

EARPDC Transit Service Study and Action Plan

Final Report

Revised

June 26, 2023

Executive Summary

The East Alabama Regional Planning and Development Commission (EARPDC) Transit Service Study and Action Plan is intended to serve as a review and guide to possible changes to the existing transit system. The recommendations included in this study were developed through several iterations of public meetings, workshops and rider surveys. The recommendations are intended to serve as a guide to be further investigated and acted upon if the EARPDC or communities deem appropriate.

The study is divided into three distinct areas: 1) evaluation of the existing ACTS fixed route system, 2) new fixed route service in Jacksonville, and 3) development of a maintenance facility. The report contains a detailed description of the work performed and results.

The following list included the summary of items from these three areas.

- route modifications for the north route to provide hospital access,
- route modifications for the west route to provide hospital access,
- a potential fixed route service in Jacksonville,
- cost analysis for the Jacksonville service, and
- cost analysis of a potential maintenance facility.

The next steps in the process will include:

- drive time analysis of potential route changes,
- determine the availability of local match to support the Jacksonville fixed route,
- work with JSU to determine potential funding and on-campus stop locations,
- funding analysis related to maintenance facility, and
- site location for maintenance facility.

Introduction

The East Alabama Regional Planning and Development Commission (EARPDC) Transit Services Study and Action Plan is intended to serve as a review and guide to possible changes to the existing transit system. The recommendations included in this study were developed through several iterations of public meetings, workshops and rider surveys. The recommendations are intended to serve as a guide to be further investigated and acted upon if the EARPDC or communities deem appropriate.

For review, The East Alabama Regional Planning and Development Commission (EARPDC) is a multi-purpose public agency providing a wide range of services to residents and member governments within its ten-county service area. Among the services provided, the Commission's staff administers the various public transportation services provided within the region.

- The Areawide Community Transportation System (ACTS) fixed-route transit services operate within Anniston, Oxford and portions of Weaver and Hobson City, with equivalent Paratransit services operated within Anniston, Oxford, Weaver, Jacksonville and Hobson City.
- Demand-response public transit services are available in Piedmont and the areas of Calhoun County outside the cities. Similarly, demand-response rural public transit services are provided in Cherokee, Clay, Cleburne, Coosa, and Talladega counties.

The Transit Services Study and Action Plan will evaluate the ACTS fixed route operations and possible expansion into the Jacksonville, as well as the possibility of establishing a maintenance facility for vehicles within the system.

Review of Current Services

The first task was a review of the current service and demographic examination of the key elements that drive transit ridership. The routes currently in the ACTS fixed route system are shown in Figure 1.

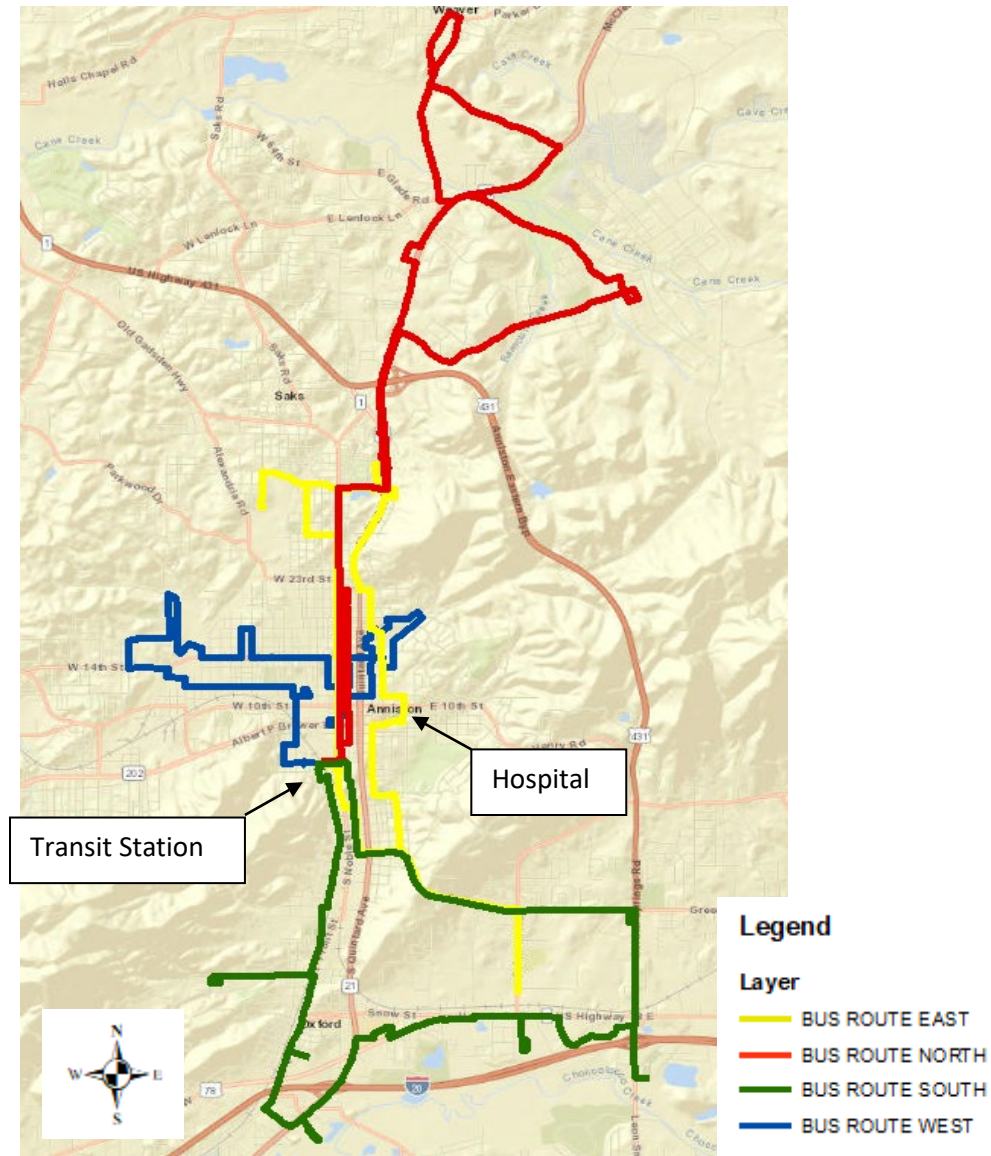


Figure 1. Existing ACTS Fixed Routes

The system consists of four distinct routes (East, North, South and West). Each route starts at the transit station and travels on its path through the community on a 1-hour time loop. The cost for each trip is \$1.00 with a reduce fare to \$0.50 for seniors, students, disabled and those on Medicaid/Medicare.

The demographic analysis was conducted to determine the level of Social Vulnerability in the Census Tracts near the transit routes. This analysis was performed to examine the residence locations for potential riders of the transit system. The factors considered were Population over the age of 60, number of residents in poverty and the number of residents with a disability. The following figures show the scale of the Social Vulnerability with the transit routes. For reference, the areas with the

lowest Social Vulnerability are shown in light purple and those with the highest are shown in the dark purple.

