activities would include the same activities² eligible under Section 5311:

- Planning
- Capital
- Operating
- Job access and reverse commute projects
- Acquisition of public transportation services

These funds would offset the RCT operating costs, associated with the fully-allocated cost model for life services such as the food shuttle, laundry shuttle and dialysis transportation.

Facebook has a local presence in Rutherford County and offers a grant for governments, nonprofits, or businesses. The grant has a broad scope, which is to assist the recipient in improving efficiency and efficacy through technology. Applications are due in September and awarded in November. Recipients may receive up to \$15,000. RCT may apply for this grant in order to meet future technology needs.

²Fact Sheet: Formula Grants for Rural Areas Section 5311, http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Formula_Grants_for_Rural_Areas.pdf



Capacity Analysis

To further address service gaps, we reviewed the usefulness of the current transit facility and the condition of the slated space for administrative support and the parking of vehicles. Included in this process was a review of route schedules and demand-response trips to analyze vehicle and staff availability. The scheduling functions of the dispatching and trip assignments have been enhanced through the institution of the CTS software Mobile Data Tablet (MDT) device(s) that connects drivers and dispatchers with the ability to communicate more efficiently with safe mobile messaging.

Vehicle Fleet

Rutherford County Transit has a current fleet of 26 vehicles with an average mileage of 87,090 miles and average age of four years. Most of the vehicles are lift vans. Table 1-11 shows the transit agency's current vehicle fleet and Table 1-12 summarizes key fleet statistics.

Future Vehicle Needs

As the service grows with the potential local demand to provide an increased service to the satellite senior center locations, there will be a need for 12-passenger vehicles that do not have a wheelchair lift. This would allow more seating capacity and provide a flexible, coordinated grouping of trips that would increase operating efficiency.

Model Year	Model	Type	Seating Capacity	Wheelchair Capacity
2013	E-350 SUPERDUTY	22-foot LTV	14	2
2013	E-350 SUPERDUTY	20-foot LTV	8	2
2013	JOURNEY	SUV	6	0
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E350	Lift Van	8	2
2011	E-350V	CTVAN	12	0
2010	E350	Lift Van	8	2
2010	E350	Lift Van	8	2
2010	E350	Lift Van	8	2
2010	E350	Lift Van	8	2
2010	E450	25-foot LTV	18	2
2009	E350	Lift Van	8	2
2009	E350	Lift Van	8	2
2009	E350	Lift Van	8	2
2009	E350	Lift Van	8	2
2009	E350	Lift Van	8	2
2009	E350	Lift Van	8	2
2008	E350	Lift Van	8	2
2008	E350	Lift Van	8	2
2008	E450L	22-foot LTV	14	2
2008	CARA	MV NON	6	0
Total	26 Vehicles		230	46



The Rutherford County Transit service may want to explore the purchase of alternative fueled vehicles for use in future service. Propane fueled vehicles have certain qualities that could provide reduced operating costs. However, a fueling station and training in the areas of maintenance would be required to make this initiative successful.

Statistic	Average	Min	Max
Vehicle Model Year	2010	2008	2013
Vehicle Mileage	87,090	13,983	155,650
Seating Capacity	9	6	18
Wheelchair Capacity	2	0	2

Transit Facilities

The current Rutherford County Transit facility is located at 294 Fairground Road in Spindale, NC. This location is less than four miles east of Rutherfordton, the county seat. The Rutherford County Department of Social Services (DSS) is very close to the transit facility – 0.2 miles south at 389 Fairground Road. This close proximity is advantageous for coordinating social service related trips.

The building is a shared facility with the Board of Elections and Fire Marshall. The entire building is 7,517 square feet with 2,870 square feet used for the transit department, 3,378 for the Board of Elections, and 1,269 for the Fire Marshall. The Board of Elections may be relocating in the near future, which could allow for Rutherford County Transit to expand at the current site.

The current facility is useful and appropriate in its configured space, to meet the current staffing demands. The shared parking lot for revenue vehicles is very adequate, though fencing might be an option to consider if needed to address any safety and security concerns. Security may also be improved by installing a key card access system for employees entering and existing the facility. Security cameras should be installed in the money counting room where transit fares are handled in order to provide staff oversight and transparency.



There is a need to have a wash bay to clean the vehicles. The cleanliness of the vans is a priority to the RCT staff and reflects on the overall quality of service. Construction of fueling site for alternative fueled vehicles may be a future consideration.

Vehicle maintenance is performed by Rutherford County staff and the only charges for maintenance expenses are the costs for parts. The maintenance labor is an in-kind contribution that assists in keeping maintenance costs at a reasonable level.

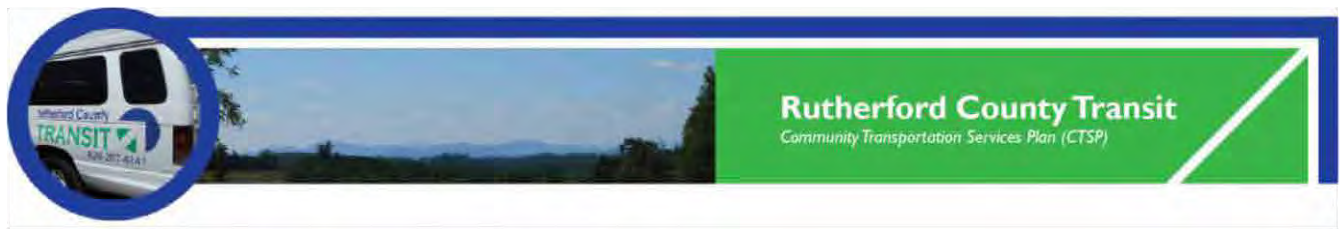


Administration and Staff

Rutherford County Transit currently operates with 31 staff, all of whom are employees of the county. There are seven full-time employees and 24 part-time employees. The part-time employees include 23 drivers (2 drivers are full time) and the transit department director. All employees are housed in the current RCT facility at 294 Fairground Road in Spindale, NC.



- **Transportation Services Director** – The Director is responsible for directing and overseeing the transportation services of Rutherford County. Her time is split evenly between Rutherford County Transit and EMS. The Director reports to the Transit Advisory Board (TAB) and County Manager.
- **Operations Manager** – The operations manager performs administrative and technical work managing the operations of RCT, which includes: hiring and training drivers, planning and overseeing maintenance of the transportation fleet, implementing and directing the System Safety Program Plan, and driving vehicles when needed.
- **Medicaid Appointments** – The Medicaid Appointments person is a full-time employee who reports to the Department of Social Services (DSS). This staff person schedules Non-Emergency Medicaid Transportation (NEMT) trips.
- **Office Coordinator** – This position performs administrative, operational and technical duties coordinating the daily operations of the Transit Department. The Office Coordinator's responsibilities include: conducting new driver orientation, billing and invoicing, report preparation, and managing and overseeing the functionality of the electronic tablets.
- **Transit Dispatcher** – This position is responsible for answering the telephone and receiving, monitoring, and dispatching radio communications traffic for the department, arranging transportation as requested, and scheduling drivers.
- **Scheduling Coordinator (Scheduler)** – This position is responsible for coordinating all scheduling and mapping of transportation for eligible county residents. Responsibilities include developing and maintaining efficient and cost-effective routes, providing drivers with daily schedules, and maintaining passenger database information.



- **Drivers** – This position is responsible for operating a multi-passenger vehicle requiring a commercial driver’s license to transport local residents for medical, social, economic and educational needs. Rutherford County Transit currently has a total of 25 drivers, two of which are full-time while the remaining 23 are part-time. Drivers are currently not required to take a physical. RCT may consider instituting this requirement in order to maintain its record of excellent safety.

The **Transportation Advisory Board (TAB)** meets quarterly on the third Friday of the month (February, May, August, and November) at the RTC facility. The purpose of the TAB is to: “establish goals and objectives for the community transportation system providing efficient and effective utilization of all available resources in the provision of safe, convenient, and reliable transportation services, and to facilitate mobility choices for all individuals including the elderly, disabled, and clients of human service agencies.”

The TAB is comprised of twelve members, representing:

- County Commissioner
- Human service agencies
- Employment Security Commission
- Job Link Career Centers/School to Work
- Civic Community Organizations
- Private Citizen(s)
- Smart Start
- Chamber of Commerce/Economic Development
- Business/Industry
- Emergency Medical Services
- Private Transportation Provider
- Faith Community Leaders

The composition follows the FTA Section 5311 requirements for Transportation Advisory Boards, which requires that they reflect a diverse array of community stakeholders and constituents such as human service agencies, transportation providers, businesses, government, and transit users.³

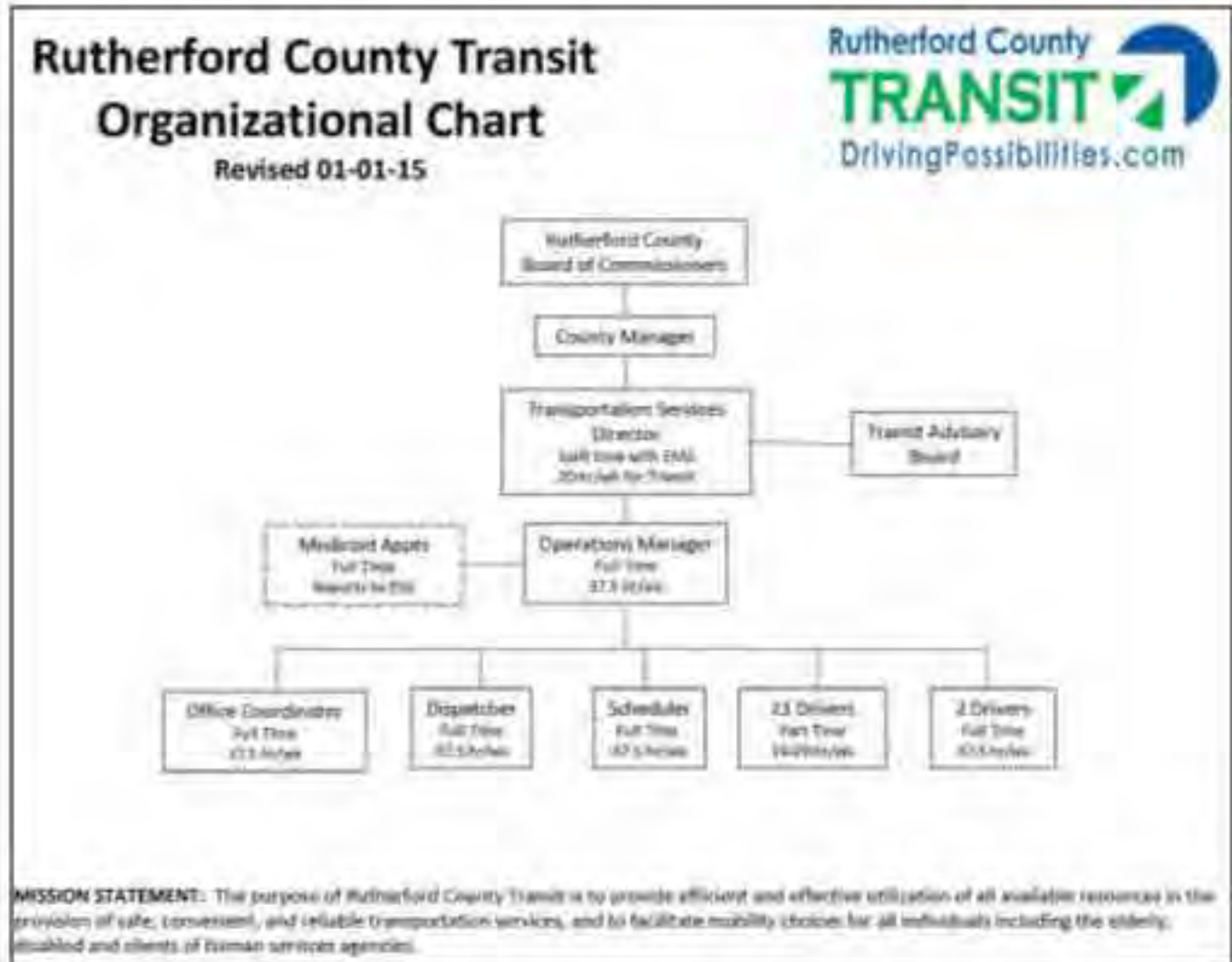
Rutherford County Transit may need to update its policies and procedures to reflect recent changes to its administration and operations such as making service changes to the deviated-fixed route only once a year.

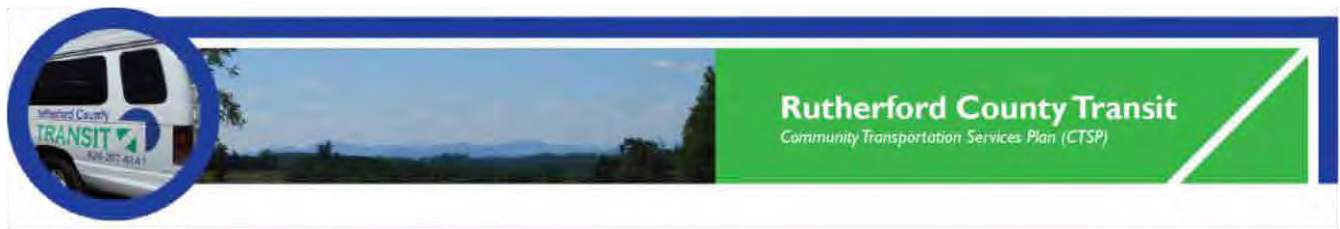
³ FTA Section 5311 Transit Advisory Board (TAB) Composition, <https://connect.ncdot.gov/business/Transit/Documents/FY2016%20%205311%20Community%20Transportation%20Program.zip>



The following is the current organizational chart for Rutherford County Transit: Figure 1-12.

Figure 1-12: Organizational Chart





Technology

CTS Software's ParaScope© – Mobile Data Computer solution provides Rutherford County Transit drivers and dispatchers with the ability to communicate more efficiently. This improvement was instituted in 2014 and includes a safe mobile messaging communications tool. The ParaScope© displays the driver's trip manifest electronically. The details on the screen include trip information such as pick-up and drop-off odometer readings and times. This ability to capture "real-time" data has been a great assistance to the scheduling and dispatching functions. The built-in GPS (global positioning system) provides invaluable routing information to help drivers get to their scheduled locations timely and efficiently. Some of the functions of this system include:

- Electronic manifest
- Real-time data capture of odometer readings and times
- Instant schedule updates which alert drivers of any changes
- Safe messaging between drivers and dispatchers
- Vehicle tracking on a standalone map display

This software could be improved by fixing a bug that currently prevents drivers from seeing the deviated fixed route stops in the correct order. It could also be improved by adding the ability to count passengers boarding and alighting from the bus. Currently drivers must log their time using the tablet, but must record passengers separately on paper logs. This is more burdensome for the drivers and takes more time than would an integrated solution.



Recommendations

Recommendations resulting from the Capacity Analysis are summarized below in Table 2-13. These recommendations will be assessed further in the Final CTSP Plan.

Table 1-13: Summary of Capacity Analysis Recommendations

Category	Recommendations
Vehicle Fleet	<ul style="list-style-type: none"> • Install security fence and lights around the shared parking lot used to store Rutherford County Transit vehicles in order to increase safety and security. • 12-passenger vans that are not lift equipped to support capacity needs for future services. • Consider purchasing alternative fueled vehicles (propane)
Transit Facility	<ul style="list-style-type: none"> • Construct a wash bay area for vehicle cleaning • Install security cameras on light poles in the revenue vehicle parking lot. • Install security cameras in the money counting room • Add a key card access system to improve security at the facility • Consider the construction of an alternative fuel fueling station
Administration and Staff	<ul style="list-style-type: none"> • Continue to review staffing functions that could provide increased: <ul style="list-style-type: none"> – street supervision – marketing and public outreach • Consider requiring physicals for RCT drivers • Update policies and procedures to reflect recent changes such as deviated fixed-route updates occurring only once a year
Transit Service Delivery	<ul style="list-style-type: none"> • Increase the out-of-county trips to the clinic in Marion • Reconfigure the deviated fixed route to improve the headway and connectivity • Explore transit service between the Isothermal Community College (ICC) campus in Rutherford County and the Polk County campus • Explore transit service for recreation and tourism in the Lake Lure and Chimney Rock areas • Provide service to the satellite senior centers in Ellenboro, Shingle Hollow and Henrietta. The local operating cost for this service would need to be recovered.
Technology	<ul style="list-style-type: none"> • Improve the CTS software so that it can count on/off passengers and show every stop in the correct order



Public Satisfaction and Community Needs

In order to best understand the experiences with and perceptions of the Rutherford County Transit system, and to identify areas for improvement and forecast future needs, the Rutherford County CTSP focused on rider surveys, meetings with members of the RCT Steering Committee, a series of interviews with community stakeholders not represented on the Steering committee, and several agencies who provide transportation on their own, without the assistance or use of RCT resources.

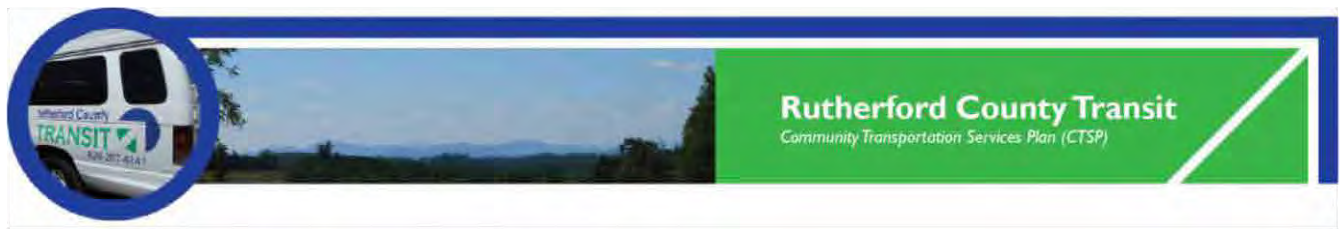
The project team had the following goals in mind in designing the survey and conducting the interviews:

- (1) Assess rider satisfaction with the current RCT services;
- (2) Identify areas for improvement to maintain or increase customer satisfaction; and
- (3) Identify community trends or needs for potential changes to assist RCT in planning future services.

Stakeholder and Agency Interviews

As noted in the Scope of Work, the project team identified six types of stakeholders to interview or survey; the Table 1-14 indicates who provided feedback to formulate this section.

