

Comprehensive Operations Analysis



Submitted to:
Clarksville Area Metropolitan Planning Organization
329 Main Street, Clarksville, TN 37040

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Executive Summary

The mission of the Clarksville Transit System (CTS) is to plan, implement, maintain and manage a public transportation system that allows for maximum mobility for the community with emphasis on safety, quality and efficiency. The purpose of this Comprehensive Operations Analysis (COA) was to assess the public transportation services for the City of Clarksville, TN, Fort Campbell Military Installation and the City of Oak Grove, KY. A major objective for this study involved a constructive analysis of the transit system and a recommendation of an appropriate allocation of resources. Through this analysis, CTS could potentially implement service recommendations that would increase ridership and productivity through operational improvements. The AECOM team reviewed existing conditions of the CTS service and crafted this document to provide guidance for improved service efficiency and effectiveness of public transportation for the Clarksville Urbanized Area.

A review of the 2040 Metropolitan Transportation Plan, the 2016 Clarksville Strategic Transit Plan Update, and the Clarksville Transit System 2010 Strategic Plan provided background data of planning initiatives and operational analysis for CTS. The approach of the AECOM team was to put together a three (3) phase work-plan that accomplished the tasks outlined in the scope of work. The work-plan included assessing the ridership data while analyzing local and regional development trends and service barriers. Funding and potential alternatives were developed based on the gathering of extensive rider data, and a seven-year capital plan was formulated to meet future service demands. Finally, an action implementation plan and schedule were presented to the CTS Advisory Committee for review and adoption.

Much of this document involved synthesizing quantitative data related to routes and ridership. However, our team understood the larger context of meeting community travel needs which are not always identified by analytics. The population of the Clarksville region is very diverse. This document is a testament to the importance of inclusion and collaboration for generating an effective

CTS At-a-Glance

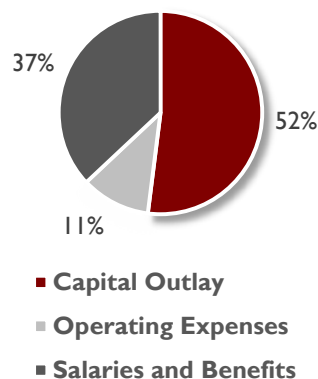
Every month CTS transports:

- 64,300 fixed route trips
- 2,440 paratransit trips
- 5,800 APSU students
- 4,500 senior citizens
- 1,500 children under age four
- 4,600 passengers on the Nashville commuter service

CTS provides service with:

- 85.4 full-time equivalent positions
- 24 fixed-route vehicles
- 12 demand response vehicles
- Support from federal, state, and local sources

FY 2017 CTS Proposed Budget



plan that will meet future needs of the CTS service in achieving mobility for all persons.

CTS plays a crucial role in meeting the mobility needs of disadvantaged population groups (racial and ethnic minorities, low-income and populations with disabilities). An important element regarding CTS service is understanding the dynamic of working with a large military population and the challenges associated with route coordination to meet its needs. Another critical element is the partnership that CTS has with Austin Peay State University (APSU), which provides benefits to the university, CTS, and the community as a whole. APSU employees and students are major stakeholders in the CTS community. Continued coordination with these groups is essential to successful implementation of new services.

The population growth over the past few years in the region has been significant and steady. Future developments of potential “trip generator” locations should constantly be monitored. Continued growth in the areas of the senior citizen population and those who have special needs is addressed through this planning study. Implementing service enhancements will result in the provision of an improved transit service that can meet the productivity objectives of the CTS staff. Through the COA process, the AECOM team reviewed an integrated approach to evaluating existing services and building on the service updates that were introduced in previous studies. It is important to note that it is not only critical to assess the existing CTS service, but it is also important to understand the productivity, ridership, and cost-effectiveness of service, and how best to evaluate the other components of the system including transfer utilization, emerging marketing opportunities, operational management, fleet concerns, ITS integration, farebox recovery ratios, park and ride shuttle service and transfers from ADA paratransit service to the fixed-route service.

Fixed Route Scheduling

The Clarksville Transit System (CTS) provides fixed-route and paratransit services six (6) days per week from approximately 5:30 a.m. – 9:00 p.m. on weekdays and 6:30 a.m. – 9:00 p.m. on Saturdays. American’s with Disability Act (ADA) paratransit services operate the same times and geographic areas as the fixed-route buses. CTS operates a radial transit system where the fixed-route buses pulse at the Downtown Transit Center (located at 200 Legion Street) at approximately the same time and radiate out to key destinations outside the central business district (CBD). The buses then return to the Downtown Transit Center at approximately the same time, enabling passengers to transfer from one route to another to reach their final destination. Additionally, there are major transfer points along each route where the routes intersect.

In the current run assignments provided to the study team by CTS, 35 full-time operators are assigned to perform the fixed-route service. These operators are scheduled to work 1,331 hours per week, an average of 38 hours per week for each operator ($1,331 \text{ hours} / 35 \text{ operators} = 38.03 \text{ hours per week}$). This results in no scheduled overtime for the fixed-route operation. The fixed-route service also has six full-time stand-by operators to operate shifts for operators that are on vacation, sick, or otherwise unavailable to report to work. Whether the ratio of 6 stand-by operators for 35 operators assigned to regular runs is the correct proportion can be determined by:

- Regularly analyzing the number of operator slots assigned to the “extraboard”;
- Knowing the number of vacation days that need to be covered and estimating the number of expected absences;

- Determining operator shortages and making recruitment plans accordingly.¹

ADA Paratransit Service – The Lift

One of the areas in the transit industry experiencing a significant increase in demand is Americans with Disabilities Act (ADA) complementary paratransit services. Under the ADA, complementary paratransit service is required for passengers who are: 1) unable to navigate the public bus system, 2) unable to get to a point where they could access the public bus system, or 3) have a temporary need for these services because of injury or some type of limited duration cause of disability (49 CFR 37.123). Service must be provided to individuals that meet these requirements and also reside within $\frac{3}{4}$ of a mile of a transit route. CTS currently goes above and beyond these minimum distance requirements and does not require passengers to live within $\frac{3}{4}$ of a mile of routes, but rather within the CTS service area that coincides with the Clarksville Urbanized Area boundary. Title 49 Part 37 details the eligibility rules along with requirements governing how the service must be provided and managed. In the United States, paratransit service is now highly regulated and closely monitored for compliance with standards set by the Federal Transit Administration (FTA).

The CTS ADA paratransit service, called “The Lift”, utilizes 13 operators to run the service each weekday and Saturday that the fixed-route service operates. The Lift service currently provides 2,440 customer trips each month. CTS has an effective eligibility process for ADA riders. Operators rotate from fixed-route service to ADA service, and this adds continuity to the staffing, in that vehicle operators are part of all aspects of the transit services. Currently there is a need for CTS to install a dispatching software that will help provide “trip-batching” for driver schedules. Advancements in software technology can greatly improve the efficiency of the paratransit services. Using web-based technologies, customers may be able to access and view their scheduled trips as well as request trips on-line, eliminating the need for time intensive phone scheduling. Though there is institutional knowledge of riders and desired drop-off and pick-up locations, efficiency can be better achieved through an automated scheduling system.

Table ES-I: Service Recommendations for Implementation

Task ID	Tasks to be Implemented	Phase	Description
Administration			
A1	New Bus Operator Training should include working with motorized wheelchairs	Short-Term	This will improve the customer service provided by CTS Operators.
A2	Purchase and install Paratransit Scheduling software	Short-Term	This will improve ADA rider scheduling and monitoring the on-time performance of pick-ups. Software with a web-based customer interface would allow customers to schedule and view their scheduled trips.
A3	Consider scheduling Paratransit Rider interviews twice a month (exceptions can be made if warranted by special circumstances)	Short-Term	This would allow the ADA Paratransit Staff to better schedule the resources needed to conduct these interviews.
A4	Provide an automated way to collect ridership data	Short-Term	Currently these trips are counted manually. Survey tablets are now available to assist with the data

¹ Source: TCRP Report 135 – Controlling System Costs: Basic and Advanced Scheduling Manuals and Contemporary Issues in Transit Scheduling. Note: The National Center for Transit Research has developed a tool to assist small and mid-sized transit agencies in managing the extraboard. See: <http://www.nctr.usf.edu/wp-content/uploads/2012/05/77707.pdf>

Task ID	Tasks to be Implemented	Phase	Description
			collection.
A5	Initiate paper transfers (Implemented 7/1/2016)	Short-Term	This would include a 25 cent transfer fee between buses that pulse into the transfer facility.
A6	Provide an annual survey and community outreach at the Rivers and Spires Festival	Short-Term	CTS staff can leverage the community awareness by conducting an annual service promotion at the Rivers and Spires Festival.
A7	Continue to assess the feasibility of a new location for a transfer center	Short-Term, Mid-Term	On-going data collection will be needed to provide an alternative location for a transfer station.
A8	Initiate a bus stop signage review	Short-Term, Mid-Term	A bus stop placement policy should be implemented. Additionally, each bus stop sign location should be geocoded and reviewed for sight issues and safety concerns.
A9	Develop a Quarterly CTS Newsletter	Mid-Term	There is currently a Newsletter for City staff, but a transit specific newsletter that is provided to staff and any interested citizens could help improve CTS staff communication and highlight the specific achievements and events associated with the CTS staff.
A10	Collaboration with Austin Peay State University	Mid-Term	Continue to collaborate with APSU to include internship opportunities for students in the planning program.
A11	Consider a 10-Ride Ticket book to be sold for \$13.50 (one free ride)	Mid-Term	This would allow extra value to riders and may result in more sales when CTS receives the fare collection "up-front".
A12	Offer a 30-Ride Ticket book to be sold for \$47.00 (two free rides)	Mid-Term	This would allow extra value to riders and may result in more sales when CTS receives the fare collection "up-front".
A13	Become a partner in the National Safe Place Network	Mid-Term	This would promote a community partnership with local agencies to create a safety net for local youth in the CTS service area.
A14	Consider implementing a Student Transit Ambassador program	Mid-Term	A middle-school and/or high-school "Transit Ambassador" program can increase awareness of transit in public schools and ultimately increase ridership.
A15	Consider implementing a "Commuter Benefit" program.	Short-Term, Mid-Term	CTS could implement an employer sponsored rider benefit program where large employers provide free transit trips as a benefit to their employees. CTS would track these rides and invoice the large employers monthly. Initial candidates could be Ft. Campbell, APSU, Trane, and Hankook.
A16	System Map and Schedule Updates	Short-Term, Mid-Term	Revise maps and schedules based on service changes implemented as a result of the Action Plan. The CTS website should also be updated with these revisions.
A17	Annual Software Fees	Short-Term	This would fund the annual fees associated with the paratransit scheduling software.
Operating			
O1	Create downtown circulator: - Veterans Plaza/Health Dept. - AJAX Senior Center - Workforce Development - CTS Downtown Transfer Facility	Short-Term	This would assist in relieving the capacity constraints on Route #5.
O2	Initiate a circulator route on the Fort Campbell military installation	Short-Term	This would provide a mobility option for connectivity with base housing and major traffic generators on the post.

Task ID	Tasks to be Implemented	Phase	Description
O3	Route #2 Split at Wal-Mart on Ft. Campbell Blvd.	Mid-Term	A higher frequency route from Fort Campbell to Downtown could improve commuter travel and allow the Tiny Town Route #2 to be more responsive in the areas of Tiny Town Road and the Wal-Mart.
O4	Route #8 Split at Governors Square Mall Shopping Center	Mid-Term	This would improve travel times for passengers on Route 8, which is the longest route.
O5	Discontinue Route #812	Short-Term	Due to lack of ridership and low performance metrics, it is recommended that this route be discontinued once the park-and-ride lot is relocated to Exit 11.
O6	Increase frequencies on fixed routes to 30 minutes	Mid-Term	Increasing frequency would provide riders with more flexibility and encourage additional ridership.
Capital			
C1	Replace vehicles meeting FTA useful life	Short-Term, Mid-Term	Replacing vehicles that have met their useful life will reduce maintenance costs associated with older and highly used vehicles and maintain a high level of service for CTS customers.
C2	Provide additional shelters	Short-Term	These amenities would benefit riders with shelter while waiting for buses
C3	Consider procuring Automatic Passenger Counters (APC)	Mid-Term	This will assist in data collection for the National Transit Database as well as providing automated rider tracking.
C4	Procure additional buses	Mid-Term	Four additional buses added to vehicle inventory in order to operate the service recommended in the Action Plan.
C5	Transition from diesel fixed route bus fleet to hybrid fleet	Mid-Term	Transitioning the fleet to these more fuel efficient and cleaner buses would reduce fuel costs and improve air quality.

1.0 Local and Regional Development Patterns

This chapter provides an overview of previous plans, land use and development patterns, major travel nodes and activity centers, regional employment trends, and demographics in order to paint a picture of the study area and its relation to CTS transit services.

1.1 Local and Regional Context

The following plans have been adopted by CTS and the Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) for transportation planning. Summaries of these plans are provided as they relate to transit in Clarksville.

CTS Strategic Plan (2010)

The 2010 update of CTS's strategic plan identified the following challenges for CTS: limited locations to cross the Red River, limited sidewalks along transit routes, housing developments with limited access, and employment growth east of CTS's service area. The plan recommends new hubs in the downtown, northeast, and northwest areas to improve the efficiency of transfers. It also recommends potential vanpool services for outside the CTS service area.

2040 Metropolitan Transportation Plan (2014)

Adopted in 2014 by CUAMPO, the 2040 Metropolitan Transportation Plan (MTP) establishes a 25-year vision for multi-modal transportation in the Clarksville metropolitan area and makes recommendations for road, transit, bicycle and pedestrian, rail, aviation, and waterway infrastructure projects.

One of the MTP's primary recommendations for improving transit is to create additional transfer points, namely in the northwest and northeast parts of Clarksville. These points would allow passengers to transfer between radial and circumferential bus routes without having to go to the downtown transit center. Other transit recommendations included in the MTP are noted below:

- Vehicle replacements and new vehicles for demand response and fixed route services
- Equipment and transit enhancements
- Maintain financial support for evening bus service
- Encourage new employment and retail to locate in areas where CTS already provides services
- Ensure that streets in new subdivisions are designed to allow efficient circulation, including usable sidewalks

CTS Strategic Transit Plan Update (2016)

CTS updated its Strategic Plan in January 2016 to improve overall safety, quality, and efficiency of transit service delivery through a review of its operations and policies. The main objectives of the update were to develop general recommendations for: service delivery and operations, maintenance and state of good repair, service quality and customer service, and efficiency and effectiveness.

Key recommendations of the strategic plan update include:

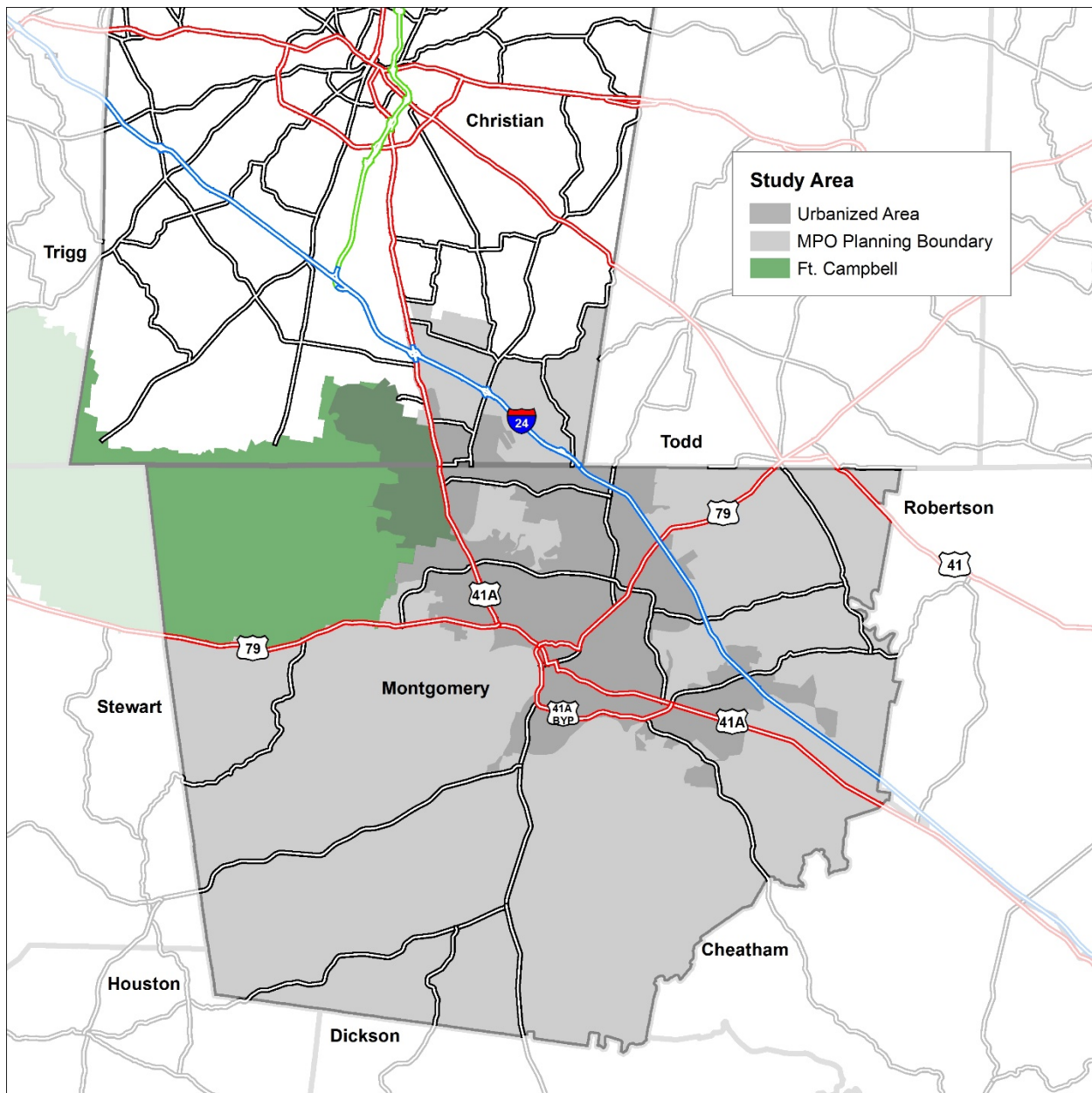
- Adjusting route schedules to decrease the number of early bus arrivals at stops
- Discontinue Route 812 (Exit 8) once the park-and-ride lot relocates to Exit 11. Work with the RTA and other regional service providers to find more cost-effective options
- Relocate transit stops to the street and away from building entrances and other unproductive diversions and loops
- Explore the feasibility of implementing a business access transit lane along Wilma Rudolph Boulevard that would improve transit travel time and reliability
- Consider reinstating free transfers for passengers
- Consider investments in automatic passenger counting equipment
- Explore creating mini-hubs for transfers between CTS routes

This Comprehensive Operations Analysis is a primary recommendation of the plan update. The COA builds on the strategic plan's overall assessment by providing specific recommendations for improving service delivery on each CTS route.

I.2 Study Area

The CTS COA focuses on the existing and anticipated mobility needs of targeted populations and the general public throughout the CTS service area. The service area is defined as by the Clarksville Urbanized Area boundary. The CUAMPO is the planning body responsible for the planning and programming of federal transportation funds for the Clarksville Urbanized Area. The Clarksville Urbanized Area contains the cities of Clarksville, TN, Oak Grove, KY, and Fort Campbell, KY. The City of Clarksville serves as the county seat of Montgomery County, Oak Grove and Fort Campbell are just north of the State line in Christian County. The CUAMPO planning boundary extends beyond the Urbanized Area to include the entirety of Montgomery County, and a portion of unincorporated southwest Christian County, Kentucky, and surrounding Oak Grove. Both the Urbanized Area and the greater CUAMPO "Planning Area" are included in the Clarksville, TN-KY Metro Area Metropolitan Statistical Area. For the purpose of the COA, the planning boundary will serve as the study area. The Clarksville Urbanized Area will also be analyzed, representing the CTS service area. While CTS may operate outside the Clarksville city limits in the Urbanized Area, only the City of Clarksville contributes to the operating and capital costs of CTS. Both are shown in Figure 1-1. The study area encompasses 581.2 square miles of which: 544.4 square miles cover Clarksville and Montgomery County, Tennessee; approximately, 10.6 square miles of Oak Grove; 25 square miles of portions of Ft. Campbell Military Reserve and Christian County and 1.2 square miles of Hopkinsville, Kentucky. Some of the major highways that run through study area are: I-24, US-79, US-41, and US-41A.

Figure I-1: Study Area



I.3 Land Use and Development

Figure 1-2 shows the development footprint in relation to the Urbanized Area and areas within a ¼-mile of CTS service. CTS serves a large portion of existing development within the Urbanized Area. However, there are pockets of significant development inside the Urbanized Area are not currently served by CTS. These areas include inside the SR-374 loop, south of Ashland City Rd., near Tylertown Rd., and the Sango area. However, these areas are higher income neighborhoods where transit usage is typically low. Some of these pockets are in unincorporated Montgomery County where Montgomery County Government provides no financial assistance to CTS. Additionally, there are pockets of significant low density development that are not currently served by CTS because they are also located outside the Urbanized Area in unincorporated Montgomery County. These areas include northeast of I-24 adjacent to Rossvie Rd. and Wilma Rudolph Blvd although CTS recently initiated on April 4, 2016, a new transit route in the Clarksville-Montgomery County Industrial Park northeast of I-24 between Rossvie Rd. and Wilma Rudolph Boulevard.

Figure I-2: Existing Development

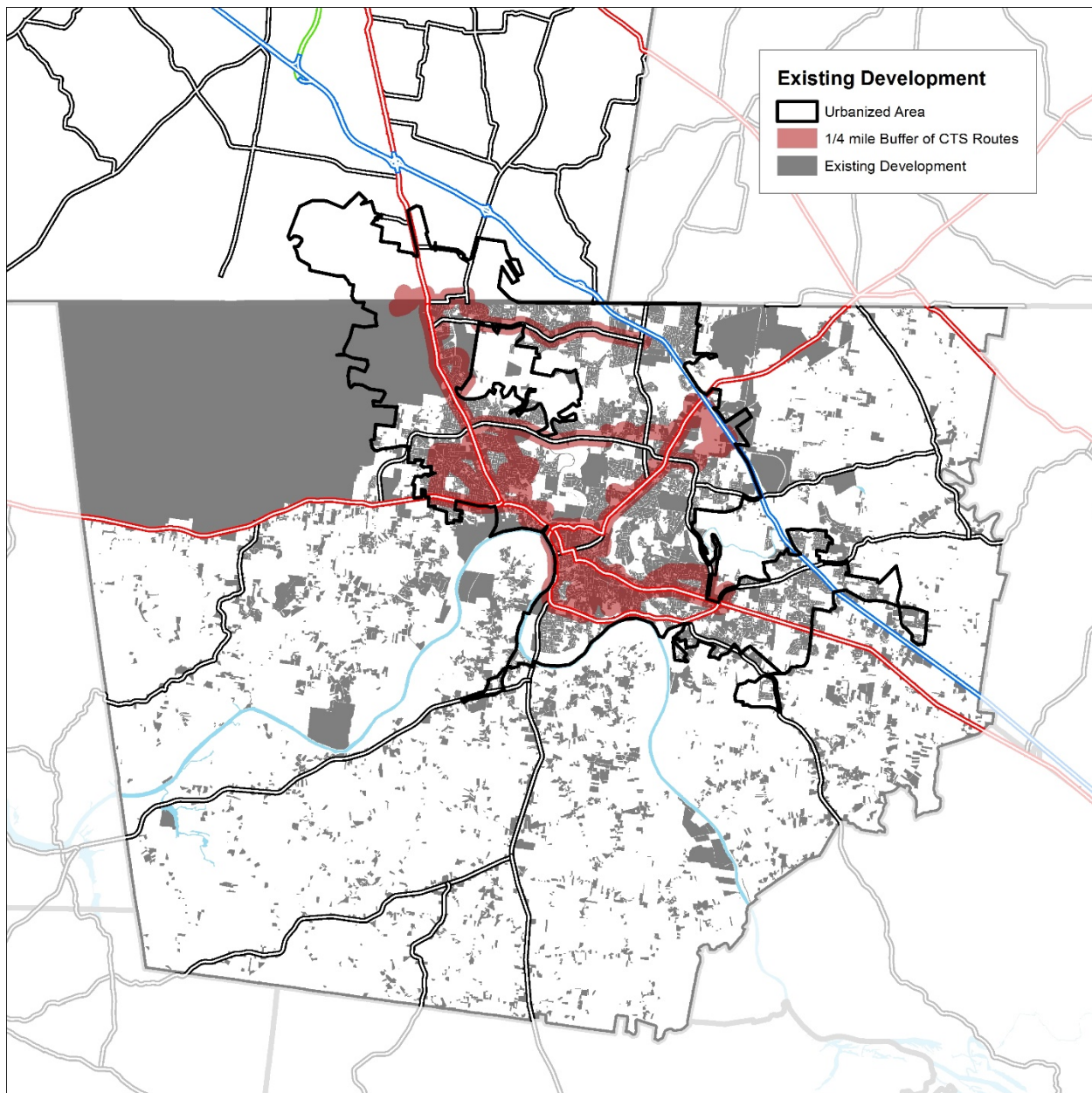


Figure 1-3 shows zoned land uses in relation to the Urbanized Area and areas within a ¼-mile of CTS service. CTS serves a large portion of more intense land uses within the Urbanized Area. Some places with more intense land uses inside the Urbanized Area are not currently served by CTS. These areas include near Exit 11, near Tylertown Rd., and the Sango area that are outside the Clarksville city limits. Additionally, due to being located outside the Urbanized Area, and the Clarksville city limits, areas of intensive land uses are not currently served by CTS because federal transit funding going to CTS can only be used for transit services inside the Urbanized Area boundary. These areas include industrial areas northeast of I-24 adjacent to Rossview Rd. and Wilma Rudolph Blvd., as well as along Zinc Plant Rd. While the former is served by a newly inaugurated CTS bus route, the latter is the Nystar Zinc Plant in Cumberland Heights, outside the Urbanized Area.

Figure I-3: Generalized Zoning

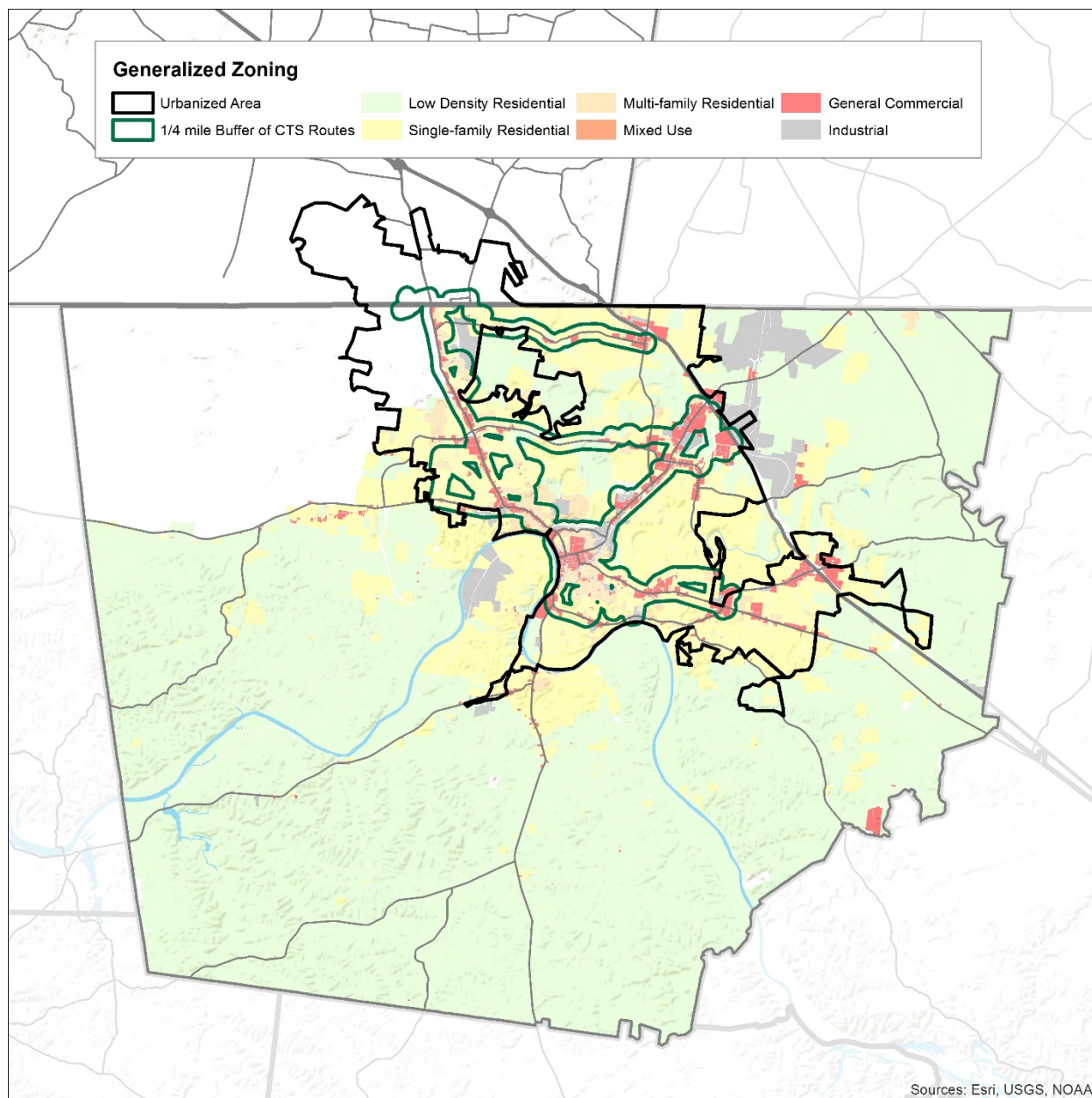


Figure 1-4 shows recent growth trends in relation to the Urbanized Area and areas within a 1/4-mile of CTS service. The growth trends shown represent the number of single-family building permits issued within a 1/4-mile area, since 2010. The majority of permits issued fall inside the Urbanized Area and are close to areas served by CTS. Some areas experiencing growth inside the Urbanized Area are not currently served by CTS. Some of these areas are in the unincorporated area; however, some of these areas are within the city limits and have developed in the past 10 years. These recently developing areas include north of SR-374 adjacent to Peachers Mill Rd., near Trenton Rd., near Tiny Town Rd., and the Sango area.

Additionally, due to being located outside the Urbanized Area, some areas experiencing growth are not currently served by CTS. These areas include Tylertown Rd., near Purple Heart Pkwy. / Paul B. Huff Memorial Pkwy., and northeast of I-24 on Rossview Rd. The recently inaugurated route to the Clarksville-Montgomery County Industrial Park addresses the vast area which falls outside of the 2010 Census defined Urbanized Area, but falls within the Urban Area Boundary approved by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) in which federal transit funds for urban areas may be expended.

Figure I-4: Single-family Building Permits

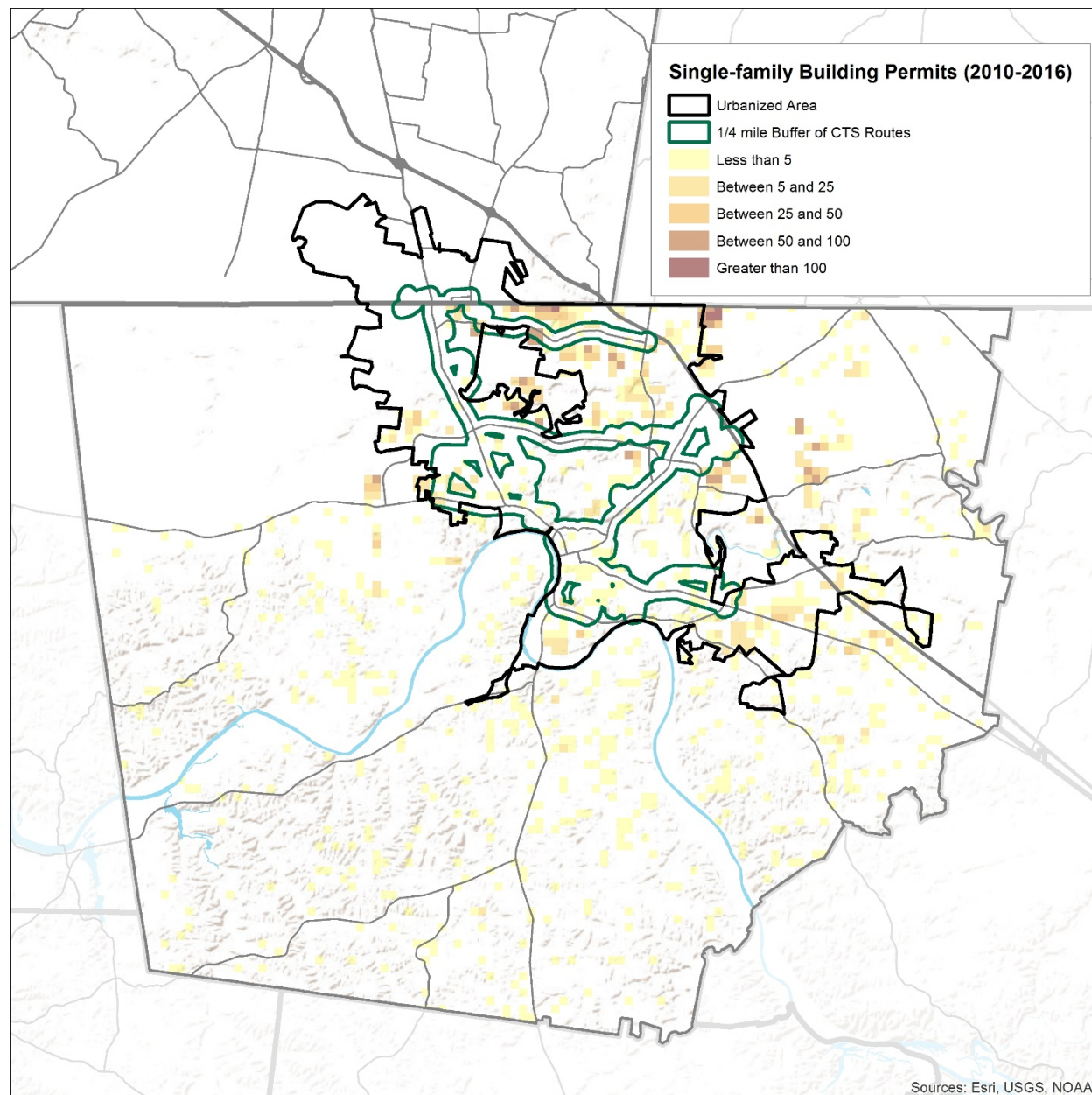


Figure 1-5 shows expected population growth trends in relation to the Urbanized Area and areas within a ¼-mile of CTS service. The growth trends shown represent the projected increase in population from the MPO's Travel Demand Model's Transportation Analysis Zones (TAZs). The majority of growth is anticipated to fall inside the Urbanized Area and close to areas served by CTS. Some areas experiencing population growth inside the Urbanized Area are not currently served by CTS. These areas include near Rotary Park inside the city limits and Sango outside the city limits. Additionally, due to being located outside the 2010 Urbanized Area, some areas anticipating population growth cannot currently be served by CTS. These areas include south of Tylertown Rd. and along Rossview Rd east of I-24.

Figure I-5: Expected Population Growth

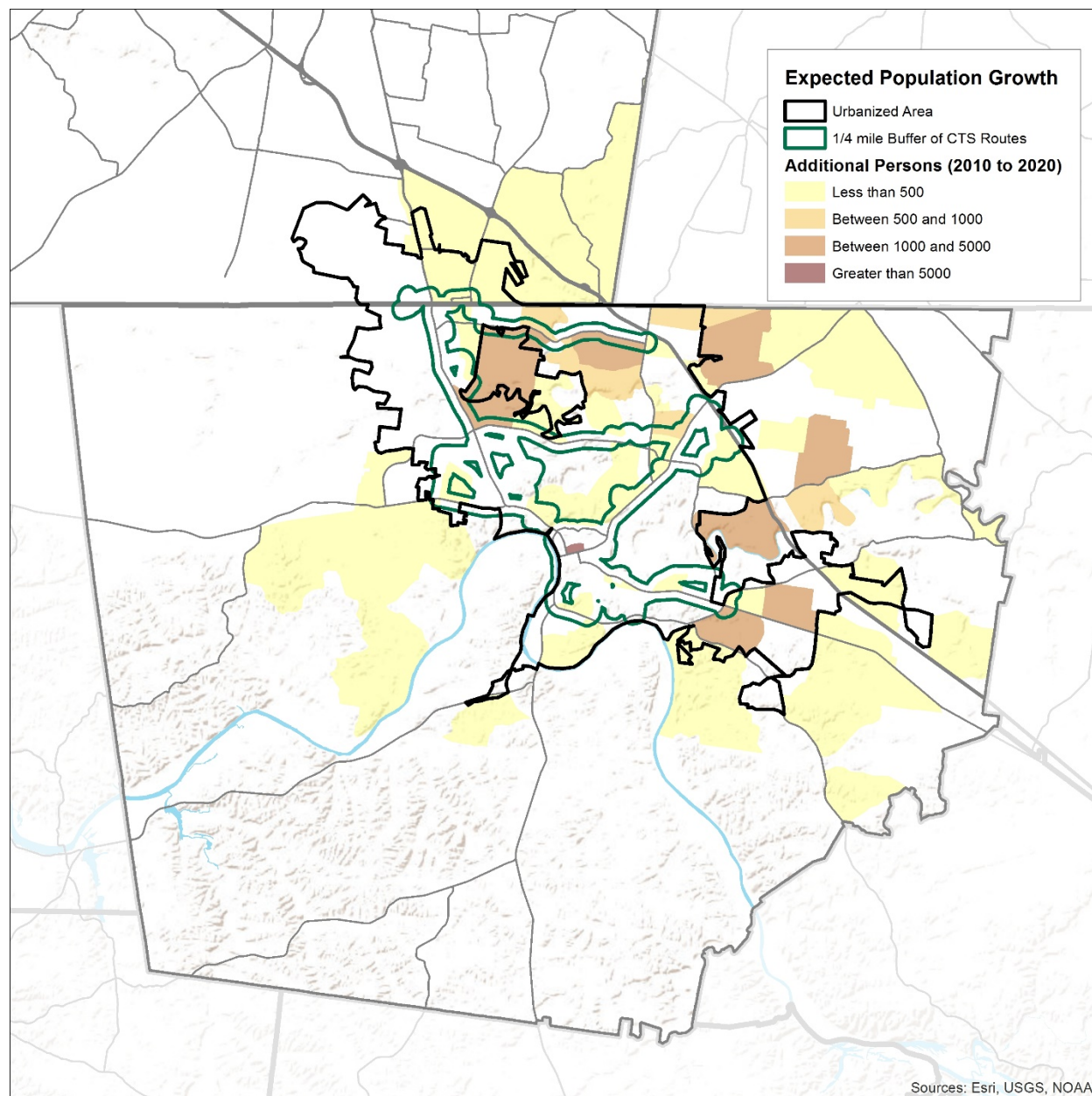
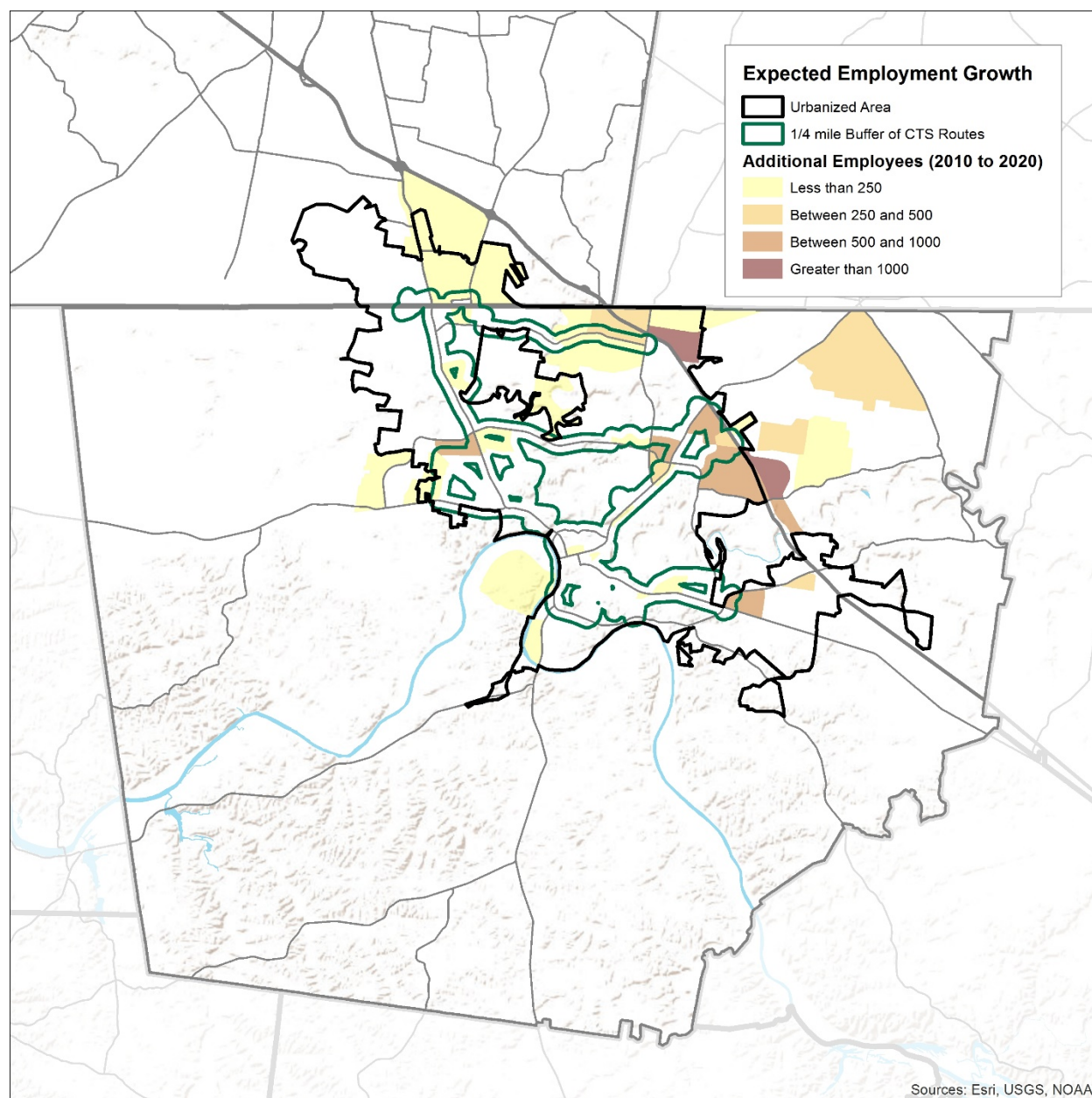


Figure 1-6 shows expected employment growth trends in relation to the Urbanized Area and areas within a ¼-mile of CTS service. The growth trends shown represent the projected increase in employment from the MPO's Travel Demand Model's Transportation Analysis Zones (TAZs). The majority of growth is anticipated to fall inside the Urbanized Area and close to areas served by CTS. Some areas experiencing employment growth inside the Urbanized Area are not currently served by CTS. These areas include south of Tylertown Rd. and Rossvie Rd. Additionally, due to being located outside the Urbanized Area, some areas anticipating employment growth are not currently served by CTS. These areas are northeast of I-24 and are generally bound by Rossvie Rd., Port Royal Rd., and Guthrie Hwy.

Figure 1-6: Expected Employment Growth



I.4 Major Travel Nodes and Activity Centers

Figure 1-7 notes the major travel nodes and activity centers in the study area overlaid with existing CTS bus routes. Included in the list of activity centers are major transit destinations such as: Austin Peay State University, Governor's Square Shopping Center, Veterans Plaza, Wal-Mart (Ft. Campbell), Wal-Mart (Wilma Rudolph), Wal-Mart (Sango), Gateway (now Tennova) Medical Center, and the Ft. Campbell Military Installation gates. As shown on the figure, CTS currently serves the majority of the activity centers. They are listed in Table 1-1 by ID, which corresponds to the figure.

Figure 1-7: Activity Centers

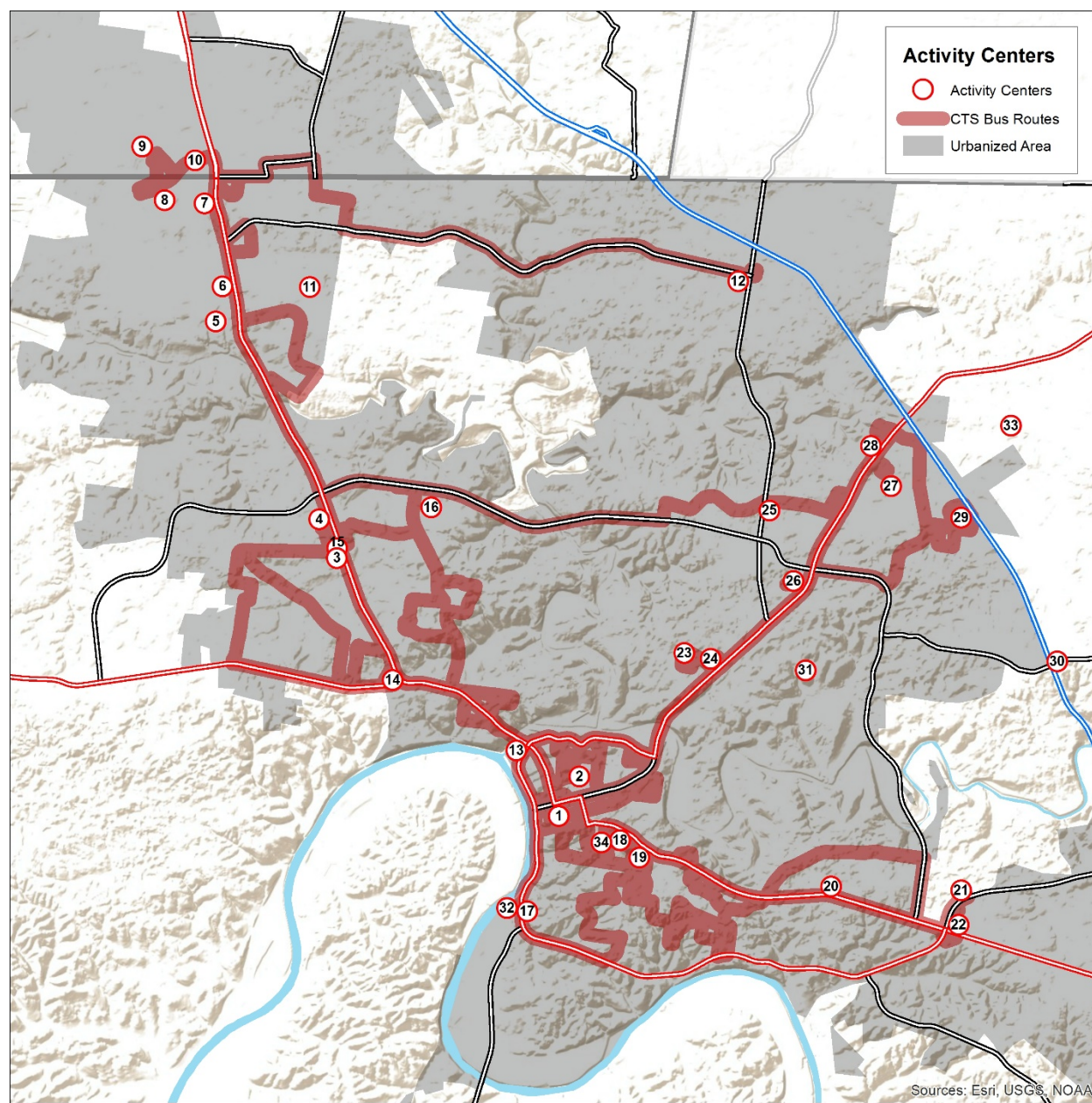


Table I-1: Activity Centers

ID	Name	Address	Served by CTS
1	Transit Center	200 Legion St.	Yes
2	Austin Peay State University	601 College St.	Yes
3	Tradewinds North Shopping Center	1596 Ft. Campbell Blvd.	Yes
4	Wal-Mart (Ft. Campbell Blvd.)	1680 Ft. Campbell Blvd.	Yes
5	Gate #1	N/A	Yes
6	Gate #2	N/A	Yes
7	Gate #3	N/A	Yes
8	Blanchfield Army Community Hospital	650 Joel Dr.	No
9	PXTRA	2840 Bastogna Ave.	Yes
10	Gate #4	N/A	Yes
11	Outlaw Field	Outlaw Field Rd.	Yes
12	Regal Clarksville Stadium 16	1810 Tiny Town Rd.	Yes
13	Two Rivers Mall Shopping Center	668 N. Riverside Dr.	Yes
14	Dover Road Medical Center	201 Dover Rd.	Yes
15	Cunningham Plaza	1636 Ft. Campbell Blvd.	Yes
16	Heritage Park	1241 Peachers Mill Rd.	Yes
17	Clarksville Square Shopping Center	1031 S. Riverside Dr.	Yes
18	Ajax Senior Center	951 Clark St.	Yes
19	Veterans Plaza	350 Pageant Ln.	Yes
20	Tradewinds South Shopping Center	1937 Madison St.	Yes
21	Spring Meadows Health Care	220 HWY 76	Yes
22	Wal-Mart (Madison St.)	2315 Madison St.	Yes
23	Driver's License Examination Station	220 W Dunbar Cave Rd.	Yes
24	Miller-Motte Technical College	1820 Business Park Dr.	Yes
25	Daymar College	2691 Trenton Rd.	Yes
26	Social Security Office	119 Center Pointe Dr.	Yes
27	Governors Square Mall	2801 Wilma Rudolph Blvd.	Yes
28	Wal-Mart (Wilma Rudolf Blvd.)	3050 Wilma Rudolph Blvd.	Yes
29	Gateway Medical Center	651 Dunlop Ln	Yes
30	Park & Ride Lot (Exit 8)	Rossvie Rd./ I-24	Yes
31	Dunbar Cave State Park	401 Old Dunbar Cave Rd.	No
32	Clarksville Marina	250 Marina Way	No
33	Corporate Business Park	N/A	No

I.5 Regional Employment Trends

Figure 1-8 demonstrates the movement of workers who reside or work in the study area and its surrounding counties, according to 2013 Longitudinal Employer-Household Dynamics (LEHD) statistics. Out of the approximately 56,106 workers who reside in the study area, 30,381 (54.2%) work in study area. 5,831 (12.3%) of the 47,446 workers that are employed in the study area come from immediately surrounding counties. Shown in Table 1-2, 7,310 (13.0%) of workers that reside in the study area work in Davidson County. Conversely, only 1,837 (3.9%) of workers employed in the study area reside in Davidson County.

Figure I-8: Study Area Employment Flows

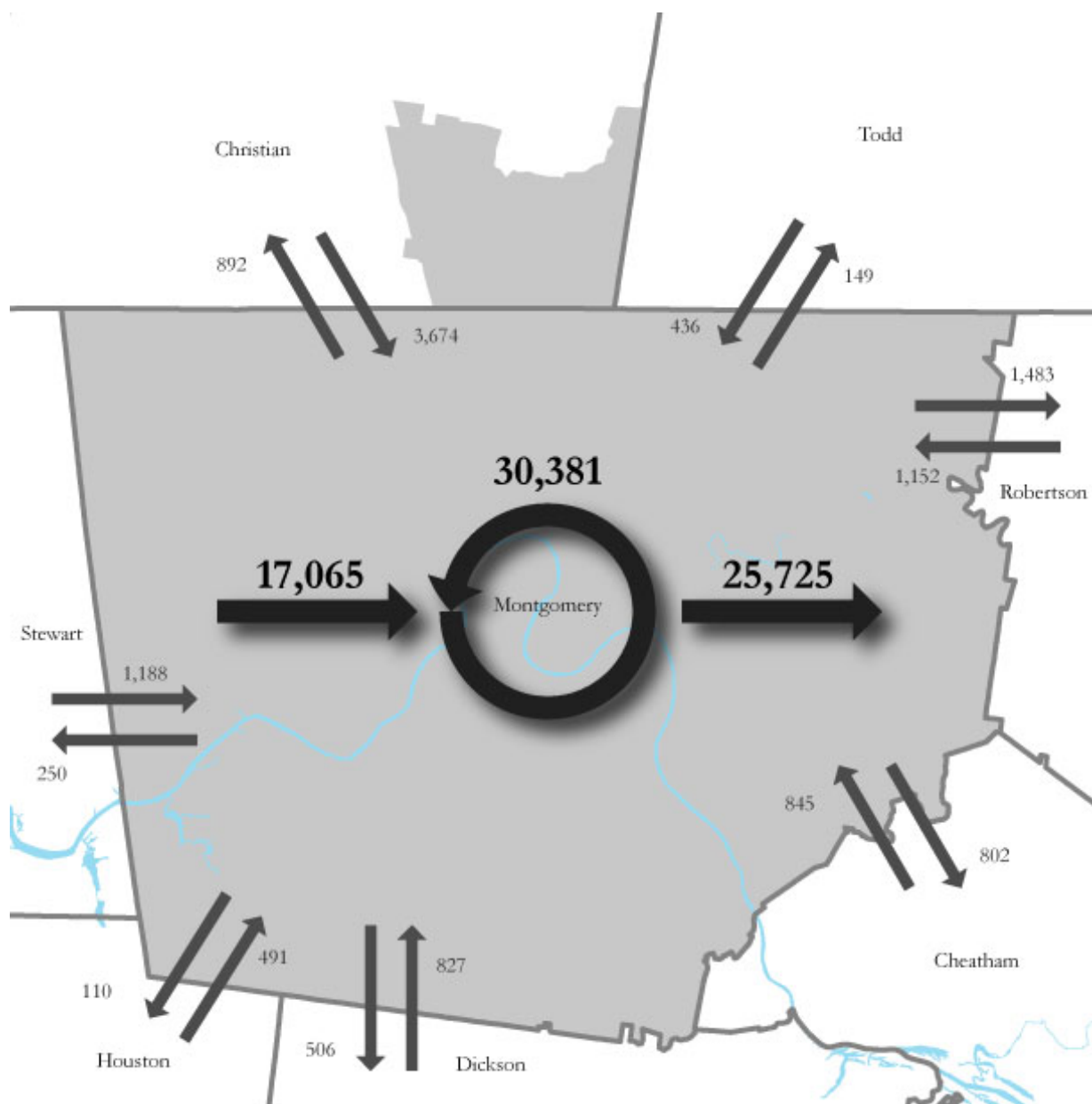


Table I-2: Employee Travel From and Into the Study Area

Employee Travel Flows Into the Study Area		
From	Employees	Percentage
Montgomery County, TN	29,845	62.9%
Davidson County, TN	1,837	3.9%
Christian County, KY	1,428	3.0%
Stewart County, TN	1,188	2.5%
Robertson County, TN	1,152	2.4%
Cheatham County, TN	845	1.8%
Dickson County, TN	827	1.7%
Rutherford County, TN	744	1.6%
Sumner County, TN	708	1.5%
Williamson County, TN	540	1.1%
Other	8,332	17.6%
Total	47,446	100.0%

Employee Travel From the Study Area		
To	Employees	Percentage
Montgomery County, TN	29,805	53.1%
Davidson County, TN	7,310	13.0%
Christian County, KY	4,260	7.6%
Shelby County, TN	1,653	2.9%
Robertson County, TN	1,483	2.6%
Williamson County, TN	1,045	1.9%
Knox County, TN	867	1.5%
Cheatham County, TN	802	1.4%
Rutherford County, TN	801	1.4%
Hamilton County, TN	793	1.4%
Other	7,287	13.0%
Total	56,106	100.0%

Figure 1-9 demonstrates the movement of workers who reside or work in the Urbanized and its surrounding counties, according to 2013 Longitudinal Employer-Household Dynamics (LEHD) statistics. Out of the approximately 46,312 workers who reside in the study area, 21,343 (46.1%) work in study area. 9,536 (21.8%) of the 43,647 workers that are employed in the Urbanized Area come from immediately surrounding counties. Shown in Table 1-3, 5,893 (12.7%) of workers that reside in the Urbanized Area work in Davidson County. Conversely, only 1,730 (4.0%) of workers employed in the Urbanized Area reside in Davidson County.

Figure I-9: Urbanized Area Employment Flows

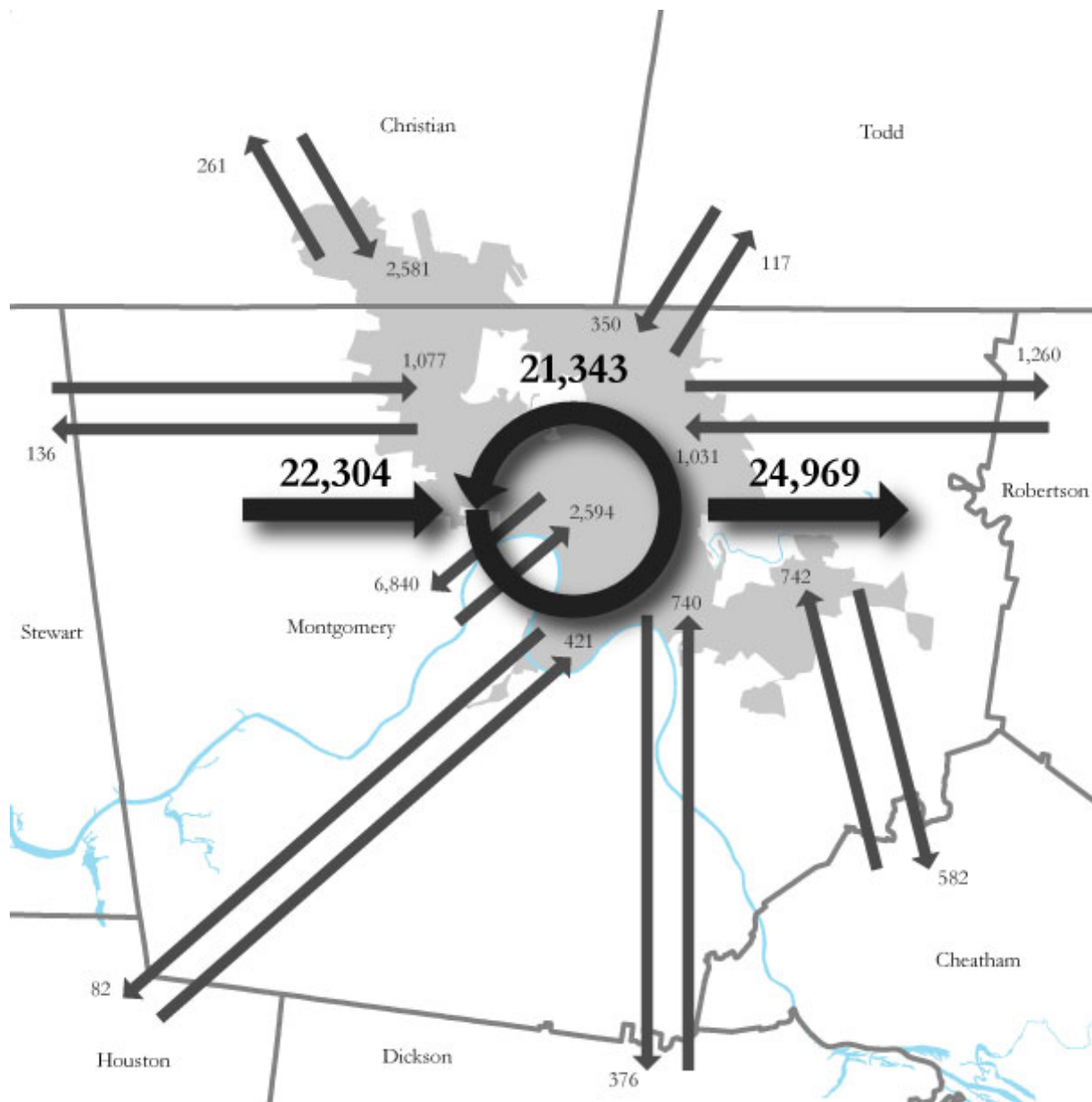


Table I-3: Employee Travel From and Into the Urbanized Area

Employee Travel Flows Into the Urbanized Area			Employee Travel From the Urbanized Area		
From	Employees	Percentage	To	Employees	Percentage
Montgomery County, TN	27,113	62.1%	Montgomery County, TN	22,867	49.4%
Davidson County, TN	1,730	4.0%	Davidson County, TN	5,893	12.7%
Christian County, KY	1,331	3.0%	Christian County, KY	3,651	7.9%
Stewart County, TN	1,077	2.5%	Shelby County, TN	1,652	3.6%
Robertson County, TN	1,031	2.4%	Robertson County, TN	1,260	2.7%
Cheatham County, TN	742	1.7%	Knox County, TN	872	1.9%
Dickson County, TN	740	1.7%	Williamson County, TN	859	1.9%
Rutherford County, TN	725	1.7%	Hamilton County, TN	791	1.7%
Sumner County, TN	648	1.5%	Rutherford County, TN	657	1.4%
Williamson County, TN	525	1.2%	Cheatham County, TN	582	1.3%
Other	7,985	18.3%	Other	7,228	15.6%
Total	43,647	100.0%	Total	46,312	100.0%

Table 1-4 shows the top 10 employers in the study area based on the number of employees reported by the Clarksville Chamber of Commerce. The industries reflected in the list of the top employers, are: Defense, Education, Health Services, Manufacturing; Public Administration; and Professional & Business Services.

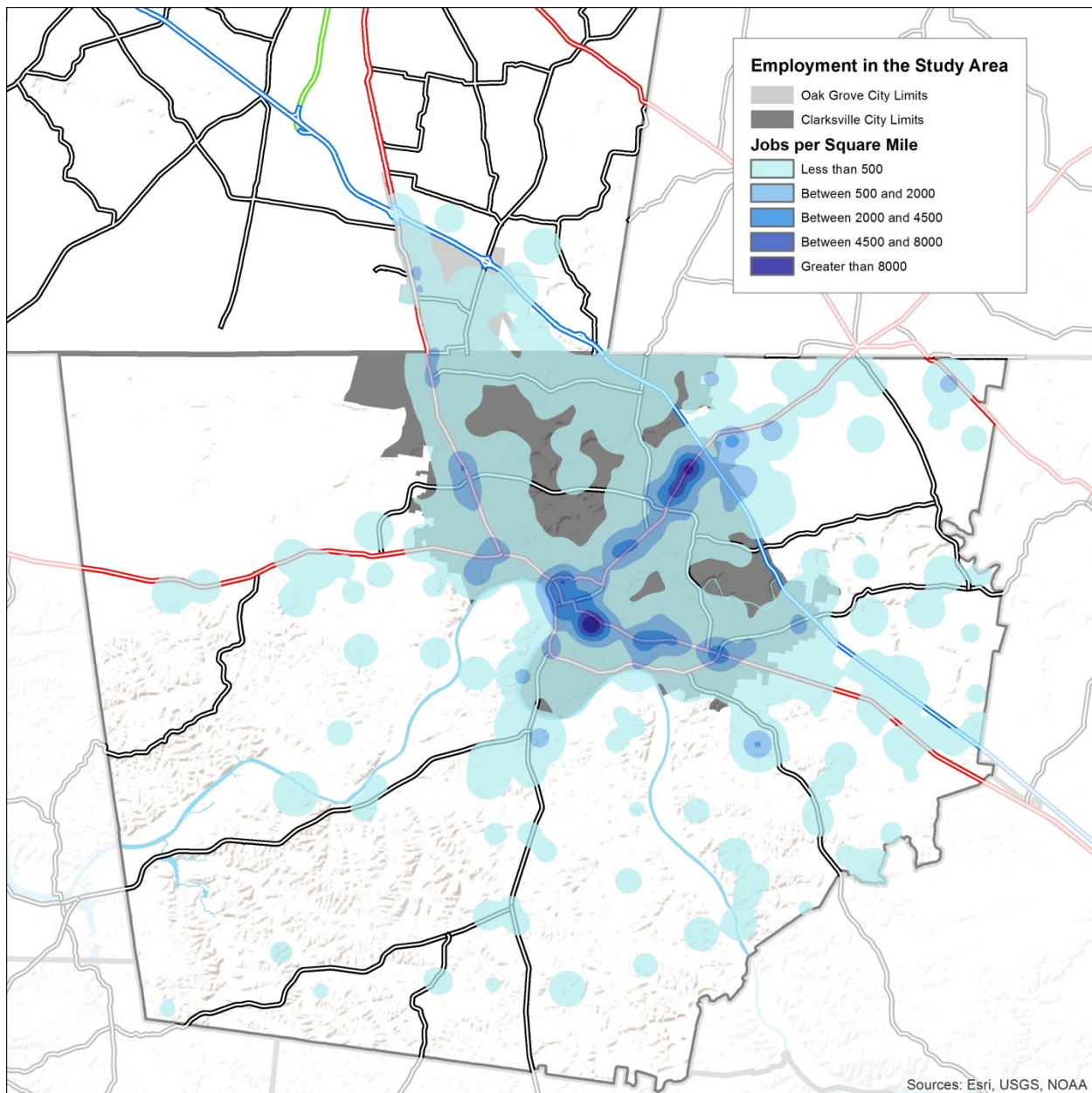
Table I-4: Major Employers in Montgomery and Christian Counties

Rank	Employees	Employer	Sector	Served by CTS
1	29,500	Ft. Campbell Military Installation	Defense	Yes
2	3,900	Clarksville-Montgomery County School System	Education	Yes
3	1,400	Trane Company	Manufacturing	Yes
4	1,363	Wal-Mart Supercenter	Retail	Yes
5	1,165	Gateway Medical Center	Health Services	Yes
6	989	City of Clarksville	Public Administration	Yes
7	921	Montgomery County Government	Public Administration	Yes
8	900	Austin Peay State University	Education	Yes
9	800	Convergys Corp.	Professional & Business Services	Yes
10	700	Jostens, Printing & Publishing Div.	Manufacturing	
11	650	Akebono	Manufacturing	
12	500	Agero	Customer Service	Yes
13	415	Bridgestone Metalph USA	Manufacturing	
14	275	Premier Medical Group	Health Services	Yes
15	260	Florim USA	Tile	
16	250	Lowe's	Retail	Yes
17	249	Nyrstar	Minerals	
18	194	Spear USA	Manufacturing	
19	150	Hendrickson Trailer Suspensions Systems	Manufacturing	
20	145	Hollingsworth Oil	Petroleum	
21	105	MW/MB LLC	Manufacturing	
22	90	Rivers End Trading Company	Clothing	

Figure 1-10 illustrates employment in the study area and density of jobs based on number of employees, according to LEHD statistics. The largest employers in the study area are clustered along Ft. Campbell Blvd., Wilma Rudolph Blvd., and Madison St. corridors. Most employers lie within or directly around the Clarksville and Oak Grove city boundaries.

CTS provides service along these main corridors and therefore serves these employers well. As of April 2016, CTS began providing new service to the industrial park east of Interstate 24. This new route is called Route 1000 Industrial Park and runs a 30-minute loop that connects back to the Wal-Mart on Wilma Rudolph Blvd, and thus connects with the Route 7 Governor's Square Mall, and is easily accessible by Route 8 – 101 Express/Gateway Medical Ctr. This new service runs from 6:30 a.m. to 6:30 p.m. This route will provide service to the major employers east of the interstate and is expected to serve the new Hankook tire facility once it become fully operational.

Figure I-10: Employment in the Study Area



I.6 Study Area Demographics

For the COA, several data sources are used to describe the demographics of the study area as defined in Section 1.2. All available data sources used for this analysis conform to the 2010 Census defined geographies; however, based on the availability of differing datasets and their different sized boundaries (block, block group, tract), it was necessary to develop a methodology to assign data from a larger geography, such as a block group, into a smaller unit such as a block. This is particularly important in order to compare demographic data totals within the study area to the urbanized area and the counties.

Based on conversations with the study oversight committee, a methodology was developed where the entirety of a Census block group or tract that contains a portion of the study area was used for the demographic information that follows. Figure 1-11 displays the relationship between the study area and the Census geographies. In order to align these geographies with the Urbanized Area defined in Section 1.2, Census tracts comprised of at least 40 percent Urbanized Area and the block groups these tracts contain were used for the demographic information that is summarized in Table 1-5.

Figure 1-12 displays the relationship between the Urbanized Area and the Census geographies used. Table 1-5 provides a summary of demographic information. These statistics include population density, targeted populations, and transit dependent populations for the study area and Urbanized Area equivalents defined in this Section.

