



Chatham Area Transit's
**Transportation Development
Plan (TDP)**

2013-2018 Business Plan

Prepared by
Center for Urban Transportation Research



CHATHAM AREA TRANSIT DEVELOPMENT PLAN

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Acronyms

| | |
|-------|---|
| ACAT | Advisory Committee on Accessible Transportation |
| ACS | American Community Survey |
| ADA | Americans with Disabilities |
| ARC | Advisory Review Committee |
| APTA | American Public Transportation Association |
| AVL | Automatic Vehicle Location |
| CAC | Citizens Advisory Committee |
| CAD | Computer Aided Dispatch |
| CAT | Chatham Area Transit |
| CCS | Central Computer System |
| CIP | Capital Improvement Program |
| COA | Comprehensive Operational Analysis |
| COMTO | Conference of Minority Transportation Officials |
| CRC | Coastal Regional Commission |
| CTAA | Community Transportation Association of America |
| CUTR | Center for Urban Transportation Research |
| ESRI | Economic and Social Research Institute |
| FFGA | Full funding Grant Agreement |
| FHWA | Federal Highway Administration |
| FSGMP | Fort Stewart Growth Management Partnership |
| FTA | Federal Transit Administration |
| FTIS | Florida Transit Information System |
| FY | Fiscal Year |
| GDOT | Georgia Department of Transportation |
| GDHS | Georgia Department of Human Services |
| GRHS | Georgia Regional Hospital at Savannah |
| GTA | Georgia Transit Association |
| HAAF | Hunter Army Airfield |
| HAS | Housing Authority of Savannah |
| HST | Human Services Transportation |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

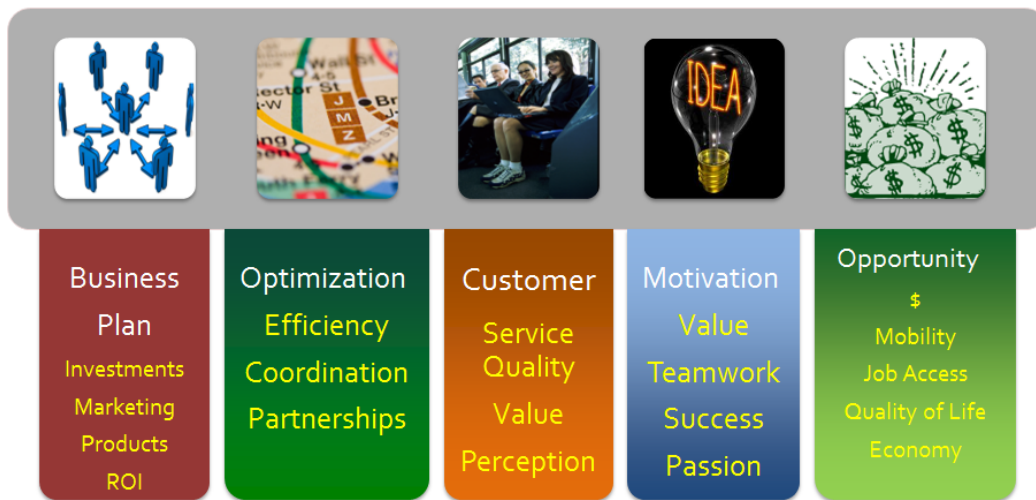
| | |
|--------|--|
| ID | Identification |
| ITS | Intelligent Transportation System |
| LCTR | Lehman Center for Transportation Research |
| L RTP | Long Range Transportation Plan |
| MAP | Mobility Action Plan |
| MMB | Mobility Management Board |
| MMP | Mobility Management Plan |
| MPO | Metropolitan Planning Organization |
| MSA | Metropolitan Statistical Area |
| NTD | National Transit Database |
| ONT | On-Time Performance |
| PIP | Public Involvement Plan |
| PTPA | Pedestrian Transit Priority Area |
| SCAD | Savannah College of Arts & Design |
| SEDA | Savannah Economic Development Authority |
| SPLOST | Special Purpose Local Option Sales Tax |
| SSMP | Safety and Security Management Plan |
| STS | Special Transportation Services |
| TAC | Technical Coordinating Committee |
| TADs | Tax Allocation Districts |
| TBEST | Transit Boardings Estimation Simulation Tool |
| TCRP | Transit Cooperative Research Program |
| TDM | Travel Demand Management |
| TDP | Transit Development Plan |
| VOMS | Vehicles Operated in Maximum Service |

Chapter 1

Transit Development Plan (TDP) and Process

Introduction

The Chatham Area Transit (CAT) Authority is in motion as pronounced by its current slogan "Always on the Move". A rhetorical set of questions to ponder are, "Where is CAT going? Where has CAT been? Where do the communities in and around greater Savannah want to move? It is vital that Public Transportation is **relevant** to the values and hopes of the areas it serves. A Strategic Transit Development Plan (TDP) provides understanding and awareness of the issues CAT faces in being relevant and proactively organized to address challenges and opportunities. The TDP is a strategic business plan that defines a Vision and Mission for CAT and constructs strategic initiatives to enhance and expand mobility services. The TDP presents a 5-Year Capital and Operating Program that looks beyond existing constraints and annual budgets in order to focus on needs, markets to be served and partnerships to forge.



Why A TDP?

Figure 1-1. Why a TDP?

As a public agency, CAT is the steward of public funding and prudent management of capital and operating resources. As a service oriented business with a focus on customers, CAT must efficiently compete for markets and reach out for partnerships with the private sector. The TDP articulates this business approach and serves as a transparent public plan, as well as an internal, and motivating employee team program to serve the public good.

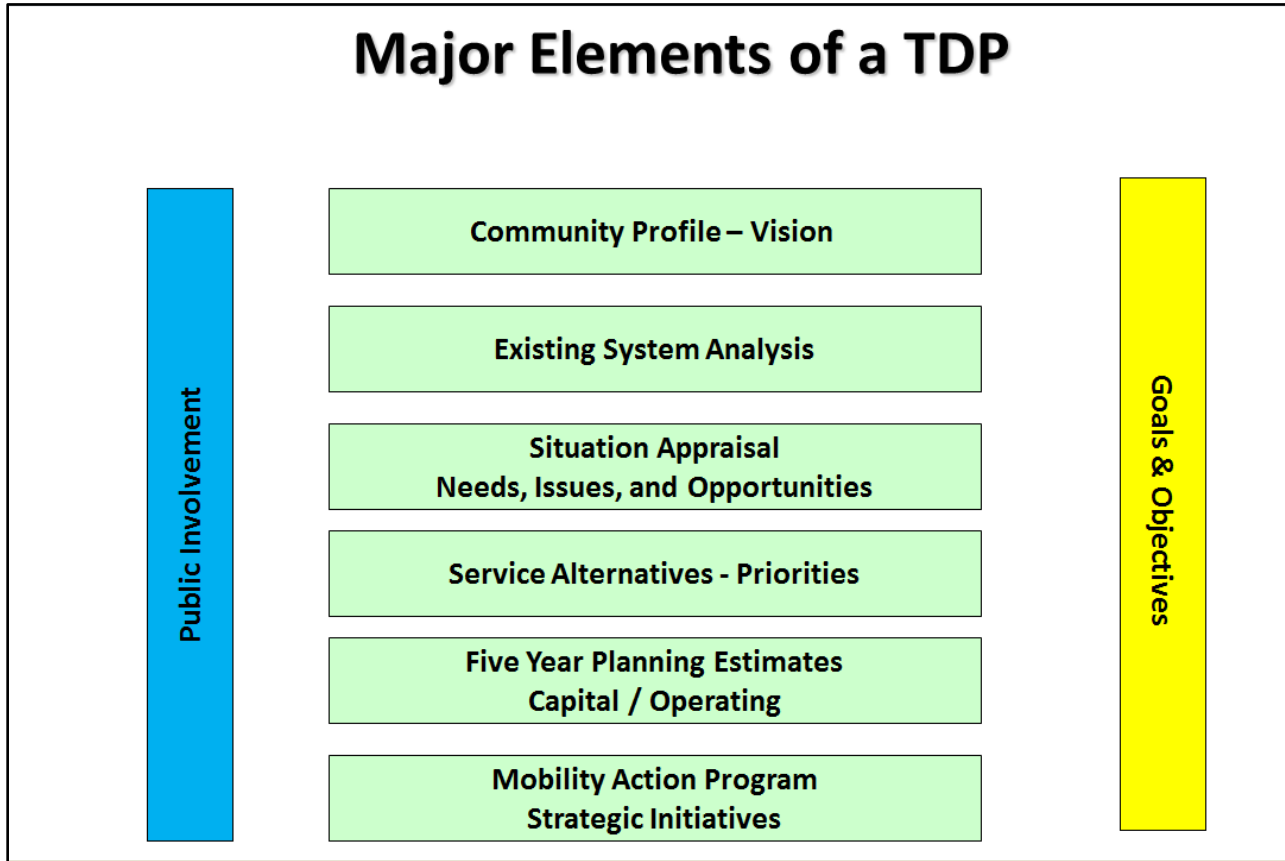


Figure 1-2. Major Elements of a TDP

This TDP was developed through a strategic planning process that involved major elements of research, analysis, an assessment of strengths and weaknesses, the development of goals, objectives and strategies, mobility initiatives and a Five Year Planning Program of capital and operating investments. Throughout this process, various approaches were utilized to incorporate public participation.

TDP Coordination & Compliance

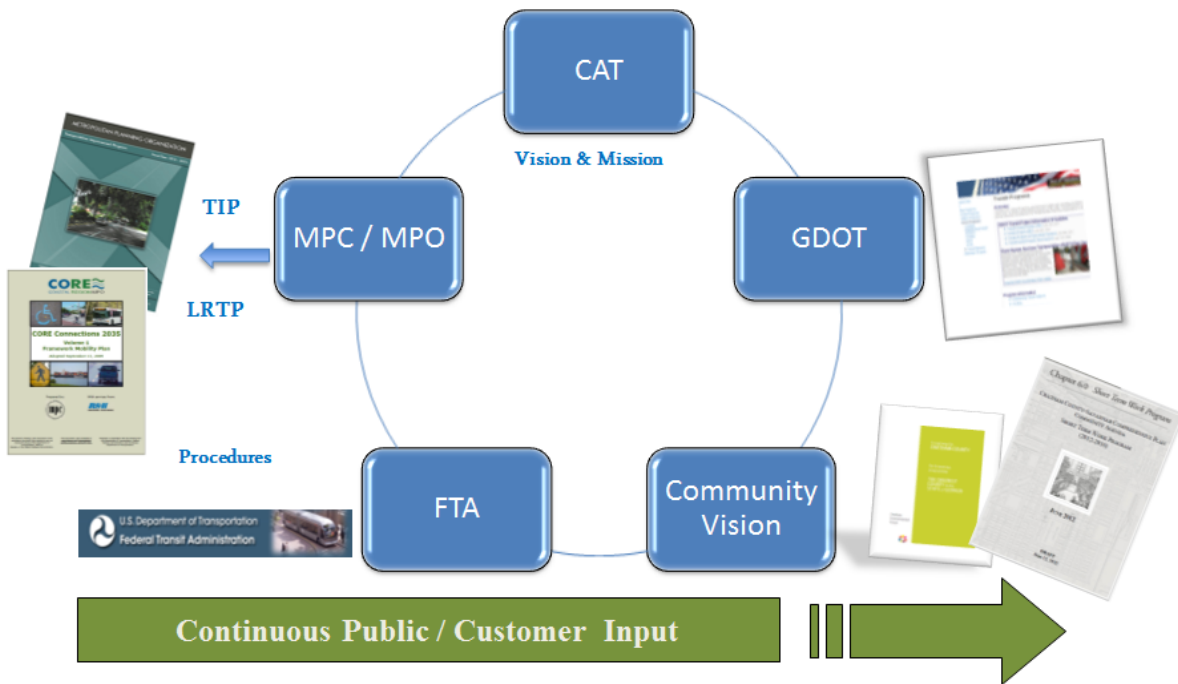


Figure 1-3. TDP Coordination & Compliance

The TDP establishes the mobility needs of Savannah and enables CAT to efficiently coordinate with all levels of government in both urban and rural environments within the existing service area, additional new areas within Chatham County, and throughout the Coastal Region. The TDP will be utilized to queue candidate mobility projects for inclusion in the Urban Transportation Planning Process managed by the CORE Metropolitan Planning Organization (MPO). Specifically the TDP and the annual updates of the TDP will provide direct input into the Transportation Improvement Program, the Unified Planning Work Program and incremental improvements toward the Long Range Transportation Plan (LRTP).

The TDP will be a significant planning and grant tool for CAT to compete for grant opportunities with “ready-to-go” projects that have been identified through this process. Additionally, these identified funding needs will assist in annual legislative requests to the State of Georgia.

Start with Values & Vision of Community and Region



Figure 1-4. Mobility Vision

The most significant aspect of the TDP and its continuous planning process is the identification of community needs in the “Big Picture”. Public Involvement (Chapter 2) and the Situation Appraisal (Chapter 5) in particular, provide awareness of the major community issues and initiatives that require the support of mobility services.

The Advisory Review Committee (ARC) and stakeholder interviews were instrumental in understanding community mobility needs and providing insight into public perception and expectations of CAT.

The TDP Technical Report document is organized to reflect the major elements of the strategic planning process from initial data collection to the details of strategic initiatives and the five year capital and operating program. (See Appendix A).

The following description briefs are provided for quick reference to subsequent chapters:

TDP Document Organization

- Chapter 1: Transit Development Plan (TDP) and Process – provides a TDP overview.
- Chapter 2: Public Involvement - describes the Public Involvement Plan (PIP) developed for the TDP and details the implementation and results of the PIP.
- Chapter 3: Base Data and Analysis – presents various socio-economic data, travel information and generalized benefits of public transportation.
- Chapter 4: Existing Services and Performance Evaluation – details efficiency and effectiveness trend analysis of CAT as well as benchmarks performance among transportation industry peers.
- Chapter 5: Situation Appraisal – provides an assessment of the environment and factors that influence CAT’s roles and responsibilities in providing and developing mobility services.
- Chapter 6: Vision, Mission, Goals and Objectives – captures the output of various elements of the TDP planning process and articulates relevant goals, objectives and strategies.
- Chapter 7: Service Alternatives and System Design – presents the details of service improvement proposals and quantifies resource needs.
- Chapter 8: TDP Capital & Operating Program – provides a strategic capital and operating scenario with a sense of priority and funding needs over the next five years (2014-2018).
- Chapter 9: Mobility Action Program (MAP) – Recommends an internal CAT organizational implementation process to develop a TDP based annual work program which will facilitate policy direction, administration of activities, and assignment of team responsibilities among CAT departments.

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Chapter 2

Public Involvement

Introduction

Public involvement and participation were important aspects of preparing the TDP. The TDP provides an understanding of public interests, community values and mobility needs. As the TDP defines issues and opportunities, various public involvement strategies were utilized to incorporate public insight, perceptions and opinions. The public was afforded access to information and opportunities to comment throughout the plan's development, which was used to shape the final TDP recommendations and strategic initiatives.

Public Involvement Plan

This section describes the Public Involvement Plan (PIP) which was specifically designed for the planning process.

The purpose of the PIP is to ensure public awareness and involvement in the transit development planning process. The TDP includes an understanding of public interests, community values and mobility needs. As the TDP defines issues and opportunities, various public involvement strategies were utilized to incorporate public insight, perceptions and opinions. The public was afforded access to information and opportunities to comment throughout the plan's development, which were be used to shape the final TDP recommendations and strategic initiatives.

This PIP for Chatham Area Transit is designed to be consistent with the Savannah Metropolitan Planning Commission's Participation Plan. It was developed with the following major objectives in mind:

- Educate and promote proactive and early public involvement by presenting information in a non-technical easy to understand format.
- Solicit public input throughout the planning process.
- Monitor and adjust the public involvement process as necessary to maximize public participation.
- Incorporate public feedback in the final TDP.

Following are the public involvement activities conducted for the CAT TDP:

- Established a Coordination Process with the MPC

To ensure the TDP is consistent with and complementary to the comprehensive transportation planning process, the project team engaged the MPC Board and committees in the development of the TDP. The project team provided periodic updates to ensure that technical and citizen committee input was incorporated in the TDP.

- Coordinated with MPC staff through participation in ARC.

- Provided TDP updates to MPC Board, Technical Coordinating Committee (TCC), Citizens Advisory Committee (CAC), and Advisory Committee on Accessible Transportation.

- Noticed meetings and prepared agenda items per MPC policies.

- Conducted Community Leader Interviews

The perspectives of elected officials, local community leaders and their constituents play an important role in shaping short and long range transportation plans and initiatives. Community leader interviews were conducted to ascertain personal perceptions, needs and priorities related to mobility, economic development and fiscal policies.