Category	Recommendation
Human service agency riders	16 riders representing the Rutherford County Senior Center, Rutherford County Department of Social Services, and Rutherford County Health Services.
General public riders	3 riders on Deviated Fixed Route (TARC), Jan. 13 and 20, 2015.
Human Service agency directors or contacts who purchase transportation services	4 agency directors (Department of Social Services, Senior Center, Adult Learning, The Sheltered Workshop)
Stakeholders not included on the Steering Committee	<ol style="list-style-type: none"> 1. President, Rutherford County Chamber of Commerce 2. Receptionist/Librarian, Rutherford County Library 3. Disability & Career Services Counselor, Isothermal Community College 4. Spindale Recreation Department Director and staff 5. Union Mills Learning Center Director, Union Mills (northern Rutherford County)
Human service agencies not currently contracting with RCT	<ol style="list-style-type: none"> 1. Human Resources Director, Rutherford Life Services (private, non-profit Adult Learning Center for mentally handicapped) 2. Director, Holly Springs Senior Center 3. Director, Colonial Manor Rest Home 4. Director, Fair Haven Nursing Home 5. Accounts Payable Coordinator and occasional driver, Willow Ridge Nursing Home
Persons with Limited English Proficiency	Survey tool was designed and translated but not used



Summary of Findings

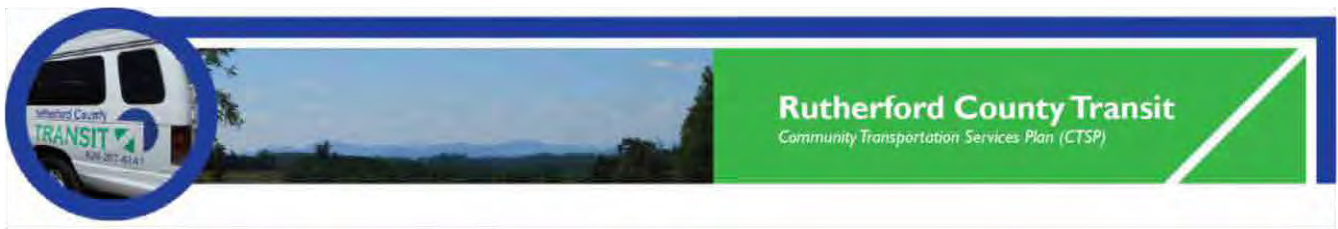
The majority of the county's current population makes trips for work, school, shopping, appointments, and entertainment in private transportation (personally-owned or share vehicles). However, public transportation is an essential service for individuals who do not have another means of transportation and for general public riders who would like a convenient and cost effective mobility option. These transit-dependent individuals cannot drive, bike or walk, or do not own a vehicle. They are reliant on Rutherford County Transit's demand-response service or deviated fixed route service to travel to medical appointments, social service appointments, shopping, or education at the community college. There were no interviewed deviated fixed route riders who currently take the bus to and from work. However, there are two clients from the Rutherford Life Services who sometimes utilize the deviated fixed route service as a work trip alternative.

Residents who use public transportation are highly dependent on the RCT as their only means of transportation. The survey process feedback was very positive from the existing riders. They provided favorable feedback to RCT in the service as reliable, affordable, safe, and courteous customer service from the drivers and dispatchers.

Many of the community non-riders and merchants were aware of the existence of RCT, and communicated the importance of mobility and connectivity. The general feedback from this group of stakeholders was that the current operations and leadership was very strong and understood the diverse transit needs in the community.

Themes that emerged from rider and non-rider feedback included:

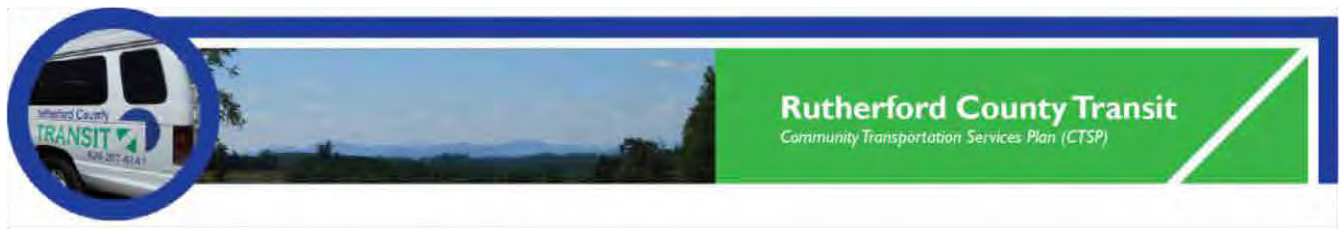
- RCT provides an essential service to the residents of the county.
- RCT enables seniors and low-income riders to travel to medical appointments and social services.
- RCT's Director is doing an excellent job fulfilling the current needs of the county, and has successfully developed a zone-based fees policy and the Holiday Shuttle transit service.
- Everyone the project team interviewed was aware of the existence of the RCT and its deviated fixed route, but fewer were familiar with the demand-response service "the reservation system." Many of the deviated fixed route riders became familiar with the transit service only after seeing posted RCT signs and boarding for the first time.
- Assisted living centers for seniors follow state regulations that require the presence of center personnel to be with the senior at all times, during transport, during a medical appointment and when traveling by automobile, bus, wheelchair, etc. For this reason, these particular senior centers find it more convenient to have center staff drive seniors to their appointments and shopping instead of making reservations for services on the RCT vans.
- Greater frequency on the deviated fixed route each day, occasional evening service and Sunday transit service would increase ridership by the individuals already using the RCT. Attracting new



riders may require additional or new marketing strategies and funding revenue to support these initiatives.

- There is a widespread perception that transit is used only by the low income riders and those patrons with zero-car households. The current deviated fixed route schedule is not convenient enough for daily rides to work or school.
- Several stakeholders said that more Rutherford County residents would use the deviated fixed route service if they were more aware of the route, convenience and cost.

Detailed findings and sample of the survey instruments are provided in Appendix A.



2.0 TECHNICAL MEMORANDUM 2

2.1 Administration and Management of the Transit System

Mission and Goals of Rutherford County Transit

Mission

The mission statement of Rutherford County Transit is:

“The purpose of Rutherford County Transit is to provide efficient and effective utilization of all available resources in the provision of safe, convenient, and reliable transportation services, and to facilitate mobility choices for all individuals including the elderly, disabled, and clients of human service agencies.”

This mission statement supports the guiding principles of the NCDOT Public Transportation Division’s Community Transportation Service Plans, which are:

- **Mobility** – To maintain transportation options for the general public, low income individuals, elderly persons and persons with disabilities to foster independence and enhance quality of life.
- **Integration** – To integrate the community transportation system with other federal, state and local programs that support public and human service transportation.
- **Efficiency** – To enhance the efficiency and effectiveness of community transportation.
- **Coordination** – To develop the seamless delivery of transportation services across geographies, jurisdictions and program areas.
- **Measureable** – To create a phased implementation schedule that supports measureable results.

Goals

Rutherford County Transit maintains a System Safety Program Plan, which is updated annually. The plan is required by a resolution passed by the North Carolina Board of Transportation in 2002, and addresses six core elements: 1) Driver/Employee Selection, 2) Driver/Employee Training, 3) Safety Data Acquisition Analysis, 4) Drug/Alcohol Abuse Program, 5) Vehicle Maintenance, and 6) Security. The plan includes the department’s policies, procedures, and goals. Its system goals are listed below:

- To run an efficient system based on drivers’ hours, revenue miles and passenger trips.
- To maximize the number of passengers aboard all Transit vehicles.
- To transport passengers to out of town appointments in a shuttle based system.
- To create a proactive transit safety culture that supports employee safety and safe system operation through motivated compliance with agency rules and procedures and the appropriate use and operation of equipment.



- To leverage revenues and grant funds to provide additional transportation services to the citizens of Rutherford County.
- Improve image and understanding of service by the general public through a strong marketing program and public involvement plan and professional image for all employees.
- Upgrade department's overall computer skills through training and equipment/software purchases.

Performance Measures

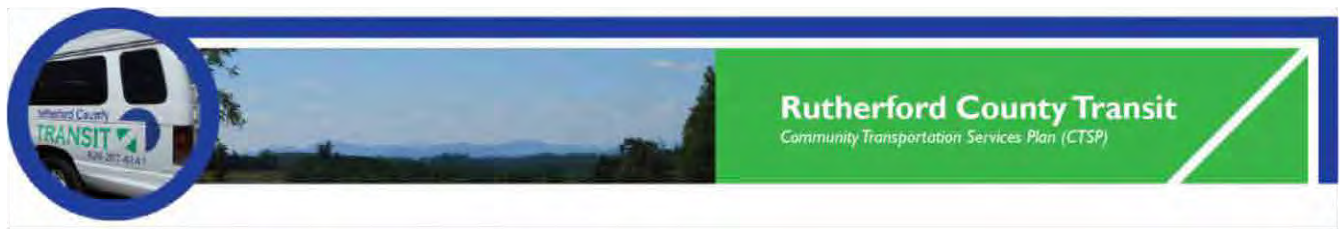
RCT currently provides weekly performance information that is valuable to access trends in service delivery. For example, the following information was provided for the last week in February 2015. Additionally, a narrative is provided to indicate any specific activities that were part of the weekly service delivery:

TYPE	CURRENT WEEK	WEEKLY AVG
Total Miles	10,312	9,566
# of Local Trips	1,156	881
# of Out of County Trips	34	66
# Unduplicated Passengers	248	238
Total Revenue	\$16,295	\$14,549

Rutherford County Transit staff reviews their transit service performance measures. These numbers are associated with the OpStats information provided to NCDOT-PTD. The transit department may consider establishing a more formalized performance measure analysis that is related to its organizational goals. This process would then provide a quantifiable means of evaluating safety, mobility efficiency and coordination. These measures, which are already captured, could be evaluated in an annual report document made available on the RCT's website and in printed form at the transit office. The report would provide a comparable analysis of past years' reports which would identify trends. These performance measures may include:

- **Safety** – number of miles without a recordable incidents (which is currently being tracked with a visual chart for drivers/operators to view)
- **Mobility** – number of passengers served through demand response service and deviated fixed-route (which is currently being tracked in the weekly statistical updates provided to the TAB members)
- **Efficiency** – operating costs per hour, mile, and passenger (which is part of the NCDOT-PTD OpStats report)
- **Coordination** – initiatives with organizations in Rutherford County, such as the Grocery Shuttle and with transit agencies outside of the county (this information is currently part of the TAB updates provided by RCT staff)





Review of Existing Policies

The department's existing policies are documented in its System Safety Program Plan and made available on the department's webpage, in printed copies of the transit brochure, and in person at the transit office. The current rules and procedures are summarized below and provided in Appendix B.



No-Show and Cancellation Policies

- Passengers must cancel transportation by 6:30 am on the day of the appointment by calling 287-6339. Any cancellations after 6:30 am will result in a “no show”.
- If a passenger does not require transportation for their take home trip, they must call 287-6339 at least one hour prior to their take home time. Failure to do so will result in a “no show”.
- Passengers must be ready for the driver when the van arrives for pick-up. Transit policy is for drivers to wait (3) three minutes. If a passenger is not ready within three minutes, the driver will leave and the passenger will be documented as a “no show.”
- Three (3) no shows in a three month period will result in a passenger being suspended from riding Transit for 30 days.

Scheduling and Reservation Policies

- Appointments must be scheduled three business days prior to transportation.
- Passengers will be picked up and dropped off at the locations specified when the appointment was made. If you need to be dropped at another location you must notify Transit in advance.
- All out of county appointments must be scheduled with the doctor's office between 9:00 am – 12:00 pm.
- All demand/response passengers receive a call the night before and twenty minutes prior to arrival with their pick-up time

RCT has procedures in place for violations of the above policies. The procedures are as follows:

- **First incident:** When a passenger's behavior disrupts the driver or other passengers, the Operations Manager, or his/her designated official will speak privately with the passenger and the passenger's sponsoring agency representative (if the passenger is a human service agency client) about his/her behavior. The director or official will state to the passenger the reason his/her behavior is objectionable and the steps the passenger must take to correct the behavior. The director will also provide a written warning to the passenger.
- **Second incident:** If the passenger continues his/her disruptive behavior, the director or official will speak with the passenger and the passenger's sponsoring agency representative (if the passenger is a human agency client) a second time. During this conversation, the passenger will be notified of a



second written warning stating the reasons his/her behavior is objectionable and the steps he/she must take to correct the behavior. The warning will also state that at this time there is a suspension of privileges to ride the transportation system for 30 days.

- **Third incident:** A third incident could result in a suspension of transportation privileges permanently. The director will present to the Transportation Advisory Board the circumstances surrounding the incidents and the board will then decide whether or not to suspend transportation privileges. The suspension notice will be written, and hand delivered to the passenger's sponsoring agency (if the passenger is a human services agency client) or sent by certified mail to his/her address and to that of the sponsoring agency, if applicable.

The RCT Operations Manager reserves the right to exceed the above violation procedures, including calling the police and having a disruptive passenger removed, should it become necessary for the safety of the driver and/or other passengers.

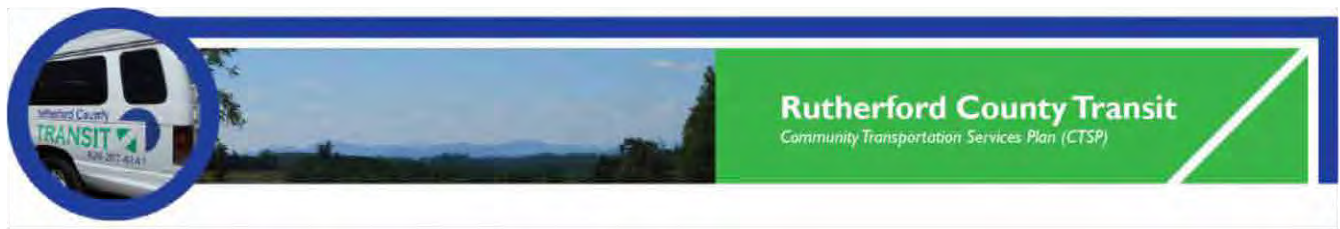
Rutherford County Transit's policies were compared to those of its peer systems in neighboring Cleveland, McDowell, and Polk counties (Table 2-1). The policies are relatively consistent among the four systems, with RCT's policies most similar to those of McDowell County. In comparison to McDowell and Polk Counties, RCT offers its clients the most flexibility by only requiring that they cancel by 6:30 am on the day of their trip. RCT may consider increasing the time that it waits for passengers to five minutes before considering them a "no-show."

RCT has a "Good Cause" policy for no-shows similar to McDowell County, in which a no show is excused under certain circumstances. These circumstances include: a death in the client's family, illness, inability to contact the transportation office due to lack of telephone service, or another reason accepted by the county's transportation board. Polk County has a similar policy in place as well.

Table 2-1: Comparison to Peer Policies

Policy	Rutherford County	Cleveland County	McDowell County	Polk County
Scheduling				
In-county	1 day ahead*	2 days ahead	3 days ahead	2 days ahead
Out-of-county	1 day ahead*	Not specified	5 days ahead	5 days ahead
Cancellations	6:30 am day of appointment	As soon as possible	5:00 pm day before appointment	24 hours before appointment
No Show	Passenger does not appear within 3 mins.	Not specified	Not specified	Passenger does not appear within 5 mins.
No Show Suspension	3 no shows within a 90 day period	Not specified	3 no shows within a 90 day period	3 no shows within a 60 day period

*Three days preferred, but not required



Cash Management Policy

Currently RCT has internal procedures for handling farebox revenue. However, a recommendation would be to formalize this procedure with an updated cash fare collection process. The following policy could be considered for implementation:

Subscription route service is funded by contracted agencies and all payments are made by these agencies. RCT would bill each agency for services rendered during the prior month with payments due within 30 days of the bill date, which is generally the 10th working day of each month.

General public riders have the option of paying cash fare or purchasing tickets for their trip. Transit passes may be purchased directly through the RCT Office.

RCT could reserve the right to refuse service to any passenger that owes an outstanding debt of \$50.00 or more for transportation services provided to the client by RCT.

The driver manifest identifies the passengers from whom fares must be collected and the amounts to be collected. **The driver shall indicate on his/her manifest if a fare was collected by marking “Paid” or “Ticket.”** The Driver may either collect the cash fare from the passenger or collect the passenger’s tickets. If the Driver collects a cash fare the Driver will deposit the fare into their cash bag. Then the Diver will complete and issue the passenger a receipt. The receipt will be a triplicate document and will be issued in the following manner:

- The **White** copy will be issued directly to the person paying the fare.
- The **Yellow** copy will be turned in with the money to RCT’s Administrative office.
- The **Pink** copy will remain in the receipt book for future auditing.

Drivers would not handle fares except for onboard collection. Fares would be turned into RCT’s Administrative Office daily for local buses. The fares are to be collected and counted by two RCT Administrative or Operational staff members. A deposit is to be prepared and signed by the Director or the representative of the county finance department. Copies of all checks are made. The deposit is then placed in a sealed bag and taken to the bank by someone other than the person that prepared the deposit. An excel spread-sheet would be updated monthly recording any uncollected fares from passengers.

The deviated fixed route bus fares and tokens will be placed in the designated farebox upon a passenger boarding the vehicle. When fares are turned into the office, the farebox collection will be balanced and reconciled against the drivers manifest.

If for any reason the deposit does not get taken to the bank the deposit is placed in a locked filing cabinet in the administrative office area and the office door is locked. **The Director, Operations Manager and the Office Coordinator are the only individuals that would have keys to the locking file cabinet.**

Once the deposit has been made and the deposit receipt is obtained, the Office Coordinator would then post the deposit to the General Ledger in the appropriate line.



Budget Analysis

Budget Trends

The Rutherford County Transit budgets over a three year period were analyzed to determine trends in revenue, expenses, and deficits or surpluses. RCT generated a surplus during each of the fiscal years between FY 2012 and FY 2014, as noted in Table 2-2. The primary reason why expenses were approximately \$100,000 higher in FY 2013 than in FY 2012 or FY 2014 was that RCT purchased three new vehicles.

Fiscal Year	FY '11 – '12	FY '12 – '13	FY '13 – '14
Revenue	\$1,007,098	\$1,122,731	\$1,039,102
Expense	\$934,476	\$1,046,491	\$939,858
Surplus	\$72,622	\$76,240	\$99,244

Source: 2011-2014 Transit Financial, Rutherford County Transit

Realized Efficiencies

The impact of Rutherford County Transit's practice to schedule their out-of-county medical trips on certain days of the week to group trips was assessed by analyzing the relationship of demand/response passengers to vehicle miles. Between 2011 and 2014, passengers per vehicle mile increased by 36 percent. The increase shows that RCT is effective at providing transit services with fewer vehicle miles by combining trips. This suggests that RCT's practice of grouping out-of-county medical trips is resulting in realized efficiencies for the department such as lower fuel, maintenance, and labor costs.



Fully Allocated Cost Model

The Fully Allocated Cost Model for Rutherford County Transit is presented in Table 2-3. The model, provided by the Institute for Transportation Research (ITRE), allocates administrative and operating costs to hours, miles, and passengers. The model can be used to assess Rutherford County Transit's billing rates and project the cost of future transit improvements and expansions.

Item	FY 2013-2014 (Actual)		
Total Administrative Expenses	\$218,951		
Total Operating Expenses	\$683,189		
Total Expenses	\$902,140		
Total Grants Received	\$218,951		
Total Cost of Service Less Grants	\$716,032		
Total Cost Less Grants With Program Reserve	\$751,833		
Total Cost Less Grants With Capital Reserve	\$742,680		
Total Cost Less Grants with Program and Capital Reserves	\$778,481		
Cost Allocation (with grants discounted)			
	Per Hour	Per Mile	Per Passenger
Base Rate	\$25.54	\$1.44	\$13.06
Rate with Program Reserve	\$26.82	\$1.51	\$13.71
Rate with Capital Reserve	\$26.49	\$1.49	\$13.55
Rate with Program and Capital Reserve	\$27.77	\$1.57	\$14.20

Source: ITRE Rate Setting Model FY 2013-2014, Rutherford County Transit

ITRE also provides comparisons of each transit agency in North Carolina to peer agencies. Rutherford County is included in ITRE's Peer Group 4, which is composed primarily of transit agencies operating in rural counties. These comparisons are provided on four key measures: subsidy per trip, cost per trip, passengers per hour, and non-contract trips per non-urban population. For each of the benchmarks ITRE has established a three tiered ranking:

- Superior = value at 85th percentile
- Median = value at 50th percentile
- Acceptable = Median - (Superior - Median)

As shown in Figure 2-1 through Figure 2-4, RCT was consistently above the acceptable level in all four categories from 2011 through 2013 (the most recent year period available).