Table I-5: Study Area Demographics

Demographic	Study Area	Urbanized Area	Montgomery and Christian Counties
Population Density (Avg. Population/sq. mi.)	256.45	1,445.08	198.58
% Below Poverty	16.1%	18.7%	17.5%
% Zero Vehicle Households	4.5%	5.1%	5.4%
% Persons with Disabilities	6.9%	7.6%	7.2%
% Population 65 Years and Up	7.3%	5.9%	8.7%
% Population 17 Years and Under	28.6%	29.5%	27.9%
% Minority Population	33.2%	40.5%	33.0%
% Transit Dependent Population	2.4%	3.5%	3.8%

Figure I-11: Study Area and Census Geographies

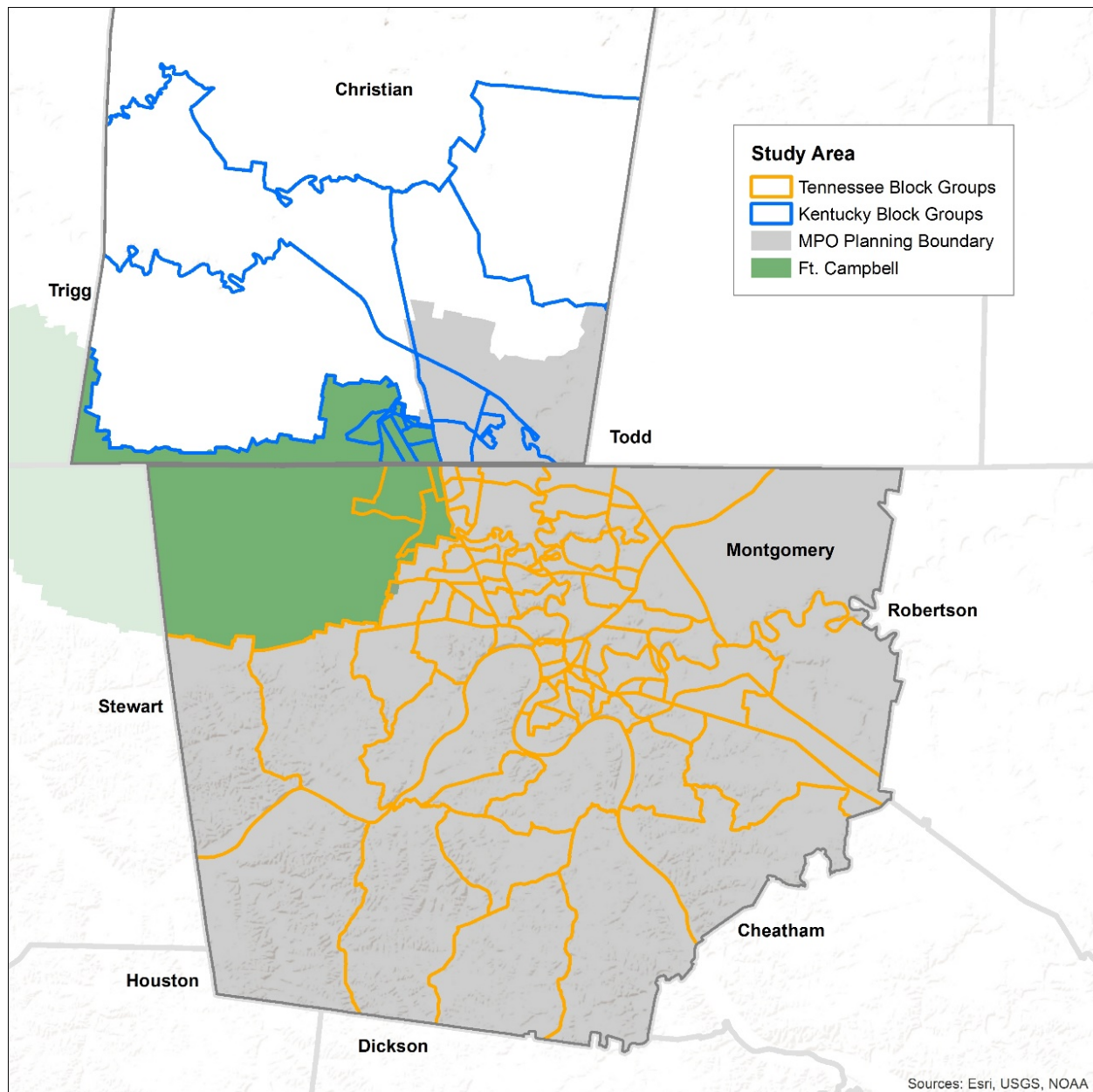
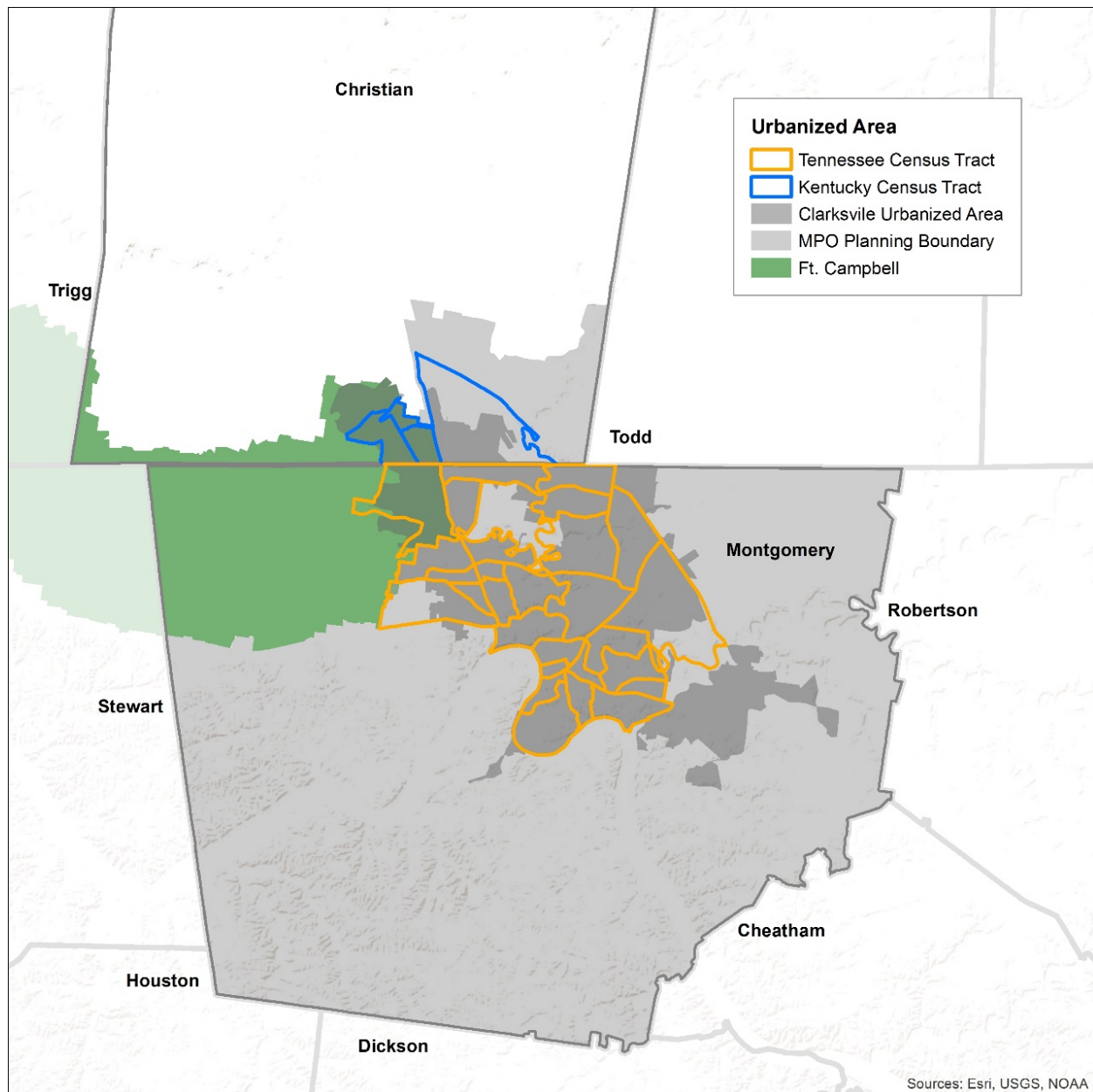


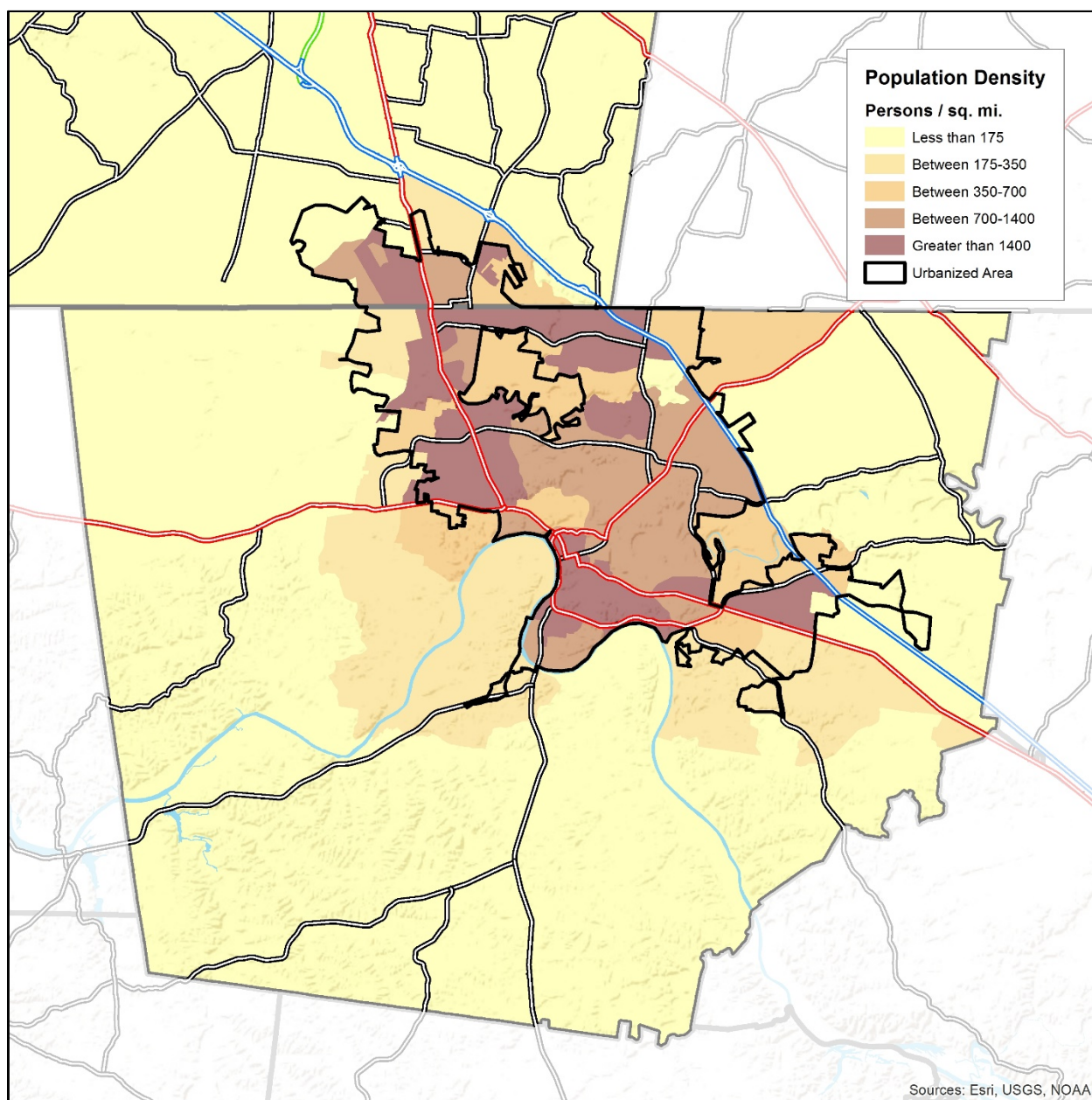
Figure I-12: Urbanized Area and Census Geographies



Population Density

According to the 2013 American Community Survey (ACS) 5-year population estimates, the study area had 204,556 people residing in an area of approximately 798 square miles. Shown in Table 1-5, the average population density in the study area is 256 persons per square mile and a density of 1,445 persons per square mile in the Urbanized Area. Displayed in Figure 1-13, the study area has pockets of higher population throughout, with the most densely populated areas on the Ft Campbell Blvd. corridor. CTS provides geographic coverage to and between these corridors which generally follow major state routes.

Figure 1-13: Population Density



Poverty

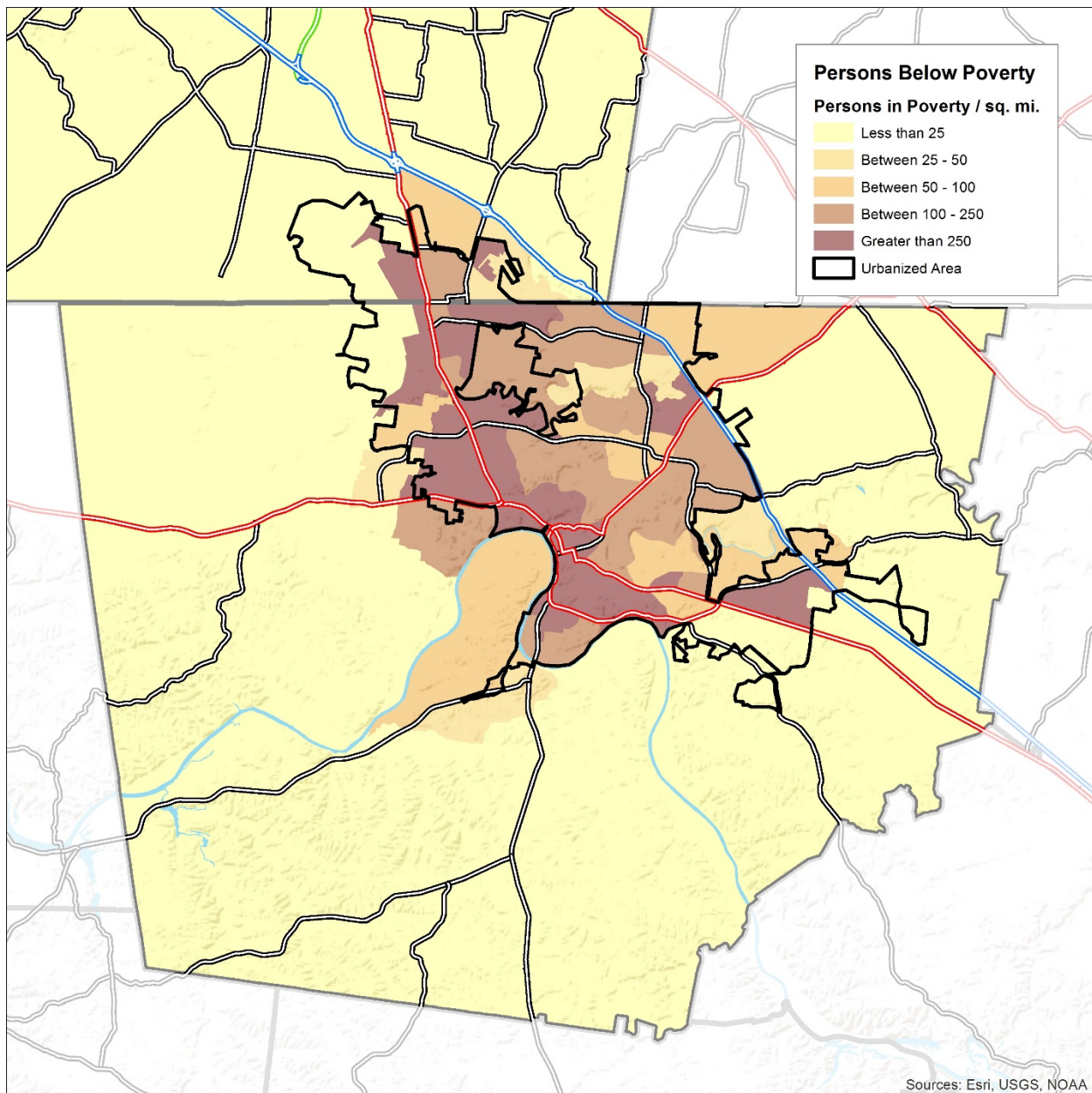
Approximately 16.1% of persons living in the study area fall below national poverty thresholds. The poverty thresholds provided by the census are based on the number of adults as well as children in a household, the age of the adults in the household, and total household income. In general, those households with one individual under the age of 65, with an income less than \$12,119 are considered to be in poverty. For two adults, under age 65, without children, the threshold is \$15,600.

Figure 1-14 shows the density of persons in poverty within the study area. For the population for whom poverty status was determined through 2013 ACS census block group estimates, the study area poverty estimates are less than both Tennessee (17.6%) and Kentucky (18.8%) statewide averages of persons in poverty. The most densely populated areas for persons in poverty are within the Urbanized Area, specifically along the Ft Campbell Blvd. and Madison St. corridors.

Based on the on-board survey (see Chapter 6.0), 49% of those surveyed indicated that their household income is below \$12,000, which indicates that at a minimum, nearly 50% of CTS riders fall below the poverty threshold. Further analysis of the survey results would likely increase that result, meaning that a large majority of CTS passengers qualify as poverty status.

The areas of highest poverty extend along the main corridors which are well served by CTS.

Figure I-14: Poverty

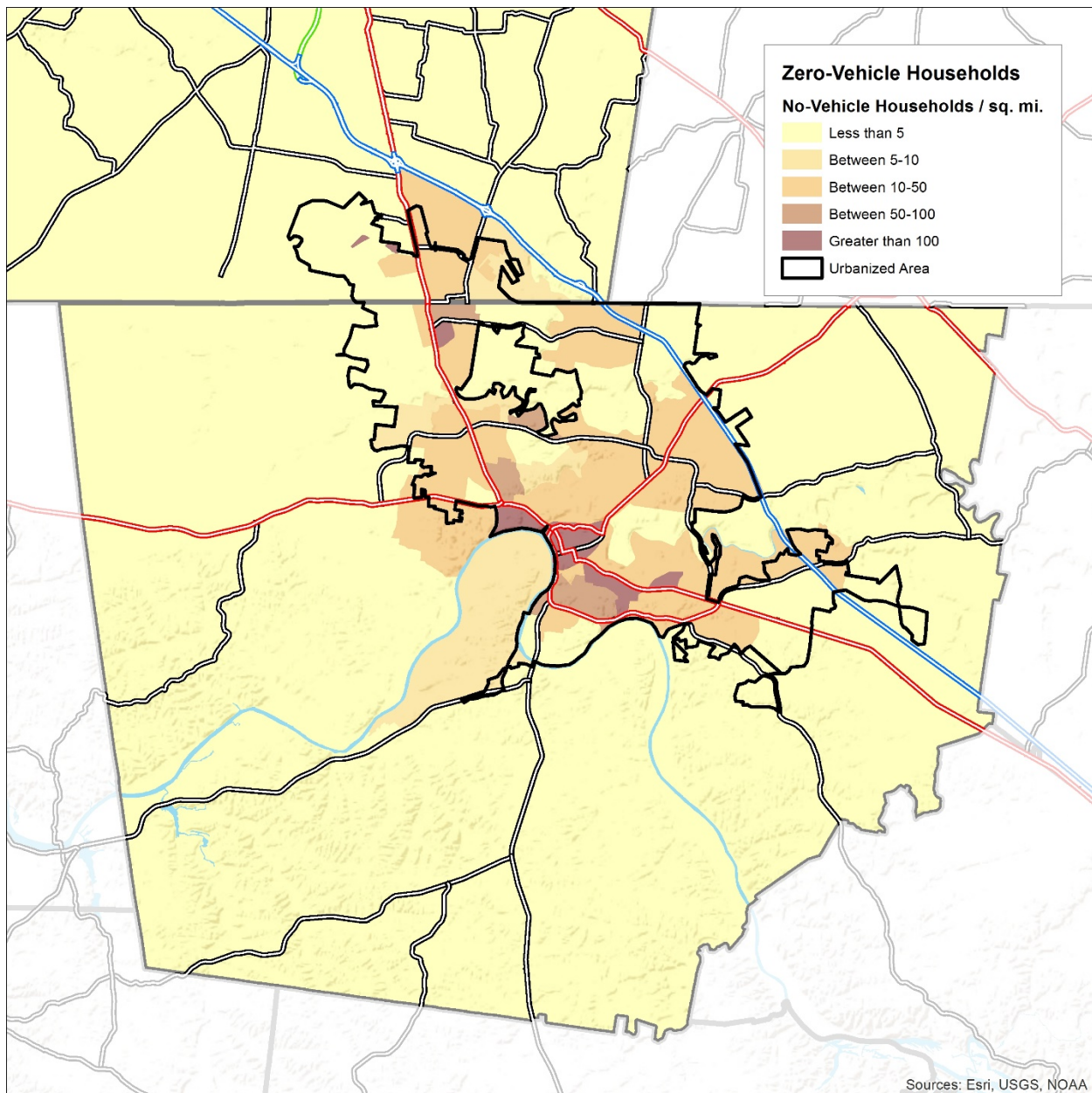


Zero Vehicle Households

According to 2013 ACS estimates, more than 3,250 of the approximately 71,500 households in the study area do not have access to a vehicle. These households account for about 4.5% of the total number of households in the study area, less than both the Tennessee (6.3%) and Kentucky (7.7%) statewide percentages. According to census block group estimations, most of these households are in the Urbanized Area and near downtown Clarksville, as displayed in Figure 1-15.

The on-board survey results showed that 61% of CTS riders did not have a working vehicle in the household. When this question was further expanded to assess whether a vehicle was available for the trip, 87% said that a vehicle was not available. Additionally 54% of surveyed riders do not have a valid driver's license. It is evident that CTS has a large proportion of riders without a vehicle and CTS does a good job providing service to areas with limited access to vehicles.

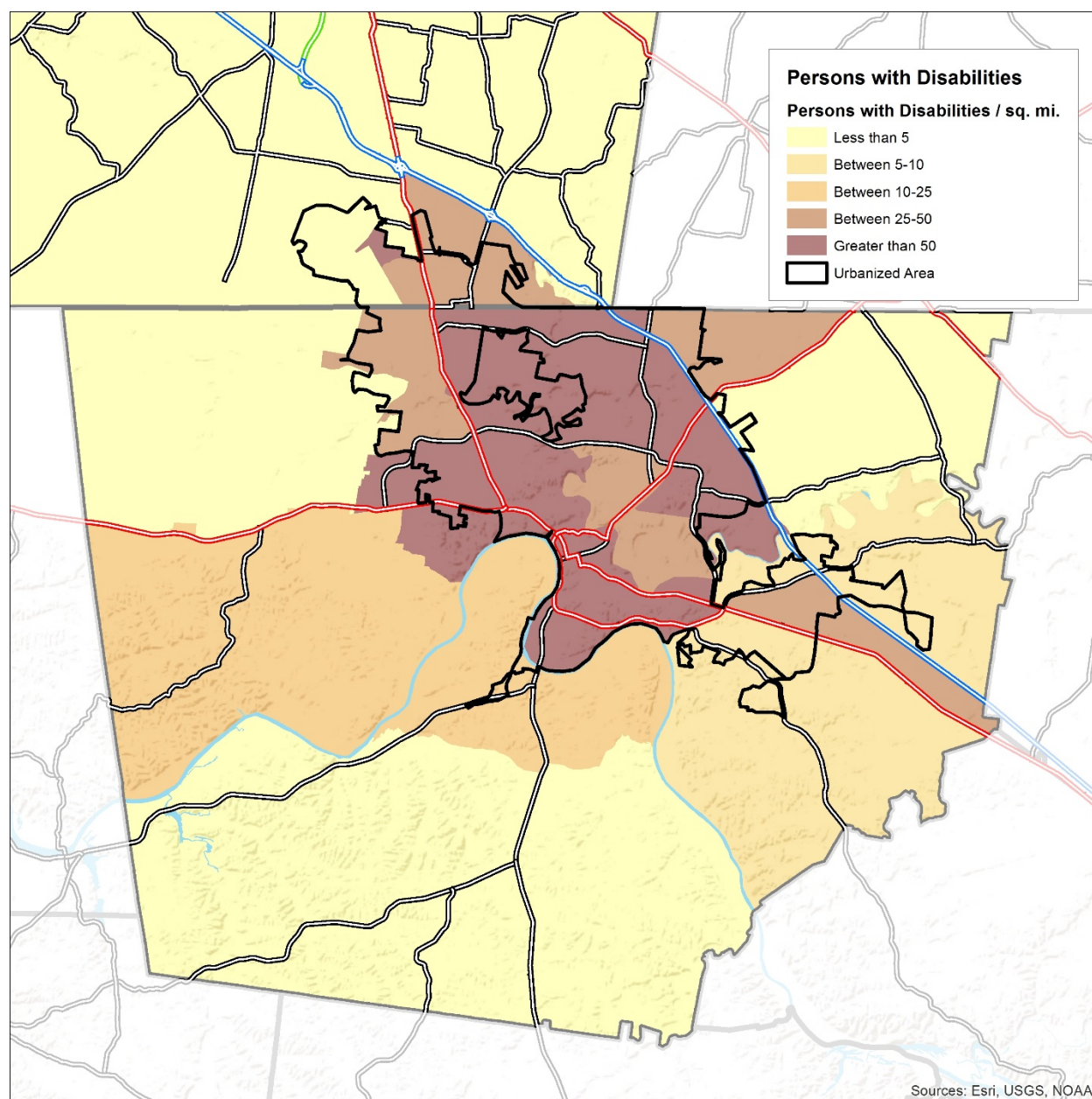
Figure I-15: Zero Vehicle Households



Persons with Disabilities

Slightly less than 7% of people employed within the labor force of Montgomery and Christian Counties reported a disability (hearing, vision, cognitive, ambulatory, self-care, or independent living difficulties) in the 2013 ACS. Among those who are unemployed in the labor force, approximately 12.7% of people have a disability. Displayed in Figure 1-16, the census tracts with the highest density of persons with disabilities are in the Urbanized Area. Although CTS fixed route bus service is primarily limited to the major roadway corridors, their service for persons with disabilities, called Lift, goes beyond federal requirements and provides service throughout the entire urbanized area.

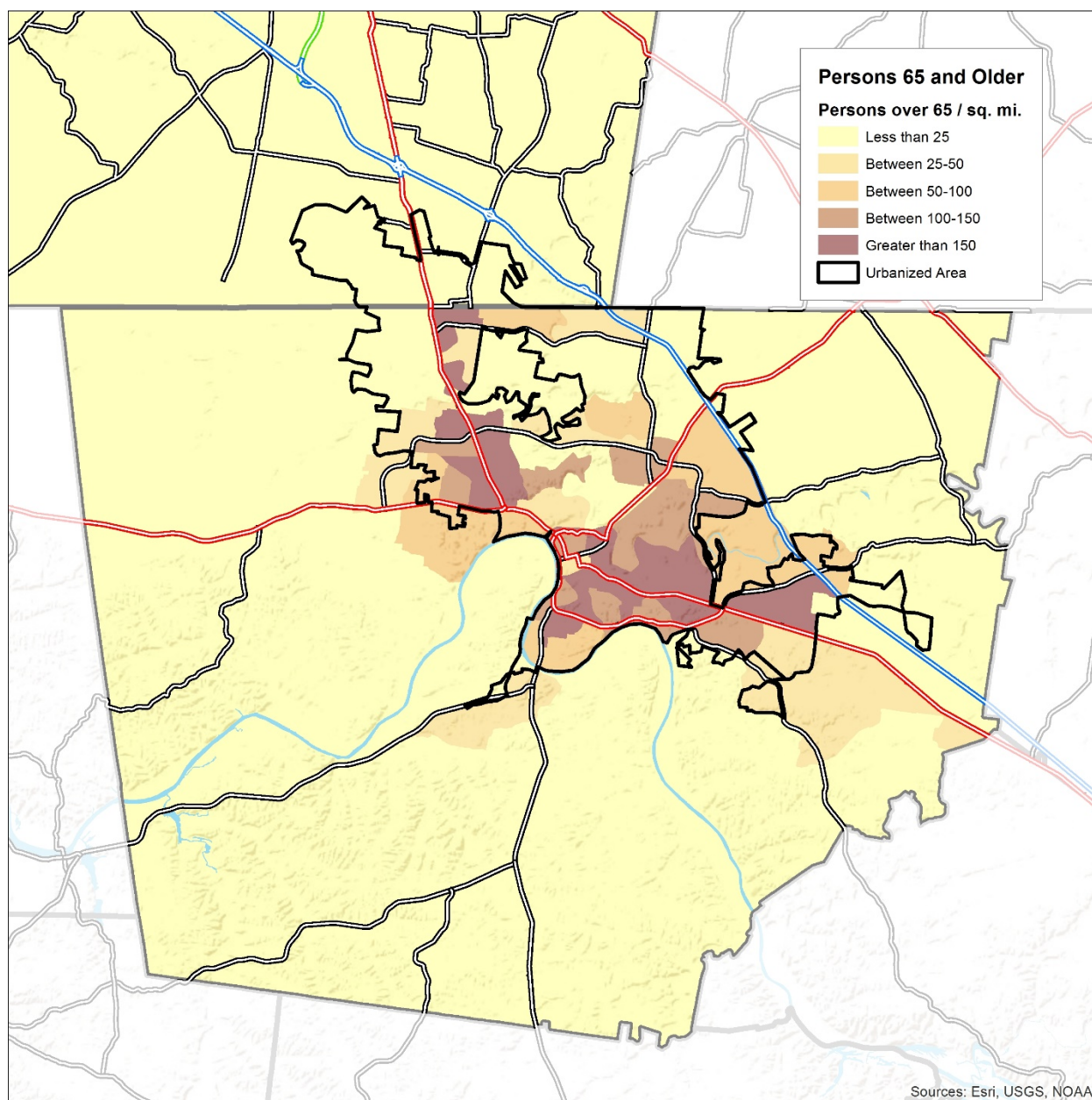
Figure 1-16: Persons with Disabilities



Population 65 Years and Older

In the study area, persons 65 years and older accounted for 7.3% of the total population. Displayed in Figure 1-17, the densest clusters of older persons correlate with higher general population densities in the Urbanized Area along the Ft. Campbell Blvd. and Madison St. corridors. The higher densities of older persons are most likely due to a higher concentration of population in both of these areas. Information from the on-board survey shows that CTS serves a broad age-range of riders; however, persons over 65 account for only 6% of bus ridership.

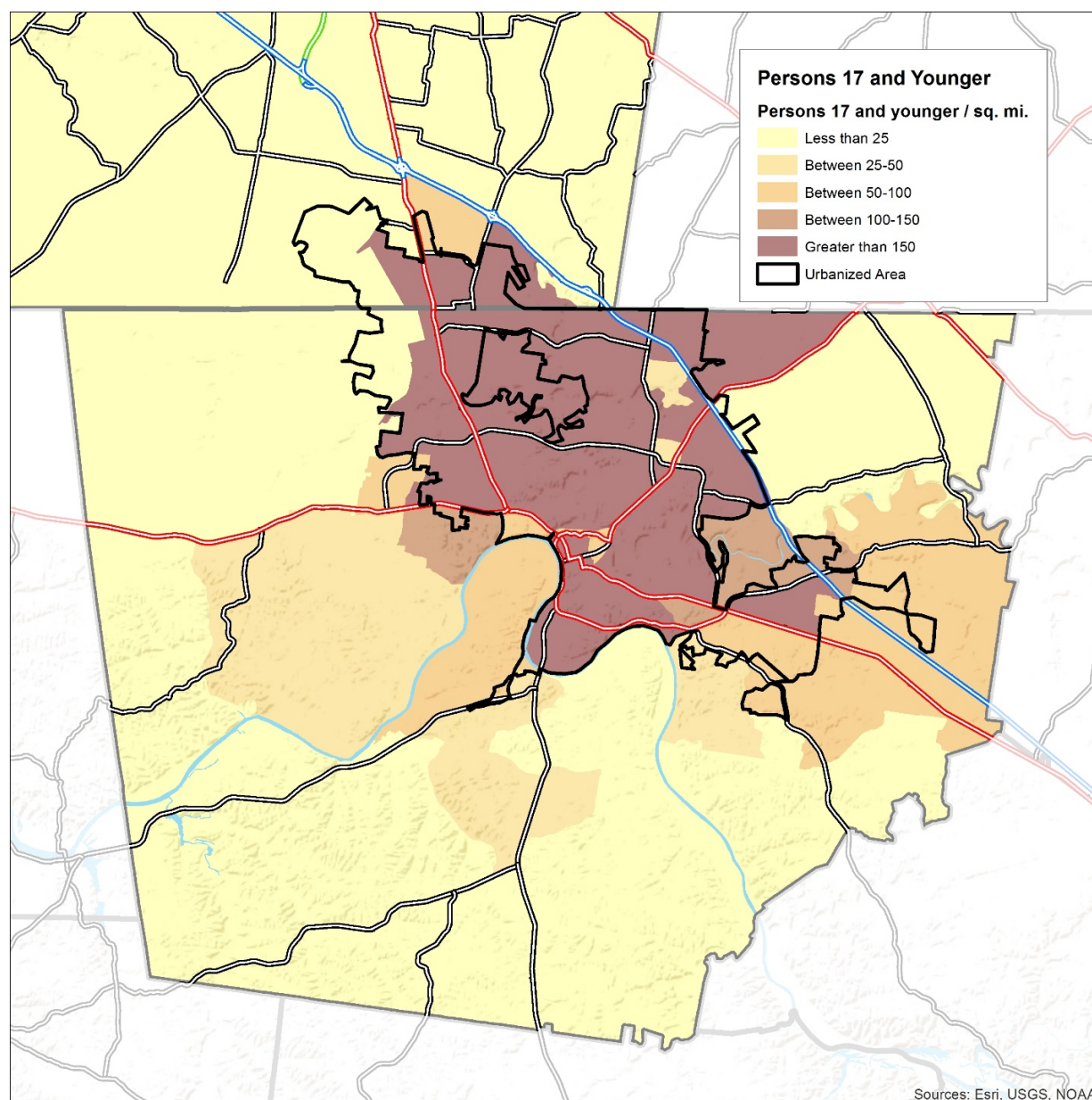
Figure 1-17: Population 65 Years and Up



Population 17 Years and Under

In the study area, persons 17 years and younger accounted for 28.6% of the total population. Densities of persons 17 and younger are shown in Figure 1-18. Although high populations are throughout the study area, the densest clusters of younger persons correlate with higher general population densities in the Urbanized Area along Ft. Campbell Blvd. The higher densities of younger persons are most likely due to a higher concentration of population in these areas. On-board survey data showed that about 5% of CTS riders are under 18, this is significantly less than the 28.6% that makeup the total population. However, the Clarksville-Montgomery County School System provides buses for school trips. This indicates there may be opportunities for CTS to focus on riders between ages 11 and 17 to increase ridership among youth for non-school trips.

Figure 1-18: Population 17 Years and Under

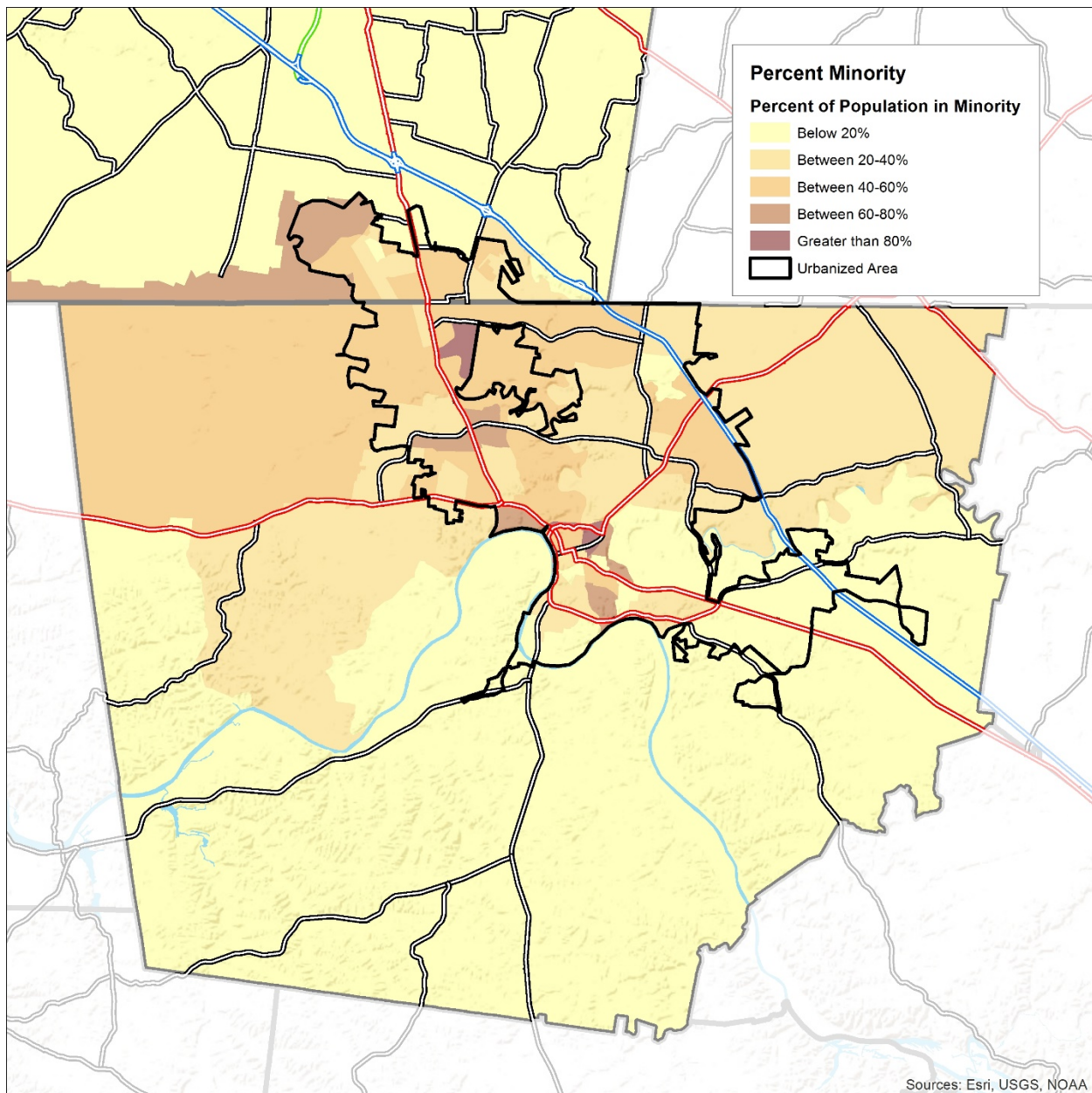


Minority Population

In the study area, minority populations accounted for 33.2% of the total population. The block groups and their minority percentages are shown in Figure 1-19. Although high populations are throughout the study area, the densest clusters of minority populations correlate with higher general population densities along Ft. Campbell Blvd. and near downtown Clarksville. Of the minority populations, 18.6% indicated that they are Black/African American and 8.6% indicated that they are Hispanic. 3.7% of the population is considered as Limited English Proficiency (LEP). Spanish is the most prevalent primary language used for the LEP population.

On-board survey data showed that for those riders who selected just one race or ethnicity, 41% are Black/African American, 37% are White, 3% are Hispanic/Latino, and 1% each for Asian and Native American. This appears to indicate that a majority of riders are minorities. CTS routes provide good access to high density minority population areas.

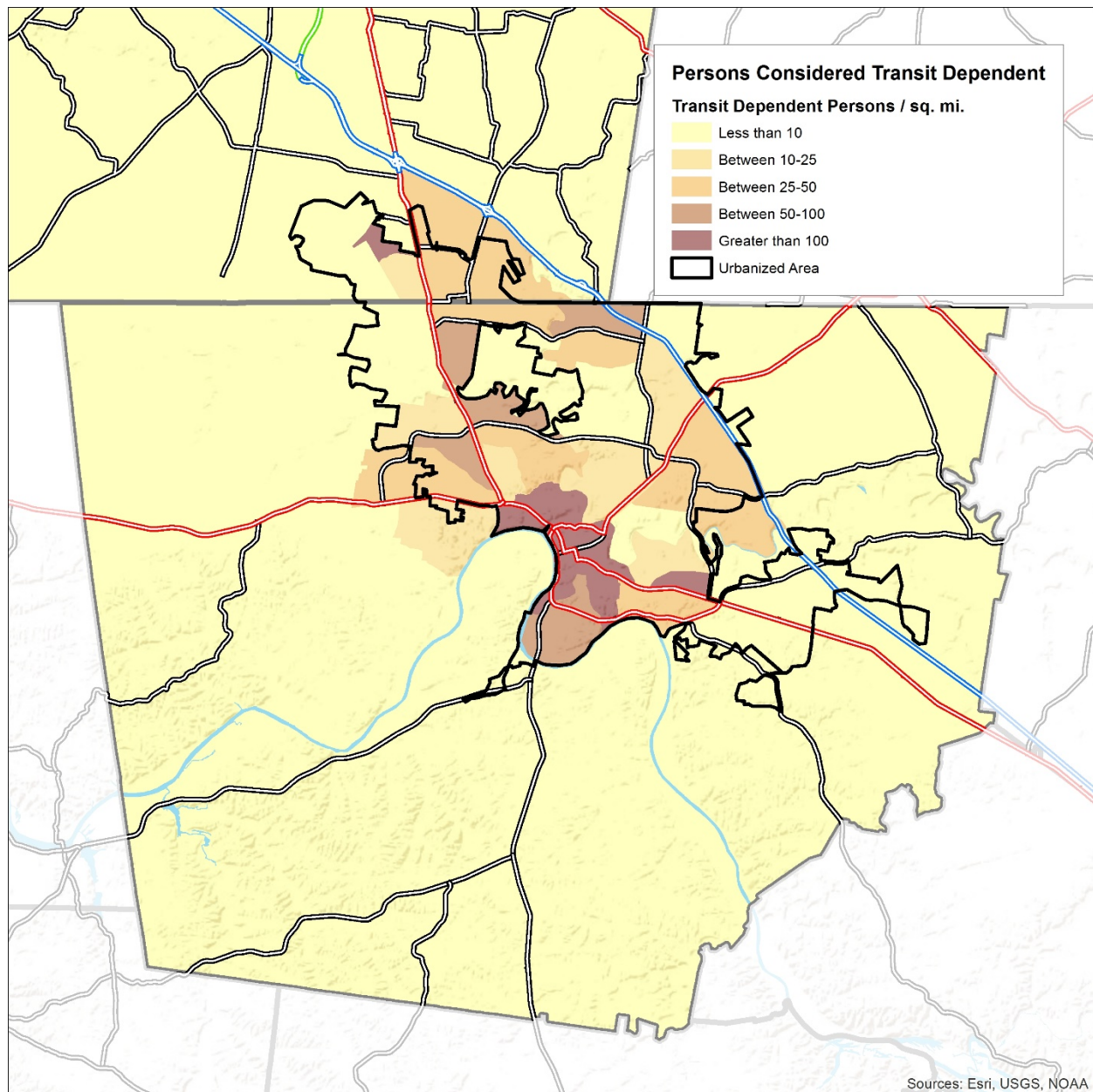
Figure I-19: Minority Population



Transit Dependent Population

The Federal Transit Administration defines “transit dependent persons” as individuals residing in households that do not own a car. According to 2013 ACS estimates, more than 4,500 of the approximately 130,638 people in the Urbanized Area do not have access to a vehicle. These people account for about 3.5% of the total number of population in the Urbanized Area compared to 3.8% in Montgomery and Christian Counties. Figure 1-20 shows the locations of high densities of persons considered transit dependent. According to census tract estimations, most of these persons live near downtown Clarksville. The on-board survey suggests that a large portion of CTS riders are transit dependent based on the results that 61% did not have a working vehicle in the household and 49% of households had incomes of \$12,000 or less.

Figure I-20: Transit Dependent Population



2.0 Analysis of Existing CTS Service

CTS provides fixed route and demand response transit services with the Clarksville Urbanized Area, which includes parts of Montgomery County, TN and parts of Christian County, KY. The CTS mission statement is to: “plan, implement, maintain, and manage a public transportation system that allows for maximum mobility for the community with emphasis on safety, quality, and efficiency.” CTS currently has 85.4 full-time equivalent positions. As part of the Fiscal Year (FY) 2017 budget request, 89 full-time equivalent positions are requested. Figure 2-1 shows the proposed CTS organizational chart.

CTS operates eight local fixed routes, an express route to connect with RTA’s service to Nashville at the Exit 8 park-and-ride lot, and a trolley service at APSU. The eight local fixed routes and express route leave from the downtown transit center located at 200 Legion Street. The fixed routes are listed below and are described further in Section 2.2:

- Route 1 – Fort Campbell
- Route 2 – Tiny Town Road
- Route 3 – Cunningham Loop
- Route 4 – Peachers Mill Road
- Route 5 – Hildale
- Route 6 – Madison Street
- Route 7 – Gov. Square Mall
- Route 8 – 101 Express/Gateway Medical Ctr.
- Route 812 – Transit Center to Exit 8
- Route 900 – Peay Pickup

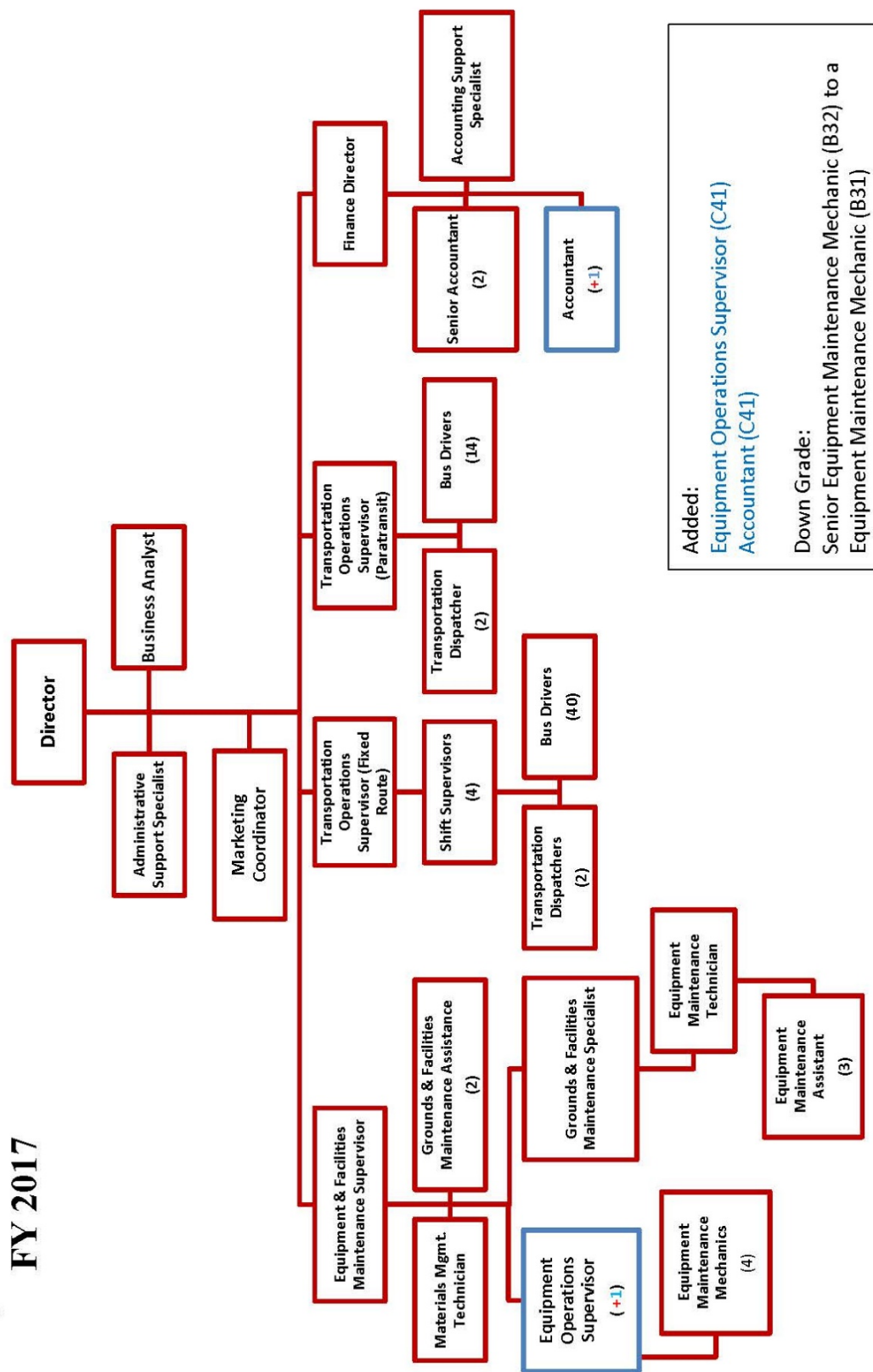
In addition to the fixed route services, CTS operates “The Lift” paratransit service for eligible riders. Eligibility is determined by CTS based on an application submitted by the potential rider. Although only required to provide paratransit service within three-quarter miles of fixed routes by the Federal Transit Administration, CTS currently provides paratransit throughout its service area. Paratransit service is discussed further in Section 2.5.

Several key performance CTS statistics are provided below:

- Since the 2010 Census, CTS has transported over 5,275,000 passengers, averaging approximately 64,300 passenger trips per month
- Since the 2010 Census, CTS has transported over 200,000 passengers on The Lift service, averaging approximately 2,440 passenger trips per month
- CTS transports approximately 5,800 APSU students monthly
- CTS transports approximately 4,500 senior citizens monthly
- Senior citizen ridership has increased by 102 percent since the start of the Senior Ride Free Program
- CTS transports approximately 1,500 children under age four monthly
- Commuter bus service to Nashville carries approximately 4,600 passengers monthly

Figure 2-1: Proposed CTS Organizational Chart

Clarksville Transit System Organization Chart FY 2017



Daily and annual mileage for fixed routes is summarized in Table 2-1 and Table 2-2. The distance of the route when the transit vehicle is transporting passengers (revenue miles) is noted as well as the distance to and from the transit garage (deadhead miles).

Table 2-1: CTS Fixed Route Miles – Weekday

Route	Revenue Miles	Trips Per Day	Deadhead Miles	Total Daily Miles
111 FIRST RUN	21.6	1	2.1	23.7
111	32.4	7	0	226.8
111 LAST RUN	21.6	1	2.1	23.7
112	32.4	8	4.2	263.4
211	40	7	4.2	284.2
212	40	6	4.2	244.2
311	17.1	15	4.4	260.9
313	17.1	12	4.4	209.6
411	17	15	4	259
511 FIRST RUN	24.8	1	0	24.8
511	30.8	7	2	217.6
512	30.8	7	4	219.6
512 LAST RUN	14	1	0	14
611 FIRST RUN	5.1	1	0	5.1
611	15.5	15	2.1	234.6
613 FIRST RUN	5.1	1	0	5.1
613	14	12	2.1	170.1
711	17	14	2.1	240.1
712	17	13	2.1	223.1
811	39	8	4	316
812 EXIT #8	19	4	4	80
DAYS OPERATED		257		20,560
813	39	7	4	277
813 LAST RUN	17	1	0	17
A.P.S.U. TROLLEY	2.5	36	4	94
DAYS OPERATED		137		12,878
TOTALS	529.8	200	60	3,934

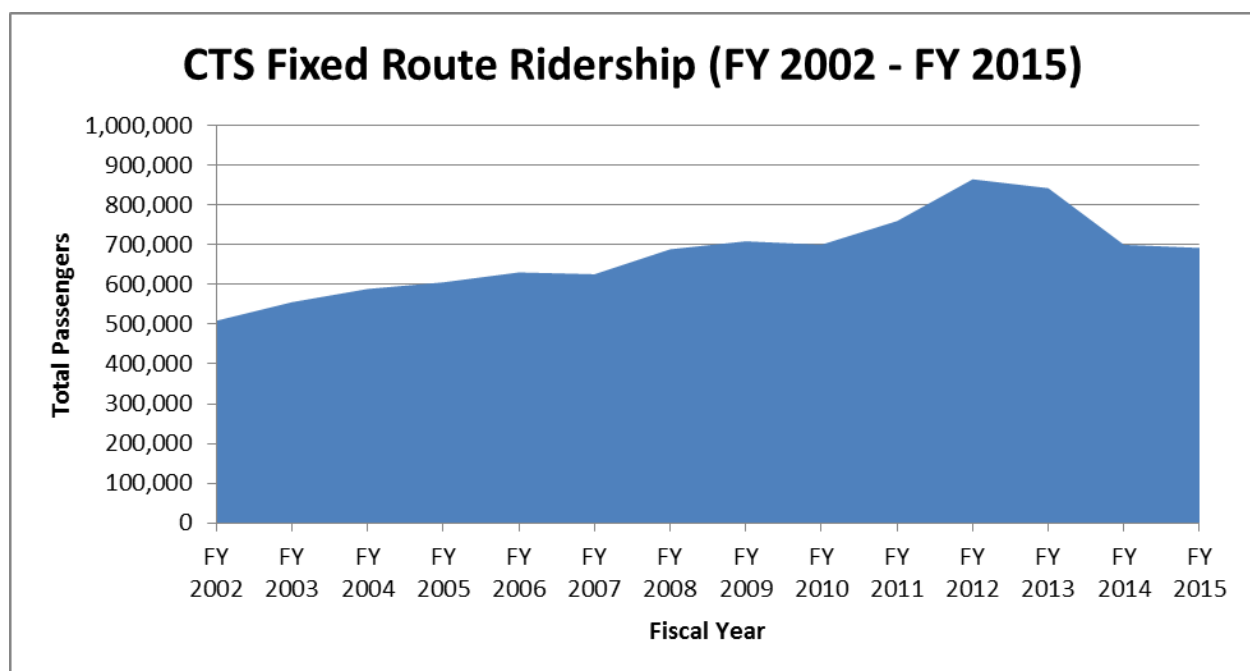
Table 2-2: CTS Fixed Route Miles – Weekend

Route	Revenue Miles	Trips Per Day	Deadhead Miles	Total Daily Miles
111 FIRST RUN	21.6	1	2.1	23.7
111	32.4	6	0	194.4
111 LAST RUN	21.6	1	2.1	23.7
112	32.4	7	4.2	231
211	40	6	4.2	244.2
212	40	6	4.2	244.2
311	17.1	14	4.4	243.8
411	17	14	4	242
511 FIRST RUN	24.8	1	0	24.8
511	30.8	6	0	184.8
511 LAST RUN	14	1	2	16

Route	Revenue Miles	Trips Per Day	Deadhead Miles	Total Daily Miles
512	30.8	7	4	219.6
611 FIRST RUN	5.1	1	0	5.1
611	15.5	15	2.1	234.6
711	16	13	2.1	210.1
712	16	12	2.1	194.1
811	39	7	4	277
813	39	6	4	238
TOTALS	453.1	124	45.5	3,051.1

Annual ridership for fixed routes is summarized in Figure 2-2. As noted in the figure, ridership increased between FY 2002 and FY 2012, and then has decreased since FY 2012. The decrease in ridership may be attributed in part to the CTS fare increase implemented in 2013 and the elimination of free transfers in 2014.

Figure 2-2: Summary of CTS Fixed Route Ridership



The current fares for fixed route and paratransit services are summarized in Table 2-3. Transfers were eliminated in 2014, meaning that riders had to pay the full fare when transferring from one route to another route. However, transfers have recently been reinstated allowing riders to complete one continuous trip for a \$0.25 transfer. The approved transfer locations are:

- CTS Transit Center
- Wal-Mart (Ft. Campbell Blvd.)
- St. B Wal-Mart (Wilma Rudolph Blvd.)
- Sango Wal-Mart (Madison St.)

Table 2-3: CTS Fares

Type	Fares	Passes
Fixed Route		
Full Fare	\$1.50	One Day:\$4 10-ride:\$15 31-day (Liberty Pass):\$50
Student (with I.D. card):	\$1.00	10-ride:\$10
65 & Over (with CTS Photo I.D.)	Free	N/A
Disabled (with CTS Photo I.D. card or Medicare card)	\$0.75	10-ride:\$7.50 31-day (Liberty Pass):\$25
City Employee (with City of Clarksville I.D.)	\$0.75	N/A
Children (age 4 and under)	Free	N/A
"The Lift" Paratransit		
Eligible Riders	\$2.50	N/A

CTS, 2016.

2.1 Vehicle Inventory

CTS operates a fleet of fixed-route vehicles and demand response vehicles as well as support vehicles for its operations. Its fixed-route vehicle inventory includes 21 Gillig buses and two Supreme Trolleys, which are used to serve the APSU route. The fixed-route vehicles have an average of 8.1 years of service and 413,984 miles per vehicle. Seating capacity ranges from 26 seats and two wheelchair positions to 30 seats with two wheelchair positions. The fleet is 74 percent diesel and 26 percent hybrid. The hybrid buses are newer models, either 2010 or 2015 model years. The condition of the fleet ranges from poor to excellent, based on years of service and mileage. The fixed-route vehicles are listed in Table 2-4.

Table 2-4: Fixed-Route Vehicle Inventory

CTS No.	Make	Model Year	Fuel	Seating (Seats + W/C)	FY 2016 Mileage	Years in Service	Condition
716	Gillig	2001	Diesel	29 + 2	836,221	15	Poor
709	Gillig	2003	Diesel	29 + 2	737,851	13	Poor
711	Gillig	2003	Diesel	29 + 2	756,615	13	Poor
717	Gillig	2003	Diesel	29 + 2	754,635	13	Poor
718	Gillig	2005	Diesel	29 + 2	611,203	11	Poor
719	Gillig	2005	Diesel	29 + 2	639,980	11	Poor
720	Gillig	2005	Diesel	29 + 2	625,520	11	Poor
721	Gillig	2005	Diesel	29 + 2	638,385	11	Poor
T-2	Supreme Trolley	2005	Diesel	30 + 2	85,331	11	Fair
T-3	Supreme Trolley	2005	Diesel	30 + 2	84,663	11	Fair
722	Gillig	2006	Diesel	29 + 2	557,807	10	Poor

CTS No.	Make	Model Year	Fuel	Seating (Seats + W/C)	FY 2016 Mileage	Years in Service	Condition
723	Gillig	2006	Diesel	29 + 2	556,615	10	Poor
724	Gillig	2006	Diesel	29 + 2	549,312	10	Poor
725	Gillig	2010	Diesel	26 + 2	342,665	6	Good
726	Gillig	2010	Diesel	26 + 2	341,203	6	Good
727	Gillig	2010	Diesel	26 + 2	294,795	5	Good
728	Gillig	2010	Hybrid	26 + 2	286,991	5	Good
729	Gillig	2010	Hybrid	26 + 2	286,479	5	Good
730	Gillig	2010	Hybrid	26 + 2	311,042	5	Good
731	Gillig	2015	Hybrid	26 + 2	55,641	1	Excellent
732	Gillig	2015	Hybrid	26 + 2	56,477	1	Excellent
733	Gillig	2015	Hybrid	26 + 2	56,415	1	Excellent
734	Gillig	2015	Diesel	26 + 2	55,781	1	Excellent
				Total: 639 + 46	Average: 413,984	Average: 8.1	

CTS Vehicle Fleet, 2016.

CTS has a fleet of 12 demand-response vehicles, comprised of Ford and Dodge makes. The demand-response fleet has an average of 5.2 years of service and 171,168 miles per vehicle. Seating capacity ranges from five seats and two wheelchair positions to 12 seats with two wheelchair positions. The fleet is entirely gasoline powered. The condition of the fleet ranges from fair to excellent, based on years of service and mileage. The demand-response vehicles are listed in Table 2-5.

Table 2-5: Demand-Response Vehicle Inventory

CTS No.	Make	Model Year	Fuel	Seating (Seats + W/C)	FY 2016 Mileage	Years in Service	Condition
523	Ford E150 Conv Van	2009	Gasoline	7 + 2	243,484	7	Fair
524	Ford E150 Conv Van	2009	Gasoline	7 + 2	221,065	7	Fair
525	Ford E150 Conv Van	2009	Gasoline	7 + 2	238,362	7	Fair
526	Ford E150 Conv Van	2009	Gasoline	7 + 2	248,300	7	Fair
527	Ford E150 Conv Van	2009	Gasoline	7 + 2	228,036	7	Fair
528	Ford / Goshen Coach	2009	Gasoline	12 + 2	231,440	7	N/A
529	Ford / Goshen Coach	2009	Gasoline	12 + 2	230,538	7	N/A
530	Ford / Goshen Coach	2010	Gasoline	12 + 2	234,419	6	Fair
531	Dodge Grand Caravan Van	2013	Gasoline	5 + 2	53,941	3	N/A
532	Dodge Grand Caravan Van	2014	Gasoline	5 + 2	25,895	2	N/A
533	Ford E150 Conv Van	2014	Gasoline	7 + 2	54,868	1	N/A
534	Ford E450 StarTran	2015	Gasoline	12 + 2	43,663	1	Excellent
				Total: 100 + 24	Average: 171,168	Average: 5.2	

CTS Vehicle Fleet, 2016.

Pictures of current CTS vehicles, shelters, and signs are shown in Figure 2-3:

Figure 2-3: CTS Vehicles, Shelters, and Signs

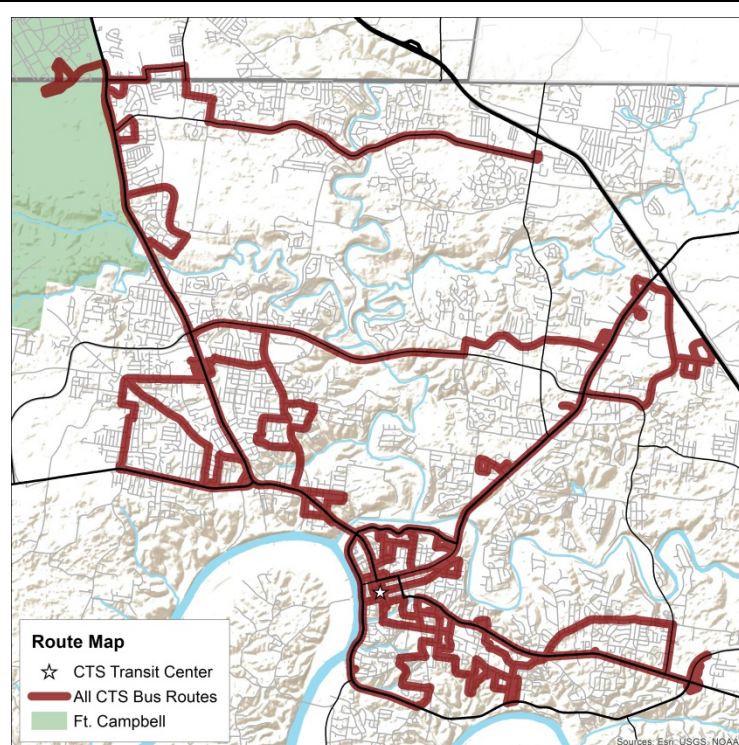


2.2 Route Fact Book

The route fact book summarizes the key operational, performance, and demographic indicators of the CTS fixed routes along with a description of the strengths, challenges, and opportunities. The indicators are based on CTS performance data from FY 2015 and demographic data from the 2013 American Community Survey.

The annual operating costs for each route were estimated by multiplying the average system operating cost per hour by the annual miles performed by each route. The average system operating cost per hour was derived by dividing FY 2015 operating expenses (\$5,631,841) by FY 2015 total service hours (65,954), resulting in an operating cost of \$85.39 per hour. The farebox recovery was calculated by dividing route revenue by the annual operating cost.

All Routes*



Block Groups analyzed for demographics: 471251018022, 471251013042, 471251013032, 471251020012, 471251020053, 471251010012, 471251009002, 471251004002, 471251020021, 471251020041, 471251020054, 471251006011, 471251006022, 471251006021, 471251008001, 471251011024, 471251020031, 471251013033, 471251013063, 471251012011, 471251010021, 471251010011, 471251011023, 471251011022, 471251012022, 471251014003, 471251014001, 471251013043, 471251013041, 471251010022, 471251020011, 471251003003, 471251018041, 471251018031, 471251012021, 471251013062, 471251011031, 471251014002, 471251013051, 471251020051, 471251013031, 471251020023, 471251019031, 471251005001, 471251005003, 471251007001, 471251007002, 471251005002, 471251008002, 471251001001, 471251002001, 471251002002, 471251003001, 471251003002, 471251004001, 471251009001, 471251011011, 471251013071, 210472013022, 210472015022, 210472013024

Operational

Length:	208.56 miles
Hours of Operation:	4:40 a.m. – 8:56 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$5,432,796
Annual Farebox Recovery:	8%

Performance

On-time performance:	86%
Daily ridership:	2,679
Annual ridership:	683,060
Passengers per hour:	10.7
Passengers per mile:	0.6
Net cost per passenger:	\$7.95

Demographics

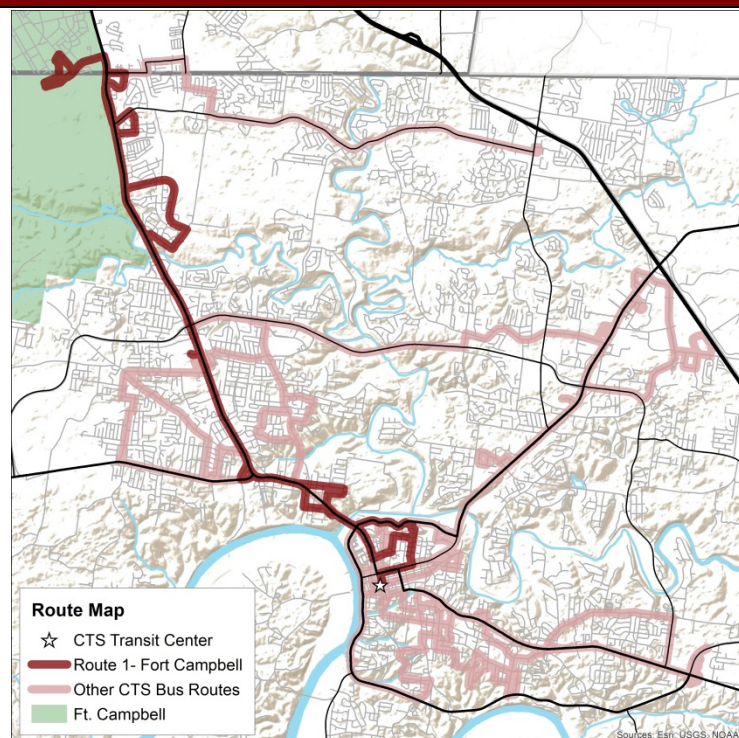
Population Density:	1325.0/ sq. mi.
Persons below poverty level:	18.6%
Zero Vehicle Households:	4.9%
Persons with disabilities:	7.0%
Population 65 years and up:	7.0%
Population 17 years and under:	28.4%
Minority Population:	39.6%
Transit Dependent Population:	3.2%

Strengths, Challenges, and Opportunities

Overall, CTS does a good job providing transit service for a large area with low population density. Please see individual route profiles for more information.

*Includes all existing CTS fixed routes. Does not include express routes or the APSU Peay Pickup; CTS FY 2015 Data

Route 1 – Fort Campbell



Block Groups analyzed for demographics: 471251013042, 471251010012, 471251009002, 471251008001, 471251011024, 471251013063, 471251012011, 471251010011, 471251012022, 471251014003, 471251014001, 471251013043, 471251013041, 471251012021, 471251013062, 471251011031, 471251013051, 471251013031, 471251008002, 471251001001, 471251009001, 471251011011, 471251013071, 210472013022, 210472015022

Operational

Length (round-trip):	31.25 miles
Average Travel Time (round-trip):	1 hr. 48 min.
Average Frequency:	1 hr.
Hours of Operation:	4:40 a.m. – 8:56 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$786,300
Annual Farebox Recovery:	11%

Performance

On-time performance:	90%
Daily ridership:	412
Annual ridership:	104,992
Passengers per hour:	11.4
Passengers per mile:	0.7
Net cost per passenger:	\$7.49

Demographics

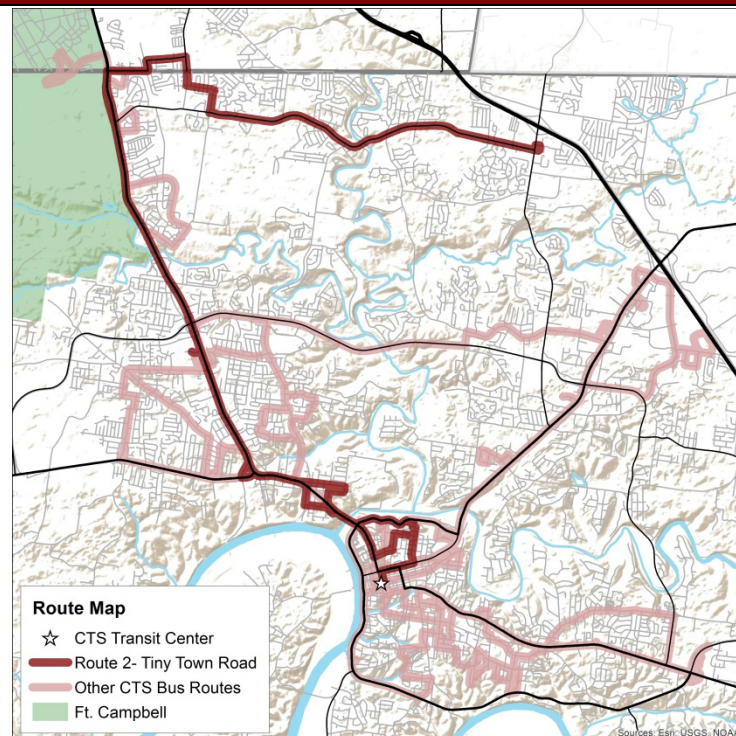
Population Density:	1291.9/ sq. mi.
Persons below poverty level:	24.0%
Zero Vehicle Households:	5.4%
Persons with disabilities:	7.3%
Population 65 years and Over:	5.6%
Population 17 years and Under:	29.0%
Minority Population:	47.9%
Transit Dependent Population:	3.2%

Strengths, Challenges, and Opportunities

This route serves Ft. Campbell and is the route with the second highest ridership. It is the third longest route and is the first to begin operation, starting at 4:40 a.m. Considering the route length and extended hours of operation, the passengers per mile and passengers per hour are acceptable. This route faces some challenges in that it serves one of the lowest density areas of Clarksville. An opportunity exists to increase ridership of soldiers and employees originating to and from the Ft. Campbell military base.

CTS FY 2015 Data

Route 2 – Tiny Town Road

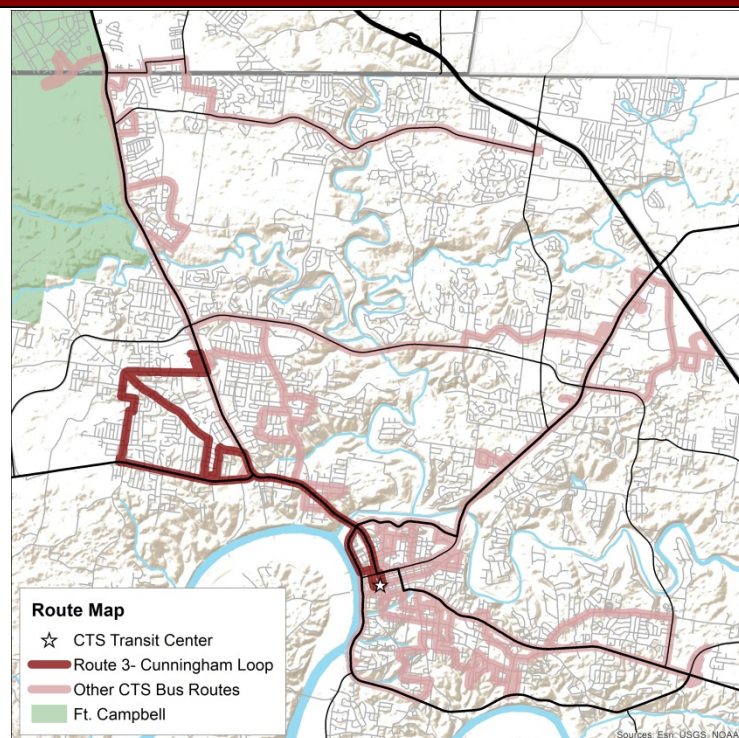


Block Groups analyzed for demographics: 471251013042, 471251013032, 471251010012, 471251009002, 471251020041, 471251020054, 471251008001, 471251011024, 471251020031, 471251013033, 471251013063, 471251012011, 471251010011, 471251012022, 471251013043, 471251013041, 471251012021, 471251013062, 471251011031, 471251014002, 471251013051, 471251013031, 471251008002, 471251001001, 471251009001, 471251011011, 471251013071, 210472013022, 210472013024

Operational	
Length (round-trip):	39.21 miles
Average Travel Time (round-trip):	1 hr. 48 min.
Average Frequency:	1 hr.
Hours of Operation:	6:30 a.m. – 8:18 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$672,705
Annual Farebox Recovery:	10%
Performance	
On-time performance:	86%
Daily ridership:	328
Annual ridership:	83,612
Passengers per hour:	10.6
Passengers per mile:	0.5
Net cost per passenger:	\$8.05
Demographics	
Population Density	1473.3/ sq. mi.
Below Poverty	19.8%
Zero Vehicle Households	4.9%
Persons with Disabilities	7.1%
Population 65 Years and Up	5.1%
Population 17 Years and Under	29.6%
Minority Population	48.2%
Transit Dependent Population	3.1%
Strengths, Challenges, and Opportunities	
This route is one of the longest at nearly 40 miles. It parallels Rt. 1 Ft. Campbell for a significant portion of its routing. Together with Rt. 1, this provides effective trunk service along Ft. Campbell Blvd. It also serves the lower density communities near Ft. Campbell and the airfield; however, it also serves the growing communities along Tiny Town Rd. There may be opportunities to split off the portion of the route that travels along Tiny Town road and create a new route that continues south near the interstate to the employment opportunities at Industrial Park.	