- Conducted CAT/Teleride Customer Surveys

Surveys are an effective tool to identify demographic and socio-economic characteristics of the existing customer base, measure levels of satisfaction related to quality of service and identify unmet mobility needs. The analysis of existing customer data may also aid in the identification of opportunities to attract non-users to the system. CAT and Teleride customer surveys were conducted and the data was used to develop TDP strategic initiatives and service and capital requirements.

- Developed TDP Outreach and Awareness Campaign

A TDP outreach and awareness campaign is essential to maximizing the quality and quantity of public involvement in the TDP. The development of a consistent brand/identity conveyed via multiple media and outreach venues was used to help ensure broad based community input and support for CAT initiatives. Outreach and marketing opportunities included:

- Creation of locally relevant and engaging “Brand” for the TDP
- Establishment of a project information webpage
- TDP overview, goals and objectives, schedule
- Participation opportunities-workshops/open houses/public meetings
- On-line comment or survey tool
- Interim draft reports
- E-Blast customer outreach campaign
- Press Releases
- Speakers Bureau
- Newsletters
- On-board announcements
- Public Meetings/Workshops/Open Houses

Public meetings provide opportunities to share project information via displays, presentations, and personal interaction with project team members. In turn, project

team members receive valuable input regarding the general public's opinions on existing services and desired future improvements. A series of public meetings were conducted to maximize opportunities for participation. The locations were geographically dispersed and transit accessible.

- Conducted outreach activities via public meetings
- Provided opportunities for verbal and written input via comment cards
- Noticed meetings via internet, on-board announcements, newsletters, newspaper, radio and/or television
- Coordinated TDP outreach with other CAT marketing activities
- CAT Employee Participation

Employee participation in the transit development planning process serves several purposes. The TDP is designed to be an organizational roadmap for the future. As such, employees who are actively engaged in shaping the TDP are more likely to "buy in" to implementation of TDP initiatives. Employee surveys were conducted to measure the opinions and perceptions of CAT employees, particularly those who interact with the public on a daily basis including fixed route and Teleride operators, customer service personnel and others.

Advisory Review Committee (ARC)

The Advisory Review Committee (ARC) was established to provide guidance to the TDP project team based on their unique insight and experience related to regional mobility needs and opportunities.

Members were invited to participate over the course of the TDP process, and included representation from: Chatham County, City of Savannah, Effingham County, Bryan County, Thunderbolt, Garden City, Tybee Island, Vernonburg, Port Wentworth, Bloomingdale, Pooler, Savannah State University, Housing Authority of Savannah, CAT Board Members, and the CORE MPO.

The ARC provided valuable insight and feedback during the workshops that included the following topics:

- Role and responsibility of public transportation (existing and future)
- Opinions of a "Great" public transportation system
- Score card evaluation of current CAT system
- Suggestions for public outreach activities and identification of community stakeholders
- Discussion of planning process and relationships among local governments, MPO process and regional implications
- Review and analysis of system performance trends and peer group comparisons
- Development of goals and objectives for the CAT TDP
- Review of service development concepts and fixed route modeling outputs

- Assessment of CAT organizational strengths, weakness, opportunities, and threats.

The ARC discussed characteristics of a “Great” public transportation system, providing reflection on the current state of transit in Savannah and suggesting benchmark characteristics to strive for. ARC feedback included:

- Trust
- Reliability
- Ease of Use
- Image / awareness
- Accessibility to riders
- Perceptions of safety
- Reliable and sustainable funding
- A sense of personal cost/benefit to use transit
- Saves cost, time, and contributes to the community vision
- Relevance of transit to values of the community it serves

When asked “if you could have one wish to immediately improve public transportation what would it be?” the ARC members offered the following responses:

- Priority treatment/ dedicated lane for transit
- Make transit more dependable and on-time
- Free fare, more accessible for everyone
- New charter for CAT giving all citizens access to service, all governments a partner
- All forms of transit inter-linked, coordinated, connectivity
- Provide service throughout Chatham and surrounding counties
- Improve “Mental” attitude to use transit
- Enhance services now before transportation issues get worse
- Service that is cheap and timely
- Efficient transportation system
- Right size buses
 - Quick and on-time service

The ARC was asked to score existing perceptions of transit in Savannah. Using a scale of 1 to 5 with 1 indicating the most positive score or “Excellent” and 5 indicating the lowest score or “Worst”, as shown in Table 2-1 the ARC revealed that image, safety and frequency were perceptions that may need the most attention.

Table 2-1. Existing Public Transportation Score Card

| Category | Score | | | | | weighted totals |
|--------------|-------|---|----|----|---|-----------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Image | 0 | 2 | 12 | 12 | 0 | 26 |
| Quality | 1 | 2 | 15 | 4 | 0 | 22 |
| Safety | 1 | 4 | 6 | 12 | 0 | 23 |
| Frequency | 0 | 4 | 15 | 4 | 0 | 23 |
| Span | 1 | 8 | 9 | 0 | 0 | 18 |
| Friendliness | 1 | 2 | 18 | 0 | 0 | 21 |
| Value | 7 | 0 | 3 | 0 | 0 | 10 |

Community Leader Interviews

Another approach to help define the future role and responsibility of public transportation in the Savannah region was to interview identified community stakeholders who could present current impressions of CAT as well as expectations of CAT in fulfilling future mobility needs.

The stakeholder group included representatives of governmental agencies, private sector business, private sector / governmental partnership organizations, and educational institutions.

The CUTR project director conducted one-on-one interviews with the following stakeholders for the purpose of discussing issues and opportunities for CAT. For the most part, stakeholders were very frank and interested in providing observations and recommendations for better mobility.

- Mayor Edna Jackson, City of Savannah
- Al Scott, Chatham County Chairman
- Pat Shay, LEED AP, AIA, Gunn, Meyerhoff, Shay
- Dr. Keith Betts, VP Student Affairs, Armstrong University
- Monifa Johnson, Neighborhood Services Coordinator, Housing Authority of Savannah
- Dr. Priscilla Thomas, CAT Board, Vice Chair
- Jon Albright, Concerned Rider
- Wayne Dawson, CAT Board Member
- Larry Miles, Arrowwood Environmental Group
- Marc Friday, Tourism Leadership Council

Figure 2-1 presents a graphic illustration of major comments and themes identified during the stakeholder interviews.



Figure 2-1. Stakeholder Interview Comments

From these interviews general themes were categorized to later be used in developing goals, objectives and strategic initiatives for CAT, these included:

- General impressions of CAT
- Service types and attributes
- Key responsibilities relevant to the role of Mobility Management
- Major stakeholders that must be recognized by CAT for coordination and collaboration
- Recommendations for CAT to be successful

Coordination with Costal Region (CORE) MPO and Committees

During the development of the TDP, CAT provided information and data to the CORE MPO to provide awareness and seek understanding as to the needs and opportunities to improve public transportation.

The CORE MPO is a key partner for CAT in supporting planning efforts related to multi-modal development and participating in the urban planning process that communicates needs and funding opportunities at the federal, state and local levels. More issues related to the MPO Coordination will be discussed in the Situational Appraisal chapter of this TDP.

- The key organizational bodies of the MPO included in the TDP process were:
- The Technical Coordinating Committee (TCC)
- The Citizens Advisory Committee (CAC)
- The Advisory Committee on Accessible Transportation (ACAT)
- The CORE MPO Board
- The MPO staff participated as members of the ARC and presentations were made to the committees / Board cited above.

Chatham Area Transit (CAT) On-Board Passenger Survey

The CAT on-board survey (see Appendix B) was distributed to CAT fixed route customers to identify their demographic and socio-economic characteristics, trip and travel usage, travel behaviors, and levels of satisfaction with CAT service. A total of 639 responded to the survey.

The analysis of survey data is divided into four sections: Trip Characteristics, Customer Demographics, Fare and Travel Behavior, and Customer Satisfaction.

The **Trip Characteristics** section details specific attributes of the customers' individual trip. Customer trip characteristics include: route, modes of access and egress to/from the bus stops, transfers, and trip purpose.

The **Customer Demographics** section changes the focus from the trips that were made to the persons who are making them. Information on customer demographics include: age, gender, ethnic heritage, 2011 total household income, household vehicle availability, driver's licensure, and residency status (i.e., number of months per year customer resides in Chatham County). The customer characteristics and resulting profile are an important part of any on-board survey analysis. Specifically, this data will enable CAT to better identify and understand the current market characteristics of its ridership and pinpoint specific customer characteristics/segments that can help direct more focused marketing strategies.

The **Fare and Travel Behavior** section provides an overview of the customer's overall transit usage characteristics, including frequency and tenure of use. The customer's reasons for using CAT and potential alternative modes of transportation are also examined.

The **Customer Satisfaction** section reviews specific aspects of CAT service as determined by customer responses to two questions in the survey. Question 23 asked customers to rate their perception of six different CAT communication service characteristics. In addition,

Question 24 asked respondents give feedback on 22 service characteristics using a five-point scale.

Trip Characteristics

Question 2 asked customers to provide the route number of the bus they were riding at the time of survey completion. Figure 2-2 below shows the breakdown of customer survey responses on each CAT route.

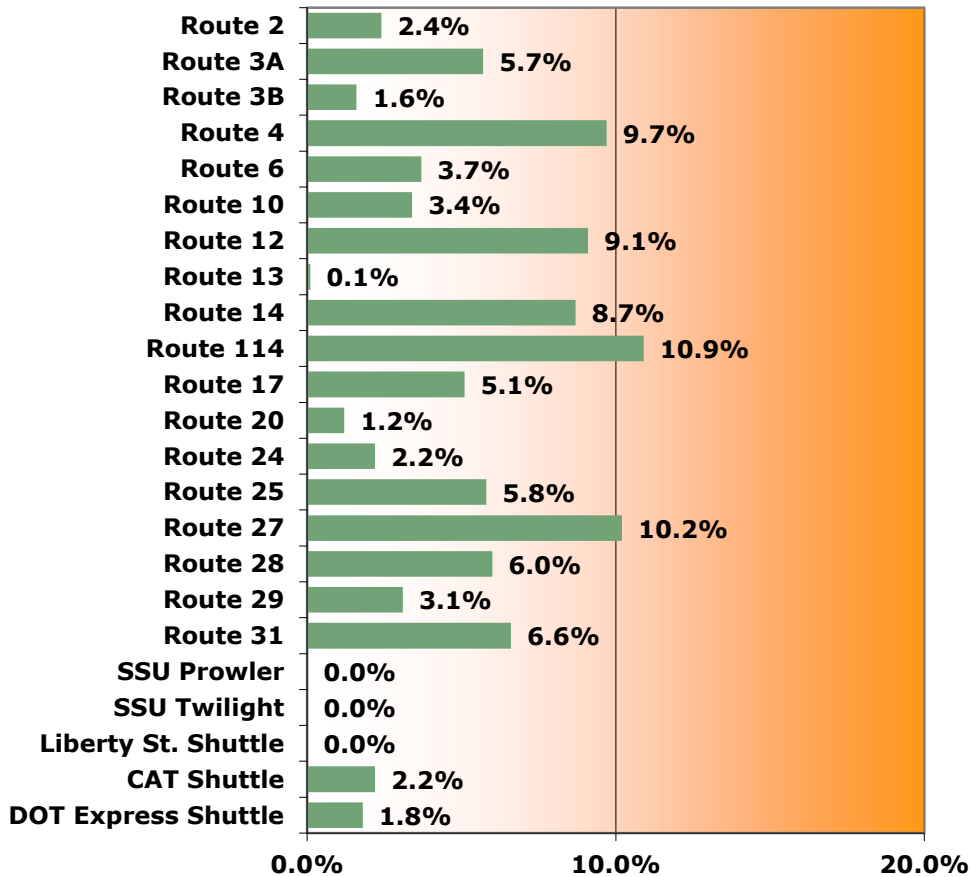


Figure 2-2. Q2 – What CAT route are you currently riding on? (Please check only ONE)

The purpose of Questions 3, 4, 5, and 6 was to allow the customers to describe the nature of their trips in terms of mode of access, place of origin, transfer, final destination and mode of egress. Question 5 and 5a also asked passengers about their trip characteristics by asking riders if their trip required a transfer, and if so, to which route number. As shown in Figures 2-3 through Figure 2-5, it is clear that a majority of CAT customers:

- Walked three blocks or less to their bus stop
- Used CAT to go to work or go shopping
- Required a transfer between routes
- Ended their trip at either work or at home

Mode of Access

According to the 2012 on-board survey results, approximately 83 percent of the weekday respondents walked to access CAT service, and the majority (38.4%) walked one block. Figure 2-3 displays the results of Question 3.

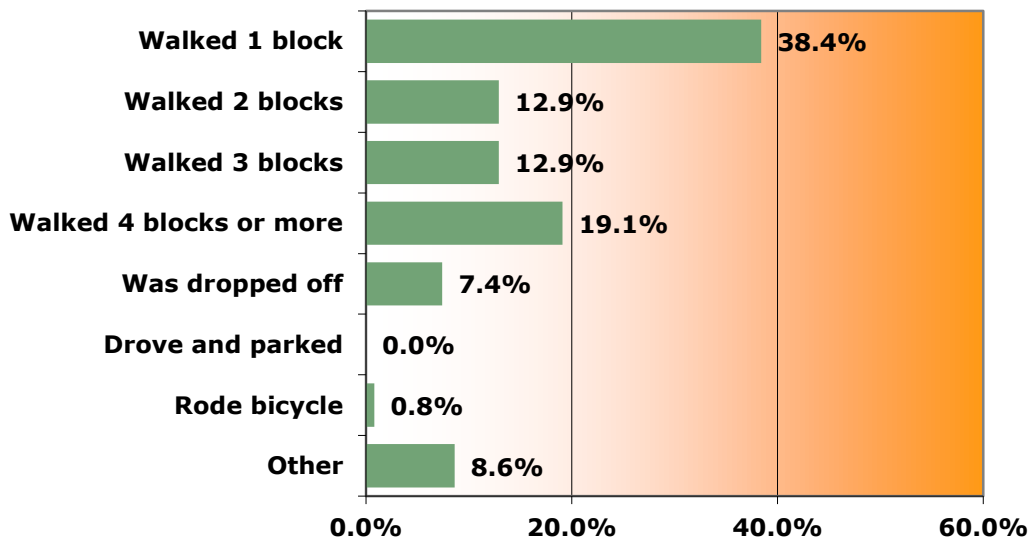


Figure 2-3. Q3 – How did you get to the bus stop for this trip?

Trip Purpose

Question 4 asked respondents what the purpose of their trip was that day. Of those that responded, over half were using the bus to travel to or from work, with shopping/errands a distant second (21.4 percent), as shown in Figure 2-4.

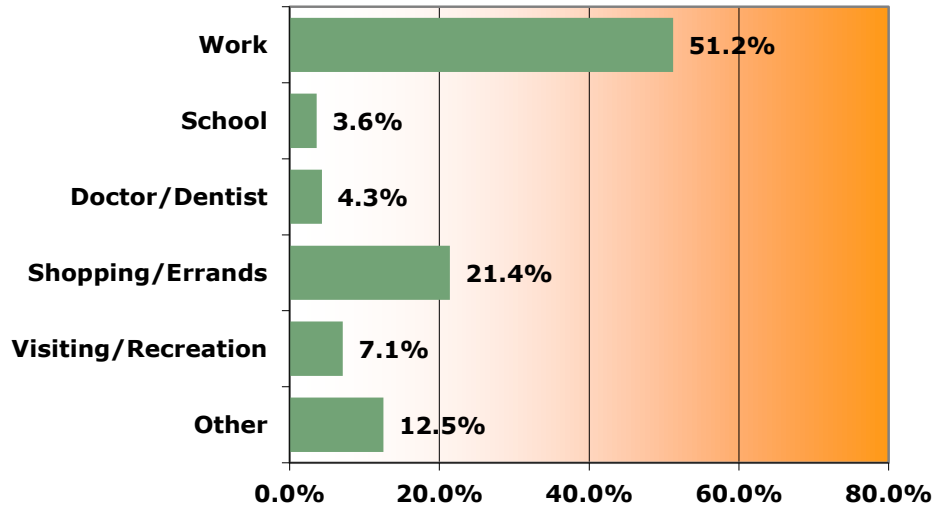


Figure 2-4. Q4 – What is the purpose of your trip today?

Question 6 asked “Where are you going on this trip?” According to the 2012 on-board survey, roughly 29 percent of respondents indicated they were on their way home; 34.6 percent were going to work; and 14.4 percent were going shopping/errands. Figure 2-5 displays the results.