Figure 2-1: Subsidy per trip – Rutherford County Transit and Peer Group 4

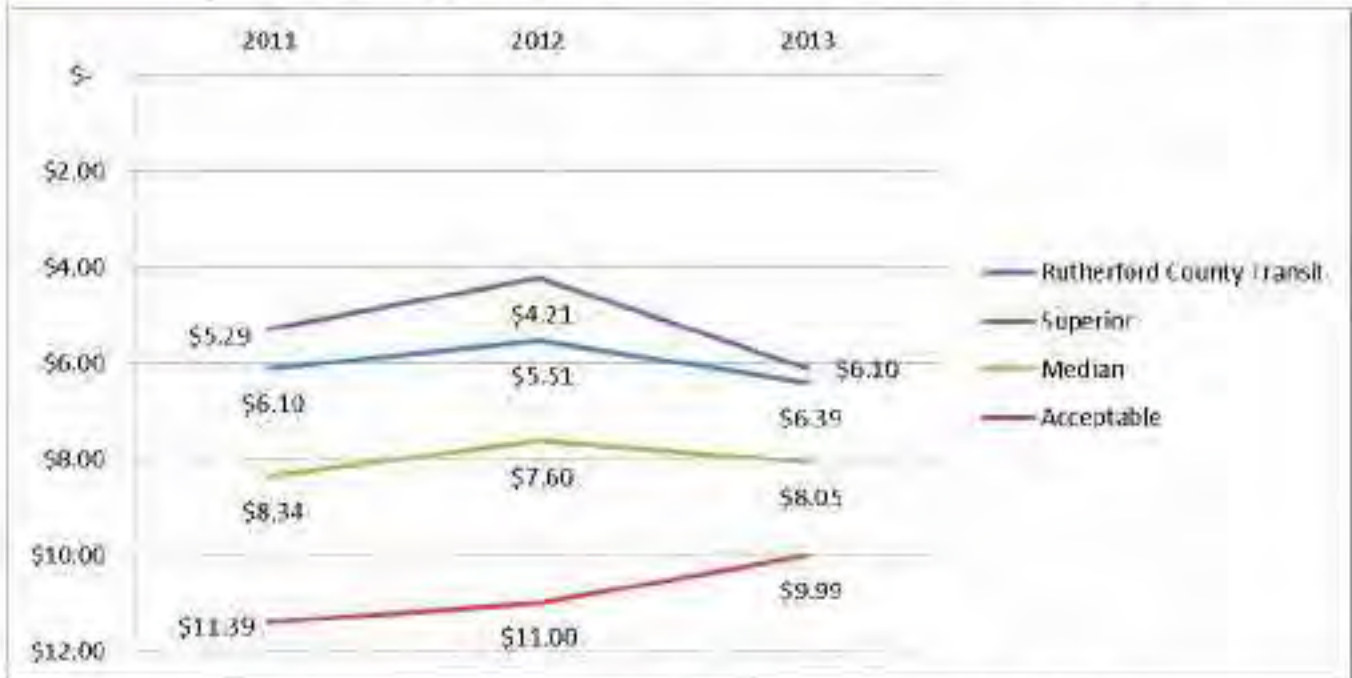


Figure 2-2: Cost per trip – Rutherford County Transit and Peer Group 4



*Note that the cost per trip by year does not factor Rutherford County Transit's surplus. Taking into account this surplus would lower the cost per trip and be more comparable to the peer group average.

Figure 2-3: Passengers per trip – Rutherford County Transit and Peer Group 4

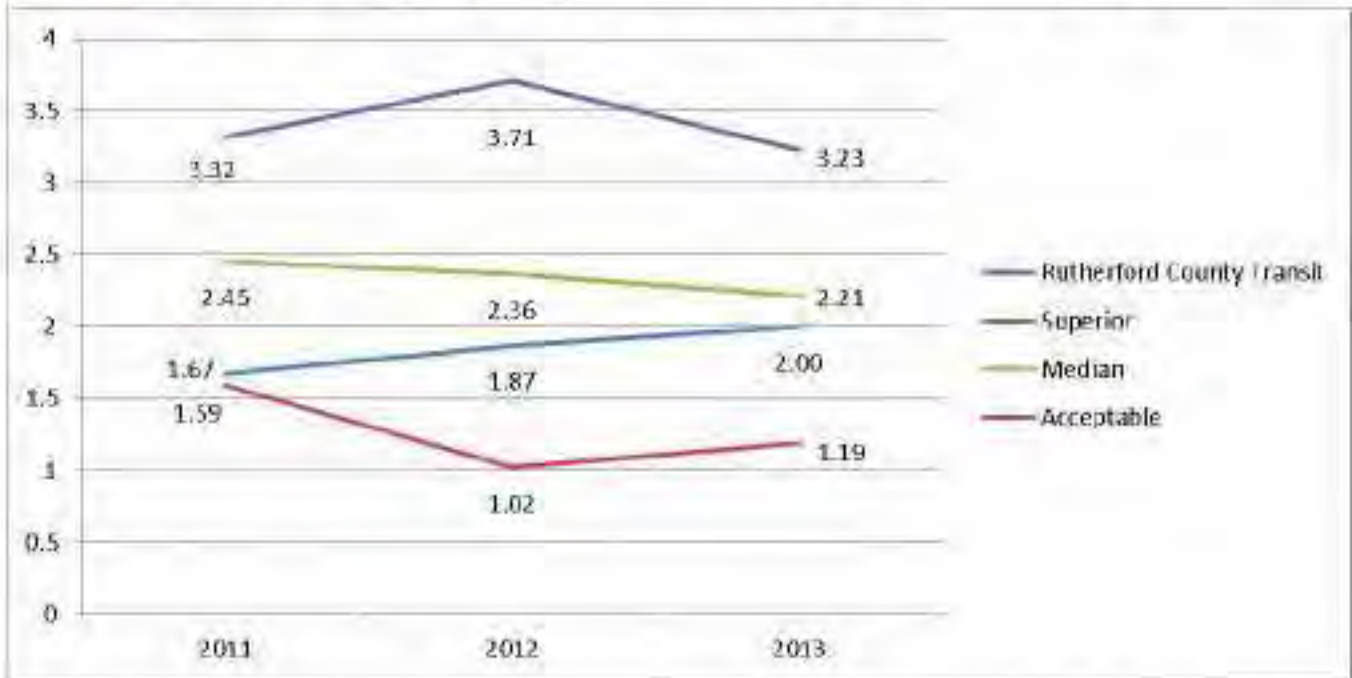
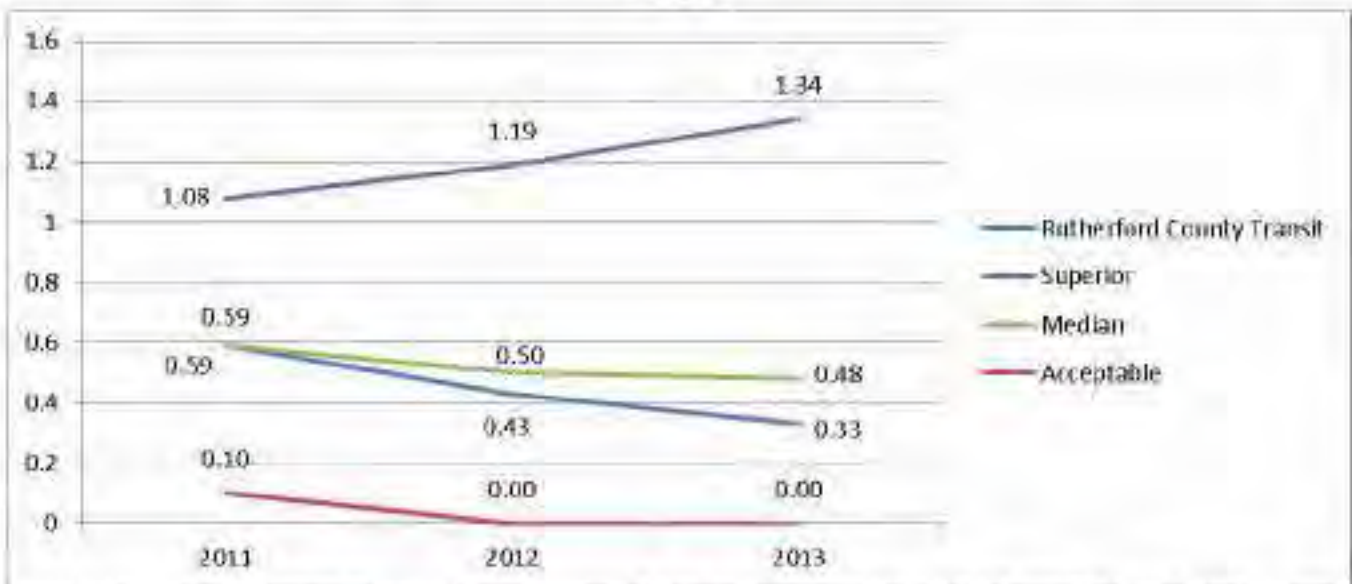


Figure 2-4: Non-Contract trips per Non-Urban population – Rutherford County Transit and Peer Group 4



Sources for above figures: ITRE Community Transportation Peer Group 4, 2011, 2012, and 2013; ITRE: Rutherford County FY 2013 NCDOT Public Transportation Division, Community Transportation Operating and Financial Statistics Report; and Rutherford County FY 2012 NCDOT Public Transportation Division, Community Transportation Operating and Financial Statistics Report.



Contract Services

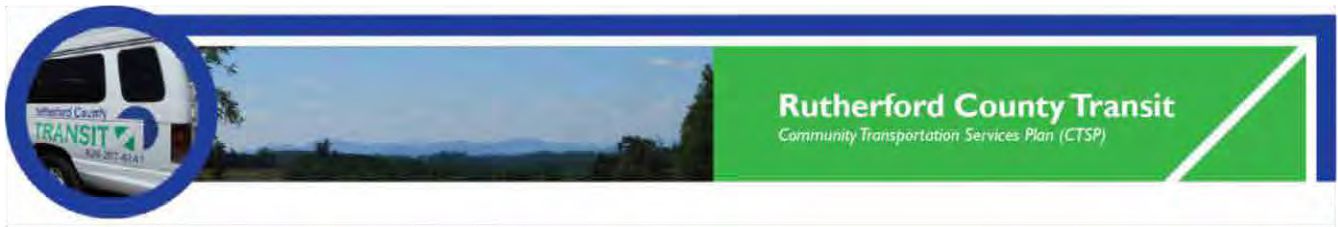
Contract services such as Medicaid and the Department of Social Services (DSS) provide the largest single source of revenue for RCT. RCT recently increased its rate to \$1.71 per passenger mile in 2015 from medical trips to destinations outside of Rutherford County. As discussed in Technical Memorandum 1, RCT encourages patrons to schedule their out-of-county medical trips on certain days of the week, based on the community where the appointment will occur. This allows RCT to have multiple passengers on many of its out-of-county medical trips. Multiple passengers making a similar trip in the same vehicle allows RCT to charge DSS less than their per mile cost as determined by ITRE.

Year	Cost Per Mile
2011	\$1.59
2012	\$1.69
2013	\$1.77

Source: ITRE FY 2011, 2012, and 2013 Operating and Financial Statistics Reports for Rutherford County

Financial Reserves

Rutherford County Transit maintains financial reserves, which are approximately three months of the current operating cost at a minimum. In addition, any surplus at the end of the year is placed into reserves.



Local Commitment to Transit

Rutherford County provides numerous services to RCT including a facility for an annual fee of \$8,000. Those services include all labor associated with vehicle maintenance, human resources, financing and accounting, legal services, and information technology, as well as, office space and utilities. Although, neither Rutherford County nor Rutherford County Transit currently tracks the fully allocated value of these services, it is likely that this investment exceeds the \$8,000 annual contribution.

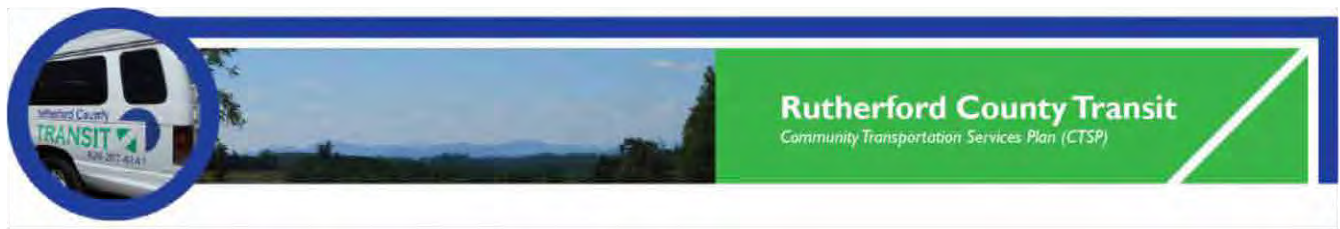




Potential Constraints, Barriers, and Strategies for Implementing the CTSP

Rutherford County Transit has identified several potential constraints and barriers that it currently faces and that would be applicable to the CTSP. It has also implemented several strategies to overcome these barriers and constraints, which would be effective in implementing the CTSP. The potential constraints, barriers, and strategies are summarized below in Table 2-5.

Potential Barrier or Constraint	Strategies
<ul style="list-style-type: none"> • Large service area with a low population density • Clients tend to live further from the urban area • Long distances between pickups 	<p>By implementing auto scheduling software and tablets on transit vehicles, RCT has:</p> <ul style="list-style-type: none"> • Reduction of 250 miles/week (\$424 saved per week) • Reduction of 15 hours/week in payroll (\$143 saved per week) • Reduced costs by \$29,484 per year
<ul style="list-style-type: none"> • Transit service need for long-haul medical trips 	<ul style="list-style-type: none"> • RCT has made long-haul medical trips out of the county more efficient by scheduling specific days of the week for certain cities in order to combine trips and reduce costs
<ul style="list-style-type: none"> • Sufficient equipment and drivers to implement service expansion 	<ul style="list-style-type: none"> • RCT maintains a young vehicle fleet, thereby lowering maintenance costs and downtime. The average vehicle age is four years. • RCT hires full-time and part-time drivers. Part-time drivers allow RCT more flexibility in scheduling transit service on an as-needed basis.
<ul style="list-style-type: none"> • Costs associated with providing transit service and expanding it 	<ul style="list-style-type: none"> • According to the fully allocated cost model, RCT bills at an appropriate rate in order to cover its expenses associated with providing transit service • RCT continues to generate a surplus annually, which is then used to fund capital costs such as the acquisition of transit vehicles to expand services • RCT's zone-based pricing for its contracted services has made its fares more predictable for agencies and covered RCT's costs for services.
<ul style="list-style-type: none"> • Stability of Funding Sources (e.g. NEMT Threat, state match) 	<ul style="list-style-type: none"> • RCT maintains financial reserves (three months of current operating costs at a minimum) • End-of-year surplus is placed into reserves



Marketing Strategies

Rutherford County Transit currently engages in several marketing strategies in order to improve knowledge of its services in the community and promote its brand.

Logo Branding

Rutherford County Transit has a strong logo identity, representative of the county’s green and blue colors as shown to the right. RCT is currently effective in using its logo consistently in its printed and electronic communications. All transit vehicles have the logo painted prominently. The logo is included on RCT schedules, brochures, and System Safety Program Plan. Electronic communications, including a webpage and Facebook page include the logo as well. This consistent and prominent use of the logo plays an important role in promoting the services and recognition of RCT’s services.

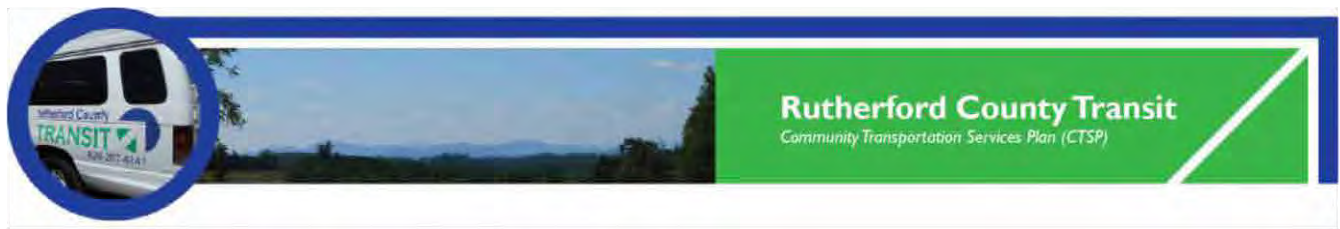


Brochures and Maps

RCT produces several printed brochures (also available electronically online) for its deviated fixed route, special shuttles, and a general brochure about the department.

The department may consider producing map for its deviated fixed route. A map would help existing and potential riders understand the service and plan their trips. The Rutherford County Geographic Information Systems (GIS) department or consultant may be able to assist with creating the map.





Promotional Videos



Rutherford County Transit produced a promotional video in 2009 to encourage residents to ride. The video gives an overview of RCT’s service area, fares, and deviated fixed route. It is available for download on RCT’s webpage. The department may consider updating the video to include RCT’s new logo and branding. Similar videos may be produced to highlight RCT’s unique services such as the Christmas Shuttle, Walmart Friday, and the new Laundromat Service. Instead of posting the video for download, which

can be more difficult for viewers, future videos could be shared via the department’s Facebook page and on YouTube.

Given the expense associated with video, RCT may wish to collaborate with local high schools and the local community college. Students may be able to assist RCT with video production as an unpaid internship or for a small stipend. This arrangement has the potential to save the department funds and offer students experience in video production and working with local government.

Visitors and Tourism

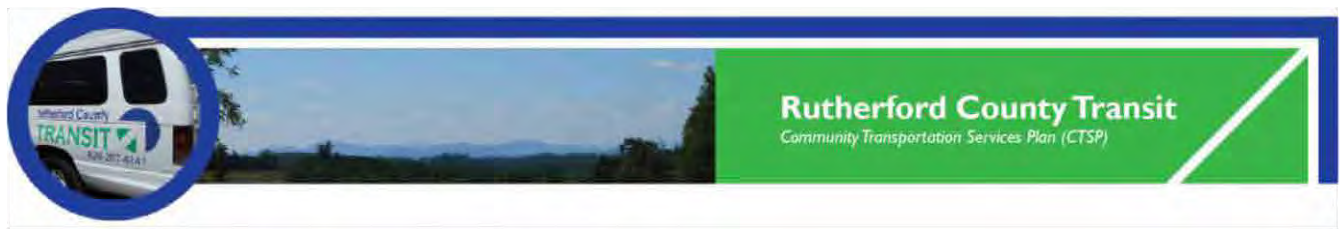
Rutherford County is home to several tourism destinations including Lake Lure and Chimney Rock. The Rutherford County Tourism Development Authority Office has designed a promotional website for visitors with information about activities, restaurants, and lodging. Currently the website does not provide any information about RCT’s transit services. RCT may partner with the tourism office to provide transit information in order for visitors and tourists to consider using transit during their stay. This recommendation would be especially relevant if RCT implements transit service to Lake Lure or Chimney Rock in the future.

Public Involvement Strategies

Rutherford County Transit has been innovative and proactive in its use of public involvement strategies, which include: a webpage and Facebook page.

RCT Webpage

RCT has a webpage on the Rutherford County website: www.drivingpossibilities.com. The webpage is comprehensive in that it offers information for general public riders, Medicaid riders, elderly and disabled riders, and prospective employees. Rules, procedures, and forms pertaining to employment, Medicaid Transportation, the Elderly and Disabled Transportation Assistance Program, and Employment Transportation Assistance Program are available on the webpage.