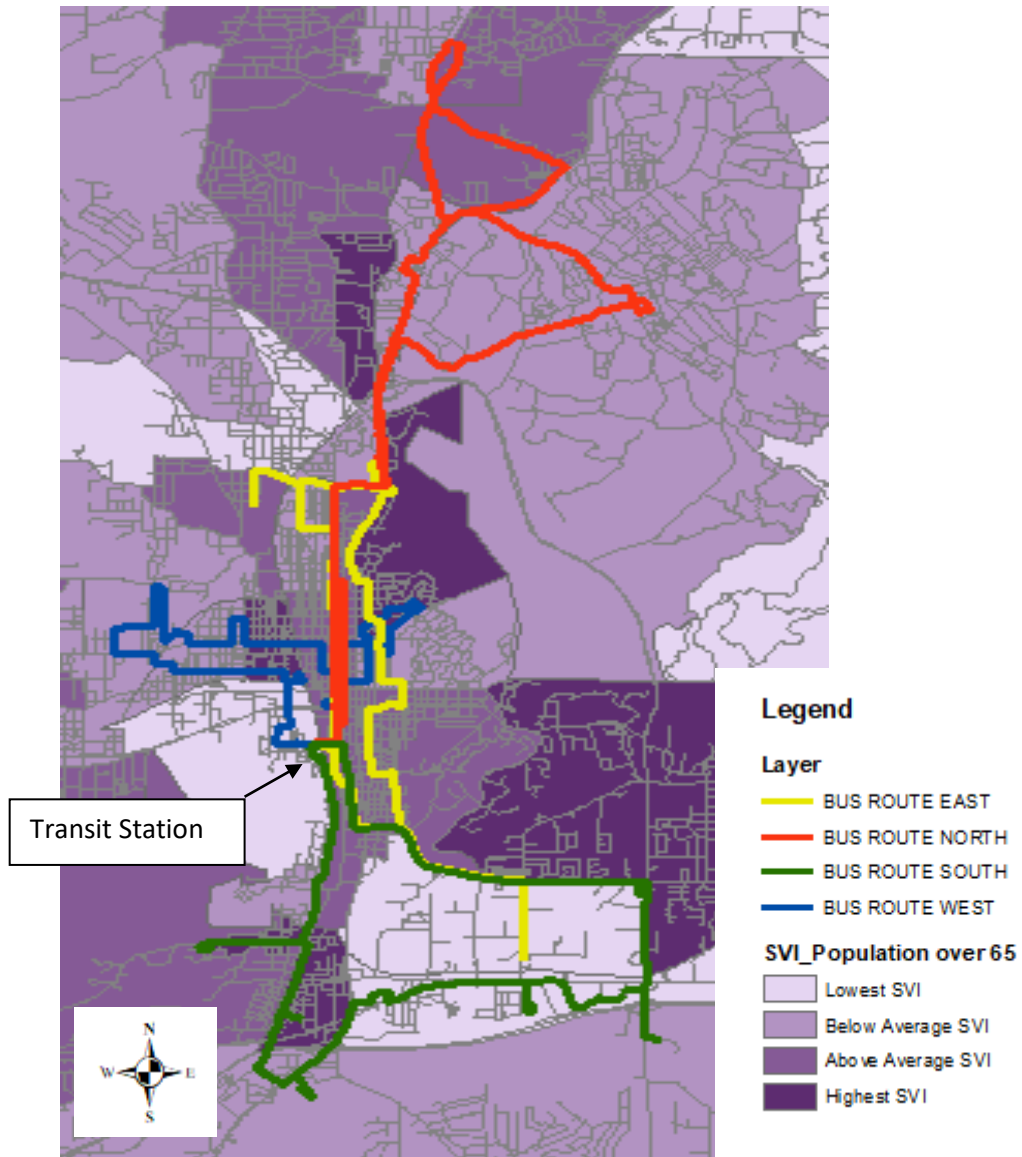


Figure 2. Population over the age of 65.

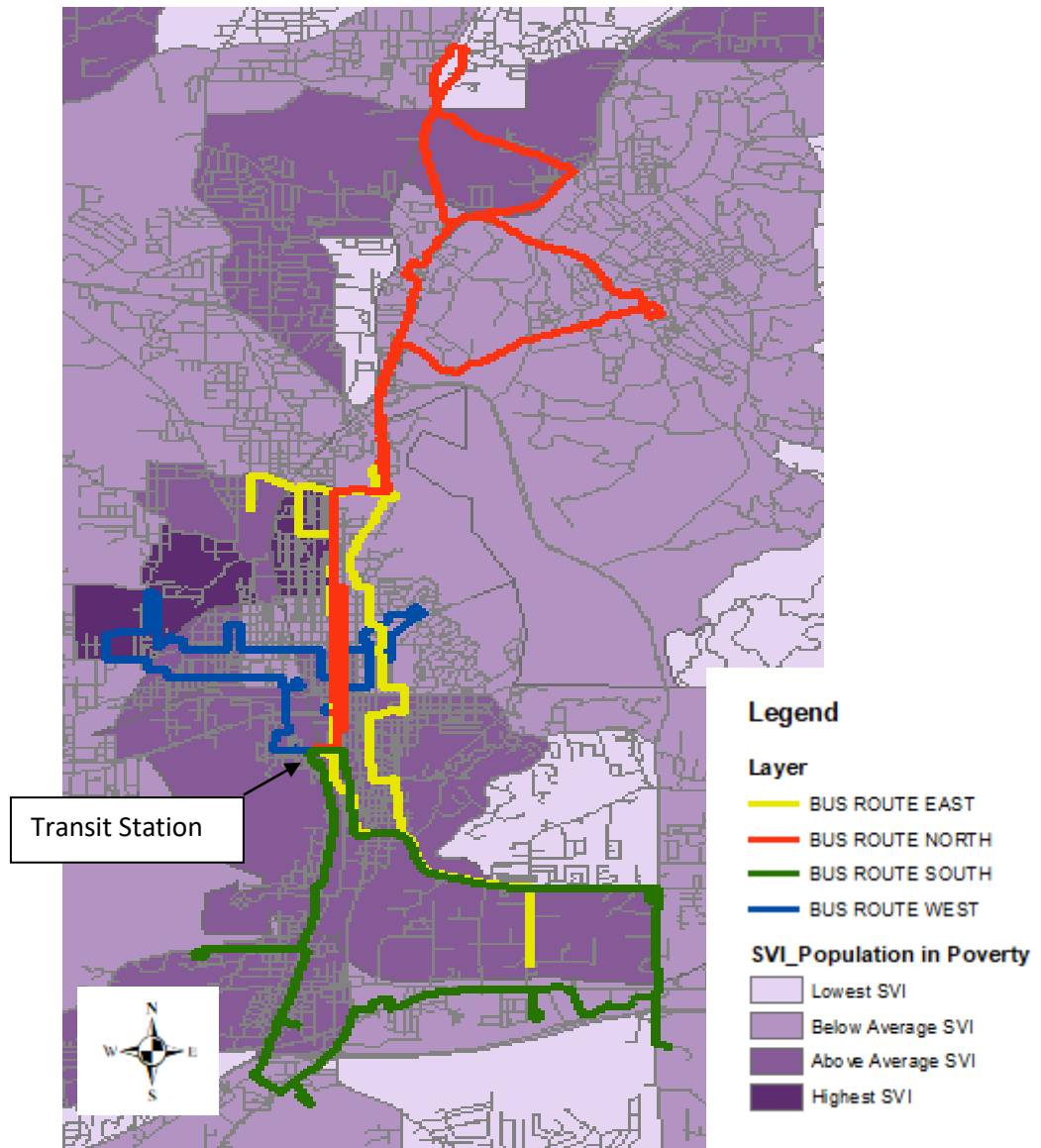


Figure 3. Population living in poverty.