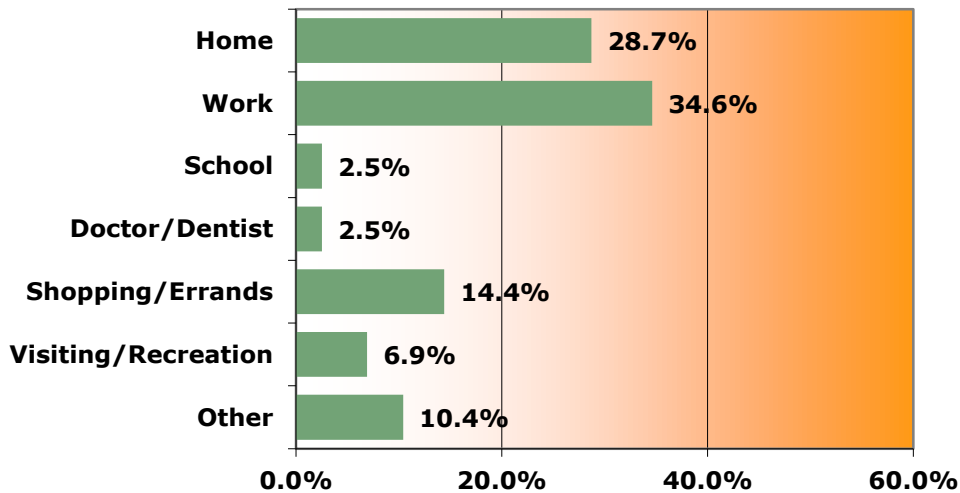


Figure 2-5. Q6 – Where are you going on this trip?

Transfer

According to Figure 2-6, approximately 52 percent of respondents answered they had to transfer between routes to complete their trips.

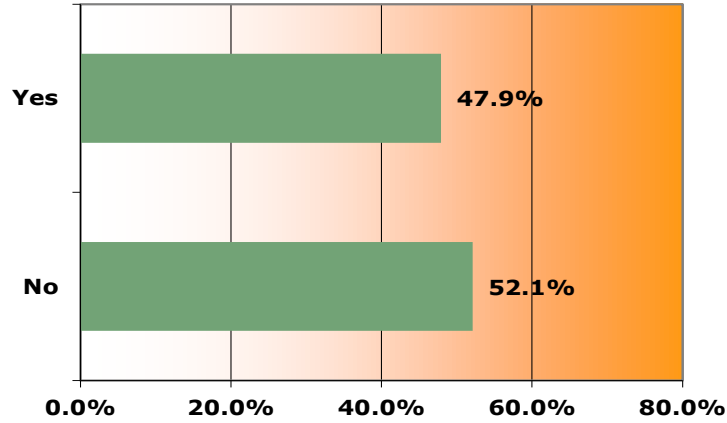


Figure 2-6. Q5 – Does your current trip involve a transfer?

Customer Demographics

A series of questions were included in the survey to establish a demographic profile of CAT customers including:

- Driver's licensure
- Age
- Gender
- Ethnic heritage
- Total household income
- Household vehicle availability
- Residency status

Driver's License

Question 7 asked respondents if they had a valid driver's license. As shown in Figure 2-7, approximately 51.3 of respondents possessed a valid driver's license.

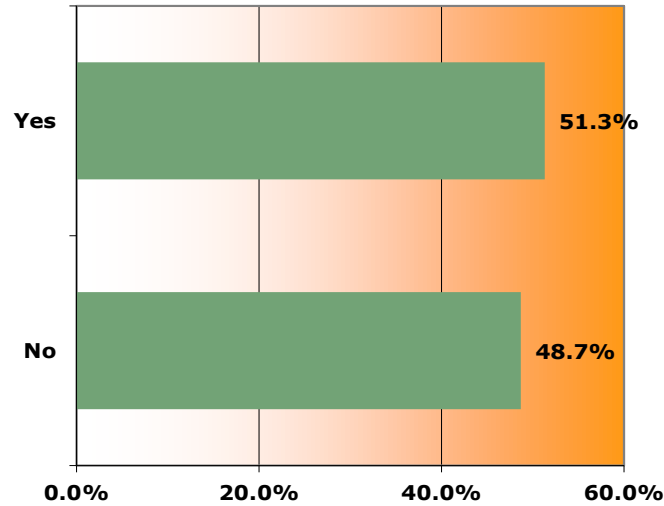


Figure 2-7. Q7 – Do you have a valid driver's license?

Age

The majority of riders (81.3%) were between the ages of 18 and 54. Youth (17 or under) accounted for approximately 2.9 percent of riders, and those aged 55 and over accounted for 15.9 percent (see Figure 2-8).

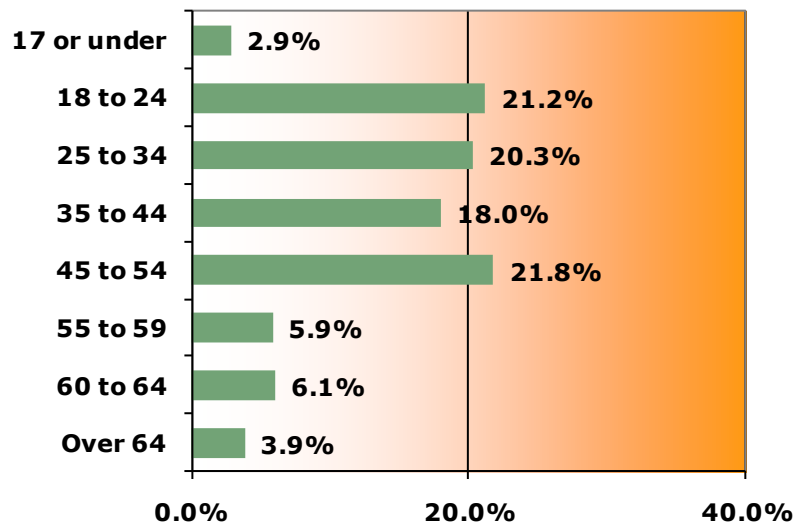


Figure 2-8. Q16 – Your age is...

Gender

The survey revealed that more males utilized transit service than females. As shown in Figure 2-9, male ridership was 56.6 percent while female ridership was 43.4 percent.

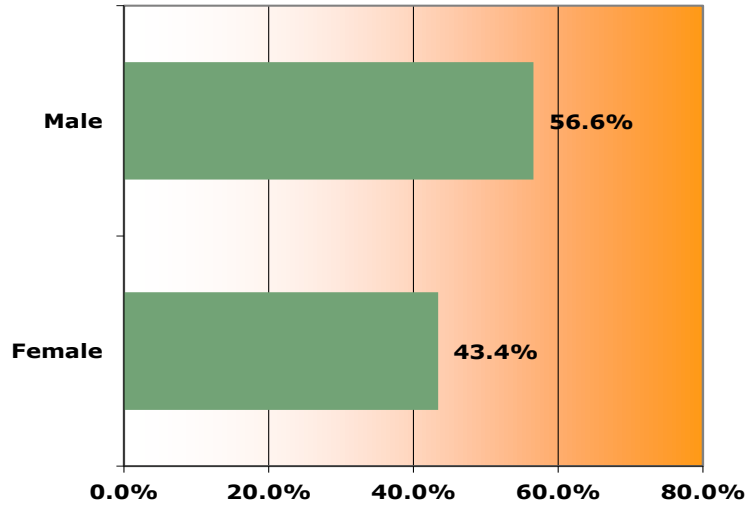


Figure 2-9. Q8 – What is your gender?

Ethnic Heritage

The survey revealed that 79.7 percent of respondents were black; 14.1 percent were white and 2.9 percent were Hispanic as shown in Figure 2-10 below.

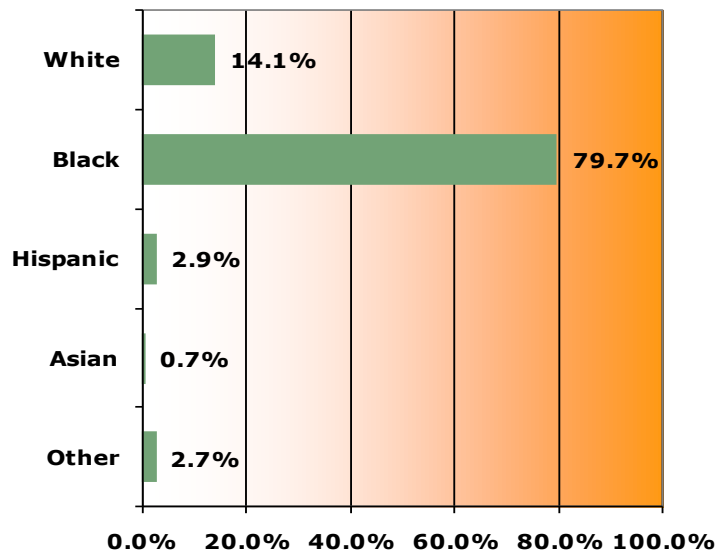


Figure 2-10. Q17 – What is your ethnic heritage?

Total Household Income for 2011

Question 18 asked respondents to indicate their annual household income in 2011. As shown in Figure 2-11, the vast majority of CAT customers (41.4%) had annual incomes of less than \$10,000, while 8.2 percent had a household income of \$30,000 or more in 2011.

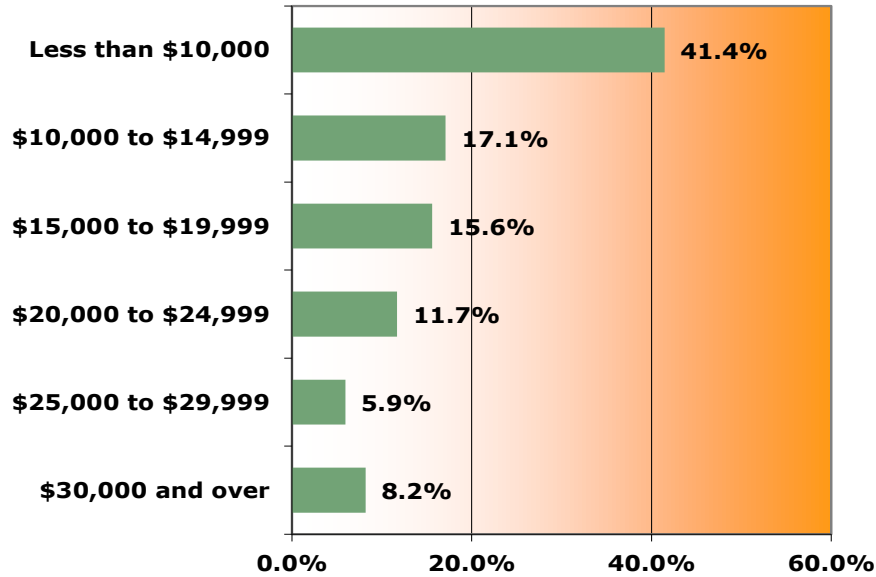


Figure 2-11. Q18 - What was the range of your total household income for 2011?

Household Vehicle Availability

As displayed in Figure 2-12, approximately 65 percent of respondents live in a household that does not have access to a working automobile. About 25 percent of riders have one vehicle available in their households.

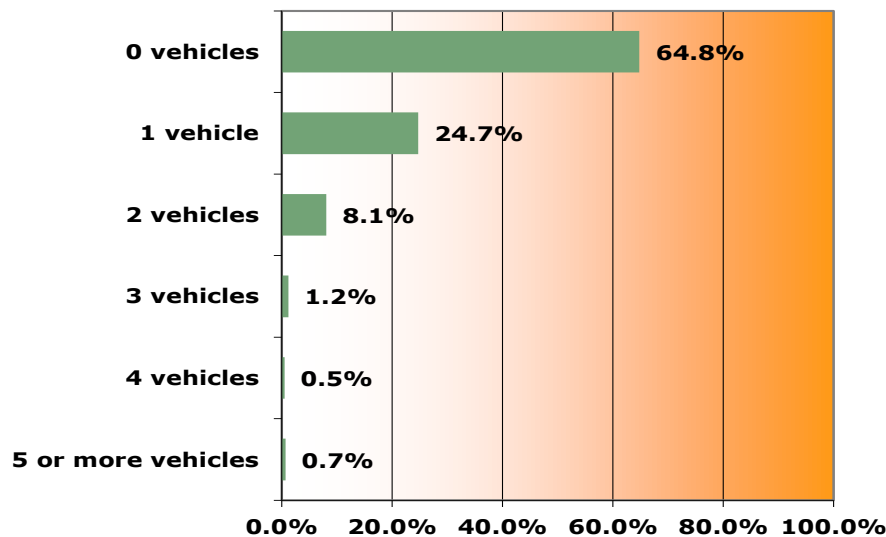


Figure 2-12. Q19 - How many working vehicles (cars, vans, and/or light trucks) are available in your household?

Residency

Question 20 asked (Figure 2-13 below) respondents, "How many months of the year do you reside in Chatham County?" Over, 85 percent of respondents were full time residents of Chatham County. At a distant second, 5.4 percent of respondents indicated they reside in Chatham County six to nine months of the year, and only 1.9 percent said they were tourists/visitors.

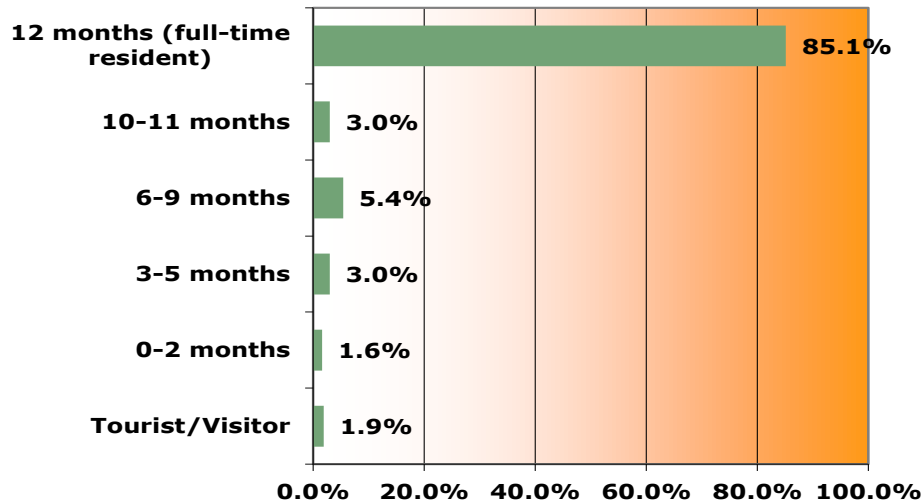


Figure 2-13. Q20 - How many months of the year do you reside in Chatham County?

Fare and Travel Behavior

A series of survey questions were used to establish the fare payment type and travel behavior characteristics of CAT customers. These questions included:

- Fare payment type
- Amenities at bus stops
- Frequency of use
- Alternative transportation
- Length of use

Fare Payment Type

As shown in Figure 2-14 nearly 39 percent of customers paid a base fare of \$1.50 when they boarded and approximately 29 percent used the \$3.00 all-day pass. Only 1.0 percent used the 20 Ride Pass and 5.6 percent indicated they were traveling free of charge on the shuttle.

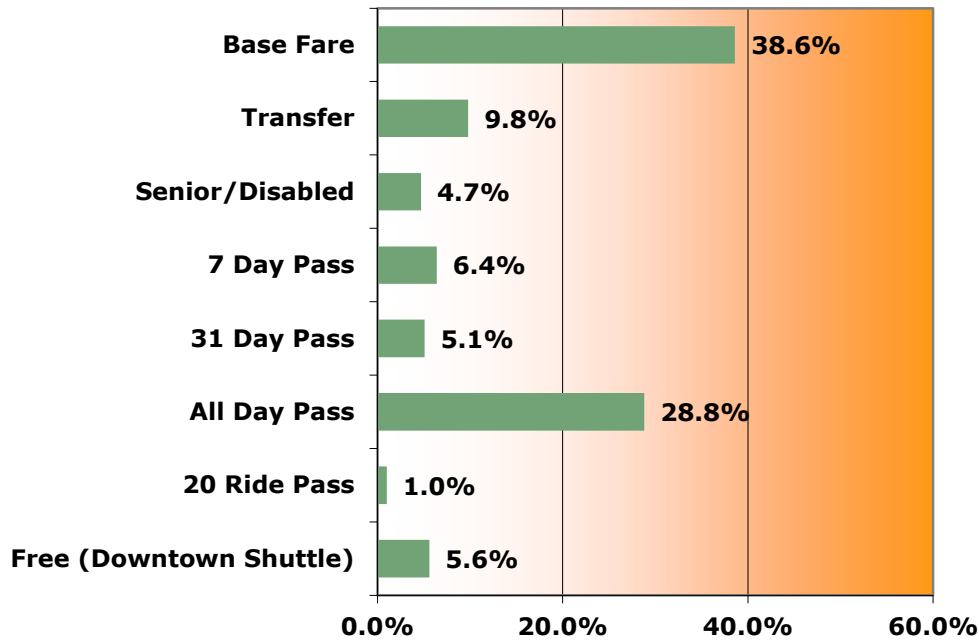


Figure 2-14. Q11 – What type of fare did you pay when you boarded this bus?