The Title VI Protection and complaint procedure are online as well as the required public hearing notices for the Rural Operating Assistance Program. Title VI of the Civil Rights Act and associated executive orders require recipients of federal financial assistance to publish or broadcast program information in the news media. Advertisements must state that the program is an equal opportunity program and/or indicate that Federal law prohibits discrimination. Additionally, reasonable steps shall be taken to publish information in languages understood by the population eligible to be served or likely to be directly affected by transportation projects.

The webpage should be updated regularly with service changes and updated policies. These updates would include changes due to inclement weather and other operational related occurrences. The webpage may be further improved by organizing the information under sub-pages as necessary to reduce clutter and placing all forms and policies in a central location for easier access.

Social Media



RCT maintains an active Facebook page (<https://www.facebook.com/RutherfordCountyTransit>) with information about the transit department including current schedules, policies, and programs. The department updates the Facebook page immediately with service changes due to inclement weather. The department’s main website is linked to the Facebook page. Furthermore, the transit vehicles promote the Facebook page with logos that say “Find us on Facebook.”



In addition to its use of Facebook, RCT may consider using Twitter to communicate with its riders and the general public. Twitter is an effective social media tool for delivering short messages to an unlimited number of people at one time. Given the ease and speed of Twitter, transit agencies often use it for communicating service changes or interruptions in real-time.

Language Needs

Title VI of the Civil Rights Act and associated executive orders require that reasonable steps be taken to publish information in languages understood by the population eligible to be served or likely to be directly affected by transportation projects. A demographic analysis of Rutherford County showed that some block groups within the county have a Limited English Proficiency (LEP) population above the current threshold used by the US Justice Department (Safe Harbor Act). The Justice Department defines the threshold as a block group with either 1,000 adults or 5% of the adult population speaking English less than very well, as surveyed by the American Community Survey (ACS). The block group must have at least 50 adults to be considered LEP. In Rutherford County, the block groups meeting these criteria are listed in Table 2-6 and mapped on Figure 2-5, (page 2-17).

Table 2-6: Limited English Proficiency Block Groups

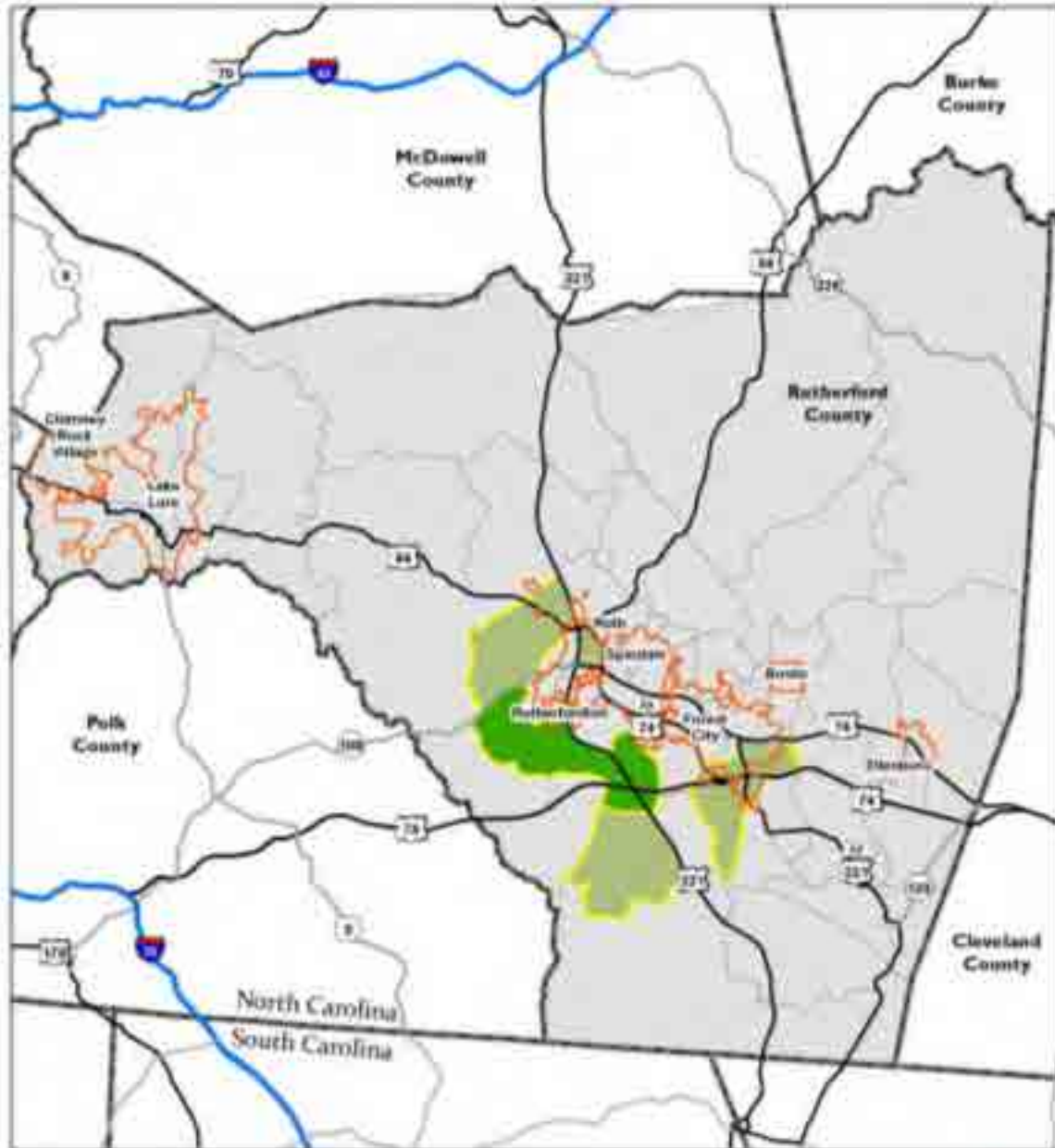
Block Group	LEP Language Group ^a	LEP Language Group Population	LEP %
Block Group 1, Census Tract 9604	Asian	98	6.4
Block Group 1, Census Tract 9605	Spanish	90	6.9
Block Group 5, Census Tract 9605	Spanish	60	8.7
Block Group 4, Census Tract 9608	Spanish	87	10.2
Block Group 5, Census Tract 9608	Spanish	63	10.0
Block Group 3, Census Tract 9609	Spanish	52	6.6
Block Group 1, Census Tract 9612	Spanish	99	6.5

^aThe language groups used by the American Community Survey (ACS) are: Spanish, Asian, Indo-European, and Other. Data Source: American Community Survey 2013 5-Year Estimates.

Based on the findings of this demographic analysis, RCT may consider offering its brochures, route schedules, required notices, and online material in other languages. The Asian languages spoken in Block Group 1 of Census Tract 9604 should be identified by making contact with local community leaders and organizations such as schools or places of worship. For its online content, RCT may add a free translation plugin that would allow the visitor to select the language preference of his or her choice. It should be noted that brochures such as the Grocery Shuttle that are saved as images would not be automatically translated. These would need to be translated separately.



Figure 2-5: Limited English Proficiency (LEP) Populations



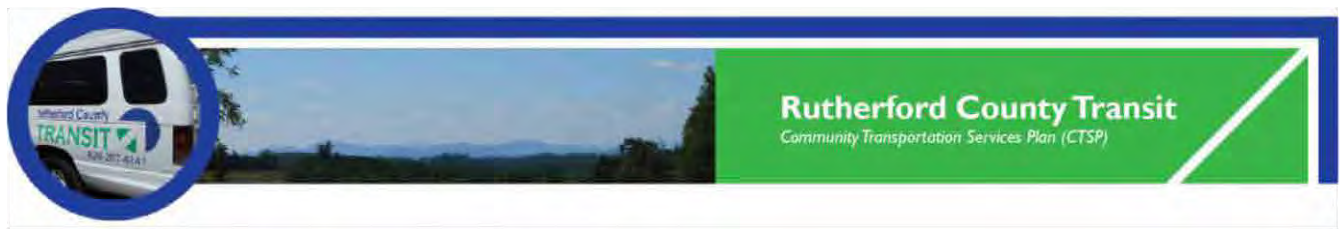
Legend

- Interstate
- Municipal Boundaries
- US Highway
- NC Highway
- County Boundaries
- Block Group - LEP for Asian Languages
- Block Group - LEP for Spanish Language



Rutherford County
TRANSIT
www.rctransit.com





Local Coordinated Plan

In 2013, the Isothermal Planning and Development Commission updated the 2009 Local Coordinated Plan (LCP) known as *The Isothermal Regional Human Service Regional Transportation Coordination Plan*. The update involved inventorying public transportation service providers in the Isothermal region, conducting a needs and service gaps analysis, and prioritizing transit improvements. Some of the needs and service gaps include: a regional transit call center, schedule coordination between the three counties, transit access for veterans, and better access for remote/underserved clients. The improvements consisted of acquiring additional transit vehicles, dedicating public parking lots for carpools, vanpools, and park-and-rides and increasing deviated fixed-route service. The improvements were not specific to systems, but rather applicable to the four-county region: Cleveland, McDowell, Rutherford, and Polk. The improvements were not targeted for a specific timeframe. (Cleveland County is a part of the Lake Norman RPO, not the Isothermal RPO).

In addition to the recommendations made by the Local Coordinated Plan, RCT may consider coordinating with Polk County to provide transit service to the new Tryon International Equestrian Center, which is located on the county line between Rutherford and Polk counties. This center is described in an article published by the *Citizen-Times* newspaper of Asheville, NC:

The Tryon International Equestrian Center is an extensive \$100 million equestrian center and luxury resort that is planned to feature a 150-room hotel is scheduled to open in the summer 2017 off U.S. 74. The hotel site will overlook the Tryon International Equestrian Center, which is in the last phases of being completed.



Though not located in Rutherford County, this Polk County project will have a significant impact on the tourism industry for the region. Five horse rings are going to be installed with 500 permanent stables. The future planning includes a 6,000-seat outdoor stadium with floodlights, more horse rings, a sports center, a covered arena with an additional 500 stables. Altogether the resort will cover approximately 1,400 acres.

There will be opportunities to improve access to both tourists and workers at the center and RCT may coordinate with Polk County Transit to assess future mobility needs and potential connectivity for public transit services going forward. With the Tryon International Equestrian Center, economic developers anticipate a 30 percent growth in horse-related jobs in the region over the next decade (*Citizen Times*, 2014).



The Tryon International Equestrian Center will have economic development potential to the region, due to the need for mobility needs for visitors and workers at the site. Transit service to the Equestrian Center is discussed further under Economic Drivers in Section 2.2: Service Analysis.

2.2 Service Analysis

Implementing and Leveraging Federal Programs

As Rutherford County Transit considers expanding its services, it may use funds allocated through the Rural Operating Assistance Program (ROAP) to leverage more funds by applying for other transportation grants administered by NCDOT-PTD. According to the ROAP State Management Plan, Rutherford County Transit could use ROAP funds as the local match for FTA Section 5310 and FTA Section 5311 programs. These federal funding programs and their applicability to RCT are described in detail in Table 2-7. Allocations from these programs are made by NCDOT-PTD, which posts calls for applications at least once a year.

Rutherford County Transit would be competing with other rural systems for these funds. In FY 2015, the entire apportionment from the Federal Transit Administration to North Carolina for non-urbanized areas was as follows:

- FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities: \$1,739,658
- FTA Section 5311 and 5340: Formula Grants for Rural Areas: \$17,576,879
- Appalachian Development Transportation Assistance Program (ADTAP): \$965,342

Table 2-7: Federal Funding Programs

Description	Eligible Activities	Applicability to RCT
FTA Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities		
Intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services.	At least 55% of program funds must be used on capital projects that are: <ul style="list-style-type: none"> • Public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable. The remaining 45% may be used for: <ul style="list-style-type: none"> • Public transportation projects that exceed the requirements of the ADA. • Public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit. • Alternatives to public transportation that assist seniors and individuals with disabilities. 	FTA Section 5310 may fund new transit service to senior congregate meal site programs: <ul style="list-style-type: none"> • Ellenboro Congregate Meal Program • Hennesetta Congregate Meal Program • Shingle Hollow Congregate Meal Program



Table 2-7: Federal Funding Programs

Description	Eligible Activities	Applicability to RCT
FTA Section 5311 and 5340: Formula Grants for Rural Areas		
The purpose of this program is to provide capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destinations.	<ul style="list-style-type: none"> • Planning • Capital • Operating • Job access and reverse commute projects • Acquisition of public transportation services 	<ul style="list-style-type: none"> • Expand deviated fixed route service • New transit service to senior congregate meal site programs
FTA Section 5311: Appalachian Development Transportation Assistance Program (ADTAP)		
This program is a \$20 million formula program created under Section 5311 as a part of Moving Ahead for Progress in the 21st Century (MAP-21) legislation.	<ul style="list-style-type: none"> • Planning • Capital • Operating • Job access and reverse commute projects • Acquisition of public transportation services 	<ul style="list-style-type: none"> • Expand deviated fixed route service • New transit service to senior congregate meal site programs

Economic Drivers

There are two new initiatives in particular that have the opportunity to provide economic impacts for the community, through public transit: the Thermal Belt Rails-to-Trails Shuttle and the Tryon International Equestrian Center Workforce Shuttle. These two transit services have the potential to make a positive economic impact in the community by encouraging tourism, exercise, and health (rails-to-trails shuttle) and by expanding employment opportunities for Rutherford County residents (workforce shuttle). The economic advantages, potential transit costs, and potential ridership for these services are summarized in Table 2-8. Descriptions of the services and maps are included on the following pages.

Table 2-8: Economic Driver Transit Services

	Thermal Belt Rails-to-Trails Shuttle	Tryon International Equestrian Center Workforce Shuttle
Description	Transportation along the trail that starts north of Rutherfordton and ends in Forest City	Workforce transportation for Rutherford County residents to the Equestrian Center in Polk County
Economic Advantages	<ul style="list-style-type: none"> • Encourages tourism and related businesses including restaurants, bike shops, hotels • Promotes health and wellness, which reduces medical costs 	<ul style="list-style-type: none"> • Expands employment options for residents that may not have access to a personal vehicle • Increases spending in Rutherford County
Potential Transit Costs	• Approximately \$50,000 per year (seasonal)	• Approximately \$40,000 per year
Potential Ridership	• 15 riders per day, over 3,000 per year (seasonal)	• 12 riders per day, over 4,000 per year



Thermal Belt Rails-to-Trails Shuttle

The proposed shuttle service would operate seasonally, April 1st through October 31st, along the length of the Thermal Belt Rail Trail, which begins north of Rutherfordton and will eventually end in Forest City. It would stop at four locations along the trail, providing a convenient transportation option for cyclists and pedestrians of all ages and abilities to park and cover as much or as little as the trail as they desire. This shuttle would encourage recreation, health, and wellness as well as support local businesses related to the use of the trail such as restaurants, bike shops, and hotels. This service would focus on new riders to the RCT system and give these “choice riders” an opportunity to experience public transit, getting to and/or from their desired location along the route.

The service would operate seasonally, Monday through Friday from 5:00 PM to 8:30 PM and Saturday and Sunday from 2:00 PM to 6:00 PM. (operating hours would need adjusted during daylight savings time). Two transit vehicles would be assigned to the 14 mile route with one traveling northbound and the other southbound to increase service frequency. The estimated annual cost of this service is \$50,000. An additional one-time cost of \$6,000 would be required for adding bike racks to six RCT transit vehicles. Ridership is estimated to be 15 riders per day or over 3,000 riders seasonally.

The marketing of this service would be important, as this would include signage, shelter placements and advertising this option to the recreation community. Funding to support this initiative would come from Section 5311 ADTAP Operating funds.

This service is programmed to being in FY 2018, contingent upon the remaining portions of the Thermal Belt Rail Trail being completed. If the entire trail is not completed by FY 2018, the service may be delayed or modified to serve the completed portions.

The proposed schedule for the shuttle is included in Table 2-9 and Figure 2-6 on the following page shows the proposed route for this transit service.

Table 2-9: Proposed Thermal Belt Rails to Trails Shuttle Schedule

Southbound		Northbound	
Time	Stop	Time	Stop
0:00	Gilkey Lumber Co.	0:00	Forest Hunt Elementary School
0:15	Spindale Drug Store	0:10	Forest City Farmers Market
0:30	Forest City Farmers Market	0:25	Spindale Drug Store
0:40	Forest Hunt Elementary School	0:40	Gilkey Lumber Co.

Times above are estimated and include dwell times at stops.



Figure 2-6: Thermal Belt Rails-to-Trails Shuttle



Legend

Thermal Belt Rails to Trails Shuttle

Proposed Stop

US Highway

NC Highway

Thermal Belt Rails to Trails Shuttle

0 0.5 1 Miles



Tryon International Equestrian Center Workforce Shuttle

The proposed workforce shuttle would expand the employment options for Rutherford County residents by providing transit service from the Food Lion Shopping Center at the interchange of Alternate US 74 and Alternate US 221 in Forest City to the Tryon International Equestrian Center off of Exit 170 on US 74 in Polk County. This service would be particularly beneficial to potential employees of the Equestrian Center that do not have access to a personal vehicle. The direct economic impact to residents working at the Equestrian Center would have the additional benefit of increasing spending at businesses in Rutherford County.

The service would operate Monday through Sunday with three daily trips departing from the Food Lion Shopping Center at 6:00 AM, 2:00 PM, and 7:00 PM. This schedule would accommodate the different shifts at the Equestrian Center. One transit vehicle would be required for this route, which is 13 miles one way. The estimated annual cost of this service is \$40,000. Ridership is estimated to be 12 riders per day or over 4,000 riders annually.