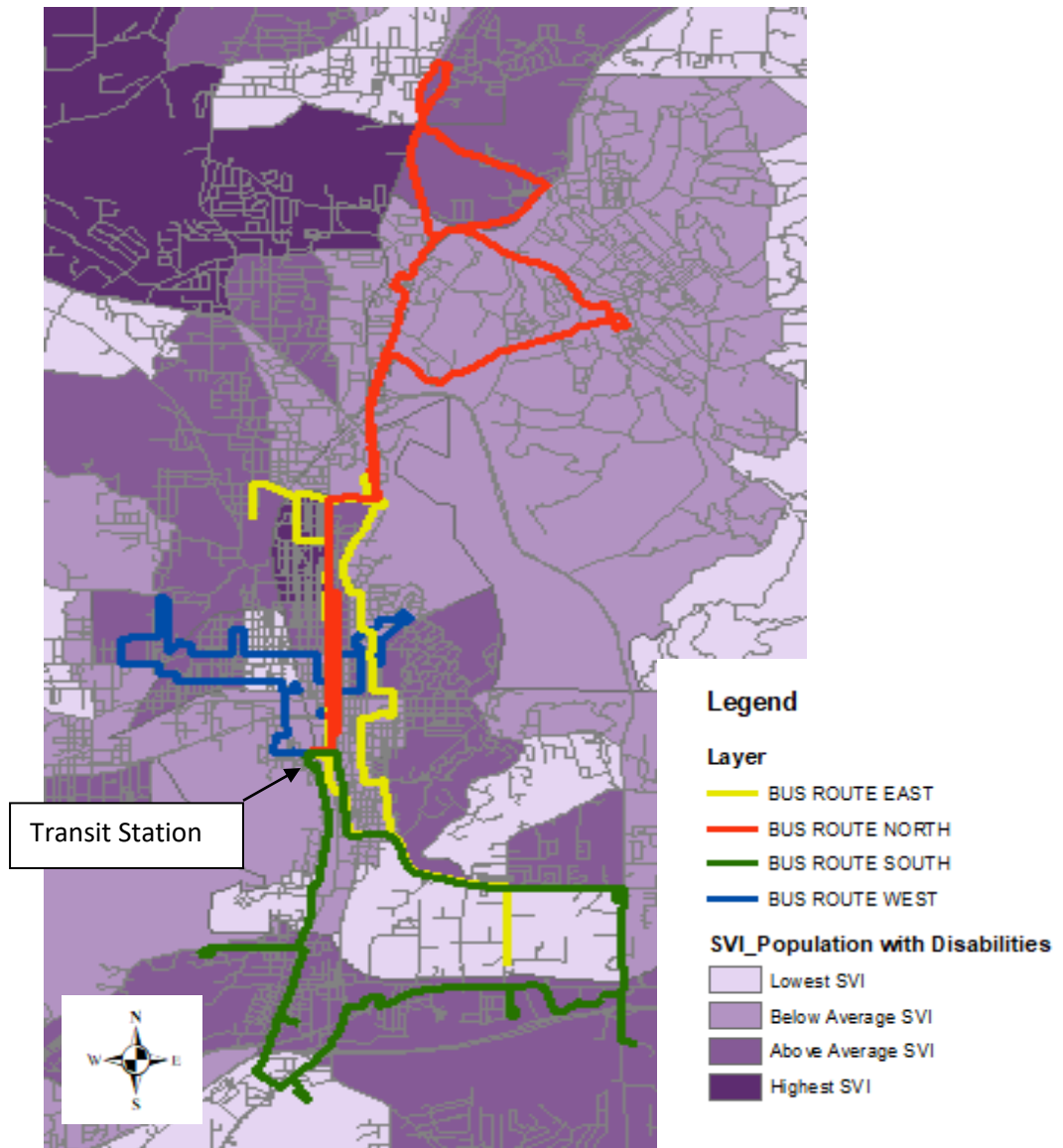


Figure 4. Population living with a disability.

As can be seen in Figures 2-4, the existing transit service connects with most of the areas in the community that have the highest level of Social Vulnerability. While Social Vulnerability is not the only means to evaluate the service, having the transit routes connect to the those in the community that are considered the most vulnerable and dependent on transit services is a strong indication that the general structure and location of the routes is serving the needs of the community.

A second demographic analysis was performed examining the employment in the community. This was intended to determine the destination locations where passengers on the transit system would likely be exiting the bus. The metrics examined were total employment, retail employment and health care employment. The following figures show the scale of the employment with the transit routes. For reference, the areas with the highest employment are shown in the darkest purple.

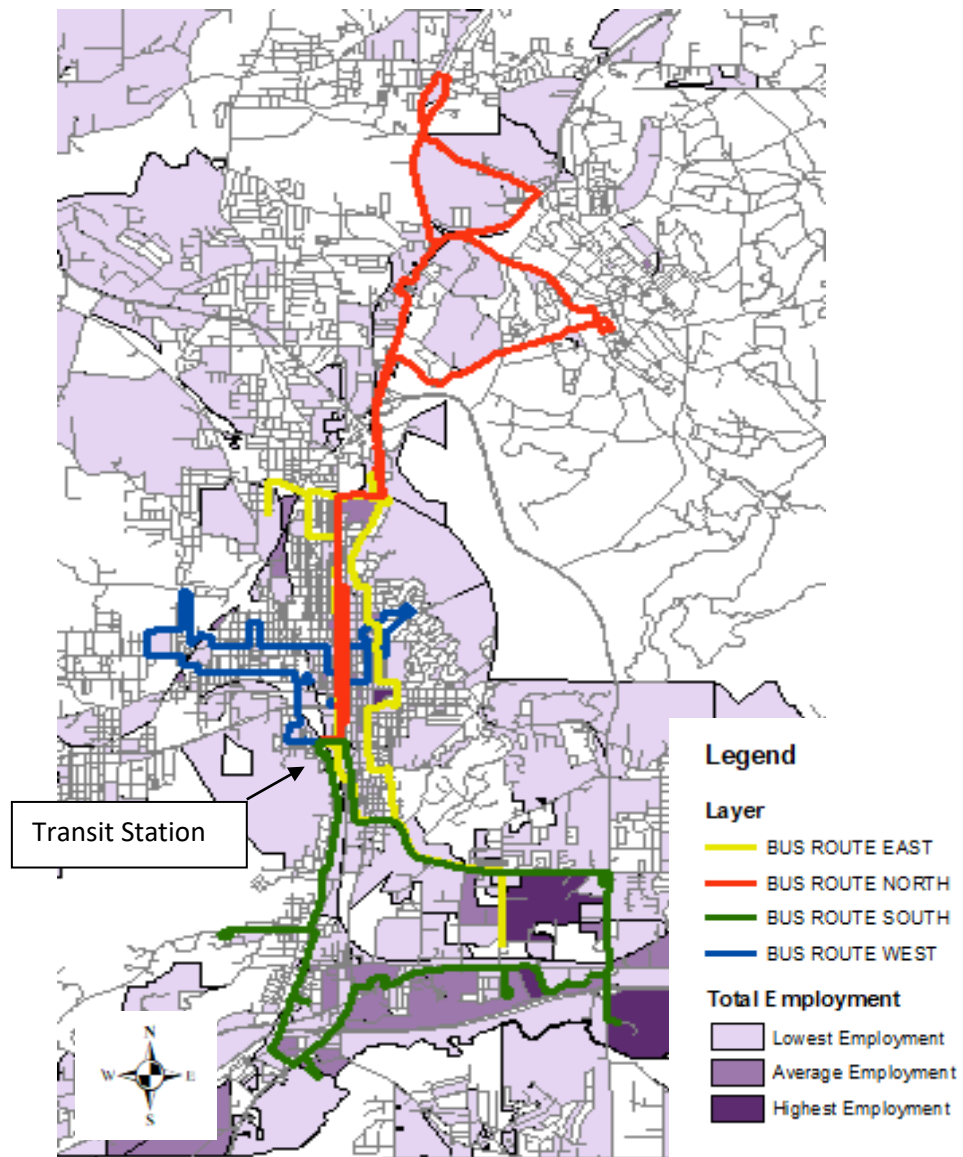


Figure 5. Total employment in the area.