Amenities at Bus Stop

Figure 2-15 displays the amenities available at the stop where survey respondents boarded the bus. Question 10 asked customers to indicate if there was a sign, bench, shelter, trash can or route/system information (including times) where they boarded. It is not clear why only 36 percent indicated that there was a sign at their stop.

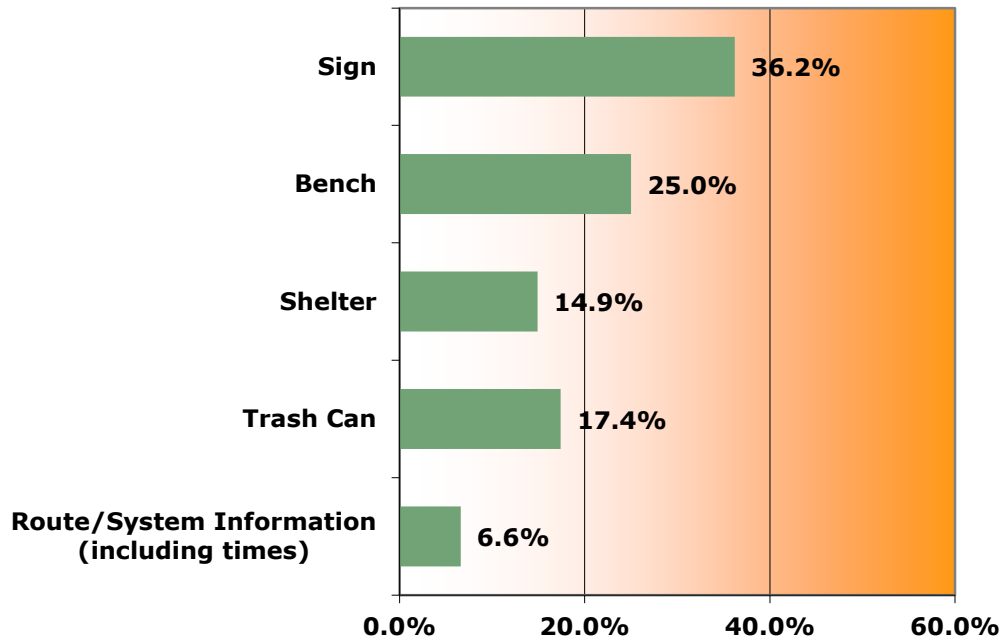


Figure 2-15. Q10 – Which of the following were in place at the bus stop where you boarded?

Mode of Egress

Question 9 asked customers to indicate how they would reach their final destination after alighting the CAT bus. The survey results presented in Figure 2-16 indicate the majority of customers (42.7%) would walk one block or less to reach their final destination.

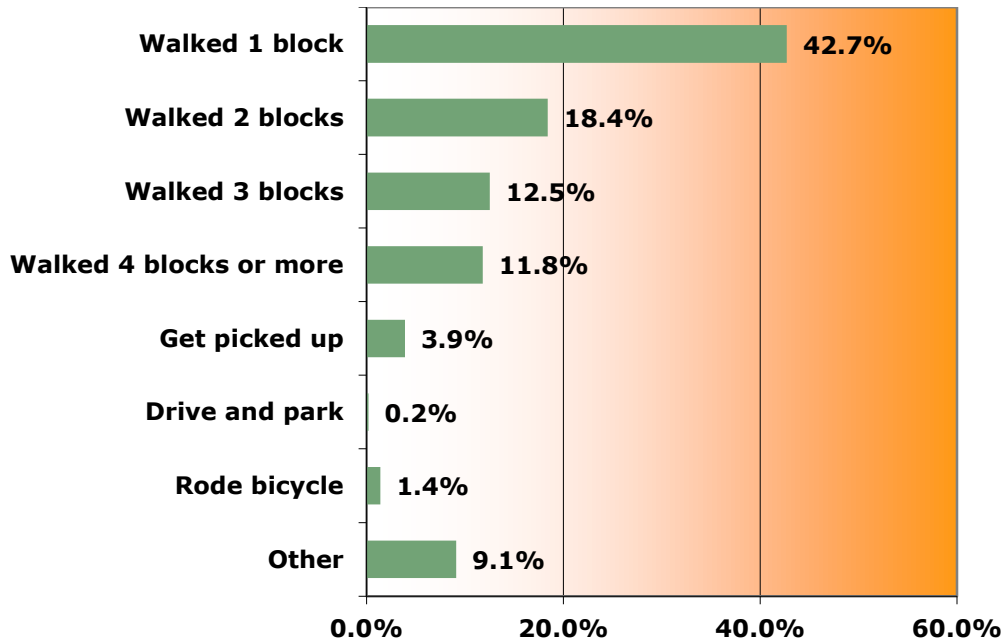


Figure 2-16. Q9 – How will you get to your final destination?

Frequency of Use

Question 12 asked customers how often they utilized CAT bus service. Figure 2-17 indicates that the majority of customers (67.8%) were very frequent users (i.e., at least five or more days per week).

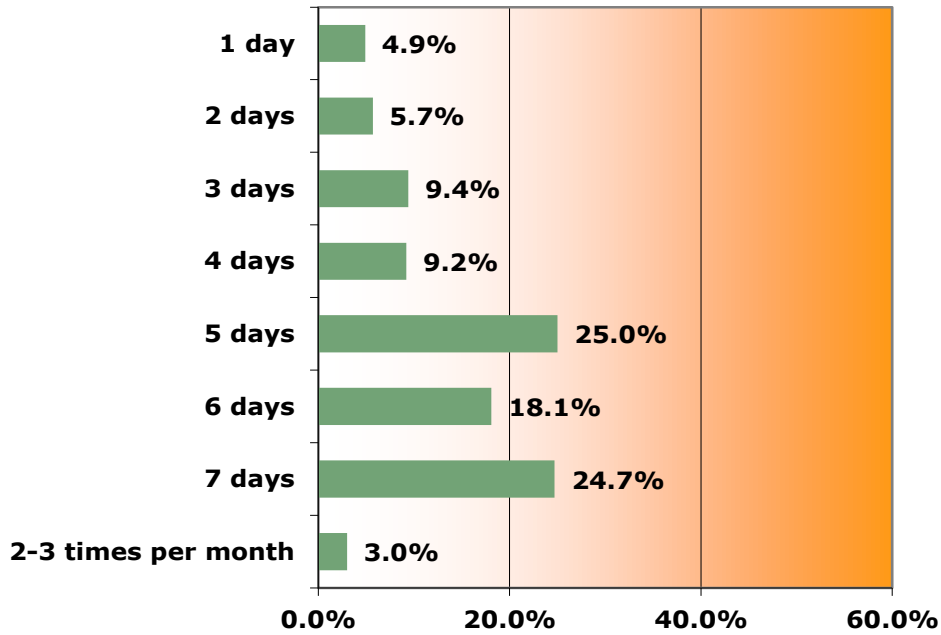


Figure 2-17. Q12 – On average, how many days per week do you ride the bus?

Reason for Riding Bus

Question 13 asked respondents “Compared to other transportation alternatives available to you, what is the most important reason you use CAT?” Although approximately 58 percent of respondents ride CAT because they don’t drive or do not have a vehicle available for their use, 13.4 percent choose CAT because it is more convenient and 12.5 percent because it is more economical as shown in Figure 2-18.

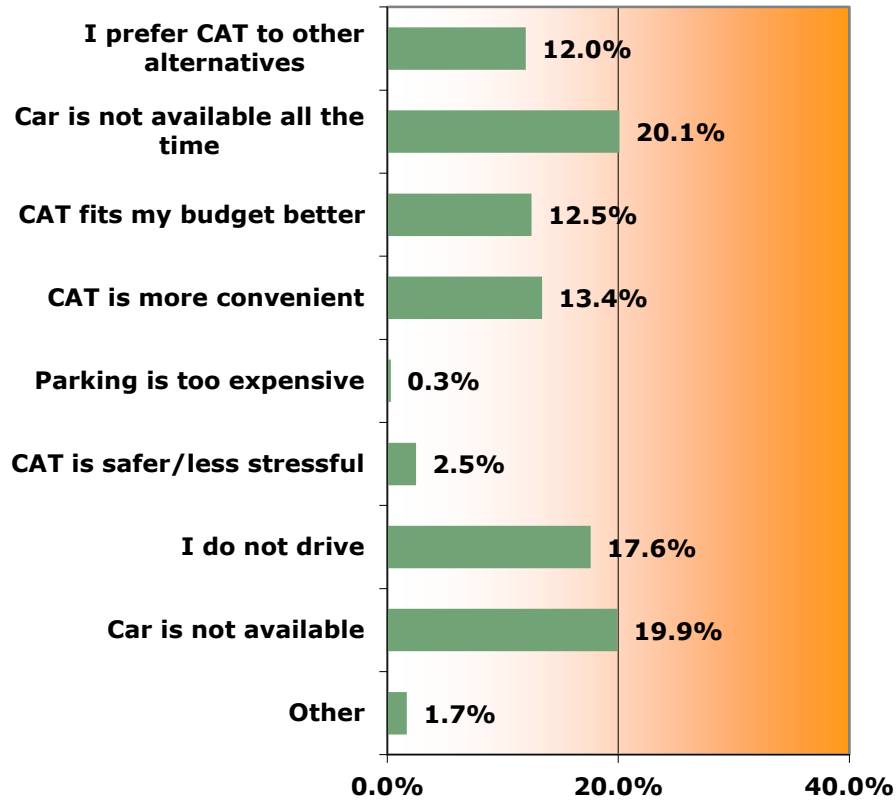


Figure 2-18. Q13 – Compared to other transportation alternatives available to you, what is the most important reason you use CAT?

Question 14 asked respondents how they would get to their destination if CAT bus service was not available. As shown in Figure 2-19, roughly 43 percent said they would have to ride with someone else and 16.4 percent indicated they would not be able to make the trip.

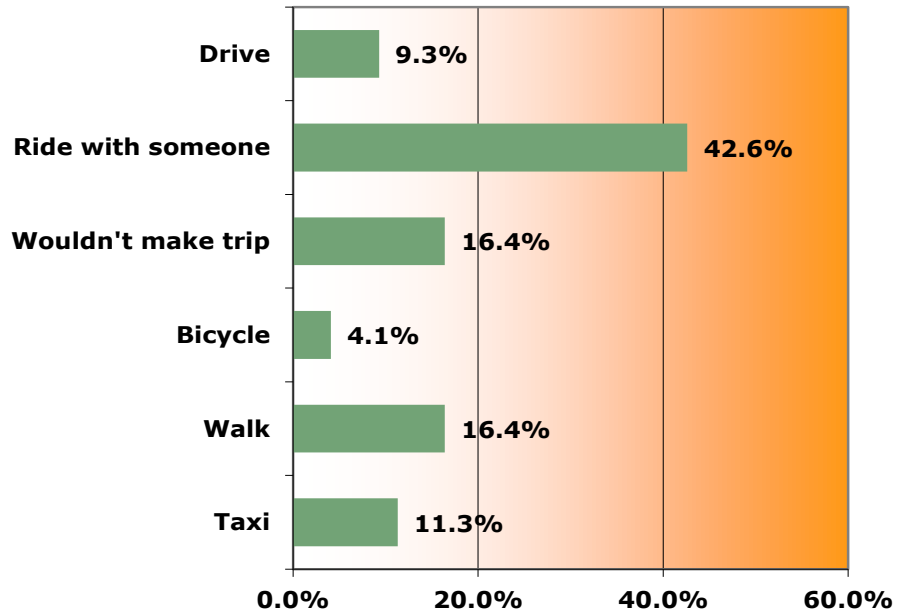


Figure 2-19. Q14 – How would you make this trip if not by bus?

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In Question 15, respondents were asked how long they had been using CAT bus service. As shown in Figure 2-20, the majority of respondents (62.0%) had been using CAT service for more than two years. CAT has also been able to attract new riders. Approximately 12 percent of those surveyed were customers who had started using CAT in the six months preceding the survey.

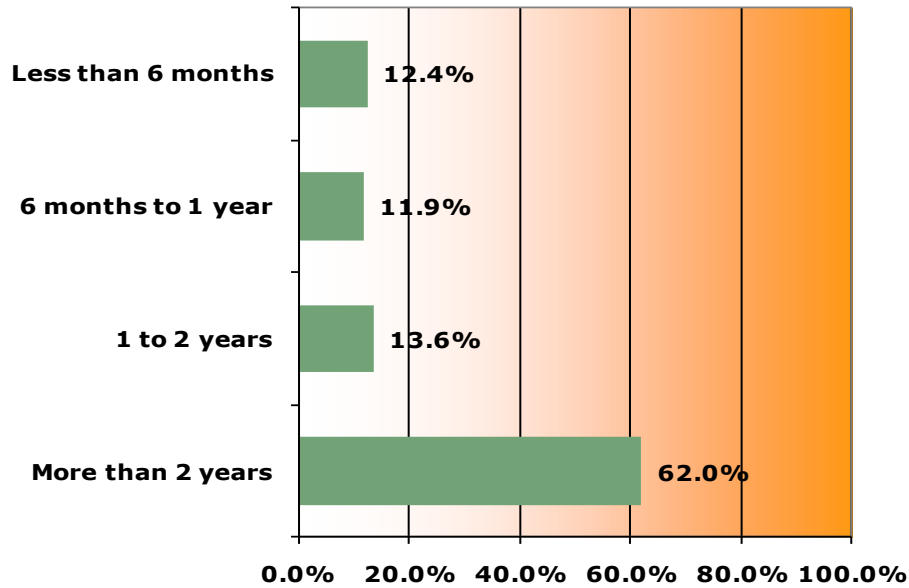


Figure 2-20. Q15 - How long have you been using CAT bus service?

As shown in Figure 2-21, 7.7 percent of survey respondents indicated they were eligible to ride CAT's Teleride service and 40.4 percent were uncertain. Of the 7.7 percent who responded to question 22 asking if they were eligible to use Teleride, 75.7 percent indicated they used CAT for this trip because it was more convenient (Figure 2-22).

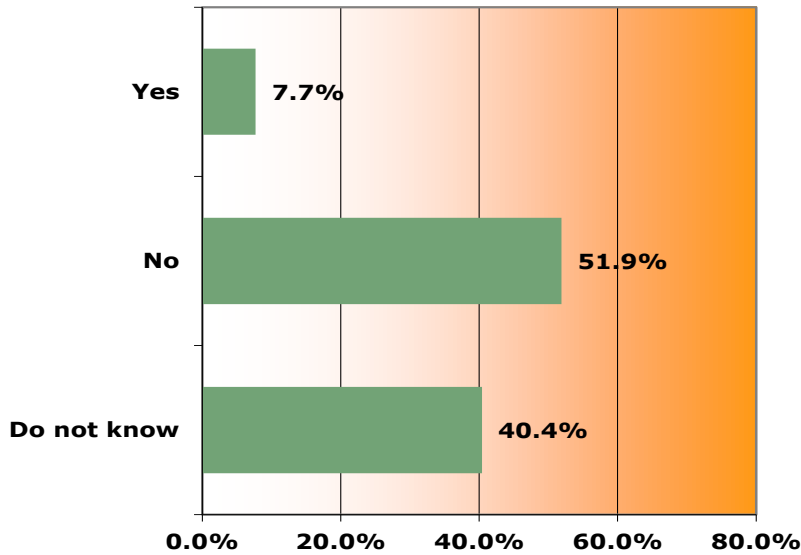


Figure 2-21. Q22 - Are you eligible to use Teleride?