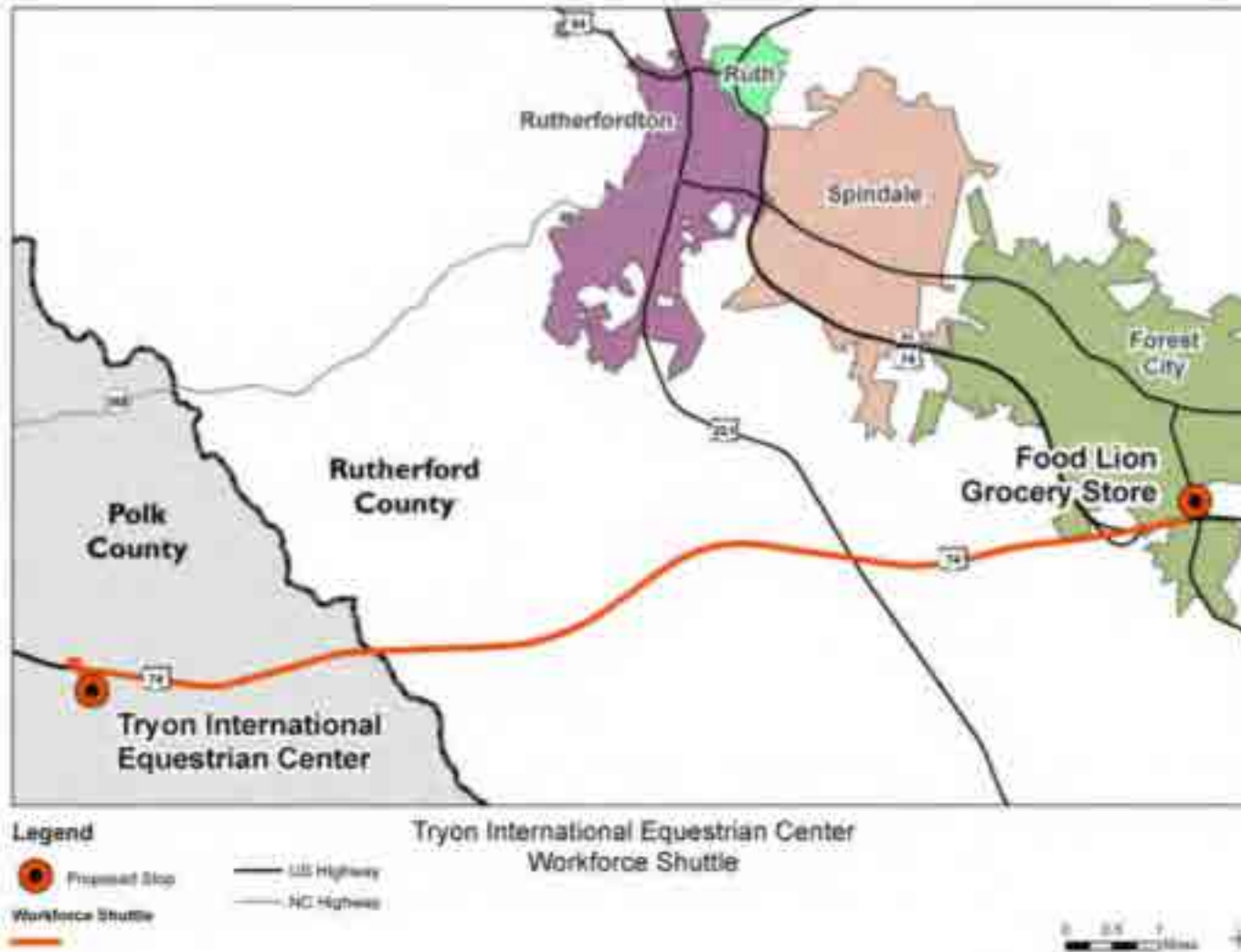
Coordination with the Equestrian Center is critical for the success of this service. The promotion of the transit service and timing of the daily trips should be coordinated prior to commencing the service in FY 2017. Funding would also come from Section 5311 ADTAP Operating funds, however, there is the potential to request Workforce Innovation funding through the Department of Labor, which could assist in providing funding to support this service. In the future, this shuttle may be expanded to provide transportation between hotels and the Equestrian Center.

The proposed schedule for the shuttle is included in Table 2-10 and Figure 2-7 on the following page shows the proposed route for this transit service.

Table 2-10: Proposed Workforce Shuttle Schedule			
To: Tryon International Equestrian Center Workforce Shuttle			
Departure	Stop	Arrival	Stop
6:00 AM	Food Lion Shopping Center	6:20 AM	Tryon International Equestrian Center
2:00 PM	Food Lion Shopping Center	2:20 PM	Tryon International Equestrian Center
7:00 PM	Food Lion Shopping Center	7:20 PM	Tryon International Equestrian Center
To: Food Lion Shopping Center			
Departure	Stop	Arrival	Stop
6:25 AM	Tryon International Equestrian Center	6:45 AM	Food Lion Shopping Center
2:25 PM	Tryon International Equestrian Center	2:45 PM	Food Lion Shopping Center
7:25 PM	Tryon International Equestrian Center	7:45 PM	Food Lion Shopping Center

Times above are estimated and include dwell times at stops.

Figure 2-7: Tryon International Equestrian Center Workforce Shuttle





Deviated Fixed Route Assessment

RCT's Deviated Fixed Route, known as TARC, operates through the communities of Rutherfordton, Spindale and Forest City on a set schedule. The route runs from 8:00 AM – 5:40 PM and makes 27 stops on a circular route that starts at the Transit Office. Deviations can be made up to 1/2 mile from a set bus stop and stops may also be made along the route as long as it is a safe location for the bus to stop. There are two runs associated with the route, runs 996 and 997. Both runs follow the same route (shown in Figure 2-8). Run 996 has headways at 7:52 AM and 9:37 AM and run 997 has headways of 11:30 AM, 1:45 AM, and 3:24 AM. The average headway for the system is every 1 hour and 53 minutes.

Rural General Public data showing boarding and alighting data gathered from July 1, 2014 through January 27, 2015 was analyzed to determine the most frequently used stops along the route. It is important to note that the data do not include information for deviated stops, or stops that are made outside of the fixed routes path, but within a 1/2 mile radius. RCT does not record the location of these stops, only the number of deviated stops, so the data only reflects counts for designated stops. The total boarding and alightings at designated stops during the time period was 5,537 passengers. The most commonly used stops during this time period were Wal-Mart (814 passengers), Highland Apartments (607 passengers), and the BB&T (361 passengers). The stops with the lowest boarding and alightings were the McDonalds/Exxon in Spindale (60 passengers), Main Street Baptist Church (62 passengers), and the Oak Villa Apartments (65 passengers). Table 2-11 shows total boarding and alightings by stop for the period and Figure 2-8 shows the stops with boarding and alighting data.

The vehicles used for the deviated fixed route are the same vehicles used for the demand response service, and do not have logos or branding that identifies the vehicles as part of a publicly available fixed route service. This contributes to a lack of public awareness about the service.

Table 2-11: Total Boarding and Alightings by Stop

Stop Number	Stop	Boardings	Alightings	Total
1	Transit Office	165	80	245
2	Meadowbrook MH Park	88	29	117
3	Medical Arts Pharmacy	74	56	130
4	Grace of God	64	36	100
5	BB&T (FC)	218	143	361
6	Food Lion (FC)	84	83	167
7	Harmony Hills Apts	49	46	95
8	Oak Villa Apts	48	17	65
9	FC Housing Authority Office	49	43	92
10	Highland Apts	319	288	607
11	Southern Manor Apts	102	47	149
12	Ingles	86	76	162

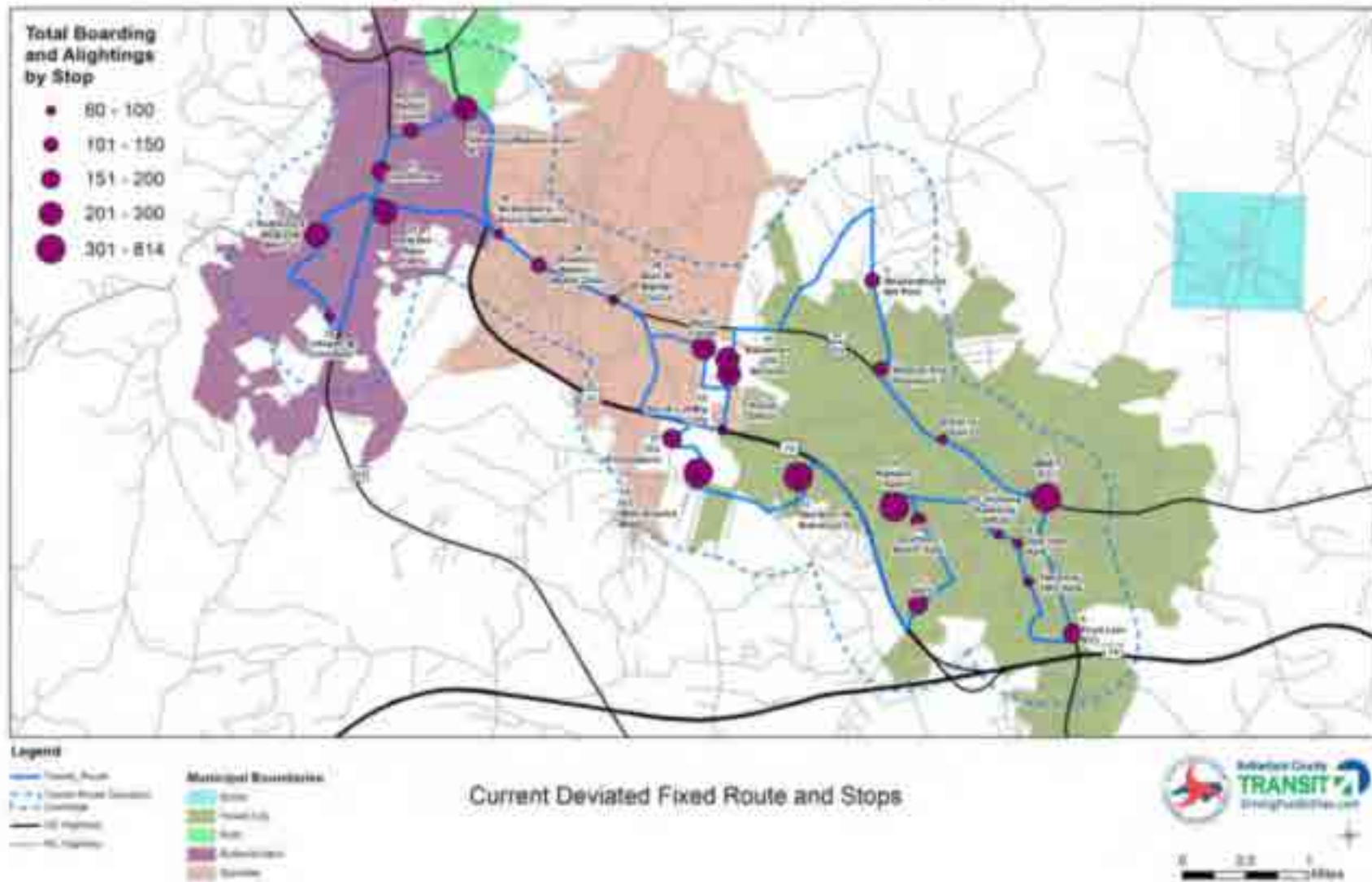


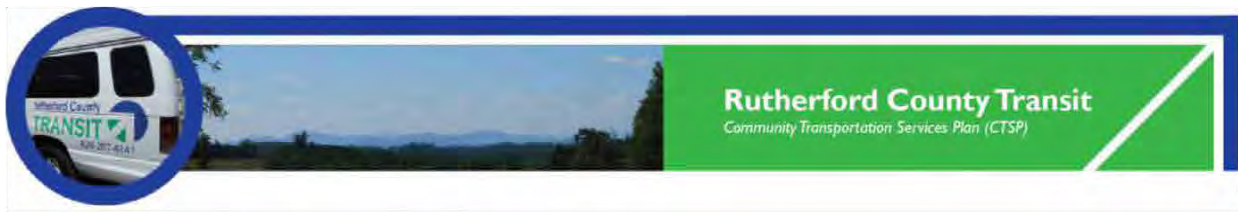
Table 2-11: Total Boarding and Alightings by Stop

Stop Number	Stop	Boardings	Alightings	Total
13	Wal-Mart (Rx Entrance)	273	541	814
14	ICC (Bus-Science Bldg)	132	184	316
15	Sav-A-Lot/Big Lots	35	63	98
16	Senior Center	154	70	224
17	Rutherford Life Services (RLS)	101	111	212
18	Main St Baptist Church	23	39	62
19	McDonald's/Exxon-Spindale	28	32	60
20	Trelleborg/Reeves-Green St	171	108	279
21	Second Baptist Church	40	85	125
22	Courthouse	90	65	155
23	Rutherford Regional Med Ctr	72	175	247
24	Cottages @ Crestview	62	32	94
25	Parklane Plaza (Fred's)	133	130	263
26	Granny's Bakery / Health Clinic	61	57	118
27	ICC (Foundation)	98	82	180
	Total	2,819	2,718	5,537



Figure 2-8: Current Transit Deviated Fixed Route (TARC)





Filling Service Gaps

Deviated Fixed Route

Opportunities for effective expansion of service exist in RCT. The current deviated fixed route has limited headways ranging from every 1 hour and 39 minutes to 2 hours and 15 minutes, with a total of five runs per day. Current headways and the length of the route make the fixed route a poor choice for travel. Overall service of the deviated fixed route could be enhanced by splitting and reconfiguring the route slightly which would provide more frequent headways. Splitting the single route into two separate routes which would pulse, or meet, at Walmart, would allow for nearly the same coverage as is currently offered, but with 30 minute headways. Stop #2 Meadowbrook Mobile Home Park would be removed from the route in order to improve efficiencies. RCT estimates that this change would result in additional costs of \$90,000, however the enhanced service would likely make it a more appealing transportation alternative and could increase ridership, somewhat offsetting the costs.

Ridership would be expected to increase due to the added frequency of service. An onboard rider survey conducted in January 2015 asked general public riders how improvements to RCT services would impact their ridership. Riders reported that they would likely make more trips each week if frequency was increased. The current farebox recovery is 7.4%, or approximately \$6,000 per year. By implementing these improvements the total fares collected would be expected to increase due to the increase in ridership. However, the farebox recovery would be about 6.4%, or approximately \$11,000 per year, because of the increased costs associated with the improvements. This estimate would be contingent upon the successful marketing strategies of the new service and adding passenger amenities such as bus shelters. This model is conservative in predicting future ridership and does not take into account the convenience factor of increased frequency and bus shelters, which would likely encourage additional riders. Additional riders would increase the farebox recovery.

Figure 2-9 shows the recommended route changes. As noted the two routes would pulse at Walmart every 30 minutes. Route 1, referred to as Blue Line 1, would service current stops west of the transit offices, and Route 2, referred to as Blue Line 2, would service stops east of the transit offices, including the transit office itself. While this new system of routes would require users to change buses if they wanted to travel from the east end of the service area to the west end of the service area, the increased headways would make up for any perceived inconvenience. And, as noted in Section 2.2 the Walmart stop where the two routes would pulse is the most heavily used stop on the current route. Furthermore, the two routes could be timed to meet at Walmart at the same time to avoid long transfer times. Both routes are approximately the same length – 11.75 miles for Blue Line 1 and 12.0 miles for Blue Line 2 – and have similar number of stops. Figure 2-9 shows the proposed route changes, including stops. These changes would also help meet the LCP's goal discussed in Section 2.1 of improving deviated fixed route service in the Isothermal region. Table 2-12 shows the division of stops between the two routes. The stops are listed in the order in which they would be served on the respective route.



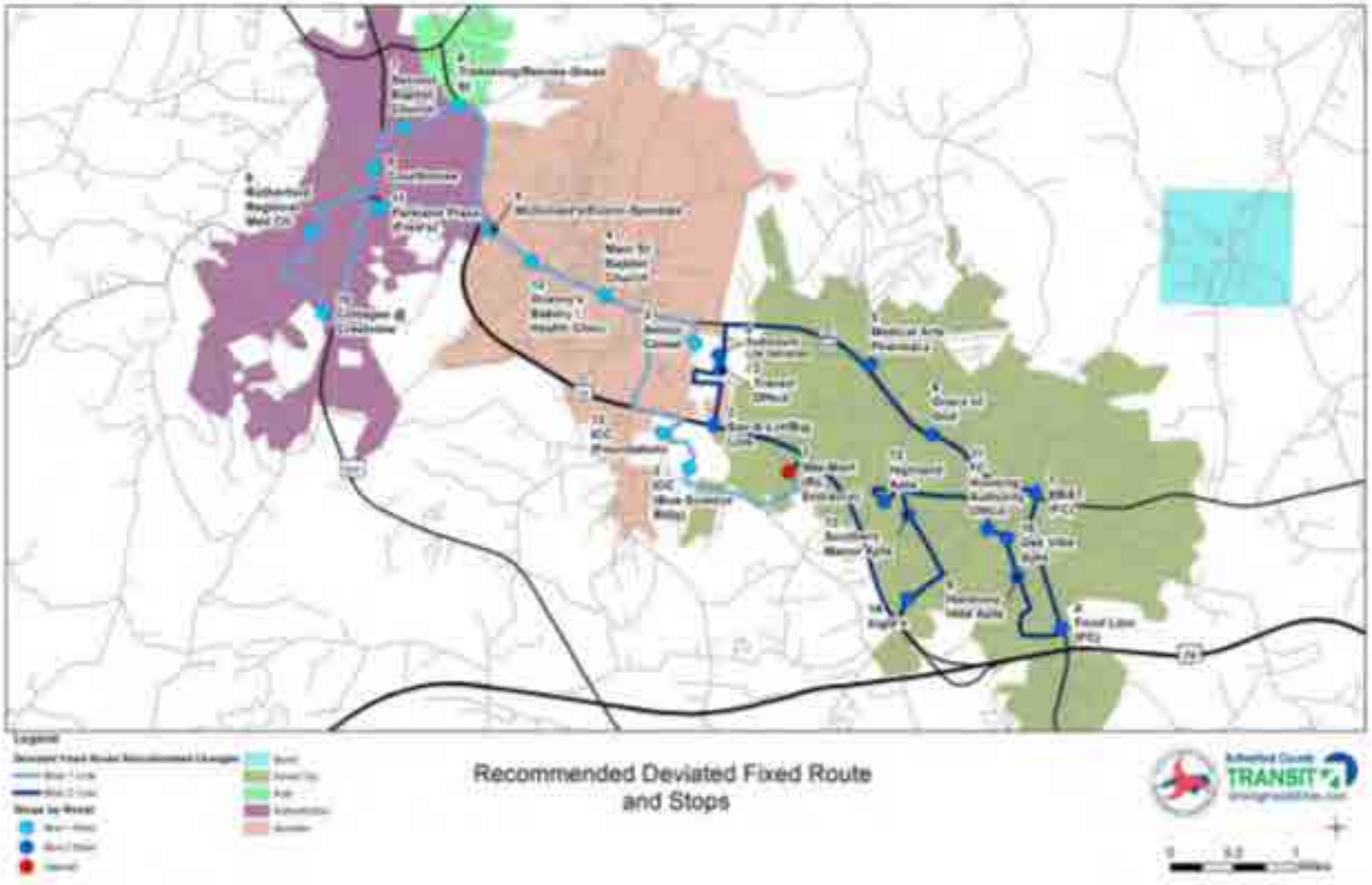
Table 2-12: Stops Along Proposed Route

Route	Route
Blue Line 1 (Total 11.75 Miles)	Blue Line 2 (Total 12 Miles)
Walmart	Walmart
ICC (Bus-Science Building)	Sav-A-Lot/Big Lots
Senior Center	Transit Office
Main St Baptist Church	Rutherford Life Services (RLS)
McDonald's/Exxon-Spindale	Medical Arts Pharmacy
Tielleboag/Reeves-Green St	Grace of God
Second Baptist Church	BB&T (FC)
Courthouse	Food Lion (FC)
Rutherford Regional Med Ctr	Harmony Hills Apartments
Cottages @ Crestview	Oak Villa Apartments
Parklane Plaza (Fred's)	FC Housing Authority Office
Granny's Bakery / Health Clinic	Highland Apartments
ICC (Foundation)	Southern Manor Apartments
	Ingles

Another recommendation for the deviated fixed route service would be the addition of bus shelters at high volume boarding locations. This passenger amenity would improve the perception of the public transit service as well as promoting a safe, sheltered area to wait for the transit buses. Also, it is recommended that the deviated fixed route buses be painted a different color, to distinguish them from the agency-contracted transit services. Perception is important, and as the system develops this new brand and emphasis on increasing ridership, a "new look" of the buses would help improve the image of marketing to general public riders.

Walmart is a key location that would serve as the transfer for both routes. This location has the highest boarding and alighting totals and is a destination that has a central appeal to each of the surrounding communities.

Figure 2-9: Recommended Transit Deviated Fixed Route





Congregate Meal Programs

In addition to improvements to the deviated fixed route service, There are three congregate meal programs within the county that offer meals, social and physical activities, and continuing education opportunities to senior citizens. These three congregate meal site programs are located in the following communities:

- Ellenboro Congregate Meal Program;
- Henrietta Congregate Meal Program; and,
- Shingle Hollow Congregate Meal Program.