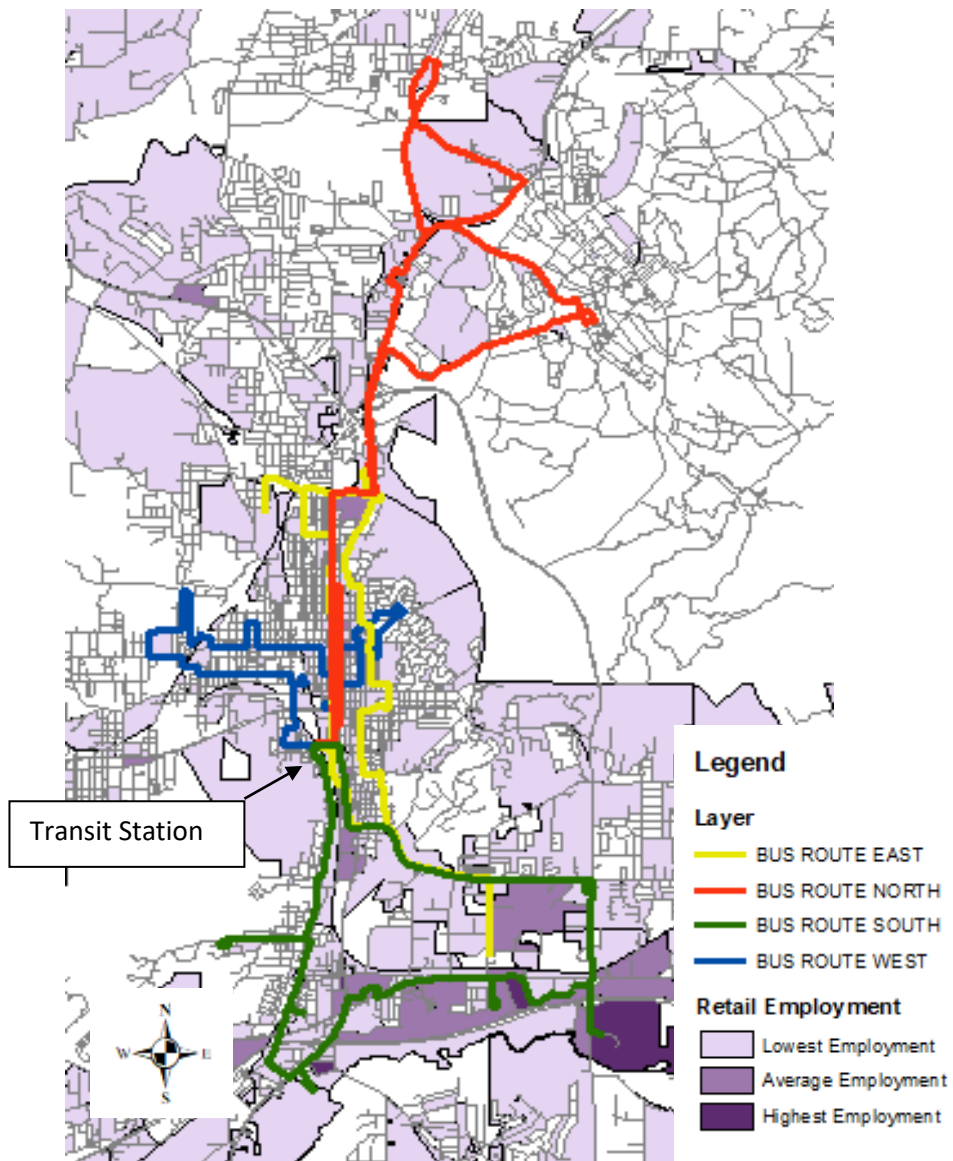


Figure 6. Retail employment in the area.

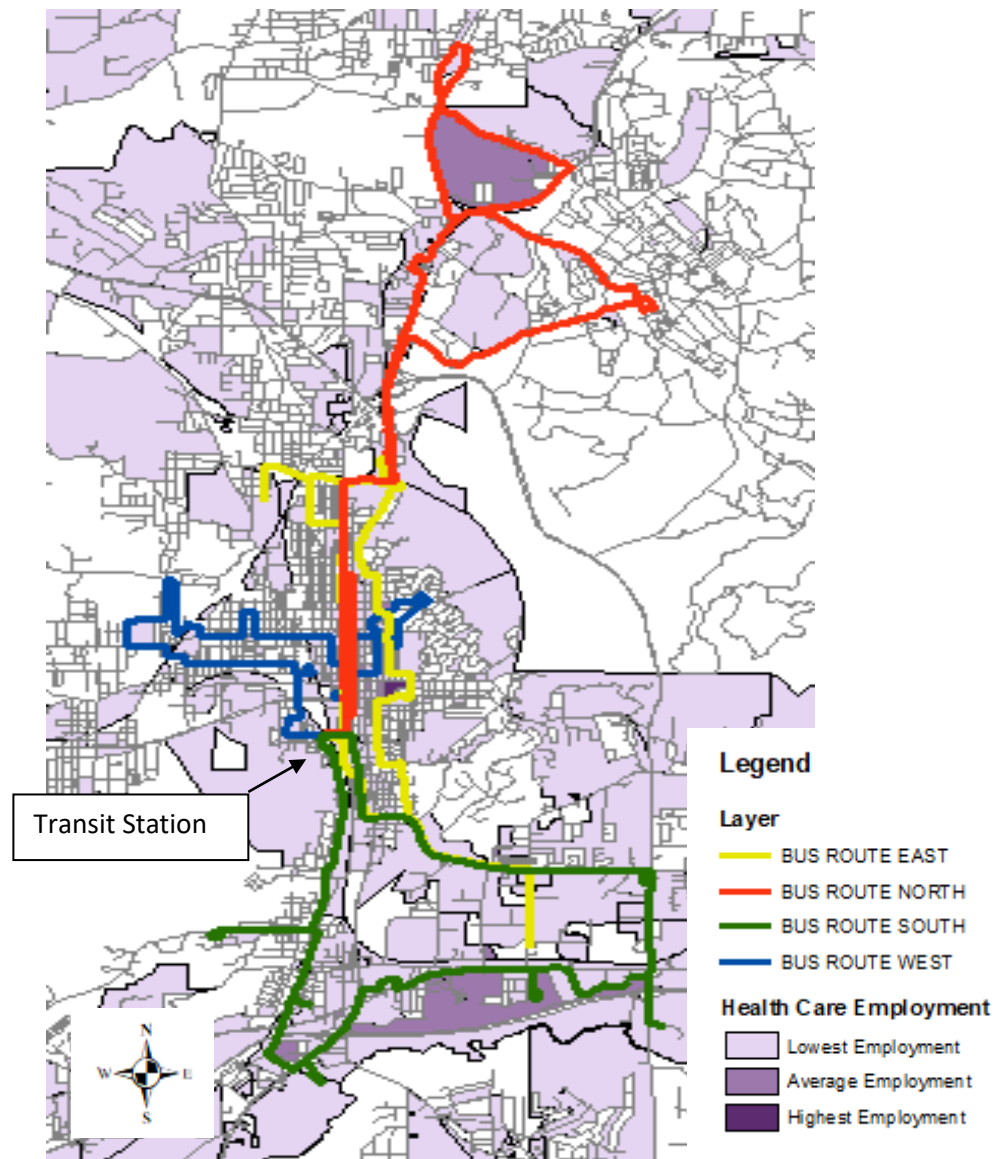


Figure 7. Health care employment in the area.

As can be seen in Figures 5-7, the existing transit route pass near the highest areas of total employment and retail employment, especially the south route as it travels closest to the Oxford Exchange. The east route passes closest to the area with the highest concentration of health care employment as it passes near the hospital. While employment is not the only means to evaluate the service, having the transit routes connect to residents to the most likely destination locations is a strong indication that the general structure and location of the routes is serving the needs of the community.

As a secondary method to review the quality of the existing service, a transit service questionnaire was prepared and available to riders on the transit system. The questionnaire was intended to determine the ridership contributions for the transit and allow for feedback regarding any issues or improvements identified by the passengers. The survey was available via QR code scan on smartphones and additional data were collected in person at the transit station.