CTS FY 2015 Data

Route 3 – Cunningham Loop

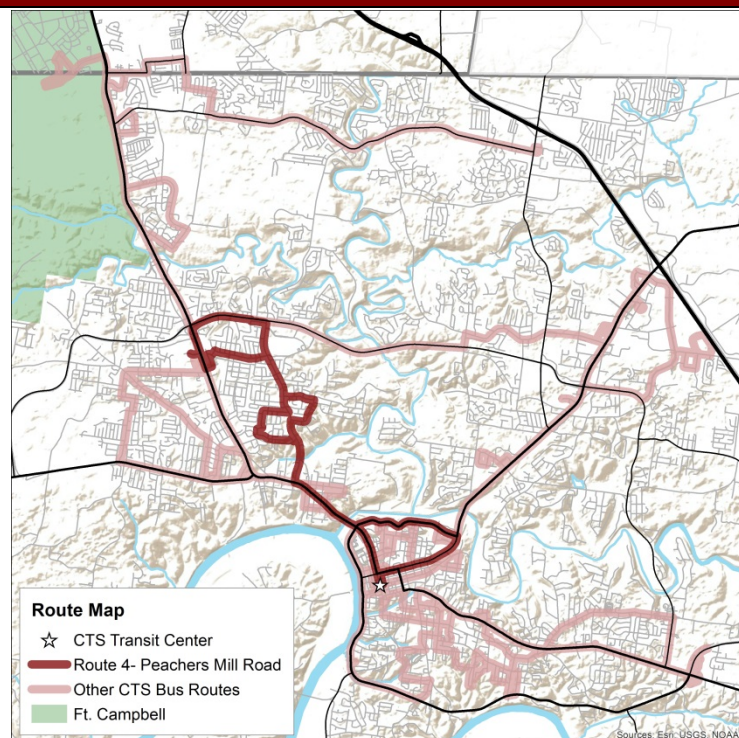


Block Groups analyzed for demographics: 471251010012, 471251009002, 471251008001, 471251011024, 471251012011, 471251010011, 471251011023, 471251011022, 471251011031, 471251008002, 471251001001, 471251009001, 471251011011, 471251013071

Operational	
Length (round-trip):	16.95 miles
Average Travel Time (round-trip):	50 min.
Average Frequency:	30 min.
Hours of Operation:	6:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$650,076
Annual Farebox Recovery:	11%
Performance	
On-time performance:	90%
Daily ridership:	378
Annual ridership:	96,418
Passengers per hour:	12.7
Passengers per mile:	0.7
Net cost per passenger:	\$6.74
Demographics	
Population Density	1621.9/ sq. mi.
Below Poverty	29.7%
Zero Vehicle Households	7.5%
Persons with Disabilities	9.2%
Population 65 Years and Up	7.6%
Population 17 Years and Under	27.0%
Minority Population	47.1%
Transit Dependent Population	5.0%
Strengths, Challenges, and Opportunities	
<p>The population density along this route is the second highest for the system. It also serves an area with the second highest population of 17 and under, and serves the second highest area of poverty at nearly 30%. This route is ranked second overall in terms of performance, and it does very well on farebox recovery. Due to the high population density and higher ratio of persons 17 and under, there may be opportunities to increase ridership from middle- to high-school children.</p>	

CTS FY 2015 Data

Route 4 – Peachers Mill

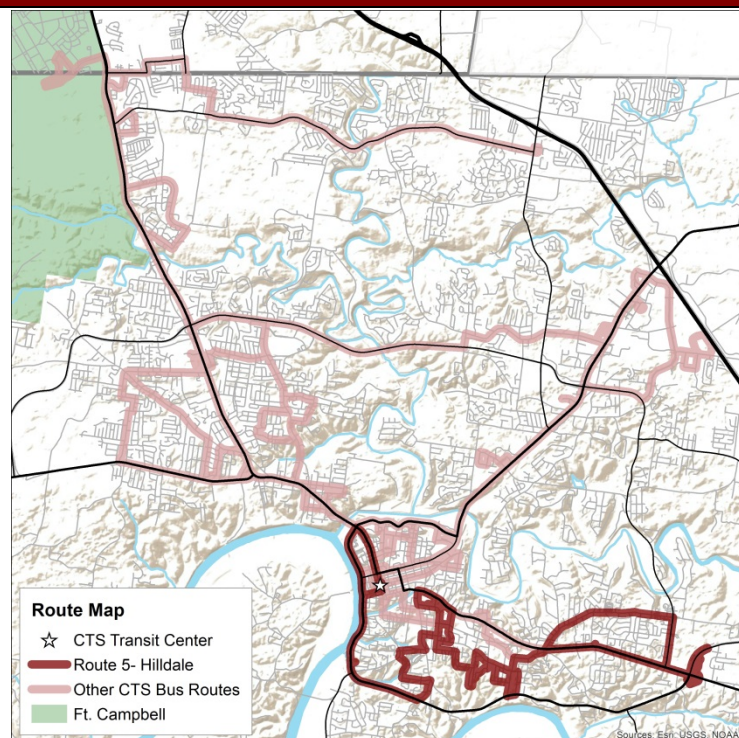


Block Groups analyzed for demographics: 471251010012, 471251009002, 471251008001, 471251013063, 471251012011, 471251010021, 471251010011, 471251010022, 471251008002, 471251001001, 471251009001, 471251013071

Operational	
Length (round-trip):	17.87 miles
Average Travel Time (round-trip):	50 min.
Average Frequency:	1 hr.
Hours of Operation:	6:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$388,782
Annual Farebox Recovery:	7%
Performance	
On-time performance:	83%
Daily ridership:	154
Annual ridership:	39,294
Passengers per hour:	8.6
Passengers per mile:	0.5
Net cost per passenger:	\$9.84
Demographics	
Population Density	1773.2/ sq. mi.
Below Poverty	32.6%
Zero Vehicle Households	8.8%
Persons with Disabilities	8.6%
Population 65 Years and Up	7.0%
Population 17 Years and Under	25.9%
Minority Population	54.1%
Transit Dependent Population	5.6%
Strengths, Challenges, and Opportunities	
<p>This is the third shortest route in terms of distance. It serves the highest density area, and serves the highest proportion of both poverty and minority households. However, the overall rating for this route is seventh. There are four one-way loops on this route and there may be some opportunities to modify the routing to remove some of these loops. In particular, the Jackson/Hillsboro loop could be eliminated as riders in this area also have easy access to existing Routes 1 and 2 on Ft. Campbell Blvd. The Bancroft loop could be considered as well. Elimination of either or both loops would speed up the service and reduce travel time for passengers.</p>	

CTS FY 2015 Data

Route 5 – Hilldale



Block Groups analyzed for demographics: 471251018022, 471251004002, 471251006011, 471251006022, 471251006021, 471251008001, 471251003003, 471251018041, 471251018031, 471251005001, 471251005003, 471251007001, 471251007002, 471251005002, 471251001001, 471251002001, 471251002002, 471251003001, 471251003002, 471251004001

Operational

Length (round-trip):	26.20 miles
Average Travel Time (round-trip):	1 hr. 50 min.
Average Frequency:	1 hr.
Hours of Operation:	6:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$791,039
Annual Farebox Recovery:	7%

Performance

On-time performance:	90%
Daily ridership:	335
Annual ridership:	85,424
Passengers per hour:	9.2
Passengers per mile:	0.6
Net cost per passenger:	\$9.26

Demographics

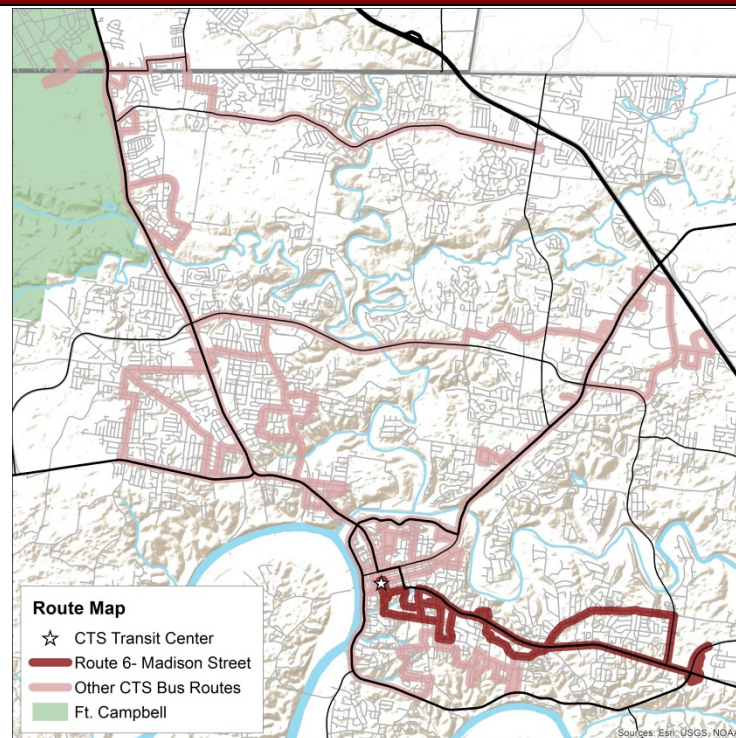
Population Density	1327.4/ sq. mi.
Below Poverty	21.3%
Zero Vehicle Households	7.9%
Persons with Disabilities	7.0%
Population 65 Years and Up	13.0%
Population 17 Years and Under	21.8%
Minority Population	25.2%
Transit Dependent Population	4.9%

Strengths, Challenges, and Opportunities

This route serves the second highest area of senior population and has a significant number of passengers using mobility devices. It ranks sixth overall. In an effort to serve this community, portions of the route include many turns and the routing itself is circuitous. Opportunities exist to potentially reduce the number of turns and simplify the routing as well as possibly shortening the route to turn around at Vista Lane. Both this route and Route 6 Madison Street duplicate coverage to Wal-Mart via Memorial and Madison St, although in reverse directions on the memorial loop. A transfer point for Route 5 and Route 6 would need to be identified. Simplification of this route combination could improve efficiency and travel time for passengers.

CTS FY 2015 Data

Route 6 – Madison Street



Operational	
Length (round-trip):	16.32 miles
Average Travel Time (round-trip):	50 min.
Average Frequency:	30 min.
Hours of Operation:	6:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$650,076
Annual Farebox Recovery:	9%

Performance	
On-time performance:	89%
Daily ridership:	466
Annual ridership:	118,765
Passengers per hour:	15.6
Passengers per mile:	1.0
Net cost per passenger:	\$5.47

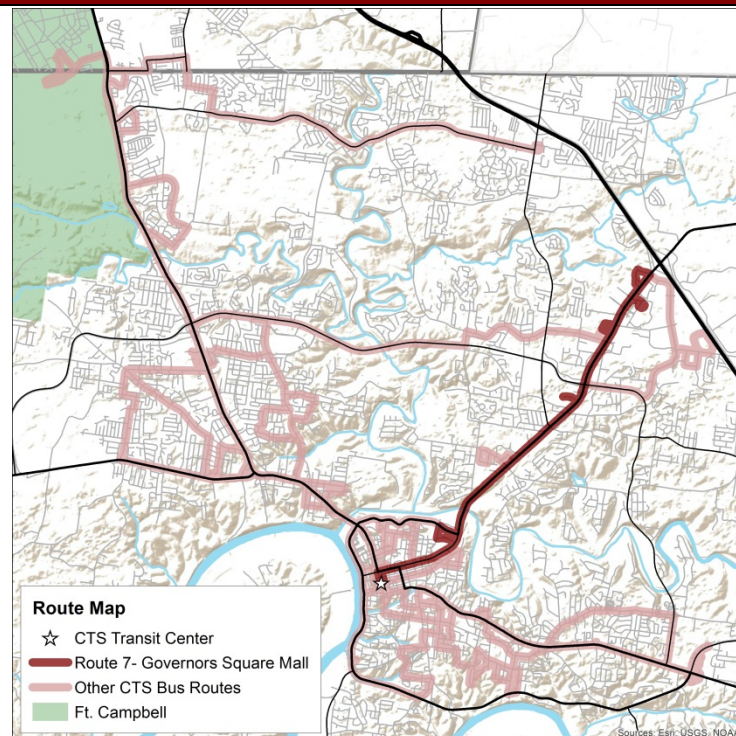
Demographics	
Population Density	1302.0/ sq. mi.
Below Poverty	19.3%
Zero Vehicle Households	7.7%
Persons with Disabilities	6.9%
Population 65 Years and Up	14.3%
Population 17 Years and Under	21.9%
Minority Population	24.0%
Transit Dependent Population	4.1%

Strengths, Challenges, and Opportunities

This route is the highest ridership route and ranks first overall. It is the second shortest route and serves the highest density senior population. All of the metrics on this route are excellent. One potential opportunity is to consider expanding the route southeastward on Madison toward Old Farmers Road. There are some high density communities located in this area as well as medical facilities that might be beneficial to passengers and these businesses. Under the current route configuration, there would not be time to implement this change; however future revisions to this route such as elimination of loops may provide time necessary for expansion.

CTS FY 2015 Data

Route 7 – Governors Square Mall

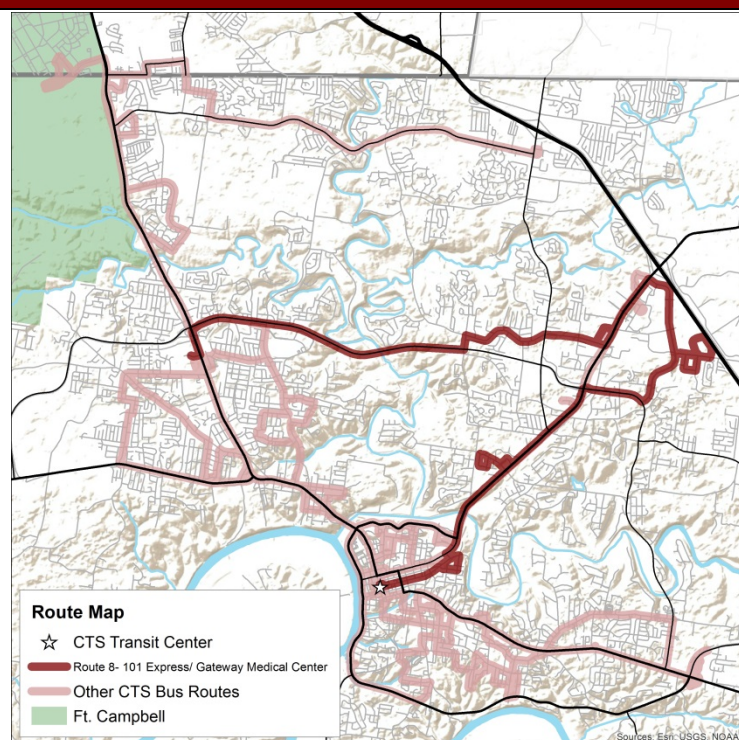


Block Groups analyzed for demographics: 471251020012, 471251020053, 471251008001, 471251020011, 471251020051, 471251019031, 471251008002, 471251001001

Operational	
Length (round-trip):	15.93 miles
Average Travel Time (round-trip):	50 min.
Average Frequency:	30 min.
Hours of Operation:	6:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$725,134
Annual Farebox Recovery:	7%
Performance	
On-time performance:	79%
Daily ridership:	384
Annual ridership:	98,036
Passengers per hour:	11.5
Passengers per mile:	0.7
Net cost per passenger:	\$7.40
Demographics	
Population Density	1088.0/ sq. mi.
Below Poverty	21.3%
Zero Vehicle Households	8.9%
Persons with Disabilities	7.0%
Population 65 Years and Up	5.4%
Population 17 Years and Under	20.5%
Minority Population	40.0%
Transit Dependent Population	5.2%
Strengths, Challenges, and Opportunities	
<p>Ranked fourth overall, this route serves as a major trunk line connecting downtown with Governors Square Mall and all of the businesses along Wilma Rudolph Blvd. This route is the shortest route in the system yet it is the lowest in on-time performance at 79%. This route is particularly challenging due to the heavy fluctuations of traffic. In an effort to serve destinations directly, this route also includes several small loops and one on-demand service area to the Social Security Office. One opportunity that could gain some travel time on this route would be to consider eliminating the Red River and Athletic Avenue loops. Although the routing is currently very convenient for passengers, the short walk-distances that would be added by removing the loops may end up in travel time savings.</p>	

CTS FY 2015 Data

Route 8 – 101 Express/ Gateway Medical Center

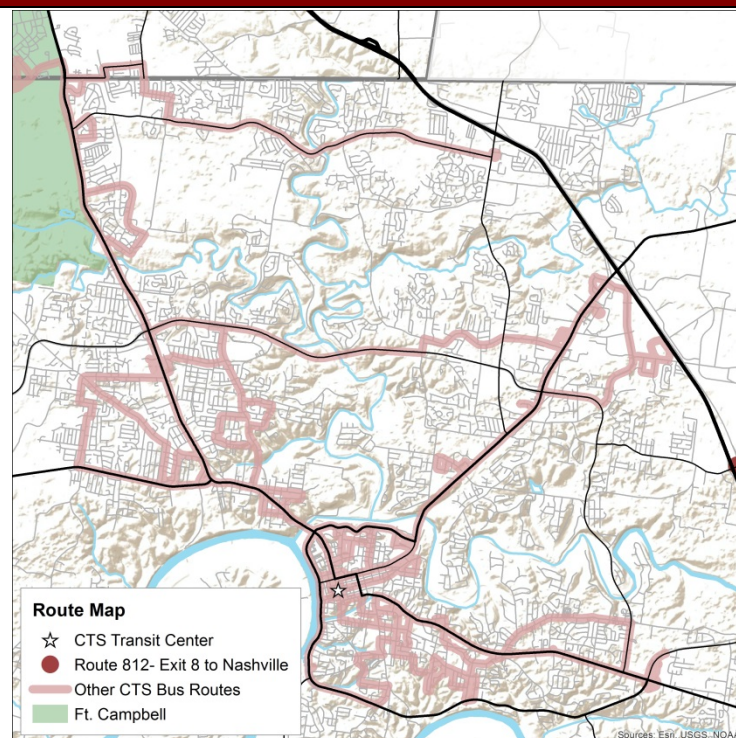


Block Groups analyzed for demographics: 471251020012, 471251020053, 471251020021, 471251012011, 471251010021, 471251020011, 471251020051, 471251020023, 471251019031, 471251007002, 471251008002, 471251001001, 471251013071

Operational	
Length (round-trip):	39.93 miles
Average Travel Time (round-trip):	1 hr. 50 min.
Average Frequency:	1 hr.
Hours of Operation:	5:00 a.m. – 8:50 p.m.
Days of Operation:	Monday – Saturday
Estimated Annual Operating Cost:	\$768,684
Annual Farebox Recovery:	5%
Performance	
On-time performance:	82%
Daily ridership:	222
Annual ridership:	56,519
Passengers per hour:	6.3
Passengers per mile:	0.3
Net cost per passenger:	\$13.60
Demographics	
Population Density	1296.7/ sq. mi.
Below Poverty	17.7%
Zero Vehicle Households	5.1%
Persons with Disabilities	7.0%
Population 65 Years and Up	5.3%
Population 17 Years and Under	28.5%
Minority Population	44.6%
Transit Dependent Population	3.7%
Strengths, Challenges, and Opportunities	
<p>This is the longest route at nearly 40 miles and ranks eighth overall. It also has the second earliest start time. This route faces several challenges in that it covers large swaths of the community that do not have significant population. Its current operation serves as both a cross-town connector and a connection into downtown and the medical center. It overlaps a significant leg of its service with Route 7 Governors Square Mall. Several opportunities exist on this route including, repurposing it as a cross-town connector only, potentially removing the service portion to downtown, and using Athletic Dr. to access the Gateway Medical Center (instead of Holiday Dr.). Businesses on Holiday Dr. would still be served as they are approximately 1,500 ft. from Wilma Rudolph Blvd.</p>	

CTS FY 2015 Data

Route 812 – Transit Center to Exit 8

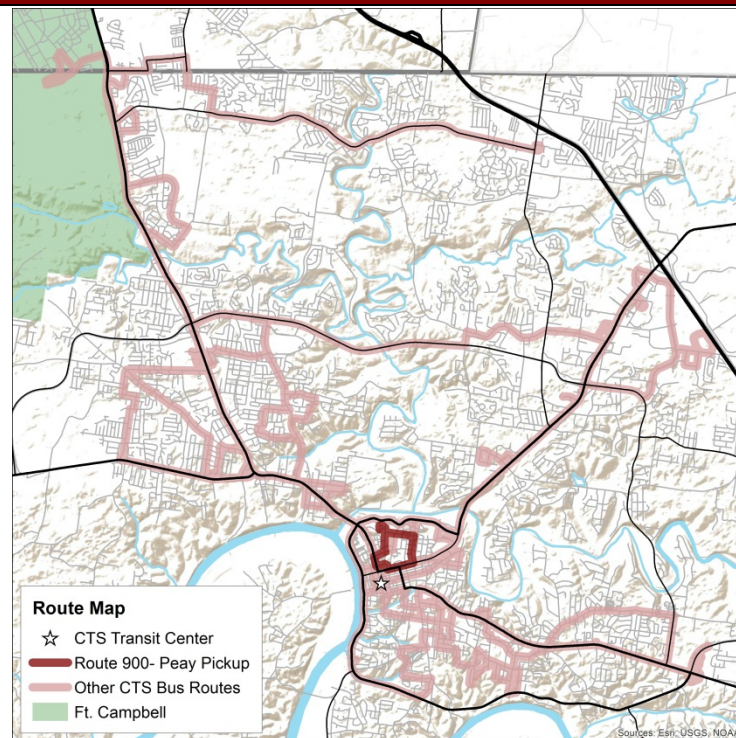


Demographics were not analyzed for this route, due to the nature of express commuter service between the transit center and Exit 8 Park & Ride lot.

Operational	
Length (round-trip):	N/A
Average Travel Time (round-trip):	45 min.
Average Frequency:	25 min.
Hours of Operation:	5:30 a.m. – 7:01 a.m. and 4:45 p.m. – 6:12 p.m.
Days of Operation:	Monday – Friday
Estimated Annual Operating Cost:	\$94,527
Annual Farebox Recovery:	Not available
Performance	
On-time performance:	Not available
Daily ridership:	11
Annual ridership:	2,866
Passengers per hour:	2.6
Passengers per mile:	Not available
Net cost per passenger:	\$32.98
Demographics	
Population Density	N/A
Below Poverty	N/A
Zero Vehicle Households	N/A
Persons with Disabilities	N/A
Population 65 Years and Up	N/A
Population 17 Years and Under	N/A
Minority Population	N/A
Transit Dependent Population	N/A
Strengths, Challenges, and Opportunities	
Due to lack of ridership and low performance metrics, it is recommended that this route be discontinued when the park and ride is moved to Exit 11.	

CTS FY 2015 Data

Route 900 – Peay Pickup



Block Groups analyzed for demographics: 471251008001, 471251001001

Operational	
Length (round-trip):	4.90 miles
Average Travel Time (round-trip):	15 min.
Average Frequency:	15 min.
Hours of Operation:	7:30 a.m. – 4:30 p.m.
Days of Operation:	Monday – Friday
Estimated Annual Operating Cost:	\$104,518
Annual Farebox Recovery:	N/A
Performance	
On-time performance:	Not available
Daily ridership:	52
Annual ridership:	7,114
Passengers per hour:	5.8
Passengers per mile:	0.6
Net cost per passenger:	\$14.69
Demographics	
Population Density	2491.1/ sq. mi.
Below Poverty	55.4%
Zero Vehicle Households	23.0%
Persons with Disabilities	8.2%
Population 65 Years and Up	3.2%
Population 17 Years and Under	8.1%
Minority Population	41.5%
Transit Dependent Population	15.9%
Strengths, Challenges, and Opportunities	
The trolley operates on an approximately 15 minute headway when APSU is in session. Due to the nature of this being fare free, it continues to be a popular alternative for the APSU students.	

CTS FY 2015 Data

2.3 Route Analysis

The CTS routes were analyzed based on data from FY 2015 contained in the Route Fact Book in order to identify routes that are performing below, at, or above the system average. This analysis focused on four route diagnostics:

- **Farebox Recovery:** This indicator measures the amount of individual route cost that is covered by patron fares.
- **Passengers per hour:** This analysis tool balances route level ridership with the amount of service (in platform hours), for each individual route in the system.
- **Passengers per mile:** This indicator is an efficiency rating to determine how many boardings each route maintains compared to route length.
- **Net cost per passenger:** This indicator compares routes based on the net operating cost and ridership levels that each route is able to maintain.

In order to determine a representative system average, similar CTS routes were grouped together. Routes 1 through 8 were grouped because they share similar characteristics: they are all fixed-routes that provide regular bus service from early morning into early evening. Routes 812 and 900 were grouped in an “other” category because they are express and campus shuttle services.

Table 2-6 summarizes the route diagnostics for the fixed routes and Table 2-7 summarizes Routes 812 and 900. The color coding compares the route diagnostic to the system average where red is less than the system average, yellow at the system average, and green above the system average.

Table 2-6: Existing CTS Fixed Route Summary

Route	Farebox Recovery (FR)	Pax/Hour	Pax/Mile	Net Cost/Pax
Route 1 – Fort Campbell	10.6%	11.40	0.65	\$7.49
Route 2 – Tiny Town Road	10.1%	10.61	0.52	\$8.05
Route 3 – Cunningham Loop	10.7%	12.66	0.73	\$6.74
Route 4 – Peachers Mill Road	7.4%	8.63	0.50	\$9.89
Route 5 – Hilldale	7.3%	9.22	0.60	\$9.26
Route 6 – Madison Street	8.8%	15.60	1.01	\$5.47
Route 7 – Gov. Square Mall	6.8%	11.54	0.74	\$7.40
Route 8 – 101 Express/Gateway Medical Ctr.	5.2%	6.28	0.31	\$13.60
System Average	8%	10.7	0.6	\$8.49

Color Coding: Red: 0 to 20% of system average, Orange: 20 to 40%, Yellow: 40 to 60%, Light Green: 60 to 80%, Dark Green: 80 to 100%

Table 2-7: Existing CTS Other Routes Summary

Route	Farebox Recovery (FR)	Pax/Hour	Pax/Mile	Net Cost/Pax
Route 812 – Transit Center to Exit 8	N/A	7.5	N/A	\$11.40
Route 900 – Peay Pickup	0%	5.8	0.56	\$14.69

Color Coding: Red: 0 to 20% of system average, Orange: 20 to 40%, Yellow: 40 to 60%, Light Green: 60 to 80%, Dark Green: 80 to 100%

The percent of system average was calculated for the route diagnostics of each route, which allows for identification of underperforming, average, and over performing routes. Percent of system average is shown in Table 2-8 for each route.

Table 2-8: Percent of System Average for Existing CTS Fixed Routes

Route	Farebox Recovery (FR)	Pax/Hour	Pax/Mile	Net Cost/Pax
Route 1 – Fort Campbell	126.6%	106.1%	102.7%	88.2%
Route 2 – Tiny Town Road	121.0%	98.8%	82.5%	94.8%
Route 3 – Cunningham Loop	127.4%	117.9%	115.6%	79.4%
Route 4 – Peachers Mill Road	88.9%	80.3%	79.0%	116.6%
Route 5 – Hilldale	86.8%	85.8%	94.3%	109.1%
Route 6 – Madison Street	105.5%	145.2%	159.6%	64.5%
Route 7 – Gov. Square Mall	81.1%	107.4%	117.2%	87.1%
Route 8 – 101 Express/Gateway Medical Ctr.	62.7%	58.4%	49.1%	160.2%

Color Coding: Red: 0 to 20% of system average, Orange: 20 to 40%, Yellow: 40 to 60%, Light Green: 60 to 80%, Dark Green: 80 to 100%

Existing fixed routes were then assigned points based on percent of system average in order to determine a composite score. Points for farebox recovery, passengers per hour, and passengers per mile were assigned points as follows:

- 1 point for values between 0 and 20% of the system average
- 2 points for values between 20 and 40% of the system average
- 3 points for values between 40 and 60% of the system average
- 4 points for values between 60 and 80% of the system average
- 5 points for values between 80 and 100% of the system average

The inverse of this point scheme was used for net cost per passenger as a higher net cost per passenger is less desirable. The points assigned to each of the four route diagnostics were summed to a result in a composite score for each route. Following this methodology, Route 6 was the best performing route with a composite score of 29 while Route 8 was the worst performing route with a score of 4. The ranking results are presented in Table 2-9.

Table 2-9: Existing CTS Fixed Route Ranking

Overall Ranking	Route	FR Points ¹	Pax/Hour Points ¹	Pax/Mile Points ¹	Net Cost/Pax Points ²	Total Points
3	Route 1 – Fort Campbell	7	5	5	5	22
5	Route 2 – Tiny Town Road	6	4	3	4	17
2	Route 3 – Cunningham Loop	8	7	6	7	28
7	Route 4 – Peachers Mill Road	4	2	2	2	10
6	Route 5 – Hilldale	3	3	4	3	13
1	Route 6 – Madison Street	5	8	8	8	29
4	Route 7 – Gov. Square Mall	2	6	7	6	21
8	Route 8 – 101 Express/Gateway Medical Ctr.	1	1	1	1	4

¹ Ranked in ascending order such that routes higher than the system average receive more points, ² Ranked in descending order such that routes higher than the system average receive fewer points

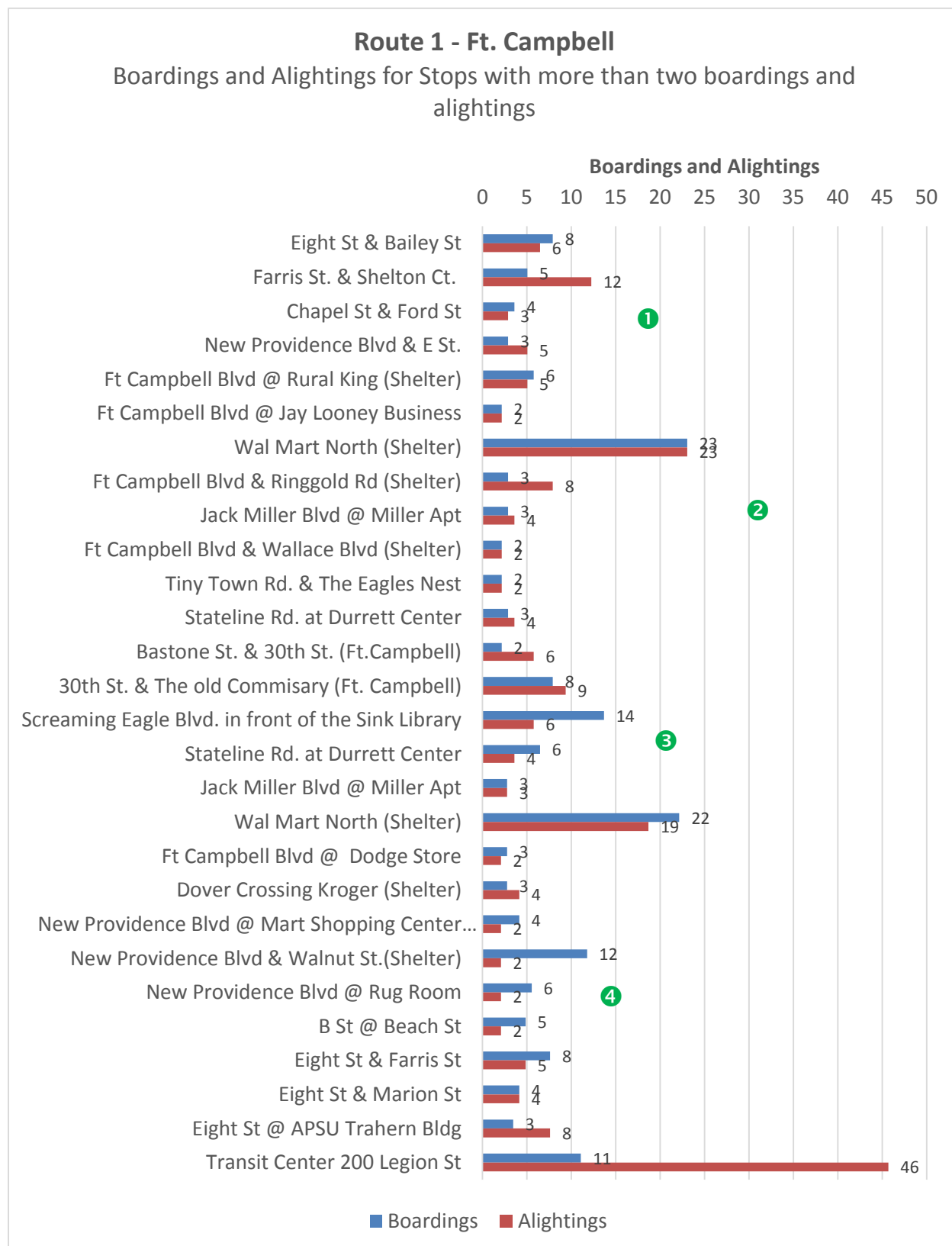
2.4 Ridership and Stop Analysis

In addition to conducting the route analysis, CTS ridership was analyzed at the stop level. A ridecheck survey was completed at the end of March 2016 through the beginning of April 2016 to manually count riders boarding and alighting from CTS vehicles at specific stops. The routes were surveyed for the inbound and outbound directions using a listing of stops provided by CTS. The survey was conducted in partnership with Transit Insight and AECOM, and Austin Peay State University (APSU). Routes were surveyed at different times of the day in order to account for changes in ridership based on time. The results from the survey provide insight into the performance of individual route segments and identify stops that are more popular than others. Survey results are shown graphically for the outbound and inbound portions of the following routes:

- Figure 2-4: Route 1 – Fort Campbell
- Figure 2-5: Route 2 – Tiny Town Road
- Figure 2-6: Route 3 – Cunningham Loop
- Figure 2-7: Route 4 – Peachers Mill Road
- Figure 2-8: Route 5 – Hilldale
- Figure 2-9: Route 6 – Madison Street
- Figure 2-10: Route 7 – Gov. Square Mall
- Figure 2-11: Route 8 – 101 Express/Gateway Medical Ctr.

The graphs show the total boardings and alightings for a “typical day” of service based on averages from the survey. Boardings are represented by blue bars and alightings by red bars. Some bus stops with higher ridership are indicated on the graph by a green number. These numbers are correlated on the individual route maps to provide general guidance for locating these stop locations along the route. More detail on the boardings and alightings of each stop is available in Appendix E.

Figure 2-4: Route 1 Ridership by Stop



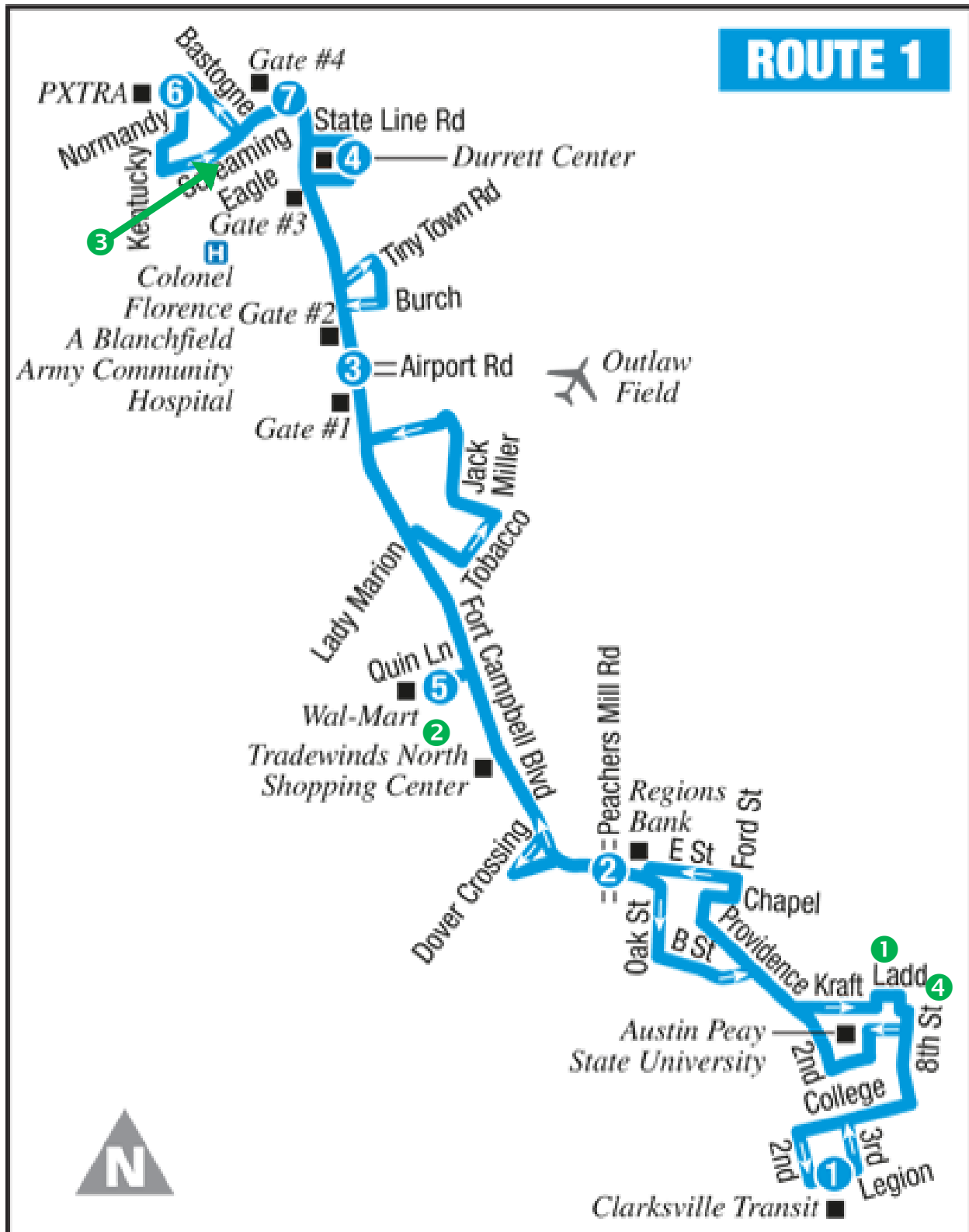
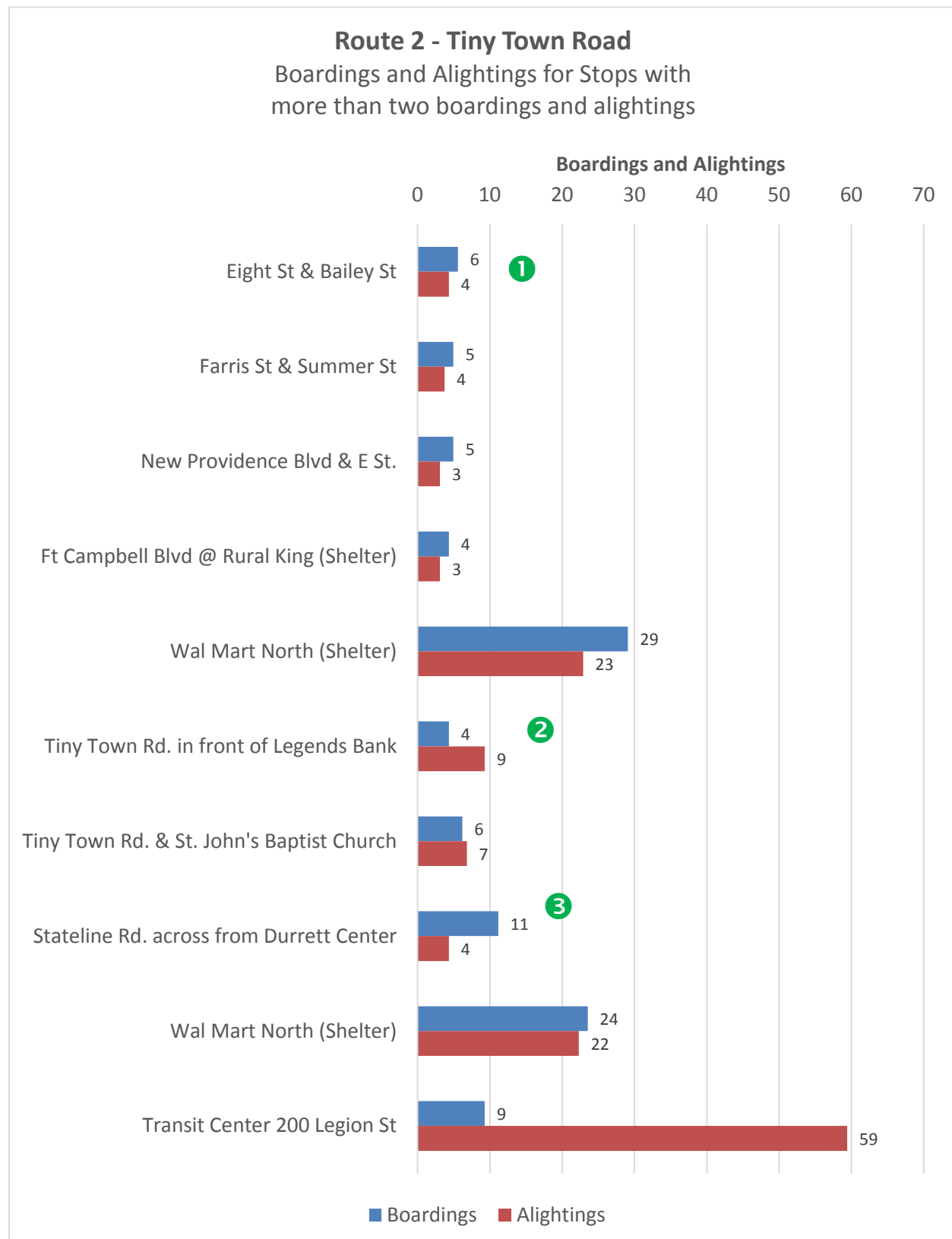


Figure 2-5: Route 2 Ridership by Stop



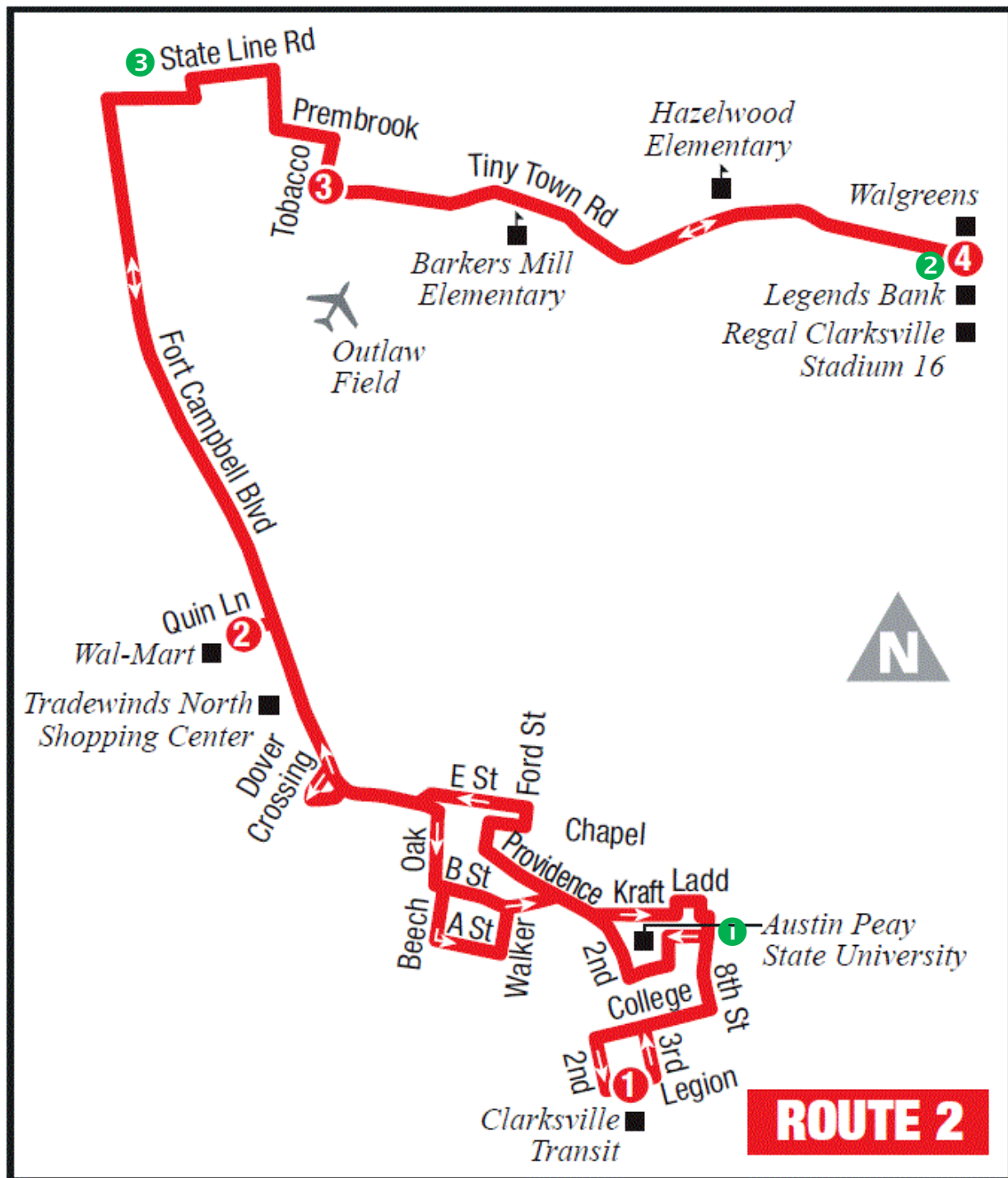


Figure 2-6: Route 3 Ridership by Stop

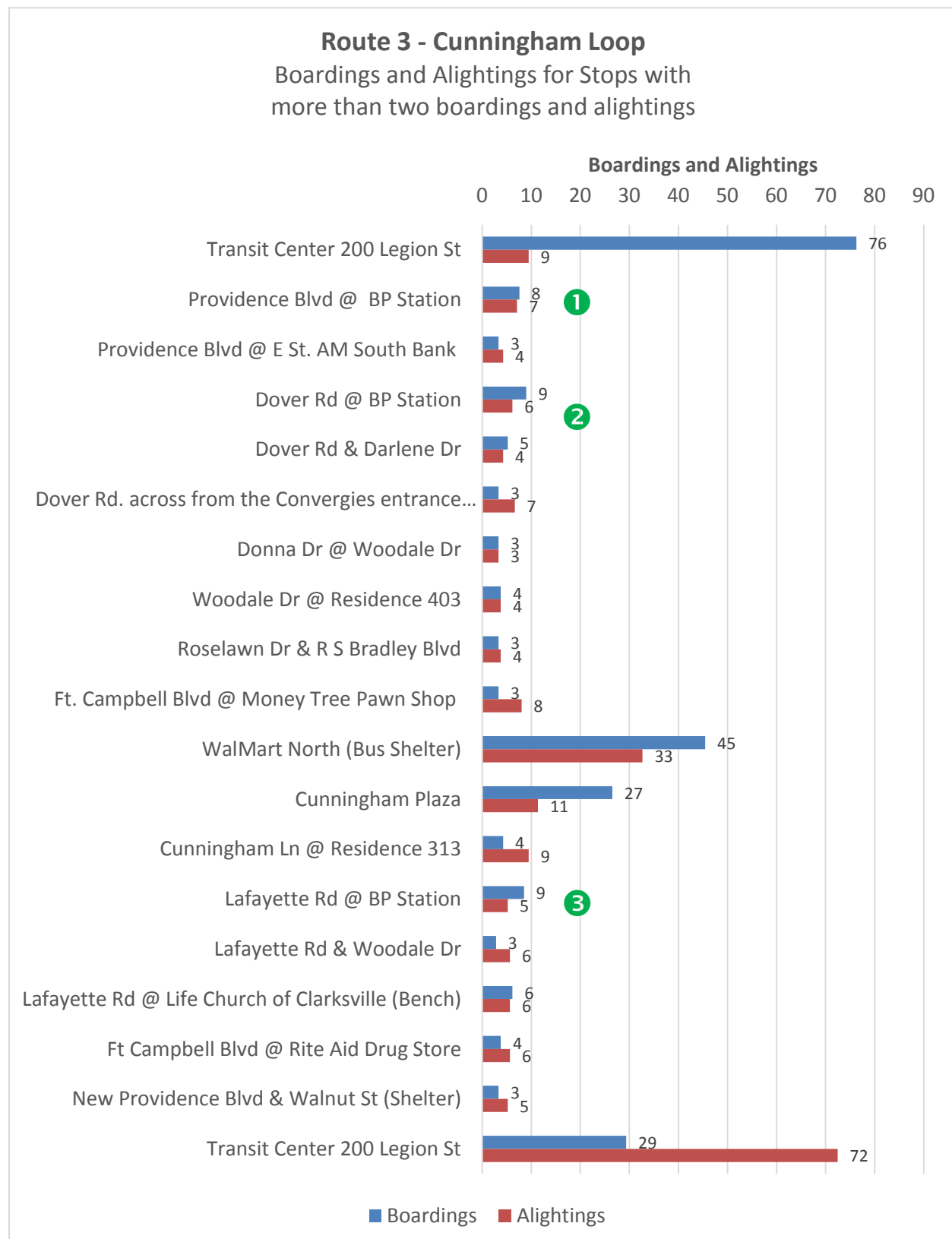
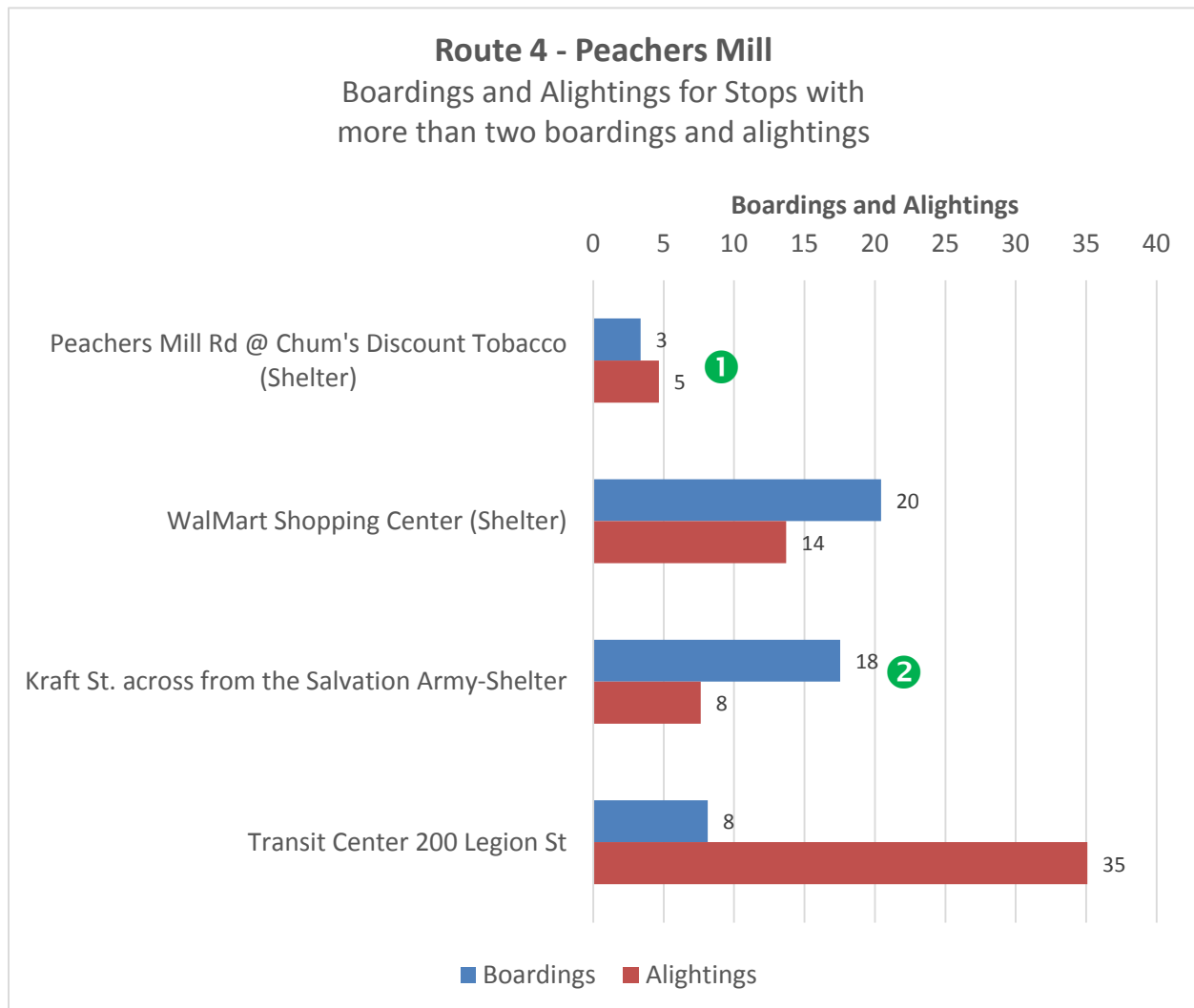




Figure 2-7: Route 4 Ridership by Stop



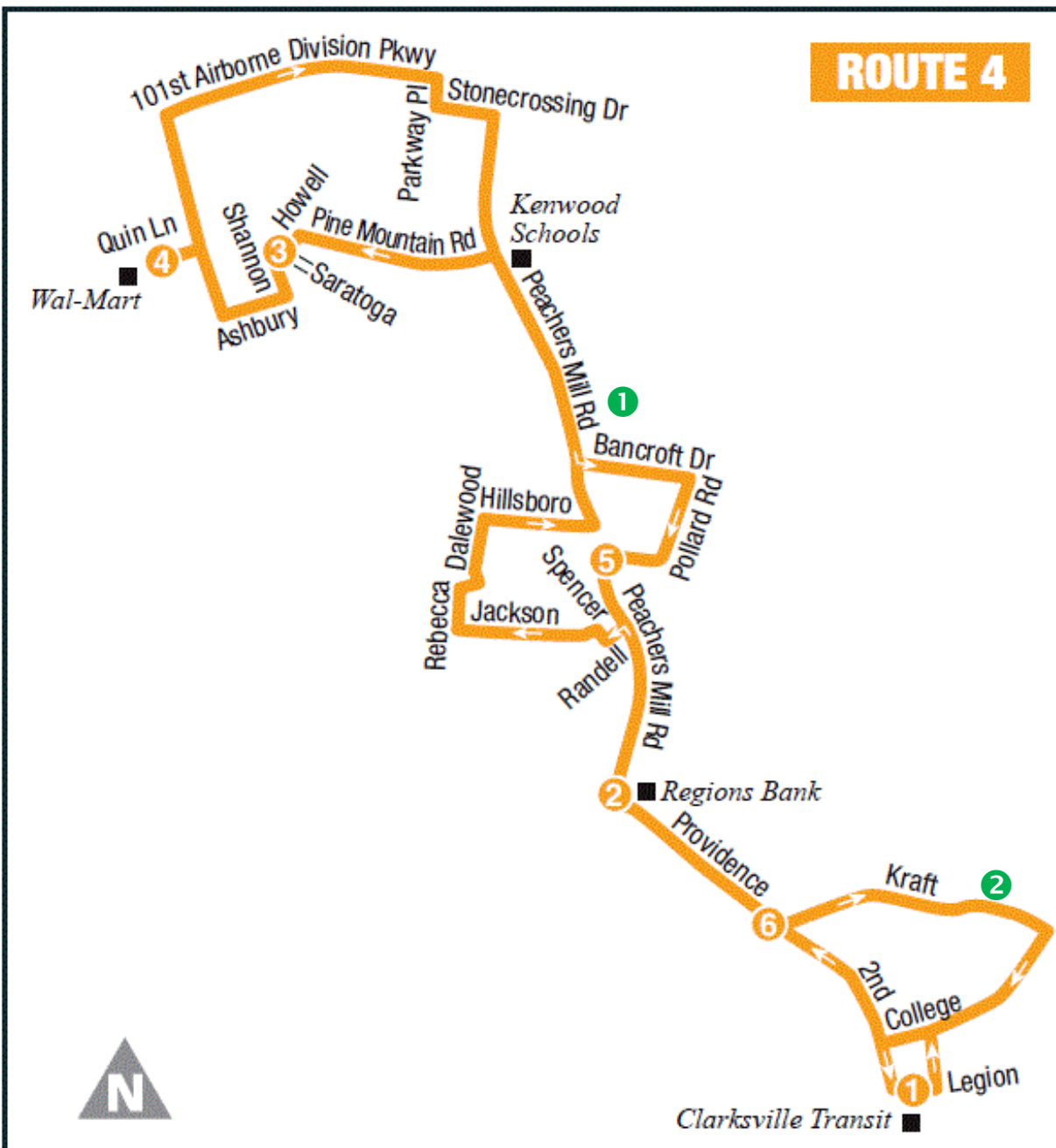
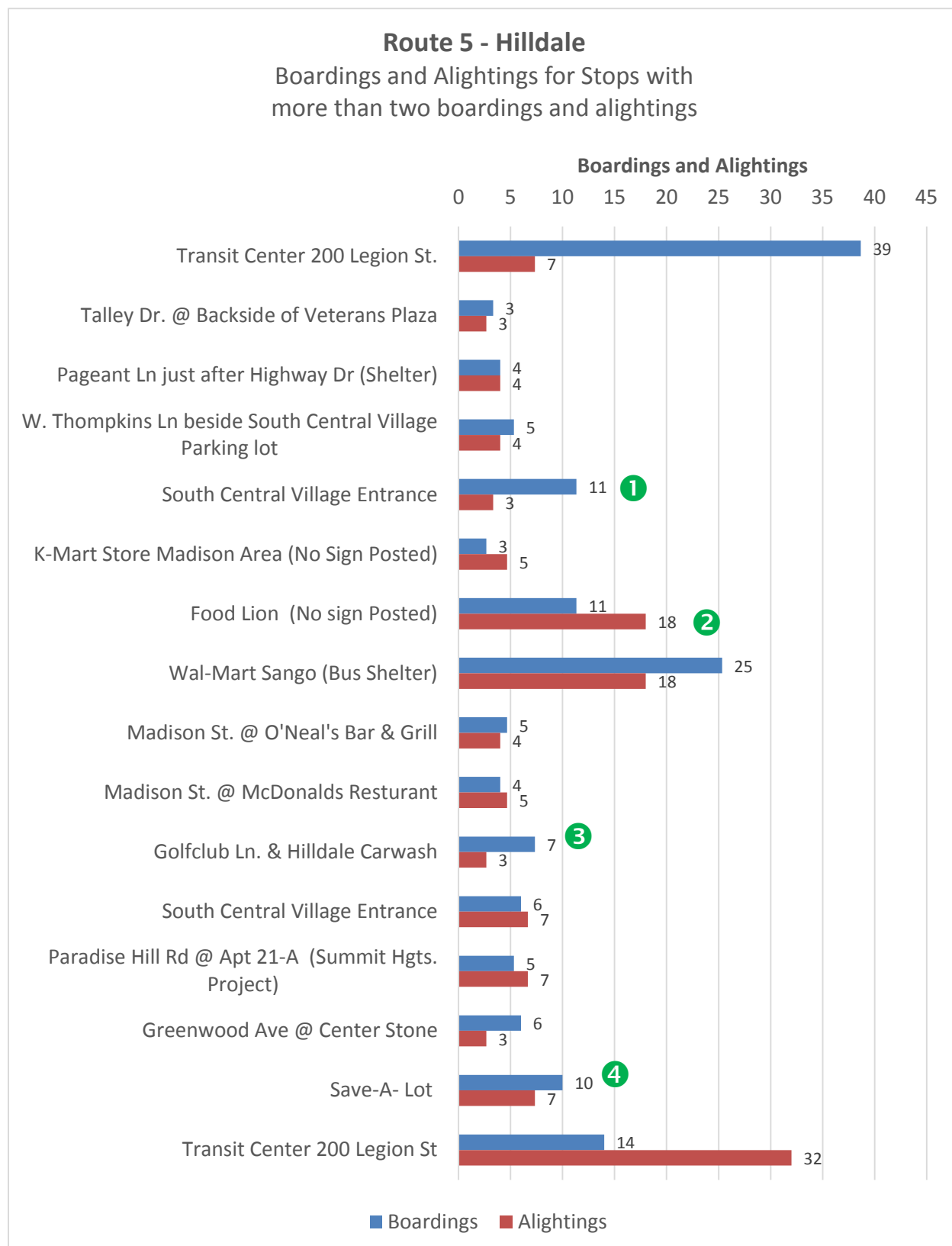


Figure 2-8: Route 5 Ridership by Stop



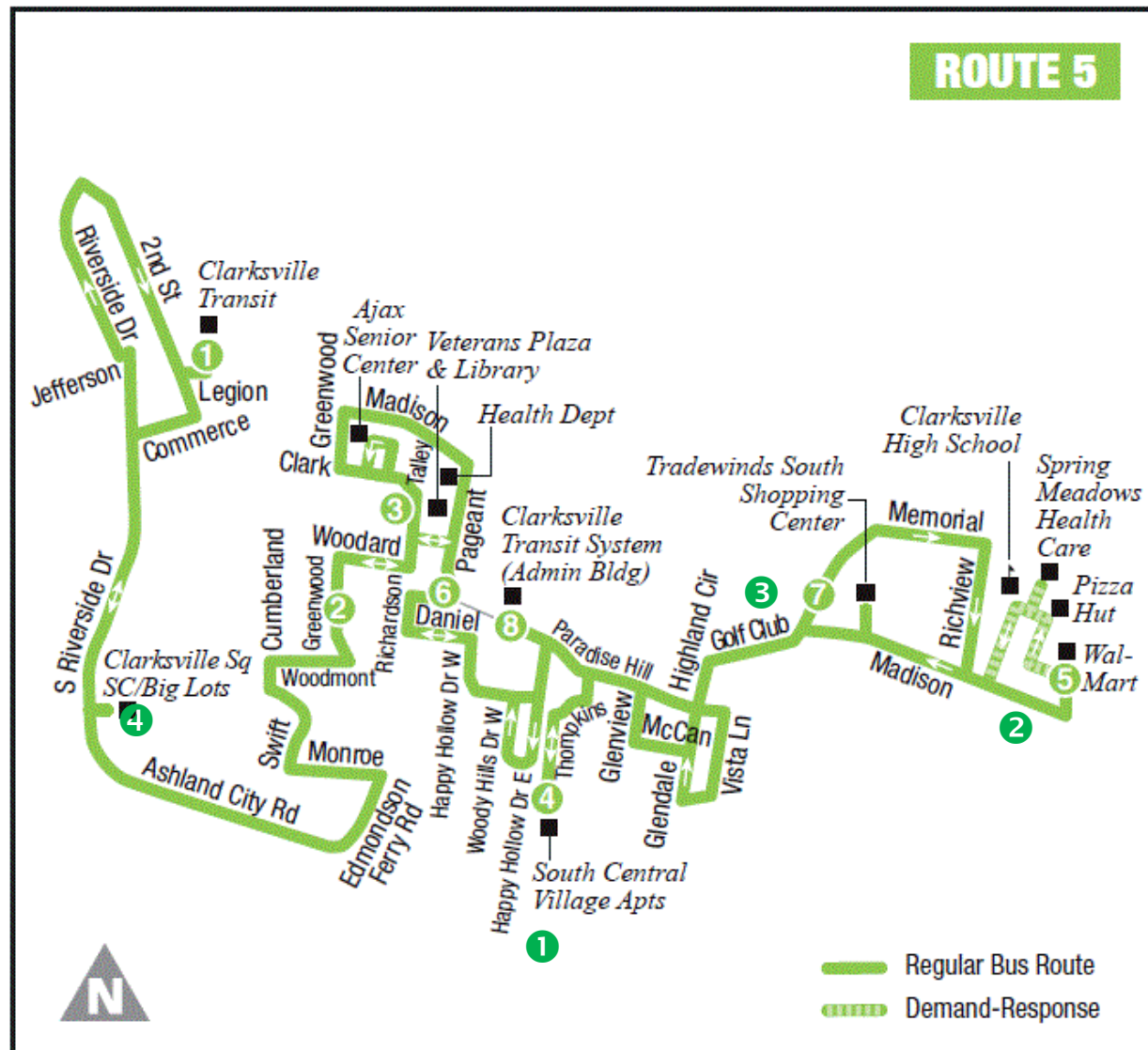


Figure 2-9: Route 6 Ridership by Stop

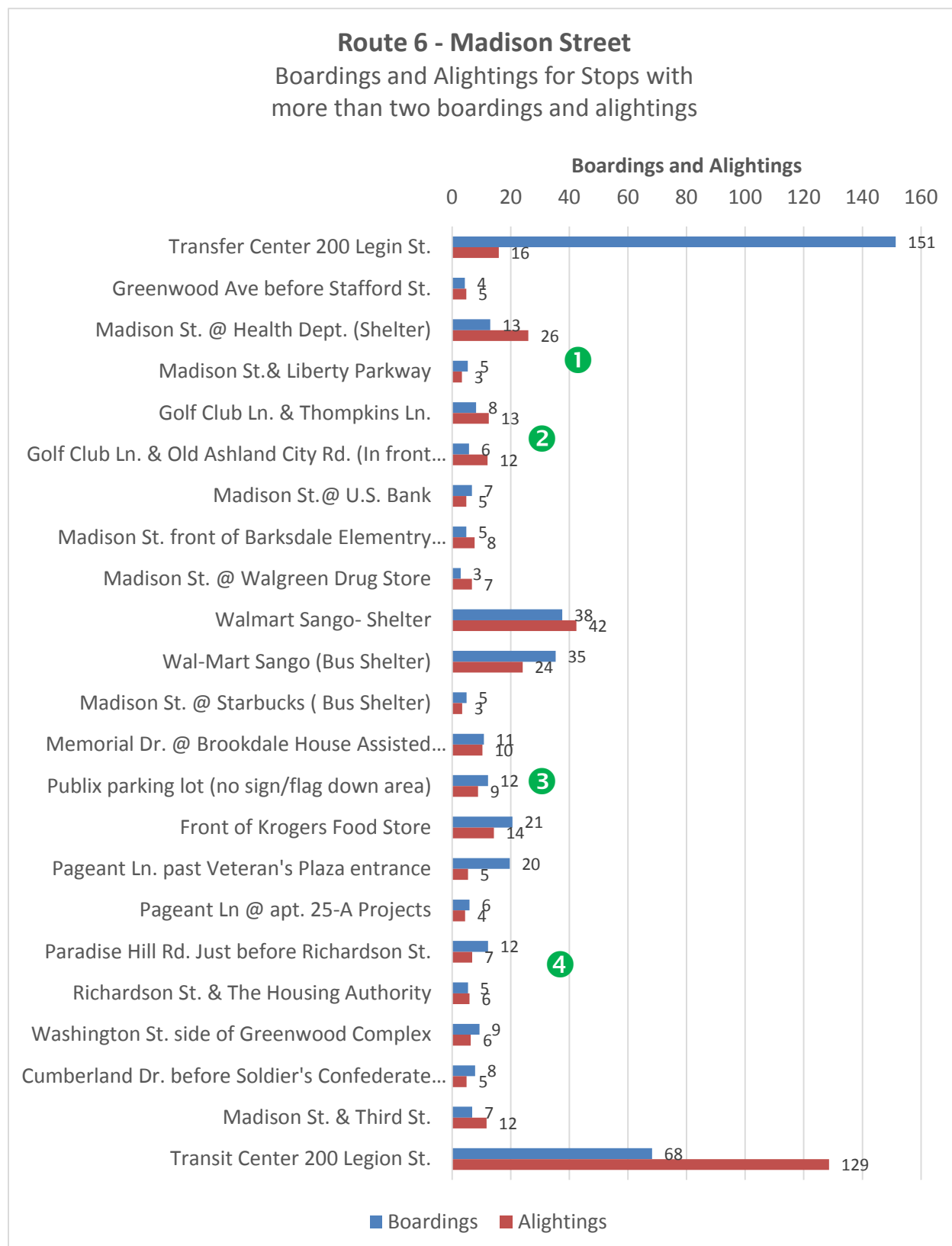
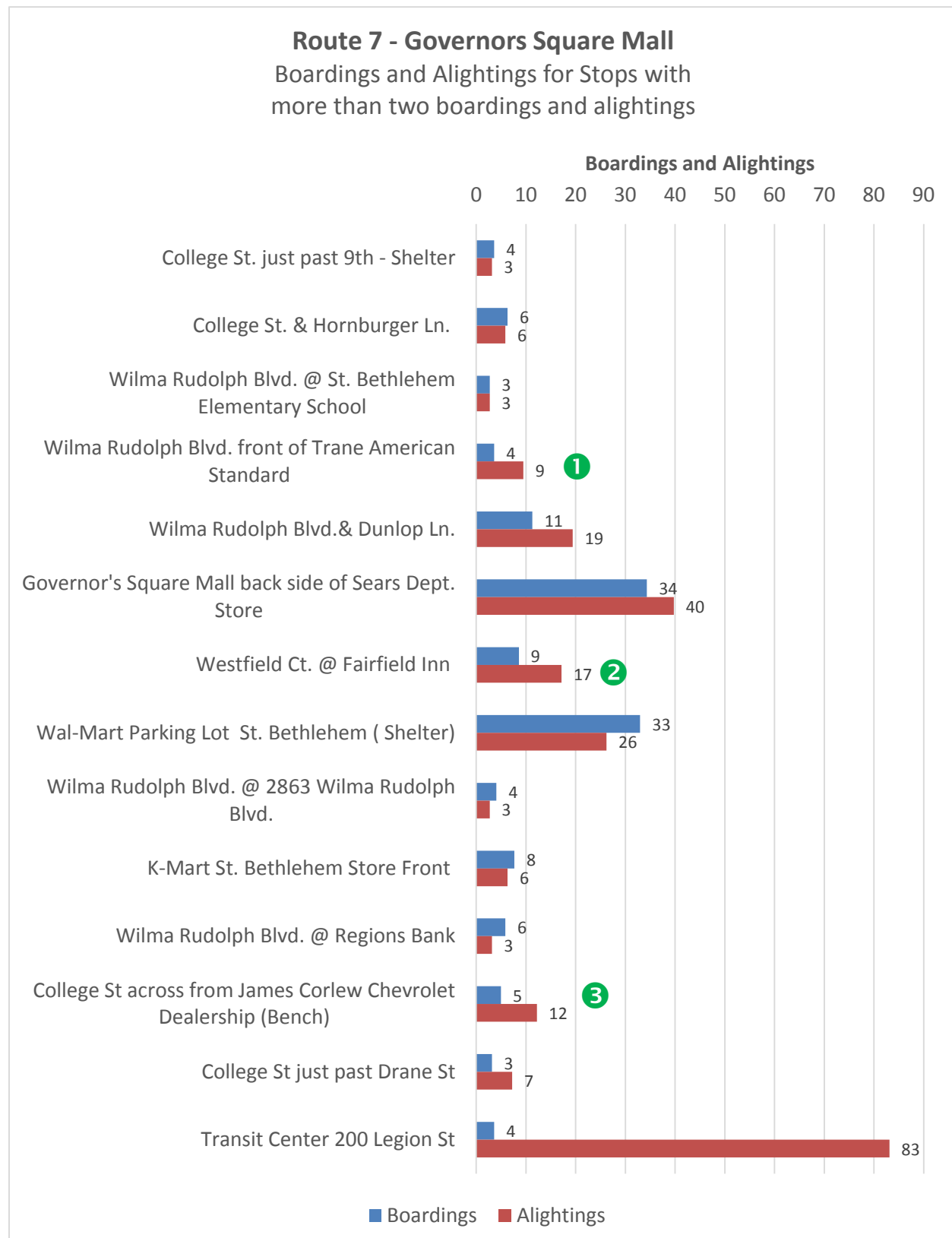