None of the congregate meal programs are currently served by RCT, making them inaccessible to many seniors in their respective parts of the County, thus representing a service gap. Providing a scheduled shuttle between retirement communities, senior centers, and the congregate meal program locations, mobility for senior citizens could be improved. These three shuttles could operate mid-day, Monday through Friday, as a contracted service that would be limited by program demands. Adopting this service would also provide assistance in addressing the service gap identified in the LCP for remote and underserved clients in the Isothermal region.

The estimated costs of this additional service would be approximately \$80,000 based on 12 hours of service per day at an hourly rate of \$18.07, mileage rate of \$0.36, and fixed cost factor of 1.32 for five days a week for a total of 250 days a year. The 12 hours of service per day represents 4 hours per round trip to each of the three congregate meal sites. This service may be funded through Section 5310 funds that the Senior Center would apply for and contract with RCT.

Tourists and Retirees

Chimney Rock Park and Lake Lure are located in the western part of the county and are popular tourist and retirement destinations. Currently there is no scheduled transit service to the park or Lake Lure area, but RCT operates demand response service. Scheduled transit service was considered for this region to alleviate congestion and increase mobility options for tourists and retirees, but was ultimately not recommended. RCT provided a deviated fixed route in the summer of 2010, but it had very limited usage. The Lake Lure community expressed support for ending the service and reallocating resources to provide other transit services where they were more needed. Based on the low ridership and interest in this past service, it was recommended that RCT not pursue a deviated fixed route for this area.



Technology Recommendations

Rutherford County Transit is innovative and proactive in its use of technology. Its current technologies include CTS Software ParaScope, Automatic Vehicle Locators (AVLs), and Google Transit. It also operates an automated call system that reminds passengers of their scheduled pick up time the night before and 20 minutes prior. The increase in operational efficiencies in fiscal years 2011-2014 allowed RCT to rebuild their reserves back to a minimum of three month's operational expenses. This in turn also allowed RCT to have the funds to invest in new technology as noted below.

CTS Software ParaScope

CTS Software's ParaScope© – Mobile Data Computer solution provides Rutherford County Transit drivers and dispatchers with the ability to communicate more efficiently. This improvement was instituted in 2014 and includes a safe mobile messaging communications tool. The ParaScope© displays the driver's trip manifest electronically. The details on the screen include trip information such as pick-up and drop-off odometer readings and times. This ability to capture "real-time" data has been a great assistance to the scheduling and dispatching functions. The built-in GPS (global positioning system) provides invaluable routing information to help drivers get to their scheduled locations timely and efficiently. Some of the functions of this system include:

- Electronic manifest
- Real-time data capture of odometer readings and times
- Instant schedule updates which alert drivers of any changes
- Safe messaging between drivers and dispatchers
- Vehicle tracking on a standalone map display

Employing the CTS Software has resulted in financial and efficiency benefits for Rutherford County Transit. Since implementing the software and tablets, RCT has realized the following benefits:

- Reduction of 250 miles/week translates into a savings of \$424/week*
- Reduction of 15 hours/week in payroll translates into a savings of \$143/week*
- Total \$567/week savings x 52 weeks = **\$29,484 per year***

The costs associated with the software are as follows:

- Capital Cost = \$36,000 / 3 years lifespan of tablets = \$12,000 per year*
- Maintenance Cost = \$15,888 per year*
- Total annual cost = **\$27,888 per year***

*These cost and benefit figures are provided by Rutherford County Transit.

The software could be improved by fixing a bug that currently prevents drivers from seeing the deviated fixed route stops in the correct order. It could also be improved by adding the ability to count passengers



boarding and alighting from the bus. Currently drivers on the deviated fixed route must log their time using the tablet, but must record passengers separately on paper logs. This is more burdensome for the drivers and takes more time than would an integrated solution.

Google Transit

RCT is a Google Transit Partner, meaning that its deviated fixed route schedule is integrated with Google Maps. Rutherford County residents and visitors alike can plan their trip on RCT by using Google Maps on the computer, smartphone, or tablet. Google Maps gives step-by-step directions to complete the trip, starting with walking directions to the closest RCT transit stop. This helpful tool is currently not promoted on the RCT webpage or Facebook page. It is recommended that RCT promote the tool by adding a link to both its webpage and Facebook page. A plugin to allow users to plan their trip directly on the RCT webpage could also be added.



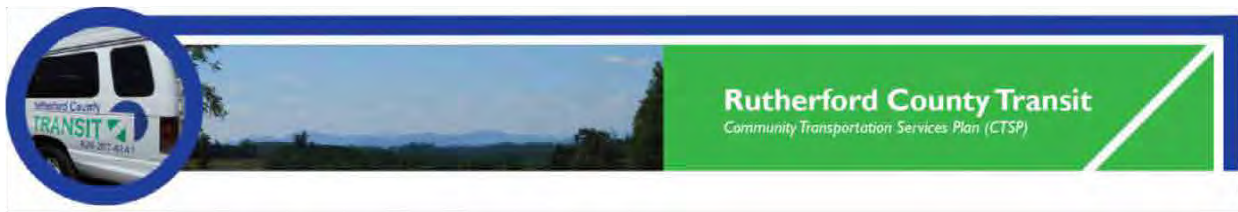
Automatic Vehicle Locators

Rutherford County Transit has Automatic Vehicle Locators (AVLs) installed on its vehicles. These devices allow the dispatcher to monitor where vehicles are at all times, enabling him or her to decide where to send vehicles based on their location.

RCT may improve on this technology by integrating the data from AVLs could be integrated with Google Transit and other services such as TransLoc (based in Durham) that allow riders to

see where there bus is and when it will arrive. In addition, RCT could place electronic sign boards at its deviated fixed route stops that would tell riders when the next bus is arriving.

These technology improvements may be funded through FTA Section 5311 funds. Rutherford County Transit would need to complete the required application through the NCDOT-PTD and ITRE.



2.3 Coordination Opportunities

Transit Services by Other Providers

In Rutherford County, several taxi companies including AA Tri City Cab, Discount Taxi, Hampton’s Cab, and Tommy’s Taxi provide services. These taxi companies, particularly Hampton’s Cab, transport dialysis patients to DaVita Dialysis Care in Forest City. These providers also transport patients to medical facilities outside of the county. In addition to medical trips, these taxi services drive Rutherford County residents to airports in Asheville, Charlotte, Hickory, and Greenville-Spartanburg, SC.

Coordination Opportunities with Neighboring Counties



A meeting was held on Tuesday, March 10th with McDowell County transportation officials. The meeting was conducted at the McDowell County Senior Center in Marion, North Carolina. Currently, McDowell County has 13 vehicles (11 purchased through NCDOT and 2 non-NCDOT funded vehicles) and employs 9 drivers. There have not been any vehicle purchases since 2008. The services provided are coordinated through the McDowell County DSS for Medicaid related transportation. The County receives approximately

\$70,000 in ROAP (EDTAP and EMPL) funds and vehicle maintenance for the vehicle fleet is provided by the County. Coordination for schedules and operational support is done through DSS.

The discussion at this informal fact gathering meeting included potential coordination for future out-of-county medical trips. McDowell County will undergo a transit development plan in 2015.

In addition to coordination with McDowell County, RCT has the opportunity to coordinate their out-of-county medical trips with the Transportation Administration of Cleveland County (TACC). RCT trips are currently provided to Gastonia, Charlotte on Tuesdays and Wednesdays, and service to appointments in Kings Mountain is provided each Wednesday. Additionally, RCT provides non-emergency medical trips (NEMT) to Shelby on Monday, Tuesday, Wednesday and Thursday. Through scheduling communication, RCT has the ability to include TACC in trip coordination which could improve efficiency of NEMT regional services.





Regional Medical Centers

In-County Medical Transportation

Rutherford County has several medical centers, the most prominent being the **Rutherford Regional Health System** affiliated with Duke LifePoint Healthcare. The system is a not-for-profit organization with many locations in Rutherford County, including:

1. Rutherford Regional Medical Center
2. Chase Family Care
3. Forest City Family Care
4. Rutherford East Family Care
5. Boiling Springs Family Care
6. The Clinic at Walmart
7. Rutherford Regional Cancer Resource Center
8. Carolina Home Care
9. Rutherford Children's Care
10. The Mammography Place
11. OneSource Rehabilitation Services
12. Rutherford Orthopaedics
13. Insights Psychiatric Resources
14. Rutherford Surgical Associates
15. Rutherford Wound Care & Hyperbarics

The main hospital campus is in Rutherfordton, NC. The locations of these facilities are shown on Figure 2-10 on the next page. The numbers listed beside each facility correspond to the figure. Rutherford County Transit's existing deviated fixed route serves the following locations: 1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15. Demand response also serves these locations as well as the remaining ones: 2, 4, and 5.

Currently, each of the stops on the deviated fixed route is served five times a day with the average headway at 1 hour and 53 minutes. By implementing changes to the route, the frequency of transit service to these medical locations could be increased and headways decreased. Instead of serving these locations five times a day, the route would serve them 19 times. The average headway would decrease from 1 hour and 53 minutes to 30 minutes. The increase in frequency and decrease in headways would improve transit service for patients and staff of these facilities.

The **VA Medical Center** is near Rutherford Regional Medical Center in Rutherfordton. It is also served by the deviated fixed route. The VA Medical Center used to be a time stop on the deviated fixed route, but was removed due to its low popularity. This has led to some confusion, with some riders thinking that the center is no longer served. In order to improve communication, adding the center as a time stop to the schedule should be considered.

DaVita Dialysis Care is located in Forest City and provides dialysis to many patients in Rutherford County. It is served by the deviated fixed route, but patients are transported to and from dialysis using demand-response service due to the trips originating at patients' homes. This arrangement currently works well for patients so no changes are recommended.



Figure 2-10: Rutherford Regional Health System

Quality care for you and your family, right here at home



RUTHERFORD REGIONAL
HEALTH SYSTEM

Nationally recognized for our compassionate care, cost-consciousness and clinical outcomes, Rutherford Regional Health System is built around one of America's Top 20 Community Hospitals, according to Becker's Hospital Review of Chicago, Illinois. Our recently expanded care is offered in these locations:



1 MEDICAL CENTER 888-888-5000 FAMILY MEDICINE 1 Chase Family Care 608-851-5271 2 Forest City Family Care 888-245-5026 3 Rutherford East Valley Care 888-485-0700 4 Rolling Springs Family Care 704-424-2288 WALK-IN CLINIC 5 The Clinic at Wehner 608-298-8498 CANCER PROGRAM 6 Rutherford Regional Cancer Research Center 888-545-4296	HOME CARE 7 Carolina Home Care 828-245-2575 888-848-5574 PEDIATRICS 9 Rutherford Children's Care 828-281-0226 WOMEN'S SERVICES 10 The Gynecology Place 888-288-9871 REHABILITATION 11 Carolina Rehabilitation Services 888-243-5588	ORTHOPAEDICS 12 Rutherford Orthopaedics 608-287-4300 PSYCHIATRY 13 Insights Psychiatric Resources 608-287-8829 SURGERY 14 Rutherford Surgical Services 888-288-1241 WOUND CARE 15 Rutherford Wound Care & Hyperbarics 828-281-0000
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Table 2-13: Transit Serving Regional Medical Centers

Regional Medical Center	Current Transit Service	Recommended Changes to Transit Service
Rutherford Regional Health System	Deviated fixed route transit service for most locations, demand response service to all locations	Implement recommended changes to the deviated fixed route, thereby increasing daily transit trips from 5 to 19 and decreasing the average headway from 1 hour 53 minute to 30 minutes.
VA Medical Center	Deviated fixed route transit service	
DaVita Dialysis Care	Demand-Response transit service	No change recommended.

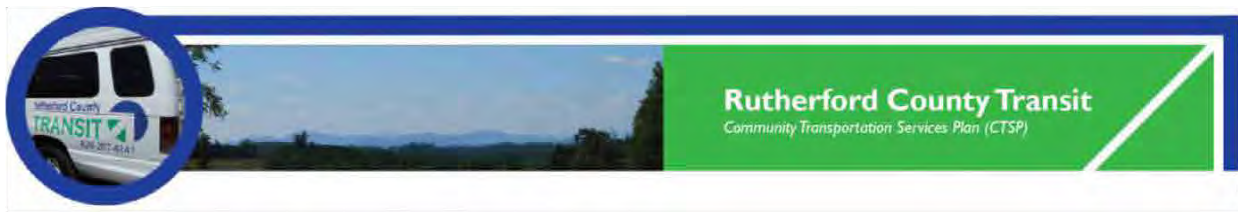


Out-of-County Medical Transportation

Rutherford County Transit has made its out-of-county medical transportation more efficient by scheduling trips to certain cities on specific days of the week as listed in Table 2-14. There may be opportunities to further increase efficiency by coordinating out-of-county medical trips with McDowell and Polk Counties. Through coordination, efficiencies would be achieved by increasing the number of passengers on each trip. This would particularly be beneficial for the long-haul trips to Durham and Chapel Hill. A shared revenue model would need to be determined with McDowell and Polk counties.

Table 2-14: Out-of-County Medical Transportation

Day of the Week	Location Served
Monday	Asheville, Columbus, Hendersonville, Hickory, Morganton, Shelby
Tuesday	Charlotte, Gastonia, Mooresville, Shelby, Winston-Salem
Wednesday	Charlotte, Gastonia, Kings Mountain, Shelby
Thursday	Asheville, Durham/Chapel Hill, Hendersonville, Shelby, Spartanburg, SC
Friday	No service



Expansion to Employers and Isothermal Community College



Isothermal Community College (ICC), a member of the North Carolina Community College System, is a comprehensive, two-year, public institution that serves

the individuals in Rutherford and Polk counties. It has two main campuses, one in Spindale, NC and the other in Columbus, NC. It also has a learning center in Rutherfordton, NC. The main Rutherford County campus and Learning Center are served by Rutherford County Transit's deviated fixed route. The transit connection between the campus and the Learning Center is approximately 30 minutes, and is offered four times a day. Currently, there is no transit service between the main Rutherford County campus and Polk County campus. The steering committee discussed a potential connection between the two ICC campuses, and there is not a need for this service. The same classes are offered at both campus locations, with the exception of the Hospitality curriculum that is offered at the Polk County campus.

The **Rutherford County Airport**

is located about five miles north of Rutherfordton off of US 64. It is a small airport serving mostly local general aviation. There is currently no commercial airline service and no plans to add service in the near future. The airport is not served by Rutherford County Transit's deviated fixed route, but it is within



RCT's demand response service area. Future deviated fixed route transit service to the airport is not recommended in the foreseeable future due to the absence of commercial air service that would generate general public transit demand.

There are several large employers both along the path of the deviated fixed route and within a half mile radius of the route (see Table 2-15). Additionally, according to US Census Longitudinal Employer-Household Dynamic (LEHD) data there are a total of 2,004 jobs within the half mile buffer of the deviated fixed route. This represents 21 percent of the total jobs within Rutherford County. Transit service allows employees to travel to work at these locations without the use of a car, but the infrequent headways discussed in Section 2.2 makes traveling by bus difficult. Although establishing a park and ride lot is not considered a priority, a logical location for one would be at the Walmart. There is likely sufficient parking and riders would be located at the middle of the route. Further, if recommended changes to the route are implemented, riders would be able to board either Blue line route.



Rutherford County Schools is the largest employer in the county and provides school bus transportation for students. The school system administrative offices are located in Forest City on the current and proposed deviated fixed routes. In addition, several schools are located on or within the half-mile deviation from the current and proposed routes:

- Forest City-Dunbar Elementary School
- Rutherford Early College High School
- Rutherford-Spindale Middle School
- Spindale Elementary School

Students are most likely to go to and from school by school bus transportation provided by the school system or in private vehicles. Faculty and staff may utilize the deviated fixed route since school bus transportation is not applicable to them. Other schools in the system are located outside of deviated fixed route's coverage area, but demand response service is provided by RCT. Modifying the deviated fixed route to serve these schools is not recommended due to the time and expense that would be associated with serving these locations, which are further from population centers and other trip generators.

Table 2-15: Transit Serving Employers and Isothermal Community College

Entity	Current Transit Service	Recommended Changes to Transit Service
Isothermal Community College	Two stops at the Rutherford campus on the deviated fixed route	Increase frequency to the Rutherford County campus; Transit service between the Polk and Rutherford campuses not needed
Rutherford County Airport	None	No transit service is recommended to the airport for the foreseeable future.
Rutherford Regional Health System	Serviced by the deviated fixed route.	No change recommended.
Watts Regulator Company	Serviced by the deviated fixed route.	No change recommended.
Rutherford County Schools	Serviced by the deviated fixed route.	No change recommended.
Walmart	Serviced by the deviated fixed route.	No change recommended.
Isothermal Community College	Serviced by the deviated fixed route.	No change recommended.
Parker Hannifin	Within the half-mile buffer of the deviated fixed route	No change recommended.
Americal, Inc.	Within the half-mile buffer of the deviated fixed route	No change recommended.
Trollborg Coated System	Within the half-mile buffer of the deviated fixed route	No change recommended.



2.4 Recommendations

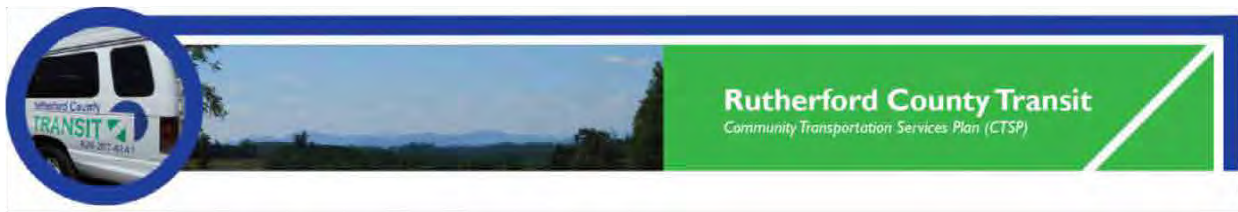
Recommendations for improving and expanding Rutherford County Transit services are summarized by advantages, disadvantages, and annual costs in this section. Costs are described in terms of dollars or staff time, whichever is applicable. The recommendations presented in Table 2-16 will be prioritized in a five-year implementation plan to be included in the Final Report.