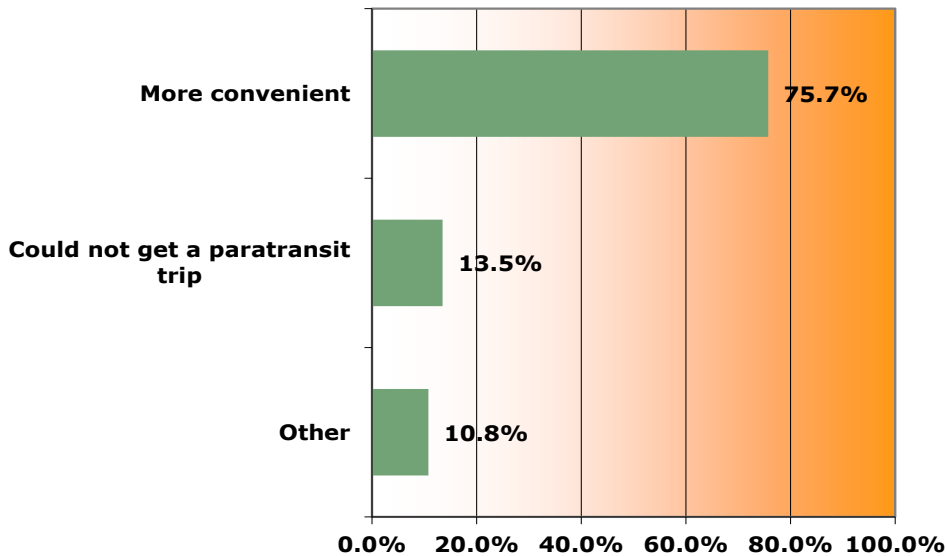


Figure 2-22. Q22a - If Yes, Why did you choose to use CAT for your trip TODAY?

Customer Satisfaction

Two questions were included on the survey to measure customer satisfaction. In the first question, customers were asked to rate their satisfaction with CAT communication service characteristics using a scale of 1 to 5 where 1 is “very unsatisfied” and 5 is “very satisfied”. Using this scoring system, an average score was calculated for each CAT communication service characteristic. Overall, customers were satisfied with communication services (see Figure 2-23). The highest rated communication tool was the on-board Next Stop announcement feature with a score of 4.14. And while still satisfied, respondents ranked driver communications with passengers in unexpected situations the lowest with a score of 3.73.

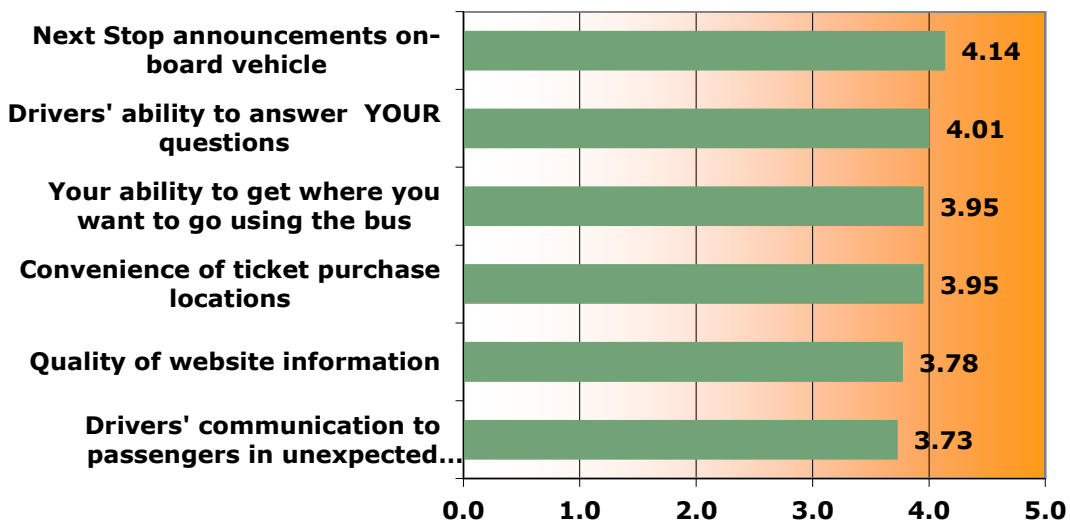


Figure 2-23. How satisfied are you with the following aspects of CAT communication?

Question 24 gave customers an opportunity to rate their individual levels of satisfaction with a number of CAT bus service characteristics also using a scale of 1 to 5 where 1 is “very unsatisfied” and 5 is “very satisfied”. As shown in Figure 2-24, respondents were also generally satisfied with service characteristics. Safety characteristics that received the highest ratings were: The bus driver’s ability to drive the bus (4.32), safety while riding the bus (4.17) and safety after getting off the bus (4.11). The two characteristics that received the lowest score of 3.16 were related to schedule adherence and the availability of evening service on the weekends.

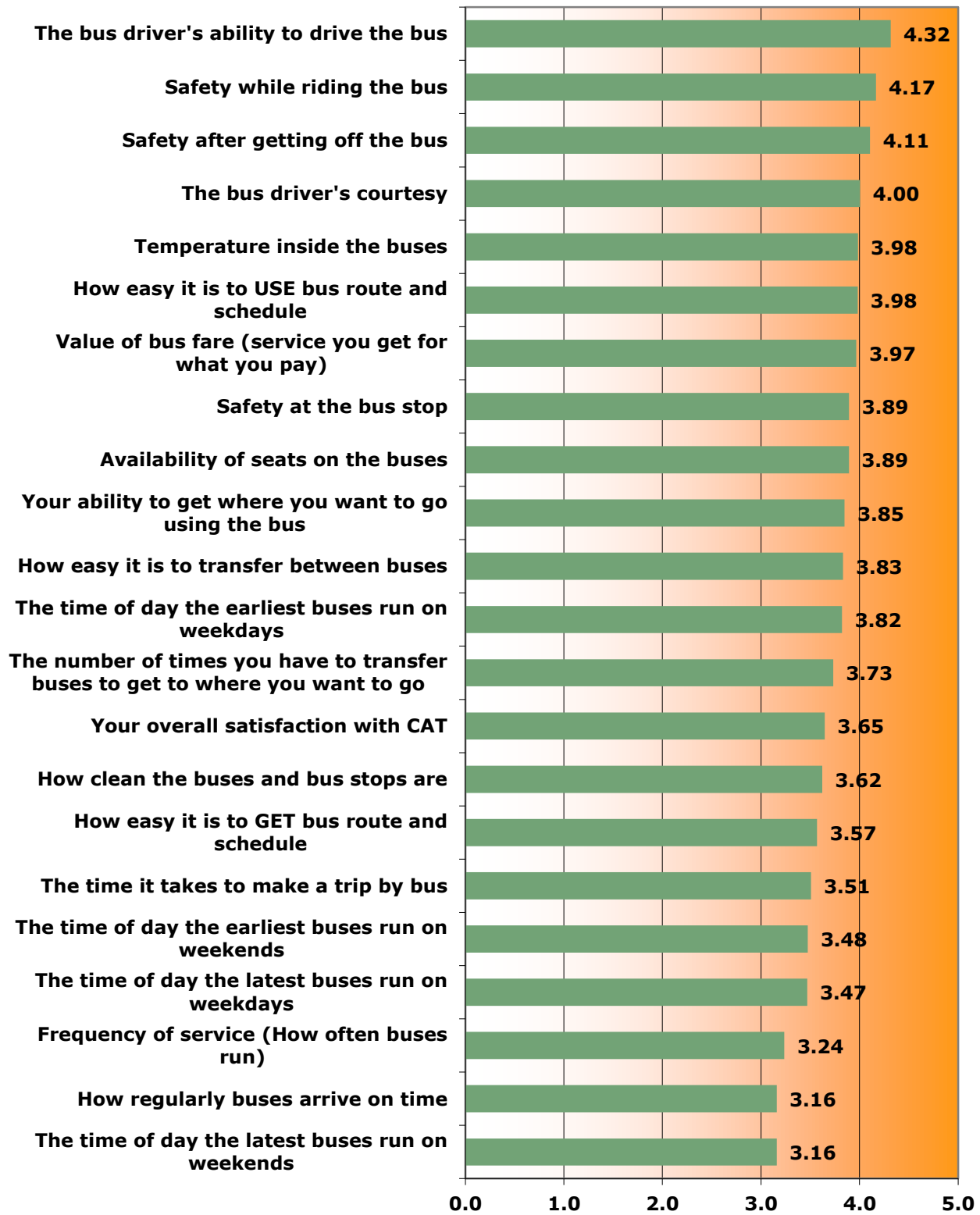


Figure 2-24. Q24 - How Satisfied are you with each of the following...?

CAT Customer Profile

Table 2-2 below presents a profile of the typical CAT customer based on responses to the on-board survey.

Table 2-2. CAT Customer Profile

| Category | Profile |
|-------------------------|-------------------|
| Gender | Male |
| Age | 45-54 |
| Ethnicity | Black |
| Annual Household Income | < \$10,000 |
| Vehicles in Household | Zero |
| Trip Purpose | Work |
| Trip Destination | Work |
| Mode of Access | Walk 1 Block |
| Mode of Egress | Walk 1 Block |
| Frequency of Use | 5 Days Per Week |
| Tenure of Use | More Than 2 Years |
| Driver's License | Yes |
| Residency | Full Time |

Public Forums and User Survey Results

In addition to the on-board survey work described in the previous section, a series of public workshops and outreach activities were conducted to solicit input on public transportation needs. The workshops also afforded CAT staff and the consultant team an opportunity to share information about data collected during the planning process and preliminary concepts for service design and delivery.

CAT staff also participated in a variety of community and association meetings (see Table 2-3) in an effort to engage the public in the TDP planning process to ensure the public's opinions and priorities related to mobility were incorporated in the development of the TDP.

Table 2-3. Public Meeting Schedule

Chatham Area Transit's Public Meeting Schedule

August 2012 - July 2013

| Date | Location | Time |
|------------------------------|--|------------------------------|
| Tuesday, August 21, 2012 | W. W. Law Community Center W. W. Law Community Center | 6:00 PM |
| Thursday, September 06, 2012 | Center | 6:00 PM |
| Saturday, October 20, 2012 | Carnegie Branch Library | 10:00 AM |
| Thursday, October 25, 2012 | Southwest Chatham Library | 6:00 PM |
| Saturday, November 10, 2012 | Carnegie Branch Library | 10:00 AM |
| Thursday, November 15, 2012 | Bull Street Library | 5:00 PM |
| Tuesday, December 04, 2012 | Bull Street Library | 5:00 PM |
| Thursday, December 13, 2012 | Southwest Chatham Library | 6:00 PM |
| Thursday, January 17, 2013 | Southwest Chatham Library | 6:00 PM |
| Thursday, January 24, 2013 | Bull Street Library | 4:00 PM |
| Tuesday, January 29, 2013 | Southwest Chatham Library | 6:00 PM |
| Tuesday, February 12, 2013 | Bull Street Library | 6:00 PM |
| Tuesday, March 12, 2013 | Bull Street Library | 5:00 PM |
| Thursday, June 20, 2013 | 110 East State Street | MPO Offices TCC 3:00 PM |
| Thursday, June 20, 2013 | 110 East State Street | MPO Offices CAC 5:00 PM |
| Monday, June 24, 2013 | 110 East State Street | MPO Offices ACAT 1:00 PM |
| Wednesday, June 26, 2013 | 110 East State Street | MPO Offices MPO 10:00 AM |
| Thursday, June 27, 2013 | 1310 Richards Street | Moses Jackson 12:00 PM |
| Thursday, June 27, 2013 | 1310 Richards Street | Moses Jackson 4:00 PM |

In addition to verbal input received during the various public forums, a brief CAT user survey (see Appendix B) tool was distributed to capture additional public input. The survey included questions about the user’s length and frequency of use of CAT services, most important reason for using CAT services and level of satisfaction with a series of CAT service characteristics.

A total of 439 survey responses were collected as a result of this outreach. The survey results are described below.

Question 1 asked users how often they ride CAT. Approximately 71 percent of users stated they ride CAT four or more days per week as shown in Figure 2-25 below.

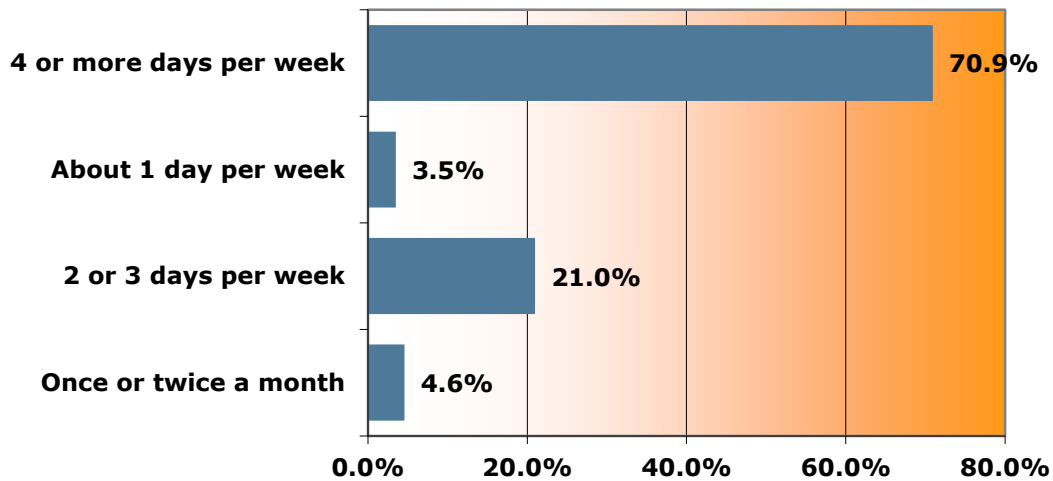


Figure 2-25. Q1 - How often do you ride CAT?

In the second question, respondents were asked “What is the most important reason you ride the bus?” Figure 2-26 shows that approximately 64 percent of respondents rely on CAT because either they don’t drive or they don’t have a vehicle available for their use. The reason approximately 15 percent choose to ride CAT is because of convenience.

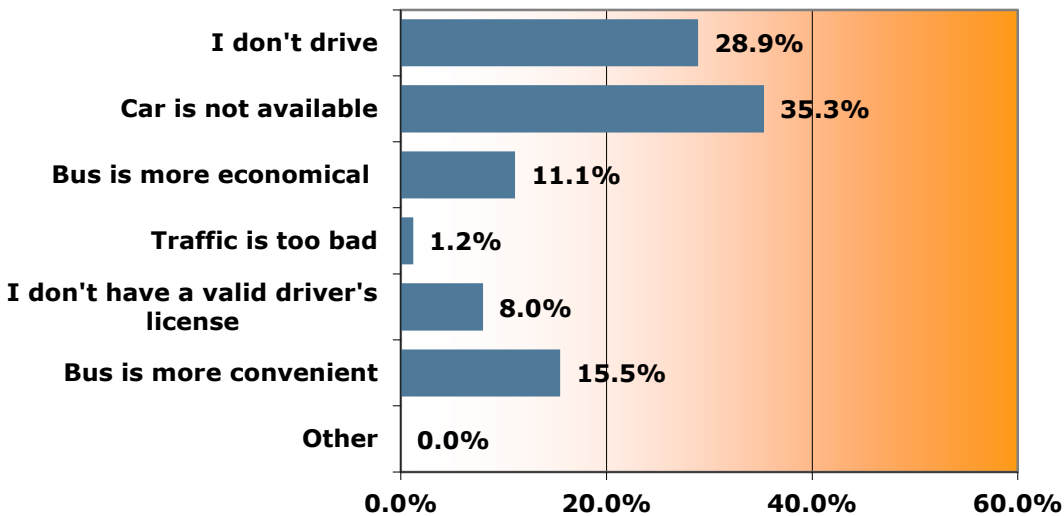


Figure 2-26. Q2 - What is the most important reason you ride the bus?

Question 3 asked “How long have you been using CAT services?” Consistent with the results of the CAT on-board survey, the majority of respondents are long time CAT users, with nearly 40 percent having used the system for more than five years, as shown in Figure 2-27.

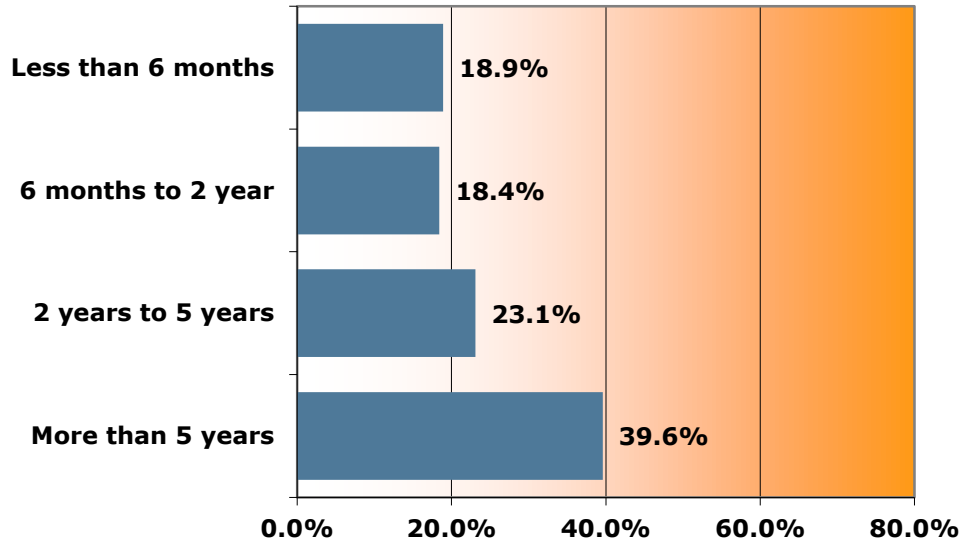


Figure 2-27. Q3 - How long have you been using CAT services?