The results of the survey indicated that the ridership profile for the ACTS system that:

- 40 percent of the riders identified themselves as older than 64,
- 73 percent of the riders identified an income less than \$20,000,
- 72 percent of the riders did not own a vehicle, and
- 57 percent of the riders identified that they had a disability.

Regarding trip purpose for riders on the ACTS system,

- 37 percent indicate shopping/other,
- 35 percent indicated medical, and
- 19 percent indicated employment.

Again, the survey results indicate that the system is currently picking up at the locations where the most transit dependent population lives and is taking the residents to the locations that are most desirable.

The general feedback from the survey identified two main concerns that riders wanted the system to review: 1) not all routes passed by the hospital and 2) the 1-hour loop time was too long. The response to these identified concerns will be addressed later in this report.

A final analysis was performed to evaluate the existing service of the ACTS transit system that included a workshop of local professionals to gather feedback. The format of the workshop was to ask questions and allow for each representative to write their responses on notecards and have a discussion of the information collected after each question. The questions were:

1. Write three words that describe the current system?
2. What trip purposes are most important for the service?
3. What are the most important pick-up and destinations locations for the service?
4. Identify one pick-up and one drop-off locations that are not being served?
5. What are the current limitations with the current service?
6. How can the system be improved?

In response to question 1, the most common answers were limited, needed and helpful. During the discussion, the limitations for the system centered on hours of operation and access to the hospital. The panel responded to question 2 indicating that the main trip purposes were medical and shopping. This agreed with the top trip purposes identified by the riders. The locations in question 3 most important were the hospital, Walmart/other shopping and the Oxford Exchange. The locations in questions 4 that were not being served highlighted Jacksonville (and Jacksonville State University) and Target in the Oxford Exchange. Question 5 on the current limitations the panel identified limited hours of operation, difficulty with persons with disability getting to stops and the frequency of the service. Finally, the panel's response to question 6 indicated more frequent buses, better hospital access and Jacksonville service.

Potential Service Modifications and Expansions

In response to the workshop and rider survey responses, potential modifications the system have been prepared and are presented in this section. As mentioned in the introduction, these recommendations are possible changes and will need to be further examined by the system and communities to make any final decisions. The potential service modifications and expansion will include possible route changes to the existing ACTS route, the addition of a Jacksonville Route to service residents of Jacksonville, and the possibility of establishing a maintenance facility to service the vehicles.

ACTS Route Changes

The first potential changes to be examined relate to the changes in the existing fixed route system. From the rider survey and workshop panel, the two major concerns were access to the hospital and increased bus frequency.

Examining first the ability to increase the frequency of vehicles on the existing routes, moving from a 1-hour time loop to having the vehicles operate on a 30 minute loop interval – essentially a vehicle leaving the transit station at the top of the hour and another vehicle leaving the transit station at the bottom of the hour would require a doubling of the existing number of vehicles and drivers. Assuming that vehicle would be available to be purchased, the initial vehicle purchase would require at least 8 more vehicles with a purchase price of \$170,000 per vehicle – 20 percent of the purchase cost to be borne by the local communities as the match totaling \$272,000. After the initial vehicle purchase, the local share of the operating and maintenance cost for the increased frequency would be approximately \$760,000 per year. While the increase in service frequency would be a benefit to the citizens, the cost for the service seems too great for the local communities and increasing the fares significantly to cover the added cost would eliminate riders from the system. Additionally, the lack of vehicles available for purchase limits this option for the next several years.

Examining the access to the hospital, it is possible for the north route and west route to have access to stops near the hospital. The north route can have a small change that would allow for access to the hospital with a less than 2-mile additional length, see Figure 8. This would allow access to the hospital while still maintaining the stop locations at the library and other existing stops on Wilmer Avenue. The route might need to be modified at the north end of the route to remove some stops if the added time doesn't allow the driver to complete the route within the 1-hour loop time.

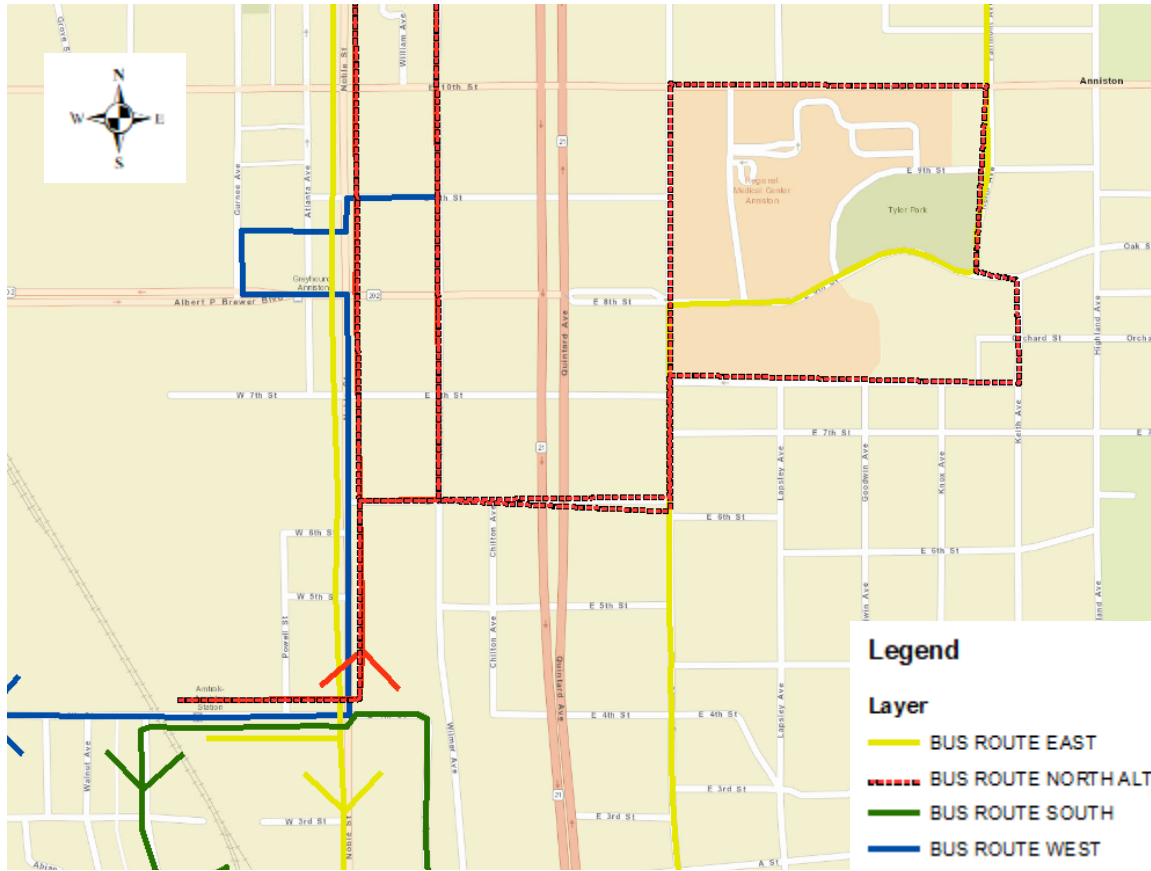


Figure 8. Modification to the North Route.

The west route can be modified slightly to have hospital access as shown in Figure 9. Again, this would be a slightly longer route and a driving analysis would need to be performed to determine if the driver can efficiently make all the existing stops or if there would need to be a stop on the west end of the route removed.