Table 2-16: Recommendations			
Recommendation	Advantages	Disadvantages	Cost (\$)
Financial Recommendations			
Leverage ROAP funds for additional programs	<ul style="list-style-type: none"> Increased funds to expand services such as the Thermal Belt Rails-to-Trails Shuttle (RGP) and Tryon International Equestrian Center Workforce Shuttle (Employment) 	<ul style="list-style-type: none"> Competitive program, may not receive award May divert funding away from current needs 	Staff time
Continue applying for ADTAP funding	<ul style="list-style-type: none"> Additional revenue source to fund planning, capital, and operating expenses 	<ul style="list-style-type: none"> Competitive program, may not receive award 	Staff time
Subtotal			Staff time
Administration and Staff Recommendations			
Develop performance measures and assess them in an annual report	<ul style="list-style-type: none"> Increases transparency May improve service and efficiency by setting measurable goals 	<ul style="list-style-type: none"> Requires an annual investment of staff time Requires oversight and management 	Staff time
Subtotal			Staff time
Transit Service Delivery Recommendations			
Deviated Fixed Route – split into two separate routes	<ul style="list-style-type: none"> Increases frequency from 5 times per day to 19 Decreases headways from about 35 minutes to 30 minutes Increased ridership Improved public image 	<ul style="list-style-type: none"> RCT estimates additional operational costs of \$90,000 Requires a transfer for those traveling east-west 	\$90,000
Install bus stop shelters at 6 locations along the fixed route service	<ul style="list-style-type: none"> Provides amenities that would contribute to excellent customer service 	<ul style="list-style-type: none"> Approximate cost of \$15,000 per site installation Coordination for right-of-way approvals 	\$90,000
Add shuttle service to three Congregate Meal Programs	<ul style="list-style-type: none"> Addresses the service gap identified in the LCP of underserved and remote clients 	<ul style="list-style-type: none"> Additional funds would be required to operate the service The Senior Center would be 	\$80,000



Table 2-16: Recommendations

Recommendation	Advantages	Disadvantages	Cost (\$)
	<ul style="list-style-type: none"> Improves mobility options for seniors Eligible for leveraged Section 5310 funds 	required to apply for Section 5310 funds to cover the service	
Coordinate out-of-county trips	<ul style="list-style-type: none"> Improves efficiency by grouping trips More sustainable 	<ul style="list-style-type: none"> Less convenient for passengers who would likely have to transfer 	Staff time
Subtotal			\$260,000
Public Involvement and Marketing Recommendations			
Maps and schedule holders for the deviated fixed route	<ul style="list-style-type: none"> Assists riders in understanding the service Further promotes RCT services 	<ul style="list-style-type: none"> Recurring costs associated with updating and printing 	\$8,000
Translate materials in other languages as necessary to meet the needs of Limited English Proficiency (LEP) populations	<ul style="list-style-type: none"> Improves outreach to LEP populations Enhances compliance with Title VI of the Civil Rights Act 	<ul style="list-style-type: none"> Translation costs Increases printing costs from printing multiple versions of documents 	\$2,000
New paint scheme for the deviated fixed route buses	<ul style="list-style-type: none"> Promotes the deviated fixed route service Improves RCT brand and perception 	<ul style="list-style-type: none"> Design and painting costs Restricts buses to only be used for the deviated fixed route 	\$10,000 (\$5,000/bus)
Subtotal			\$20,000
Technology Recommendations			
Improve the RCT webpage	<ul style="list-style-type: none"> Improves communication with regular updates Enhances organization and ease-of-use 	<ul style="list-style-type: none"> Complexity of modifying RCT's webpage 	Staff time
Improve CTS Software	<ul style="list-style-type: none"> Reduces time that drivers must spend at each stop recording on/off data 	<ul style="list-style-type: none"> May require downtime of vehicles to update tablets 	Staff time
Promote Google Transit service	<ul style="list-style-type: none"> Makes it easier for riders to plan their trips Promotes RCT's brand 	<ul style="list-style-type: none"> Complexity of modifying RCT's webpage 	Staff time
Subtotal			Staff Time
TOTAL			\$280,000



3.0 FINANCIAL PLAN

3.1 Overview

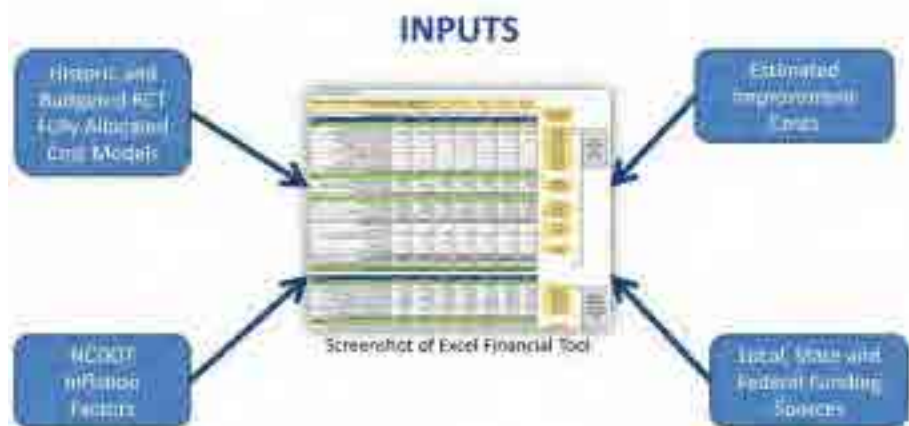
A financial plan for Rutherford County Transit was developed based on past RCT budgets and inflation factors provided by NCDOT in order to assess the financial impacts and performance measures (ridership and fares) associated with the CTSP recommendations over the CTSP planning horizon (FY 2016 – 2020). The plan is modeled on two scenarios: Base Case and Base Case + CTSP Recommendations. The Base Case Scenario does not include the CTSP recommendations, but rather projects revenues and expenditures based on past RCT budgets and inflation. The Base Case + CTSP Recommendations Scenario includes the CTSP recommendations in projected expenditures and identifies potential sources of federal, state, and local revenues to cover the associated costs.

Financial Plan Design

The financial plan is an Excel-based tool that can be modified if needed by RCT to reflect changes in priorities or budgets. The inputs and outputs of the plan are summarized in the graphics below.

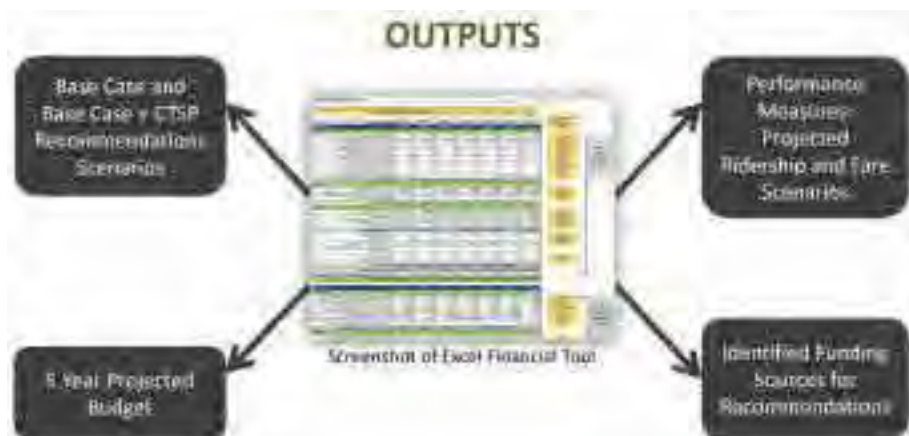
Inputs

In order to improve efficiency and accuracy, the financial plan incorporates Fully Allocated Cost Model (FACM) and OPSTATS data that RCT already provides to ITRE annually. FACM and OPSTATS data is copied into the tool from the existing reports in order to project future expenditures and ridership.



Outputs

The financial tool produces several outputs: detailed cost projections for the Base Case and Base Case + CTSP Recommendations Scenarios, ridership and fare scenarios, and identified funding sources for the recommendations.





Financial Plan Components

The methodologies and results of the following financial plan components are listed below:

- Base Case Scenario (Section 3.2)
- CTSP Recommendations (Section 3.3)
- Base Case + CTSP Recommendations Scenario (Section 3.4)
- Ridership and Fare Scenarios (Section 3.5)

3.2 Base Case Scenario

The Base Case Scenario projects future revenues and expenditures based on historic RCT budgets. It does not include the CTSP recommendations. Capital costs such as vehicle replacements that are not associated with CTSP recommendations are included in the Base Case Scenario.

Methodology

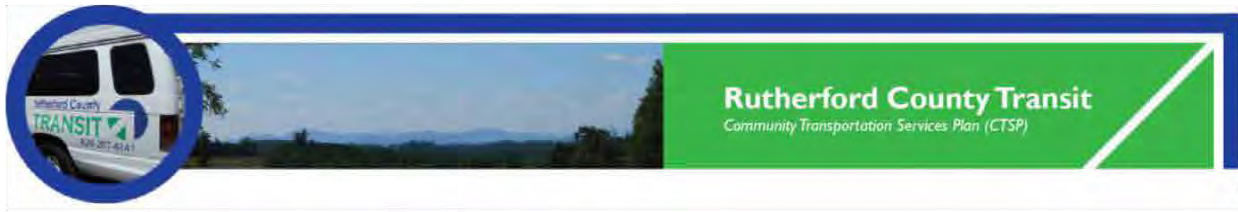
The Base Case Scenario is compiled based on historic RCT budgets. Revenues are from the RCT budgets that were submitted annually to Rutherford County. Expenditures are directly linked to the Fully Allocated Cost Model (FACM) that RCT submits to ITRE annually. Future revenues are projected based on the average of past actual budgets while future expenditures are projected based on inflation factors provided by NCDOT-PTD. Revenues were based on an average instead of an inflation rate, since they tend not to always increase each year, but rather remain more constant. However, expenditures do tend to increase annually due to rising fuel, equipment depreciation and personnel costs.

Results

The Base Case Scenario summary is presented in Table 3-1.

Table 3-1: Base Case Scenario Summary

Base Case Scenario	Actual FY 2014	Projected FY 2015	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016 - 2020
Expense								
Administrative	\$ 218,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 235,951	\$ 1,179,755
Operating	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 683,189	\$ 3,415,945
Capital	\$ 4,660	\$ 247,200	\$ 280,602	\$ 222,000	\$ 312,000	\$ 357,000	\$ 152,000	\$ 1,323,602
Expense Subtotal	\$ 906,800	\$ 1,166,340	\$ 1,199,742	\$ 1,141,140	\$ 1,231,140	\$ 1,276,140	\$ 1,071,140	\$ 4,595,700
Revenue								
Federal	\$ 160,852	\$ 354,933	\$ 381,655	\$ 334,773	\$ 406,773	\$ 442,773	\$ 278,773	\$ 1,844,747
State	\$ 208,095	\$ 202,659	\$ 205,999	\$ 200,139	\$ 209,139	\$ 213,639	\$ 193,139	\$ 1,022,055
Local - RCT	\$ 646,965	\$ 679,200	\$ 704,393	\$ 712,718	\$ 721,168	\$ 729,744	\$ 738,450	\$ 3,606,473
Revenue Subtotal	\$ 1,015,912	\$ 1,236,792	\$ 1,292,047	\$ 1,247,630	\$ 1,337,080	\$ 1,386,156	\$ 1,210,362	\$ 6,473,275
NET (Revenue - Expenses)	\$ 109,112	\$ 70,452	\$ 92,305	\$ 106,490	\$ 105,940	\$ 110,016	\$ 139,222	\$ 1,877,575



3.3 CTSP Recommendations

The CTSP recommendations included in the financial plan were the result of a multi-month planning process with feedback from the Steering Committee, RCT, NCDOT-PTD, human service agencies, transit riders and community stakeholders to identify programs and services for improving mobility in the community. The programs and services identified through this process along with the advantages and disadvantages are listed Table 2-16 on page 2-40. The financial plan estimates annual costs of each recommendation and identifies potential funding sources of federal, state, and local revenues.

Methodology

Costs for the transit service recommendations of the Deviated Fixed Route, Senior Congregate Meal Sites, Thermal Belt Rails to Trails Shuttle, and Tryon International Equestrian Center Workforce Shuttle were estimated based on historical data from the Fully Allocated Cost Model (FACM) and OPSTATS report applied in the cost of service formula, which is dependent on hours and miles:

$$\text{Cost of Service} = \text{Fixed Cost Factor} * [(\text{Daily Hours} * \text{Hours Unit Cost}) + (\text{Daily Miles} * \text{Miles Unit Cost})] * \text{Annualization Factor}$$

Based on the FY 2014 Actual FACM and the FY 2014 OPSTATS report, the values of the fixed cost factor and unit costs were:

$$\text{Fixed Cost Factor} = 1.32 \quad \text{Hours Unit Cost} = \$18.07 \quad \text{Miles Unit Cost} = \$0.36$$

The annualization factor represents the number of days per year that the transit service is operated. For the deviated fixed route and senior congregate meal sites, this factor was assumed to be 250 days per year. The Tryon International Equestrian Center Workforce Shuttle would operate 350 days per year. The Thermal Belt Rails to Trails Shuttle would be a seasonal service, operating 211 days per year. Based on this formula, the additional costs associated with the deviated fixed route improvements were estimated to be approximately \$90,000 annually for 300 additional miles of transit service each weekday. The cost of the senior congregate meal site transit service was approximated to be \$80,000 annually based on one round trip per weekday to each site.

Results

The costs associated with each CTSP recommendation were estimated with the federal, state, and local funding splits included in Table 3-2. The estimated costs for each fiscal year of the CTSP planning horizon are shown in Table 3-3 on the following page. Note that the costs shown in Table 3-2 are based on 2015 dollars while the costs in Table 3-3 have been adjusted for inflation.

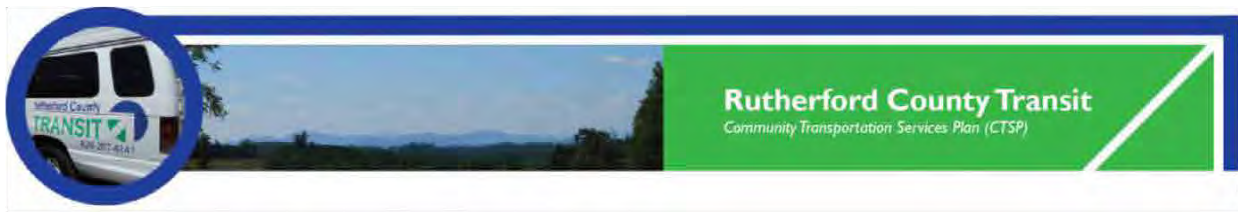


Table 3-2: CTSP Improvements Summary with Funding Splits

Recommendations	Estimated Annual Cost (\$ FY15)	CTSP Start Year	Recurring Recommendation	Potential Funding Source	Federal	State	Local - RCT	Local - Contract				
Administration												
Maps and schedules	\$ 8,000	FY 2016	Yes	Section 5311 - Admin	80%	\$ 6,400	5%	\$ 400	15%	\$ 1,200	0%	\$ -
Translate materials	\$ 2,000	FY 2016	Yes	Section 5311 - Admin	80%	\$ 1,600	5%	\$ 100	15%	\$ 300	0%	\$ -
Administration Total	\$ 10,000					\$ 8,000		\$ 500		\$ 1,500		\$ -
Operating												
Transit Service to Congregate Meal Sites	\$ 81,496	FY 2017	Yes	Section 5310 - Operating	0%	\$ -	0%	\$ -	0%	\$ -	100%	\$ 81,496
Deviated Fixed Route Service Changes	\$ 91,172	FY 2016	Yes	Section 5311: ADTAP - Operating	50%	\$ 45,586	0%	\$ -	50%	\$ 45,586	0%	\$ -
Thermal Belt Rails to Trails Shuttle	\$ 51,352	FY 2018	Yes	Section 5311: ADTAP - Operating	50%	\$ 25,676	0%	\$ -	50%	\$ 25,676	0%	\$ -
Tryon Equestrian Center Workforce Shuttle	\$ 37,858	FY 2017	Yes	Section 5311: ADTAP - Operating	50%	\$ 18,929	0%	\$ -	50%	\$ 18,929	0%	\$ -
Operations Total	\$ 261,877					\$ 90,191		\$ -		\$ 90,191		\$ 81,496
Capital												
Install bus shelter stops	\$ 150,000	FY 2017	No	Section 5339 - Capital	80%	\$ 120,000	0%	\$ -	20%	\$ 30,000	0%	\$ -
New Paint Scheme for Deviated Fixed Route Buses	\$ 10,000	FY 2016	No	Section 5311 - Capital	80%	\$ 8,000	10%	\$ 1,000	10%	\$ 1,000	0%	\$ -
Install security fencing and lighting to improve security	\$ 15,000	FY 2019	No	Section 5311 - Capital	80%	\$ 12,000	10%	\$ 1,500	10%	\$ 1,500	0%	\$ -
Construct vehicle washbay	\$ 120,000	FY 2020	No	Section 5339 - Capital	80%	\$ 96,000	0%	\$ -	20%	\$ 24,000	0%	\$ -
Install security cameras in the parking lot	\$ 34,340	FY 2016	No	Section 5311 - Capital	80%	\$ 27,472	10%	\$ 3,434	10%	\$ 3,434	0%	\$ -
Install security cameras in the money counting room	\$ 2,000	FY 2018	No	Section 5311 - Capital	80%	\$ 1,600	10%	\$ 200	10%	\$ 200	0%	\$ -
Add a key card access system at the transit facility	\$ 3,000	FY 2018	No	Section 5311 - Capital	80%	\$ 2,400	10%	\$ 300	10%	\$ 300	0%	\$ -
Install bike racks on buses	\$ 6,000	FY 2018	No	Section 5311 - Capital	80%	\$ 4,800	10%	\$ 600	10%	\$ 600	0%	\$ -
Signage	\$ 1,000	FY 2017	No	Section 5311 - Capital	80%	\$ 800	10%	\$ 100	10%	\$ 100	0%	\$ -
Capital Total	\$ 341,340					\$ 273,072		\$ 7,134		\$ 61,134		\$ -
CTSP Recommendations Total	\$ 613,217					\$ 371,263		\$ 7,634		\$ 152,825		\$ 81,496

Table 3-3: CTSP Improvements Summary for Planning Horizon

Recommendations by FY	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	TOTAL FY 2016-2020
Administration						
Maps and schedules	\$ 8,486	\$ 8,826	\$ 9,179	\$ 9,546	\$ 9,546	\$ 45,584
Translate materials	\$ 2,122	\$ 2,206	\$ 2,295	\$ 2,387	\$ 2,387	\$ 11,396
Administration Total	\$ 10,608	\$ 11,032	\$ 11,474	\$ 11,933	\$ 11,933	\$ 56,980
Operating						
Transit Service to Congregate Meal Sites	\$ -	\$ 89,906	\$ 93,508	\$ 97,249	\$ 97,249	\$ 377,912
Deviated Fixed Route Service Changes	\$ 96,715	\$ 100,581	\$ 104,610	\$ 108,795	\$ 108,795	\$ 519,496
Thermal Belt Rails to Trails Shuttle	\$ -	\$ -	\$ 58,922	\$ 61,279	\$ 61,279	\$ 181,479
Tryon Equestrian Center Workforce Shuttle	\$ -	\$ 41,765	\$ 43,438	\$ 45,175	\$ 45,175	\$ 175,553
Operations Total	\$ 96,715	\$ 232,251	\$ 300,478	\$ 312,498	\$ 312,498	\$ 1,254,441
Capital						
Install bus shelter stops	\$ -	\$ 165,480	\$ -	\$ -	\$ -	\$ 165,480
New Paint Scheme for Deviated Fixed Route Buses	\$ 10,608	\$ -	\$ -	\$ -	\$ -	\$ 10,608
Install security fencing and lighting to improve security	\$ -	\$ -	\$ -	\$ 17,900	\$ -	\$ 17,900
Construct vehicle washbay	\$ -	\$ -	\$ -	\$ -	\$ 143,196	\$ 143,196
Install security cameras in the parking lot	\$ 36,428	\$ -	\$ -	\$ -	\$ -	\$ 36,428
Install security cameras in the money counting room	\$ -	\$ -	\$ 2,295	\$ -	\$ -	\$ 2,295
Add a key card access system at the transit facility	\$ -	\$ -	\$ 3,442	\$ -	\$ -	\$ 3,442
Install bike racks on buses	\$ -	\$ -	\$ 6,884	\$ -	\$ -	\$ 6,884
Signage	\$ -	\$ 1,103	\$ -	\$ -	\$ -	\$ 1,103
Capital Total	\$ 47,036	\$ 166,583	\$ 12,621	\$ 17,900	\$ 143,196	\$ 387,336
CTSP Recommendations Total	\$ 154,359	\$ 409,866	\$ 324,573	\$ 342,331	\$ 467,627	\$ 1,698,757



3.4 Base Case + CTSP Recommendations

The Base Case + CTSP Recommendations Scenario includes the projected revenues and expenditures for RCT through the CTSP planning horizon and the costs and potential funding sources of revenue associated with the CTSP recommendations. The summary budget for this scenario is presented in Table 3-4.