Question 4 asked respondents how satisfied they were with a series of 21 service characteristics. Respondents were asked to rate their level of satisfaction using a scale of 1 to 5 where 1 is “very unsatisfied” and 5 is “very satisfied”. Figure 2-28 shows the average scores in order from most to least satisfied. On average, respondents gave CAT a score of 3.62 in terms of their overall level of satisfaction. The scores also show that customers have a high level of confidence in the capabilities of the bus drivers (4.28). Sunday span of service (early morning and late evening) was the only characteristics that received a score of less than satisfied.

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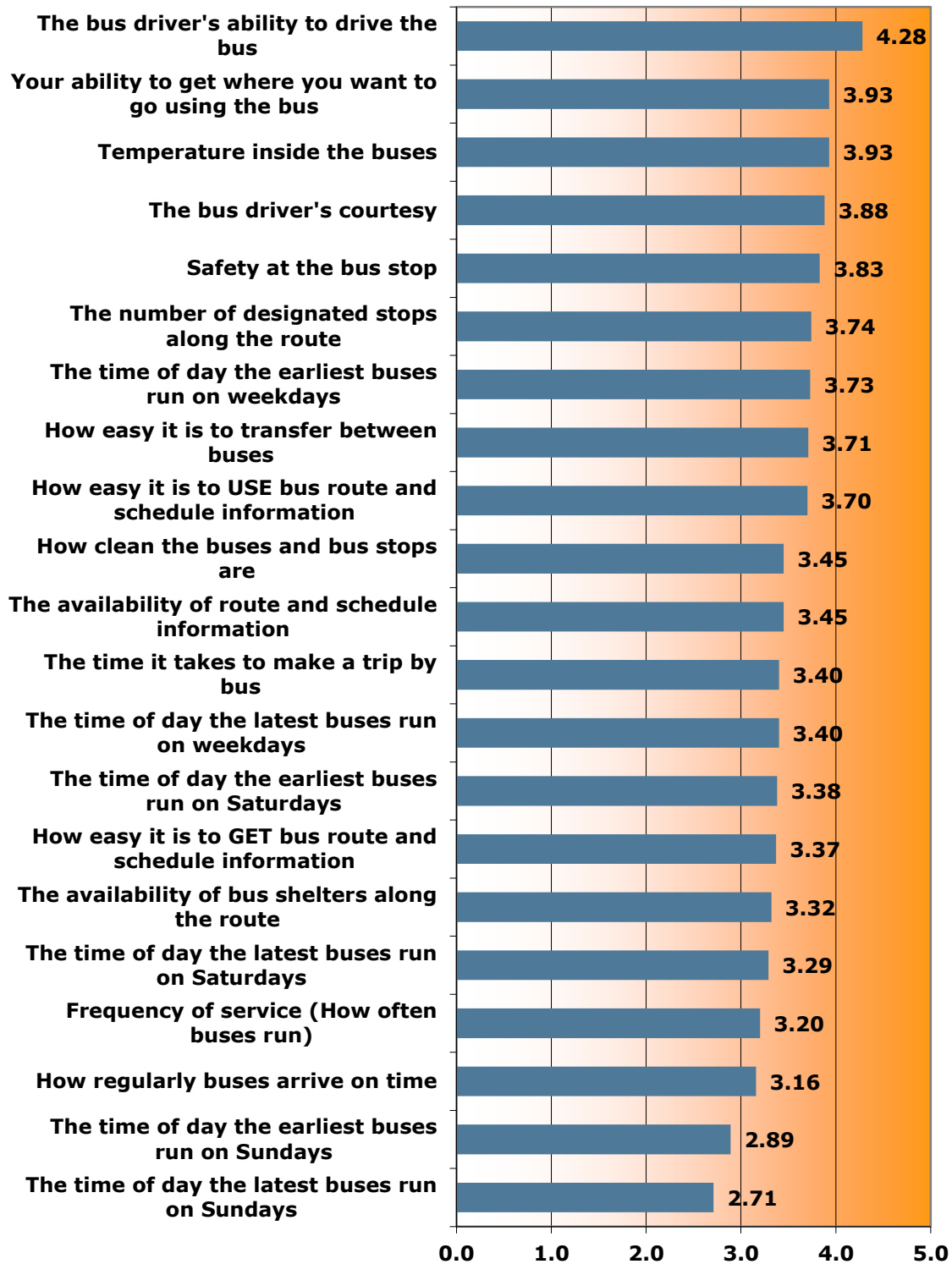


Figure 2-28. Q4 - How satisfied are you with each of the following?

Chatham Area Transit Authority Teleride Survey

CAT also distributed a survey via mail (see Appendix B) to customers who use the door-to-door Teleride service. A total of 56 surveys were completed and returned. The results of the Teleride survey are presented below.

As shown in Figure 2-29 survey respondents reported they use Teleride on a relatively frequent basis, with approximately 25 percent using the service on a daily basis and 45 percent using Teleride two to four times per week.

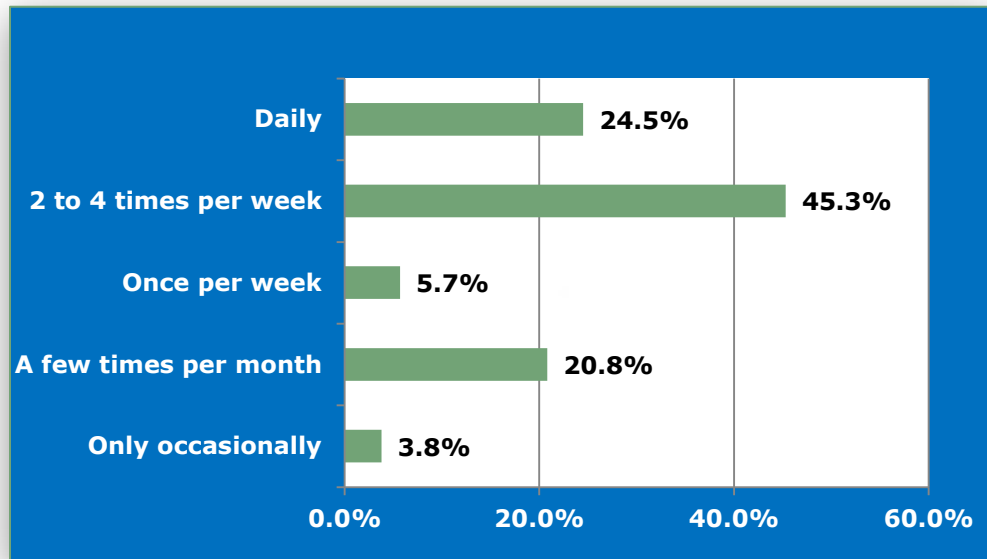


Figure 2-29. How often do you use Teleride services?

Question 2 asked respondents if they use a wheelchair when they travel on Teleride. Over 69 percent answered they do not.

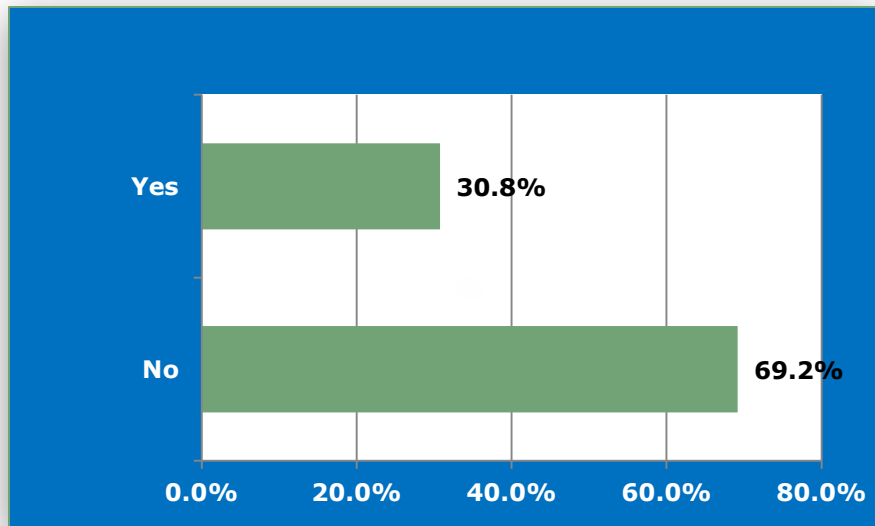


Figure 2-30. Q2 - Do you use a wheelchair for your travels on Teleride?

Question 3 asked customers to rate the overall quality of the Teleride services. Nearly 68 percent of respondents scored the quality as excellent or good, while approximately 23 percent ranked the service as fair or poor.

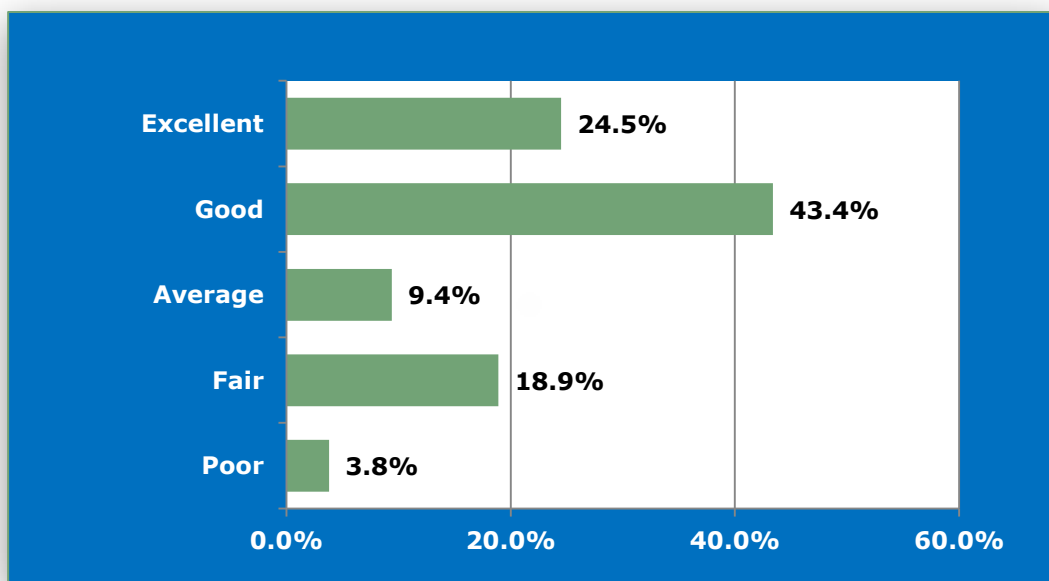


Figure 2-31. Q3 - How would you rate the overall quality of Teleride services?

Question 4 asked customers to rate the comfort of the Teleride vehicles. Overall, vehicle comfort received positive scores (see Figure 2-32), with approximately 77 percent of respondents ranking comfort as excellent or good, and only 9.6 percent reporting a score of fair.

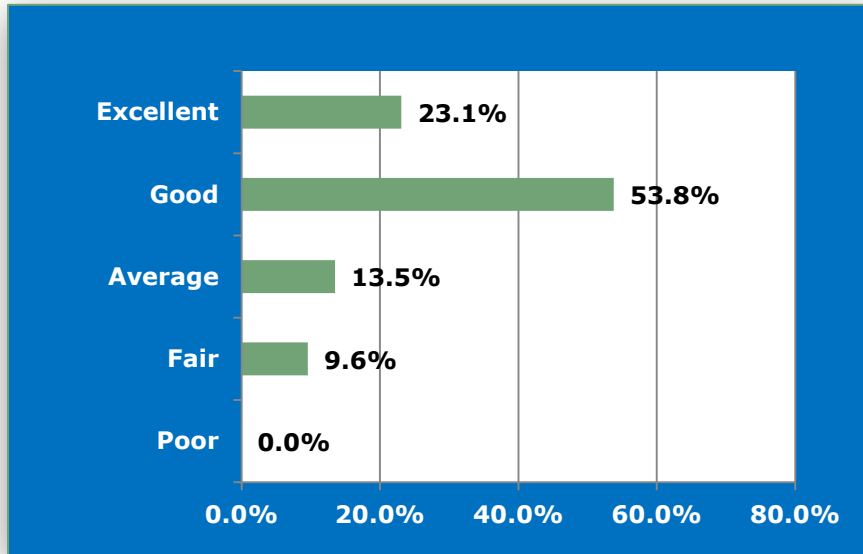


Figure 2-32. Q4 - How would you rate the comfort of the Teleride vehicles?

In Question 5 respondents were asked to score the cleanliness of the Teleride vehicles. Eighty percent ranked vehicle cleanliness as either excellent or good and only 8 percent rated cleanliness as fair.

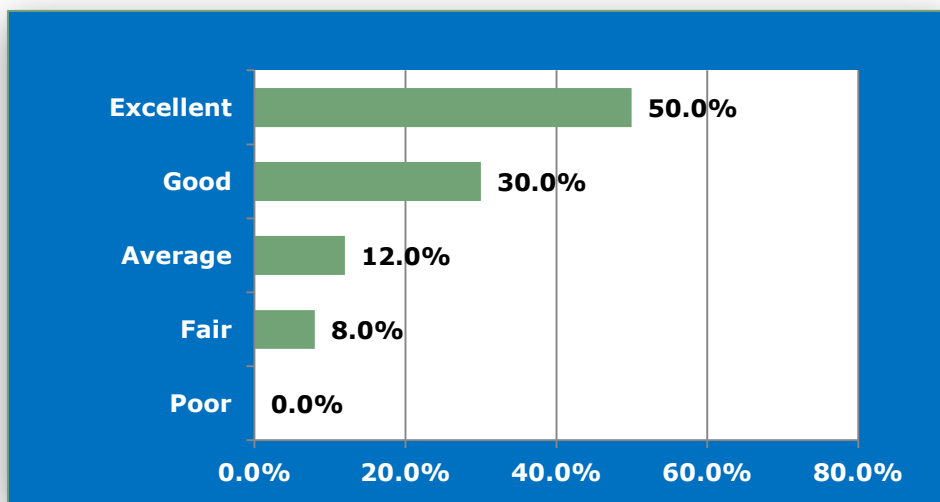


Figure 2-33. Q5 - How would you rate the cleanliness of the Teleride vehicles?

Overall, survey respondents were satisfied with the timeliness of the Teleride service. Over 80 percent reported they arrived at their destinations on time always or most of the time. Sixteen percent reported sometimes they arrived on time.

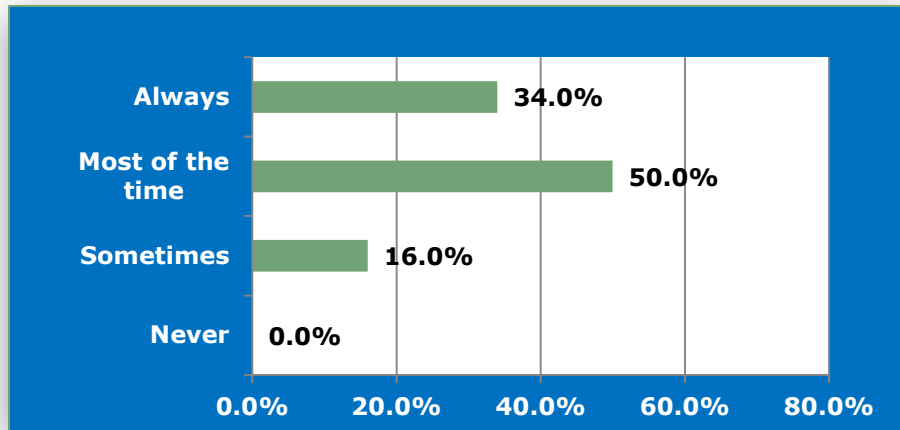


Figure 2-34. How often do you arrive at your destination on time?

Overall, customers are relatively new to the Teleride system as shown in Figure 2-35 below. The majority (approximately 76 percent) have been using Teleride for one year or less, while only 6.1 percent have been using Teleride for more than two years.