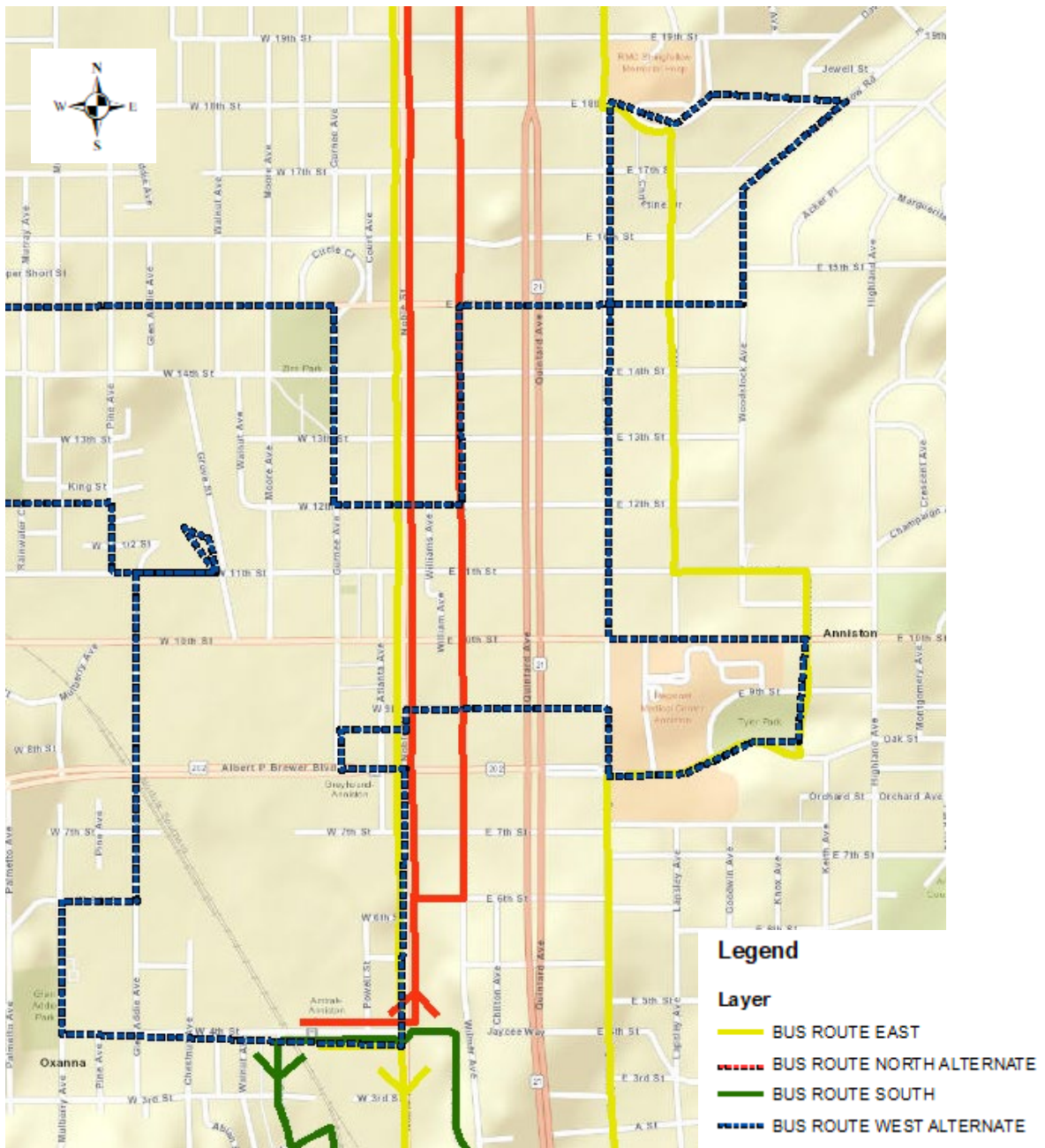


Figure 9. Modification to the west route.

The south route was examined to determine if a hospital stop could be worked into the route option and it was determined that it was not feasible. This route is already the longest of the four routes and the additional mileage needed to get to the hospital would make it impossible to complete the route within a 1-hour time limit.

If these two slight route modifications were made, the new system would be as shown in Figure 10.

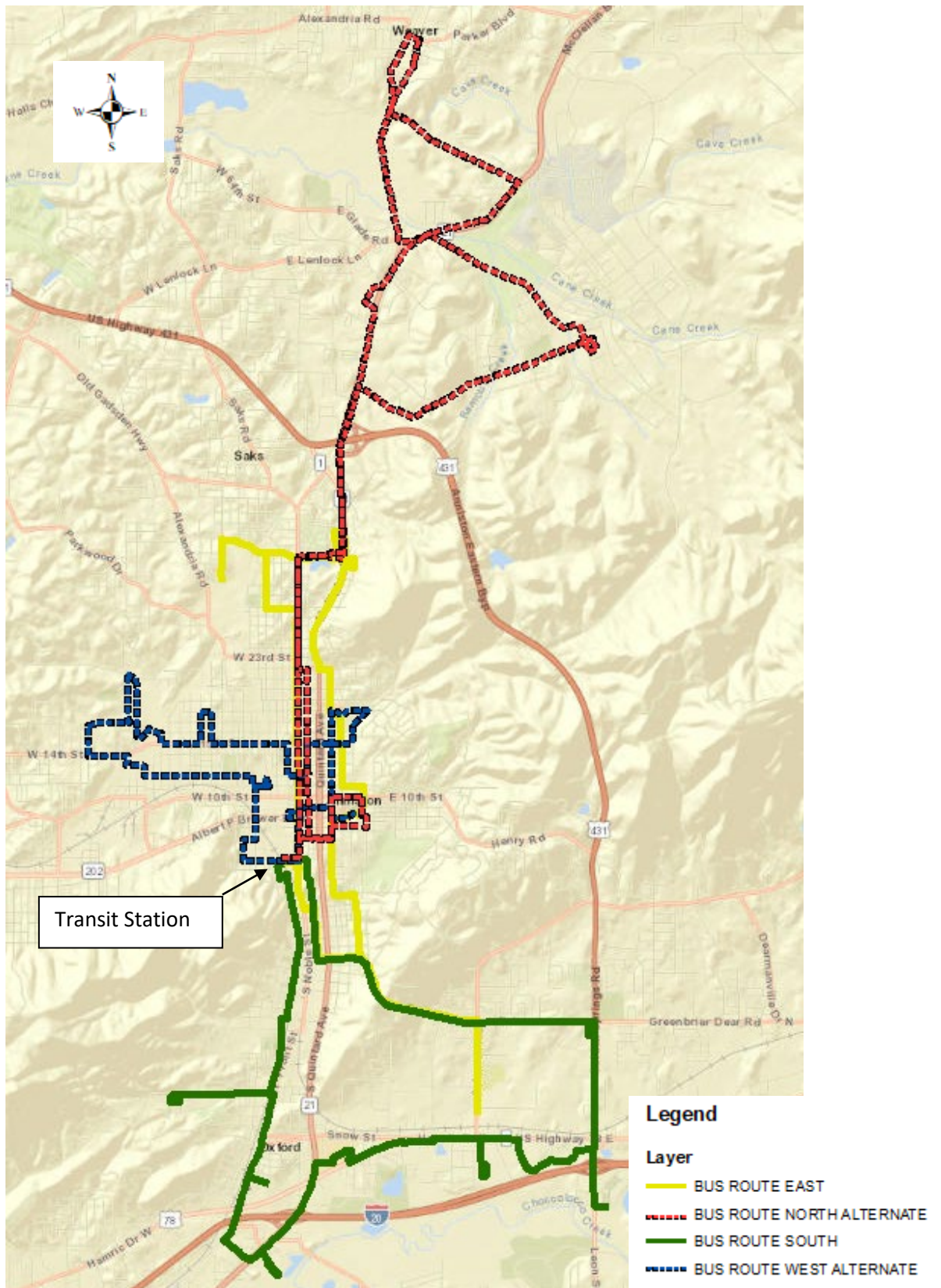


Figure 10. Modified ACTS fixed route system.