Figure 2-10: Route 7 Ridership by Stop



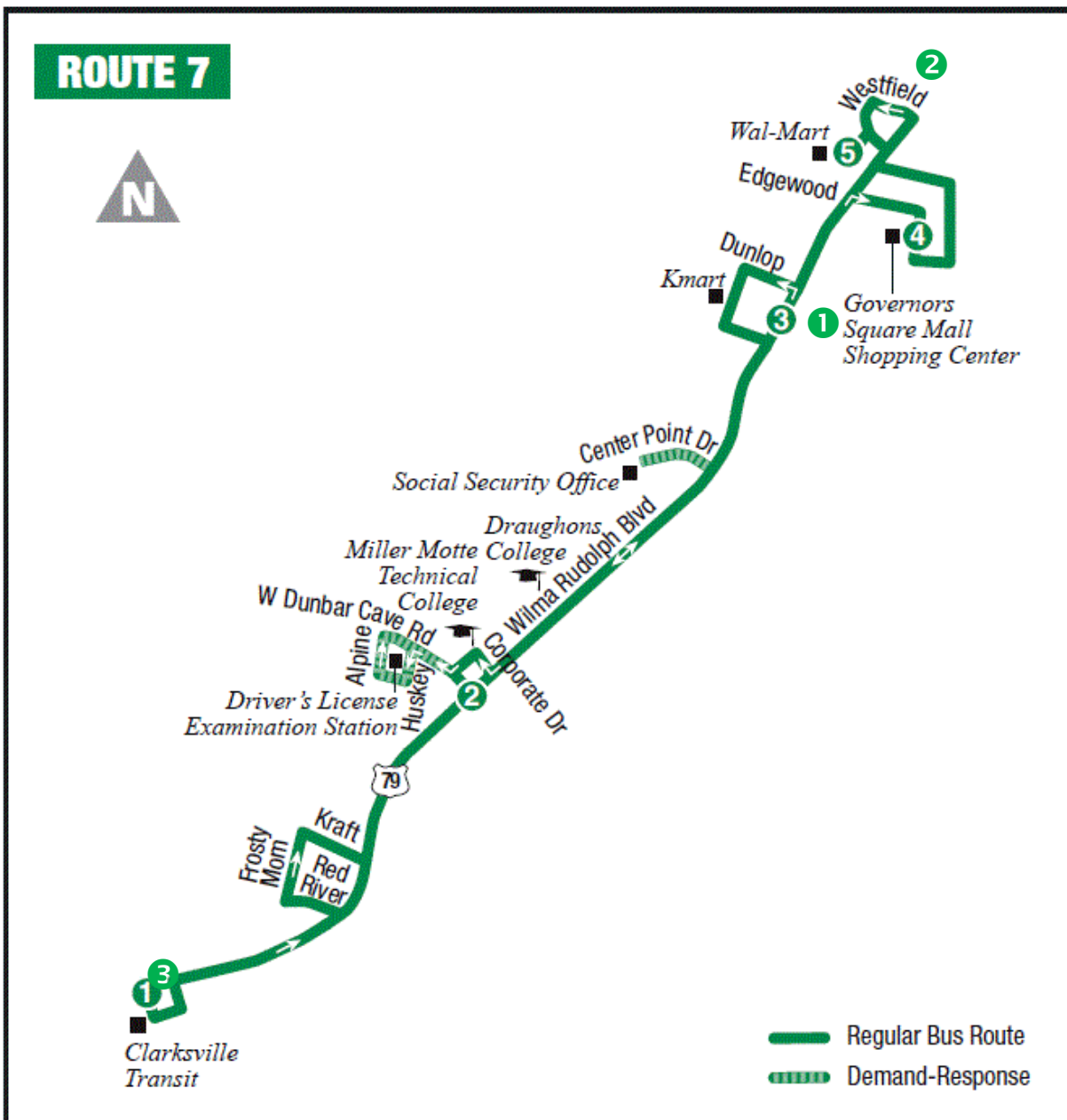
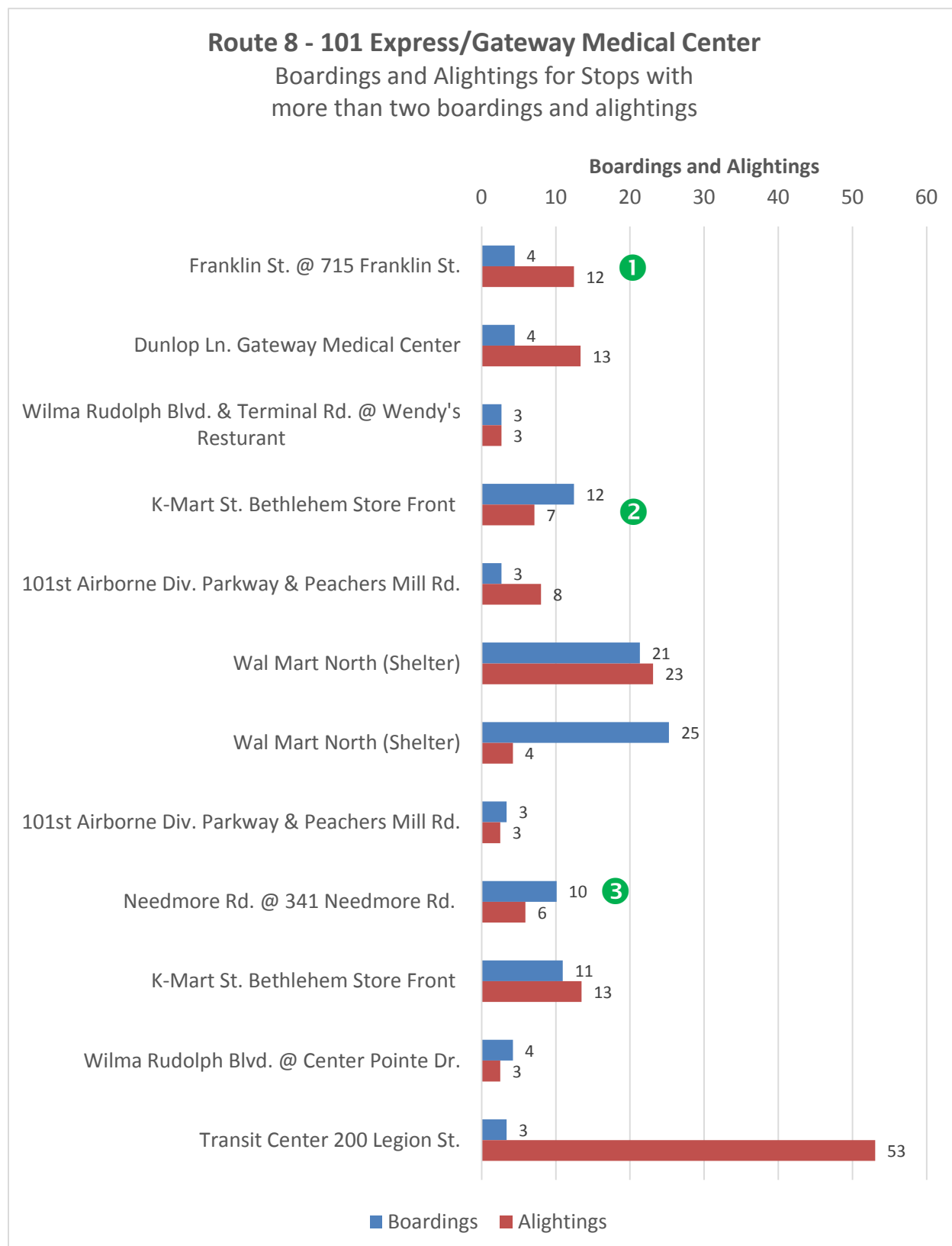
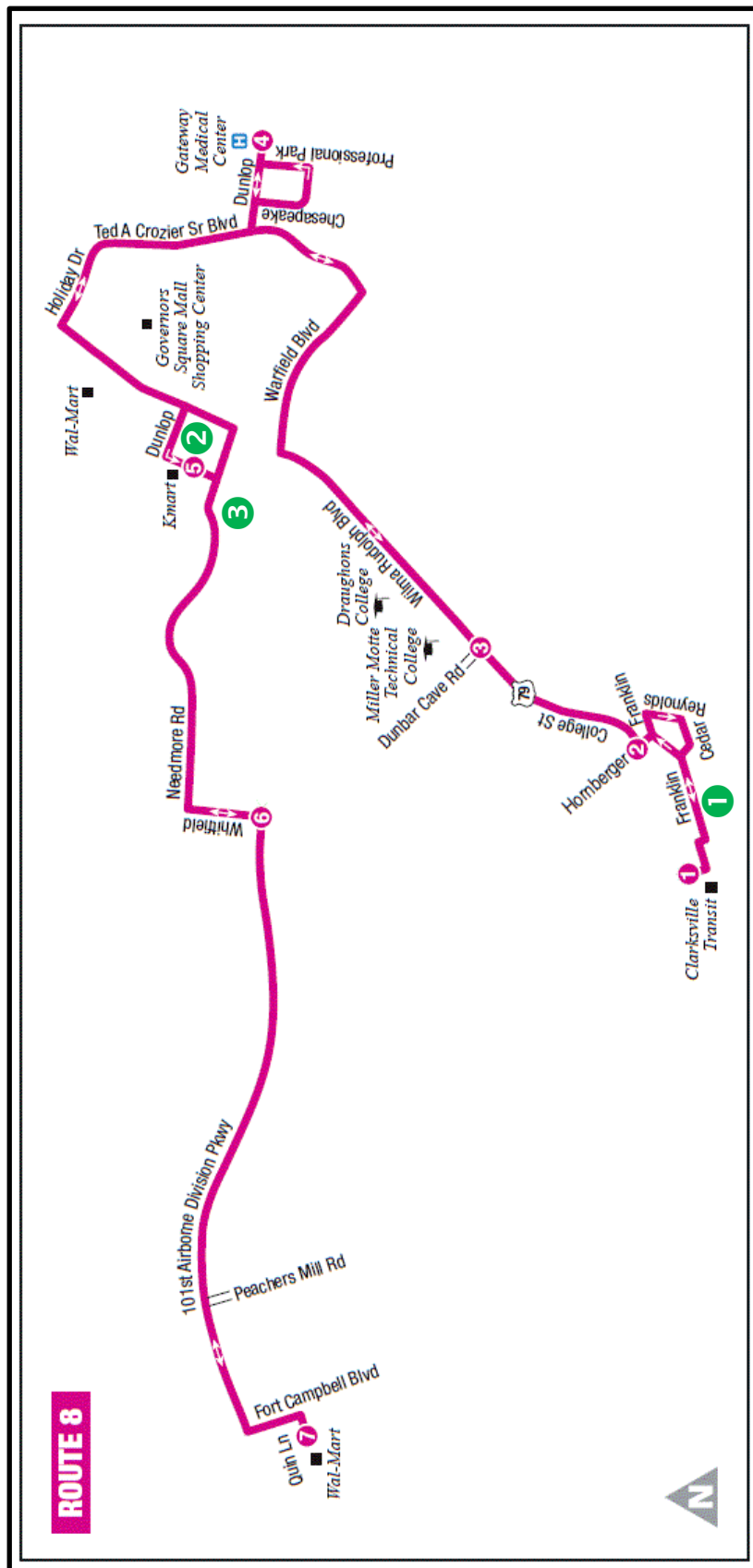
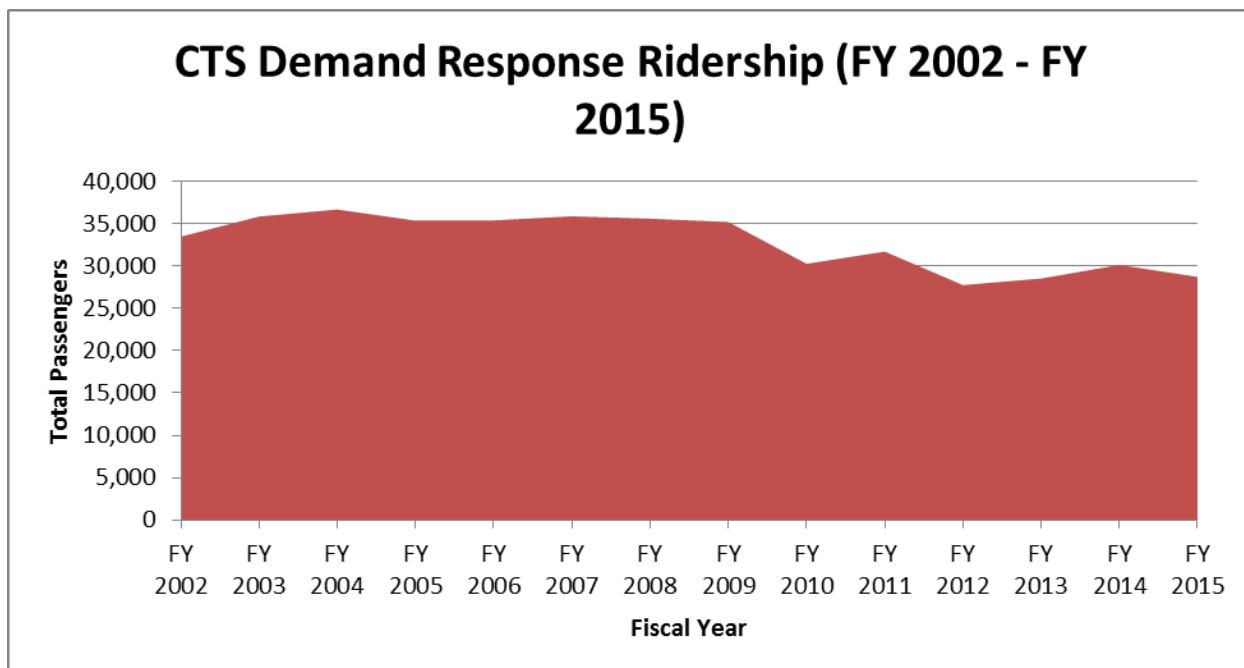


Figure 2-I I: Route 8 Ridership by Stop





2.5 Lift Paratransit Analysis



Although there has been a slight decline in ridership on The Lift paratransit service over the past 6 years, the demand for service is expected to grow.

The CTS staff provides excellence in conducting the certification interviews and scheduling of the paratransit trips. An automated scheduling program would provide great assistance in optimizing the trips for the subscription and demand-response riders. Additionally, this software would provide the tools to easily access the necessary performance indicators that reflect the success of the service.

2.6 Travel Pattern Analysis

The travel patterns of CTS passengers, including transfers, were analyzed based on the Origin and Destination Survey conducted by Transit Insight and AECOM in partnership with APSU. The detailed methodology and results of that survey can be found in Section 6.1.

Briefly, a sampling plan was developed to ensure that the overall results would be statistically valid for the CTS fixed-route system. Because transit riders are tracked as ‘trips’, not individuals, we used a methodology to determine the approximate number of individual riders per day of 1,090. From these, we received 301 completed surveys equating to 30% of individual riders. Although many survey respondents did not accurately complete all questions on the survey, detailed home and destination information was requested.

The home, origin, and destination locations provided by survey respondents were mapped in order to determine reasons for trips and to understand passenger movement spatially. Reasons for trip origins and destinations were specifically analyzed within a half-mile of the Transit Center. The results of that analysis are provided in Table 2-10. The most common trip reason was for college/university among students. The next most frequent responses were transit, recreation/sightseeing, and home.

Table 2-10: Reason for Trip Origins or Destinations near Transit Center

Reason	Number of Respondents
College / University (students only)	19
Transit	5
Recreation / Sightseeing	3
Your Home	3
Courthouse / Legal Visit	2
Medical Appointment / Dr. Visit	2
Social Visit / Church / Personal / Friend's House	2
Jail	1
School (Grades K-12)	1
Shopping	1
Your Workplace	1
Total	40

Transit Insight and AECOM, 2016.

The second component of the analysis was to map origin and final destination pairs. As noted on Figure 2-12, many of the origin-destination pairs include the downtown area with few origin-destination pairs that do not go through the downtown area. This pattern is supportive of the radial type of transit service that CTS operates with routes starting and ending at the CTS Transit Center located downtown. However more circumferential origin-destination pairs may occur if CTS offered circumferential bus routes.

In addition to mapping origin-destination pairs for the CTS system, origins were examined for key destinations: APSU Area (Figure 2-13), Governors Square Area (Figure 2-14), Pageant Lane Area (Figure 2-15), Wal-Mart Area-Ft. Campbell Blvd. (Figure 2-16), and Wal-Mart Area-Sango (Figure 2-17).

Figure 2-12: System Origin-Destination Pairs

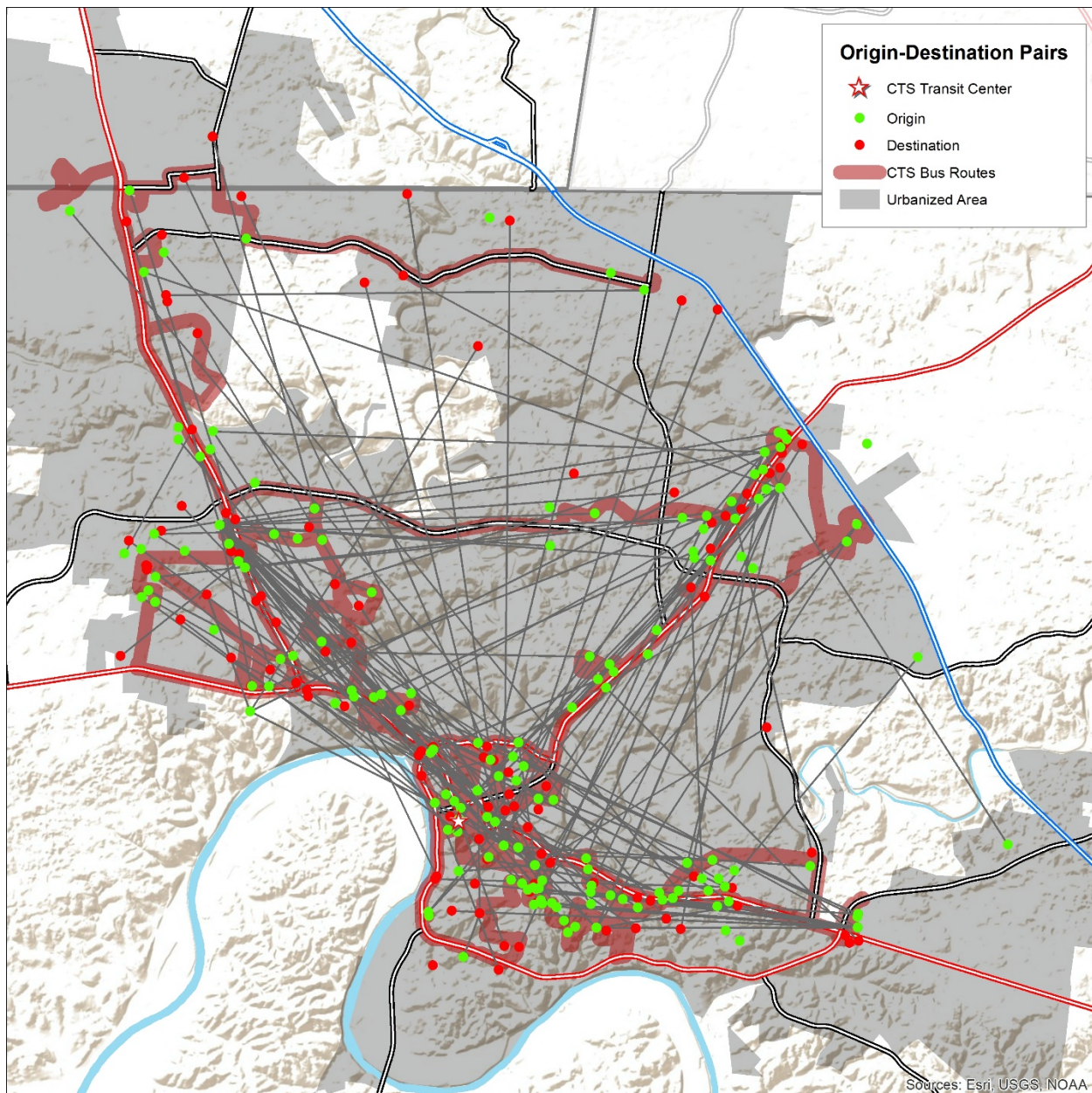


Figure 2-13: APSU Area Origin-Destination Pairs

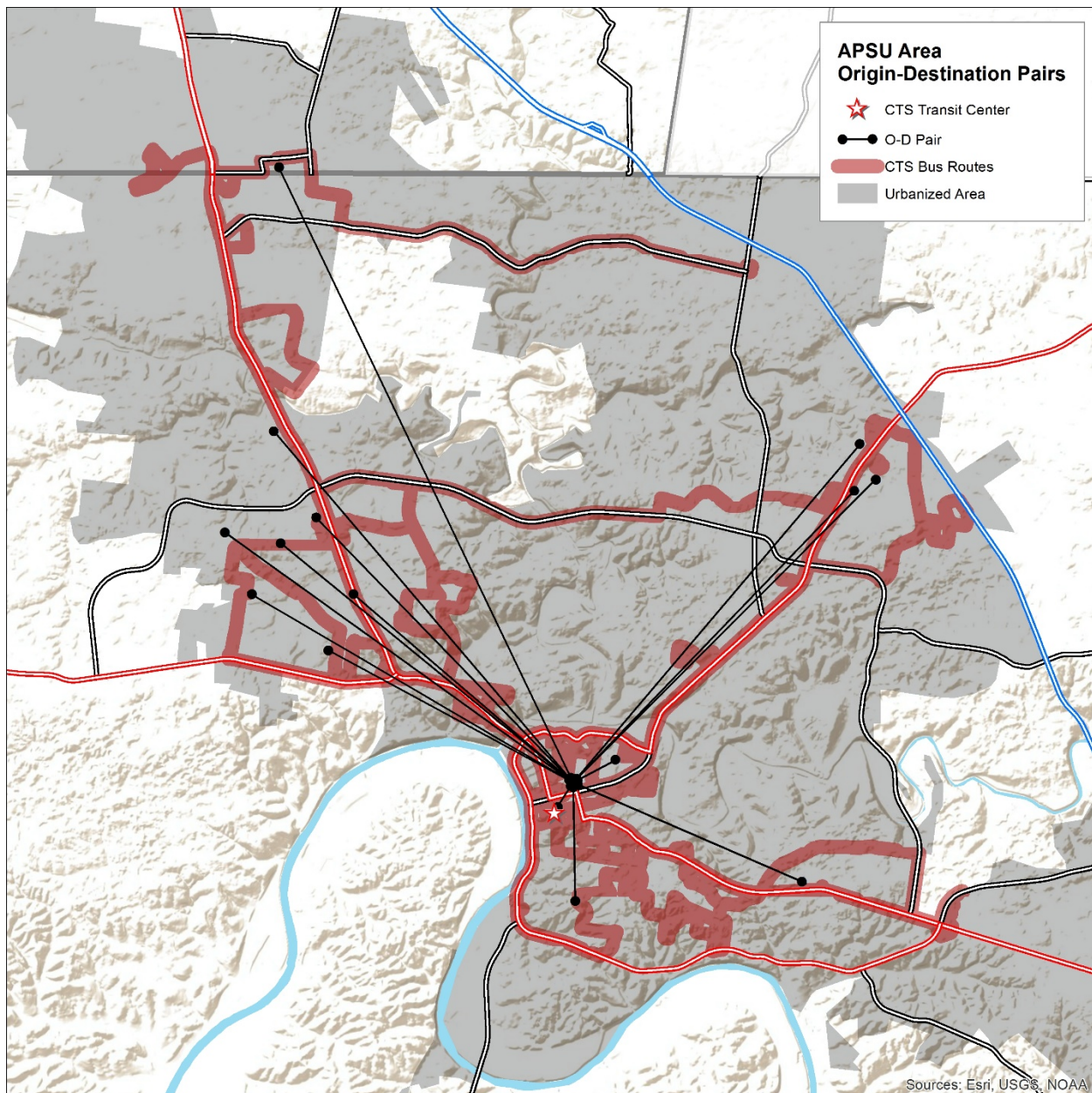


Figure 2-14: Governors Square Area Origin-Destination Pairs

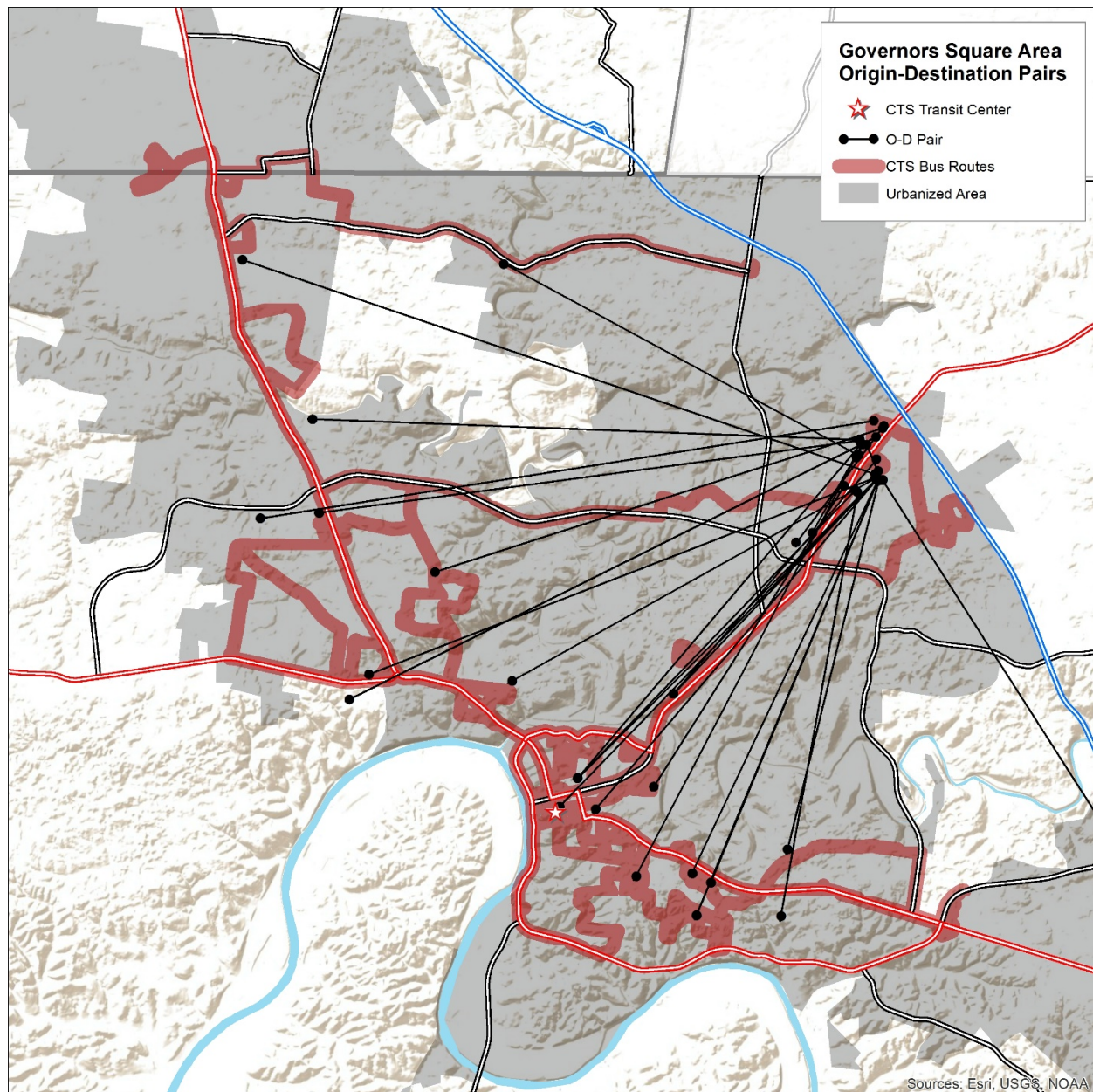


Figure 2-15: Pageant Lane Area Origin-Destination Pairs

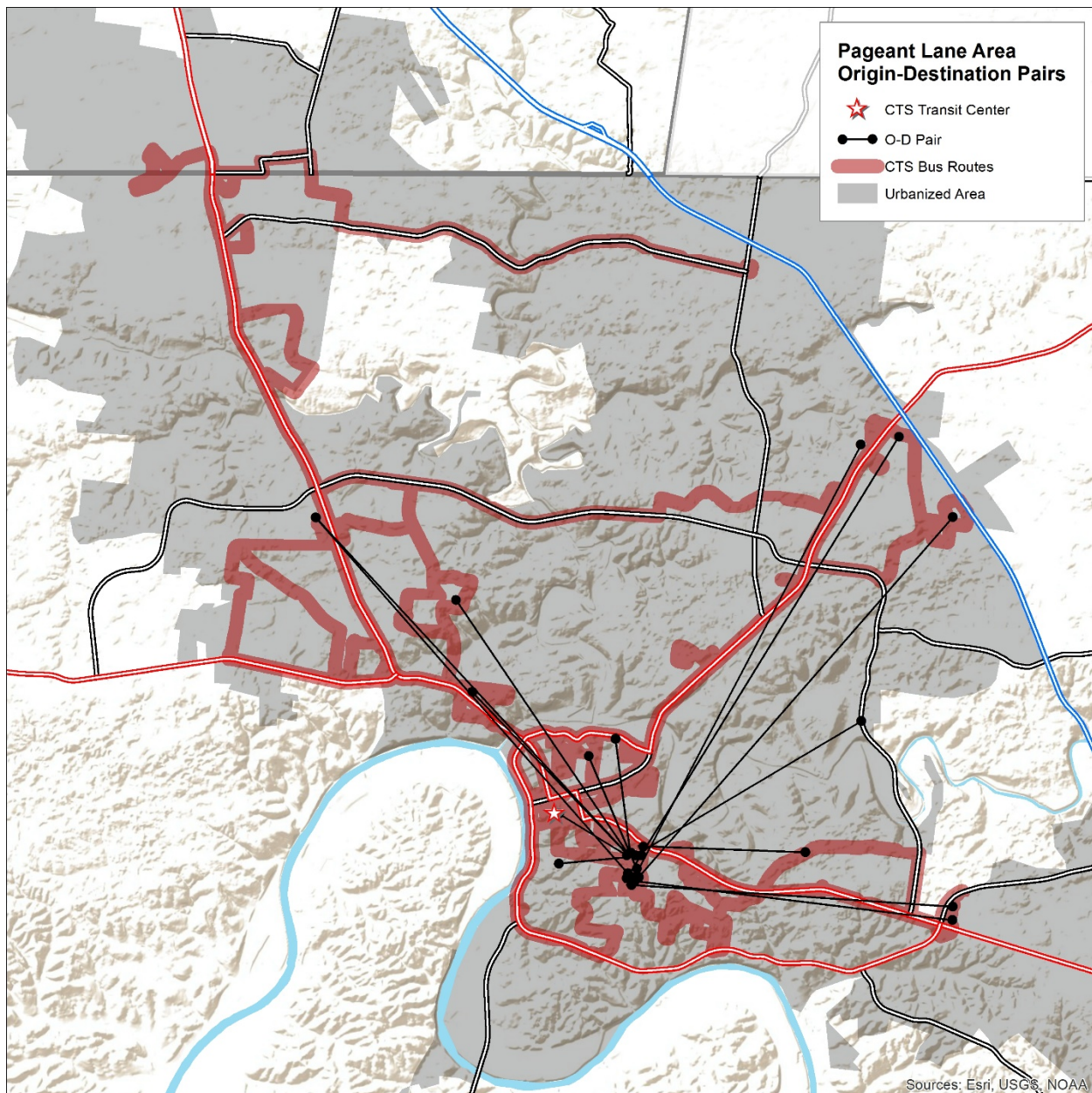


Figure 2-16: Wal-Mart Area (Ft. Campbell Blvd.) Origin-Destination Pairs

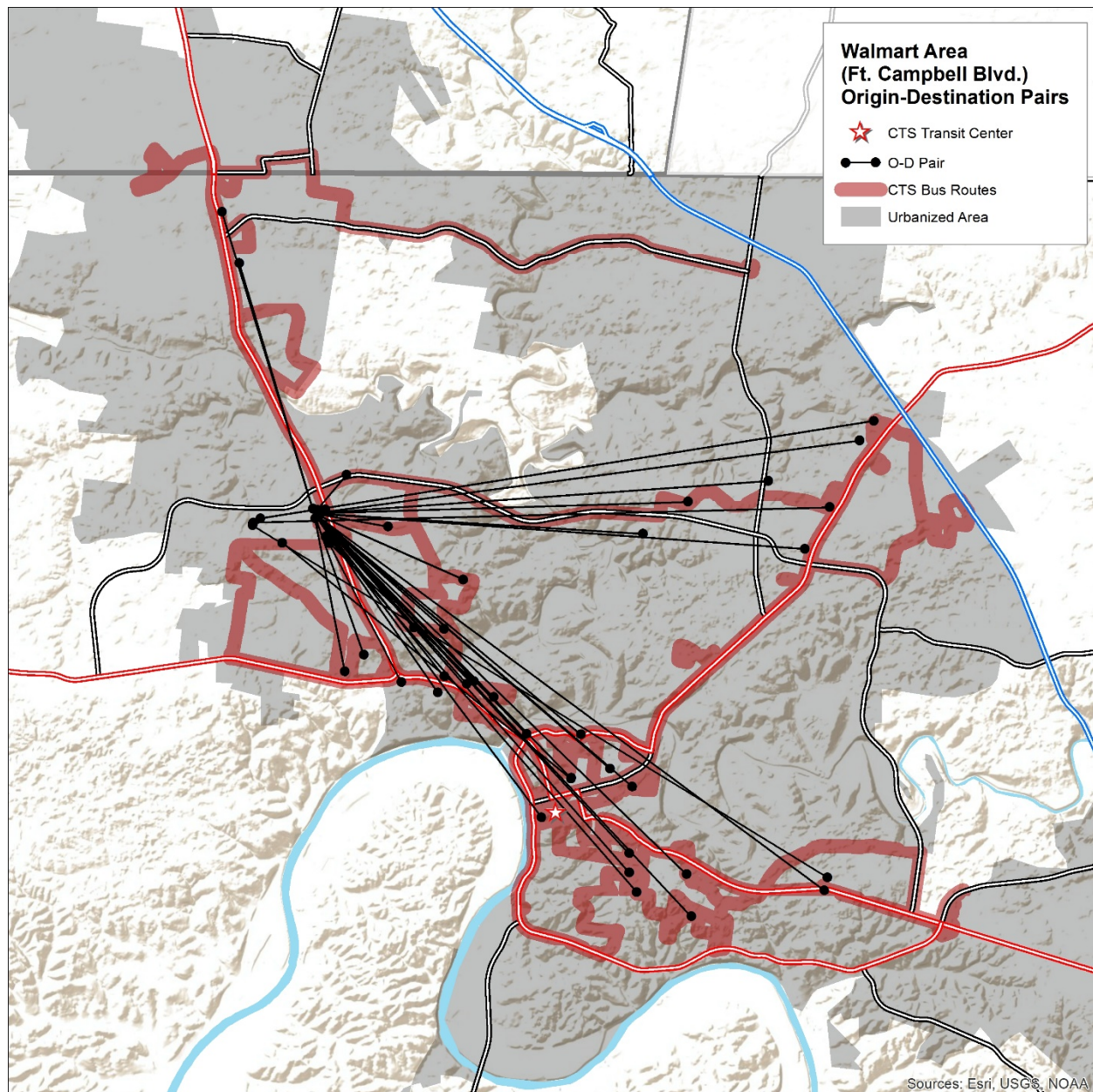
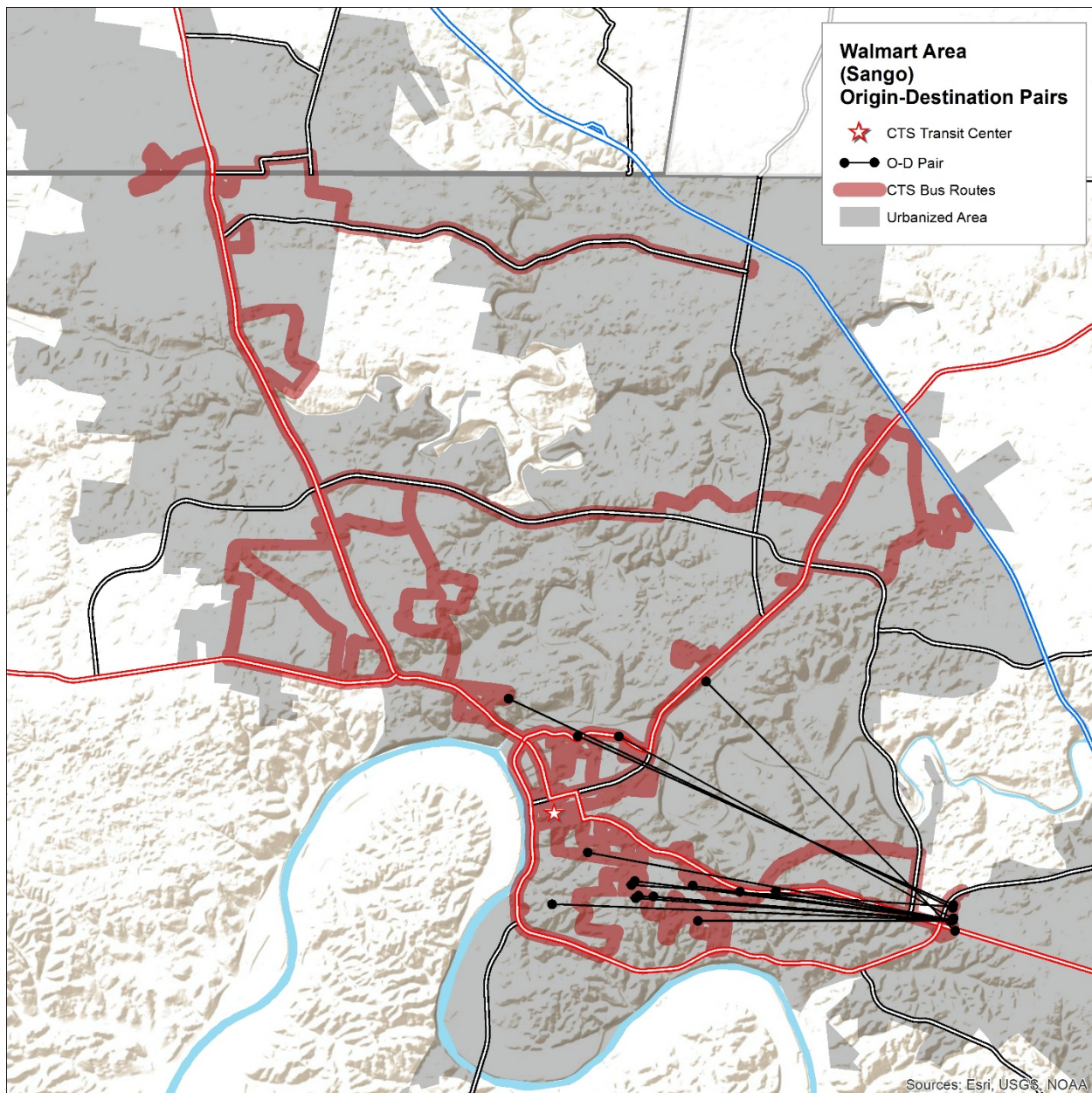


Figure 2-17: Wal-Mart Area (Sango) Origin-Destination Pairs



Transfer Activity

During administration of the Origin-Destination interview survey, passengers were asked to list all buses used for their one-way trip. Overall, about 30% of the approximate 1,090 individual riders were surveyed. This provides a snapshot of system wide transfer activity; however, due to the small population of survey candidates on a route by route basis, it should be understood that individual routes have unique characteristics, and therefore the data for individual routes may not be fully representative. It is therefore recommended that CTS explore the transfer matrix capabilities within the GFI farebox system to enhance the understanding of transfer activity.

Based on transfer information gathered during the origin-destination survey, a transfer matrix was assembled and is shown below in Figure 2-18. Overall, nearly half of the riders surveyed indicated use of only one bus per trip, meaning they did not transfer. The remaining half of riders indicated that they did transfer at least once and in some cases three times. The transfer matrix below is a summation of transfers from the origin routes (listed on the Y axis) to the destination routes (listed on the X axis). The transfer data is further illustrated in the charts that follow.

Figure 2-18: Transfer Matrix

		Route Transferred To								
		1 - Ft Campbell	2 - Tiny Town Road	3 - Cunningham	4 - Peachers Mill	5 - Hilldale	6 - Madison St	7 - Governors Square	8 - 101X / Gateway	TOTAL
Route Transferred From	1 - Ft. Campbell		6	5	4	6	10	6	4	41
	2 - Tiny Town Road	5		5	0	0	3	3	0	16
	3 - Cunningham	6	3		5	0	6	3	1	24
	4 - Peachers Mill	2	0	1		0	1	1	1	6
	5 - Hilldale	3	1	4	0		5	6	3	22
	6 - Madison	1	1	4	1	6		5	3	21
	7 - Governors Square	3	3	6	1	2	4		4	23
	8 - 101X / Gateway	4	1	3	1	5	3	5		22
	TOTAL	24	15	28	12	19	32	29	16	175

Figure 2-19: Transfers (From/To)

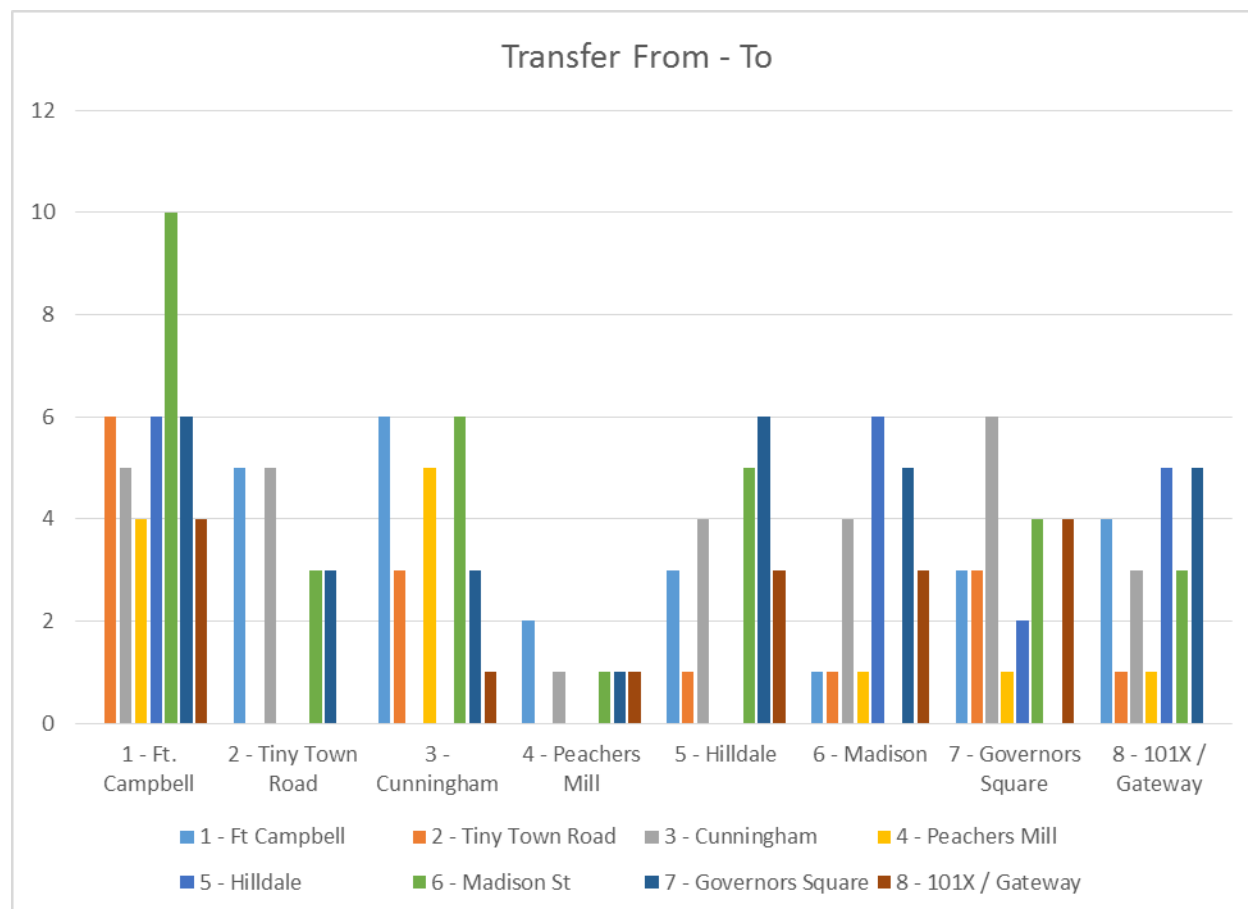
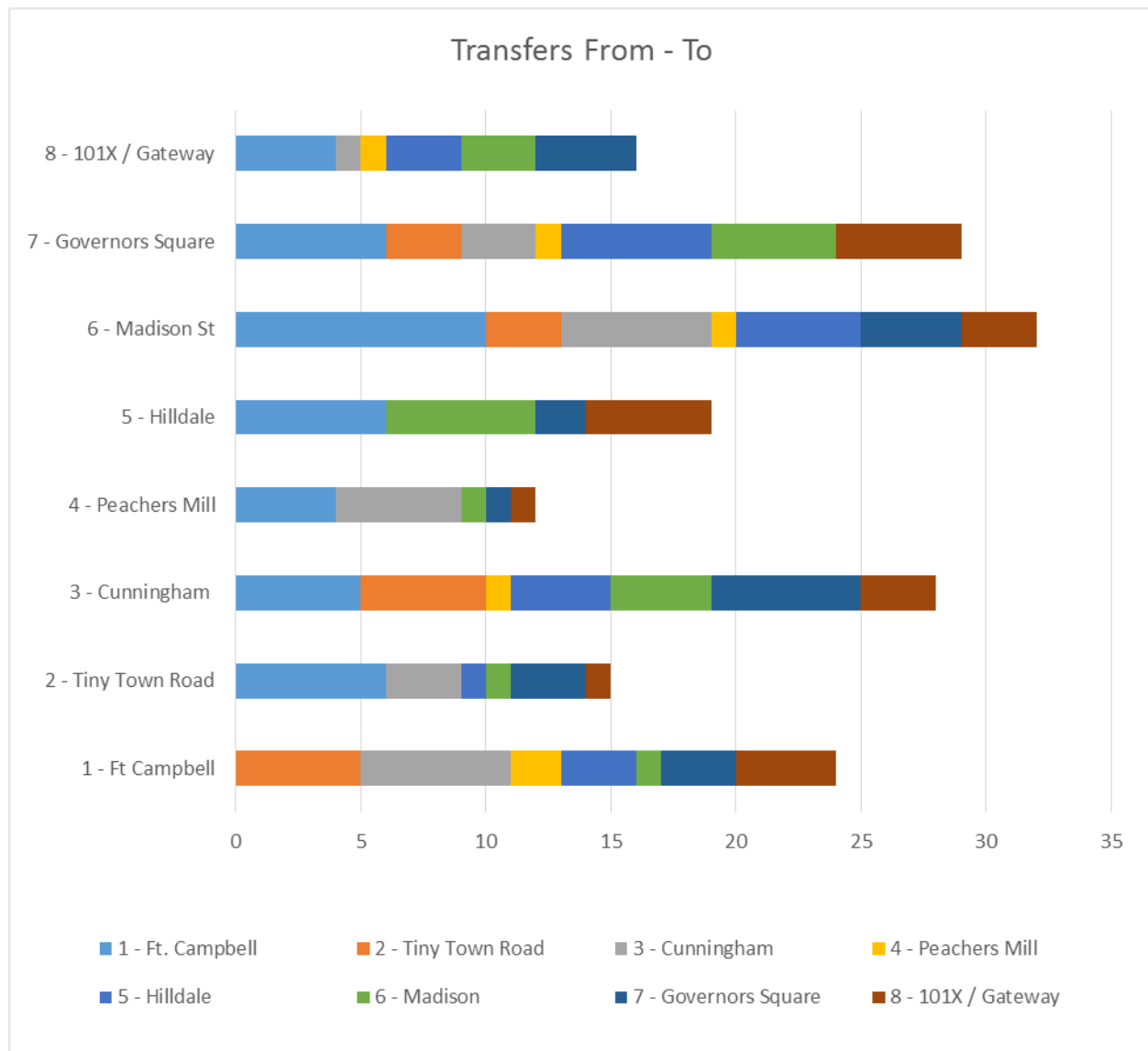


Figure 2-19 above shows the routes Transferred From across the x-axis while showing the routes Transferred To in colored bars. This is helpful for identifying both the popularity of transfers (the higher the bar, the more transfers) as well as the absence of transfers (missing bars means no transfers were indicated).

As shown above, transfers from Route 1 – Ft. Campbell occur to all routes with Route 6 – Madison receiving the most transfers. Route 2 – Tiny Town shows transfers to Routes 1, 3, 6, and 7. Of particular note is the relatively low transfer rate from Route 4 – Peachers Mill.

This same information is represented in Figure 2-20 which provides a stacked bar chart showing the destination route on the Y-axis with the origin route across the X-axis. This helps to indicate the routes which receive significant transfers. Route 6 – Madison receives the most transfers followed by Route 7 – Governors Square, and Route 3 – Cunningham.

Figure 2-20: Routes Receiving Transfers



3.0 Identification of Service Issues

In a recommended redesign of current transit services, there are many factors to consider. The first and most important factor is that the current bus transfer facility at 200 Legion Street may be relocated to another site location. This may have a significant impact on the route scheduling and time elements associated with fixed route services. However, any relocation of the downtown transfer center is anticipated to be close to the existing transfer center to minimize any increase in operating cost and to serve ridership origins and destinations. A relocation greater than one-half mile from the current location would be expected to result in more adverse impacts. The FTA uses a radius of one-half mile when determining pedestrian catchment areas around transit stations (FTA, 76 FR 52046).

Signage is an issue that was observed during the route analysis process. It was noted that many bus signs in the community are placed on various structures and many times the signage placements do not exhibit the best and safest locations for boarding passengers. Lighting, uneven right-of-way locations, sight issues with trees are examples of needs that will require some correction. A recommended approach would be to develop a bus stop sign policy. Since new signs have been created and new ones are being placed in the community, the timing is right to look at creating an inventory of the signed stops and implement consistency with the bus stop sign placements throughout the service area. There is also a lack of sidewalks at bus stops and to access bus stops.

There is an opportunity to work with the staff at the military installation at Fort Campbell, to begin a shuttle service that would be patterned after the APSU shuttle. This could be set up as a “fare-free” service, with an annual funding allocation to be provided to CTS through a negotiated contract with Fort Campbell. There are many opportunities for a public transit option to be successful on the post. Connecting base housing locations with retail, medical and service areas on the installation would benefit many low income soldiers and their families, as well as providing a means of mobility to the many visitors on the post.

Another service issue would be to implement an express service along Fort Campbell Blvd., to reduce the number of vehicles that pulse into the downtown transfer center. By providing a connection (which currently happens) at the Wal-Mart location, route #1, Ft. Campbell and the Tiny Town #2 could provide more frequent service in the northern service area and passengers could transfer to an express bus that would go directly downtown.

Route #4 has four one-way loops, and there may be some opportunities to modify the routing to remove some of them. In particular, the Jackson/Hillsboro loop could be eliminated as riders in this area also have easy access to existing Routes 1 and 2 on Ft. Campbell Blvd. The Bancroft loop could be considered as well. Elimination of either or both loops would speed up the service and reduce travel time for passengers.

The Route #5, Hilldale route could be reconstructed to complement a downtown circulator route, which would reduce the number of wheelchair passengers who currently ride the Route #5 bus. Many of the passengers from the Ajax Senior Center and other locations of transit-dependent populations make the #5 bus operate on a schedule that is difficult to keep on time.

The Route #8 is another long route that takes in a large service area and that serves conflicting radial and circumferential travel patterns. The Governors Square Shopping Mall is a good location to break this route and connect with another bus that would service the Gateway Medical Center.

Route #812 currently underperforms due to lack of ridership and low performance metrics. It is recommended that this route be discontinued when the park and ride is moved to Exit 11.

4.0 Action Plan

An Action Plan for enhancing CTS service was developed based on an analysis of existing CTS service, identification of service issues, and interviews with CTS riders, vehicle operators, and administration. The Action Plan is organized by phase: short-term and mid/long-term. It includes the capital and administrative requirements necessary for implementation.

4.1 Short-Term (One Year) Service Design Plan

The following are some short-term service designs that should be considered for implementation within the next year:

- A downtown circulator route would provide relief of capacity issues on the current Route #5. This route has many riders with mobility impairments, and it is very difficult to keep this route (#5) on a solid time schedule. Developing a circulator that would service the Veterans Plaza/Health Department, the AJAX Senior Center, the corridor along Madison Street and the downtown transfer facility, would be a positive way to decrease some of the loads associated with the Route #5 and improve the headway for a downtown service area.
- Route #5 should be examined for loops that could be eliminated in order to streamline the service.
- The Fort Campbell Circulator Route would provide a mobility option for connectivity with base housing and major traffic generators on the post.
- If the current transit center is relocated, all routes will need to be examined for any necessary changes to routing and scheduling.
- The current Route #812 has poor ridership and performance metrics. It is recommended that this route be discontinued once the park and ride is moved to Exit 11. The vehicle and resources assigned to this route could be used to operate the recommended changes in service such as splitting Route #5 into two routes.

4.2 Mid and Long-Term (3 Year) Operational Changes

The following are mid and long-term service designs that should be considered for implementation within the next three years:

- The current Route #2 is lengthy and could be broken up into two routes. Though this would increase the operational cost for the service, and there would be an impact on available buses to support this service. It would benefit the riders by now providing an express link to downtown, from the Wal-Mart on Fort Campbell Blvd. This route change would also increase service frequency.
- The current Route #8 is another long route that covers a lengthy service area. Since the boarding and alighting information noted that most passengers want to go to Governors Square Mall Shopping Center, this might be a good location to consider breaking this route into two routes. Service could still be provided to the Gateway Medical Center, but one leg of the new route would require passengers to transfer to get there. Another benefit of this change would be increased service frequency. Again, the operational costs and capital

support for available vehicles will make an impact on the feasible nature of this recommendation.

- In order to reduce fuel costs and improve air quality, CTS should continue to transition its fixed route fleet of diesel buses to hybrid buses. CTS was successful in receiving a Congestion Mitigation and Air Quality (CMAQ) grant to replace six diesel buses with hybrid buses for FY 2017.
- CTS may consider increasing frequencies to 30 minutes on weekday routes where the frequency is currently one hour. Routes 1, 2, 4, 5, and 8 currently operate on an average 1 hour headway on weekdays while Routes 3, 6, and 7 operate on 30 minute headways. Implementing this recommendation would provide riders with increased flexibility and encourage increased ridership on the CTS system.

4.3 Capital Requirements

Capital requirements for the Action Plan are summarized below:

- Additional shelter space is needed at busy collection points. The riders at the Wal-Mart on Fort Campbell Blvd could benefit from an additional bus shelter at this stop.
- Fourteen additional buses could be added to the vehicle inventory. One for the express extension of Route #2; One for the service realignment of Route #8; One for a downtown circulator route; Nine for increasing weekday frequencies to 30 minutes; and two as spare vehicles to be placed where needed within the fleet service demands. A bus would also be needed for the Ft. Campbell circulator route, however the bus currently used for Route 812 could be utilized.
- An automated scheduling software would improve the efficiency of The Lift, the ADA paratransit service. The software would benefit the efficient placement of demand-response trips, optimize operator schedules and improve the on-time performance of the service.
- Automatic Passenger Counters (APC) installed on fixed route buses would assist in data collection for the National Transit Database as well as providing automated rider tracking.

4.4 Administrative Requirements

Administrative recommendations are included to support the Action Plan as listed below:

- Training is always an important element of service delivery. Operators of the ADA paratransit service should be trained in the tie-down procedures of working with motorized wheelchairs. Though standard wheelchair training is part of the instruction provided to vehicle Operators, mobility devices are much more complex, and the training needs to include some of the new equipment that is being used by riders with mobility impairments.
- The eligibility process which includes an interview with the ADA eligible rider, could be conducted at prescribed times each month. This would allow for the process to be better coordinated with staff schedules. However, exceptions to this schedule can be made due to special circumstances as needed.
- Development of a quarterly internal CTS Newsletter would be a communication vehicle that could connect the operations, maintenance and administrative staff members. Staff member highlights, special interests, training and HR updates, new requirements, schedule changes, upcoming events, etc., can all work to improve morale within the organization.

- CTS maps and schedules will need to be revised based on service changes implemented as a result of the Action Plan. The CTS website should also be updated with these revisions.
- Utilize the new tablets to provide updated surveys and collect the ridership information for NTD reporting.
- Develop an incentive purchase plan for riders who purchase the advanced 10-Ride and 30-Ride ticket books. Since the monies are collected in advance of the trips, this would be an effective way to market more participation for purchasing these ride ticket books.
- Collaborate with the staff at Austin Peay State University to develop an internship program to work with students who want to study public transportation/land use planning and public policy. APSU is a great resource and stakeholder in the community and the staff and students can assist with the implementation of technology and student-led initiatives that can improve the planning of future transit services.
- The 2016 Rivers and Spires Festival proved to be a valuable venue to reach out to non-riders of the CTS service and get feedback as to how CTS could attract new riders to the service. An annual survey should be planned to be done each April at the future festivals. This will give the CTS staff an opportunity to generate positive publicity for the system and bring about community awareness that could improve the CTS public transit system.
- A bus stop sign inventory should be conducted to include the geocoding of each bus stop. This task should be conducted in concert with a bus stop policy, where bus stop sign placements and the amenities at the stops are addressed in the context of promoting safety, passenger security and customer service.
- CTS could implement an employer sponsored rider benefit program where large employers provide free transit trips as a benefit to their employees. CTS would track these rides and invoice the large employers monthly. Initial candidates could be Ft. Campbell, APSU, and Hankook.
- A middle-school and/or high-school “Transit Ambassador” program can increase awareness of transit in public schools and ultimately increase ridership.
- Develop a Safe Place Network for the buses/vans and transfer facility. This is a national initiative that both APTA and the University of Tennessee have instituted. This program provides a network of safety for youth in the community, who need a safety network. The National Safe Place Network (NSPN) organization provides training, technical support and resources to ensure the quality and consistent operation of Safe Place, a youth outreach and prevention program for young people in need of help and safety. Information can be provided at the NSPN website: www.nationalsafeplace.org. The CTS staff is encouraged to contact the LEAP Organization, located at 1860 Wilma Rudolph Blvd, Clarksville, TN 37040, Phone: (931) 614-0440 to inquire about a potential community partnerships in conjunction with the local Police and Fire Departments.

4.5 Implementation Plan/Schedule

An Implementation Plan/Schedule is provided in order to assist CTS with realizing the recommendations contained in the Action Plan. The Implementation Plan/Schedule takes into account finite funding sources by implementing the recommendations over several years as opposed to all at once. Table 4-1 identifies the phase and fiscal year for each recommendation. CTS may modify these phases and fiscal years depending upon funding availability.

Table 4-1: Implementation Plan/Schedule

Task ID	Tasks to be Implemented	Phase	Fiscal Year
Administration			
A1	New Bus Operator Training should include working with motorized wheelchairs	Short-Term	FY 2017
A2	Purchase and install Paratransit Scheduling software	Short-Term	FY 2017
A3	Consider scheduling Paratransit Rider interviews twice a month (exceptions can be made if warranted by special circumstances)	Short-Term	FY 2017
A4	Provide an automated way to collect ridership data	Short-Term	FY 2017
A5	Initiate paper transfers (Implemented 7/1/2016)	Short-Term	FY 2016
A6	Provide an annual survey and community outreach at the Rivers and Spires Festival	Short-Term	FY 2016
A7	Continue to assess the feasibility of a new location for a transfer center	Short-Term, Mid-Term	FY 2016
A8	Initiate a bus stop signage review	Short-Term, Mid-Term	FY 2017
A9	Develop a Quarterly CTS Newsletter	Mid-Term	FY 2017
A10	Collaboration with Austin Peay State University	Mid-Term	FY 2016
A11	Consider a 10-Ride Ticket book to be sold for \$13.50 (one free ride)	Mid-Term	FY 2018
A12	Offer a 30-Ride Ticket book to be sold for \$47.00 (two free rides)	Mid-Term	FY 2018
A13	Become a partner in the National Safe Place Network	Mid-Term	FY 2017
A14	Consider implementing a Student Transit Ambassador program	Mid-Term	FY 2018
A15	Consider implementing a "Commuter Benefit" program.	Short-Term, Mid-Term	FY 2018
A16	System Map and Schedule Updates	Short-Term, Mid-Term	FY 2018
A17	Annual Software Fees	Short-Term	FY 2017
Operating			
O1	Create downtown circulator: - Veterans Plaza/Health Dept. - AJAX Senior Center - Workforce Development - CTS Downtown Transfer Facility	Short-Term	FY 2017
O2	Initiate a circulator route on the Fort Campbell military installation	Short-Term	FY 2017
O3	Route #2 Split at Wal-Mart on Ft. Campbell Blvd.	Mid-Term	FY 2019
O4	Route #8 Split at Governors Square Mall Shopping Center	Mid-Term	FY 2019
O5	Discontinue Route #812	Short-Term	FY 2017
O6	Increase frequencies on fixed routes to 30 minutes	Mid-Term	FY 2018
Capital			
C1	Replace vehicles meeting FTA useful life	Short-Term, Mid-Term	FY 2017
C2	Provide additional shelters	Short-Term	FY 2017
C3	Consider procuring Automatic Passenger Counters (APC)	Mid-Term	FY 2017
C4	Procure additional buses	Mid-Term	FY 2018
C5	Transition from diesel fixed route bus fleet to hybrid fleet	Mid-Term	FY 2017

5.0 Financial Plan

This chapter summarizes past CTS budgets, estimates costs associated with the capital improvement and action plans, and identifies sources of revenue to cover them. Estimated revenues and costs in future years are based on a budget model tailored to CTS with input from transit system. These figures are subject to change.

5.1 Historical Financial Analysis

CTS is supported by federal and state transit funds allocated by the Office of Public Transportation within the Tennessee Department of Transportation (TDOT). CTS is also supported by funds from the Kentucky Transportation Cabinet (KYTC) Office of Transportation Delivery. The transit system also receives local support from the City of Clarksville. Approximately \$2,300,000 was requested and approved June 22, 2016, in the proposed FY 2017 budget from the Clarksville City Council.

Table 5-1: Revenue and Expense Trends

Revenue	Actual FY 2010	Budgeted FY 2017	Change
Federal	\$1,606,980	\$2,905,500	81%
State	\$858,916	\$1,045,709	22%
Local	\$1,279,883	\$1,875,148	47%
Directly Generated Funds	\$608,837	\$816,072	34%
Total Revenue	\$4,354,616	\$6,642,429	53%

Expenses	Actual FY 2010	Budgeted FY 2017	Change
Total Salaries & Wages	\$1,972,147	\$3,066,809	56%
Total Fringe Benefits	\$1,302,379	\$1,792,429	38%
Total Services	\$124,600	\$183,061	47%
Total Materials and Supplies	\$725,731	\$1,081,891	49%
Total Utilities	\$63,766	\$92,350	45%
Total Casualty and Liability	\$59,906	\$77,626	30%
Total Taxes	\$245	\$323	32%
Total Miscellaneous Expense	\$80,090	\$204,297	155%
Total Reconciling Items	\$3,456	\$2,654	-23%
Total Capital Expenses	\$-	\$-	
Total Expenses	\$4,332,318	\$6,501,440	50%

FY: Fiscal Year. The CTS Fiscal Year begins July 1st and ends June 30th of each year.

CTS' budgets from FY 2010 to FY 2017 were analyzed for trends in revenues and expenses. This analysis helps to better understand the existing CTS service and project budgetary resources for future fiscal years. As shown in Table 5-1, both revenues and expenses increased by approximately 50 percent between FY 2010 and FY 2017. All sources of revenue increased, with revenue from federal sources increasing the most (81 percent). Nearly all expense items increased during this time period; total reconciling items, which includes building, parking lot, equipment, and interest expenses decreased by 23 percent. Expense items that increased by more than the average were: salaries and wages (56 percent) and miscellaneous expenses (155 percent).

Figure 5-1 on the next page shows revenues and expenses plotted by fiscal year. Revenues and expenses by line items are included in Table 5-2 and Table 5-3.

Figure 5-1: Historical Revenue and Expenses

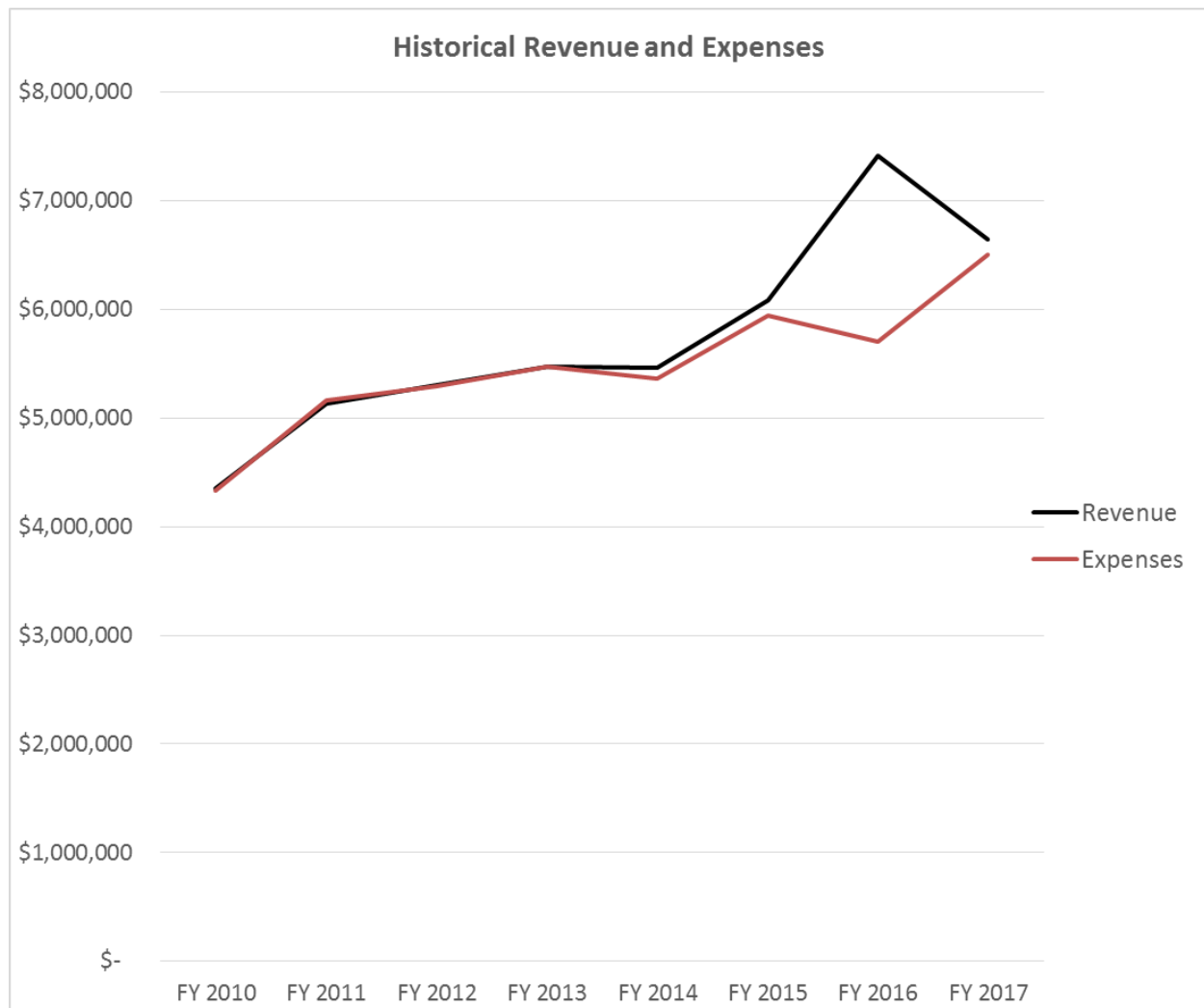


Table 5-2: Historical CTS Revenue

Revenue	Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
Federal								
Jobs Access Assistance	\$188,120	\$344,285	\$199,992	\$289,836	\$129,685	\$94,573	\$56,214	\$-
Planning/Research	\$40,562	\$41,493	\$41,496	\$44,568	\$43,340	\$55,038	\$56,214	\$56,214
Capitalized Operating-Preventative Maintenance	\$-	\$-	\$450,738	\$556,641	\$591,578	\$636,509	\$636,509	\$636,509
Capitalized Operating-ADA	\$519,311	\$671,450	\$184,411	\$190,964	\$197,277	\$225,625	\$225,625	\$261,717
Operating Assistance	\$858,987	\$976,102	\$1,147,022	\$1,070,191	\$1,183,919	\$1,294,120	\$1,643,332	\$1,719,946
Other	\$-	\$-	\$-	\$-	\$-	\$-	\$924,561	\$231,114
Federal Total	\$1,606,980	\$2,033,330	\$2,023,659	\$2,152,200	\$2,145,799	\$2,305,865	\$3,542,455	\$2,905,500
State								
Jobs Access Assistance	\$94,060	\$172,142	\$100,002	\$144,918	\$64,842	\$47,281	\$7,027	\$-
Planning/Research	\$5,070	\$5,187	\$5,187	\$5,571	\$5,417	\$6,880	\$7,027	\$7,027
Capitalized Operating-Preventative Maintenance	\$-	\$-	\$56,342	\$69,579	\$73,947	\$79,563	\$79,563	\$79,563
Capitalized Operating-ADA	\$64,914	\$83,931	\$23,051	\$23,870	\$24,659	\$28,203	\$28,203	\$32,714
Operating Assistance	\$694,872	\$695,217	\$695,218	\$695,218	\$884,352	\$884,265	\$884,300	\$897,500
Other	\$-	\$-	\$-	\$-	\$-	\$-	\$115,570	\$28,905
State Total	\$858,916	\$956,477	\$879,800	\$939,156	\$1,053,217	\$1,046,192	\$1,121,690	\$1,045,709
Local								
Jobs Access Assistance	\$94,060	\$172,142	\$100,002	\$144,918	\$64,843	\$47,281	\$7,027	\$70,268
Planning/Research	\$5,070	\$5,187	\$5,189	\$5,569	\$5,418	\$6,880	\$7,027	\$7,027
Capitalized Operating-Preventative Maintenance	\$-	\$-	\$56,343	\$69,580	\$73,948	\$79,564	\$79,564	\$79,564
Capitalized Operating-ADA	\$64,913	\$83,931	\$23,052	\$23,870	\$24,660	\$28,203	\$28,203	\$32,715
Operating Assistance	\$1,115,840	\$1,203,153	\$1,480,913	\$1,343,939	\$1,245,277	\$1,716,023	\$1,696,953	\$1,656,669
Other	\$-	\$-	\$-	\$-	\$-	\$-	\$115,570	\$28,905
Local Total	\$1,279,883	\$1,464,413	\$1,665,499	\$1,587,876	\$1,414,146	\$1,877,951	\$1,934,344	\$1,875,148

Revenue		Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
Directly Generated Funds									
	Adult Passenger Fares	\$336,847	\$362,339	\$407,606	\$434,795	\$449,704	\$460,200	\$429,767	\$433,900
	Senior Citizen Fares	\$11,412	\$10,759	\$10,084	\$14,233	\$14,659	\$15,070	\$924	\$-
	Student Fares	\$11,147	\$10,940	\$11,896	\$19,460	\$18,435	\$18,975	\$13,226	\$13,625
	Special Ride Fares	\$96,086	\$104,749	\$103,750	\$119,231	\$128,534	\$129,525	\$123,058	\$124,075
	Total Passenger Fares	\$455,492	\$488,786	\$533,337	\$587,719	\$611,332	\$623,770	\$566,975	\$571,600
	Special Transit Fares	\$147,613	\$151,862	\$164,589	\$170,448	\$154,771	\$154,724	\$130,637	\$118,472
	Auxiliary Funds (Advertising)	\$38,960	\$33,180	\$30,175	\$38,550	\$79,843	\$80,000	\$115,443	\$125,000
	Investment Income (Interest)	\$627	\$718	\$218	\$382	\$457	\$450	\$594	\$500
	Non-Transportation Funds	\$(33,855)	\$6,530	\$5,158	\$1,610	\$-	\$-	\$520	\$500
	Directly Generated Funds Total	\$608,837	\$681,076	\$733,477	\$798,708	\$846,403	\$858,944	\$814,169	\$816,072
	Total Revenue	\$4,354,616	\$5,135,296	\$5,302,435	\$5,477,941	\$5,459,565	\$6,088,952	\$7,412,658	\$6,642,429

CTS, 2016.