Table 3-4: Base Case + CTSP Recommendations Scenario Summary

Base Case + CTSP Recommendations Scenario		Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016 - 2020
Expense							
Administrative		\$ 246,559	\$ 246,983	\$ 247,425	\$ 247,884	\$ 247,884	\$ 1,236,735
Operating		\$ 779,904	\$ 915,440	\$ 983,667	\$ 995,687	\$ 995,687	\$ 4,670,386
Capital		\$ 327,638	\$ 388,583	\$ 324,621	\$ 374,900	\$ 295,196	\$ 1,710,938
Expense Subtotal		\$ 1,354,101	\$ 1,551,006	\$ 1,555,713	\$ 1,618,471	\$ 1,538,767	\$ 7,618,059
<i>Change from Base Case Scenario</i>		13%	36%	26%	27%	44%	66%
Revenue							
Federal		\$ 476,127	\$ 548,038	\$ 529,534	\$ 574,264	\$ 510,501	\$ 2,638,464
State		\$ 211,233	\$ 200,801	\$ 210,975	\$ 216,026	\$ 193,736	\$ 1,032,770
Local - RCT		\$ 704,393	\$ 712,718	\$ 721,168	\$ 729,744	\$ 738,450	\$ 3,606,473
Local - Contract		\$ -	\$ 89,906	\$ 93,508	\$ 97,249	\$ 97,249	\$ 377,912
Revenue Subtotal		\$ 1,391,753	\$ 1,551,463	\$ 1,555,185	\$ 1,617,283	\$ 1,539,935	\$ 7,655,619
<i>Change from Base Case Scenario</i>		8%	24%	16%	17%	27%	18%
NET (Revenue - Expenses)		\$ 37,653	\$ 456	\$ (528)	\$ (1,188)	\$ 1,168	\$ 37,560



3.5 Ridership and Fare Scenarios

Performance measures for the transit service recommendations were estimated in order to model the potential impacts of these recommendations on the RCT system. Additional information regarding the financial plan can be found in Appendix C.

Methodology

Ridership and fares were projected using historic budgets, OPSTATS reports, Rutherford County population projections, and RCT estimates for future transit services. Three scenarios were prepared in order to provide a range of potential ridership and fares and are described in Table 3-5.

Table 3-5: Ridership Scenarios

Recommendation	Low Scenario	Medium Scenario	High Scenario
Deviated Fixed Route Changes	<ul style="list-style-type: none"> -2.5% annual change 7.5% increase in ridership from the existing Deviated Fixed Route (factor similar to adopted CTSPs) 	<ul style="list-style-type: none"> Annual change linked to Rutherford County population projects (Table 3-6) 7.5% increase in ridership from the existing Deviated Fixed Route 	<ul style="list-style-type: none"> +2.5% annual change 7.5% increase in ridership from the existing Deviated Fixed Route
Congregate Meal Sites	<ul style="list-style-type: none"> 20 riders per day, per congregate meal site 	<ul style="list-style-type: none"> 25 riders per day, per congregate meal site 	<ul style="list-style-type: none"> 30 riders per day, per congregate meal site
Thermal Belt Rails to Trails Shuttle	<ul style="list-style-type: none"> 10 riders per day 	<ul style="list-style-type: none"> 15 riders per day 	<ul style="list-style-type: none"> 30 riders per day
Tryon International Equestrian Center Workforce Shuttle	<ul style="list-style-type: none"> 8 riders per day 	<ul style="list-style-type: none"> 12 riders per day 	<ul style="list-style-type: none"> 16 riders per day

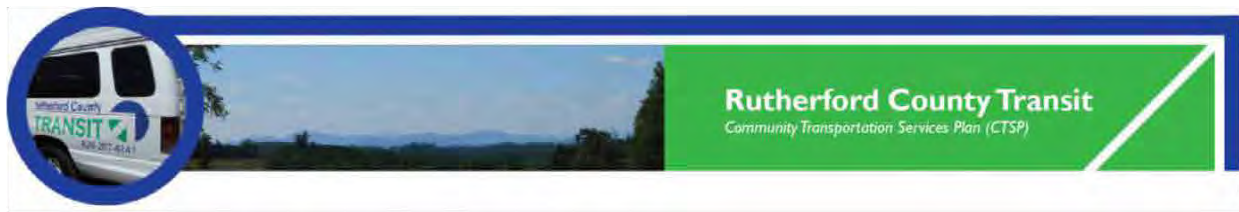
Since the Deviated Fixed Route (DFR) recommendation is a modification of an existing service, the ridership estimate was based on the current passengers per hour multiplied by the additional service hours due to the recommendation. An increase of 7.5% from existing ridership was applied to the ridership formula to account for the additional riders likely to ride due to increased service frequencies and convenience. This factor is similar to other adopted CTSPs.

$$\text{Ridership of Recommended DFR} = \left(\frac{\text{Current DFR Passengers} / \text{Current DFR Service Hours}}{\text{Recommended DFR Service Hours}} \right) * 1.075$$

Table 3-6: Rutherford County Population Projections

Rutherford County Population	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total FY 2015 – 2020 Change
Projected/Estimated Population	67,719	67,600	67,456	67,343	67,242	67,156	67,082	67,015	-441
Projected/Estimated Annual Population Change	N/A	-0.2%	-0.2%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.7%

The annual population changes were applied proportionally to 2014 OPSTATS ridership numbers to project the deviated fixed route ridership in the medium scenario for FY 2015 through FY 2020.



The fare for the deviated fixed route was assumed to remain at the current \$1.00 fare per trip. The fare for demand response trips was calculated by dividing total contract revenue by the total number of demand response trips in FY 2014, which was \$12.68 per trip in FY 2014. The Thermal Belt Rails to Trails Shuttle is planned to be a fare-free service. The Tryon International Equestrian Center Workforce Shuttle fare is recommended to be \$1.50 per one-way trip based on the premise that this is an express shuttle. Also, the intent would be for RCT to work with the Equestrian Center on a possible ridership subsidy for the Equestrian Center riders of the service.

Results

The summary ridership and fare low, medium, and high scenarios are presented in Table 3-7 and Table 3-8. The detailed medium scenario is presented in Table 3-9 on the following page. Note that the Senior Congregate Meal Sites service would be contract revenue based, not fare based.

Table 3-7: Summary of Annual Ridership Scenarios

Scenario	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016-2020
Deviated Fixed Route Improvements						
Low	4,914	4,791	4,672	4,555	4,441	23,373
Medium	5,150	5,142	5,135	5,130	5,125	25,682
High	5,431	5,567	5,706	5,849	5,995	28,548
Senior Congregate Meal Sites						
Low	N/A	15,000	15,000	15,000	15,000	60,000
Medium	N/A	18,750	18,750	18,750	18,750	75,000
High	N/A	22,500	22,500	22,500	22,500	90,000
Thermal Belt Rails-to-Trails Shuttle						
Low	N/A	N/A	2,110	2,110	2,110	6,330
Medium	N/A	N/A	3,165	3,165	3,165	9,495
High	N/A	N/A	4,220	4,220	4,220	12,660
Tryon International Equestrian Center Workforce Shuttle						
Low	N/A	2,800	2,800	2,800	2,800	11,200
Medium	N/A	4,200	4,200	4,200	4,200	16,800
High	N/A	5,600	5,600	5,600	5,600	22,400

Table 3-8: Summary of Annual Fare/Contract Revenue Scenarios

Scenario	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2016-2020
Deviated Fixed Route Improvements						
Low	\$4,914	\$4,791	\$4,672	\$4,555	\$4,441	\$23,373
Medium	\$5,150	\$5,142	\$5,135	\$5,130	\$5,125	\$25,682
High	\$5,431	\$5,567	\$5,706	\$5,849	\$5,995	\$28,548
Senior Congregate Meal Sites						
Low	N/A	\$226,611	\$235,269	\$244,265	\$253,614	\$959,759
Medium	N/A	\$263,944	\$267,519	\$271,104	\$274,717	\$1,077,284
High	N/A	\$292,560	\$288,921	\$285,336	\$281,805	\$1,148,622
Thermal Belt Rails-to-Trails Shuttle						
Low	N/A	N/A	\$ -	\$ -	\$ -	\$ -
Medium	N/A	N/A	\$ -	\$ -	\$ -	\$ -
High	N/A	N/A	\$ -	\$ -	\$ -	\$ -
Tryon International Equestrian Center Workforce Shuttle						
Low	N/A	\$4,200	\$4,200	\$4,200	\$4,200	\$16,800
Medium	N/A	\$6,300	\$6,300	\$6,300	\$6,300	\$25,200
High	N/A	\$8,400	\$8,400	\$8,400	\$8,400	\$33,600

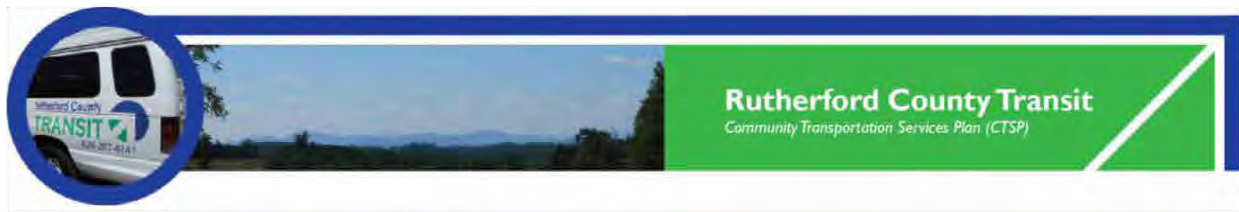


Table 3-9: Ridership and Fare Medium Scenario

Fares/Contract Revenue	Actual FY 2014	Projected FY 2015	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2015 - 2020 Change
Deviated Fixed Route Fare	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ -
Thermal Belt Rails to Trails Fare	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tryon Equestrian Center Workforce Shuttle Fare	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ -
Demand Response/Subscription Contract Revenue (Per Trip)	\$ 12.68	\$ 13.35	\$ 13.89	\$ 14.08	\$ 14.27	\$ 14.46	\$ 14.65	\$ 1.30
Demand Response/Subscription Contract Revenue (Per Mile)	\$ 1.36	\$ 1.43	\$ 1.48	\$ 1.50	\$ 1.52	\$ 1.54	\$ 1.55	\$ 0.13

Ridership and Fares/Contract Revenue	Actual FY 2014	Projected FY 2015	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2015 - 2020 Change
Base Case								
Transit System- Deviated Fixed Route								
Vehicle Service Hours	2,747	2,747	2,747	2,747	2,747	2,747	2,747	0
Vehicle Service Miles	36,980	36,980	36,980	36,980	36,980	36,980	36,980	0
Passenger Trips: Non-Contract	5,562	5,550	5,541	5,533	5,525	5,519	5,514	-36
Estimated Fare Revenue	\$ 5,562	\$ 5,550	\$ 5,541	\$ 5,533	\$ 5,525	\$ 5,519	\$ 5,514	\$ (36)
Transit System- Demand Response/Subscription								
Vehicle Service Hours	25,285	25,285	25,285	25,285	25,285	25,285	25,285	0
Vehicle Service Miles	460,447	460,447	460,447	460,447	460,447	460,447	460,447	0
Total Passenger Trips	49,263	49,158	49,076	49,002	48,939	48,886	48,837	-321
Estimated Contract Revenue	\$ 624,466	\$ 656,200	\$ 681,478	\$ 689,803	\$ 698,252	\$ 706,829	\$ 715,534	\$ 59,334
Transit Totals								
Vehicle Service Hours	28,032	28,032	28,032	28,032	28,032	28,032	28,032	0
Vehicle Service Miles	497,427	497,427	497,427	497,427	497,427	497,427	497,427	0
Total Passenger Trips	54,825	54,708	54,617	54,535	54,465	54,405	54,351	-358
Estimated Fare Revenue	\$ 630,028	\$ 661,750	\$ 687,018	\$ 695,335	\$ 703,778	\$ 712,348	\$ 721,048	\$ 59,298
CTSP Recommendations - Incremental Ridership and Fares								
								Total FY 2016 - 2020
Deviated Fixed Route Service Changes (Category = Deviated Fixed Route)								
Vehicle Service Hours			2,375	2,375	2,375	2,375	2,375	11,875
Vehicle Service Miles			73,563	73,563	73,563	73,563	73,563	367,813
Passenger Trips: Non-Contract			5,150	5,142	5,135	5,130	5,125	25,682
Estimated Fare Revenue			\$ 5,150	\$ 5,142	\$ 5,135	\$ 5,130	\$ 5,125	\$ 25,682
Congregate Meal Program Transit Service (Category = Demand Response/Subscription)								
Vehicle Service Hours			0	3,000	3,000	3,000	3,000	12,000
Vehicle Service Miles			0	21,150	21,150	21,150	21,150	84,600
Total Passenger Trips			0	18,750	18,750	18,750	18,750	75,000
Estimated Contract Revenue			\$ -	\$ 263,944	\$ 267,519	\$ 271,104	\$ 274,717	\$ 1,077,283
Thermal Belt Rails to Trails Shuttle (Category = Deviated Fixed Route)								
Vehicle Service Hours			0	0	1,538	1,538	1,538	4,614
Vehicle Service Miles			0	0	31,248	31,248	31,248	93,744
Total Passenger Trips			0	0	3,165	3,165	3,165	9,495
Estimated Fare Revenue			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tryon Equestrian Center Workforce Shuttle (Category = Deviated Fixed Route)								
Vehicle Service Hours			0	1,050	1,050	1,050	1,050	4,200
Vehicle Service Miles			0	27,300	27,300	27,300	27,300	109,200
Total Passenger Trips			0	4,200	4,200	4,200	4,200	16,800
Estimated Fare Revenue			\$ -	\$ 6,300	\$ 6,300	\$ 6,300	\$ 6,300	\$ 25,200
Transit Totals								
Vehicle Service Hours			2,375	6,425	7,963	7,963	7,963	32,689
Vehicle Service Miles			73,563	122,013	153,261	153,261	153,261	655,357
Total Passenger Trips			5,150	28,092	31,250	31,245	31,240	126,977
Estimated Fare Revenue			\$ 5,150	\$ 275,386	\$ 278,955	\$ 282,534	\$ 286,142	\$ 1,128,165



Rutherford County Transit

Community Transportation Services Plan (CTSP)

Ridership and Fares/Contract Revenue	Actual FY 2014	Projected FY 2015	Estimated FY 2016	Estimated FY 2017	Estimated FY 2018	Estimated FY 2019	Estimated FY 2020	Total FY 2015 - 2020 Change
Base Case + CTSP Recommendations								
								Total FY 2016 - 2020
Transit System- Deviated Fixed Route								
Vehicle Service Hours			5,122	6,172	7,710	7,710	7,710	34,424
Vehicle Service Miles			110,543	137,843	169,091	169,091	169,091	755,657
Passenger Trips: Non-Contract			10,691	14,875	18,026	18,014	18,004	79,609
<i>Change from Base Case Scenario</i>			92.9%	168.9%	226.2%	226.4%	226.5%	188.1%
Estimated Fare Revenue			\$ 10,691	\$ 16,975	\$ 16,961	\$ 16,949	\$ 16,939	\$ 78,514
<i>Change from Base Case Scenario</i>			92.9%	206.8%	207.0%	207.1%	207.2%	184.1%
Transit System- Demand Response/Subscription								
Vehicle Service Hours			25,285	28,285	28,285	28,285	28,285	138,426
Vehicle Service Miles			460,447	481,597	481,597	481,597	481,597	2,386,835
Total Passenger Trips			49,076	67,752	67,689	67,636	67,587	319,739
<i>Change from Base Case Scenario</i>			0.0%	38.3%	38.3%	38.4%	38.4%	30.6%
Estimated Contract Revenue			\$ 681,478	\$ 953,746	\$ 965,771	\$ 977,933	\$ 990,251	\$ 4,569,179
<i>Change from Base Case Scenario</i>			0.0%	38.3%	38.3%	38.4%	38.4%	30.9%
Transit Totals								
Vehicle Service Hours			30,407	34,457	35,995	35,995	35,995	172,850
Vehicle Service Miles			570,990	619,440	650,688	650,688	650,688	3,142,492
Total Passenger Trips			59,766	82,627	85,715	85,650	85,590	399,348
<i>Change from Base Case Scenario</i>			9.4%	51.5%	57.4%	57.4%	57.5%	46.6%
Estimated Fare Revenue			\$ 692,168	\$ 970,721	\$ 982,732	\$ 994,882	\$ 1,007,190	\$ 4,647,693
<i>Change from Base Case Scenario</i>			0.7%	39.6%	39.6%	39.7%	39.7%	32.1%



4.0 PUBLIC INVOLVEMENT

Public involvement was an integral part of the Rutherford CTSP planning effort. The planning process was led by a Steering Committee comprised of 21 members representing RCT, human service agencies, economic development, senior citizens, persons with disabilities, planning agencies, other transportation providers, transit riders, and NCDOT Public Transportation Division. The Steering Committee members are listed in Technical Memorandum 1 in Table 1-3. The Committee met three times during the project:

- February, 2015
- March, 2015
- June, 2015

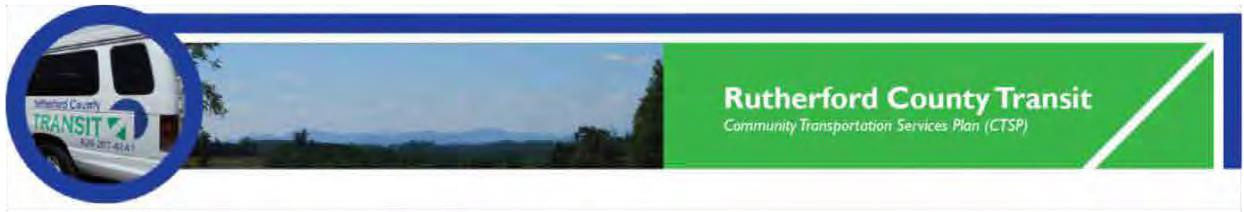
The agendas, minutes, and sign-in sheets from the meetings are included in Appendix A.

In addition to the Steering Committee, public involvement included interviews, surveys and a public forum. Interviews and surveys were conducted with general public riders, human service agency riders, human service agency directors or contacts that purchase transportation services, human service agencies not currently contracting with RCT, stakeholders not included on the Steering Committee, and persons with Limited English Proficiency. The responses to the interviews and surveys are summarized by stakeholder in Appendix A.



Input from the community was solicited on the Draft Rutherford CTSP at the annual Mayfest Craft Fair in Rutherfordton on May 2, 2015. Findings from Technical Memorandum #1, which included the demographic analysis, and the proposed CTSP recommendations from Technical Memorandum #2 were presented at the fair. Visitors to the CTSP booth were asked to complete a survey regarding their transportation needs and priorities for the CTSP improvements. Thirty people visited the booth and twelve surveys were completed. The majority of the respondents ranked changes to the deviated fixed route as most important

(increasing frequency and splitting the current route into two routes). Survey respondents would also like to see weekend service, coordination with the faith community, and outreach to the Hispanic population. A copy of the survey and the results are provided in Appendix A.



APPENDIX A: PUBLIC INVOLVEMENT

This appendix contains the agendas, minutes, and sign-in sheets from the Steering Committee meetings; survey and interview results; and information from the public forum at the Mayfest Craft Fair.

A.1	Steering Committee	A-2
A.2	Stakeholder Surveys and Interviews	A-14
A.3	Public Forum (Mayfest Craft Fair)	A-39