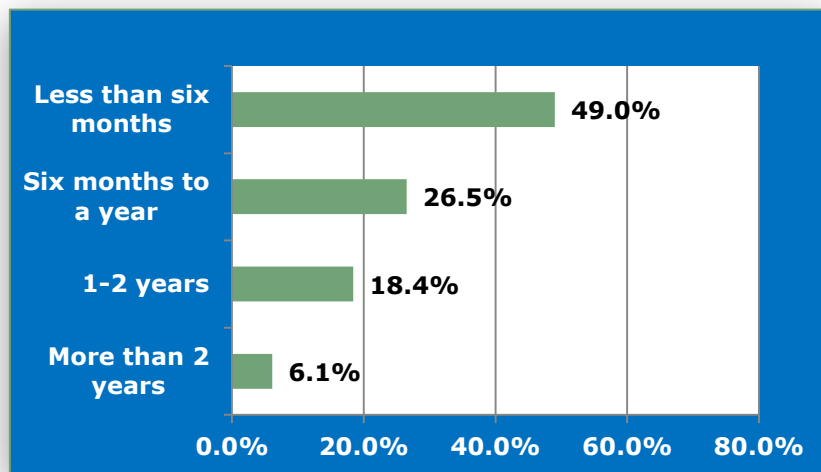


Figure 2-35. Q 7 - How long have you been using Teleride?

Survey respondents gave very high scores when probed about the courtesy and helpfulness of Teleride drivers. Approximately 79 percent rated courtesy and helpfulness either excellent or good, while 7.9 percent provided a score of poor.

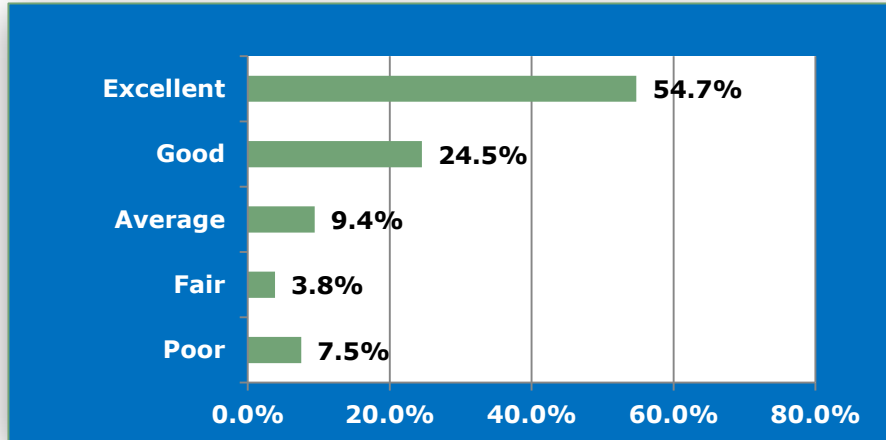


Figure 2-36. Q8 - How would you rate the courtesy and helpfulness of the drivers when riding Teleride?

In Question 9 customers were asked how they would rate the courtesy and helpfulness of the telephone reservationists when calling Teleride to schedule a trip. Although approximately 63 percent rated the courtesy and helpfulness of telephone reservationists either excellent or good, approximately 38 percent of survey respondents provide a ranking of average to poor.

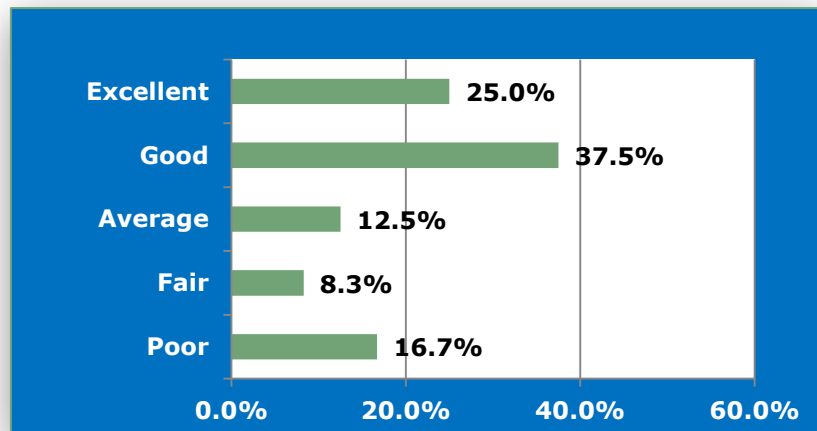


Figure 2-37. Q9 - How would you rate the courtesy and helpfulness of the telephone reservationists when you call Teleride to schedule a trip?

Question 10 asked respondents "How did you become aware of Teleride?" Over 47 percent said from a friend, 26.3 percent were referred by their doctor, nearly 13 percent from the senior center and 10.5 percent from advertisements.

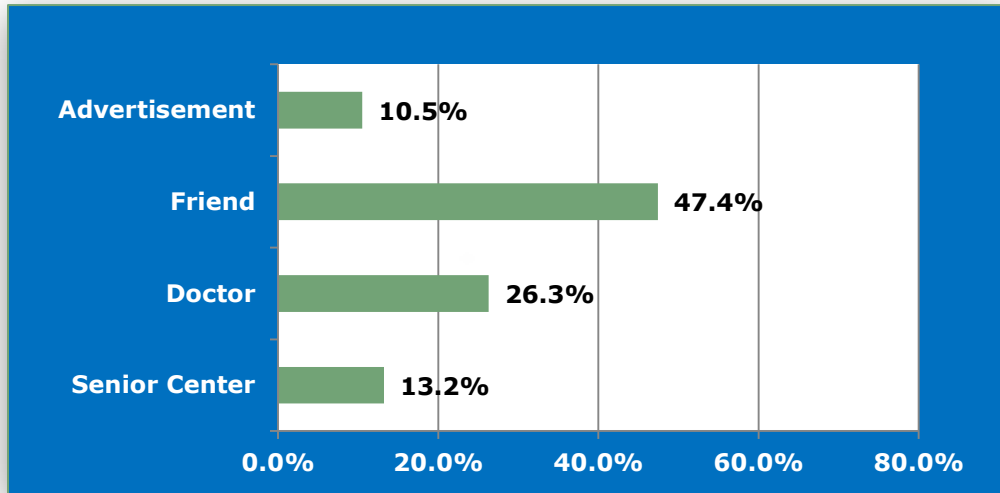


Figure 2-38. Q10 - How did you become aware of Teleride?

When respondents were asked how they would get to their destination if Teleride service was not available, most (34%) reported they would ride with someone, 18% would use a taxi and 20 percent would not be able to make the trip.

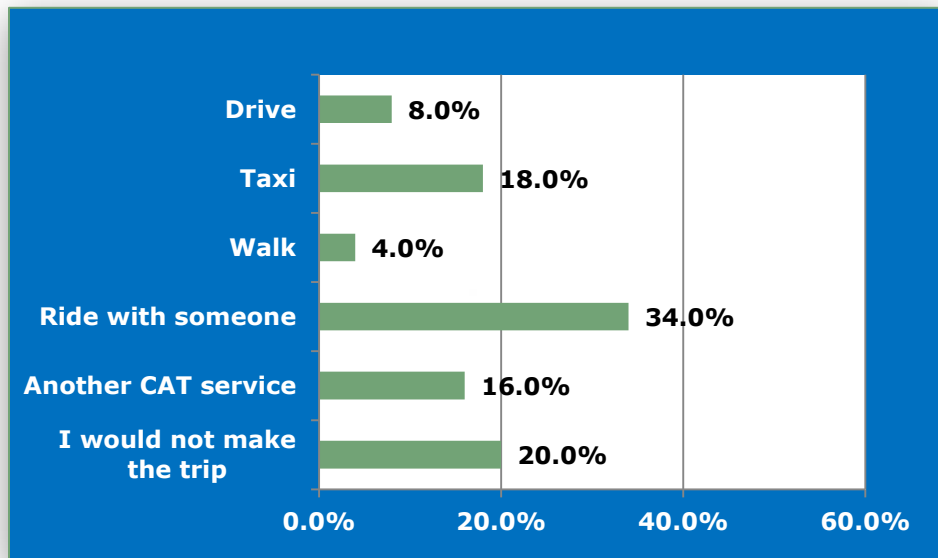


Figure 2-39. Q 11 - How would you get to your destination if Teleride service was not available?

Question 12 asked respondents “What is your primary purpose for using Teleride?” Approximately 59 percent indicated they used Teleride for doctor/dentist appointments. Another 20 percent use Teleride to go to and from work. It is notable that no customers who responded used Teleride for shopping.

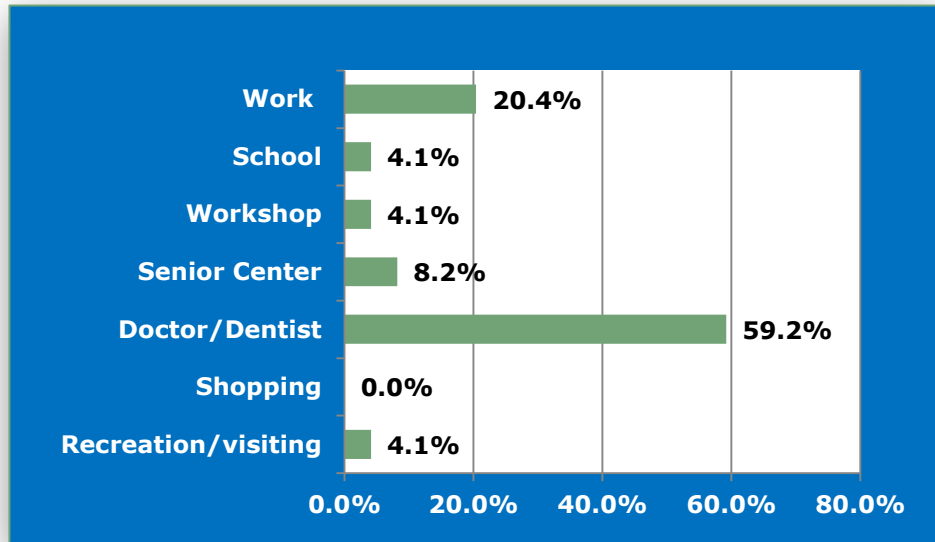


Figure 2-40. Q 12 - What is your primary purpose for using Teleride?

Question 13 asked respondents to check all purposes for which they use Teleride. Figure 2-41 shows the results. Most respondents used Teleride to go to the doctors/dentists (47.7 percent) and to go to work (16.9 percent).

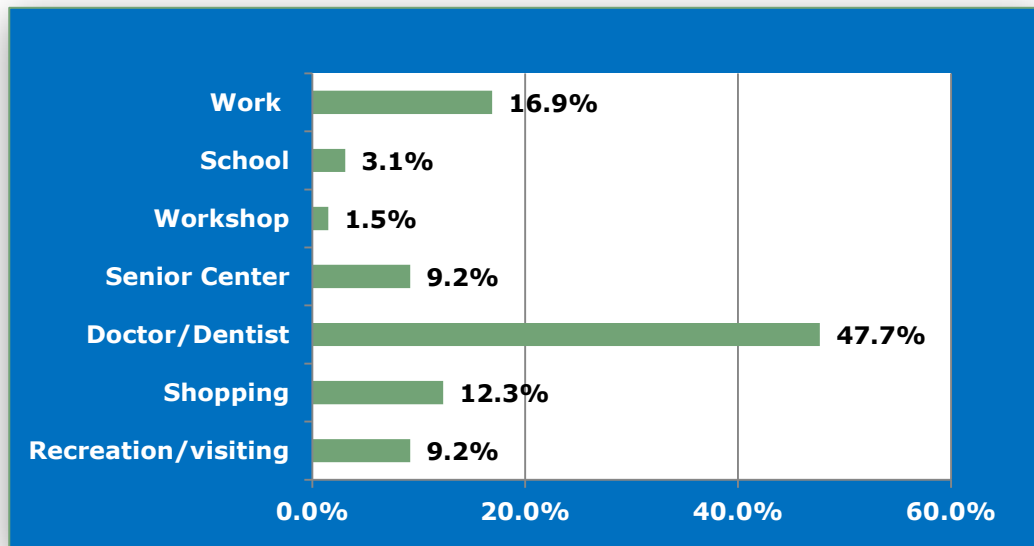


Figure 2-41. Check all purposes for which you use Teleride

Question 14 asked respondents what age group they represented. Over 65 percent of customers who responded were between the ages of 55 and 84.

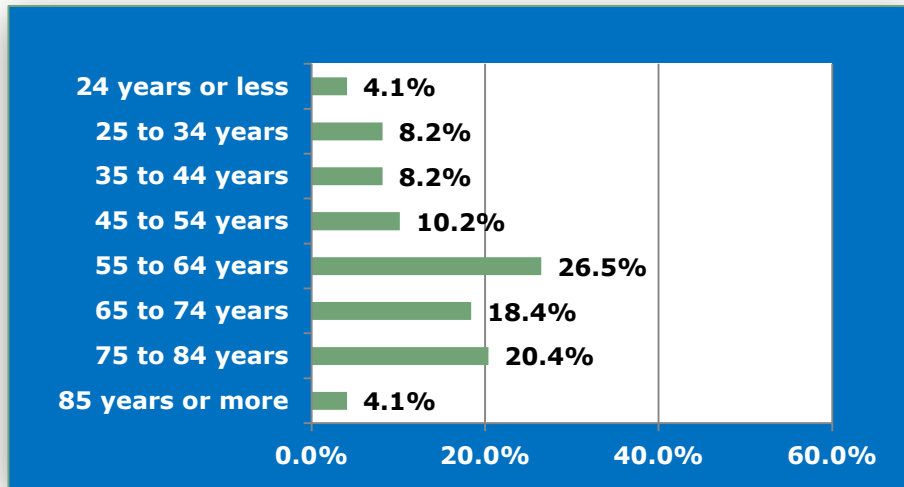


Figure 2-42. Q14 - Your age is...?

Female Teleride customers far outnumbered males. Sixty-three percent of survey respondents were female and only 37 percent were male.

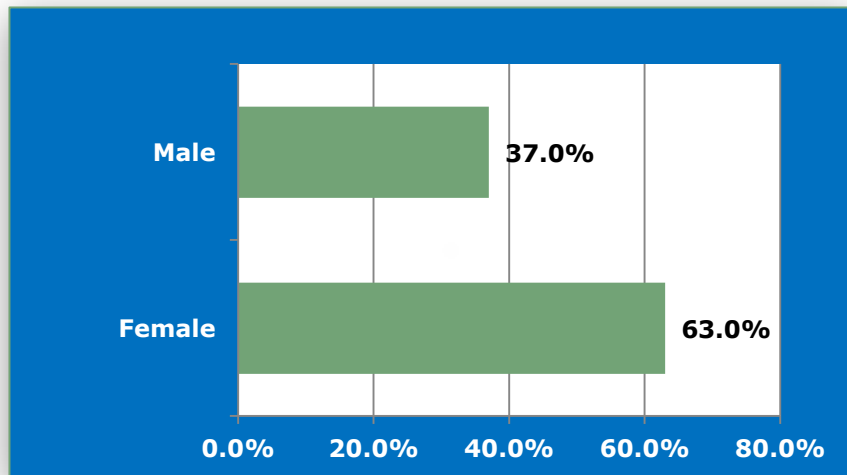


Figure 2-43. Q15 - You are...(Gender)

When asked about their ethnicity, approximately 68 percent of respondents reported they were black and approximately 28 percent were white.

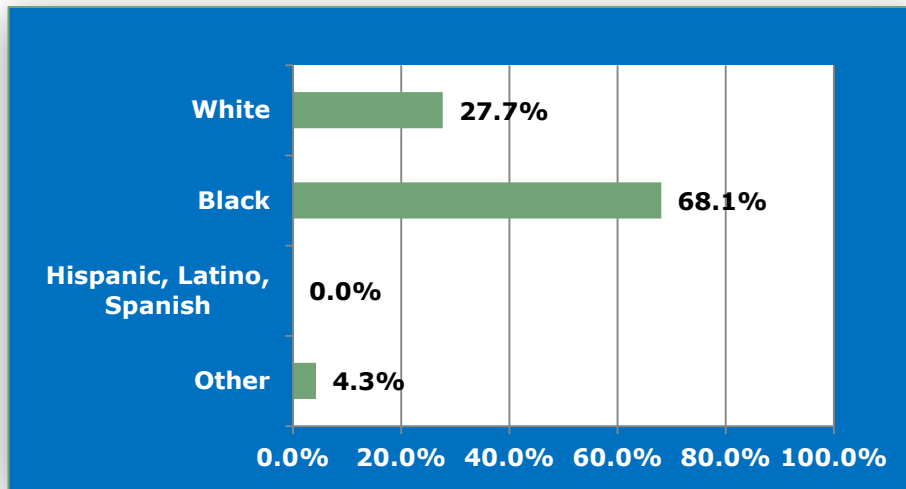


Figure 2-44. Q16 - You are...?

Similar to customers who use CAT fixed route services, the majority of Teleride customers live in a household with an annual income of less than \$10,000. Approximately 15 percent of respondents live in households with annual incomes of \$30,000 to \$59,999.