Table 5-3: Historical CTS Expenses

Expenses		Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
Salaries & Wages									
	Operator Wages	\$1,221,736	\$1,394,120	\$1,385,932	\$1,411,854	\$1,456,184	\$1,541,367	\$1,594,180	\$1,765,436
	Other Salaries & Wages	\$750,410	\$943,732	\$965,364	\$969,245	\$1,004,556	\$1,099,361	\$1,124,265	\$1,301,373
	Total Salaries & Wages	\$1,972,147	\$2,337,852	\$2,351,296	\$2,381,099	\$2,460,740	\$2,640,728	\$2,718,445	\$3,066,809
Fringe Benefits									
	FICA	\$133,326	\$156,044	\$157,157	\$159,575	\$170,176	\$177,961	\$182,524	\$209,677
	Medicare	\$31,181	\$36,494	\$36,754	\$37,322	\$39,799	\$41,523	\$42,687	\$49,040
	Flex Spending	\$94	\$321	\$464	\$383	\$313	\$228	\$267	\$289
	Pension	\$288,896	\$364,613	\$363,292	\$356,653	\$373,535	\$419,035	\$408,111	\$476,127
	Medical Insurance	\$265,512	\$313,186	\$259,400	\$263,590	\$306,309	\$425,467	\$374,981	\$415,260
	Pharmacy	\$58,307	\$70,838	\$51,880	\$57,750	\$76,577	\$107,100	\$140,674	\$155,760
	EAP	\$-	\$-	\$1,372	\$1,334	\$1,751	\$1,575	\$2,274	\$2,400
	Dental	\$19,488	\$14,538	\$17,875	\$17,150	\$21,641	\$28,380	\$34,991	\$38,432
	Wellness Center	\$-	\$-	\$-	\$6,100	\$40,577	\$48,960	\$73,620	\$85,680
	Life Insurance	\$4,480	\$4,908	\$4,927	\$4,687	\$4,730	\$4,913	\$5,938	\$6,581
	OPEB	\$171,268	\$172,921	\$326,428	\$374,481	\$-	\$-	\$-	\$-
	Long-Term Disability	\$7,750	\$8,465	\$9,786	\$9,511	\$9,808	\$10,136	\$12,243	\$13,773
	Unemployment	\$13,982	\$6,814	\$4,769	\$6,762	\$-	\$5,000	\$4,149	\$5,000
	On-the-Job Injury	\$564	\$845	\$135	\$182	\$1,230	\$1,207	\$-	\$2,500
	Sick Leave	\$57,354	\$61,892	\$63,337	\$62,766	\$90,500	\$70,376	\$55,055	\$55,865
	Admin Leave	\$2,880	\$2,466	\$3,804	\$3,677	\$2,137	\$3,050	\$5,737	\$-
	Holiday Pay	\$78,327	\$84,915	\$99,433	\$96,666	\$99,897	\$103,836	\$125,663	\$135,110
	Vacation Pay	\$90,695	\$134,583	\$117,225	\$115,375	\$109,576	\$124,940	\$105,580	\$94,991
	Military/Jury Pay	\$337	\$25	\$698	\$575	\$-	\$408	\$419	\$-

Expenses	Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
Longevity	\$59,798	\$51,564	\$20,260	\$21,306	\$22,940	\$25,700	\$24,458	\$27,000
Uniforms	\$16,642	\$9,990	\$6,011	\$10,542	\$10,001	\$12,672	\$9,469	\$15,194
Tool Allowance	\$1,500	\$2,190	\$807	\$812	\$2,250	\$2,250	\$2,250	\$3,750
Total Fringe Benefits	\$1,302,379	\$1,497,611	\$1,545,816	\$1,607,199	\$1,383,748	\$1,614,717	\$1,611,091	\$1,792,429
Services								
Services	\$124,600	\$132,534	\$138,734	\$160,322	\$129,126	\$158,214	\$245,030	\$183,061
Total Services	\$124,600	\$132,534	\$138,734	\$160,322	\$129,126	\$158,214	\$245,030	\$183,061
Materials and Supplies								
Fuel and Lubricants	\$534,169	\$735,352	\$864,059	\$880,686	\$932,500	\$1,030,270	\$443,025	\$847,750
Tires and Tubes	\$3,834	\$808	\$1,636	\$1,644	\$844	\$2,400	\$2,004	\$2,000
Other Materials and Supplies	\$187,728	\$182,165	\$152,630	\$179,358	\$176,747	\$201,992	\$312,806	\$232,141
Total Materials and Supplies	\$725,731	\$918,325	\$1,018,325	\$1,061,688	\$1,110,091	\$1,234,662	\$757,834	\$1,081,891
Utilities								
Utilities	\$63,766	\$68,230	\$66,428	\$82,280	\$80,781	\$83,535	\$85,038	\$92,350
Total Utilities	\$63,766	\$68,230	\$66,428	\$82,280	\$80,781	\$83,535	\$85,038	\$92,350
Casualty and Liability								
Casualty and Liability	\$59,906	\$110,036	\$99,867	\$98,065	\$96,709	\$101,297	\$93,933	\$77,626
Total Casualty and Liability	\$59,906	\$110,036	\$99,867	\$98,065	\$96,709	\$101,297	\$93,933	\$77,626
Taxes								
Vehicle Registration-Buses	\$35	\$70	\$-	\$-	\$-	\$-	\$154	\$68
Vehicle Registration-DR	\$175	\$-	\$-	\$-	\$-	\$18	\$40	\$210
Vehicle Registration-T/A	\$35	\$-	\$-	\$45	\$39	\$18	\$77	\$45
Total Taxes	\$245	\$70	\$-	\$45	\$39	\$35	\$271	\$323

Expenses		Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
Miscellaneous Expense									
	Miscellaneous Expense	\$80,090	\$85,522	\$69,457	\$83,769	\$103,373	\$107,425	\$189,348	\$204,297
	Total Miscellaneous Expense	\$80,090	\$85,522	\$69,457	\$83,769	\$103,373	\$107,425	\$189,348	\$204,297
Reconciling Items									
	Interest Expense	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
	Building Leases	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
	Parking Lot Leases	\$-	\$5,400	\$1,800	\$-	\$-	\$-	\$-	\$-
	Equipment Leases	\$3,456	\$3,813	\$3,474	\$3,474	\$3,711	\$2,500	\$2,463	\$2,654
	Total Reconciling Items	\$3,456	\$9,213	\$5,274	\$3,474	\$3,711	\$2,500	\$2,463	\$2,654
	Total Expenses	\$4,332,318	\$5,159,392	\$5,295,195	\$5,477,941	\$5,368,317	\$5,943,113	\$5,703,454	\$6,501,440

NET (REVENUE - EXPENSES)		Actual FY 2010	Actual FY 2011	Actual FY 2012	Actual FY 2013	Projected FY 2014	Budgeted FY 2015	Projected FY 2016	Budgeted FY 2017
	Funding Shortfall/Surplus	\$22,298	\$(24,096)	\$7,240	\$0	\$91,247	\$145,839	\$1,709,204	\$140,989

CTS, 2016.

5.2 Capital Improvement Plan

The existing CTS fixed route and demand response vehicles were assessed for their useful life, which the FTA defines as: “Useful life of rolling stock begins on the date the vehicle is placed in revenue service and continues until it is removed from revenue service. The useful life in years refers to total time in revenue transit service, not time spent stockpiled or otherwise unavailable for regular transit use. The useful life in miles refers to total miles in revenue transit service. Non-revenue miles do not count towards useful life.”²

Useful life is quantified depending on the vehicle type. For CTS’ small size, heavy-duty transit buses the useful life is at least 350,000 revenue miles or 10 years of service, whichever comes first. Light-duty vehicles such as vans used for demand response service have a shorter useful life: at least 100,000 miles or four years of service. Applying this criteria to the CTS fleet, 15 buses, two trolleys, and nine demand response vehicles have already met their useful life, which represents 74 percent of the total CTS fleet

As part of the Capital Improvement Plan, a replacement schedule was proposed for the CTS fleet in order to bring the fleet in line with the FTA recommended useful life and maintain high quality of service for CTS customers. The replacement schedule was drafted by first estimating the total mileage of the transit vehicles for the next seven fiscal years. Total mileage was forecasted using average annual mileage, which was calculated by dividing the most recent fiscal year mileage (FY 2016) by the number of years in service for each vehicle. Vehicles were then programmed for replacement when they met the FTA’s useful life guidelines. In some cases, vehicle replacement was delayed in order to balance the replacement costs with funding available in a given year. The replacement schedule for the fixed route fleet is shown in Table 5-4 and demand response in Table 5-5.

The estimated total cost associated with the Capital Improvement Plan is \$17.3M with a \$1.7M local match between FY 2017 and FY 2022. Implementation of the Capital Improvement Plan is contingent upon funding availability from federal, state, and local sources. Limited funding availability may delay replacement of vehicles.

² FTA Circular 5010.1D, Grant Management Requirements, 2008.

Table 5-4: Capital Plan for Fixed Route Fleet

CTS No.	Vehicle Description	FY 2016 Mileage	Years in Service	Avg. Annual Mileage	Replacement Year	FY 17 Mileage	FY 18 Mileage	FY 19 Mileage	FY 20 Mileage	FY 21 Mileage	FY 22 Mileage
716	Gillig (2001)	836,221	15	55,748	FY 2017	891,969	-	-	-	-	-
709	Gillig (2003)	737,851	13	56,758	FY 2017	794,609	-	-	-	-	-
711	Gillig (2003)	756,615	13	58,201	FY 2017	814,816	-	-	-	-	-
717	Gillig (2003)	754,635	13	58,049	FY 2017	812,684	-	-	-	-	-
718	Gillig (2005)	611,203	11	55,564	FY 2017	666,767	-	-	-	-	-
719	Gillig (2005)	639,980	11	58,180	FY 2018	698,160	756,340	-	-	-	-
720	Gillig (2005)	625,520	11	56,865	FY 2018	682,385	739,251	-	-	-	-
721	Gillig (2005)	638,385	11	58,035	FY 2018	696,420	754,455	-	-	-	-
T-2	Supreme Trolley (2005)	85,331	11	7,757	FY 2017	93,088	-	-	-	-	-
T-3	Supreme Trolley (2005)	84,663	11	7,697	FY 2017	92,360	-	-	-	-	-
722	Gillig (2006)	557,807	10	55,781	FY 2018	613,588	669,368	-	-	-	-
723	Gillig (2006)	556,615	10	55,662	FY 2018	612,277	667,938	-	-	-	-
724	Gillig (2006)	549,312	10	54,931	FY 2018	604,243	659,174	-	-	-	-
725	Gillig (2010)	342,665	6	57,111	FY 2019	399,776	456,887	513,998	-	-	-
726	Gillig (2010)	341,203	6	56,867	FY 2019	398,070	454,937	511,805	-	-	-
727	Gillig (2010)	294,795	5	58,959	FY 2021	353,754	412,713	471,672	530,631	589,590	-
728	Gillig (2010)	286,991	5	57,398	FY 2021	344,389	401,787	459,186	516,584	573,982	-
729	Gillig (2010)	286,479	5	57,296	FY 2022	343,775	401,071	458,366	515,662	572,958	630,254
730	Gillig (2010)	311,042	5	62,208	FY 2020	373,250	435,459	497,667	559,876	-	-
731	Gillig (2015)	55,641	1	55,641	FY 2022	111,282	166,923	222,564	278,205	333,846	389,487
732	Gillig (2015)	56,477	1	56,477	FY 2022	112,954	169,431	225,908	282,385	338,862	395,339
733	Gillig (2015)	56,415	1	56,415	FY 2022	112,830	169,245	225,660	282,075	338,490	394,905
734	Gillig (2015)	55,781	1	55,781	FY 2022	111,562	167,343	223,124	278,905	334,686	390,467
Vehicles Replaced:						7	6	2	1	2	5
Total Cost (\$M):						\$4,982,922	\$4,221,529	\$1,434,898	\$731,583	\$1,491,990	\$3,803,455
Local Match (10%):						\$498,292	\$422,153	\$143,490	\$73,158	\$149,199	\$380,345

Table 5-5: Capital Plan for Demand Response Fleet

CTS No.	Vehicle Description	FY 2016 Mileage	Years in Service	Avg. Annual Mileage	Replacement Year	FY 17 Mileage	FY 18 Mileage	FY 19 Mileage	FY 20 Mileage	FY 21 Mileage	FY 22 Mileage
523	Ford E150 Conv Van (2009)	243,484	7	34,783	FY 2019	278,267	313,051	347,834	-	-	-
524	Ford E150 Conv Van (2009)	221,065	7	31,581	FY 2019	252,646	284,226	315,807	-	-	-
525	Ford E150 Conv Van (2009)	238,362	7	34,052	FY 2019	272,414	306,465	340,517	-	-	-
526	Ford E150 Conv Van (2009)	248,300	7	35,471	FY 2020	283,771	319,243	354,714	390,186	-	-
527	Ford E150 Conv Van (2009)	228,036	7	32,577	FY 2020	260,613	293,189	325,766	358,342	-	-
528	Ford / Goshen Coach (2009)	231,440	7	33,063	FY 2020	264,503	297,566	330,629	363,691	-	-
529	Ford / Goshen Coach (2009)	230,538	7	32,934	FY 2021	263,472	296,406	329,340	362,274	395,208	-
530	Ford / Goshen Coach (2010)	234,419	6	39,070	FY 2021	273,489	312,559	351,629	390,698	429,768	-
531	Dodge Grand Caravan Van (2013)	53,941	3	17,980	FY 2021	71,921	89,902	107,882	125,862	143,843	-
532	Dodge Grand Caravan Van (2014)	25,895	2	12,948	FY 2022	38,843	51,790	64,738	77,685	90,633	103,580
533	Ford E150 Conv Van (2014)	54,868	1	54,868	FY 2022	109,736	164,604	219,472	274,340	329,208	384,076
534	Ford E450 StarTran (2015)	43,663	1	43,663	FY 2022	87,326	130,989	174,652	218,315	261,978	305,641
Vehicles Replaced:						0	2	1	3	3	3
Total Cost:						\$82,351	\$41,987	\$143,470	\$161,620	\$133,552	\$82,351
Local Match (10%):						\$8,235	\$4,199	\$14,347	\$16,162	\$13,355	\$8,235

5.3 Funding the Action Plan

There are several potential federal, state, and local sources for funding the recommendations included in the Action Plan. The TDOT Office of Public Transportation and the KYTC Office of Transportation Delivery allocates federal and state funds to Clarksville Transit. The offices manage the state allocations of several FTA programs for funding public transportation. The programs applicable to Clarksville Transit are summarized below, based on the most recent TDOT *State Management Plan for Federal Transit Administration Programs* (May 2016) and the KYTC Office of Transportation Delivery website:

- **Section 5303:** Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states that is cooperative, continuous, and comprehensive, resulting in long-range plans and short-range programs of transportation investment priorities. The planning programs are jointly administered by FTA and the FHWA, which provides additional funding. State departments of transportation and metropolitan planning organizations are eligible to receive Section 5303 funding.
- **Section 5307:** Provides annual funding to urbanized areas to assist in public transportation administration, planning, capital, and operating activities. Eligible projects include administration, asset investments, preventative maintenance, and planning. Operations are not eligible for the state match. In Tennessee, public transportation agencies providing general public transportation service in urbanized areas less than 200,000 in population such as CTS, are eligible for state and federal program funds. Kentucky allows areas between 50,000 and 199,999 in population to apply directly to the FTA or via the KYTC Office of Transportation Delivery.
- **Section 5310:** Purpose is to improve the mobility of seniors and individuals with disabilities by removing barriers to transportation services and expanding transportation mobility options. Funds are used to purchase replacement and expansion vehicles. For TDOT allocations, these projects must be identified in the Transportation Improvement Plan (TIP) and vehicles must be purchased off the TDOT Statewide Contract. Kentucky requires a fully Coordinated Plan for funding eligibility.
- **Section 5339:** Provides funding through a competitive allocation process to States and transit agencies to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. The competitive allocation provides funding for major improvements to bus transit systems that would not be achievable through formula allocations. The designated recipients for Section 5339 funds for urbanized areas between 50,000 and 200,000 are TDOT in Tennessee and KYTC in Kentucky.

In addition to the aforementioned FTA programs, the TDOT Office of Public Transportation also manages the State Operating Assistance Program. This program supports CTS operations and administrative costs and could fund costs associated with the Action Plan. The next section identifies the costs and funding sources for each recommendation.

5.4 Action Plan Costs

The costs associated with the Action Plan as well as potential funding sources are identified for each recommendation in Table 5-6 below. These cost estimates and potential funding sources were discussed in a collaborative effort with the CTS staff. The estimated costs for vehicle operator wages and benefits, recent vehicle quotes, recent map and schedule printing and current CTS fares were all taken into account in this comprehensive analytical exercise. The projected estimates were rounded to the nearest significant unit to reflect whole numbers. These estimates are all subject to change but serve as placeholders for the purpose of the estimation process. It is important to note that some recommendations such as the Fort Campbell Circulator would be funded in part by contributions from partnering entities.

Table 5-6: Action Plan Costs

Task ID	Tasks to be Implemented	Costs (\$ FY16)	Funding Sources
Administration			
A1	New Bus Operator Training should include working with motorized wheelchairs	\$1,500	Section 5307 - Operating
A2	Purchase and install Paratransit Scheduling software	\$250,000	Section 5339
A3	Consider scheduling Paratransit Rider interviews twice a month (exceptions can be made if warranted by special circumstances)	\$850	Section 5307 - Operating
A4	Provide an automated way to collect ridership data	\$1,200	Section 5339
A5	Initiate paper transfers (Implemented 7/1/2016)	\$150	Section 5307 - Operating
A6	Provide an annual survey and community outreach at the Rivers and Spires Festival	\$600	Section 5307 - Operating
A7	Continue to assess the feasibility of a new location for a transfer center	CUAMPO is funding this study	Section 5303
A8	Initiate a bus stop signage review	\$40,000	Section 5339
A9	Develop a Quarterly CTS Newsletter	\$700	Section 5307 - Operating
A10	Collaboration with Austin Peay State University	\$2,500	Section 5307 - Operating
A11	Consider a 10-Ride Ticket book to be sold for \$13.50 (one free ride)	\$900	Section 5307 - Operating
A12	Offer a 30-Ride Ticket book to be sold for \$47.00 (two free rides)	\$3,200	Section 5307 - Operating
A13	Become a partner in the National Safe Place Network	\$700	Section 5307 - Operating
A14	Consider implementing a Student Transit Ambassador program	\$1,800	Section 5307 - Operating
A15	Consider implementing a "Commuter Benefit" program.	\$2,400	Section 5307 - Operating
A16	System Map and Schedule Updates	\$11,000	Section 5307 - Operating
A17	Annual Software Fees	\$60,000	Section 5307 - Capital
Operating			
O1	Create downtown circulator: - Veterans Plaza/Health Dept. - AJAX Senior Center - Workforce Development - CTS Downtown Transfer Facility	\$280,000	Section 5307 - Operating
O2	Initiate a circulator route on the Fort Campbell	\$300,000	Section 5307 - Operating

Task ID	Tasks to be Implemented	Costs (\$ FY16)	Funding Sources
	military installation		
O3	Route #2 Split at Wal-Mart on Ft. Campbell Blvd.	\$310,000	Section 5307 - Operating
O4	Route #8 Split at Governors Square Mall Shopping Center	Costs expected to be negligible	Section 5307 - Operating
O5	Discontinue Route #812	\$(30,600)	CMAQ - Commuter
O6	Increase frequencies on fixed routes to 30 minutes	\$2,700,000	Section 5307 - Operating
Capital			
C1	Replace vehicles meeting FTA useful life	Refer to Section 5.2 Capital Improvement Plan	CMAQ
C2	Provide additional shelters	\$30,000	Section 5307 - Capital
C3	Consider procuring Automatic Passenger Counters (APC)	\$250,000	Section 5339
C4	Procure additional buses	\$8,800,000	CMAQ
C5	Transition from diesel fixed route bus fleet to hybrid fleet	Costs are reflected in Task C1	CMAQ

Further detail on the approximate costs associated with increasing weekday frequencies are provided in Table 5-7. These cost per vehicle revenue hour (CPVRH) used to approximate the increased frequency costs was developed by applying an inflation factor of 1.97 percent to the CPVRH reported in the most recent available National Transit Database Profile (2014) for CTS. The CPVRH was \$64.83 in 2014 and \$67.41 with inflation in 2016. An additional route supervisor with an annual salary of approximately \$48,000 would be necessary. These costs would be funded by federal, state, and local sources such as the Section 5307 program.

Table 5-7: Increased Weekday Frequency Costs

Route	Current Operating Cost at 60 Min. Headway	Estimated Operating Cost at 30 Min. Headway	Change in Operating Costs	Additional Vehicles Required	Vehicle Capital Costs
Route 1 – Fort Campbell	\$760,000	\$1,400,000	\$640,000	2	\$1,350,000
Route 2 – Tiny Town Road	\$670,000	\$1,230,000	\$560,000	2	\$1,350,000
Route 3 – Cunningham Loop	Currently Operates on 30 Minute Headway	N/A	N/A	N/A	N/A
Route 4 – Peachers Mill Road	\$370,000	\$670,000	\$300,000	1	\$680,000
Route 5 – Hilldale	\$700,000	\$1,270,000	\$570,000	2	\$1,350,000
Route 6 – Madison Street	Currently Operates on 30 Minute Headway	N/A	N/A	N/A	N/A
Route 7 – Gov. Square Mall	Currently Operates on 30 Minute Headway	N/A	N/A	N/A	N/A
Route 8 – 101 Express/Gateway Medical Ctr.	\$740,000	\$1,350,000	\$610,000	2	\$1,350,000
Total	\$3,240,000	\$5,920,000	\$2,680,000	9	\$6,080,000

6.0 Public Involvement

This chapter details the public involvement efforts, which were critical in the development of the Comprehensive Operations Analysis. Discussion includes the Origin and Destination Survey and the Rivers and Spires Festival. Additional information is available in the appendices where noted.

6.1 Origin and Destination Survey



Transit Insight and AECOM, in partnership with Austin Peay State University (APSU), conducted an “Origin and Destination” survey of passengers riding the Clarksville Transit System (CTS) during the spring of 2016. The primary goals of the survey were to gather accurate information from passengers about their travel patterns as well as their demographic characteristics. This information allows CTS to better understand their riders as well as the riders’ transportation needs.

At the time of the survey, CTS operated 10 bus routes and added a new connector route on April 4, 2016, called the Route 1000 Industrial Park. Eight of the ten routes could be considered “workhorse” fixed-routes that provide regular bus service from early morning into early evening.

The remaining two routes provide specialized service, one of which, called the Peay Pickup runs as a circulator around APSU from 7:30 a.m. until 4:30 p.m. The other service provides early morning and evening bus connections to the I-24 Park and Ride lot at exit 8, where passengers can connect to Regional Transportation Authority (RTA) commuter buses headed to and from Nashville.

Surveys were conducted on all of the fixed-route services, excluding the Peay Pickup and the RTA bus connection. The RTA bus connection is slated for discontinuation once the Exit 8 Park and Ride lot is relocated to Exit 11 on I-24 and the Peay Pickup primarily serves APSU students.

Methodology

Transit Insight and AECOM worked closely with CTS staff and the project steering committee to develop the survey questions. Some key data points covered in the survey include:

- The origin (starting place) of the rider’s trip
- How the rider traveled from the origin to the boarding bus stop
- An estimate of how far the rider traveled from the origin to the bus stop
- The destination (ending place) of the rider’s trip
- An estimate of how far the rider traveled from the alighting stop to their final destination
- Household information about the rider (number of people in household, number of working vehicles, etc.)
- General information (how riders paid the fare, smart-phone ownership, customer service performance)
- Personal Information (gender, race, employment status, income, other language spoken at home)

The survey was conducted from Saturday, April 2nd through Wednesday, April 6th, 2016. It was administered as a face-to-face interview using android tablets. Students, Transit Insight, and AECOM staff conducted passenger interviews on buses and at the CTS Transit Station. In addition, students were supplied with paper survey instruments (written in both English and Spanish) in the event that passengers did not have time to complete the survey. These paper surveys could be returned to a collection box located at the Customer Service counter at the Transit Station.



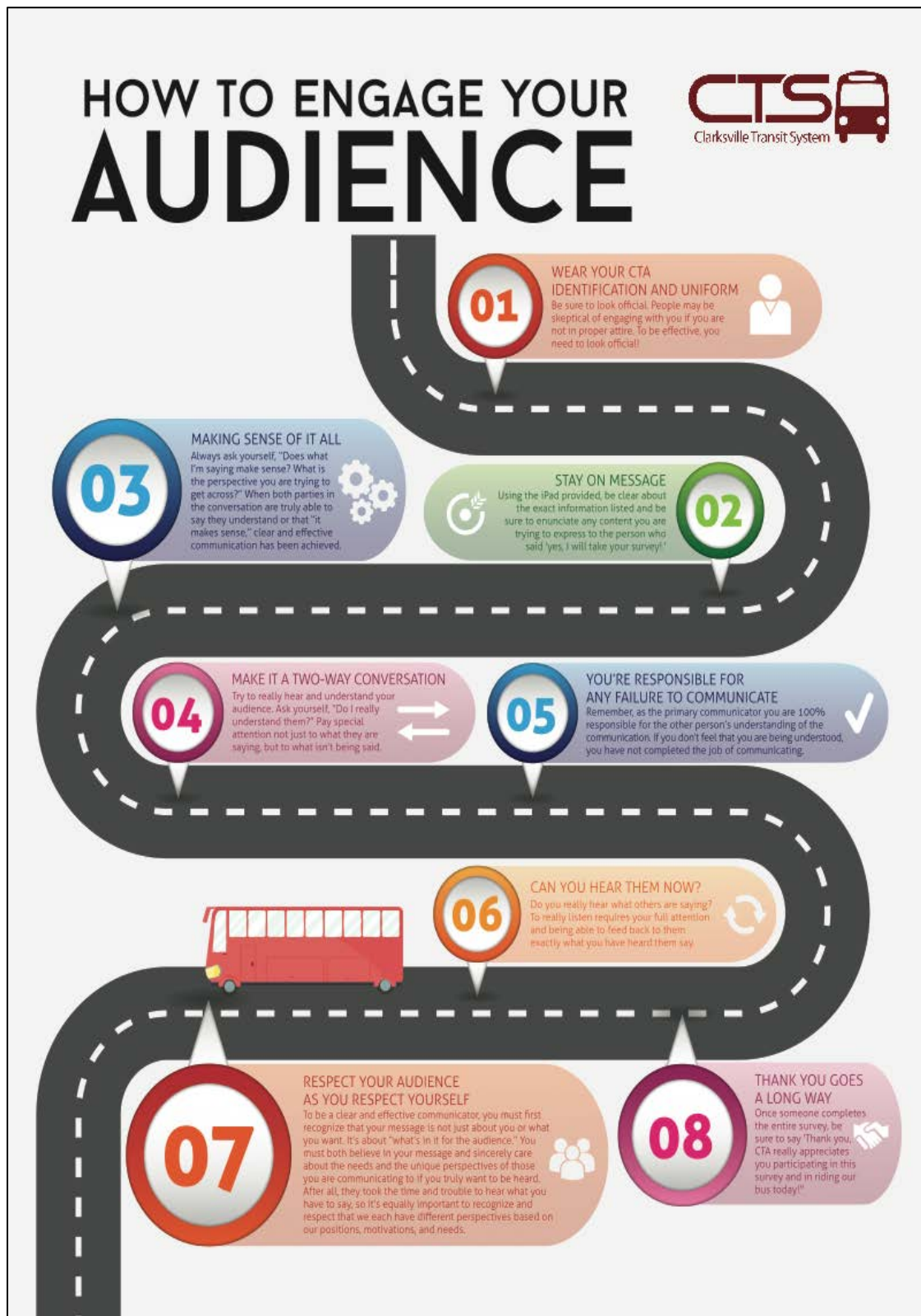
A sampling plan was developed to ensure that the overall results would be statistically valid for the CTS fixed-route system. As all transit systems track individual trips, not individuals, the sampling plan was based on average daily unlinked passenger trips (UPT). For CTS this number is 2,180 (calculated for calendar year 2015). In order to determine the appropriate level of individual riders to sample, the UPT were divided by 2 to arrive at 1,090 individual passengers per day. This is an estimation, as individual riders may ride more or less than two times per day, however, for small urban transit systems, 50% of UPT is a good rule-of-thumb.

To achieve statistical validity at a confidence level of 95% and a precision level of $\pm 5\%$, required that 295 surveys be completed. Our goal was to interact with 350 riders, or roughly 33% of daily passengers. We were able to achieve this with a total of 358 interactions netting 301 completed surveys. Table 6-1 shows the number of completed surveys by route. Additional information on the methodology used in the survey is available in Appendix B.

Table 6-1: Completed Surveys by Route

Route	10% Minimum Goal by Route for Collected Surveys	Actual Surveys Collected
Route 1 – Fort Campbell	35	36
Route 2 – Tiny Town Road	28	44
Route 3 – Cunningham Loop	31	48
Route 4 – Peachers Mill Road	12	22
Route 5 – Hilldale	30	37
Route 6 – Madison Street	40	42
Route 7 – Gov. Square Mall	34	35
Route 8 – 101 Express/Gateway Medical Ctr.	20	35
No Answer for Route	N/A	2
Total	230	301

Figure 6-1: Surveyor Training Handout

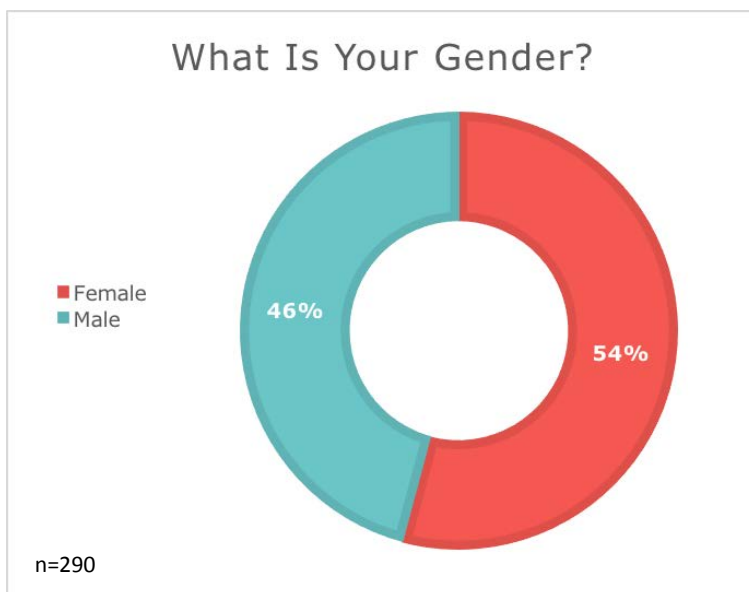


Survey Results

General ridership characteristics related to gender, age, race, employment, driver's license, vehicles, spoken language, fares, origins/destinations, and transfers are reported in this section; for the full results of the survey refer to Appendix B.

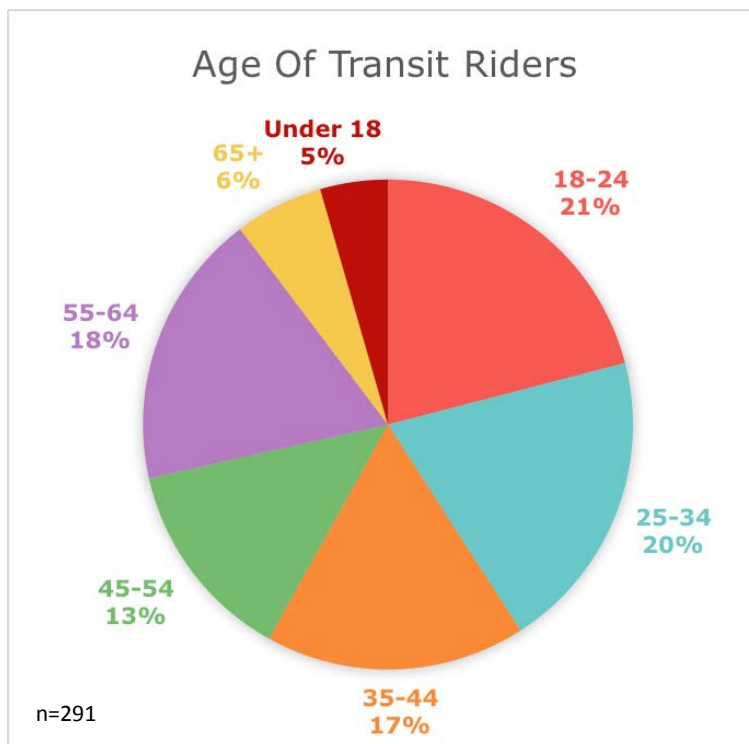
Gender

More than half (54%) of the riders surveyed were women, which is generally in-line with transit systems across the country.



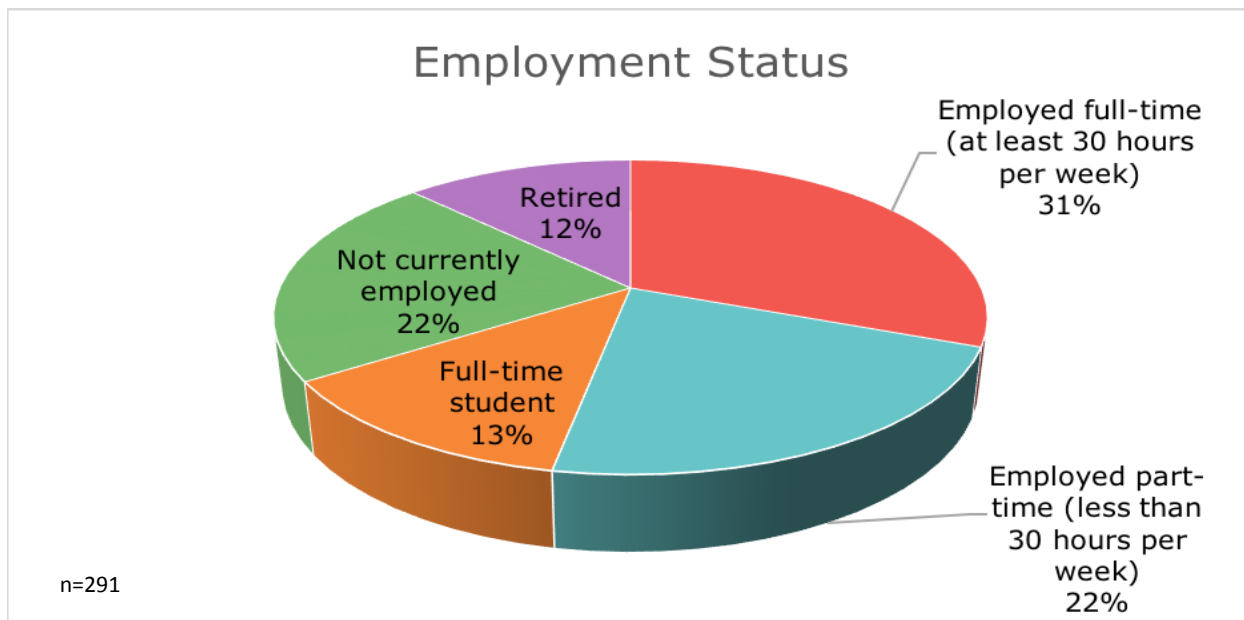
Age

The age distribution of surveyed riders was relatively even between four of the seven divisions. Age ranges for the 18-24, 25-34, 35-44, and 55-64 showed 21%, 20%, 17%, and 18% respectively.



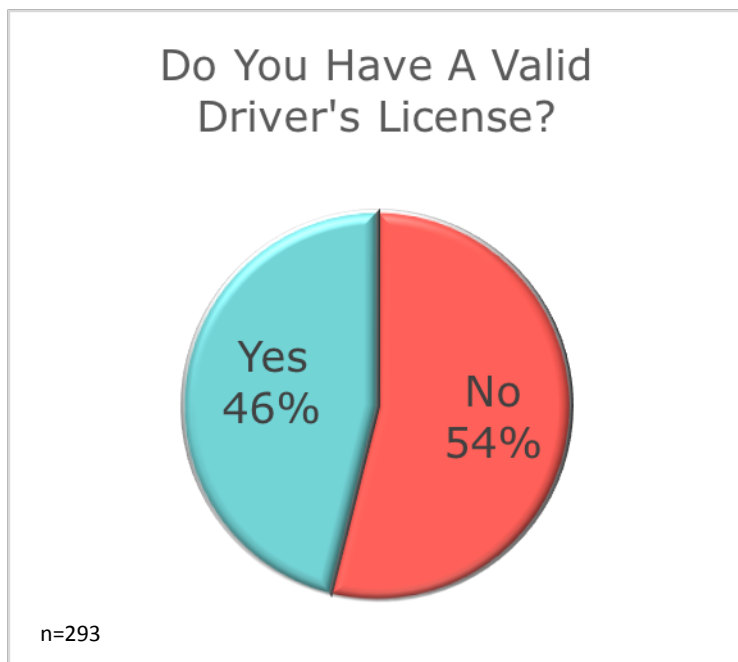
Employment

Just over half (53%) of the transit users surveyed were employed either full-time (31%) or part time (22%). Nearly one quarter of riders surveyed were not currently employed (22%) and the remaining quarter were either full-time students (13%) or retired (12%).



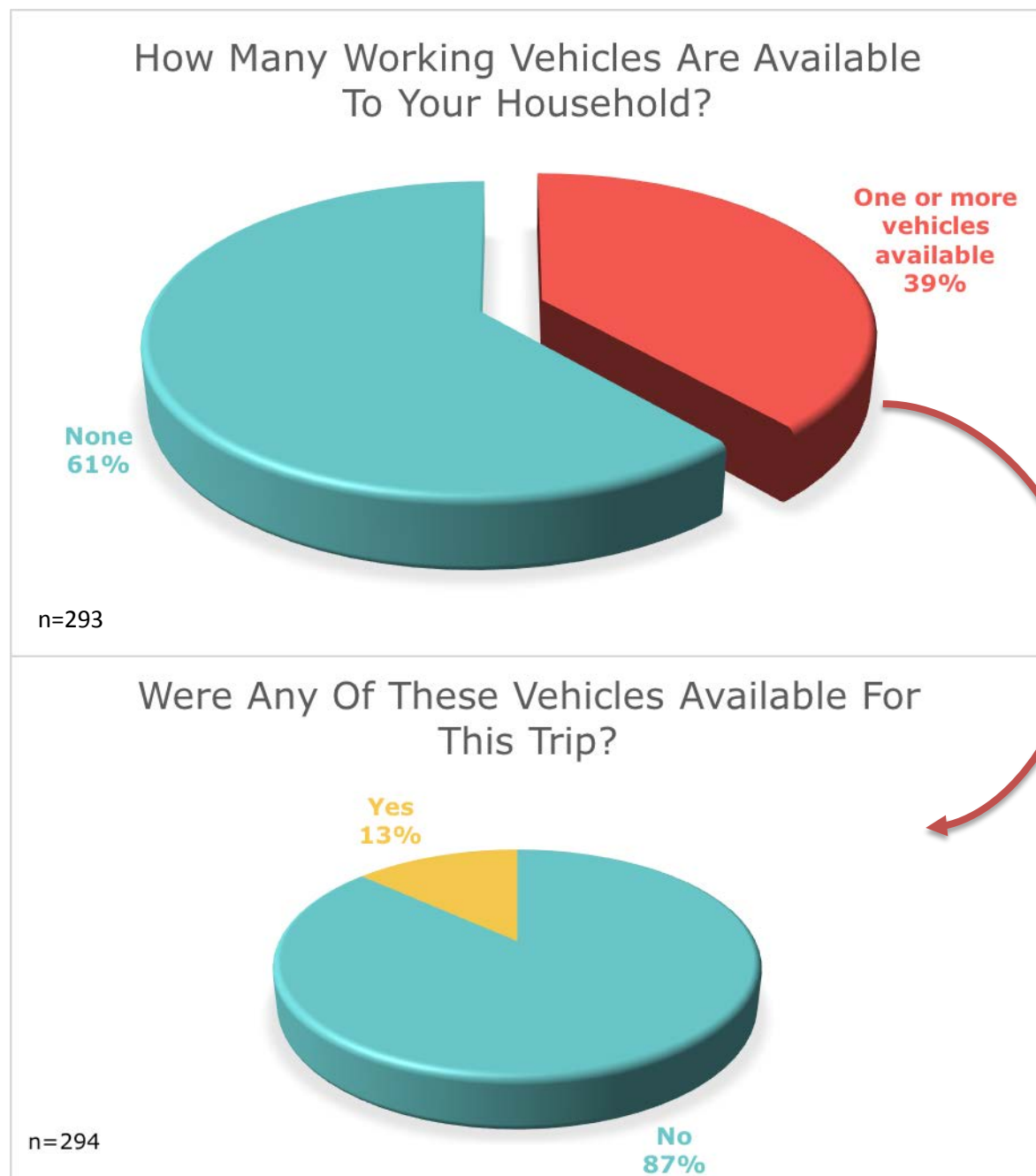
Valid Driver's License

Over half (54%) of the CTS riders surveyed do not have a driver's license.



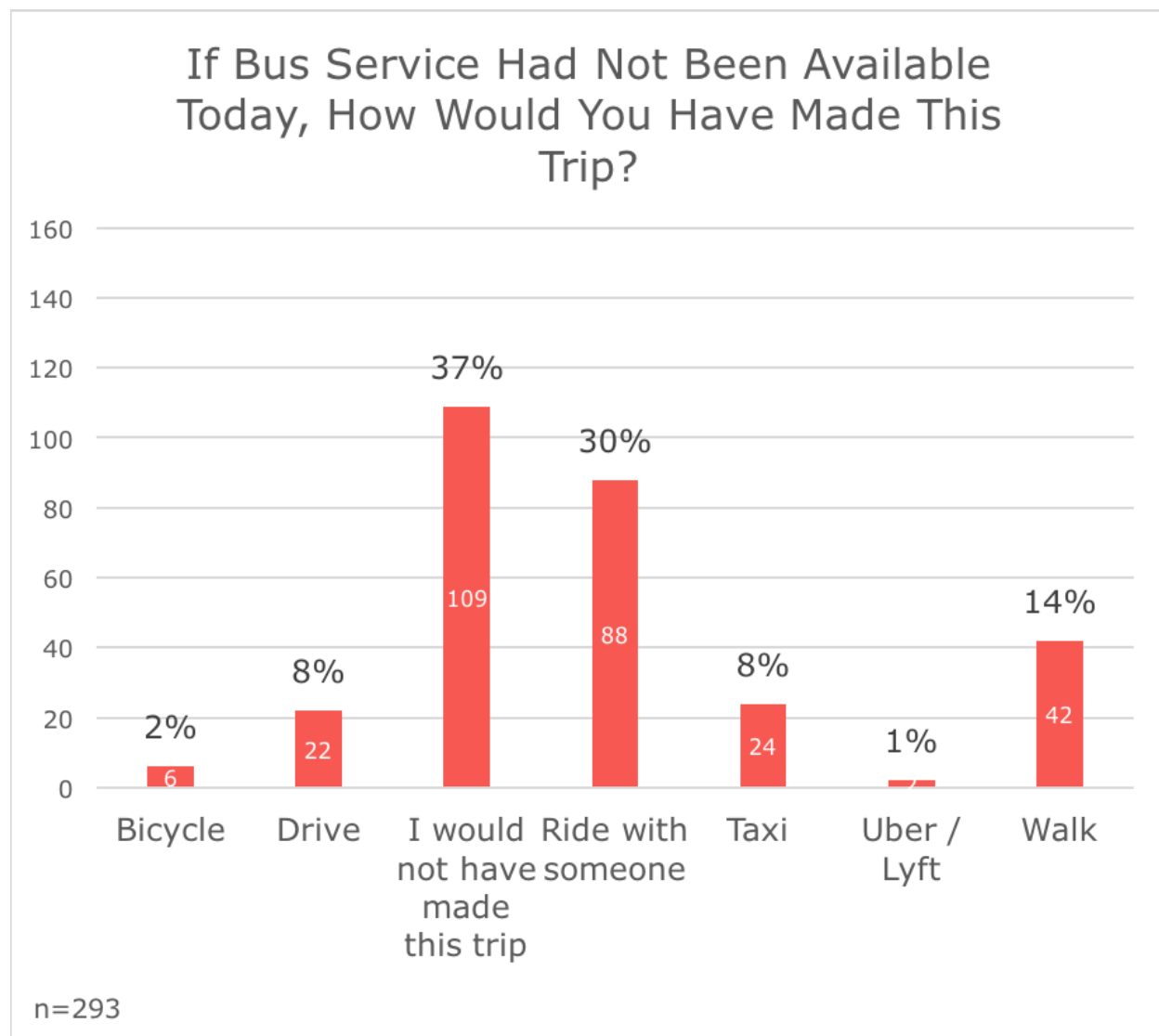
Working Vehicles Available to the Household

Over 61% of transit users surveyed did not have a vehicle available for the trip. Of the 39% of riders that do have a vehicle available, only 13% had a vehicle available for the trip.



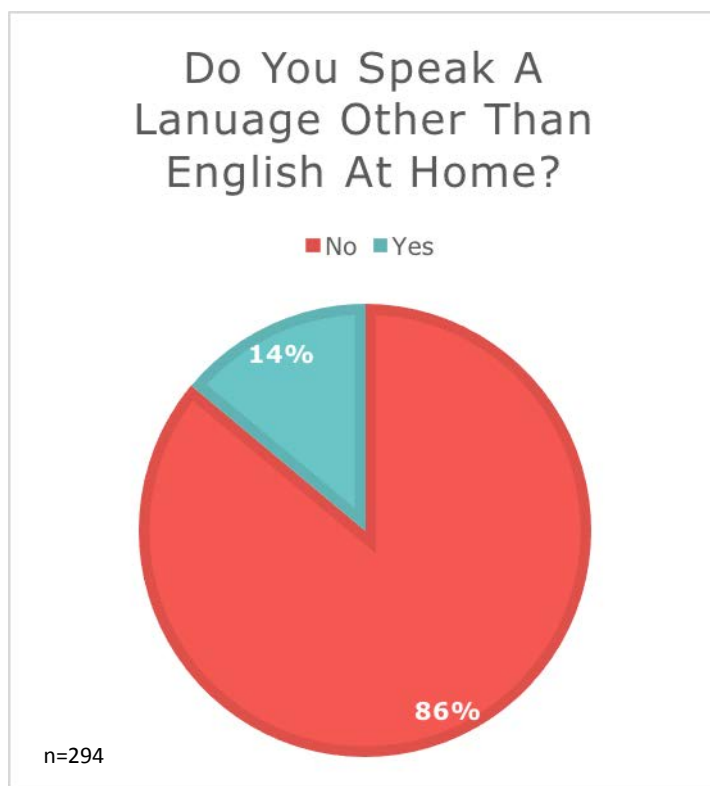
Trip Transportation Without Bus Service

If bus service was not provided by CTS, 37% of riders surveyed would not have made the trip. The next highest percentage (30%) would have ridden with someone while 14% responded that they would have walked.



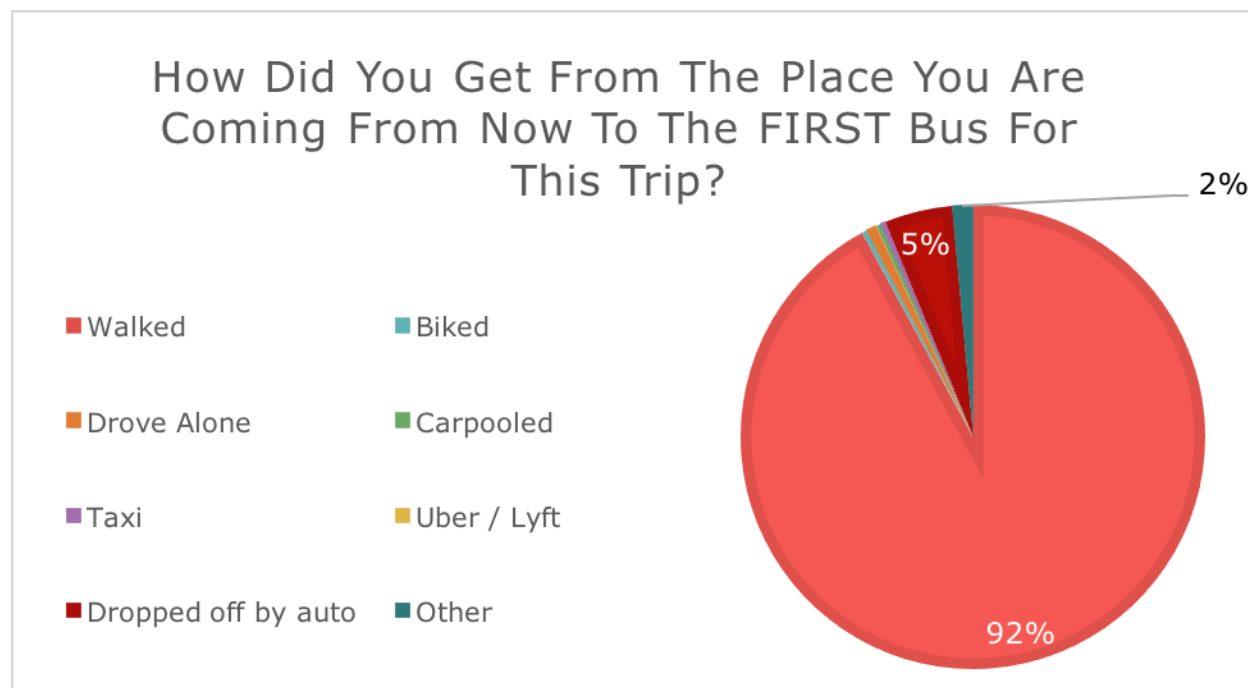
Spoken Language at Home

A small portion of surveyed riders (14%) indicated that they speak a language other than English at home. Of those, 95% responded that they speak English *Very Well*.



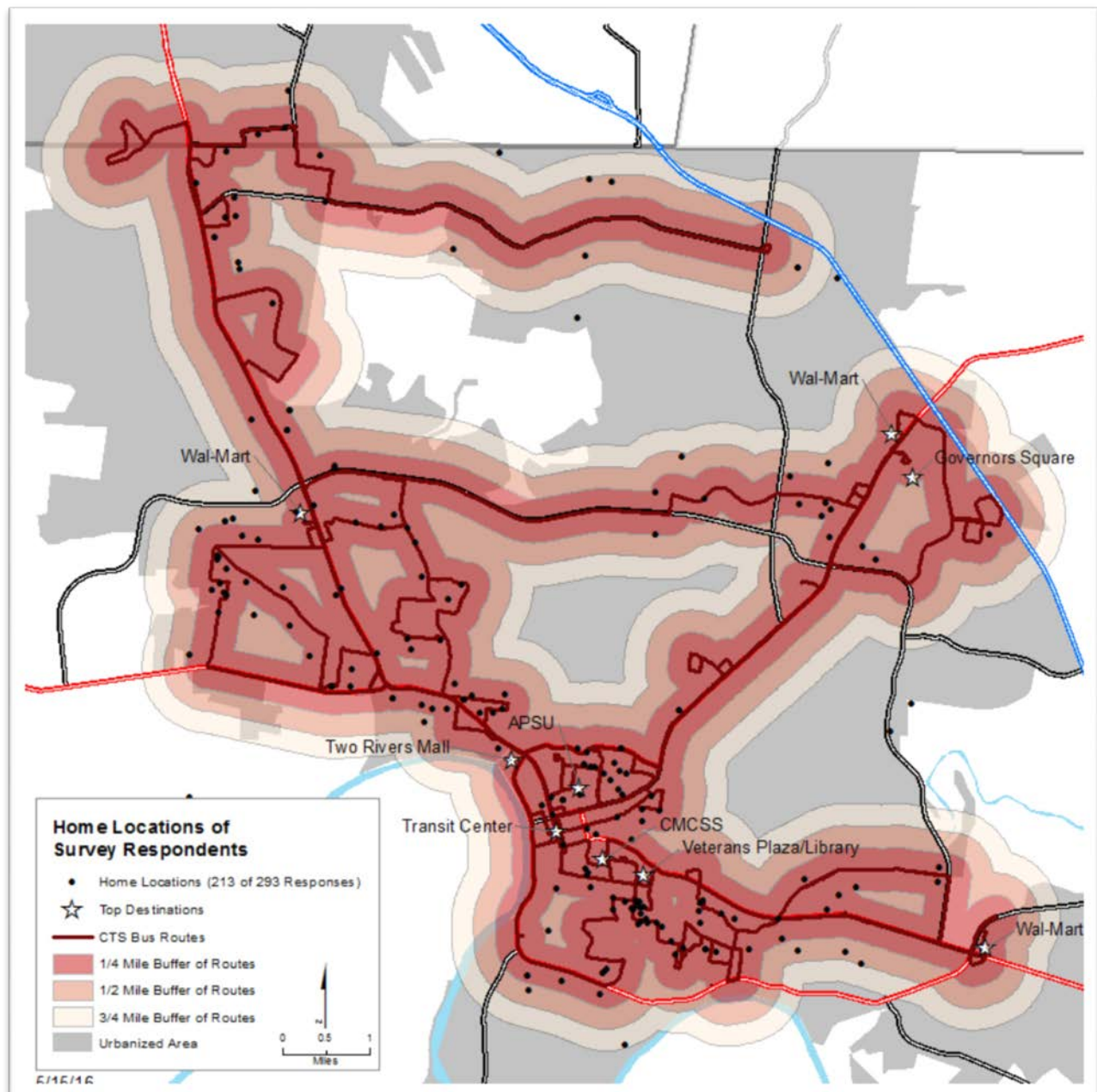
How Riders Got to the Bus

The majority of riders walk to the bus at 92% followed by being *Dropped Off* at 5%.



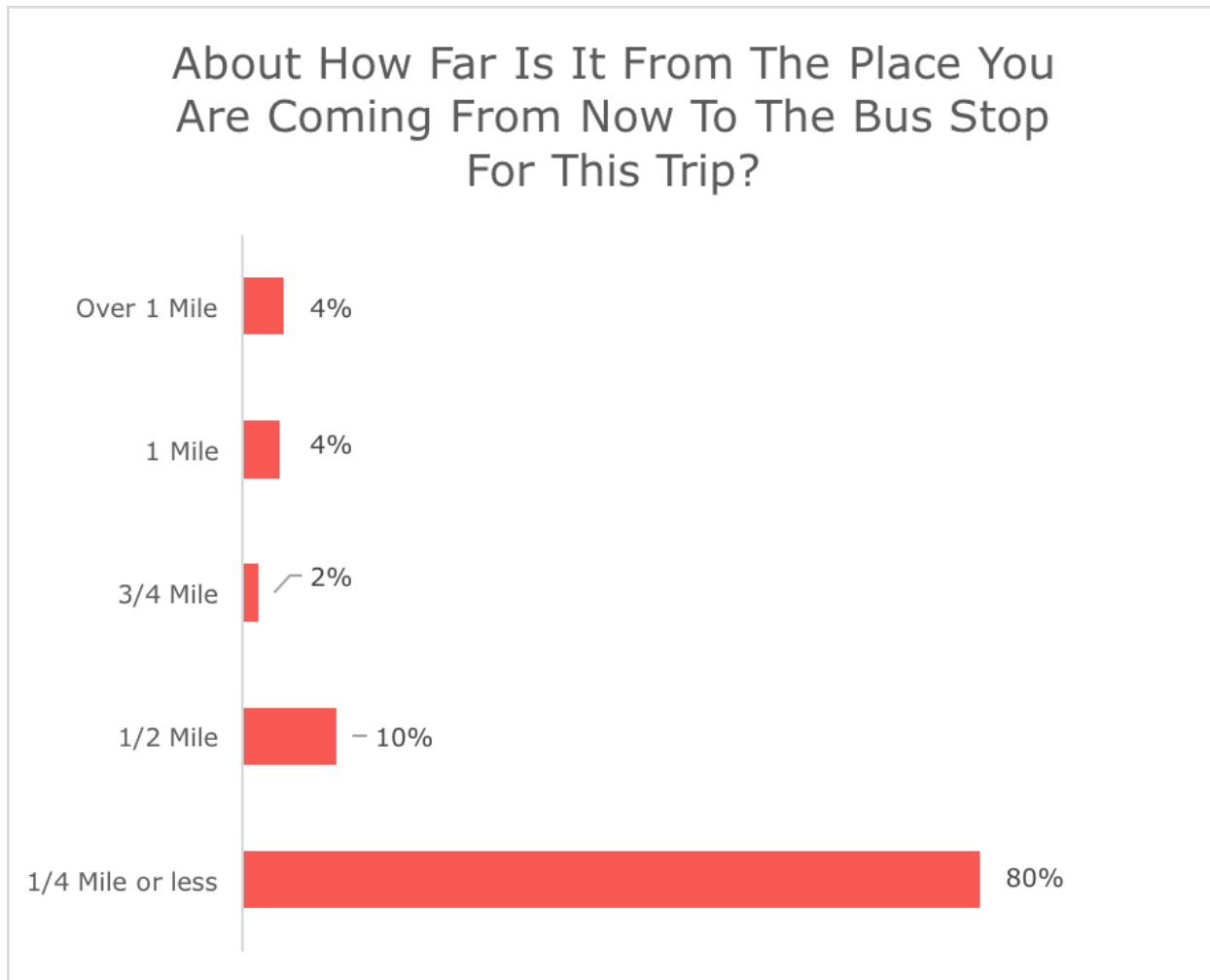
Geographic Location Of Surveyed Passengers

Based on the address data taken through the survey, AECOM staff were able to closely approximate home addresses for 213 responses (70%). These locations are represented on the map below, along with ¼ mile buffer increments. This provides some insight regarding locations with concentrations of passengers and their relationship to the CTS bus routes.



Estimated Distance From Origin to Bus Stop

Ninety percent (90%) of surveyed riders origins are within $\frac{1}{2}$ mile of the nearest bus stop and 80% are within $\frac{1}{4}$ mile. A small percentage (8%) are at 1 mile or above.

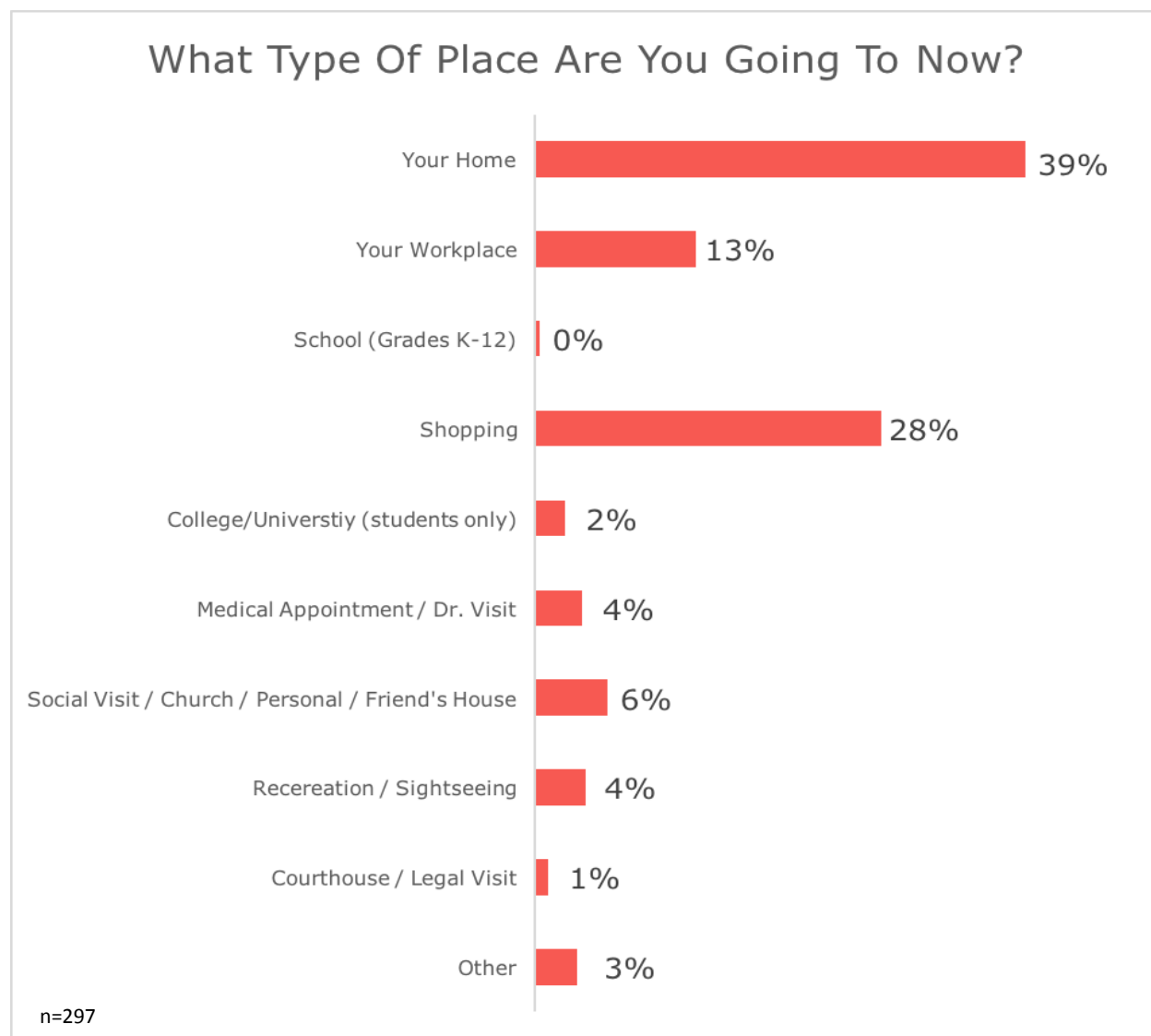


Estimated Distance From Bus Stop to Destination

When asked the distance to their final destination, 95% of respondents indicated that the destination was within $\frac{1}{2}$ mile, while 83% indicated it was within $\frac{1}{4}$ mile. Nine percent (9%) indicated it was at least a mile or more.

Where Transit Riders Were Going

Nearly 40% of the trips completed by surveyed transit riders involve a trip to return home. The next highest percentage were headed to shop (28%) followed by those on their way to work (13%). The remainder of trips were to various destinations as shown.

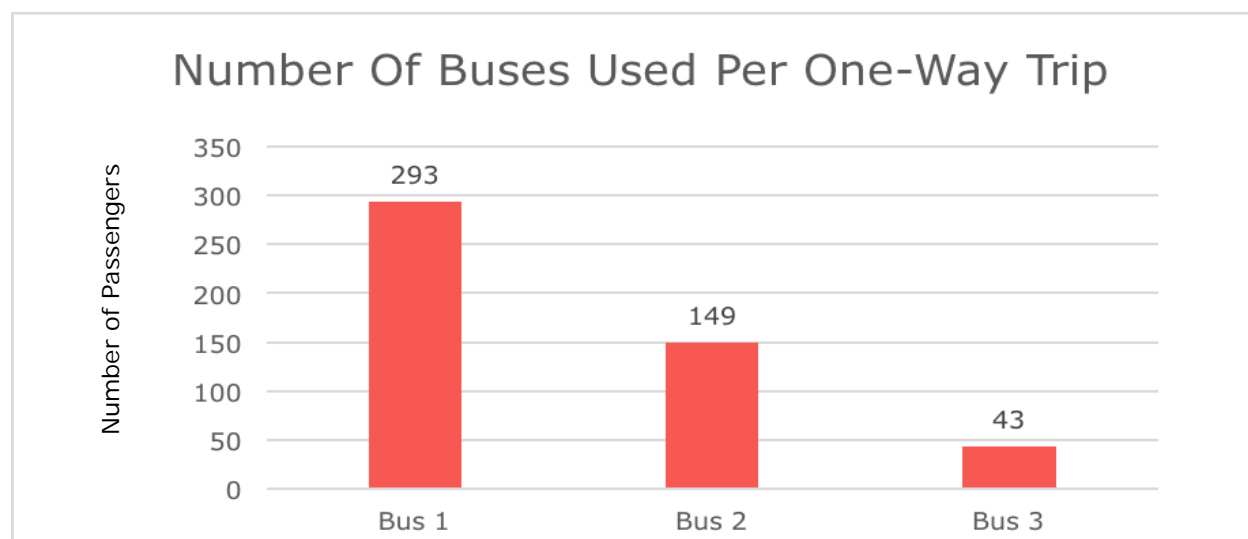
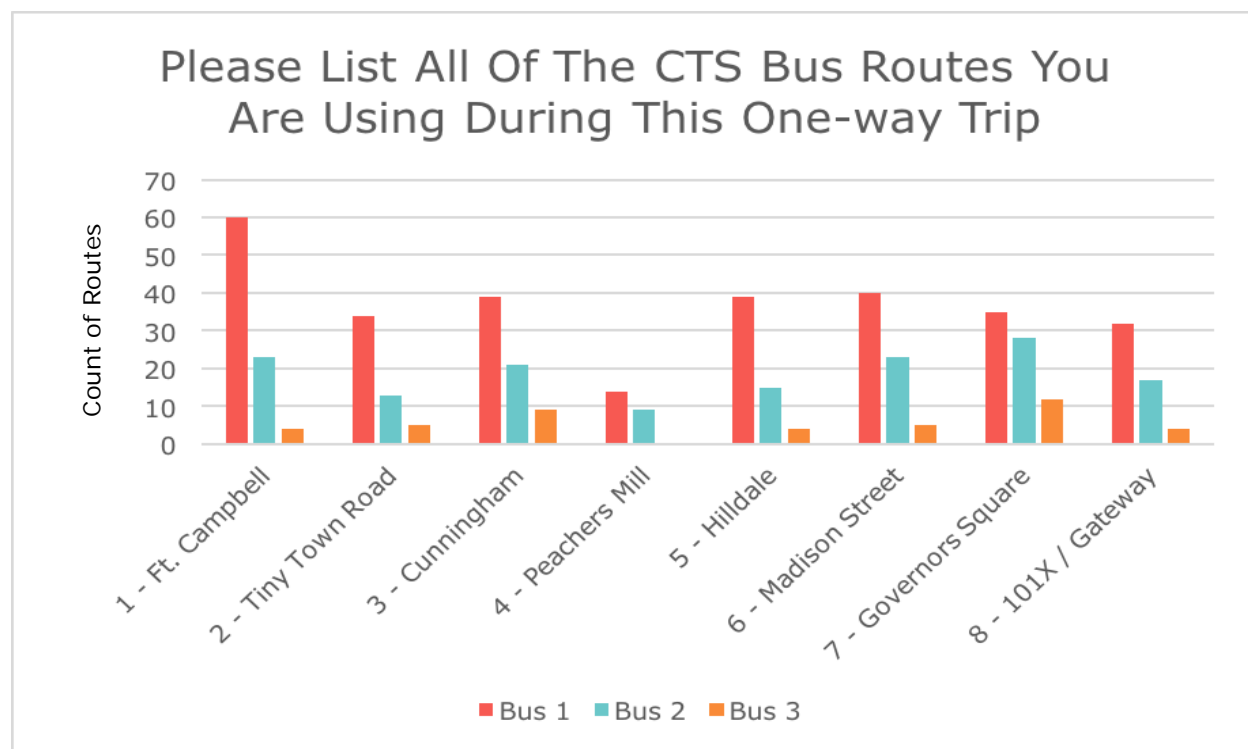


Reverse Trip

Seventy three percent (73%) of riders said they would make, or had already made, a trip in the exact opposite direction on the same day.

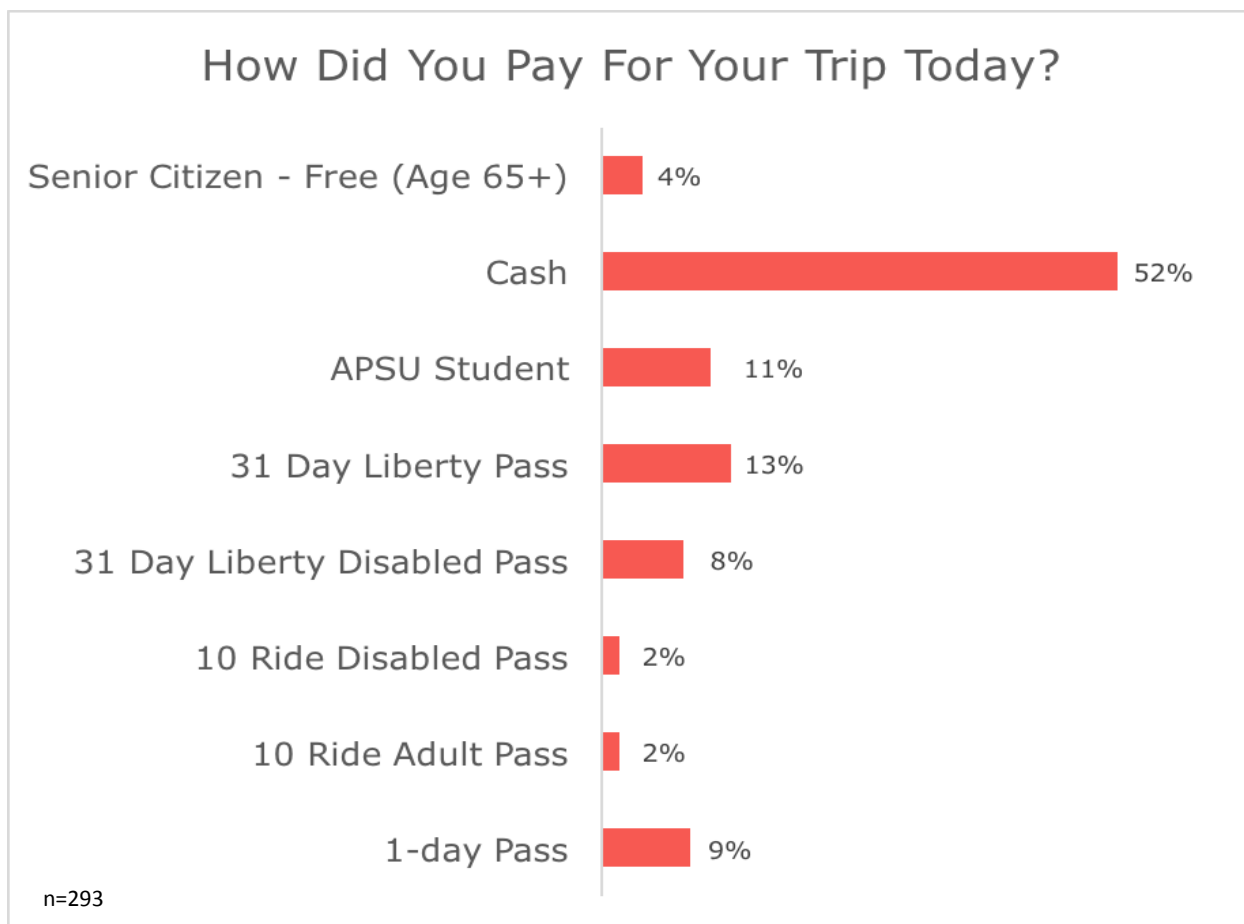
Listing Of All Buses Used During One-Way Trip

Riders were asked to list all of the buses used for this one-way trip, starting with the first bus. The charts below show a count of which buses were used First, Second, and Third. At least 293 passengers used one bus for their trip, while 149 passengers used two buses, and only 43 surveyed passengers used three buses for their one-way trip.