Jacksonville Service

The proposed service to Jacksonville is presented as the possibility of adding a new fixed route to serve the citizens of Jacksonville.

The design of the route began with identification of potential stop locations in the Jacksonville area. The stops were developed in collaboration with the Planning and Development Office of the City of Jacksonville. Figure 11 shows the original stop locations identified.

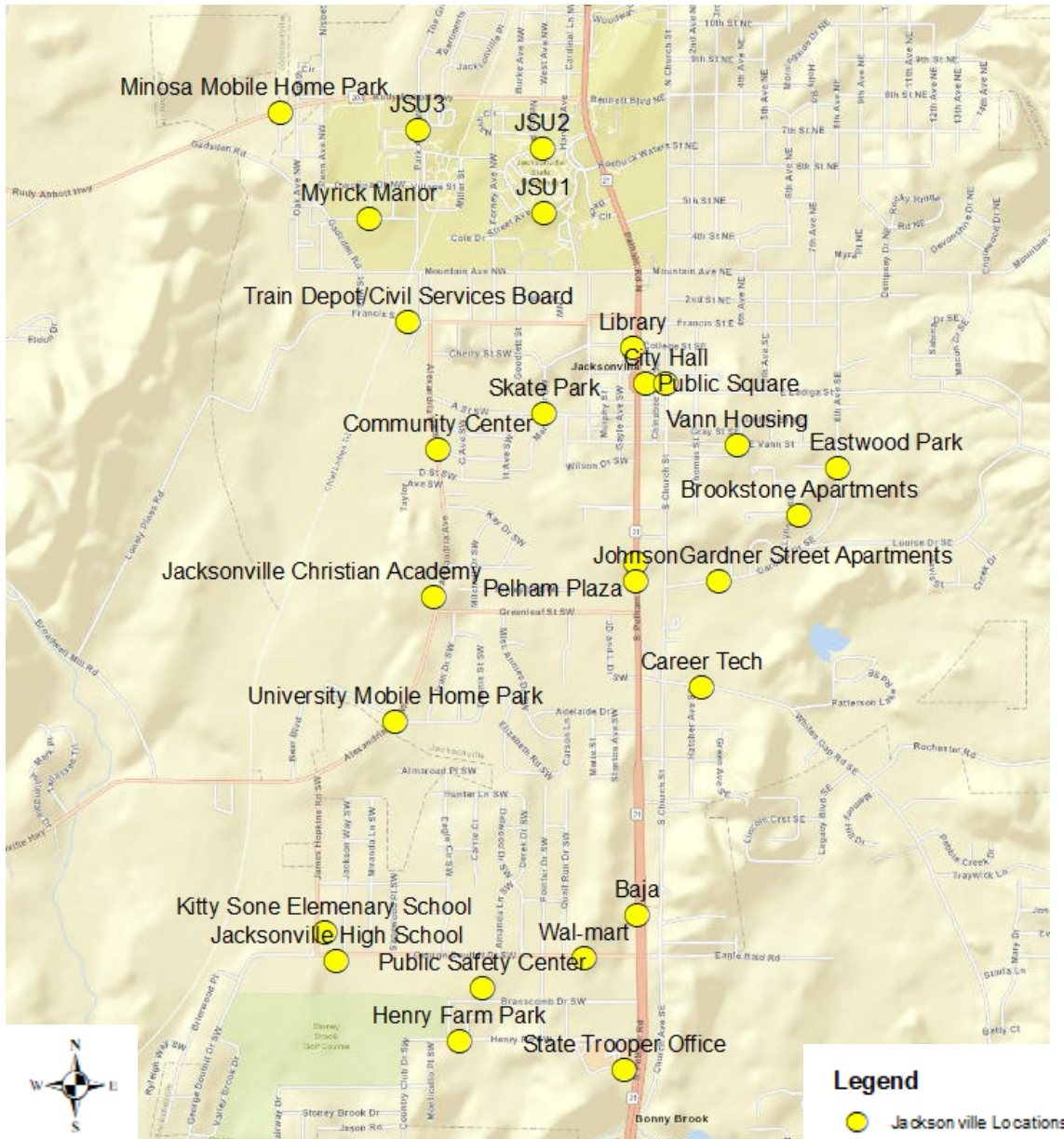


Figure 11. Jacksonville Stop locations.

After defining the stop locations, a route was drawn in to determine the ability of a transit vehicle to navigate the route, see Figure 12.

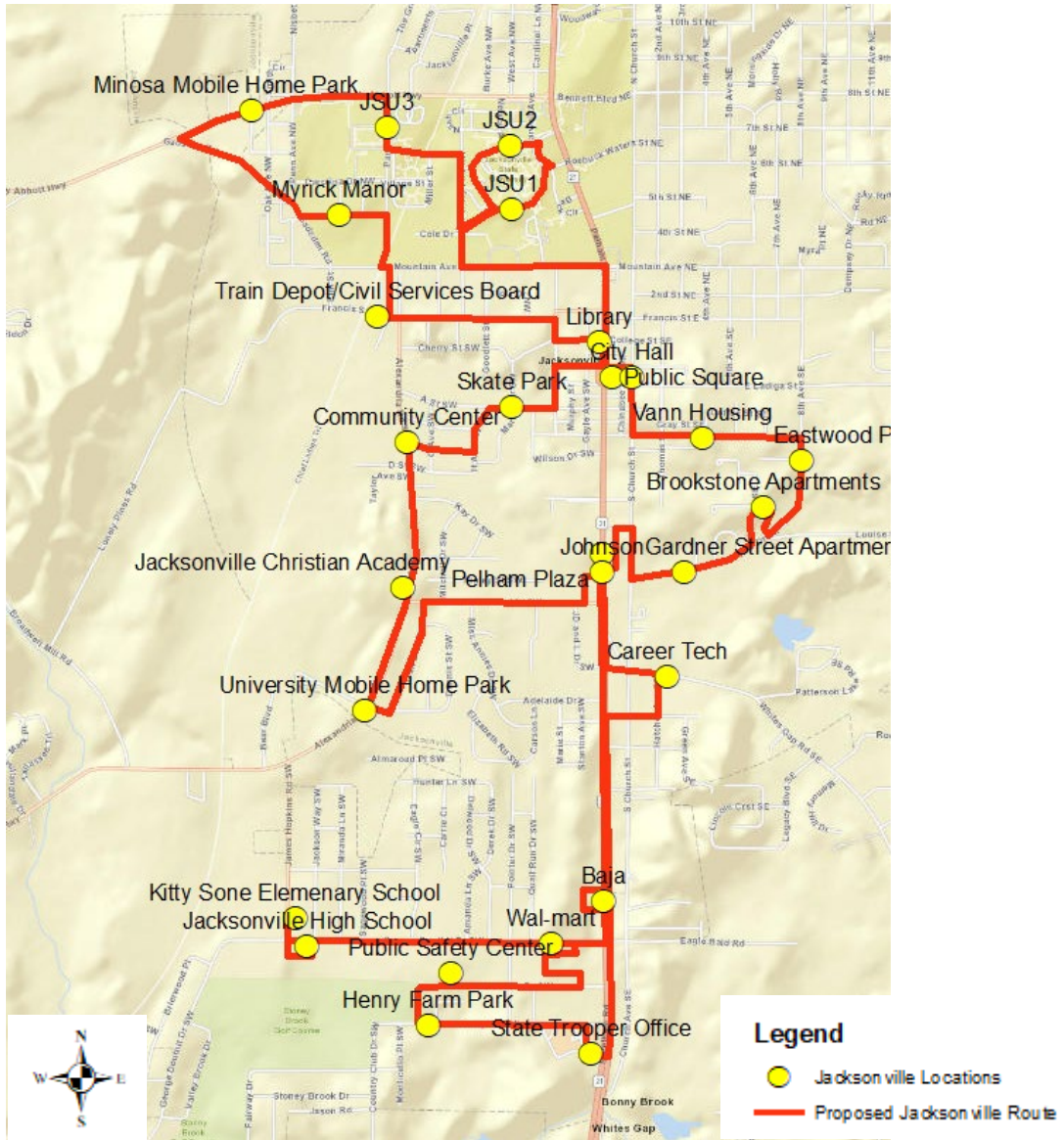


Figure 12. Jacksonville route.