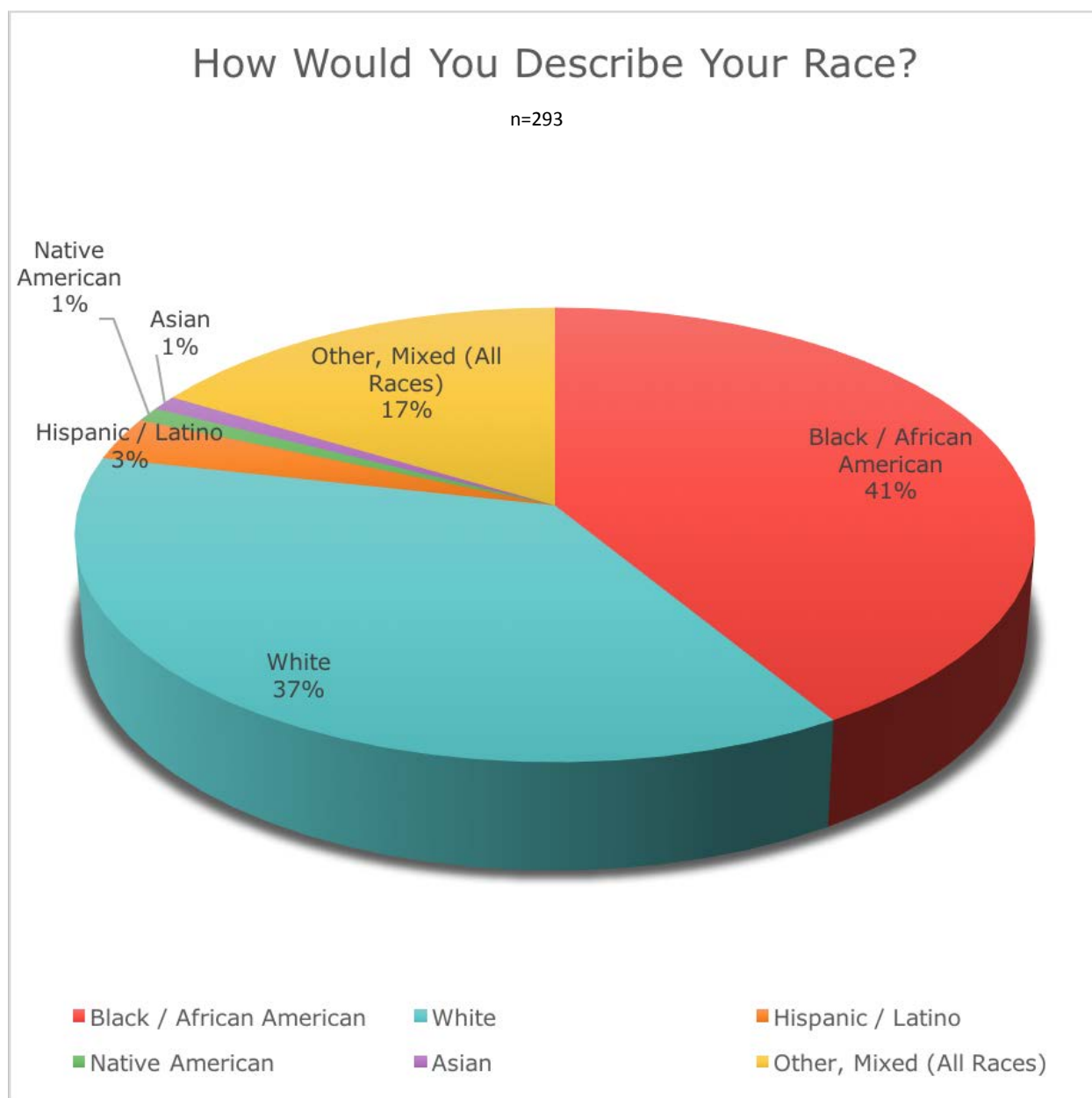
Fare Payment

A majority of the riders pay by cash (52%) while the next highest comes in at 13% for the 31 Day Liberty Pass. This is followed by APSU students at 11%. This would indicate some opportunities for marketing efforts targeted at reducing the amount of cash payments and converting those to passes.



Race

The format of the race and ethnicity question is such that riders could choose as many races as appropriate. The following table summarizes only single-category selections and groups the remainder of race answers into one category called Other, Mixed (All Races). The chart below provides a general overview of race and ethnicity but it not all encompassing.



Summary

The on-board survey results indicate that a substantial number of riders utilize CTS as their only means of transportation. When asked “If service had not been available, how would you have made the trip?”, 37% said they would not have made the trip. Additionally, 54% of riders do not have a valid driver’s license and 61% indicated that they did not have a working vehicle available to the household. This would indicate that there are opportunities for CTS to increase ridership of “choice” riders. CTS may wish to consider some programs to incentivize participation of choice riders. This could begin through partnerships with larger employers to offer a benefit to employees of covering the cost of the transit trip as part of the employment package. This can have benefits to employers by reducing the need for parking while also providing a “green” alternative to employees. Depending on how the program is setup, tax benefits can accrue to either the employee or the employer. Our recommendation would be to assist APSU in promoting CTS service to staff in addition to students.). APSU’s downtown location and proximity to multiple CTS routes (and the current Transfer Station) would provide a good level of access.

A majority of riders, 52%, are paying by cash. This provides ample opportunities to enhance transit pass usage through marketing and targeted efforts. Increasing the pass usage can have very positive impacts on bus dwell times at stops, which in turn, speeds up the service. The Transit Capacity and Quality of Service Manual estimates that cash paying customers require between 3.1 – 8.4 seconds to insert cash into the farebox, whereas magnetic-strip media or smartcard media brings that down to 2.5 – 6.5 seconds. This can equate to a 30% reduction in boarding time per passenger. Over the length of a route, these seconds can add up to minutes. Additional saving will be obtained through the reduction of necessary resources (staff and otherwise) dedicated to the management of the cash coming into the system.

One mechanism that we suggest could increase pass usage would be to create a “timed” transfer associated with passes only. Some of the general comments we received in talking with passengers during the survey was a request to “bring back free-transfers.” This is a common request when transit agencies eliminate transfers in order to improve efficiency and operations, however, it may also be an opportunity to create an incentive for utilizing passes. Working with the farebox vendor, there may be an opportunity to provide a “time-window”, such as 2 hours, within which a one-ride ticket may be utilized to transfer to another bus. CTS may wish to consider purchasing fare-vending machines that could be made available at the transfer station as well as a few other select locations with high ridership. This would allow passengers to purchase a “One-ride ticket”. The ticket would be electronically time-stamped by the farebox upon usage, allowing for them to transfer within two hours (or whatever time is selected) to another route. Overall, this approach would need to fit within the current fare-collection policy and strategies, as it would impact the usage of 1-day-passes, however, the end result could be to increase utilization of passes on the system.

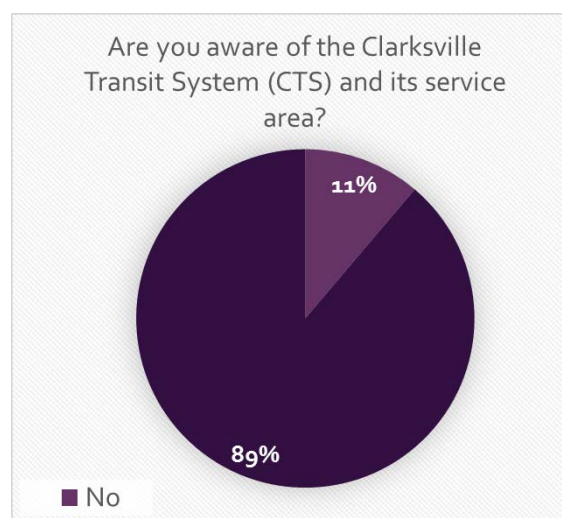
6.2 Rivers and Spires Intercept Survey



The annual Rivers and Spires Festival was held April 14 through 16th in Clarksville. The festival is free and open to the public featuring music of all genres, arts, food, and parades. The AECOM team and CTS designed an “intercept survey” for festival participants to gauge their knowledge and interest in CTS services. The team collected over 230 responses, which are summarized in this section.

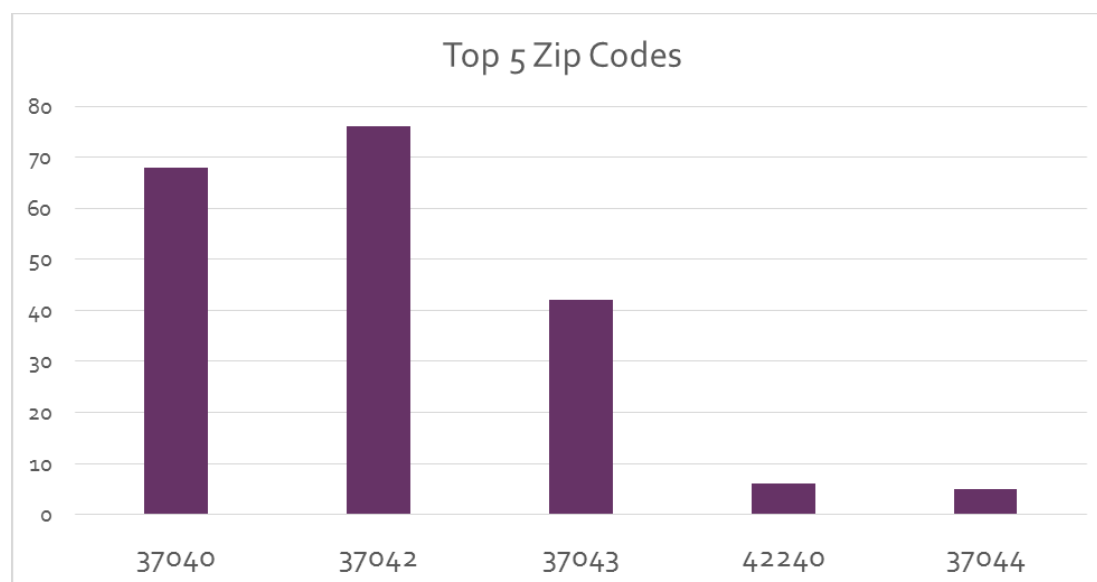
Awareness of CTS Service

The vast majority (89%) of those surveyed indicated that they were aware of CTS.



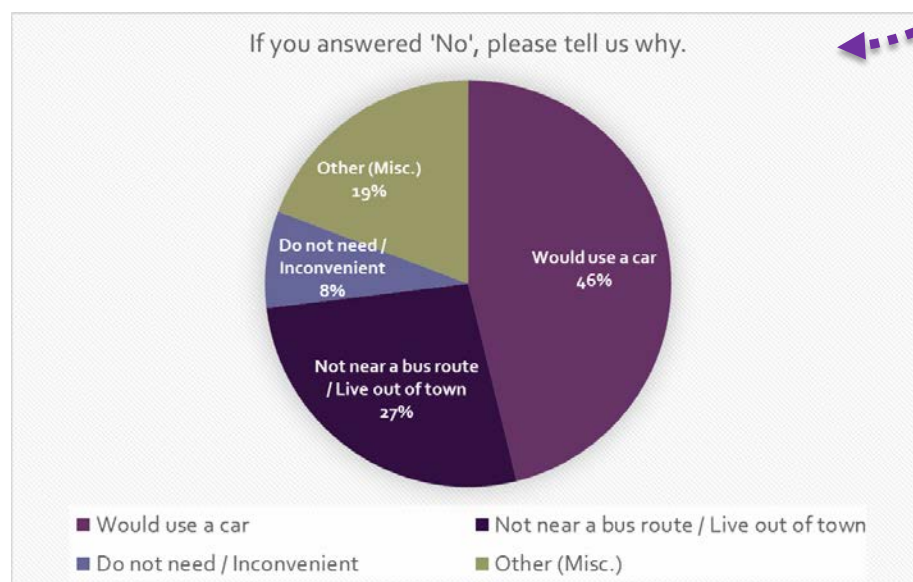
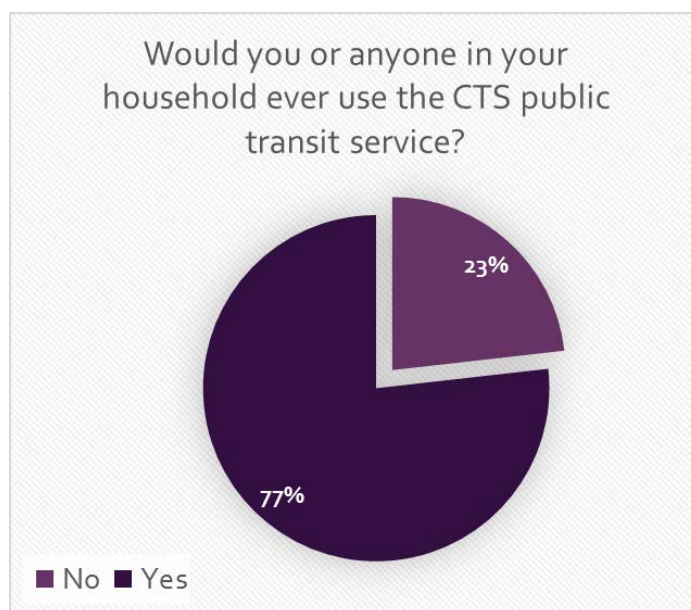
Where Interviewed Respondents Reside

There was a broad listing of zip codes in response to this question, however, the top 5 are shown below.



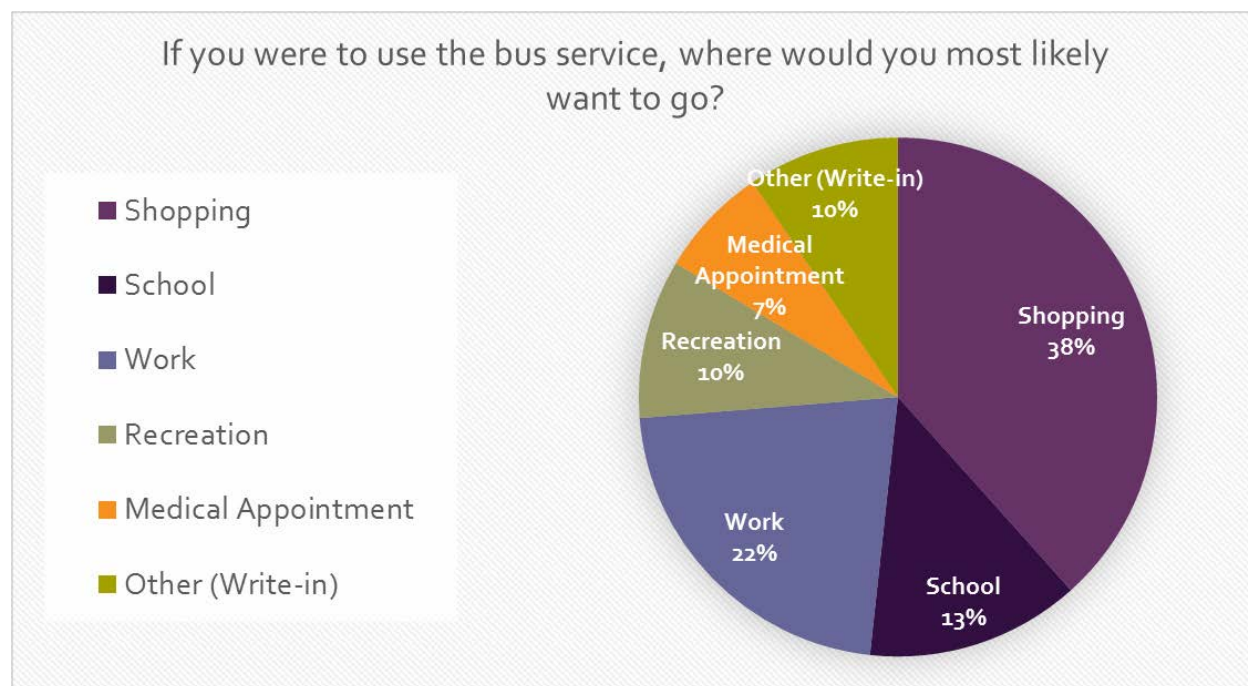
Stated Preference Regarding Possible Ridership

Seventy percent of those surveyed said they would consider using CTS services. For those who indicated they would not consider it, the responses were varied, however, the majority of those indicated that they used a car for transportation (46%). The next highest segment live out of town or not near a bus line.



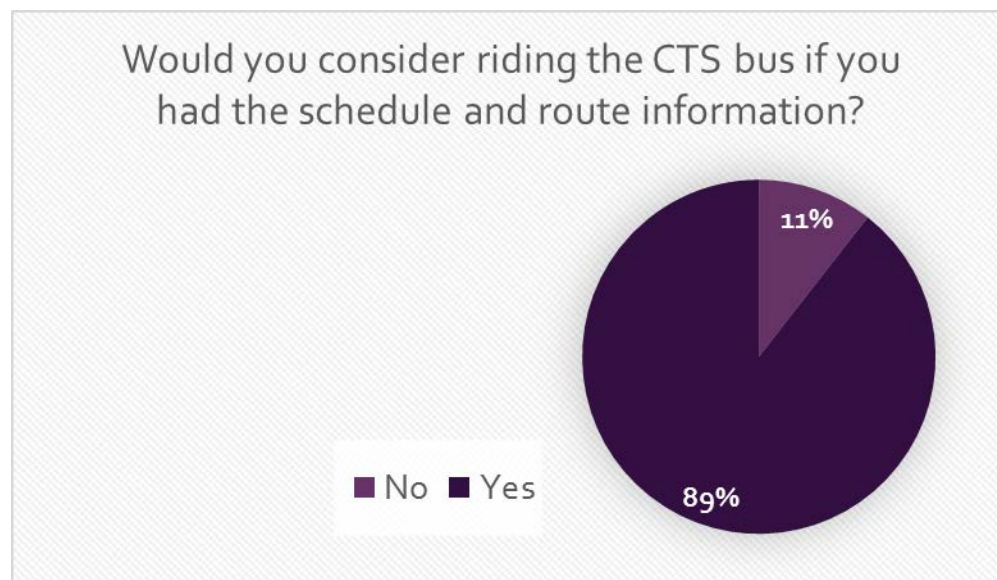
Interviewees Preference for Destination

Interviewees were given a choice of six possible destinations (Work, School, Shopping, Recreation, Medical Appointment, as well as Other: Write-in). The largest majority (38%) selected Shopping as their top choice for a destination. The next highest selection was Work at 22%.



Importance of Schedule Information

The last of the five questions asked respondents if they would consider riding if they had schedule and route information. A strong majority (79%) indicated that they would consider riding.



More detail on the survey results of Rivers and Spires Intercept Survey can be found in Appendix C.

6.3 Vehicle Operator Feedback

Vehicle operators were surveyed for their feedback on the current CTS routes given their experience and expertise in operating these routes. The feedback is summarized below by route:

- **Route 2:** Difficult to stay on time due to heavy traffic, stop at Tiny Town and Needmore is too close to light; Most passengers on the cross-town portion get on from Speedway on 101st to McDonalds.
- **Route 5:** Very circuitous route, takes too much time to unload/load wheelchair passengers; Ajax, South Central Apts, and Tradewinds Plaza are most popular stops
- **Route 6:** Good coverage of popular destinations; passengers with discount passes (disabled) often do not have ID available, which slows boarding down; three school zones impact on-time performance in the mornings
- **Route 7:** Since Route 4 covers portion of Red River loop, could consider taking it out. Traffic fluctuates, between 1:00 and 6:00 pm it slows down the route
- **Route 8:** Specific recommendation to make left at second Kmart driveway (instead of going up to light, which gets very backed up); Consider making Dunbar Cave loop demand-response; consider cutting out the portion that connects to transit center.
- **Route 1000:** Currently very few passengers (eight per day). Hankook facility to open in the fall. Service request to extend route to TRC (currently only served by request) and Jostens off Industrial Blvd.
- **General Comments:**
 - On-board collection of exact change fare impacts on-time performance
 - Passengers do not always wait at bus stop signs so the vehicle operator then has to make a judgement call if it is safe to stop.
 - Greyhound station now located on Trenton road, which is not currently served by CTS
 - Passengers do not like to cross Wilma Rudolph and Ft. Campbell Blvds and will often ride bus to end of line and come back rather than get off and cross.

Appendix A: Survey Instruments

Sample Boarding and Alighting Form for the Ridecheck Survey

Route 1: Ft. Campbell



OUTBOUND

Name: _____

Date: _____

Route Start Time: _____ End Time: _____

STOP	OFFs	ONs	Notes
Riders Left from Previous Route			
Transit Center 200 Legion St			
Third St & Main St			
College St @ Jenkins & Wynne Auto Dealership			
College St @ University St. (Bench)			
College St @ James Corlew Auto Dealership			
Eight St & Bailey St			
Farris St. & Shelton Ct.			
Farris St & Summer St			
Marion St & Robb Ave			
Marion St @ Residence 215			
N Second St & Forbes St			
N Second St across from Clarksville Academy			
N. Second St @ Kentucky Fried Chicken Restaurant			
New Providence Blvd @ USA Insurance			
Market St just past Annetta Ct			
Market St & Chapel St			
Chapel St across from Abundant Life Church			
Chapel St & Ford St			
New Providence Blvd & E St.			
New Providence Blvd @ Helga's Pet Store			
New Providence Blvd @ New Way Community Church			
New Providence Blvd @ Travel Inn Motel			
Ft Campbell Blvd @ Rural King (Shelter)			
Ft Campbell Blvd @ First Federal ATM			
Ft Campbell Blvd & Maple St (Shelter)			
Ft Campbell Blvd @ Sakura Japanese steakhouse			
Ft Campbell Blvd @ Jay Looney Business			
Ft Campbell Blvd & Bel Air Blvd			
Ft Campbell Blvd @ 5 O'clock lounge			
Ft Campbell Blvd @ ERA Reality Company			

Route 1 Outbound

Origin and Destination Survey Paper Form (English)

Clarksville Transit System (CTS) - Survey

Please take a few moments to complete this important survey. Your input will be used to plan transportation improvements in Clarksville. All information will be kept strictly confidential.

HOME Address: (please be specific, ex: 123 W Main Street): _____
(If you are just visiting the area, list the address you are staying in the Clarksville area.)

Zip Code: _____ **OR Intersection if street address is not known:**

_____ & _____

COMING FROM?

1. What type of place are you **COMING FROM** now?

- ☐ Your Home
- ☐ Your Workplace
- ☐ School (Grades K-12)
- ☐ Shopping
- ☐ College/University (students only)
- ☐ Medical Appointment / Dr. Visit
- ☐ Social Visit / Church / Personal / Friend's House
- ☐ Recreation / Sightseeing
- ☐ Courthouse / Legal Visit
- ☐ Other

2. What is the **NAME** of the place you are coming from now?

3. What is the **EXACT** Street Address of this place?

OR Intersection if street address is not known:

_____ & _____

City: _____ Zip: _____

4. How did you get from the place you are coming from now to the **FIRST** bus for this trip?

- ☐ Walked
- ☐ Biked
- ☐ Drove Alone
- ☐ Carpooled
- ☐ Taxi
- ☐ Uber / Lyft
- ☐ Dropped off by auto
- ☐ Other

5. About how far is it from the place you are coming from to the bus stop for this trip?

- ☐ ¼ mile
- ☐ ½ mile
- ☐ ¾ mile
- ☐ 1 Mile
- ☐ Over 1 Mile

GOING TO?

6. What type of place are you **GOING TO** now?

- ☐ Your Home
- ☐ Your Workplace
- ☐ School (Grades K-12)
- ☐ Shopping
- ☐ College/University (students only)
- ☐ Medical Appointment / Dr. Visit
- ☐ Social Visit / Church / Personal / Friend's House
- ☐ Recreation / Sightseeing
- ☐ Courthouse / Legal Visit
- ☐ Other

7. What is the **NAME** of the place you are going to now?

8. What is the **EXACT** Street Address of this place?

OR Intersection if street address is not known:

_____ & _____

City: _____ Zip: _____

9. How will you get to your destination once you get off the **LAST** bus you are using for this trip?

- ☐ Walked
- ☐ Biked
- ☐ Drove Alone
- ☐ Carpooled
- ☐ Taxi
- ☐ Uber / Lyft
- ☐ Dropped off by auto
- ☐ Other

10. About how far is it from where you get off the last bus to your final destination for this trip?

- ☐ ¼ mile
- ☐ ½ mile
- ☐ ¾ mile
- ☐ 1 Mile
- ☐ Over 1 Mile

THIS BUS (Answer the following based on your current one-way trip between the places listed above)

11. What bus route are you riding now? (Write in Route Number and Name.) _____

12. Approximately what time did you get on THIS bus? Hour/Minute: _____ am / pm

13. Are you traveling toward downtown (inbound) or away from downtown (outbound)? ☐ Inbound ☐ Outbound

14. Please list all of the bus routes you are using during your current ONE-WAY trip in order below. PLEASE **CIRCLE** THE ROUTE YOU WERE USING WHEN YOU COMPLETED THIS SURVEY.

ORIGIN → _____ → _____ → _____ → DESTINATION
1st Bus Route 2nd Bus Route 3rd Bus Route

15. Have you already, or will you later today, make this trip in the EXACT opposite direction)? ☐ Yes ☐ No

Please complete the questions on the back.

OTHER IMPORTANT ITEMS

16. What places do you regularly visit using CTS? (Mark all that apply.)
- | | | | |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> Home | <input type="checkbox"/> Department Store | <input type="checkbox"/> Place of Worship | <input type="checkbox"/> Courthouse/Legal Services |
| <input type="checkbox"/> Work | <input type="checkbox"/> Friends/Family | <input type="checkbox"/> Social Services | <input type="checkbox"/> Grocery/Drug Store |
| <input type="checkbox"/> School(K-12) | <input type="checkbox"/> Doctor/Hospital | <input type="checkbox"/> College/University | <input type="checkbox"/> Restaurant/Dining Out |
| <input type="checkbox"/> Other | | | |
17. How many WORKING vehicles (cars, trucks, or motorcycles) are available to your household?
- ☐ None ☐ One ☐ Two ☐ More than two
18. Was a working vehicle available for this trip? ☐ Yes ☐ No
19. If bus service had not been available today, how would you have made this trip?
- ☐ Drive ☐ Uber/Lyft ☐ Walk ☐ Taxi ☐ Bicycle ☐ Other Public Transit
- ☐ Ride with someone ☐ I would not have made this trip
20. Do you have a valid driver's license? ☐ Yes ☐ No
21. Do you own a Smart (web-enabled) phone? ☐ Yes ☐ No
22. Are you: (check the one response that BEST describes you)
- ☐ Employed full-time (at least 30 hours per week) ☐ Employed part-time (less than 35 hours per week)
- ☐ Retired ☐ Full-time student
- ☐ Not currently employed
23. What is your AGE: ☐ Under 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+
24. Your Gender: ☐ Male ☐ Female
25. How would you describe your race/ethnicity? (check all that apply)
- ☐ White ☐ Black/African American ☐ Hispanic/Latino ☐ Asian ☐ Native American ☐ Other
26. Including YOU, how many people live in your household (this includes children)?
- ☐ One ☐ Two ☐ Three ☐ Four or more
27. Including YOU, how many adults (age 18 and older) live in your household?
- ☐ One ☐ Two ☐ Three ☐ Four or more
28. Do you speak a language other than English at home? ☐ Yes ☐ No
- 28a. [IF YES to #28] How well do you speak and understand English? ☐ Very Well ☐ Less than very well
- 28b. [IF YES to #28] How often do you use the following services?
- | | | | | |
|---|-------------------------------------|--------------------------------|------------------------------------|-------------------------------------|
| (1) Speak to Customer Service on the telephone: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (2) Speak to Customer Service at the CTS Station: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (3) Speak to CTS Bus Drivers with questions: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (4) Speak with other CTS employees: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (5) Attend CTS Public Meetings: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
29. How did you pay for your trip today?
- ☐ Cash ☐ 10 Ride Adult Pass ☐ 31 Day Liberty Pass ☐ 31 Day Liberty Disabled pass ☐ APSU Student
- ☐ 1-Day Pass ☐ 10 Ride Disabled Pass
30. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME? This is the total income for ALL WAGE EARNERS in the household.
- | | | | |
|--|--|--|-------------------------------------|
| <input type="checkbox"/> Below \$12,000 | <input type="checkbox"/> \$20,000 - \$29,999 | <input type="checkbox"/> \$40,000 - \$49,999 | <input type="checkbox"/> \$60,000 + |
| <input type="checkbox"/> \$12,000-\$19,999 | <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$50,000 - \$59,999 | |
31. How would you rate the availability of information about CTS?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
32. How would you rate the comfort while riding?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
33. How would you rate the cost to ride?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
34. How would you rate driver helpfulness and courtesy?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
35. How would you rate the on-time performance of the service? (On-time Performance is defined as arriving no later than 5 minutes of the posted time on the schedule.)
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
36. Is CTS providing service to all of the places you prefer?
- ☐ Yes ☐ No
- 36a. [IF No to #36] Please write in the place(s) you would prefer service? _____

Thank you for your help!!

If you completed this survey before getting off the bus, please RETURN THIS SURVEY to any survey staff or drop off at the CUSTOMER SERVICE BOOTH at the Clarksville Transfer Station.

All completed surveys must be received at CTS by April 15th, 2016

Origin and Destination Survey Paper Form (Spanish)

Sistema de Transito Clarksville (CTS) – Encuesta

Por favor tome un pequeño momento para completar esta importante encuesta. Su opinión se usará en el plan de mejora de transporte en Clarksville. *Toda información será estrictamente confidencial.*

DOMICILIO: (Por favor sea específico, ej.: 123 W Main Street): _____
(si usted solo está de visita en el área, anote la dirección donde usted se está quedando en el área de Clarksville.)

Código Postal: _____ **O Intersección si usted no conoce la dirección exacta:**

& _____

¿DE QUÉ LUGAR VIENE?

1. ¿De qué tipo de lugar viene ahora?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita legal
- ☐ Otro

2. ¿Cuál es el nombre del lugar del que usted viene ahora?

3. ¿Cuál es exactamente la dirección de este lugar?

O la intersección si usted no conoce la dirección exacta:

_____ & _____

Ciudad: _____ Código Postal: _____

4. ¿Cómo llego desde el lugar que usted viene hasta el primer bus para este viaje?

- ☐ Caminando
- ☐ En bicicleta
- ☐ Condujo solo
- ☐ Transporte compartido
- ☐ Taxi
- ☐ Uber / Lyft
- ☐ Alguien lo llevo hasta el bus
- ☐ Otro

5. ¿Qué tan lejos es desde el lugar donde usted viene hasta la parada de bus para este viaje?

- ☐ ¼ de milla
- ☐ 1 Milla
- ☐ ½ milla
- ☐ Más de 1 Milla
- ☐ ¾ milla

¿HACIA DÓNDE VA?

6. ¿A qué tipo de lugar va usted ahora?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita Legal
- ☐ Otro

7. ¿Cuál es el nombre del lugar hacia dónde va ahora?

8. ¿Cuál es la dirección exacta de este lugar?

O la intersección si usted no conoce la dirección exacta:

_____ & _____

Ciudad: _____ Código Postal: _____

9. ¿Cómo va a llegar a su destino una vez que se baja del último bus que usted está usando para este viaje?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita Legal
- ☐ Otro

10. ¿Qué tan lejos es desde donde usted se baja del último bus hasta el destino final de su viaje?

- ☐ ¼ de Milla
- ☐ 1 Milla
- ☐ ½ Milla
- ☐ Más de 1 Milla
- ☐ ¾ de Milla

ESTE BUS (Responda a lo siguiente basado en su reciente viaje entre los lugares mencionados arriba)

11. ¿Qué ruta de bus está usando ahora? (escriba el número o el nombre.) _____

12. ¿Aproximadamente a qué hora llegó a ESTE bus? Hora/Minuto: _____ am / pm

13. ¿Está usted viajando hacia el centro (entrando) fuera del centro (saliendo)? ☐ Entrando ☐ Saliendo

14. Por favor nombre todas las rutas de buses que está usando hacia una dirección durante su reciente viaje, en orden abajo. POR FAVOR ENCIERRE EN UN CÍRCULO LA RUTA QUE USTED ESTABA USANDO CUANDO COMPLETO ESTA ENCUESTA.

ORIGEN → _____ → _____ → _____ → DESTINO
1^{era} Ruta de Bus 2^{da} Ruta de Bus 3^{era} Ruta de Bus

15. ¿Ha usted terminado, o más tarde hoy va usted a hacer EXACTAMENTE el mismo viaje hacia la dirección opuesta)? ☐ SI ☐ No

POR FAVOR COMPLETE LAS PREGUNTAS DE ATRAS.

OTROS PUNTOS IMPORTANTES

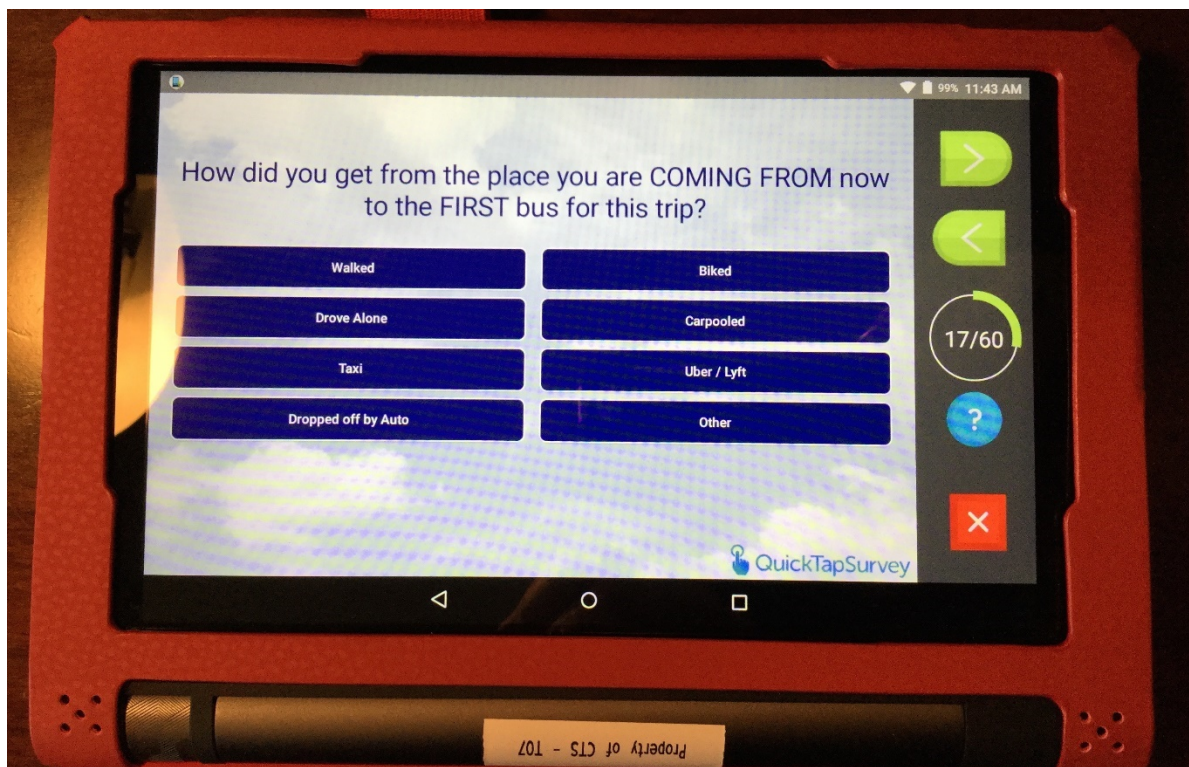
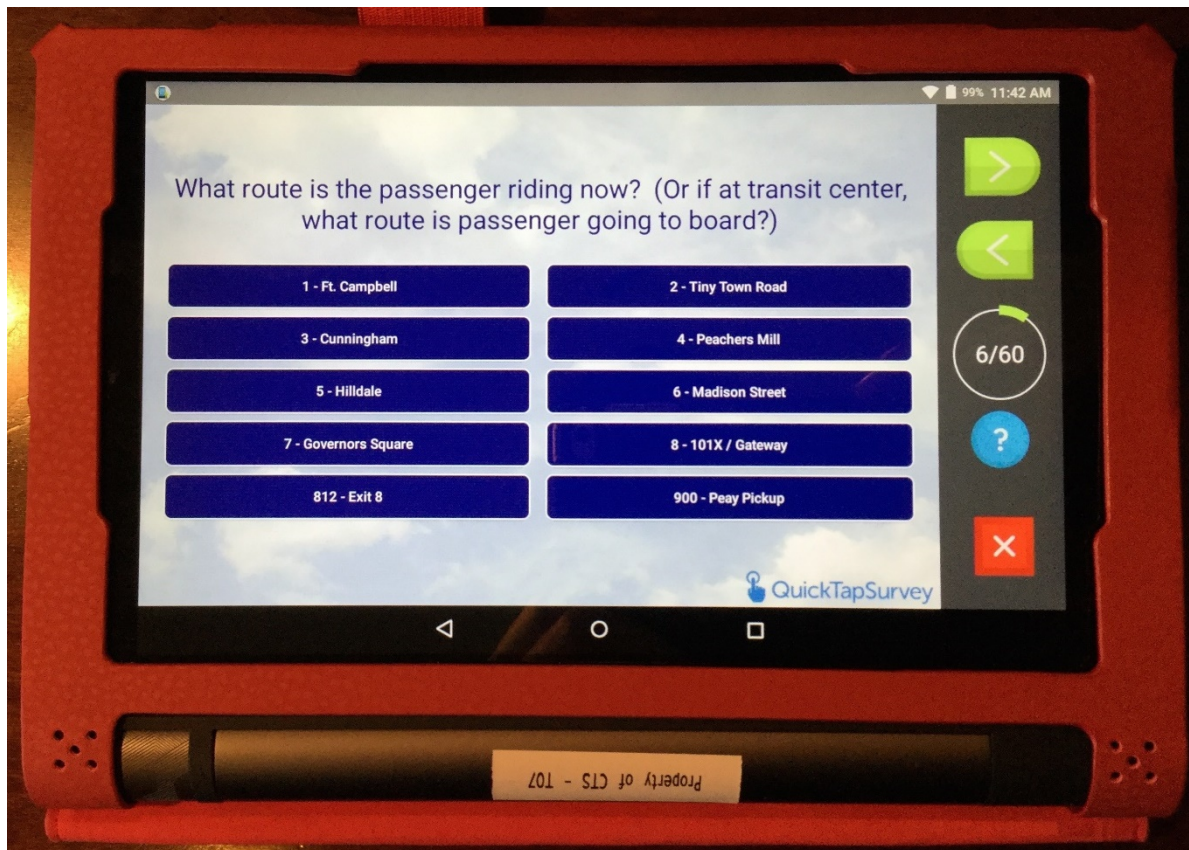
16. ¿Qué lugares visita usted regularmente usando CTS? (Marque todos los que apliquen.)
☐ Hogar ☐ Tienda Departamental ☐ Lugar religioso ☐ Centro de justicia/Servicios
 Legales ☐ Trabajo ☐ Amigos/Familia ☐ Servicios Sociales ☐ Supermercado/Farmacia
☐ Escuela (K-12) ☐ Doctor/Hospital ☐ Universidad ☐ Restaurante
☐ Otro
17. ¿Cuántos vehículos en funcionamiento (carros, camiones, o motocicletas) están disponibles en su hogar?
☐ Ninguno ☐ Uno ☐ Dos ☐ Más de Dos
18. ¿Tenía algún vehículo disponible en funcionamiento para este viaje? ☐ Sí ☐ No
19. ¿Si no hubiera estado disponible el servicio de bus hoy, como hubiera hecho este viaje?
☐ Conduciendo ☐ Uber/Lyft ☐ Caminando ☐ Taxi ☐ En bicicleta ☐ Otro Transporte Publico
☐ Viajar con alguien ☐ No podría haber hecho este viaje
20. ¿Usted tiene una licencia de conducir valida? ☐ Sí ☐ No
21. ¿Usted tiene un teléfono inteligente (con internet)? ☐ Sí ☐ No
22. Es usted: (Marque la respuesta que lo describe MEJOR)
☐ Empleado a tiempo completo (al menos 30 horas por semana) ☐ Retirado
☐ Empleado medio tiempo (menos de 35 horas por semana) ☐ Desempleado
☐ Estudiante a tiempo completo
23. ¿Cuál es su edad?: ☐ Menos de 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+
24. ¿Cuál es su género?: ☐ Hombre ☐ Mujer
25. ¿Cómo describiría usted su raza/etnia? (Marque todos los que apliquen)
☐ Blanco ☐ Negro/Africano Americano ☐ Hispano/Latino ☐ Asiático ☐ Nativo Americano ☐ Otro
26. ¿Incluyéndose USTED, cuántas personas viven en su hogar (esto incluye niños)?
☐ Uno ☐ Dos ☐ Tres ☐ Cuatro o más
27. ¿Incluyéndose USTED, cuántos adultos (mayores de 18 años) viven en su hogar?
☐ Uno ☐ Dos ☐ Tres ☐ Cuatro o más
- 28a. ¿Qué tanto usted habla y entiende inglés? ☐ Muy bien ☐ Menos que muy bien
- 28b. ¿Con qué frecuencia usted usa los servicios siguientes?
 (1) Habla a servicio al cliente por teléfono: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
 (2) Habla a servicio al cliente en la estación de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
 (3) Habla a los conductores de buses CTS para hacer preguntas: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
 (4) Habla con otros empleados de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
 (5) Asiste a reuniones públicas de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
29. ¿Cómo usted pago por su pasaje hoy?
☐ Efectivo ☐ Tarjeta adulto por 10 ☐ 31 Días Tarjeta Liberty ☐ 31 Días Tarjeta Liberty Discapacitado
☐ Estudiante APSU ☐ Tarjeta por un día ☐ Tarjeta discapacitado por 10
30. ¿Qué categoría describe mejor sus ingresos anuales totales en su hogar? Ese total incluye todos los ingresos de todos que trabajan en su hogar.
☐ Menos de \$12,000 ☐ \$20,000 - \$29,999 ☐ \$40,000 - \$49,999 ☐ \$60,000 +
☐ \$12,000-\$19,999 ☐ \$30,000 - \$39,999 ☐ \$50,000 - \$59,999
31. ¿Cómo usted calificaría el acceso a la información sobre CTS?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
32. ¿Cómo usted calificaría la comodidad durante el viaje?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
33. ¿Cómo usted calificaría el costo de pasaje?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
34. ¿Cómo usted calificaría la amabilidad y cortesía del conductor?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
35. ¿Cómo usted calificaría la puntualidad del servicio? (La puntualidad es definida como llegar no más que 5 minutos después del tiempo indicado en el horario.)
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
36. ¿CTS está brindando servicio a todos los lugares que usted prefiere?
☐ Sí ☐ No
- 36a. [Si No a #36] Por favor escriba los lugares donde usted prefiere el servicio. _____

Gracias por su ayuda!

Si usted completó esta encuesta antes de dejar el bus, por favor DEVUELVA ESTA ENCUESTA a cualquiera personal de encuestas o déjela en la OFICINA DE SERVICIO AL CLIENTE en la estación de transporte de Clarksville.

Todas las encuestas completadas tienen que ser recibidas en
CTS hasta el 15 de abril, 2016.

Sample Origin and Destination Survey Application Screenshots



Rivers and Spires Intercept Survey Instrument



1. Are you aware of the Clarksville Transit System (CTS) and its service area?

- ☐ Yes
☐ No

2. Would you or anyone else in your household ever use the CTS public transit service?

- ☐ Yes
☐ No

If you answered no, please tell us why?

3. What is your zip code?

4. If you were to use the bus service, where would you most likely want to go?

Shopping _____

Medical Appointment _____

Recreation _____

School _____

Work _____

Other _____ (If other: write-in)

5. Would you consider riding the CTS bus if you had the schedule information?

- ☐ Yes
☐ No

If you answered No, please tell us why?

Appendix B: Origin and Destination Survey

Clarksville Transit System



Origin/Destination Survey Report



May 2016

Produced By: Transit Insight / AECOM

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OVERVIEW

Transit Insight and AECOM, in partnership with Austin Peay State University (APSU), conducted an “Origin and Destination” survey of passengers riding the Clarksville Transit System (CTS) during the spring of 2016. The primary goals of the survey were to gather accurate information from passengers about their travel patterns as well as their demographic characteristics. This information allows CTS to better understand their riders as well as the riders’ transportation needs.

At the time of the survey, CTS operated 10 bus routes and added a new connector route on April 4, called the Route 1000 Industrial Park. Eight of the ten routes could be considered “workhorse” fixed-routes that provide regular bus service from early morning into early evening. The remaining two routes provide specialized service, one of which, called the Peay Pickup runs as a circulator around APSU from 7:30a.m until 4:30pm. The other service provides early morning and evening bus connections to the I-24 Park and Ride lot at exit 8, where passengers can connect to Regional Transportation Authority (RTA) commuter buses headed to and from Nashville.

Surveys were conducted on all of the fixed-route services, excluding the Peay Pickup and the RTA bus connection. The RTA bus connection is slated for discontinuation once the exit 8 Park and Ride lot is relocated to exit 11 on I-24 and the Peay Pickup solely serves APSU students.

QUICK DOCUMENT GUIDE

This report is broken into five sections. A description for each section follows.

Section 1 – Overview – contains information about the data collected, survey methodology, and quality control procedures

Section 2 – General Rider Characteristics – provides a short summary of notable findings related to rider demographics and travel behaviors

Section 3 – Comprehensive Charts and Graphs – shows results from additional survey questions in graph or chart form

Section 4 – Data Description - provides a data dictionary table for use in further analysis of the collected survey data

Section 5 – Paper Survey Instrument – provides a copy of the paper survey instrument that was used to tabulate responses from those unable to complete the in-person interview or the Spanish-language survey.

SURVEY DEVELOPMENT

Transit Insight and AECOM worked closely with CTS staff and the project steering committee to develop the survey questions. Some key data points covered in the survey include:

- *The origin (starting place) of the rider's trip*
- *How the rider traveled from the origin to the boarding bus stop*
- *An estimate of how far the rider traveled from the origin to the bus stop*
- *The destination (ending place) of the rider's trip*
- *An estimate of how far the rider traveled from the alighting stop to their final destination*
- *Household information about the rider (number of people in household, number of working vehicles, etc.)*
- *General information (how riders paid the fare, smart-phone ownership, customer service performance)*
- *Personal Information (gender, race, employment status, income, other language spoken at home)*

SURVEY METHODOLOGY

Transit Insight and AECOM worked with APSU professors and administrators to recruit students to perform the data collection and interviews. The survey was conducted from Saturday, April 2nd through Wednesday, April 6th, 2016. It was administered as a face-to-face interview using android tablets. Students, Transit Insight, and AECOM staff conducted passenger interviews on buses and at the CTS Transit Station. In addition, students were supplied with paper survey instruments (written in both English and Spanish) in the event that passengers did not have time to complete the survey. These paper surveys could be returned to a collection box located at the Customer Service counter at the Transit Station.



APSU Student Interview In-progress

A sampling plan was developed to ensure that the overall results would be statistically valid for the CTS fixed-route system. As all transit systems track individual trips, not individuals, the sampling plan was based on average daily unlinked passenger trips (UPT). For CTS this number is 2180 (calculated for calendar year 2015). In order to determine the appropriate level of individual riders to sample, the UPT were divided by 2 to arrive at 1090 individual passengers per day. This is an estimation, as individual riders may ride more or less than two times per day, however, for small urban transit systems, 50% of UPT is a good rule-of-thumb.

To achieve statistical validity at a confidence level of 95% and a precision level of $\pm 5\%$, required that 295 surveys be completed. Our goal was to interact with 350 riders, or roughly 33% of daily passengers. We were able to achieve this with a total of 358 interactions netting 301 completed surveys.

COMPLETED SURVEYS BY ROUTE

<i>Route #</i>	<i>Route Name</i>	<i>10% Minimum Goal by Route for Collected Surveys</i>	<i>Actual Surveys Collected</i>
<i>1</i>	Ft. Campbell	35	36
<i>2</i>	Tiny Town Road	28	44
<i>3</i>	Cunningham Loop	31	48
<i>4</i>	Peachers Mill Road	12	22
<i>5</i>	Hilldale	30	37
<i>6</i>	Madison Street	40	42
<i>7</i>	Governors Square Mall	34	35
<i>8</i>	101 Express / Gateway Medical Center	20	35
	No Answer for Route	N/A	2
		<i>230</i>	<i>301</i>

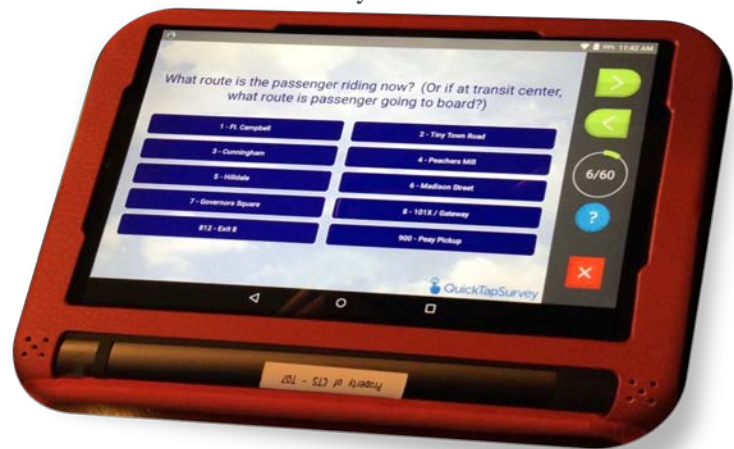
SUMMARY OF SURVEY APPROACH AND PROCEDURES

Survey software on the android tablets assisted in the clarity and accuracy of collected data. The survey questionnaire was built in such a manner as to minimize the interaction time required with the passengers. Where possible, “skip-questions” were built that, depending upon the answer, automatically bypassed unnecessary questions and sped up the overall time to conduct the interview. Depending on the passenger and the surveyor, the interview process ranged between 5 and 9 minutes.

Use of these tablets and the specifically designed interview format provides a much higher response rate than self-administered paper surveys. The tablet also provides a “connection” between the passenger and interviewer. Interviewers were encouraged to sit next to the rider during the interview and allow the interviewee to look at the tablet and survey responses together. In addition, difficult questions such as household income can be shown to the passenger where they select the appropriate response while the interviewer looks away. Based on this interview approach, we were able to achieve a nearly 30% response rate to the survey. Past experience with paper surveys often return rates between 10-15%.

Working with APSU staff, two sessions were held on campus to educate students about the survey process and provide training. Students were also provided the opportunity for hands-on practice with the tablet survey as well as one-on-one training. Areas of training included a strong focus on customer-service and how to approach passengers, as well as techniques for getting passengers to answer some of the more “difficult” questions.

Survey Tablet

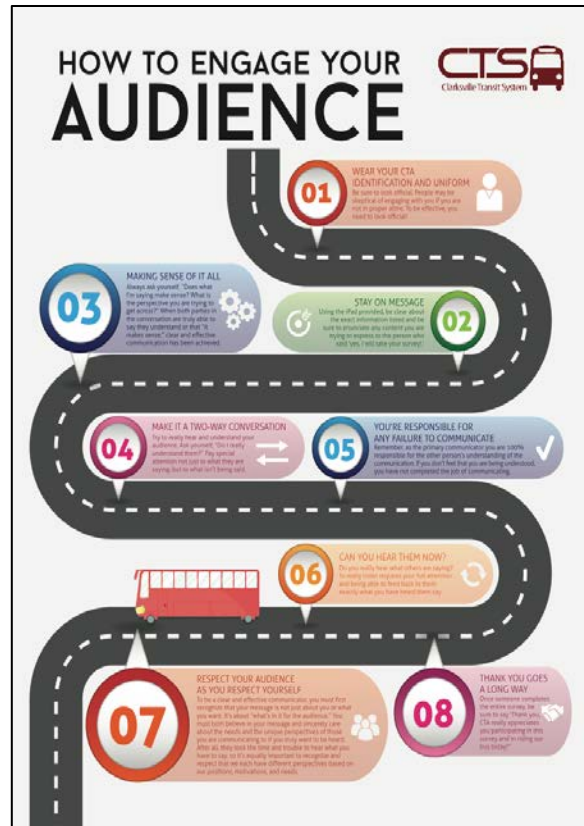


A listing of some of the more specific administration and quality control procedures are shown below.

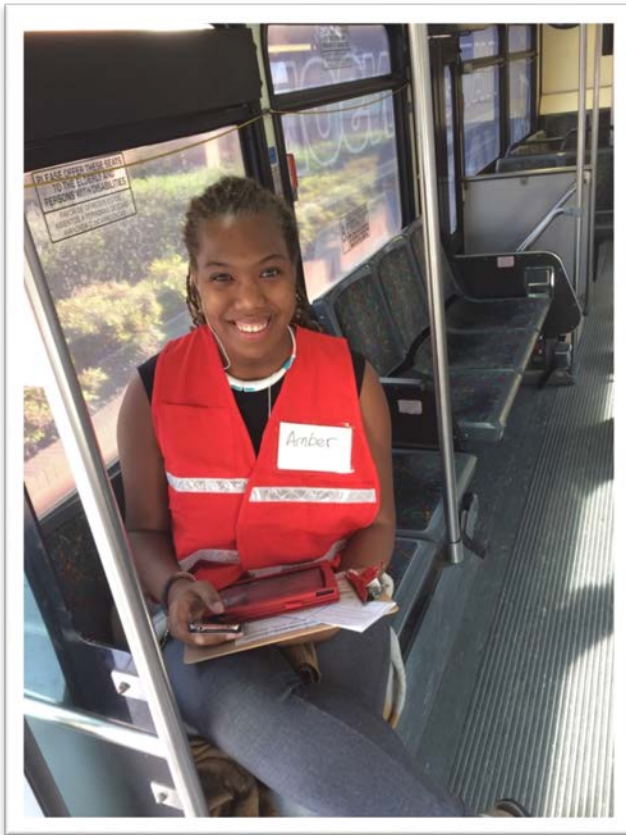
- *All interviewers wore vests that identified them as official transit surveyors and included their name.*
- *Each interviewer was trained to understand the importance of the survey so this could be relayed to passengers as needed.*
- *Interviewers boarded and alighted buses at the CTS Transit Center which served as the hub for data collection activities.*
- *A Transit Insight or AECOM Team leader managed the data collection at all times and was available for questions, tablet distribution and collection, and to ensure that data was immediately uploaded as the students returned from their shift.*

Based on the small (in statistical terms) population of interview candidates, shift-schedules were targeted at higher ridership times which ranged from early morning through early evening. Interviewers were also conducted on Saturday to ensure total coverage of all fixed-route services.

Surveyor Training Handout



Very little data entry was required due to the electronic nature of data collection, however, 20 paper surveys were completed and entered into the database by Transit Insight personnel. This data was reviewed twice to ensure accuracy. Transit Insight conducted a 100% review of all of the digitally collected data. Where possible, any errors that were easily identified and verified were corrected. Most of the information collected was rider reported and therefore not subject to modification. AECOM staff spent time reviewing all home address records and geo-coding them for use in GIS analysis. Corrections or modifications were made to the home address data using a combination of available resources to get the best or nearest possible location to what was reported in the interview.



Prior to full implementation of the survey, a pilot test was completed on 10 passengers at the CTS Transit Station the morning of Saturday, April 2nd. No major issues were identified, however, a few minor typos were corrected and uploaded to all of the survey tablets prior to the full survey kickoff.

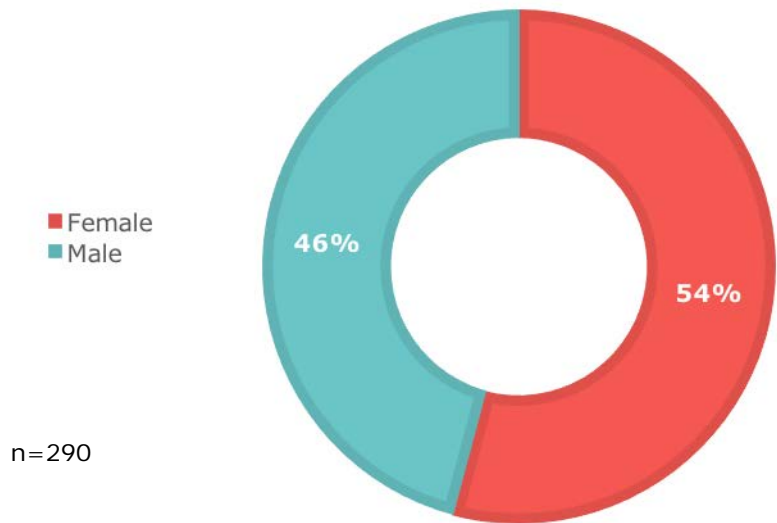
**APSU Student Prepared
for Interviews**

GENERAL RIDERSHIP CHARACTERISTICS

Gender

More than half (54%) of the riders surveyed were women, which is generally in-line with transit systems across the country.

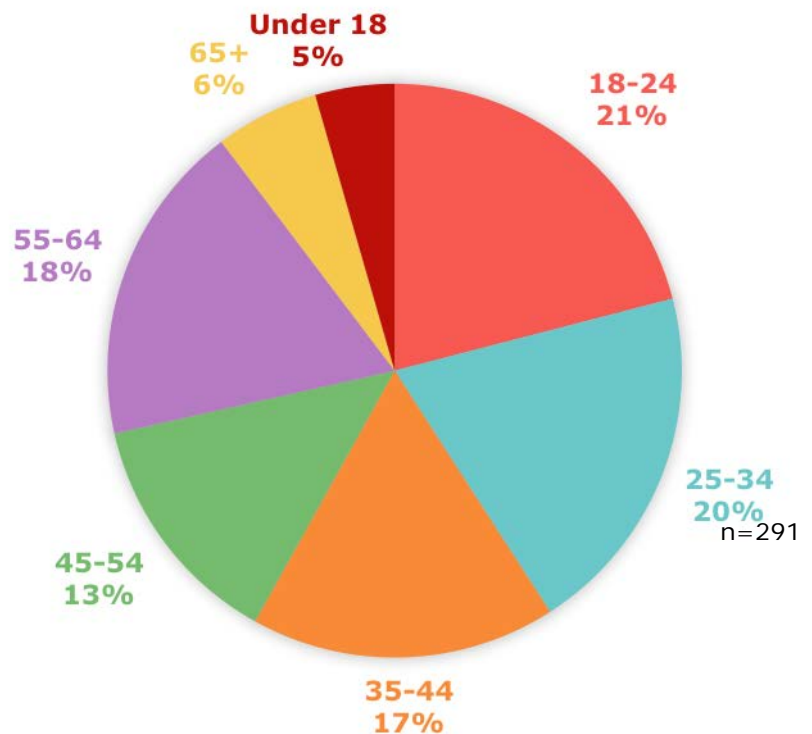
What Is Your Gender?



Age

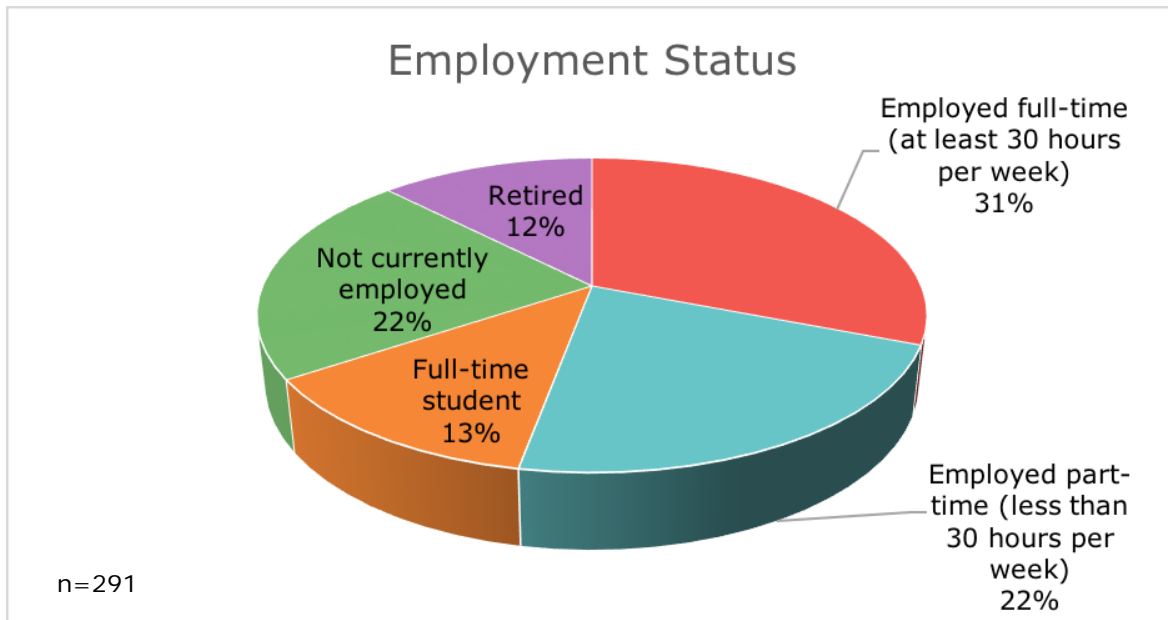
The age distribution of surveyed riders was relatively even between four of the seven divisions. Age ranges for the 18-24, 25-34, 35-44, and 55-64 showed 21%, 20%, 17%, and 18% respectively.

Age Of Transit Riders



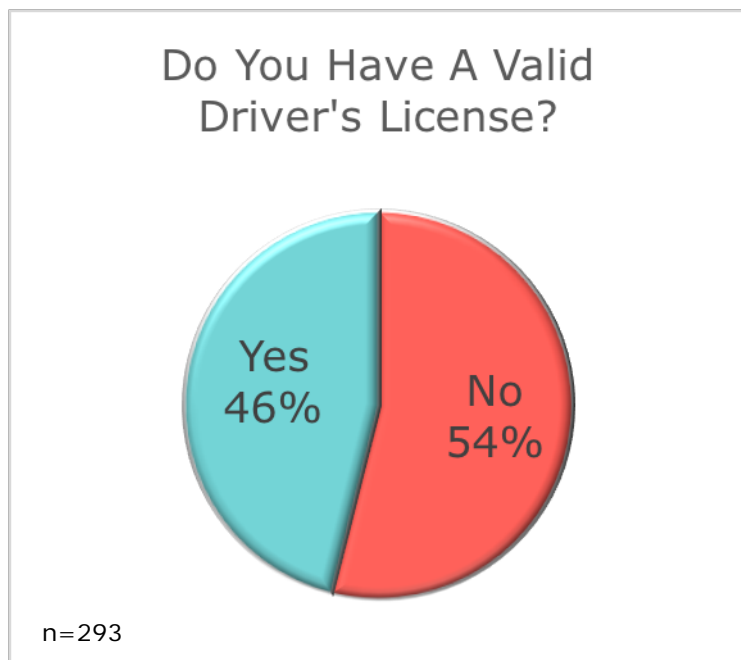
Employment

Just over half (53%) of the transit users surveyed were employed either full-time (31%) or part time (22%). Nearly one quarter of riders surveyed were not currently employed (22%) and the remaining quarter were either full-time students (13%) or retired (12%).



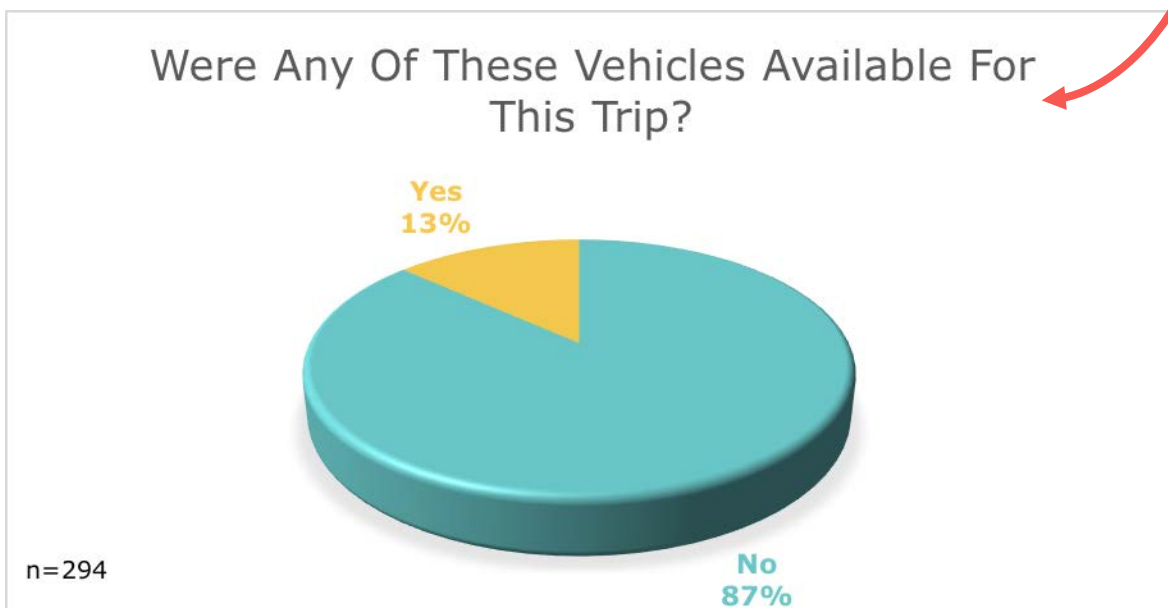
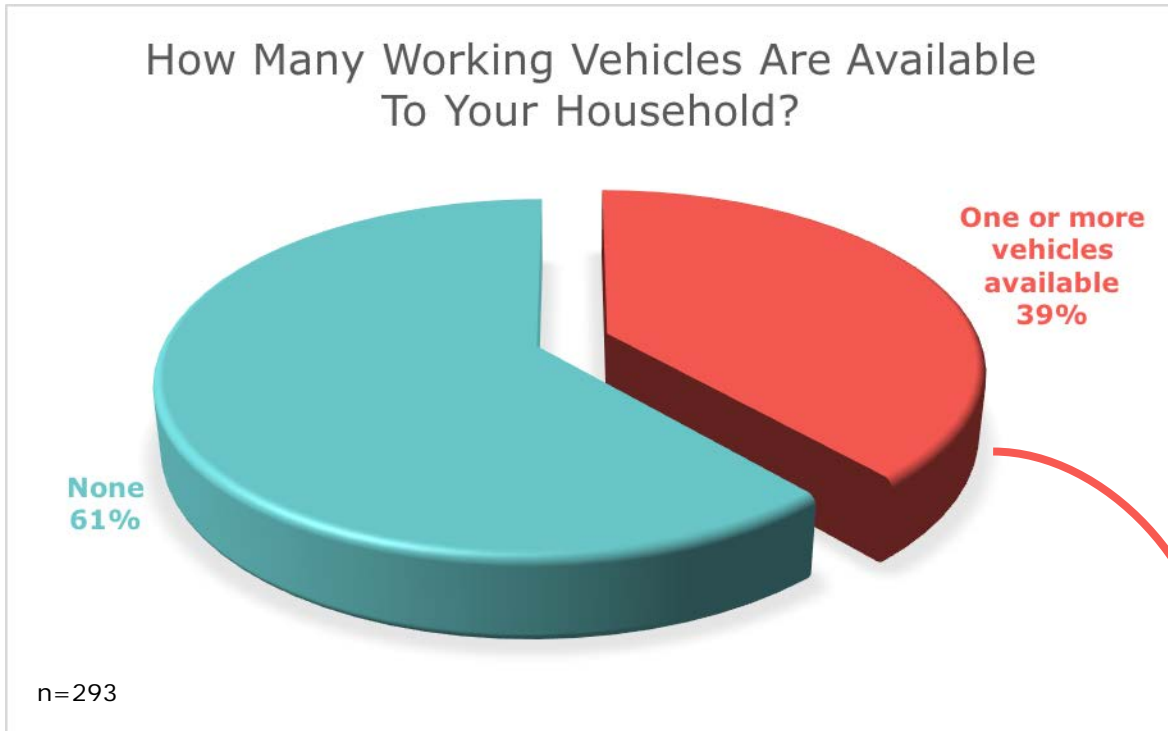
Valid Driver's License

Over half (54%) of the CTS riders surveyed do not have a driver's license.



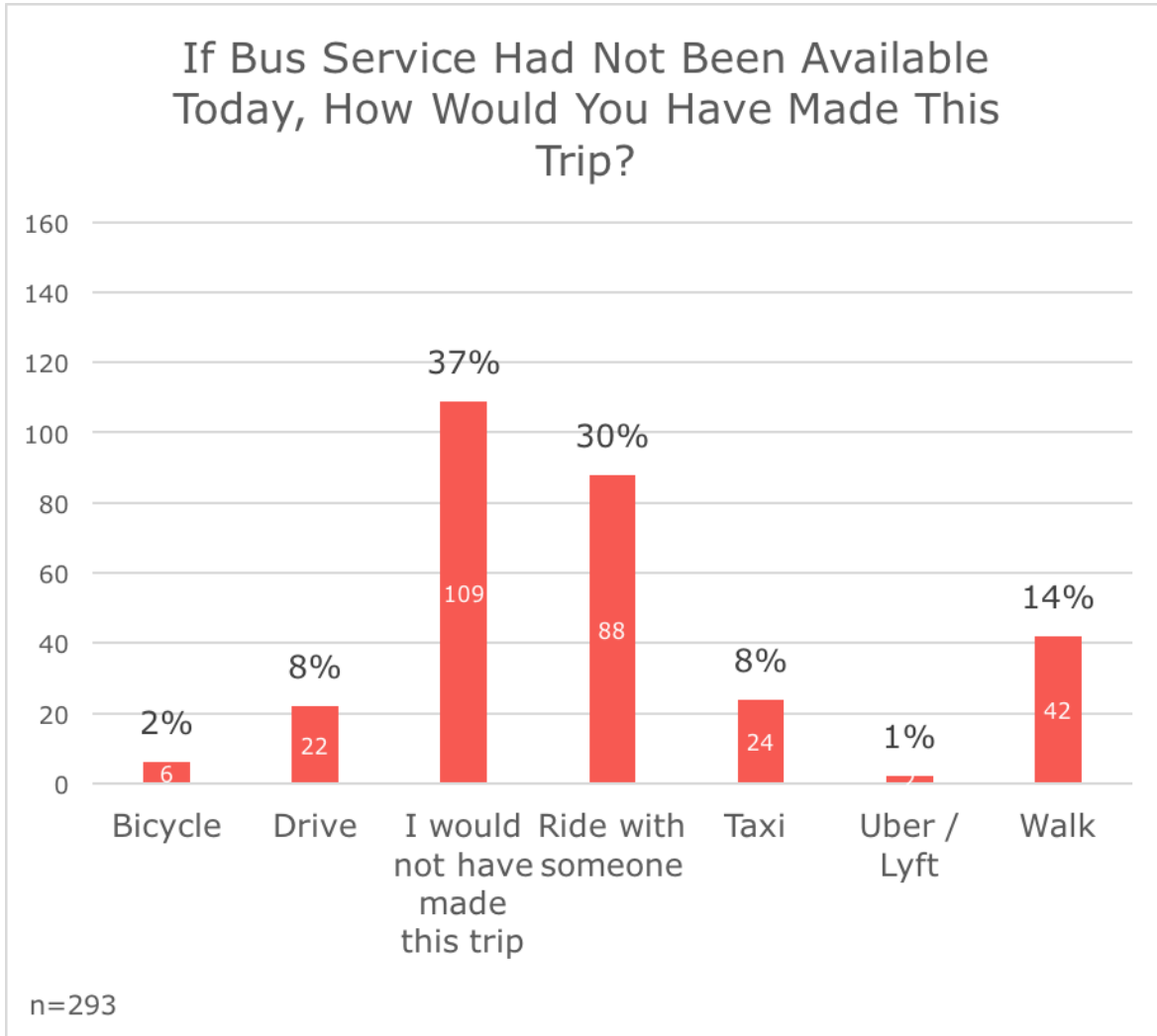
Working Vehicles Available to the Household

Over 61% of transit users surveyed did not have a vehicle available for the trip. Of the 39% of riders that do have a vehicle available, only 13% had a vehicle available for the trip.