The route designed to traverse Jacksonville is built on a similar concept to the existing fixed route service in the ACTS system. The length of the route is approximately 14 miles, which is similar to the other routes in the ACTS system and is proposed to operate on a 1-hour loop with a designated starting point identified by the city. In addition, the stops identified for Jacksonville State University (JSU) will need to be worked out specifically with campus officials to ensure that the bus stops were in areas that didn't negatively impact the campus. The businesses along AL-21 would need to be contacted to ensure that the bus could stop within their parking lots to avoid any stops being directly along AL-21 and all other stops will need to be examined for sidewalk locations and areas where passengers can wait for the bus.

The cost of operation for the Jacksonville service is expected to be similar to the cost for the other routes in the ACTS service.

The initial cost will include start-up costs for the vehicles and signage for the bus stops in the community. The cost for the vehicles will be \$340,000 (to purchase two vehicles) with the local share being \$68,000 at an 80 percent federal and 20 percent local match. The cost for the signage is expected to be a few thousand dollars for the city of Jacksonville.

The operating costs for the City of Jacksonville will be roughly \$85,000 per year on a 50 percent federal and 50 percent local match split, and maintenance of the vehicles is expected to roughly \$6,000 per year on an 80 percent federal and 20 percent local match. The total expected operating costs for Jacksonville will be \$91,000 per year after the federal monies are applied.

Possible Maintenance Facility

The final items reviewed was the possibility of establishing a maintenance facility to service the vehicles in the ACTS fleet. The current maintenance situation is a contract bid, currently held by Cobb Automotive, which is up for rebid soon.

There were options prepared for the study that looked at different cost mechanisms to support the maintenance operation.

Building purchase:

The first items to be considered is the purchase and construction of the building to house the maintenance facility. The desired building would be a pre-engineered steel building placed on property owned by the city/county government. The building would need to be roughly 2,500 square feet with 20-foot ceiling to allow for the vehicles to enter and be lifted. The expected cost of the building, with interior finished would be \$200,000 and sample images can be seen in Figures 13 and 14. The interior of the shop will need to have an office, breakroom, bathroom and storage for vehicle lifts (recommend at least two) and all equipment.



Figure 13. Exterior of the pre-engineered steel building.



Figure 14. Interior of the pre-engineered steel building.

Equipment purchase:

The equipment to furnish the building to allow mechanics to easy work on the transit vehicles and perform most routine and preventative maintenance on the vehicles includes:

- Minimum of 2 quality lifts (\$1,000 per pound lifted – recommend at least 28,000 pounds lifted)
- Tire Balancer/Changer (\$6,000)
- Air Condition Refrigerant recovery System (\$1,500)
- Tool Boxes (\$1,500)
- 20” Drill Press (\$1,500)
- 15” Band Saw (\$1,000)
- 8” Stand Alone Grinder (\$750)
- Arc Welder (\$2,000)
- Air Compressor (\$12,000)
- Wash Tub (\$500)
- Tools (\$10,000)

Personnel Needed:

The personnel needed to operate the maintenance facility would be one lead mechanic (salary between \$40K and 55K annually) and one support mechanic (salary between \$35K and 40K annually). However, based on the number of vehicles in the fleet, completing the maintenance requirements for the transit vehicles might not be sufficient to fully justify two full-time positions and the support mechanic could be hired on a part-time basis for the facility and personnel could provide services for other city/county vehicles.

Total Costs:

The total cost of the maintenance facility and continued operation would include roughly \$200,000 of building cost at an 80 percent federal and 20 percent local match, roughly \$100,000 of equipment purchases at an 80 percent federal and 20 percent local match, and roughly \$90,000 in direct salary not including fringe benefits at a 50 percent federal and 50 percent local match.

After the purchase on the building an equipment, the salaries and fringes along with the cost of all expendable parts and equipment would continue to future years.

Next Steps

The recommendations from this study can be summarized in three distinct areas: 1) ACTS route changes, 2) new service in Jacksonville, and 3) maintenance facility development. The next steps in the process for these three areas will be addressed.

Next steps for the ACTS route changes will be focused on developing a drive time analysis of the potential route changes. This will involve driving the transit bus through the new route to determine the ability of the vehicle to complete the route within the 1-hour limit. Based on the additional mileage and time needed to complete the existing north and west routes, this should be possible and the existing stop locations should be sufficient. As a future consideration, the South route might possibly access the Oxford Exchange area given the permission to access the facility, however, this route will need to be shortened in another portion to allow for the extension of the route to this area and allow for traffic congestion.

Next steps for the new service in Jacksonville will include a financial analysis to determine the availability of local match to support the Jacksonville fixed route. The local match needed is estimated at roughly \$160,000 for the first year of operating the system, once buses are available for purchase, and roughly \$91,000 in operating each subsequent year (with increases possible based on maintenance and fuel costs moving forward). Another decision that is needed with the Jacksonville Route is determining if there is an appropriate funding relationship with Jacksonville State University and on-campus stop locations. The final need for implementation of the proposed system is to work with business that have proposed stops in parking lots to ensure that agreements are in place to allow the bus to have a stop location on private property.

Next steps for the maintenance facility development are to perform a funding analysis related to maintenance facility. This might include having a system where other counties vehicle can use the facility or if the staff should be transit employees or contract employees. Additionally, the location of the facility needs to be established.

ADDENDUM:

City of Jacksonville Transit Ridership Estimates.

The following ridership estimates for the City of Jacksonville transit system are based on ridership estimates for transit systems in Anniston and Huntsville. The ridership estimates are intended to provide a possible look at the number of riders who will use the system, they are in no way a guarantee of ridership. Many aspects will determine the actual number of riders on a public transit system, including by not limited to ease of access, stop locations, frequency of service and temporal situations (academic year versus summer and beginning of the month versus end of the month).

The routes in Anniston will focus on the South Route that covers mainly Oxford, AL (pop. 20K) as the population is similar to Jacksonville (pop.15K). Examining the recent ridership data for the South Route:

	Jan 23	Feb 23	Mar 23	Apr 23	May 23	June 23
Riders (monthly)	1,340	1,533	1,641	1,259	1,435	1,252

This translates to 65 passengers per day on the South Route in Anniston. This doesn't include potential transfers to the South Route from other routes as the Jacksonville Route will not have transfers from other routes.

The ridership from Huntsville Transit has averaged a little over 200 trips per route per day. The major difference being that the Huntsville Transit is operating in a much larger market, approximately 15 times larger than Jacksonville. Additionally, the Huntsville Transit system operates between 6:00 am and 9:00 pm, which is 25% longer each day than the Anniston System.

Another important consideration for Jacksonville is the relationship developed between the Transit System and Jacksonville State University. The current enrollment of almost 10,000 students could provide a significant number of riders depending on how closely tied the transit system is to the university. Many universities provide operating funding for the transit system in exchange for "free" rides for students. This model tends to have good financial support for the transit system and ties the university to the community, but tends to have large differences in ridership between the academic year and summer months.

Based on the numbers, it is expected that the Jacksonville transit system could experience anywhere from 50 to 65 riders daily depending on marketing and scheduling. This number of riders could be higher with a close relationship between the system and Jacksonville State University.