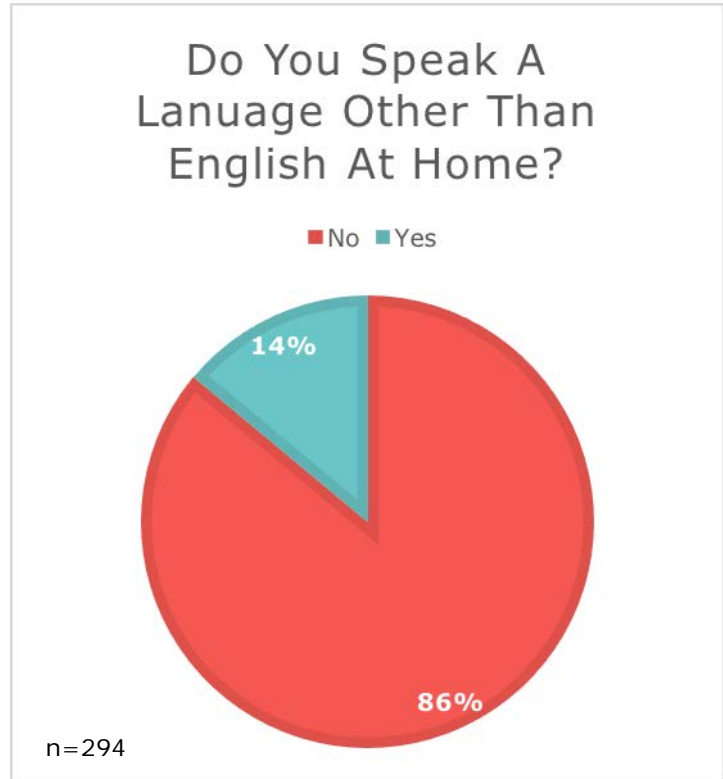
Trip Transportation Without Bus Service

If bus service was not provided by CTS, 37% of riders surveyed would not have made the trip. The next highest percentage (30%) would have ridden with someone while 14% responded that they would have walked.



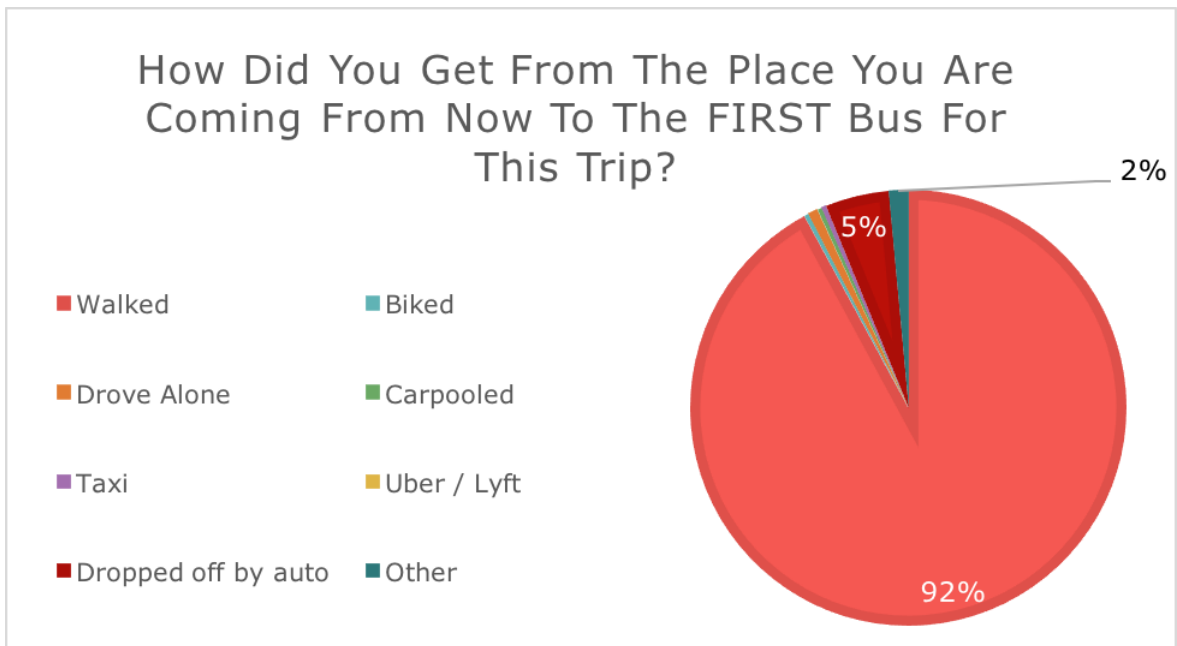
Spoken Language at Home

A small portion of surveyed riders (14%) indicated that they speak a language other than English at home. Of those, 95% responded that they speak English *Very Well*.



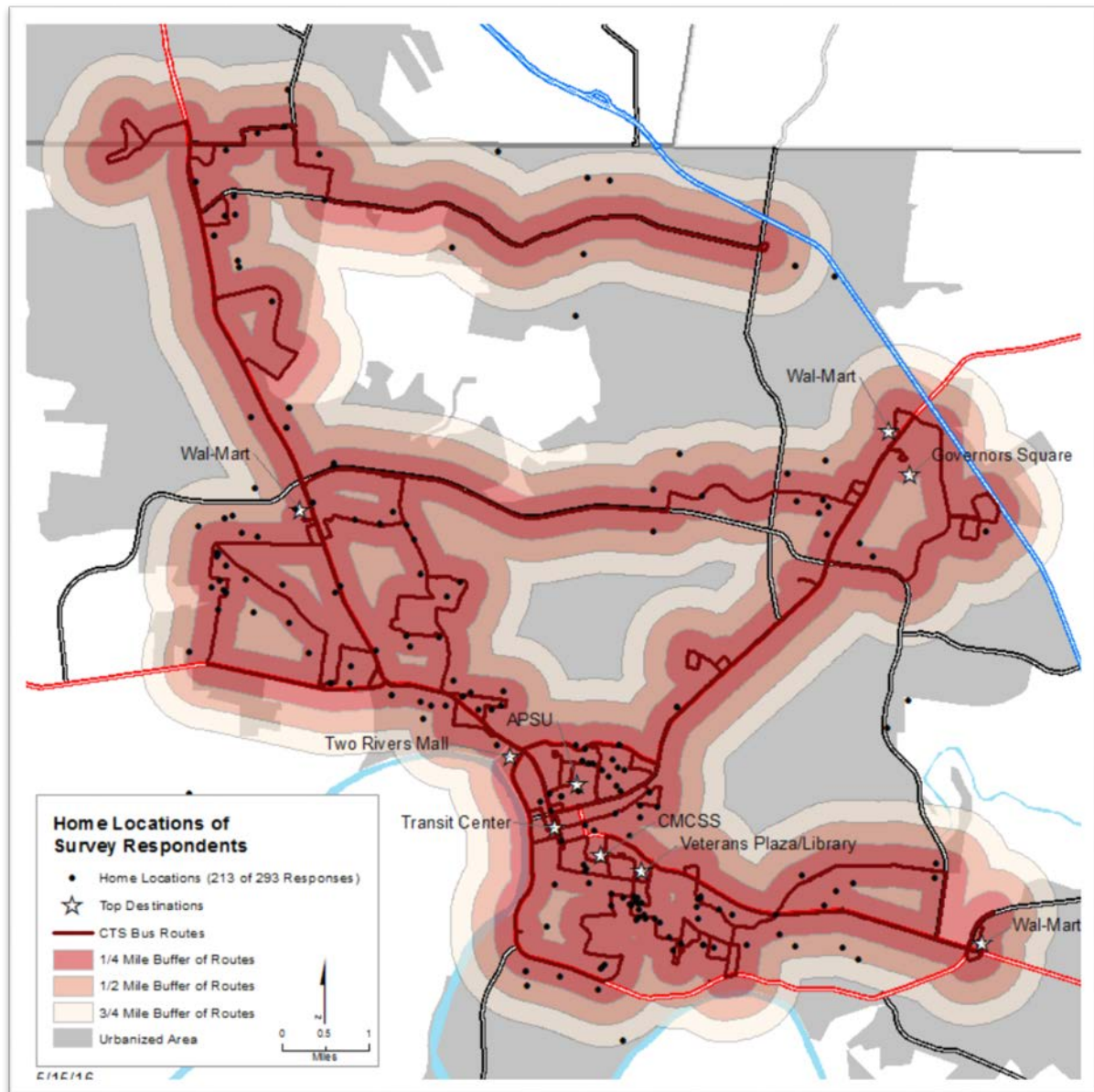
How Riders Got to the Bus

The majority of riders walk to the bus at 92% followed by being *Dropped Off* at 5%.



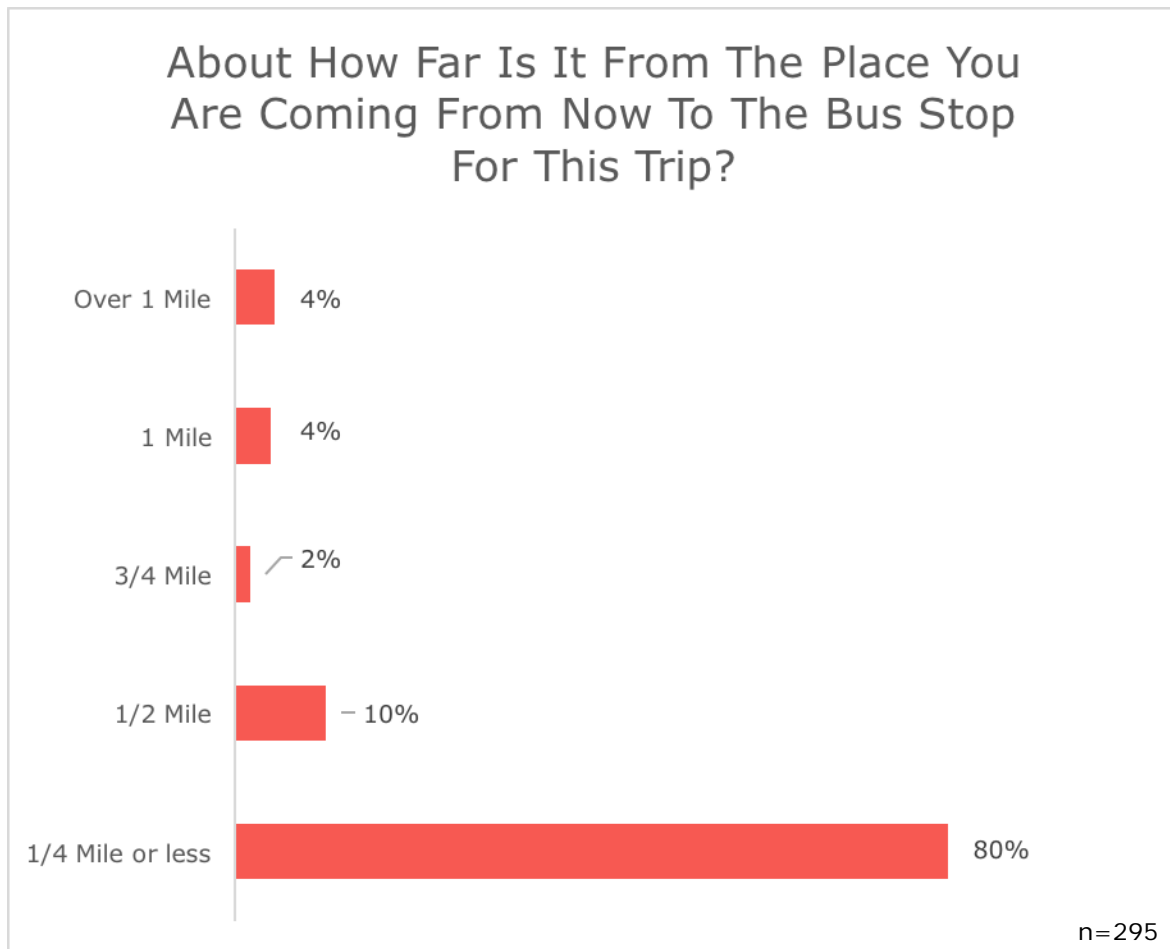
Geographic Location Of Surveyed Passengers

Based on the address data taken through the survey, AECOM staff were able to closely approximate home addresses for 213 responses (70%). These locations are represented on the map below, along with 1/4 mile buffer increments. This provides some insight regarding locations with concentrations of passengers and their relationship to the CTS bus routes.



Estimated Distance From Origin to Bus Stop

Ninety percent (90%) of surveyed riders origins are within $\frac{1}{2}$ mile of the nearest bus stop and 80% are within $\frac{1}{4}$ mile. A small percentage (8%) are at 1 mile or above.

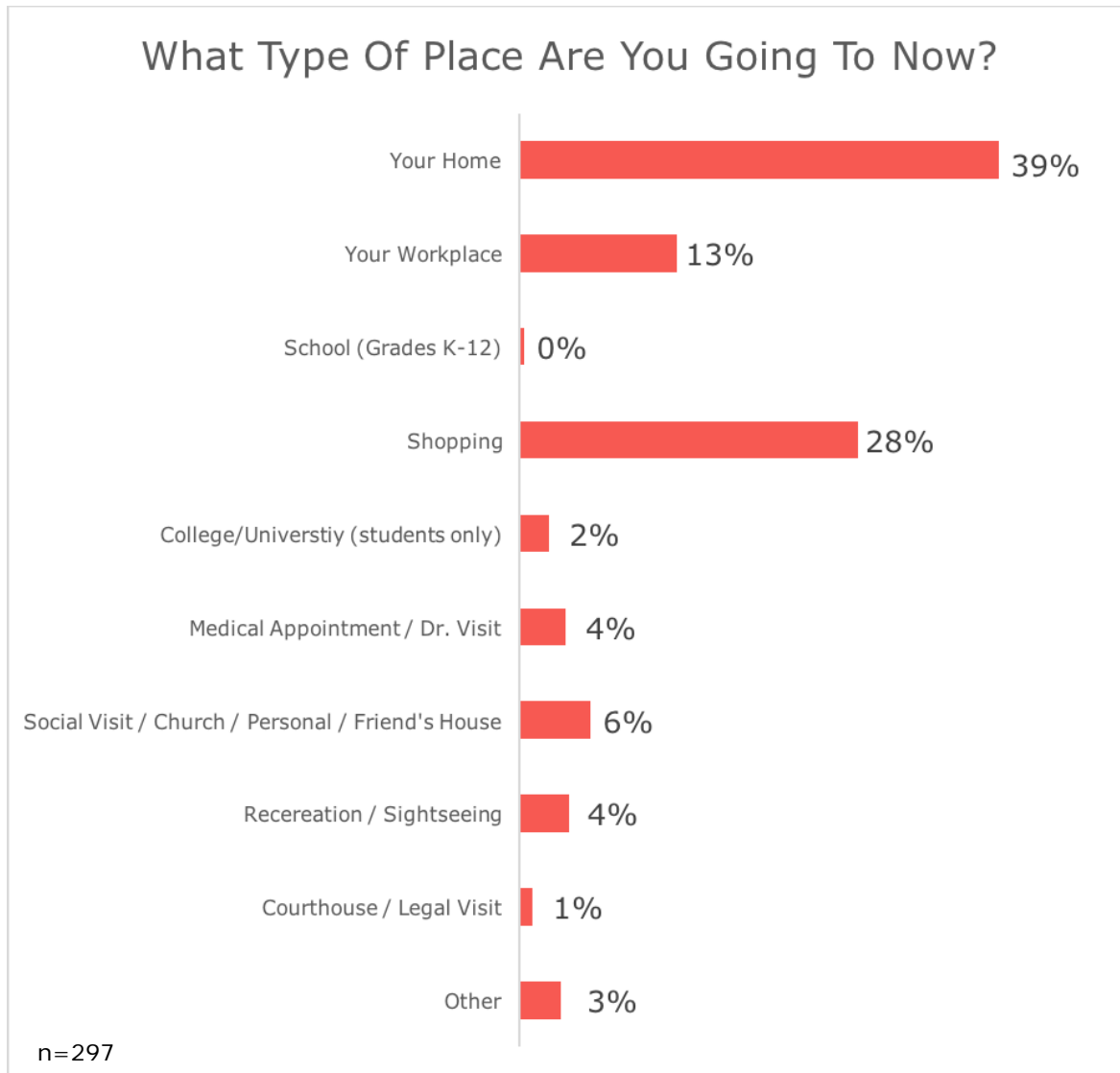


Estimated Distance From Bus Stop to Destination

When asked the distance to their final destination, 95% of respondents indicated that the destination was within $\frac{1}{2}$ mile, while 83% indicated it was within $\frac{1}{4}$ mile. Nine percent (9%) indicated it was at least a mile or more.

Where Transit Riders Were Going

Nearly 40% of the trips completed by surveyed transit riders involve a trip to return home. The next highest percentage were headed to shop (28%) followed by those on their way to work (13%). The remainder of trips were to various destinations as shown.

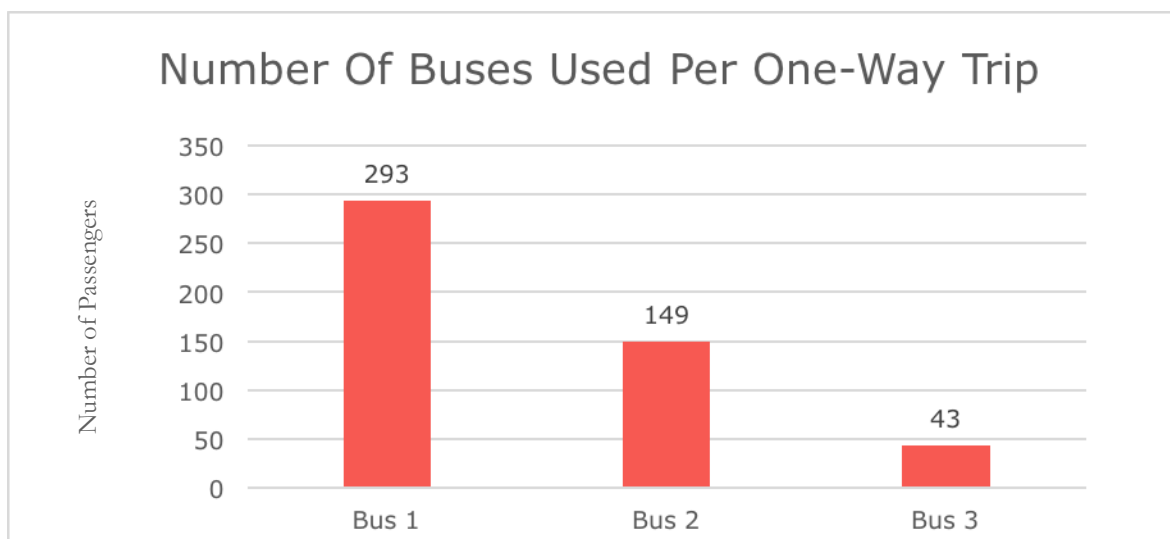
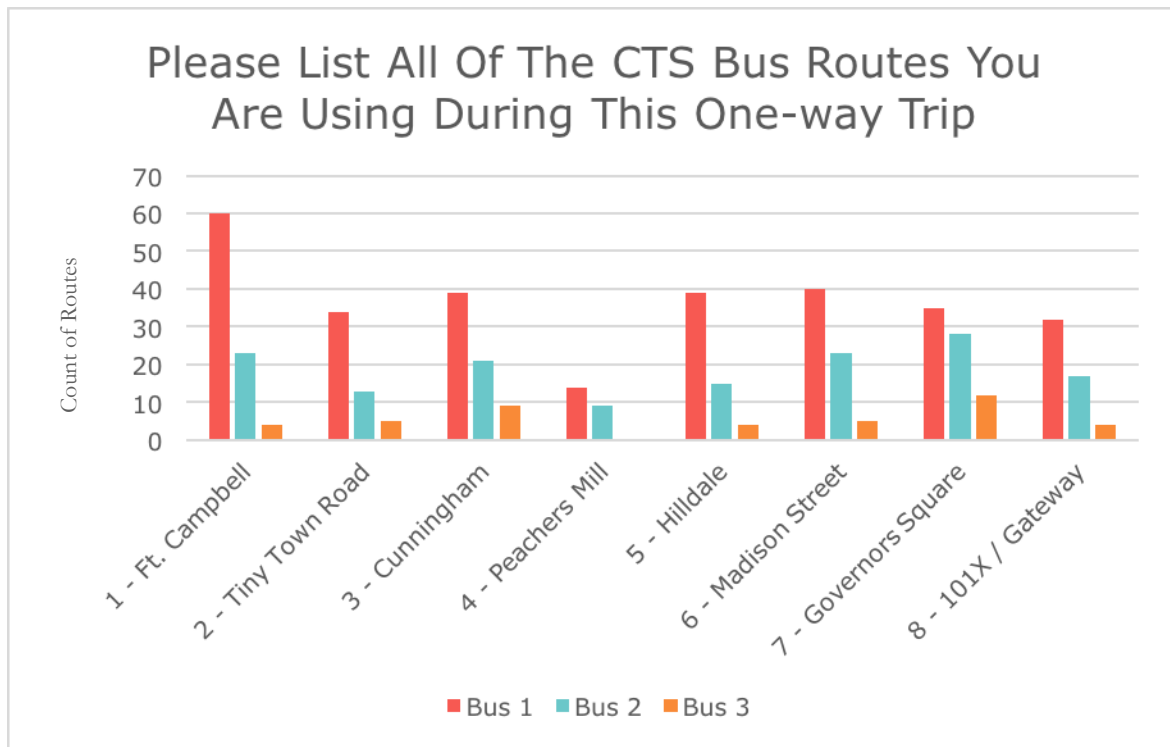


Reverse Trip

Seventy three percent (73%) of riders said they would make, or had already made, a trip in the exact opposite direction on the same day.

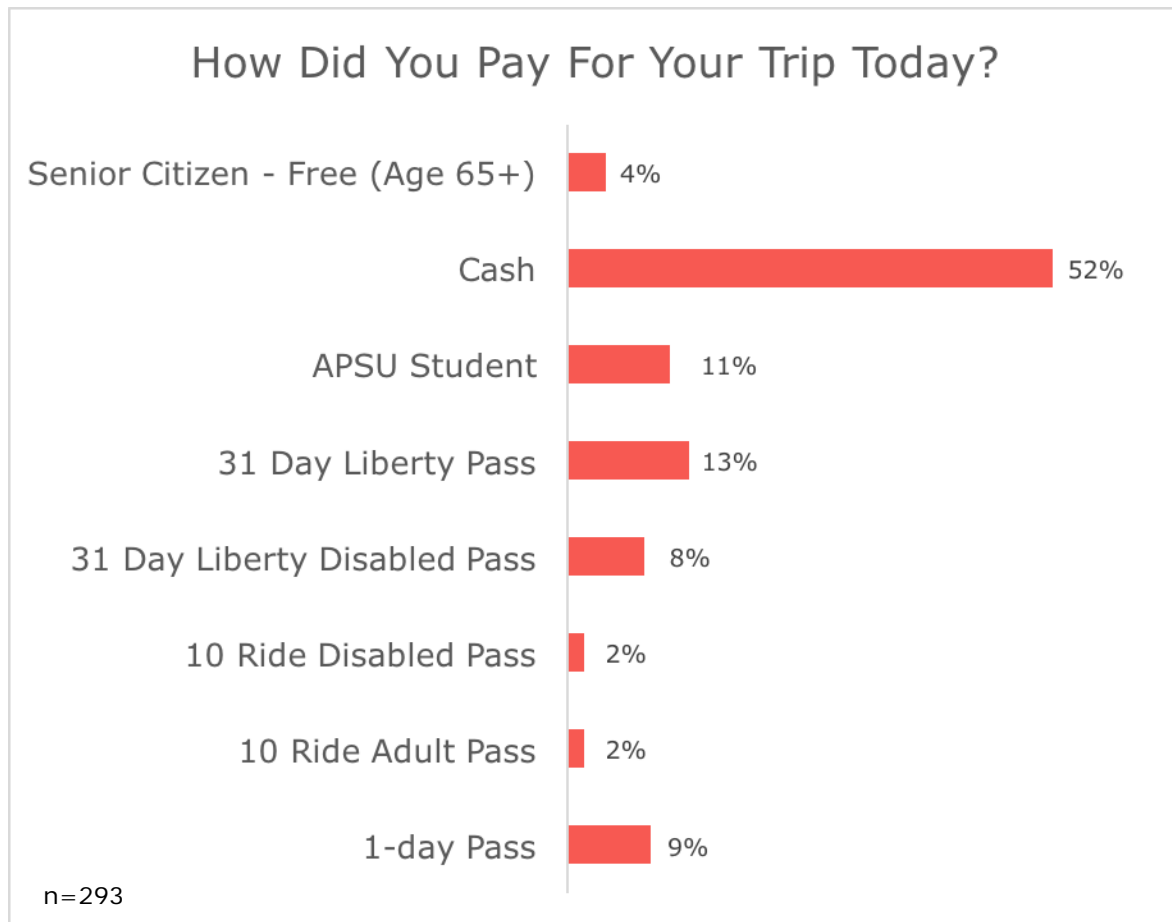
Listing Of All Buses Used During One-Way Trip

Riders were asked to list all of the buses used for this one-way trip, starting with the first bus. The charts below show a count of which buses were used First, Second, and Third. At least 293 passengers used one bus for their trip, while 149 passengers used two buses, and only 43 surveyed passengers used three buses for their one-way trip.



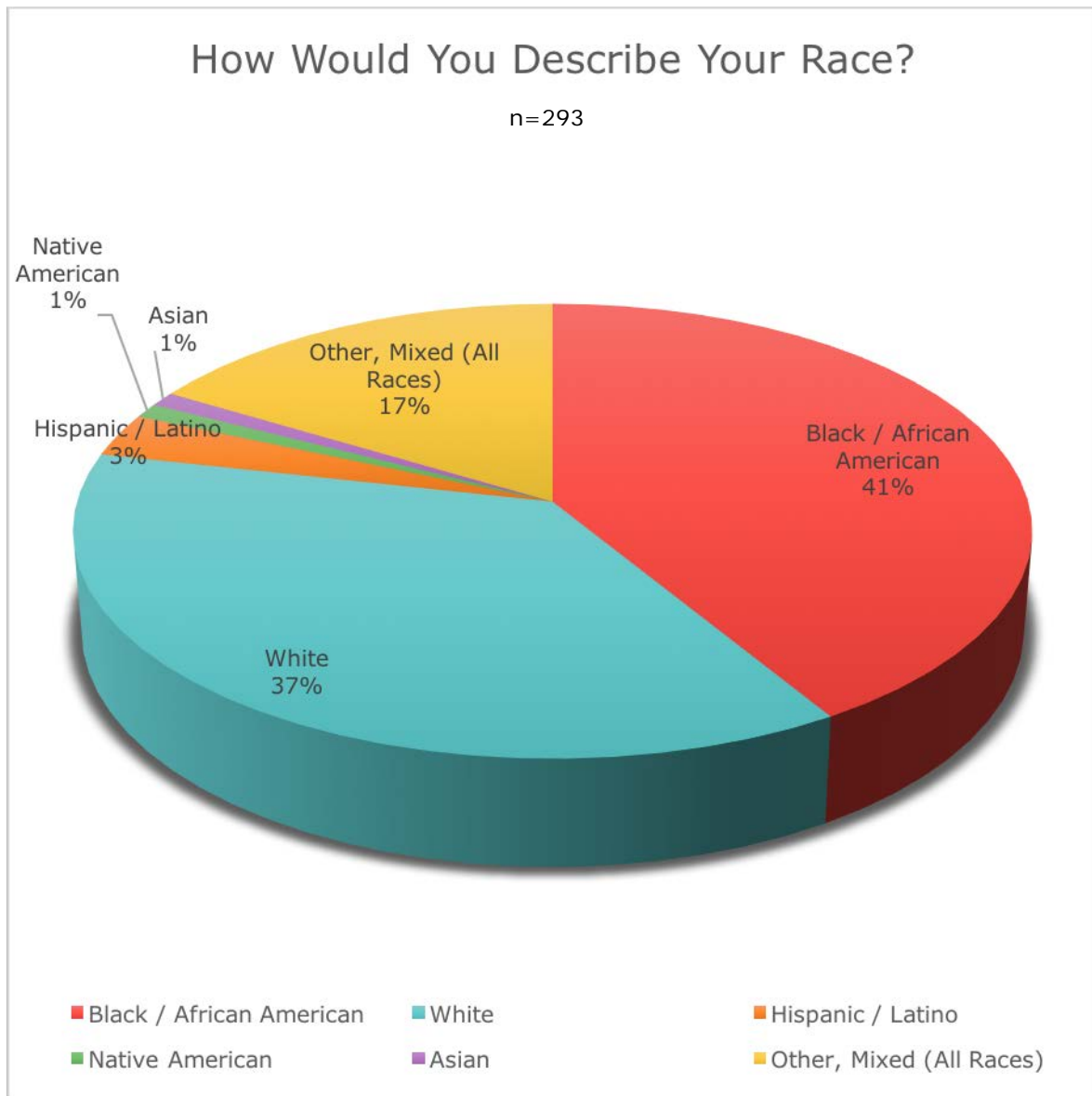
Fare Payment

A majority of the riders pay by cash (52%) while the next highest comes in at 13% for the 31 Day Liberty Pass. This is followed by APSU students at 11%. This would indicate some opportunities for marketing efforts targeted at reducing the amount of cash payments and converting those to passes.



Race

The format of the race and ethnicity question is such that riders could choose as many races as appropriate. The following table summarizes only single-category selections and groups the remainder of race answers into one category called Other, Mixed (All Races). The chart below provides a general overview of race and ethnicity but it not all encompassing.



LIMITATIONS OF THE DATA

Although the sampling goals for this survey were met and the data derived herein can assist CTS in understanding passengers and their needs, there are some limitations to the use of this data. The limitations listed below are intended to provide guidance to persons who will use data from this survey to conduct analysis in the future. The following list is not all inclusive, and anyone using the database should consider other limitations that are common to survey-acquired data.

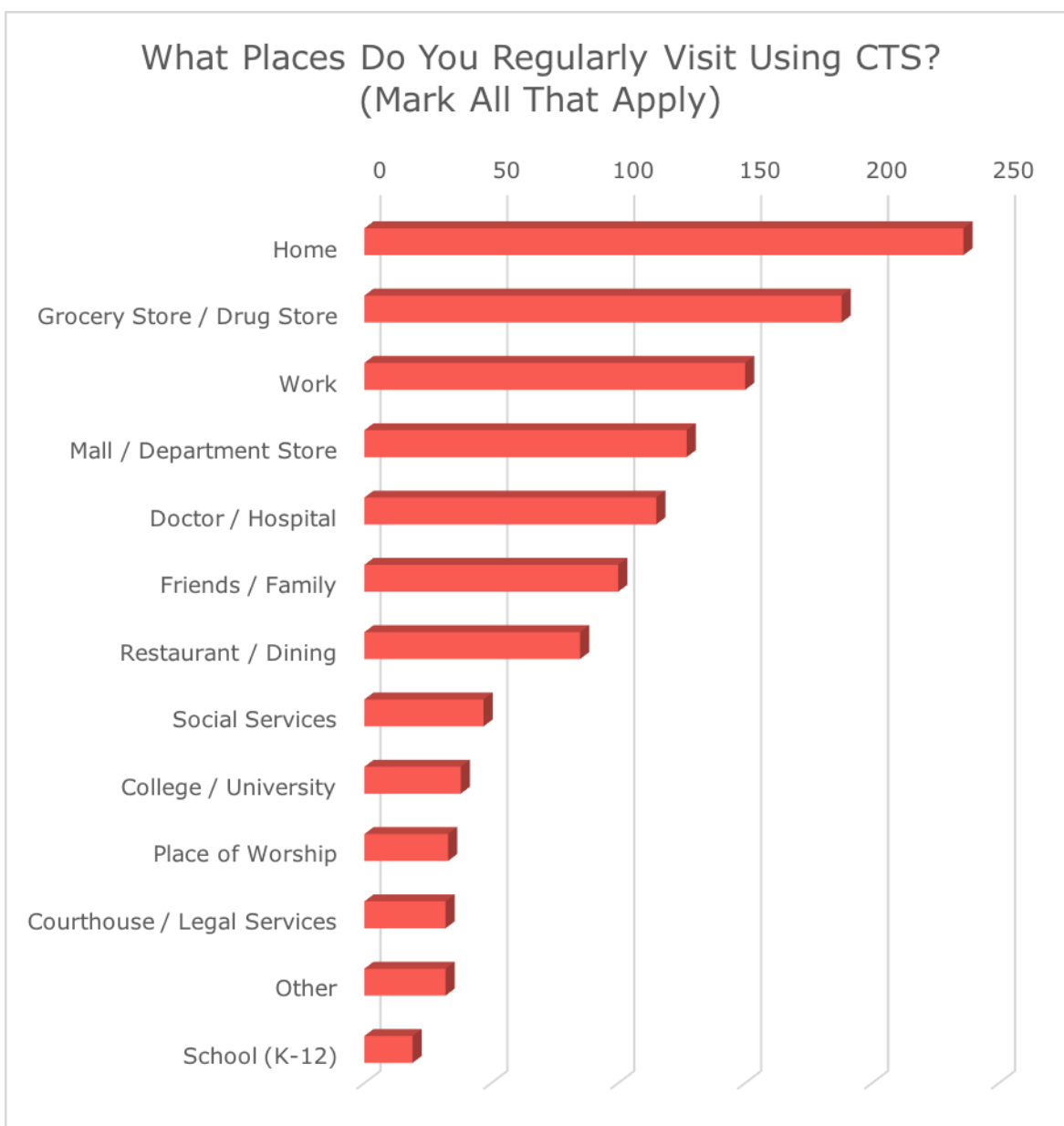
Possible under-representation of very short-trips

The survey took most riders about 5-7 minutes to complete. Although alternative methods of responding to the survey were provided (paper surveys), it is possible that people who made very short trips were less likely to complete the survey or return a completed survey to the collection box at the CTS Transit Station. This could mean that short trips are under-represented in the collected data.

Due to relatively low volume on a route by route basis, data is not statistically representative for each individual route. The survey was designed to ensure statistical accuracy for the entire CTS system, however, due to the small population of survey candidates on a route by route basis, it should be understood that low volume routes have unique characteristics. Therefore, the data for individual routes may not be fully representative.

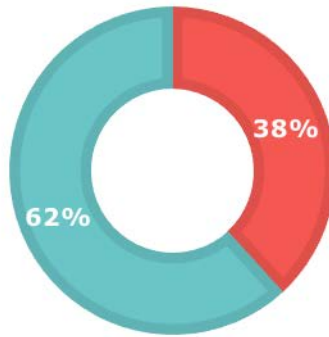
COMPREHENSIVE CHARTS & GRAPHS

The following section provides the results of selections from the remaining questions on the survey. Many of these questions were considered to be supplemental to the core information collected about demographics and travel behaviors.



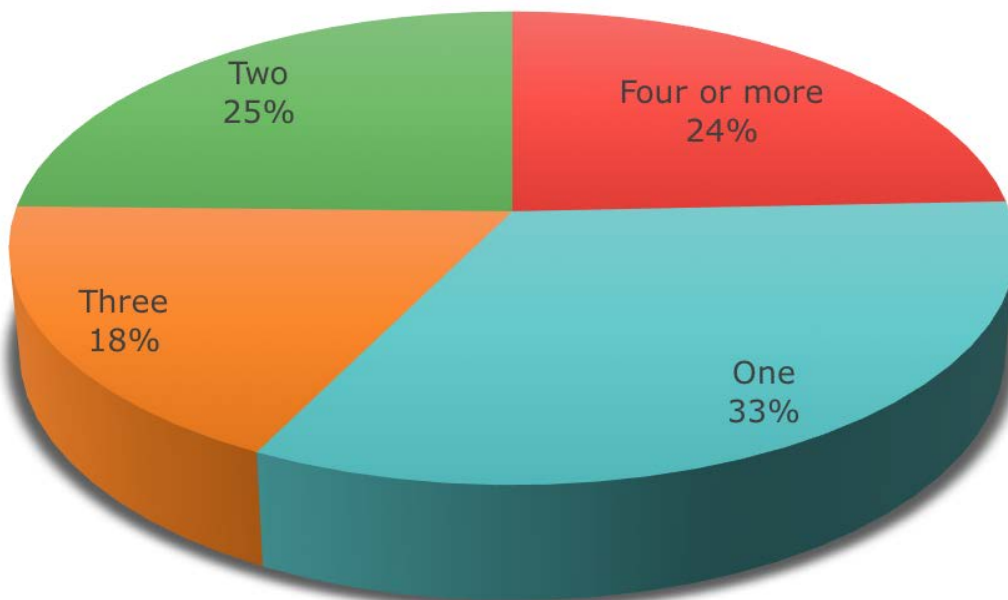
DO YOU OWN A SMART (WEB ENABLED) PHONE?

■ No ■ Yes

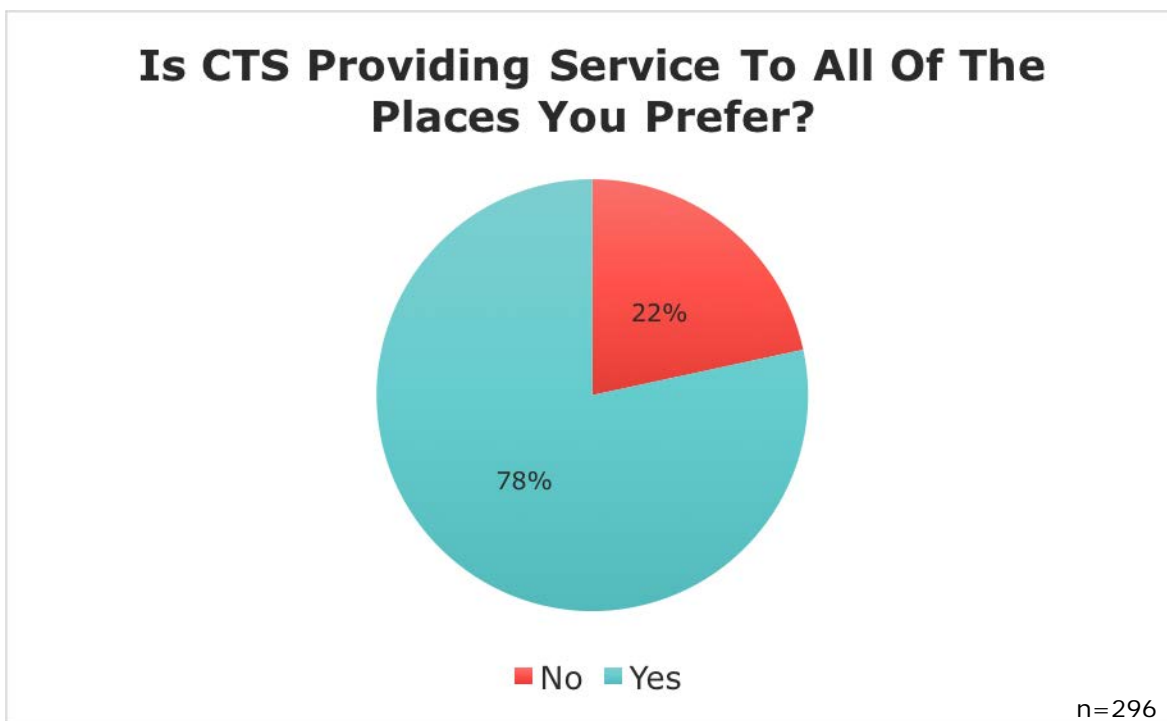
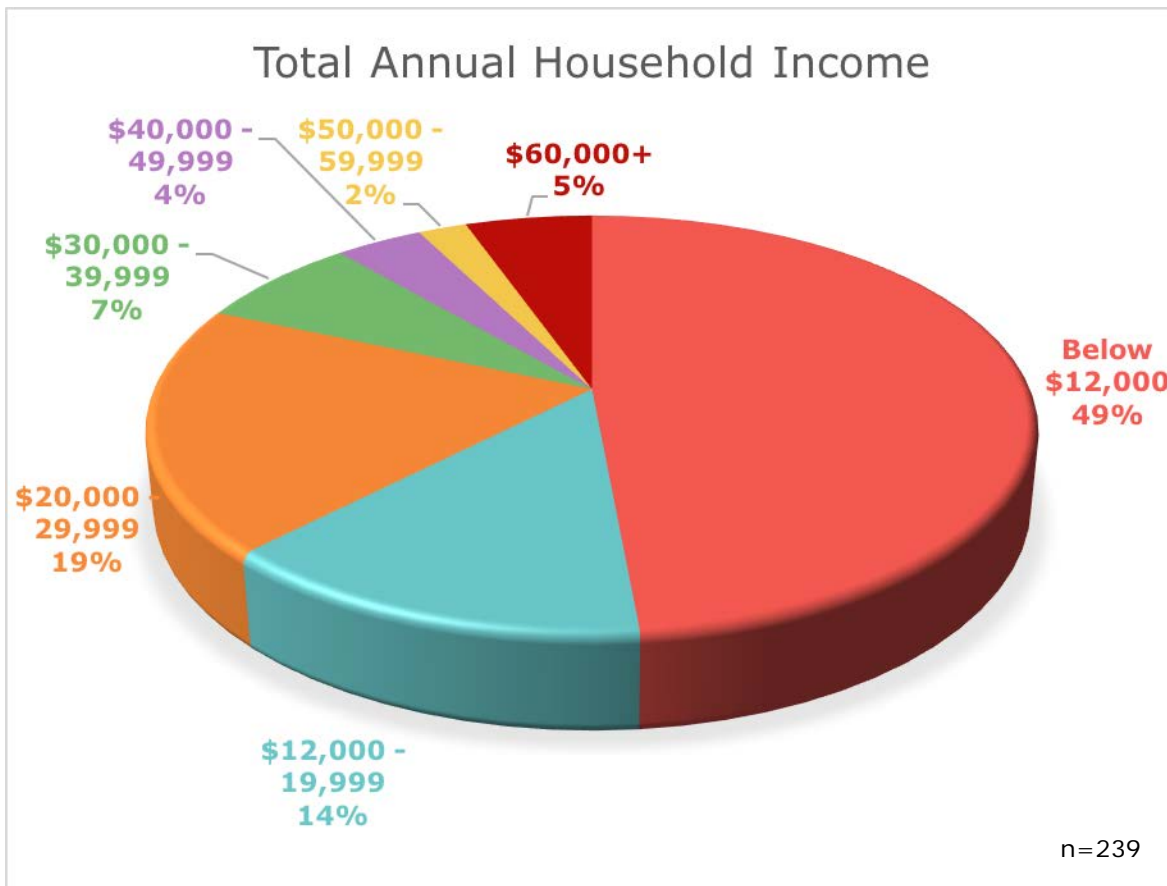


n=293

Including You, How Many People Live In Your Household? This Includes Children

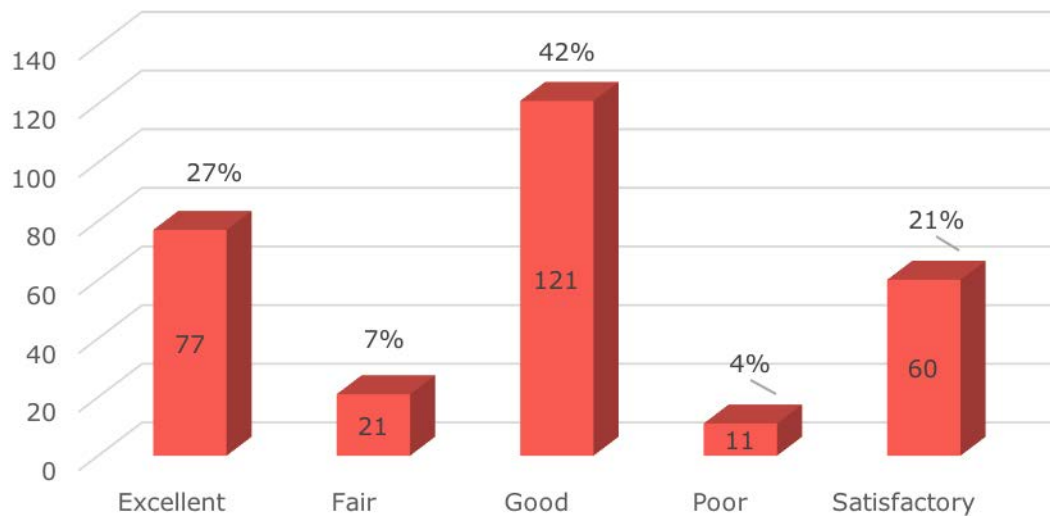


n=288



How Would You Rate The Availability Of Information About CTS Services?

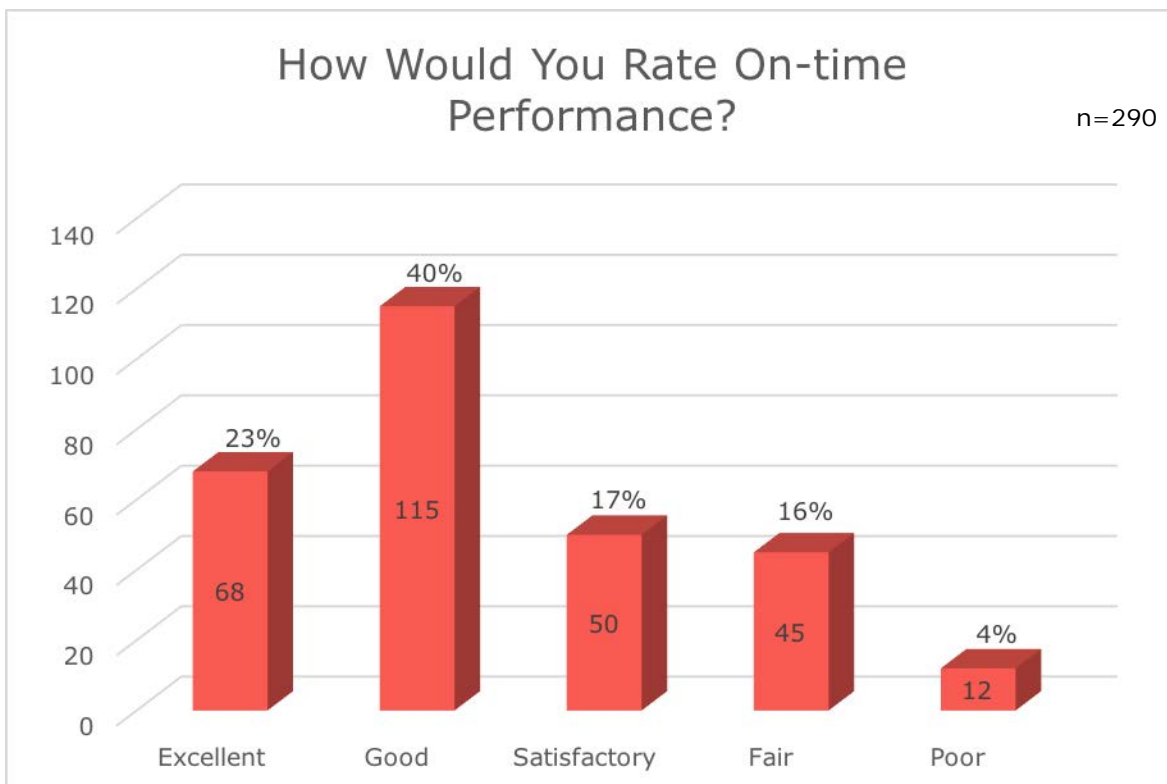
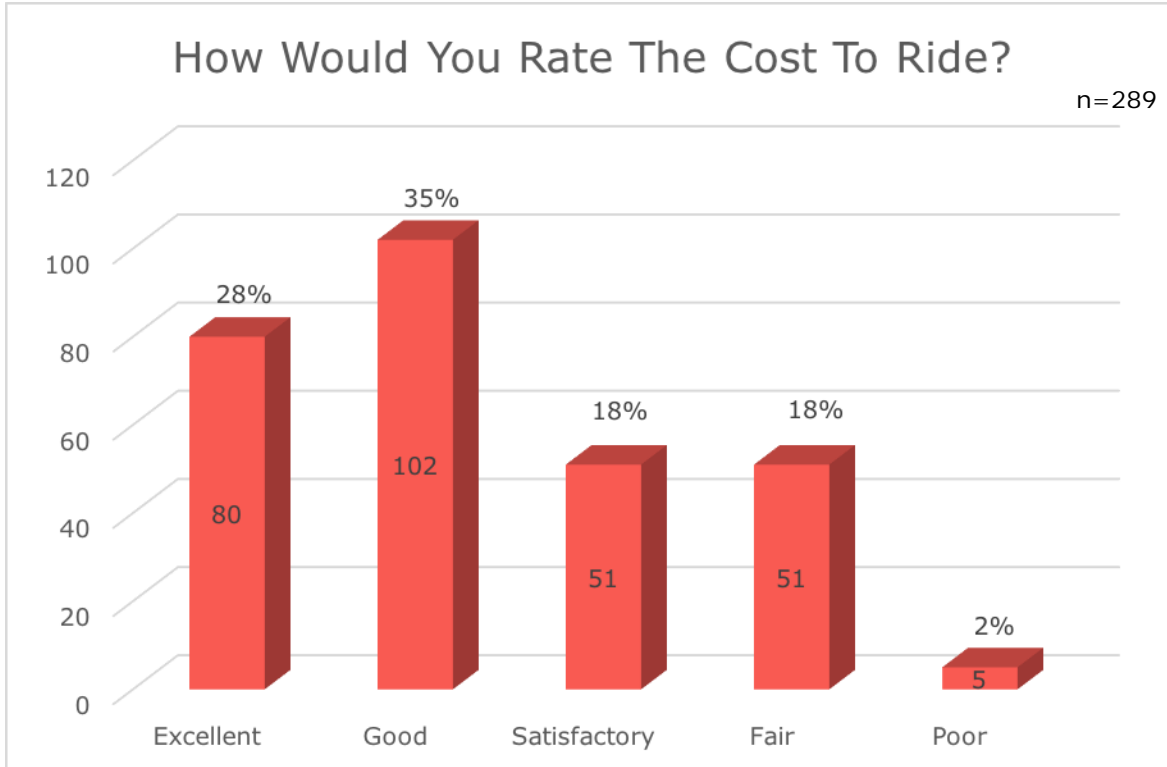
n=290

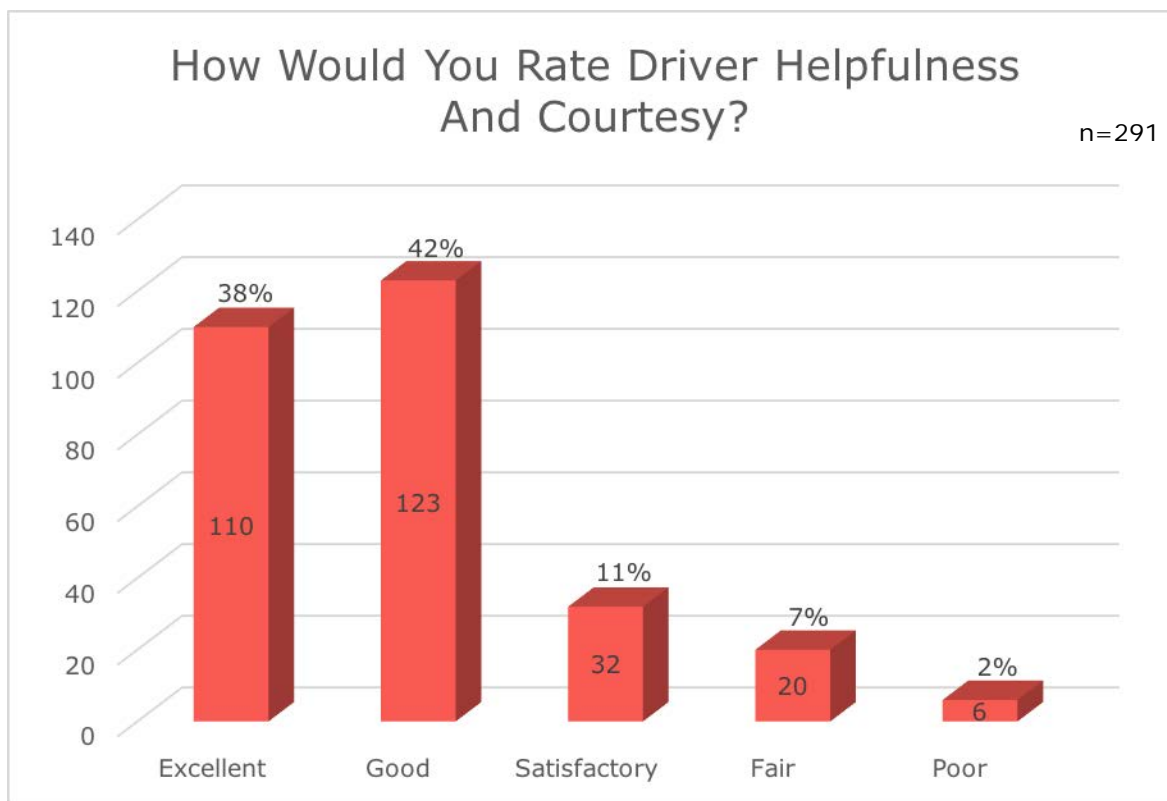


How Would You Rate The Comfort While Riding?

n=291







DATABASE DESCRIPTION

A description of the database elements if provided below and on the following pages for use in further analysis of the survey data.

VARIABLE NAME	DESCRIPTION	POSSIBLE VALUES
Date Collected	Date survey was administered	Date
Date Sent	Date survey uploaded into system	Date
Duration (seconds)	Amount of seconds	Time in seconds
User	Tablet number used to collect data	CTS01-10 Paper
Latitude	Attempted Lat/Long from tablet using wifi - NOT USED	Not used
Longitude	Attempted Lat/Long from tablet using wifi - NOT USED	Not used
Interviewer Initials (THREE initials, ex: JFK)	Interviewer initials	Initials (Write-in)
Date	Date as keyed in by surveyor	Date (Write-in)
I have read about the survey.	Statement that rider has read the disclosure information as required by the International Review Board (IRB). This statement was required due to use of APSU students to conduct interviews.	Yes! I have read about the survey and agree to participate. No. I choose not to participate

Have you already participated in this survey?	Question. Self-Explanatory.	Yes. (If yes, then survey not taken again.) No.
What route is the passenger riding now? (Or if at transit center, what route is passenger going to board?)	Question. Self-Explanatory.	<ul style="list-style-type: none"> • 1 - Ft. Campbell • 2 - Tiny Town Road • 3 - Cunningham • 4 - Peachers Mill • 5 - Hilldale • 6 - Madison Street • 7 - Governors Square • 8 - 101X / Gateway • 812 - Exit 8 • 900 - Peay Pickup
Direction of Travel	Question. Self-Explanatory.	Inbound (Toward Transit Center) Outbound (Away from Transit Center)
Time passenger got on THIS bus or time passenger will board bus from Transit Center (ex: 1:00 pm, 8:30 am)	Question. Self-Explanatory.	Time (Write-in)
What is your home/local address? (Be specific, ex: 123 Main Street)	Question. Self-Explanatory.	Address (Write-in)
Nearest Intersection (ONLY if street address not known, ex: Walnut Rd and Green Ln)	Question. Self-Explanatory.	Intersection (Write-in)

ZIP code	Question. Self-Explanatory.	Zip Code (Write-in)
What type of place are you COMING FROM now?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Your Home</i> • <i>Your Workplace</i> • <i>School (Grades K-12)</i> • <i>Shopping</i> • <i>College/University (students only)</i> • <i>Medical Appointment / Dr. Visit</i> • <i>Social Visit / Church / Personal / Friend's House</i> • <i>Recreation / Sightseeing</i> • <i>Courthouse / Legal Visit</i> • <i>Other</i>
What is the NAME of the place you are coming from now?	Question. Self-Explanatory.	Name of Place (Write-in)
What is the EXACT street address of that place? (Be specific, ex: 123 Main St.)	Question. Self-Explanatory.	Address (Write-in)
Nearest Intersection (ONLY if street address not known, ex: Walnut Rd and Madison St)	Question. Self-Explanatory.	Intersection (Write-in)
ZIP code	Question. Self-Explanatory.	Zip Code (Write-in)

How did you get
from the place
you are
COMING
FROM now to
the FIRST bus
for this trip?

Question. Self-Explanatory.

- *Walked*
- *Biked*
- *Drove Alone*
- *Carpooled*
- *Taxi*
- *Uber / Lyft*
- *Dropped off by Auto*
- *Other (Write-in)*

About how far is
it from the place
you are coming
from now to the
bus stop for this
trip?

Question. Self-Explanatory.

- *1/4 Mile*
- *1/2 Mile*
- *3/4 Mile*
- *1 Mile*
- *Over 1 Mile*

What type of
place are you
GOING TO
now?

Question. Self-Explanatory.

- *Your Home*
- *Your Workplace*
- *School (Grades K-12)*
- *Shopping*
- *College/ University (students only)*
- *Medical Appointment / Dr. Visit*
- *Social Visit / Church / Personal / Friend's House*
- *Recreation / Sightseeing*
- *Courthouse / Legal Visit*
- *Other*

What is the
NAME of the
place you are
going to now?

Question. Self-Explanatory.

Name of Place (Write-in)

What is the
EXACT street
address of this
place? (Be
specific, ex: 123
Main St.)

Question. Self-Explanatory.

Address (Write-in)

Nearest
Intersection
(ONLY if street
address not
known, ex:
Walnut Rd and
Madison St)

Question. Self-Explanatory.

Intersection (Write-in)

ZIP code?

Question. Self-Explanatory.

Zip Code (Write-in)

How will you get
to your
destination once
you get off the
LAST bus you
are using for this
trip?

Question. Self-Explanatory.

- *Walk*
- *Bike*
- *Drive Alone*
- *Carpool*
- *Taxi*
- *Uber / Lyft*
- *Dropped off by Someone*
- *Other (Write-in)*

About how far is
it from where
you get off the
last bus to you
final destination?

Question. Self-Explanatory.

- *1/4 Mile*
- *1/2 Mile*
- *3/4 Mile*
- *1 Mile*
- *Over 1 Mile*

Please list all of
the CTS bus
routes you are
using during
your current
ONE-WAY trip
in order. Bus 1:

Question. Self-Explanatory.

One selection could be made
from the following:

- *1 - Ft. Campbell*
- *2 - Tiny Town Road*
- *3 - Cunningham*
- *4 - Peachers Mill*
- *5 - Hilldale*
- *6 - Madison Street*
- *7 - Governors Square*
- *8 - 101X / Gateway*
- *812 - Exit 8*
- *900 - Peay Pickup*

Bus 2: (If applicable)	Question. Self-Explanatory.	One selection could be made from the following: <ul style="list-style-type: none"> • 1 - Ft. Campbell • 2 - Tiny Town Road • 3 - Cunningham • 4 - Peachers Mill • 5 - Hilldale • 6 - Madison Street • 7 - Governors Square • 8 - 101X / Gateway • 812 - Exit 8 • 900 - Peay Pickup
Bus 3: (If applicable)	Question. Self-Explanatory.	One selection could be made from the following: <ul style="list-style-type: none"> • 1 - Ft. Campbell • 2 - Tiny Town Road • 3 - Cunningham • 4 - Peachers Mill • 5 - Hilldale • 6 - Madison Street • 7 - Governors Square • 8 - 101X / Gateway • 812 - Exit 8 • 900 - Peay Pickup
If you rode on any other transit service during this ONE-WAY trip, please write in:	Question. Self-Explanatory.	Other Bus Service (Write-in)
Have you already, or will you later today, make this trip in the EXACT opposite direction?	Question. Self-Explanatory.	Yes No

What places do you regularly visit using CTS?
(Mark all that apply.)

Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Home</i> • <i>Work</i> • <i>Grocery Store / Drug Store</i> • <i>Department Store</i> • <i>Friends/Family</i> • <i>Doctor / Hospital</i> • <i>Place of Worship</i> • <i>Courthouse / Legal Services</i> • <i>Social Services</i> • <i>Restaurant / Dining Out</i> • <i>School (K-12)</i> • <i>College / University</i> • <i>Other</i>
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How many working vehicles are available to your household?

Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>None</i> • <i>One</i> • <i>Two</i> • <i>More than two</i>
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Was a working vehicle available for this trip?

Question. Self-Explanatory.	<p>Yes</p> <p>No</p>
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If bus service had not been available today, how would you have made this trip?

Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Drive</i> • <i>Uber / Lyft</i> • <i>Walk</i> • <i>Taxi</i> • <i>Bicycle</i> • <i>Other public transit service</i> • <i>Ride with someone</i> • <i>I would not have made this trip</i>
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Do you have a driver's license?

Question. Self-Explanatory.	<p>Yes</p> <p>No</p>
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Do you own a "Smart" (web enabled) phone?

Question. Self-Explanatory.	<p>Yes</p> <p>No</p>
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Are you: (check the response that BEST describes you)	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Employed full-time (at least 30 hours per week)</i> • <i>Retired</i> • <i>Not currently employed</i> • <i>Employed part-time (less than 30 hours per week)</i> • <i>Full-time student</i>
What is your age?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Under 18</i> • <i>18-24</i> • <i>25-34</i> • <i>35-44</i> • <i>45-54</i> • <i>55-64</i> • <i>65+</i>
What is your gender?	Question. Self-Explanatory.	Male Female
How would you describe your race/ethnicity? (Check all that apply)	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>White</i> • <i>Black / African American</i> • <i>Hispanic / Latino</i> • <i>Asian</i> • <i>Native American</i> • <i>Other</i>
Including you, how many PEOPLE live in your household? This includes children.	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>One</i> • <i>Two</i> • <i>Three</i> • <i>Four or more</i>
Including YOU, how many ADULTS (age 18 and older) live in your household?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>One</i> • <i>Two</i> • <i>Three</i> • <i>Four or more</i>

Do you speak a language other than English at home?	Question. Self-Explanatory.	Yes No
If YES, how well do you speak and understand English?	Question. Self-Explanatory.	Very well Less than very well

If you speak another language at home, how often do you use the following services?

Speak to customer service on the telephone?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Very often</i> • <i>Often</i> • <i>Not often</i> • <i>Not at all</i>
Speak to customer service at the CTS Transfer Station?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Very often</i> • <i>Often</i> • <i>Not often</i> • <i>Not at all</i>
Speak to the CTS Bus Drivers with questions?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Very often</i> • <i>Often</i> • <i>Not often</i> • <i>Not at all</i>
Speak with other CTS employees?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Very often</i> • <i>Often</i> • <i>Not often</i> • <i>Not at all</i>
Attend CTS public meetings?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Very often</i> • <i>Often</i> • <i>Not often</i> • <i>Not at all</i>

How did you pay for your trip today?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Cash</i> • <i>1-day pass</i> • <i>10 Ride adult pass</i> • <i>10 Ride Disabled pass</i> • <i>31 Day Liberty pass</i> • <i>31 Day Liberty disabled pass</i> • <i>Senior Citizen – Free (Age 65+)</i> • <i>APSU Student</i>
Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD income?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Below \$12,000</i> • <i>\$12,000 – 19,999</i> • <i>\$20,000 – 29,999</i> • <i>\$30,000 – 39,999</i> • <i>\$40,000 – 49,999</i> • <i>\$50,000 – 59,999</i> • <i>\$60,000+</i>
How would you rate the Availability of Information about CTS Services?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Poor</i> • <i>Fair</i> • <i>Satisfactory</i> • <i>Good</i> • <i>Excellent</i>
How would you rate the Comfort while Riding?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Poor</i> • <i>Fair</i> • <i>Satisfactory</i> • <i>Good</i> • <i>Excellent</i>
How would you rate the Cost to Ride?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Poor</i> • <i>Fair</i> • <i>Satisfactory</i> • <i>Good</i> • <i>Excellent</i>
How would you rate Driver Helpfulness and Courtesy?	Question. Self-Explanatory.	<ul style="list-style-type: none"> • <i>Poor</i> • <i>Fair</i> • <i>Satisfactory</i> • <i>Good</i> • <i>Excellent</i>

How would you rate on-time performance?
(On-time is defined as busses arriving no later than 5 minutes of the posted time on the schedule.)

Question. Self-Explanatory.

- *Poor*
- *Fair*
- *Satisfactory*
- *Good*
- *Excellent*

Is CTS providing service to all of the places you prefer?

Question. Self-Explanatory.

Yes

No

If not, please write in the place(s) you would prefer service:

Question. Self-Explanatory.

Write-in

END OF SURVEY -
Please THANK PASSENGER for their time and enter the time survey completed. (Ex: 8:30 am)

Time survey completed.

Time

PAPER SURVEY INSTRUMENTS

Clarksville Transit System (CTS) 3Survey

Please take a few moments to complete this important survey. Your input will be used to plan transportation improvements in Clarksville. ~~All information will be kept strictly confidential.~~

HOME Address: (please be specific, ex: 123 W Main Street): _____
(If you are just visiting the area, list the address you are staying in the Clarksville area.)
Zip Code: _____ ~~OR! Intersection if street address is not known:!~~
_____ & _____

COMING FROM?

- What type of place are you COMING FROM now?
 - ☐ Your Home
 - ☐ Your Workplace
 - ☐ School (Grades K-12)
 - ☐ Shopping
 - ☐ College/University (students only)
 - ☐ Medical Appointment / Dr. Visit
 - ☐ Social Visit / Church / Personal / Friend's House
 - ☐ Recreation / Sightseeing
 - ☐ Courthouse / Legal Visit
 - ☐ Other
- What is the NAME of the place you are coming from now?

- What is the EXACT Street Address of this place?

OR Intersection if street address is not known:
_____ & _____

City: _____ Zip: _____
- How did you get from the place you are coming from now to the FIRST bus for this trip?
 - ☐ Walked
 - ☐ Biked
 - ☐ Drove Alone
 - ☐ Carpooled
 - ☐ Taxi
 - ☐ Uber / Lyft
 - ☐ Dropped off by auto
 - ☐ Other
- About how far is it from the place you are coming from to the bus stop for this trip?
 - ☐ ¼ mile ☐ < 1 Mile
 - ☐ ½ mile ☐ Over 1 Mile
 - ☐ ¾ mile

GOING TO?

- What type of place are you GOING TO now?
 - ☐ Your Home
 - ☐ Your Workplace
 - ☐ School (Grades K-12)
 - ☐ Shopping
 - ☐ College/University (students only)
 - ☐ Medical Appointment / Dr. Visit
 - ☐ Social Visit / Church / Personal / Friend's House
 - ☐ Recreation / Sightseeing
 - ☐ Courthouse / Legal Visit
 - ☐ Other
- What is the NAME of the place you are going to now?

- What is the EXACT Street Address of this place?

OR Intersection if street address is not known:
_____ & _____

City: _____ Zip: _____
- How will you get to your destination once you get off the LAST bus you are using for this trip?
 - ☐ Walk
 - ☐ Bike
 - ☐ Drive Alone
 - ☐ Carpool
 - ☐ Taxi
 - ☐ Uber / Lyft
 - ☐ Dropped off by auto
 - ☐ Other
- About how far is it from where you get off the last bus to your final destination for this trip?
 - ☐ ¼ mile ☐ < 1 Mile
 - ☐ ½ mile ☐ Over 1 Mile
 - ☐ ¾ mile

THIS BUS (Answer the following based on your current one3way trip between the places listed above)

- What bus route are you riding now? (Write in Route Number and Name.) _____
 - Approximately what time did you get on THIS bus? Hour/Minute: _____ am / pm
 - Are you traveling toward downtown (inbound) or away from downtown (outbound)? ☐ Inbound ☐ Outbound
 - Please list all of the bus routes you are using during your current ONE-WAY trip in order below. PLEASE CIRCLE THE ROUTE YOU WERE USING WHEN YOU COMPLETED THIS SURVEY.
- | | | | | |
|--------|---------------|---------------|---------------|-------------|
| ORIGIN | 1st Bus Route | 2nd Bus Route | 3rd Bus Route | DESTINATION |
|--------|---------------|---------------|---------------|-------------|
15. Have you already, or will you later today, make this trip in the EXACT opposite direction)? ☐ Yes ☐ No

Please complete the questions on the back.

OTHER IMPORTANT ITEMS

16. What places do you regularly visit using CTS? (Mark all that apply.)
- | | | | |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> Home | <input type="checkbox"/> Department Store | <input type="checkbox"/> Place of Worship | <input type="checkbox"/> Courthouse/Legal Services |
| <input type="checkbox"/> Work | <input type="checkbox"/> Friends/Family | <input type="checkbox"/> Social Services | <input type="checkbox"/> Grocery/Drug Store |
| <input type="checkbox"/> School(K-12) | <input type="checkbox"/> Doctor/Hospital | <input type="checkbox"/> College/University | <input type="checkbox"/> Restaurant/Dining Out |
| <input type="checkbox"/> Other | | | |
17. How many WORKING vehicles (cars, trucks, or motorcycles) are available to your household?
- ☐ None ☐ One ☐ Two ☐ More than two
18. Was a working vehicle available for this trip? ☐ Yes ☐ No
19. If bus service had not been available today, how would you have made this trip?
- ☐ Drive ☐ Uber/Lyft ☐ Walk ☐ Taxi ☐ Bicycle ☐ Other Public Transit
- ☐ Ride with someone ☐ I would not have made this trip
20. Do you have a valid driver's license? ☐ Yes ☐ No
21. Do you own a Smart (web-enabled) phone? ☐ Yes ☐ No
22. Are you: (check the one response that BEST describes you)
- | | |
|--|---|
| <input type="checkbox"/> Employed full-time (at least 30 hours per week) | <input type="checkbox"/> Employed part-time (less than 35 hours per week) |
| <input type="checkbox"/> Retired | <input type="checkbox"/> Full-time student |
| <input type="checkbox"/> Not currently employed | |
23. What is your AGE: ☐ Under 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+
24. Your Gender: ☐ Male ☐ Female
25. How would you describe your race/ethnicity? (check all that apply)
- ☐ White ☐ Black/African American ☐ Hispanic/Latino ☐ Asian ☐ Native American ☐ Other
26. Including YOU, how many people live in your household (this includes children)?
- ☐ One ☐ Two ☐ Three ☐ Four or more
27. Including YOU, how many adults (age 18 and older) live in your household?
- ☐ One ☐ Two ☐ Three ☐ Four or more
28. Do you speak a language other than English at home? ☐ Yes ☐ No
- 28a. [IF YES to #28] How well do you speak and understand English? ☐ Very Well ☐ Less than very well
- 28b. [IF YES to #28] How often do you use the following services?
- | | | | | |
|---|-------------------------------------|--------------------------------|------------------------------------|-------------------------------------|
| (1) Speak to Customer Service on the telephone: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (2) Speak to Customer Service at the CTS Station: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (3) Speak to CTS Bus Drivers with questions: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (4) Speak with other CTS employees: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
| (5) Attend CTS Public Meetings: | <input type="checkbox"/> Very Often | <input type="checkbox"/> Often | <input type="checkbox"/> Not Often | <input type="checkbox"/> Not at all |
29. How did you pay for your trip today?
- ☐ Cash ☐ 10 Ride Adult Pass ☐ 31 Day Liberty Pass ☐ 31 Day Liberty Disabled pass ☐ APSU Student
- ☐ 1-Day Pass ☐ 10 Ride Disabled Pass
30. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME? This is the total income for ALL WAGE EARNERS in the household.
- | | | | |
|--|--|--|-------------------------------------|
| <input type="checkbox"/> Below \$12,000 | <input type="checkbox"/> \$20,000 - \$29,999 | <input type="checkbox"/> \$40,000 - \$49,999 | <input type="checkbox"/> \$60,000 + |
| <input type="checkbox"/> \$12,000-\$19,999 | <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$50,000 - \$59,999 | |
31. How would you rate the availability of information about CTS?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
32. How would you rate the comfort while riding?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
33. How would you rate the cost to ride?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
34. How would you rate driver helpfulness and courtesy?
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
35. How would you rate the on-time performance of the service? (On-time Performance is defined as arriving no later than 5 minutes of the posted time on the schedule.)
- ☐ Poor ☐ Fair ☐ Satisfactory ☐ Good ☐ Excellent
36. Is CTS providing service to all of the places you prefer?
- ☐ Yes ☐ No
- 36a. [IF No to #36] Please write in the place(s) you would prefer service? _____

Thank you for your help!!

If you completed this survey before getting off the bus, please RETURN THIS SURVEY to any survey staff or drop off at the CUSTOMER SERVICE BOOTH at the Clarksville Transfer Station.

All completed surveys must be received at CTS by April 15th, 2016

Sistema de Transito Clarksville (CTS) – Encuesta

Por favor tome un pequeño momento para completar esta importante encuesta. Su opinión se usará en el plan de mejora de transporte en Clarksville. *Toda información será estrictamente confidencial.*

DOMICILIO: (Por favor sea específico, ej.: 123 W Main Street): _____
(si usted solo está de visita en el área, anote la dirección donde usted se está quedando en el área de Clarksville.)

Código Postal: _____ **O Intersección si usted no conoce la dirección exacta:**

& _____

¿DE QUÉ LUGAR VIENE?

1. ¿De qué tipo de lugar viene ahora?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita legal
- ☐ Otro

2. ¿Cuál es el nombre del lugar del que usted viene ahora?

3. ¿Cuál es exactamente la dirección de este lugar?

O la intersección si usted no conoce la dirección exacta:

_____ & _____

Ciudad: _____ Código Postal: _____

4. ¿Cómo llego desde el lugar que usted viene hasta el primer bus para este viaje?

- ☐ Caminando
- ☐ En bicicleta
- ☐ Condujo solo
- ☐ Transporte compartido
- ☐ Taxi
- ☐ Uber / Lyft
- ☐ Alguien lo llevo hasta el bus
- ☐ Otro

5. ¿Qué tan lejos es desde el lugar donde usted viene hasta la parada de bus para este viaje?

- ☐ ¼ de milla
- ☐ 1 Milla
- ☐ ½ milla
- ☐ Más de 1 Milla
- ☐ ¾ milla

¿HACIA DÓNDE VA?

6. ¿A qué tipo de lugar va usted ahora?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita Legal
- ☐ Otro

7. ¿Cuál es el nombre del lugar hacia dónde va ahora?

8. ¿Cuál es la dirección exacta de este lugar?

O la intersección si usted no conoce la dirección exacta:

_____ & _____

Ciudad: _____ Código Postal: _____

9. ¿Cómo va a llegar a su destino una vez que se baja del último bus que usted está usando para este viaje?

- ☐ Su hogar
- ☐ Lugar de trabajo
- ☐ Escuela (Grados K-12)
- ☐ Compras
- ☐ Universidad (solo estudiantes)
- ☐ Cita médica / Visita al Dr.
- ☐ Visita Social / Iglesia / Personal / Casa de Amigos
- ☐ Recreación / Turismo
- ☐ Centro de Justicia / Visita Legal
- ☐ Otro

10. ¿Qué tan lejos es desde donde usted se baja del último bus hasta el destino final de su viaje?

- ☐ ¼ de Milla
- ☐ 1 Milla
- ☐ ½ Milla
- ☐ Más de 1 Milla
- ☐ ¾ de Milla

ESTE BUS (Responda a lo siguiente basado en su reciente viaje entre los lugares mencionados arriba)

11. ¿Qué ruta de bus está usando ahora? (escriba el número o el nombre.) _____

12. ¿Aproximadamente a qué hora llego a ESTE bus? Hora/Minuto: _____ am / pm

13. ¿Está usted viajando hacia el centro (entrando) fuera del centro (saliendo)? ☐ Entrando ☐ Saliendo

14. Por favor nombre todas las rutas de buses que está usando hacia una dirección durante su reciente viaje, en orden abajo. POR FAVOR **ENCIERRE** EN UN CIRCULO LA RUTA QUE USTED ESTABA USANDO CUANDO COMPLETO ESTA ENCUESTA.

ORIGEN → _____ → _____ → _____ → DESTINO
1^{era} Ruta de Bus 2^{da} Ruta de Bus 3^{era} Ruta de Bus

15. ¿Ha usted terminado, o más tarde hoy va usted a hacer EXACTAMENTE el mismo viaje hacia la dirección opuesta)? ☐ SI ☐ No

POR FAVOR COMPLETE LAS PREGUNTAS DE ATRAS.

OTROS PUNTOS IMPORTANTES

16. ¿Qué lugares visita usted regularmente usando CTS? (Marque todos los que apliquen.)
☐ Hogar ☐ Tienda Departamental ☐ Lugar religioso ☐ Centro de justicia/Servicios Legales
☐ Trabajo ☐ Amigos/Familia ☐ Servicios Sociales ☐ Supermercado/Farmacia
☐ Escuela (K-12) ☐ Doctor/Hospital ☐ Universidad ☐ Restaurante
☐ Otro
17. ¿Cuántos vehículos en funcionamiento (carros, camiones, o motocicletas) están disponibles en su hogar?
☐ Ninguno ☐ Uno ☐ Dos ☐ Más de Dos
18. ¿Tenía algún vehículo disponible en funcionamiento para este viaje? ☐ Sí ☐ No
19. ¿Si no hubiera estado disponible el servicio de bus hoy, como hubiera hecho este viaje?
☐ Conduciendo ☐ Uber/Lyft ☐ Caminando ☐ Taxi ☐ En bicicleta ☐ Otro Transporte Publico
☐ Viajar con alguien ☐ No podría haber hecho este viaje
20. ¿Usted tiene una licencia de conducir válida? ☐ Sí ☐ No
21. ¿Usted tiene un teléfono inteligente (con internet)? ☐ Sí ☐ No
22. Es usted: (Marque la repuesta que lo describe MEJOR)
☐ Empleado a tiempo completo (al menos 30 horas por semana) ☐ Retirado
☐ Empleado medio tiempo (menos de 35 horas por semana) ☐ Desempleado
☐ Estudiante a tiempo completo
23. ¿Cuál es su edad?: ☐ Menos de 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+
24. ¿Cuál es su género?: ☐ Hombre ☐ Mujer
25. ¿Cómo describiría usted su raza/etnia? (Marque todos los que apliquen)
☐ Blanco ☐ Negro/Africano Americano ☐ Hispano/Latino ☐ Asiático ☐ Nativo Americano ☐ Otro
26. ¿Incluyéndose USTED, cuantas personas viven en su hogar (esto incluye niños)?
☐ Uno ☐ Dos ☐ Tres ☐ Cuatro o más
27. ¿Incluyéndose USTED, cuantos adultos (mayores de 18 años) viven en su hogar?
☐ Uno ☐ Dos ☐ Tres ☐ Cuatro o más
- 28a. ¿Qué tanto usted habla y entiende inglés? ☐ Muy bien ☐ Menos que muy bien
- 28b. ¿Con que frecuencia usted usa los servicios siguientes?
(1) Habla a servicio al cliente por teléfono: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
(2) Habla a servicio al cliente en la estación de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
(3) Habla a los conductores de buses CTS para hacer preguntas: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
(4) Habla con otros empleados de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
(5) Asiste a reuniones públicas de CTS: ☐ Muchas veces ☐ Algunas veces ☐ No mucho ☐ Nunca
29. ¿Cómo usted pago por su pasaje hoy?
☐ Efectivo ☐ Tarjeta adulto por 10 ☐ 31 Días Tarjeta Liberty ☐ 31 Días Tarjeta Liberty Discapacitado
☐ Estudiante APSU ☐ Tarjeta por un día ☐ Tarjeta discapacitado por 10
30. ¿Qué categoría describe mejor sus ingresos anuales totales en su hogar? Ese total incluye todos los ingresos de todos que trabajan en su hogar.
☐ Menos de \$12,000 ☐ \$20,000 - \$29,999 ☐ \$40,000 - \$49,999 ☐ \$60,000 +
☐ \$12,000-\$19,999 ☐ \$30,000 - \$39,999 ☐ \$50,000 - \$59,999
31. ¿Cómo usted calificaría el acceso a la información sobre CTS?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
32. ¿Cómo usted calificaría la comodidad durante el viaje?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
33. ¿Cómo usted calificaría el costo de pasaje?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
34. ¿Cómo usted calificaría la amabilidad y cortesía del conductor?
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
35. ¿Cómo usted calificaría la puntualidad del servicio? (La puntualidad es definida como llegar no más que 5 minutos después del tiempo indicado en el horario.)
☐ Poco ☐ Justo ☐ Satisfactorio ☐ Bueno ☐ Excelente
36. ¿CTS está brindando servicio a todos los lugares que usted prefiere?
☐ Sí ☐ No
- 36a. [Si No a #36] Por favor escriba los lugares donde usted prefiere el servicio. _____

Gracias por su ayuda!

Si usted completó esta encuesta antes de dejar el bus, por favor DEVUELVA ESTA ENCUESTA a cualquiera personal de encuestas o déjela en la OFICINA DE SERVICIO AL CLIENTE en la estación de transporte de Clarksville.

Todas las encuestas completadas tienen que ser recibidas en CTS hasta el 15 de abril, 2016.

Appendix C: Rivers and Spires Intercept Survey

CTS Intercept Survey at Rivers & Spires Festival



Summary of Results April 8-9, 2016

May 2016

Rivers and Spires Festival Intercept Survey Results

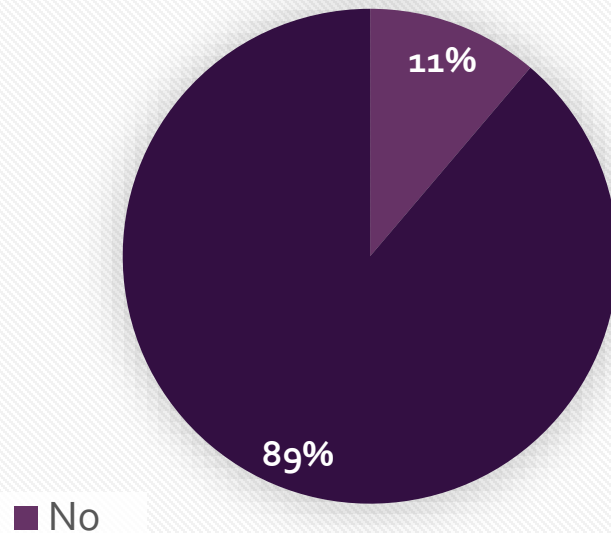
Summary

A short 5 question “intercept-survey” was developed for participants who attended the Rivers and Spires Festival to gauge their knowledge and interest in CTS services. Our team collected Over 230 responses which are summarized on the following pages.

Awareness of CTS Service

The vast majority (89%) of those surveyed indicated that they were aware of CTS.

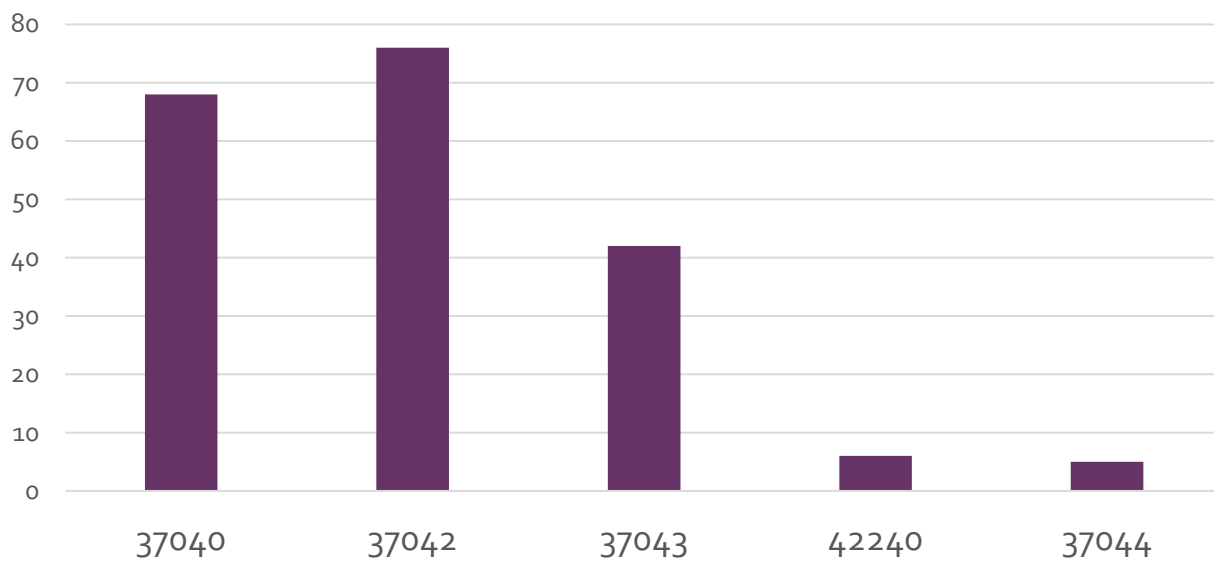
Are you aware of the Clarksville Transit System (CTS) and its service area?



Where Interviewees Reside

There was a broad listing of zip codes in response to this question, however, the top 5 are shown below.

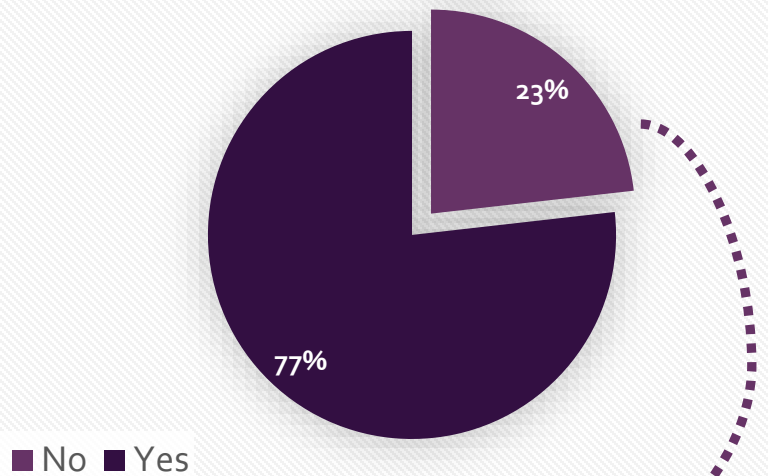
Top 5 Zip Codes



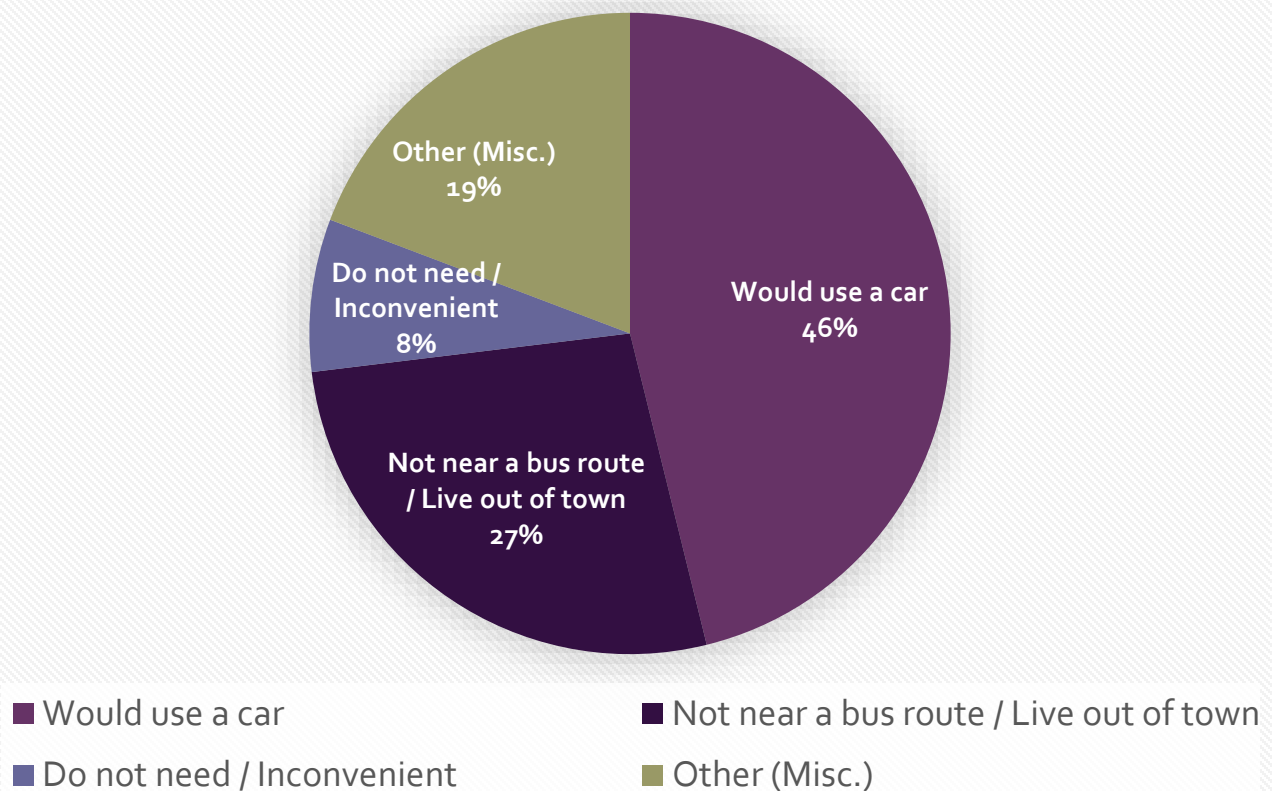
Stated Preference Regarding Possible Ridership

Seventy percent of those surveyed said they would consider using CTS services. For those who indicated they would not consider it, the responses were varied, however, the majority of those indicated that they used a car for transportation (46%). The next highest segment live out of town or not near a bus line.

Would you or anyone in your household ever use the CTS public transit service?

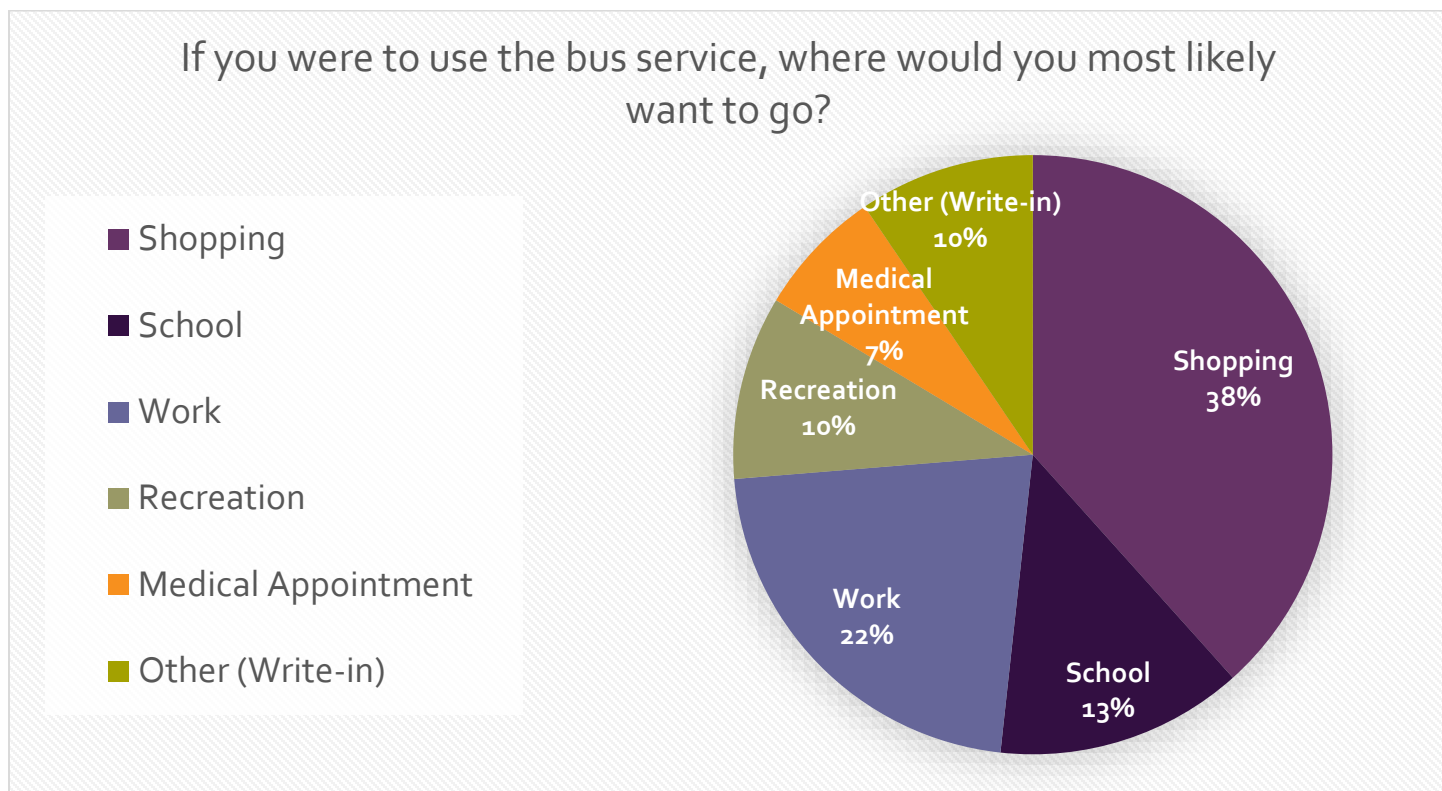


If you answered 'No', please tell us why.



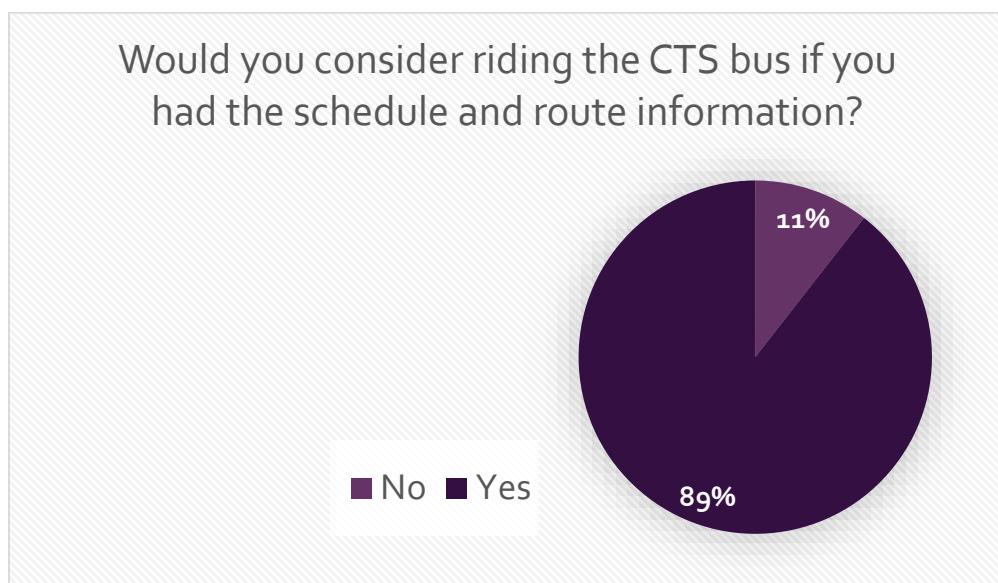
Interviewees Preference for Destination

Interviewees were given a choice of six possible destinations (Work, School, Shopping, Recreation, Medical Appointment, as well as Other: Write-in). The largest majority (38%) selected Shopping as their top choice for a destination. The next highest selection was Work at 22%.



Importance of Schedule Information

The last of the five questions asked respondents if they would consider riding if they had schedule and route information. A strong majority (79%) indicated that they would consider riding.



Appendix D: Safe Place Network Draft Guidance

1.0 PURPOSE

To establish standard operating guidelines for Clarksville Transit System (CTS) employees to use CTS buses and vans as Safe Place sites.

2.0 SCOPE

This procedure has been developed to allow CTS employees to join with other transit systems across the country to play an important role in assisting youth in crisis by designating CTS vehicles as Safe Places. This also allows all CTS facilities to be part of the Safe Places network, including buses, vans and Operating Facilities.

3.0 PROJECT SAFE PLACE

Project Safe Place is a community outreach program in partnership with the LEAP Organization, a youth social services organization. Safe Place is targeted at youth in need of immediate access to crisis intervention services. Specifically, it is a city/county network of businesses and community organizations working with trained response volunteers for the safety and protection of young people ages 7 to 17. CTS is partnering with both the LEAP Organization and the Clarksville Police Dept. and the Montgomery and Christian County Policing and Fire Departments.

4.0 PROCEDURE

This procedure does not replace current emergency procedures that pertain to all CTS customers. In addition, if a youth seeks Safe Place assistance but is in obvious need of medical or police aid, the appropriate agency will be immediately contacted.

4.1 When a youth boards a CTS bus or van and requests help through Safe Place, the operator will activate the Safe Place response by notifying their operations dispatch office. If the youth does not have a fare, the fare will be waived.

4.2 Bus Operations Dispatching Office will instruct the driver to:

Transport the child to the closest Fire Station on the route. The bus is not to go off-route to transport the child to a Fire Station.

If there is not a Fire Station on route, the child will then be transported to the Clarksville downtown transfer center.

4.3 Operations Dispatching Office will then inform the destination site of the child's arrival:

4.3.1 For bus: Call the Fire Station, communicate that there is a Safe Place youth being transported to their facility and that someone needs to meet the bus to escort the child into the Fire Station. Be sure to tell the Fire Station personnel the route, bus number, and the drop-off time.

4.3.2 For van (or bus, if no fire station is available): Call the Clarksville Transit transfer center supervisor and inform him/her that there is a Safe Place youth being transported to the facility. Be sure to communicate to the Dispatch office the route, bus or van number, and arrival time.

The transfer center supervisor will meet the youth and escort him/her to the CTS office and call the local Police/Security personnel. CTS staff will allow the Police/Security staff to provide further investigation, and contact LEAP Organization at (931) 614-0440 for a crisis counselor.

The CTS Supervisor will notify CTS Operations and Management that the child has been escorted to the CTS office and is awaiting Police/Security personnel.

4.4 The Operations Supervisor will contact the necessary Policing authorities by phone, and communicate the implementation of Safe Place. Information to be communicated:

- Date
- Time
- Route #
- Drop-off location

If at any time during this process the youth changes his/her mind about using Safe Place, CTS employees will not detain them in any manner. The use of Safe Place is strictly voluntary.

CTS personnel do not need to offer crisis counseling. Your role is to activate the response, and to link the youth with professionals trained in crisis counseling.

Appendix E: Ridecheck Survey

This appendix presents the boarding and alighting data for a “typical day” of service for CTS routes.

Route 1 – Ft. Campbell	Trips Surveyed:	25
Stop	Boardings	Alightings
Transit Center 200 Legion St	50	0
Third St & Main St	0	0
College St @ Jenkins & Wynne Auto Dealership	0	2
College St @ University St. (Bench)	0	4
College St @ James Corlew Auto Dealership	1	1
Eight St & Bailey St	8	6
Farris St. & Shelton Ct.	5	12
Farris St & Summer St	3	1
Marion St & Robb Ave	1	1
Marion St @ Residence 215	3	1
N Second St & Forbes St	1	0
N Second St across from Clarksville Academy	0	0
N. Second St @ Kentucky Fried Chicken Restaurant	0	0
New Providence Blvd @ USA Insurance	1	3
Market St just past Annetta Ct	0	1
Market St & Chapel St	1	1
Chapel St across from Abundant Life Church	0	2
Chapel St & Ford St	4	3
New Providence Blvd & E St.	3	5
New Providence Blvd @ Helga's Pet Store	1	0
New Providence Blvd @ New Way Community Church	1	1
New Providence Blvd @ Travel Inn Motel	1	0
Ft Campbell Blvd @ Rural King (Shelter)	6	5
Ft Campbell Blvd @ First Federal ATM	1	1
Ft Campbell Blvd & Maple St (Shelter)	0	1
Ft Campbell Blvd @ Sakura Japanese steakhouse	1	2
Ft Campbell Blvd @ Jay Looney Business	2	2
Ft Campbell Blvd & Bel Air Blvd	1	1
Ft Campbell Blvd @ 5 O'clock lounge	0	0
Ft Campbell Blvd @ ERA Reality Company	0	1
Ft Campbell Blvd @ Concord Center	0	0
Ft Campbell Blvd @ Signs Now Sign Shop	0	1
Ft Campbell Blvd & Cunningham Ln	0	0

Route 1 – Ft. Campbell	Trips Surveyed:	25
Stop	Boardings	Alightings
Ft Campbell Blvd @ Cash America Pawn Shop	0	1
Wal Mart North (Shelter)	23	23
Ft Campbell Blvd @ Thompson Station	0	0
Ft Campbell Blvd @ Title Max	1	1
Ft Campbell Blvd @ Baskin Robin's Ice Cream Shop	0	0
Ft Campbell Blvd @ Goodyear Tire Store	0	2
Ft Campbell Blvd @ Burritos Restaurant	0	0
Ft Campbell Blvd @ Century 21 Realtors	0	5
Ft Campbell Blvd & Ringgold Rd (Shelter)	3	8
Ft Campbell Blvd & Old Mill Rd	0	0
Ft Campbell Blvd @ Beauty Supply Store	0	1
Ft Campbell Blvd @ Blu Hanya Tattoo	0	1
Tobacco Rd. & Creekside Dr.	0	3
Tobacco Rd. & Creekside Trailer Park	1	1
Tabaco Rd. just before Jack Miller Blvd.	0	0
Jack Miller Blvd @ Miller Apt	3	4
Jack Miller Blvd. & Audrey Ln.	1	1
Jack Miller just before Bumpus Autobody	0	1
Ft Campbell Blvd & Airport Rd	1	1
Ft Campbell Blvd @ Advance Auto Parts Store	0	2
Ft Campbell Blvd & Wallace Blvd (Shelter)	2	2
Ft Campbell Blvd & Burch Rd	1	6
Tiny Town Rd. & The Eagles Nest	2	2
Ft Campbell Blvd Infront of- Blue Rentals	1	1
Ft Campbell Blvd infront of Dollar General- Bench	1	4
Ft Campbell Blvd in front of Piggly Wiggly	1	7
Stateline Rd. at Durrett Center	3	4
Bastone St. & 30th St. (Ft.Campbell)	2	6
30th St. & The old Commisary (Ft. Campbell)	8	9
Screaming Eagle Blvd. in front of the Sink Library	14	6
Stateline Rd. at Durrett Center	6	4
Ft Campbell Blvd. & Gate 3	1	0
Ft Campbell Blvd area across from Birch Rd (Shelter)	4	1
Ft Campbell Blvd area across from Wallace Blvd (Shelter)	5	0
Ft Campbell Blvd @ Gate 2	2	1
Ft Campbell Blvd across from Airport Rd	1	0
Jack Miller Blvd @ Miller Apt	3	3
Jack Miller Blvd. & Audrey Ln.	1	1

Route 1 – Ft. Campbell	Trips Surveyed:	25
Stop	Boardings	Alightings
Tobacco Rd. across from Creekside Dr.	2	1
Ft Campbell Blvd @ Showboat Plaza	0	0
Ft Campbell Blvd @ Webb Furniture Store	1	1
Ft Campbell Blvd @ Kennedy Law Firm	0	0
Ft Campbell Blvd & Hadley Dr	0	1
Ft Campbell Blvd & Britton Springs Rd	0	1
Ft Campbell Blvd @ Title Max Loans	3	0
Ft. Campbell Blvd. & Eva Dr. (Just passed Eva Dr.)	4	0
Ft Campbell Blvd @ Grandpa's Store	1	0
Ft Campbell Blvd @ Ruby Tuesday's Restaurant	0	0
Ft Campbell Blvd @ Coldwell Banker	0	1
Ft Campbell Blvd area of Wal-Mart North Fueling Station	0	3
Wal Mart North (Shelter)	22	19
Ft Campbell Blvd @ McDonald's Restaurant	2	1
Ft Campbell Blvd @ Cunningham Plaza	2	0
Ft Campbell Blvd @ Hardee's Restaurant (Shelter)	6	1
Ft Campbell Blvd @ Dodge Store	3	2
Ft Campbell Blvd @ Walgreen's Drug Store	5	1
Ft Campbell Blvd @ Family Dollar Store	6	0
Ft Campbell Blvd @ M & M Dog Grooming	0	1
Ft Campbell Blvd & Charlemagne Blvd	0	1
Ft Campbell Blvd just before Magnolia Florist	1	0
Ft Campbell Blvd @ Assembly of God Church (Shelter)	0	0
Ft Campbell Blvd @ Glory Worship Center	0	0
Dover Crossing Kroger (Shelter)	3	4
Ft Campbell @ Rite Aid Drug Store	0	1
New Providence Blvd @ Mart Shopping Center (Shelter)	4	2
New Providence Blvd @ Top Dollar	1	0
New Providence Blvd & Peach St	1	0
New Providence Blvd @ U-Haul Rental	2	0
New Providence Blvd & Walnut St.(Shelter)	12	2
New Providence Blvd @ Rug Room	6	2
Oak St @ Evangelic Temple Church	1	1
Oak St @ 206 Residence	1	2
B St @ Beach St	5	2
Kraft St @ ABRA Autobody	1	4
Kraft St @ Business Center	0	0
Kraft St & Gill St	1	1

Route 1 – Ft. Campbell	Trips Surveyed:	25
Stop	Boardings	Alightings
Kraft St & Parham St	1	0
Kraft St & Ladd St	1	1
Ladd St @ Residence 52-A	0	0
Ladd St & Hassell Dr	1	1
Hassell Dr & Vanleer St (Bench)	1	0
Eight St & Vanleer St (Bench)	1	0
Eight St & Farris St	8	5
Eight St & Marion St	4	4
Eight St @ APSU Trahern Bldg	3	8
College St across from James Corlew Chevrolet Dealership (Bench)	1	4
College St just past Drane St	1	3
N Second St @ The old First Federal Bank	1	2
Transit Center 200 Legion St	11	46

Route 2 - Tiny Town Road	Trips Surveyed:	21
Stop	Boardings	Alightings
Transit Center 200 Legion St	53	0
Third St & Main St	0	1
College St @ Jenkins & Wynne Auto Dealership	1	0
College St @ University St. (Bench)	1	2
College St @ James Corlew Auto Dealership	4	0
Eight St & Bailey St	6	4
Farris St. & Shelton Ct.	4	2
Farris St & Summer St	5	4
Marion St & Robb Ave	2	0
Marion St @ Residence 215	1	0
N Second St & Forbes St	2	0
N Second St across from Clarksville Academy	0	0
N. Second St @ Kentucky Fried Chicken Restaurant	2	3
New Providence Blvd @ USA Insurance	2	1
Market St just past Annetta Ct	0	1
Market St & Chapel St	0	2
Chapel St across from Abundant Life Church	0	0
Chapel St & Ford St	1	1
New Providence Blvd & E St.	5	3
New Providence Blvd @ Helga's Pet Store	1	0
New Providence Blvd @ New Way Community Church	0	0
New Providence Blvd @ Travel Inn Motel	2	2
Ft Campbell Blvd @ Rural King (Shelter)	4	3
Ft Campbell Blvd @ First Federal ATM	1	2
Ft Campbell Blvd & Maple St (Shelter)	1	1
Ft Campbell Blvd @ Sakura Japanese steakhouse	0	1
Ft Campbell Blvd @ Jay Looney Business	0	1
Ft Campbell Blvd & Bel Air Blvd	1	0
Ft Campbell Blvd @ 5 O'clock lounge	1	1
Ft Campbell Blvd @ ERA Reality Company	2	4
Ft Campbell Blvd @ Concord Center	0	1
Ft Campbell Blvd @ Signs Now Sign Shop	1	2
Ft Campbell Blvd & Cunningham Ln	0	1
Ft Campbell Blvd @ Money Tree Pawn Shop	1	0
Wal Mart North (Shelter)	29	23
Ft Campbell Blvd @ Thompson Station	0	1
Ft Campbell Blvd @ Skinny's Diner	0	0
Ft Campbell Blvd @ Baskin Robin's Ice Cream Shop	0	0

Route 2 - Tiny Town Road	Trips Surveyed:	21
Stop	Boardings	Alightings
Ft Campbell Blvd @ Goodyear Tire Store	0	0
Ft Campbell Blvd @ Burritos Restaurant	0	1
Ft Campbell Blvd @ Century 21 Realtors	0	1
Ft Campbell Blvd & Ringgold Rd (Shelter)	2	11
Ft Campbell Blvd & Old Mill Rd	1	3
Ft Campbell Blvd @ Beauty Supply Store	0	2
Ft Campbell Blvd @ Vision Reality	1	0
Ft Campbell Blvd & Lady Marion Dr	1	0
Ft Campbell Blvd @ Callie's Lounge	1	2
Ft Campbell Blvd & Airport Rd	1	2
Ft Campbell Blvd @ Advance Auto Parts Store	0	4
Ft Campbell Blvd & Wallace Blvd (Shelter)	2	2
Ft Campbell Blvd & Burch Rd	4	2
Ft Campbell Blvd Infront of Blue Rentals	0	2
Ft Campbell Blvd infront of Dollar General	0	1
Ft Campbell Blvd in front of Piggly Wiggly	1	5
Stateline Rd. at Durrett Center	2	4
Stateline Rd. & Durrett Village Apt.	0	1
Stateline Rd. & Durrett Dr.	0	2
Stateline Rd. Across fro Walton Atps.	0	1
Stateline Rd. & Shadow Ridge Dr.	1	1
Stateline Rd. & Patton Pl.	0	2
Pembroke Rd. & Patton Pl.	0	1
Pembroke Rd. in front of House 3424	0	0
Tiny Town Rd. & TinyTown Rd, Trailer Park	1	2
Tiny Town Rd. & Boiling Springs Baptist church	1	1
Tiny Town Rd. & Princeton Circle	1	1
Tiny Town Rd. across from Allen Rd.	0	1
Tiny Town Rd. & Barkers Mill Elementary School	0	2
Tiny Town Rd. Just before the Publix entrance	2	1
Tiny Town Rd. across from Clearwater Dr.	0	1
Tiny Town Rd. & Needmore Rd.	1	4
Tiny Town Rd. & Tower Dr.	3	2
Tiny Town Rd. & Jackie Dr.	4	2
Tiny Town Rd. in front of Legends Bank	4	9
Tiny Town Rd. & St. John's Baptist Church	6	7
Tiny Town Rd. & Sandpiper Dr.	2	3
Tiny Town Rd. & Barkers Mill Rd.	1	3

Route 2 - Tiny Town Road	Trips Surveyed:	21
Stop	Boardings	Alightings
Tiny Town Rd. & North Henderson Way	0	0
Tiny Town Rd. & Clearwater Dr.	0	0
Tiny Town Rd. across from the Publix entrance	1	1
TinyTown Rd. & Plantation Estates	1	0
Tiny Town Rd. in front of New Hope Presbyterian church	0	0
Tiny Town Rd. & Allen Rd.	0	1
Tiny Town Rd. & Summer Haven Rd.	1	0
Tiny Town Rd. across from Tiny Town Rd. Trailer Park	2	0
Stateline Rd. just past Manderine Dr.	5	1
Stateline Rd. across from Durrett Center	11	4
Ft Campbell Blvd. & Gate 3	4	1
Ft Campbell Blvd area across from & near Tiny Town Rd (Shelter)	4	0
Ft Campbell Blvd area across from Wallace Blvd (Shelter)	11	1
Ft Campbell Blvd @ Gate 2	3	1
Ft Campbell Blvd across from Airport Rd	1	0
Ft. Campbell Blvd. just before Gate #1	1	1
Ft Campbell Blvd @ Showboat Plaza	0	0
Ft Campbell Blvd @ Webb Furniture Store	0	0
Ft Campbell Blvd @ Kennedy Law Firm	0	0
Ft Campbell Blvd & Hadley Dr	1	1
Ft Campbell Blvd & Britton Springs Rd	3	1
Ft Campbell Blvd @ Title Max Loans	1	1
Ft. Campbell Blvd. & Eva Dr. (Just passed Eva Dr.)	4	1
Ft Campbell Blvd @ Grandpa's Store	1	1
Ft Campbell Blvd @ Ruby Tuesday's Restaurant	0	0
Ft Campbell Blvd @ Coldwell Banker	0	2
Ft Campbell Blvd area of Wal-Mart North Fueling Station	2	4
Wal Mart North (Shelter)	24	22
Ft Campbell Blvd @ McDonald's Restaurant	1	4
Ft Campbell Blvd @ Cunningham Plaza	2	0
Ft Campbell Blvd @ Hardee's Restaurant (Shelter)	9	0
Ft Campbell Blvd @ Dodge Store	4	1
Ft Campbell Blvd @ Walgreen's Drug Store	0	0
Ft Campbell Blvd @ Family Dollar Store	1	0
Ft Campbell Blvd @ M & M Dog Grooming	0	1
Ft Campbell Blvd & Charlemagne Blvd	1	1
Ft Campbell Blvd just before Magnolia Florist	0	1
Ft Campbell Blvd @ Assembly of God Church (Shelter)	1	1

Route 2 - Tiny Town Road	Trips Surveyed:	21
Stop	Boardings	Alightings
Ft Campbell Blvd @ Glory Worship Center	0	0
Dover Crossing Kroger (Shelter)	4	2
Ft Campbell @ Rite Aid Drug Store	1	1
New Providence Blvd @ Mart Shopping Center (Shelter)	6	2
New Providence Blvd @ Top Dollar	2	1
New Providence Blvd & Peach St	1	1
New Providence Blvd @ U-Haul Rental	0	0
New Providence Blvd & Walnut St.(Shelter)	2	2
New Providence Blvd @ Rug Room	1	1
Oak St @ Evangelic Temple Church	0	2
Oak St @ 206 Residence	0	1
B St @ Beach St	2	3
Kraft St @ ABRA Autobody	1	4
Kraft St @ Business Center	0	4
Kraft St & Gill St	2	0
Kraft St & Parham St	0	0
Kraft St & Ladd St	0	3
Ladd St @ Residence 52-A	0	0
Ladd St & Hassell Dr	1	0
Hassell Dr & Vanleer St (Bench)	0	0
Eight St & Vanleer St (Bench)	1	0
Eight St & Farris St	2	2
Eight St & Marion St	1	1
Eight St @ APSU Trahern Bldg	1	2
College St across from James Corlew Chevrolet Dealership (Bench)	2	7
College St just past Drane St	2	0
N Second St @ The old First Federal Bank	0	0
Transit Center 200 Legion St	9	59

Route 3 - Cunningham Loop	Trips Surveyed:	57
Stop	Boardings	Alightings
Transit Center 200 Legion St	76	9
N Second St @ Hope Pregnancy Center	8	0
N Second St & Castle Hgts	0	0
N Second St & Forbes Ave	1	0
N Second St @ Residence 719	0	0
N Second St @ Shoney's Resturant	4	1
Providence Blvd @ USA Insurance	1	0
Providence Blvd @ Affordable Auto Sales	1	1
Providence Blvd @ BP Station	8	7
Providence Blvd @ Old South Auto Sales	0	1
Providence Blvd @ Ratchford Tire	0	4
Providence Blvd @ E St. AM South Bank	3	4
Providence Blvd @ Helga's Pets	3	2
Providence Blvd @ New Way Community Church	1	1
Providence Blvd @ Travel Inn	0	1
Dover Rd @ BP Station	9	6
Dover Rd @ Borlcua Café	0	1
Dover Rd & Darlene Dr	5	4
Dover Rd. across from the Convergies entrance (Shelter)	3	7
Dover Rd @ Dover Road Medical Center	2	3
Dover Rd & Aurelia Lynn Dr	1	2
Dover Rd @ Kennedy Brothers Service Center	0	0
Dover Rd @ Kangaroo Mart Store	1	1
Dover Rd @ Nagey's Center (Shelter)	2	0
Dover Rd & RoseHill Dr	1	0
Dover Rd @ Magnolia Dr	0	1
Dover Rd @ Brady Dr	2	3
Donna Dr @ Residence 707	1	3
Donna Dr @ Residence 569	1	0
Donna Dr @ Stop sign	3	2
Donna Dr @ Residence 545	2	2
Donna Dr @ Residence 537	3	2
Donna Dr @ Woodale Dr	3	3
Woodale Dr @ Residence 403	4	4
Roselawn Dr & R S Bradley Blvd	3	4
Cunningham Lane @ Residence 441	2	1
Cunningham Lane & Ryder Ave	2	5
Cunningham Lane @ Residence 308	4	2

Route 3 - Cunningham Loop	Trips Surveyed:	57
Stop	Boardings	Alightings
Cunningham Lane @ Boxcroft Rd	3	1
Cunningham Lane @ Residence 292	1	3
Cunningham Lane @ William Kleeman Center	0	1
Cunningham Lane @ New Providence Middle School	2	20
Ft. Campbell Blvd @ Money Tree Pawn Shop	3	8
WalMart North (Bus Shelter)	45	33
Cunningham Plaza	27	11
Cunningham Ln @ Exxon Station	2	1
Cunningham Ln across from Armstead Dr	1	1
Cunningham Ln & Minglewood Dr	0	1
Cunningham Ln & Northridge Ct	0	2
Cunningham Ln @ Residence 301	0	1
Cunningham Ln @ Residence 313	4	9
Lafayette Rd @ BP Station	9	5
Lafayette RD @ Residence 628	1	0
Lafayette Rd & Woodale Dr	3	6
Lafayette Rd across from Residence 571	1	0
Lafayette Rd. across from Kirby Dr. (Bench)	1	1
Lafayette Rd & Lillie Belle Ln (Bench)	2	0
Lafayette Rd & Kelsey Dr	0	1
Lafayette Rd across from Monarch Ln	0	0
Lafayette Rd @ Life Church of Clarksville (Bench)	6	6
Lafayette Rd & Collinwood Dr	0	1
Charlemagne Blvd @ Residence 107	1	0
Charlemagne Blvd & Nice Dr	0	0
Charlemagne Blvd Rue Le Mans Dr	0	1
Charlemagne Blvd & Melinda Dr	1	0
Charlemagne Blvd & Chateauroux Dr	0	0
Charlemagne Blvd & Dupuis Dr	0	2
Dupuis Dr @ Dover Medical Clinic	1	0
Dupuis Dr & Orleans Dr	0	0
Orleans Dr @ Residence 216	1	0
Orleans Dr & Nice Dr @ Residence 216	0	0
Lafayette Rd & Darlene Dr	2	2
Ft Campbell Blvd @ Glory Worship Center	1	4
Ft Campbell Blvd @ Rite Aid Drug Store	4	6
New Providence Blvd @ Mart Shopping Center (Shelter)	1	4
New Providence Blvd @ Top Dollar Pawn Shop	1	1

Route 3 - Cunningham Loop	Trips Surveyed:	57
Stop	Boardings	Alightings
New Providence Blvd & Peach St	0	1
New Providence Blvd @ U-Haul Moving Center	0	2
New Providence Blvd & Walnut St (Shelter)	3	5
New Providence Blvd @ Alpine Water Bed Shop	0	1
New Providence Blvd & Plum St	1	0
New Providence Blvd @ Back To Basics Dental Clinic	0	1
New Providence Blvd @ Walker St.	0	0
New Providence Blvd @ Two Rivers Mall just after Red River Bridge	1	1
Riverside Dr. across from Sonic	1	0
Riverside Dr. in front of O'Charley's	0	1
Riverside Dr. across from McLure St.	0	0
Riverside Dr. across from Gary Matthew's Kia	1	2
Transit Center 200 Legion St	29	72

Route 4 - Peachers Mill	Trips Surveyed:	58
Stop	Boardings	Alightings
Transit Center 200 Legion St	24	0
3rd & Main St	0	0
N. 2nd St @ Hope Pregnancy Center	0	0
N. 2nd St before Castel Ln	0	0
N. 2nd St & Forbes Ave	0	0
N 2nd just past Georgia Ave	0	0
N 2nd @ Kentucky Fried Chicken Restaurant	0	0
New Providence Blvd @ USA Insurance	0	0
New Providence Blvd @ Affordable Auto Sales	0	1
New Providence Blvd @ BP Fueling Station	0	0
New Providence Blvd @ Old South Auto	0	0
New Providence Blvd @ Ratchford Tire Co.	0	0
New Providence & Peachers Mill Rd @ AM South Bank	1	1
Peachers Mill Rd @ Back Entrance of Byrns Darden Elementary School	1	0
Peachers Mill Rd across from Greenside Apts	0	0
Peachers Mill Rd across from Peachers Trace Apts	0	0
Peachers Mill Rd @ Big Brothers Big Sisters	0	0
Spencer Ln & Randall Dr	1	1
Jackson Rd area of 330 Residence	1	0
Jackson Rd & Bluegrass Dr	2	3
Jackson Rd @ 207 Residence	1	0
Rebecca Dr & Dalewood	1	1
Hillsboro Rd @ 21 Residence	1	1
Hillsboro Rd & Preston Dr	1	1
Peachers Mill Rd & Dale Terrace	1	1
Peachers Mill Rd @ Chum's Discount Tobacco (Shelter)	3	5
Peachers Mill Rd & Carter Rd.	1	1
Peachers Mill Rd just past Broadmore Dr	1	2
Peachers Mill @ Mill Creek Rd	0	1
Peachers Mill @ Mary's Oak Dr	0	0
Pine Mountain Rd @ Residence 189	1	1
Pine Mountain Rd @ Northwood Ter	3	0
Pine Mountaine Rd @ Nashboro Rd	0	0
Pine Mountain Rd @ Bunker Hill Rd	1	1
Saratoga Rd @ Howell Dr	1	1
Shannon St across from Residence 309	1	1
Ft Campbell Blvd @ Cash America Pawn	0	3
WalMart Shopping Center (Shelter)	20	14

Route 4 - Peachers Mill	Trips Surveyed:	58
Stop	Boardings	Alightings
Ft. Campbell Blvd. @ Thompson Station Rd	3	1
101 st @ Vickory Rd	0	0
Stone Crossing @ Dr. Druso	2	4
Peachers Mill Rd @ 1218 Residence	2	1
Peachers Mill Rd & Millstone Cir	1	1
Peachers Mill Rd @ Pine Mountain Rd	0	0
Peachers Mill Rd @ Mill Creek Rd	1	1
Peachers Mill Rd @ Northwood Ter	2	2
Peachers Mill Rd just across from Marshall Dr	0	0
Peachers Mill Rd @ Peachers Mill Point Apts.	1	2
Bancroft Dr @ 302 Residence	1	1
Bancroft Dr @ Prescotts Dr	0	0
Bancroft Dr @ Dillon Dr	2	2
Pollard Rd @ Cheatham Dr	1	0
Pollard Rd @ Dale Ter	0	0
Pollard Rd @ Ridgeline Dr	1	1
Pollard Rd @ Overton Dr	2	1
Peachers Mill Rd @ Randell	1	1
Peachers Mill Rd @ Children of the Light Child Care	1	1
Providence Blvd @ Rug Room	0	0
Providence Blvd & Oak St.	2	1
Providence Blvd & Plum St.	1	1
Providence Blvd. in front of Back to Basics Dental	2	1
Providence Blvd in front of palm reader shop	1	0
Kraft St @ Wyatt & ABRA Autobody	1	1
Kraft St @ Business Center	0	1
Kraft St & Gill St	0	0
Kraft St & Parham St	0	0
Kraft St & Ladd St	1	0
Kraft St. across from the Salvation Army-Shelter	18	8
Kraft St. @ 135 Kraft St.	2	1
College St. & Red River Dr. (near Clarksville Fasteners & Supply)	1	2
College St across from James Corlew Chevrolet Dealership (Bench)	1	4
College St just past Drane St	0	1
N Second St @ First Federal Bank	0	2
Transit Center 200 Legion St	8	35

Route 5 - Hilldale	Trips Surveyed:	21
Stop	Boardings	Alightings
Transit Center 200 Legion St.	39	7
Commerce St. @ Orgain Building Supply	1	0
Riverside Dr. @ Ingram Materials	0	0
Riverside Dr. @ Water Street Entertainment Center	1	4
Riverside Dr @ Rivers Edge Lounge	0	3
Riverside Dr. @ Bill Robert's Highline Dealership	1	0
Riverside Dr. @ E-Z Pawn Shop	0	0
Riverside Dr. @ Pizza Inn Resturant	0	1
41-A By Pass & Riverwood Pl.	3	1
41-A By Pass & Avondale Dr.	1	2
41-A By Pass @ Riverside Shoes Repair	2	1
Edmondson Ferry Rd. across from starting of Caldwell Project	1	2
Edmondson Ferry Rd. across from Caldwell Ln.	1	1
Edmondson Ferry Rd. @ 115 Residence	1	1
Edmondson Ferry Rd. @ 107 Residence	0	1
Greenwood Ave. @ 879 Residence	2	4
Greenwood Ave. @ 835 Residence	0	1
Greenwood Ave. & Woodard St.	1	4
Richardson St. @ Clarksville Housing Authority	1	5
Talley Dr. @ Backside of Veterans Plaza	3	3
Crossland Ave. & Veteran's Plaza	2	2
Pageant Ln just after Highway Dr (Shelter)	4	4
Pageant Ln @ apt. 25-A Projects	5	2
W. Thompkins Ln beside South Central Village Parking lot	5	4
South Central Village Entrance	11	3
Paradise Hill Rd & Golfview Pl.	3	1
Vista Ln. @ Apt 1594	1	2
Vista Ln. & Baltimore Dr.	1	2
Vista Ln. & 41-A By Pass @ BP Fueling Station	1	2
Glendale Dr. just after turn from 41-A By Pass	0	1
Glendale Dr. & McCan Dr.	3	1
Golf Club Ln @ 1622 Residence	1	3
Golf Club Ln before Hiatt Ln	0	1
Golf Club Ln & Gary Hills Dr	0	1
Golf Club Ln @ Conoco Fueling Station	1	5
Richview Rd @ Ashford Place Apts.	2	0
Richview Rd & Sentinel Dr	1	0
Madison St @ Taco Bell & Phillips 66 Fueling Station	1	1

Route 5 - Hilldale	Trips Surveyed:	21
Stop	Boardings	Alightings
K-Mart Store Madison Area (No Sign Posted)	3	5
Food Lion (No sign Posted)	11	18
Wal-Mart Sango (Bus Shelter)	25	18
Madison St. @ Starbucks (Bus Shelter)	5	1
Madison St.@ Gas and Water Service Complex	1	1
Madison St. @ Hilldale Baptist Church	0	0
Madison St. @ Eastview Vetrinary Clinic	1	1
Madison St. @ O'Neal's Bar & Grill	5	4
Madison St. @ McDonalds Resturant	4	5
Madison St. @ Kentucky Fried Chicken Resturant	0	5
Golfclub Ln. & Hilldale Carwash	7	3
Golfview Pl. @ Apt 819	1	0
Golfview Pl. @ Apt 807	0	1
Golfview Pl. & Paradise Hill Rd.	1	1
Thompkins Ln beside South Central Village Apts	1	1
South Central Village Entrance	6	7
Paradise Hill Rd @ South Central Village Apts (Pole)	2	3
Paradise Hill Rd before Power Sub Station	2	1
E. Happy Hollow Dr. @ 808 Residence	2	1
Mossrose Rd just past Valley View Cir.	1	1
Sunnyview Dr & Moss Rose Rd	0	0
W Happy Hollow Dr @ 935 Residence	0	1
Daniel St @ 1247 Residence	3	2
Daniel St @ 1215 Residence	2	1
Paradise Hill Rd & Greefield Dr	3	1
Paradise Hill Rd @ Apt 21-A (Summit Hgts. Project)	5	7
Pageant Ln. & Moore Elementary School (First Entrance)	1	4
Greenwood Ave @ Center Stone	6	3
Woodmont Blvd @ 847 Residence	3	1
Woodmont Blvd. & Locust St	1	3
Cumberland Dr @ First Community Church (Bench)	1	0
Swift Dr. just after turn from Cumberland Dr.	4	1
Swift Dr. @ 960 Residence	1	0
Monroe St. & Swift Dr.	0	0
Monroe St. & Ridgecrest Dr.	0	0
Monroe St. @ 732 Residence	0	1
Monroe St & Lincoln St.	3	0
Monroe St. @ 762 Residence	1	0

Route 5 - Hilldale	Trips Surveyed:	21
Stop	Boardings	Alightings
Edmondson Ferry Rd @ 108 Residence	1	1
Edmondson Ferry Rd @ 112 Residence	3	0
Edmondson Ferry Rd @ 1126 Residence	1	0
Edmondson Ferry Rd @ Caldwell (Projects)	2	1
Edmondson Ferry Rd 184 Residence	0	0
Edmondson Ferry Rd @ Caldwell Projects (Shelter)	4	1
41-A By Pass @ Modern Heating & Cooling	1	1
41-A By Pass across from Avondale Dr.	1	1
41-A By Pass across from Riverwood Pl.	0	0
Riverside Dr. @ Dairy Queen Restaurant	0	2
Save-A- Lot	10	7
Riverside Dr.@ AM South Bank	3	1
Riverside Dr. & Hickory Grove Blvd.	2	1
Riverside Dr. @ Riverside Auto Care Center	1	2
Riverside Dr.Citco Fueling Station	1	0
Riverside Dr. @ Cali Subs (Just before Crossland Ave.)	3	0
Riverside Dr. @ Riverside Center	1	1
Riverside Dr. @ Hodge's Auto Dealership	0	1
Riverside Dr. @ Augustine Insurance	1	0
Riverside Dr. @ Church's Chicken	0	0
Riverside Dr. @ BP Fueling Station	1	0
Riverside Dr. @ Site's Vision Clinic	1	1
Riverside Dr. @ Subway Sandwich Shop	0	1
N Second St @ McDonald's Restaurant	2	2
N Second St@ Clarksville Academy Private School	1	1
N Second St @ Night Deposit Bar	1	3
Transit Center 200 Legion St	14	32

Route 6 - Madison Street	Trips Surveyed:	55
Stop	Boardings	Alightings
Transfer Center 200 Legion St.	151	16
Second St. @ Museum	3	1
Second St. & W. Washington St.	2	2
Second St. & Crossland Ave.	3	0
Crossland Ave. & King St.	1	1
Crossland Ave. & Shelton St.	1	5
Crossland Ave. & Martin St.	3	2
Greenwood Ave before Stafford St.	4	5
Greenwood Ave. & Clark St.	2	3
Greenwood Ave. across from Greenwood Place Apts.	1	1
Madison St. & Tenth St.	2	2
Madison St. & Conroy Ave.	2	3
Madison St. @ Health Dept. (Shelter)	13	26
Madison St. @ Merrycourt Park	0	0
Madison St. @ Bicycle Center	0	3
Madison St. across from Kroger	1	8
Madison St.& Liberty Parkway	5	3
Liberty Parkway & Golfclub Ln.	0	6
Golf Club Ln. & Thompkins Ln.	8	13
Golf Club Ln. & Kendrick St.	1	4
Golf Club Ln. & Hayden Dr.	2	2
Golf Club Ln. & Colonial Ct.	2	2
Golf Club Ln. just after Highland Cir.	0	1
Golf Club Ln. & Hietts Ln.	5	2
Golf Club Ln. & Gary Hills Dr.	0	4
Golf Club Ln. & Old Ashland City Rd. (In front of the market)	6	12
Madison St.@ U.S. Bank	7	5
Madison St. @ Regency Park Apts.	0	0
Madison St.@ S. Hillcrest Dr.	0	2
Madison St.across from Hunters Chase Apt.	2	2
Madison St. front of Barksdale Elementary School (Shelter)	5	8
Madison St. @ Hilldale Florist before Holly Circle	2	5
Madison St. @ Walgreen Drug Store	3	7
Madison St.@ Briggs Clothiers	1	1
MadisonSt. & Dogwood Ln.	0	0
Madison St. & Thayer Ln.	0	0
Madison St. & S. Richview Rd.	1	2
Madson St. @ Sudden Service Market	0	4

Route 6 - Madison Street	Trips Surveyed:	55
Stop	Boardings	Alightings
Madison St. @ Chinese Rest.	1	4
Walmart Sango- Shelter	38	42
Wal-Mart Sango (Bus Shelter)	35	24
Madison St. @ Starbucks (Bus Shelter)	5	3
Madison St.@ Gas and Water Service Complex	1	0
Richview Rd. @ side of Gas & Water Service Complex	1	1
Richview Rd. just past Clarksville High School	0	0
Memorial Dr. @ Brookdale House Assisted Living	11	10
Memorial Dr. & Fairway Dr.	1	0
Memorial Dr. across from Alfred Dr.	0	0
Memorial Dr. across from Maxwell Dr.	0	0
Memorial Dr. & Kimbrough Rd.	0	0
Memorial Dr. & Georgetown Rd.	1	0
Memorial Dr. & Clearview Dr.	2	0
Memorial Dr. & Allenwood Dr.	1	3
Memorial Dr. & West Park Dr.	0	2
Memorial Dr. across from Medical Ct.	3	1
Memorial Dr. & Ussery Road	0	0
Memorial Dr. & Merritt Dr.	1	1
Memorial Dr. just after Haynes St. side of Publix.	2	1
Publix parking lot (no sign/flag down area)	12	9
Madison St. across from Chik-fila	6	0
Madison St just past Tanglewood Dr.	0	0
Madison St. @ Head Acres Subdivison	0	0
Madison Street @ A&W Motel	1	2
Madison St. @ Rite Aid Drug Store	2	0
Front of Krogers Food Store	21	14
Madison St. @ Madison Street Antiques	0	0
Pageant Ln. past Veteran's Plaza entrance	20	5
Pageant Ln just after Highway Dr (Shelter)	10	1
Pageant Ln @ apt. 25-A Projects	6	4
Paradise Hill Rd. Just before Richardson St.	12	7
Richardson St. & The Housing Authority	5	6
Tally Dr. behind Veteran's Plaza	4	0
Clark St. @ Senior Citizen Center	2	3
Washington St. side of Greenwood Complex	9	6
Cumberland Dr. before Soldier's Confederate Bridge	8	5
Madison St. @ American Red Cross	1	4

Route 6 - Madison Street	Trips Surveyed:	55
Stop	Boardings	Alightings
Madison St. @ Dunn Insurance	0	4
Madison St. & Third St.	7	12
Transit Center 200 Legion St.	68	129

Route 7 - Governors Square Mall	Trips Surveyed:	62
Stop	Boardings	Alightings
Transfer Center 200 Legion St.	152	0
Third St. & Main St.	1	4
College St. across from Drane St.	4	0
College St. & University St.- Bench	4	1
College St. @ James Corlew Chevrolet	6	0
College St. across from Ford St.	3	0
College St. just past 9th - Shelter	4	3
College St. @ 1118 College St.	0	0
College St. & Hornburger Ln.	6	6
College St. across from Kraft St.	1	5
College St. @ Sallee Dr.- Shelter	1	2
Wilma Rudolph Blvd. across from Old Trenton Rd.	2	1
Wilma Rudolph Blvd. @ 1726 Wilma Rudolph Blvd.	0	0
Wilma Rudolph Blvd. across from Nashville State	0	3
Wilma Rudolph Blvd.@ Co-op Farm Supply	2	11
Wilma Rudolph Blvd. @ Pizza Hut	0	2
Wilma Rudolph Blvd.@ Clarksville Dept of Electricity (Bench)	2	2
Wilma Rudolph Blvd.@ St. Bethlehem Post Office	0	3
Wilma Rudolph Blvd. @ 2069 Wilma Rudolph Blvd. - Bench	1	3
Wilma Rudolph Blvd.@ Walgreen Drug Store	0	3
Wilma Rudolph Blvd. @ Premier Medical	0	3
Wilma Rudolph Blvd. & Rossview Rd.	1	0
Wilma Rudolph Blvd. across from Center Pointe Dr.	1	5
Wilma Rudolph Blvd.@ Mulligan's Fine Liquor	0	2
Wilma Rudolph Blvd. @ St. Bethlehem Elementary School	3	3
Wilma Rudolph Blvd.across from Forest Hills Dr.	0	1
Wilma Rudolph Blvd.@ Baskin Robins Ice Cream Shop	0	4
Wilma Rudolph Blvd.across from Union Hall Rd before Trane American Standard	1	4
Wilma Rudolph Blvd. @ Trane American Standard @ Old Russellville Pike	0	5
Wilma Rudolph Blvd. front of Trane American Standard	4	9
Wilma Rudolph Blvd.& Dunlop Ln.	11	19
Wilma Rudolph Blvd. @ Premier Medical (Shelter)	2	5
Wilma Rudolph Blvd. front of Rafferty's Restaurant	0	6
Wilma Rudolph Blvd.across from Hampton Plaza	1	8
Governor's Square Mall back side of Sears Dept. Store	34	40
Wilma Rudolph Blvd. @ Captain D's Restaurant	3	0

Route 7 - Governors Square Mall	Trips Surveyed:	62
Stop	Boardings	Alightings
Wilma Rudolph in front of the Shell station	1	10
Westfield Ct. @ Fairfield Inn	9	17
Wal-Mart Parking Lot St. Bethlehem (Shelter)	33	26
Wilma Rudolph Blvd. @ Dairy Queen Resturant	6	1
Wilma Rudolph Blvd. @ 2863 Wilma Rudolph Blvd.	4	3
Wilma Rudolph Blvd. & Terminal Rd. @ Wendy's Resturant	4	1
Dunlop Ln. @ Pet Smart Store	0	0
K-Mart St. Bethlehem Store Front	8	6
Wilma Rodolph Blvd. @ Shell Service Station	10	2
Wilma Rudolph Blvd. @ Union Hall Rd.	3	1
Wilma Rudolph Blvd. @ Subway Sandwich Shop	4	2
Wilma Rudolph Blvd. @ Regions Bank	6	3
Wilma Rudolph Blvd. @ Center Pointe Dr.	5	1
Wilma Rudolph Blvd. & Rossview Rd.	1	3
Wilma Rudolph Blvd. across from Premier Medical Bldg.	3	1
Wilma Rudolph Blvd. & Trenton Rd.	1	3
Wilma Rudolph Blvd. @ BP Fuel Station	0	1
Wilma Rudolph Blvd.@ AM South Bank (Shelter)	1	3
Wilma Rudolph Blvd. & State Garage Ln. (Shelter)	2	1
Wilma Rudolph Blvd. @ Day Mar College (Shelter)	2	0
Wilma Rudolph Blvd. in front of Nashville State College (Shelter)	3	2
Wilma Rudolph Blvd. @ 1726 Wima Rudolph Blvd.	0	0
Wilma Rudolph Blvd. @ Old Trenton Rd.	2	3
College St. @ Exxon Fuel Station	2	7
College St. & Red River Dr. (near Clarksville Fasteners & Supply)	1	8
College St across from James Corlew Chevrolet Dealership (Bench)	5	12
College St just past Drane St	3	7
N Second St @ First Federal Bank	1	4
Transit Center 200 Legion St	4	83

Route 8 - 101 Express/Gateway Medical Center	Trips Surveyed:	18
Stop	Boardings	Alightings
Transit Center 200 Legion St.	41	0
Franklin St. @ 715 Franklin St.	4	12
College St. across from Kraft St.	1	4
College St. @ Sallee Dr.- Shelter	1	0
Wilma Rudolph Blvd. across from Old Trenton Rd.	5	1
Wilma Rudolph Blvd. @ 1726 Wima Rudoph Blvd.	0	0
Wilma Rudolph Blvd. across from Nashville State	0	0
Wilma Rudolph Blvd.@ Co-op Farm Supply	1	0
Wilma Rudolph Blvd. @ Pizza Hut	1	0
Wilma Rudolph Blvd.@ Clarksville Dept of Electricity (Bench)	1	1
Wilma Rudolph Blvd.@ St. Bethlehem Post Office	1	0
Wilma Rudolph Blvd. @ 2069 Wilma Rudolph Blvd. - Bench	0	1
Wilma Rudolph Blvd.@ Walgreen Drug Store	0	0
Wilma Rudolph Blvd. @ Premier Medical	1	4
Wilma Rudolph Blvd. & Rossview Rd.	0	1
Wilma Rudolph Blvd. across from Center Pointe Dr.	0	0
Wilma Rudolph Blvd.@ Mulligan's Fine Liquor	0	3
Ted Crozier Blvd. & Gateway Federal Credit Union	1	4
Dunlop Ln. Gateway Medical Center	4	13
Wilma Rudolph Blvd. @ 3060 Wilma Rudolph Blvd.	4	1
Wilma Rudolph Blvd. @ Dairy Queen Resturant	1	0
Wilma Rudolph Blvd. @ 2863 Wilma Rudolph Blvd.	4	1
Wilma Rudolph Blvd. & Terminal Rd. @ Wendy's Resturant	3	3
Dunlop Ln. @ Pet Smart Store	0	2
K-Mart St. Bethlehem Store Front	12	7
101st Airborne Div. Parkway & Peachers Mill Rd.	3	8
101st Airborne Div. Parkway & Ringgold Rd.	1	0
101st Airborne Div. Parkway & North Wind Dr.	0	3
Ft Campbell Blvd area of Wal-Mart North Fueling Station	1	4
Wal Mart North (Shelter)	21	23
Wal Mart North (Shelter)	25	4
Ft. Campbell Blvd. @ Thompson Station Rd	1	1
101st Airborne Div. Parkway @ Victory Rd	1	0
101st Airborne Div. Parkway & Peachers Mill Rd.	3	3
Needmore Rd. @ 341 Needmore Rd.	10	6
K-Mart St. Bethlehem Store Front	11	13
Wilma Rudolph Blvd. @ Premier Medical (Shelter)	2	0
Wilma Rudolph Blvd. front of Rafferty's Resturant	1	8

Route 8 - 101 Express/Gateway Medical Center	Trips Surveyed:	18
Stop	Boardings	Alightings
Wilma Rudolph Blvd.across from Hampton Plaza	0	8
Dunlop Ln. Gateway Medical Center	13	2
Ted Crozier Blvd. & Weatherly Dr. - Shelter	3	0
Wilma Rudolph Blvd. @ Center Pointe Dr.	4	3
Wilma Rudolph Blvd. & Rossvie Rd.	1	0
Wilma Rudolph Blvd. across from Premier Medical Bldg.	1	0
Wilma Rudolph Blvd. & Trenton Rd.	0	0
Wilma Rudolph Blvd. @ BP Fuel Station	0	1
Wilma Rudolph Blvd.@ AM South Bank (Shelter)	1	0
Wilma Rudolph Blvd. & State Garage Ln. (Shelter)	1	0
Wilma Rudolph Blvd. @ Advanced Learning Center (Shelter)	3	0
Business Park on Corporate Dr. (Shelter)	4	1
Wilma Rudolph Blvd. & Dunbar Cave Rd.	3	1
Wilma Rudolph Blvd. in front of Nashville State College (Shelter)	3	1
Wilma Rudolph Blvd. @ 1726 Wima Rudoph Blvd.	0	1
Wilma Rudolph Blvd. @ Old Trenton Rd.	2	2
College St. @ Exxon Fuel Station	1	1
Hornberger Ln. @ 167 Hornberger Ln.	1	1
Franklin St. @ Cook's Market	1	1
Reynolds St. & Vine St.	0	1
Cedar St. just after turn on to Cedar St.	2	0
Franklin St. across from the House of Sole	2	2
Franklin St. @ Burt Cobb Community Center	1	0
Franklin St. just past 9th St.	1	0
Franklin St. @ 717 Franklin St.	0	0
Franklin St. just before University St.	0	0
Franklin St. @ 562 Franklin St.	0	0
Transit Center 200 Legion St.	3	53