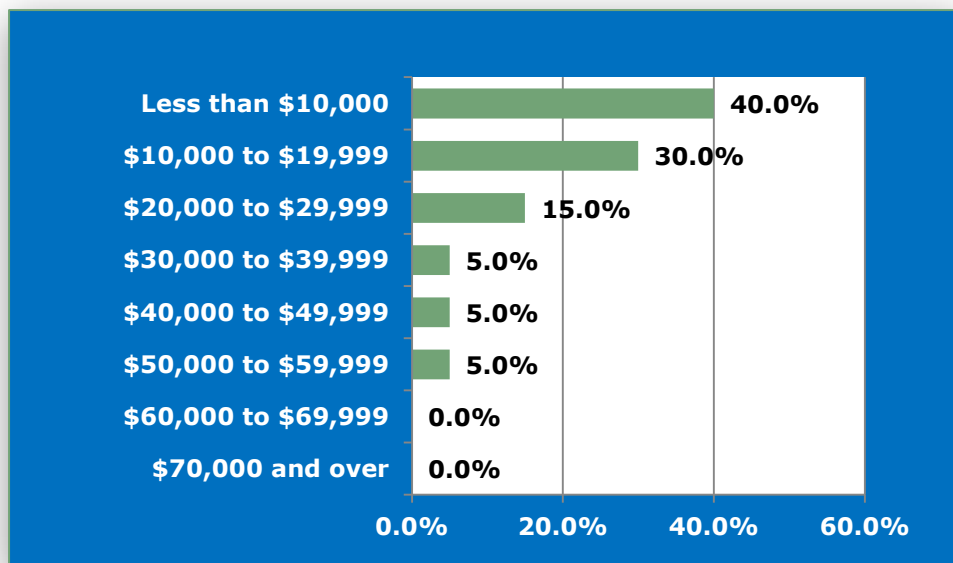


Figure 2-45. Q17 - your total annual household income is...?

Question 18 asked respondents how many vehicles were available in their household. Sixty percent of customers did not have any vehicles available and only 34 percent had one vehicle.

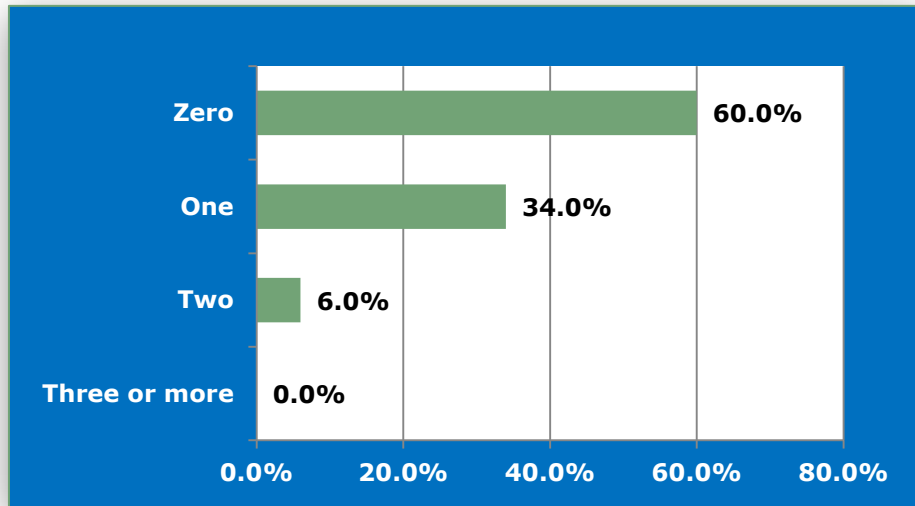


Figure 2-46. Q18 - How many vehicles are available in your

The final three questions in the Teleride survey were open ended to allow respondents to share their opinions about various aspects of Teleride services.

When respondents were asked what they liked best about Teleride, friendly drivers were most often mentioned. All responses to this question are shown below:

- Friendly drivers (14)
- Takes me where I need to go (8)
- Convenience (5)
- Reliable (4)
- Independence (2)
- Vans are not crowded or messy
- Economical

The second open ended questions asked Teleride customers what they liked least about Teleride. Respondents were least satisfied with the telephone wait times when calling for a reservation.

- Long wait time on phone time for reservations (12)
- Waiting too long for pick-up after an appointment (3)
- Driver courtesy (3)
- Timeliness (2)
- Unpredictable arrival times (2)
- Too bumpy (2)

- Wait time for an appointment (2)
- Poor cleanliness
- Rude drivers
- Lack of communication in office
- Drivers leave if I am not on the bus within five minutes
- Not enough trips available
- Not enough vans available
- Drivers don't help people get off the van
- Don't go to the beach

The final survey question asked respondent how they feel CAT could improve the quality of Teleride service or serve your transportation needs better. Consistent with the comments received about aspects of the service they liked least, improvements to telephone service were most frequently mentioned.

- Improve telephone service (8)
- Improve Timeliness (2)
- Notify customers if pick-up will be late
- Hire more drivers (2)
- Improve courtesy
- Provide the kind of service you would want
- Improve dispatcher courtesy
- Spread the word about how much you help shut-ins live independently
- Make sure you can handle all the rides that are scheduled
- Lower prices
- Provide more places to purchase tickets
- No complaints
- Purchase more buses
- Offer on-line scheduling for customers
- Be fair and show respect to your drivers
- Drivers should knock on the door because it is difficult for elderly people to wait outdoors
- Vehicles need better suspension
- Provide emergency trips

Employee Survey

This section describes the results of a survey of CAT employees. The survey (see Appendix B) was distributed to Bus Operators, Customer Service Personnel and others employees who interact with the public. The purpose of the survey was to seek input from the employees about existing services and potential improvements to the service. The survey was conducted in the fall of 2012. A total of 21 completed surveys were returned.

Survey Results

Question 1 asked for the employee's job classification. Fourteen responses were received from CAT Bus Operators, one from a Customer Service representative and six employees who identified themselves as Supervisory/Administrative personnel. Question 2 asked employees to rank the level of importance of a series of potential service improvements and

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to indicate their top five choices. As detailed in Table 2-4 the top ranked improvement was better route and schedule information. Improvements to the maintenance of transit vehicles ranked second in terms of desired improvements followed by the addition of more shelters and accessible stops.

Table 2-4. Q1 -Employee Recommended Priorities for Improvement Projects

| Priority | Improvement Project Description | Total Points |
|------------|---|--------------|
| 1 | Improve Route and Schedule Information | 53 |
| 2 | Improve Maintenance of Transit Vehicles | 46 |
| 3 | Add More Shelters and Accessible Stops | 42 |
| 4 | Operate Later Weekday Service | 29 |
| 5 | Improve On-Time Performance | 28 |
| 6 | Reduce Travel Time | 26 |
| 7 | Improve Passenger Safety and Security | 24 |
| Tied for 8 | Operate More Frequent Weekday Service | 21 |
| Tied for 8 | Operate Later Weekend Service | 21 |
| 9 | Enhance ADA Features (lifts, voice announcements, etc.) | 18 |
| 10 | Operate Earlier Weekend Service | 12 |
| 11 | Operate Earlier Weekday Service | 11 |
| 12 | Operate More Frequent Weekend Service | 10 |

Questions 3 asked Bus Operators if they experienced any problems with running time on their routes, and if so to specify the route number and time of day. Survey respondents reported the following:

- Route #28 – Too many trips into Candler Hospital and little ridership
- Route #28 – Not enough time in run
- Route #114 – Not enough time to get from St. Joseph’s Hospital to Oglethorpe Mall on all runs/all days
- Route #27 - Need more time to get from Candler and Memorial Mall and to Gwinnett St. 3:00-5:00 p.m. due to traffic congestion
- Downtown routes - difficult to make connections during rush hour

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Question 4 asked Bus Operators if there are were areas where they believed it was dangerous to operate their route. Areas identified included:

- Westlake Apartments (Route #25) where it is necessary to back the bus in order to turn around
- Westlake Apartments & Martin Luther King Blvd. between 37th St. and The Exchange

In Question 5, survey respondents were asked to share suggestions for any needed service modifications. The following suggestions were provided:

- Provide better notification and communication for schedule and route changes
- Ensure schedules and paddleboards are consistent
- Provide turn-off lanes on Abercorn
- Adjust running times
- Create preferred employer Universal Pass Program
- Right-size service to match available funding
- Develop Southside Circulator
- Ensure administrative personnel have ridden the service before making route and schedule adjustments
- Place schedules in the plastic boards at all the stops Repair the ticket machine at the Mall
- Install shelter at Chatham Plaza

Question 6 asked employees to rank the three most frequently heard passenger complaints regarding a variety of service characteristics (1= heard most frequently, 2= next most frequent, 3= third most frequent). The employee responses, summarized in Table 2-5, reveal that the most commonly heard complaint is that there are no shelters or benches. Late or early service was the second most common customer complaint.

Table 2-5. Most Frequent Customer Complaints

| Ranking | Passenger Complaints | Total Points |
|---------------|----------------------------------|--------------|
| 1 | Transit Service is Early or Late | 20 |
| 2 | Service Isn't Frequent Enough | 16 |
| Tied for 3 | Passengers Can't Get Information | 13 |
| Tied for 3 | Service Doesn't Go Where I Want | 13 |
| 4 | No Shelters or Benches | 12 |
| 5 | Need Later Evening Service | 11 |
| 7 | Need Earlier Morning Service | 10 |
| 7 | Vehicle is not Comfortable | 4 |
| 8 | Vehicle is Not Clean | 3 |
| 9 | Service Seems Unsafe | 1 |

Question 7 asked the employees to verify the validity of the customer complaints. The employees were of the opinion that the following complaints were the most valid:

Table 2-6. Validity of Customer Complaints

| Ranking | Passenger Complaints | Total Points |
|------------|----------------------------------|--------------|
| 1 | Transit Service is Early or Late | 33 |
| 2 | Service Doesn't Go Where I Want | 29 |
| 3 | Vehicle is not Comfortable | 28 |
| 4 | Service isn't Frequent Enough | 26 |
| 5 | Passengers Can't Get Information | 25 |
| Tied for 6 | Need Earlier Morning Service | 23 |
| Tied for 6 | Service Seems Unsafe | 23 |
| 7 | Vehicle is Not Clean | 22 |
| 7 | Need Later Evening Service | 21 |
| 8 | No Shelters or Benches | 19 |

Question 8 asked Bus Operators about the top three questions asked by customers when they board the bus. The most frequent customer questions are summarized below.

- Why can't I catch a bus and get to work on time?
- Why is the bus late?
- Which bus do I need to catch to get to _____?
- What time does bus _____ come?

Question 9 asked employees what they think is the greatest strength of CAT services. Employees offered the following responses:

- Ease of access, low fares and Bus Operators
- Providing transportation to those that do not own cars
- Willingness to improve
- The ability to continue to provide safe reliable transportation throughout management changes

In Question 10 employees were asked what they think is the greatest shortcoming of CAT services. The responses are summarized below.

- Constraints due to lack of funding
- Too many schedule and route changes that are not thoroughly evaluated
- Not all employees act in a professional manner
- Customers forced to wait for service in inclement weather

Question 11(a) asked "if money were no object" what parts of the area not currently served by CAT should service be added? As shown below, Pooler was the area most frequently mentioned area followed by Port Wentworth and Tybee Island.

- Pooler, Effingham, Runcon
- Port Wentworth
- More Frequent Airport Trips 6 a.m. – 2 a.m.
- Port Wentworth, Pooler, Richmond Hill
- Pooler
- Pooler
- Pooler
- Tybee Island
- Tybee Island, Garden City, Pooler, Bloomingdale, Port Wentworth
- Pooler/Tybee Island and Hilton Head
- Pooler
- Port Wentworth
- Pooler
- Pooler
- Port Wentworth, Pooler and Richmond Hill
- Shelter
- Stops with route identification, benches, shelters and trash receptacles
- Shelters every ½ mile
- Shelters and trash receptacles at Abercorn & Janet Dr. (outbound)
- Bus bench at Apache (inbound and outbound)
- Bus bench at Chevis Rd.
- Shelters at transfer points
- Shelters should be at all bus stops
- Shelters at Chatham Plaza and Barnes
- Shelters should be everywhere
- Shelters should have lighting
- Cameras

Question 11(b) asked "What additional passenger amenities should be provided and where?" Shelters were by far the most needed passenger amenity.

Employees were asked their opinion about the most needed vehicle, technology, facility or maintenance improvement. As shown below, a wide variety of responses were provided.

- Maintenance
 - Buses need to have working radios at all times
 - Radio communications
 - Bus brakes should be serviced more often
 - Facility
 - Vehicles
 - Organizational culture

- Small shuttle/circulators buses
- Enhanced Global Positioning System
- More frequent vehicle repairs
- Radios that always work
- Seatbelts on old buses should be upgraded
- Cash only fares or the option of a \$2.00 smartcard that could have money added and replenished

Employees were asked about a process by which employees could be more involved in decision-making related to schedule and policy changes. The responses to Question 12 are shown below.

- Scheduling personnel should actively involve Bus Operators in decision-making
- Provide a suggestion box and reply to all suggestions
- Information sharing
- Greater exposure to agency plans
- Provide a suggestion box for all departments
- Operators should be more involved in decision-making
- Operator input
- Give employees access to the CAT website

The final survey question was open-ended. It asked survey respondents for any other suggestions they had to increase CAT ridership. Respondents offered the following suggestions:

- Enhance routes
- Better responses to customer complaints when they contact the CAT office
- Better seating at bus stops
- The system has to show more concern, care and appreciation for the people who keep us in business
- Ban on-board cell phone use
- Provide timely and accurate information about service detours
- Be professional
- Shuttles for special events downtown
- Operator sensitivity training
- Expand service county-wide and link with Bryan and Liberty Counties
- On-time service

Chapter 3

Base Data and Analysis

Introduction

If you are an American alive in 2013, Savannah is the history of all of us, and we are the newcomers. Established as a British colony in 1733, Savannah was a utopian experiment brought forth by James Oglethorpe who deplored the conditions of debtor prisons in England. Though the experiment would ultimately fail, the people of Savannah lived under British rule, were loyal to the British during the Revolutionary War, fell to the Americans in 1779, fell to the Union during the Civil War, and then went through several economic changes in the 19th and 20th Centuries. In the 19th Century, Savannah became a center of the slave and cotton trades. After the Civil War, heavy manufacturing became a major part of the economic structure. However, the 20th Century brought hard times to the community as the once vibrant Cotton Exchange was gone and manufacturing disappeared. By the mid-20th Century, Savannah began to turn to tourism as its primary industry. Having lived through times glorious and times rock bottom, today's Savannah is a rich and diverse mixture of cultures and professions: the artist and the architect; the housekeeper and the trolley driver; the aircraft engineer and the bartender; the airman and the valet parking attendant. Together the people form an interdependent tapestry wherein no one is successful without the other. As one valet parking attendant said, "If you want to work hard in this town, you won't have a job, you'll have as many as you want."

This chapter provides a descriptive overview of Chatham County, the City of Savannah, and surrounding areas as they are today in the 21st Century. It lays the foundation for establishing the role of transit in terms of the social, economic, and cultural fabric of today's Savannah region.

Unlike centuries past, today's Savannah is described with modern data sources used to provide a more accurate profile of the community. Following the descriptive overview of the County, this chapter discusses demographic and economic conditions of Chatham County and Savannah Metropolitan Statistical Area (MSA), which includes Chatham, Effingham and Bryan counties.

Data Sources Used

The changing profile of Chatham County and the Savannah MSA cannot be captured utilizing only one source of data. Therefore, it is important to seek various sources of data that can accurately portray the demographic conditions that exist in Chatham County. During the Decennial Census process, the Census Bureau collects detailed information that then becomes available not only at the county level, but at the census block group or neighborhood level. This is vital information about a community's demographic composition, including a description of traits such as household income, auto-ownership, and age characteristics. Other more current sources of data are available that can also be used to

develop a demographic overview of current conditions in Chatham County/Savannah, MSA. Each of these data sources has limitations, as discussed below.

2010 Census

The 2010 Census has the most accurate data but is limited in scope. Data from the 2010 Census was used when possible, but other sources are used as well.

American Community Survey

The U.S. Census Bureau has recognized the challenges faced by communities when demographic data are available only on a decennial basis. In response, the Census Bureau has developed the American Community Survey (ACS). The data for the ACS are collected on an annual basis to provide community a more current snapshot of demographic conditions.

ESRI

ESRI data for 2005-2009 ACS was used to create the demographic maps in this section as the data can be mapped to the block group level, allowing a visual depiction of the location of those block groups that would most attracted to public transportation.

Study Area Setting

Chatham County is located along the east coast of Georgia. It is bordered by the State of South Carolina to the North, Effingham County, GA to the Northwest, and Bryan County, GA to the West. There are six municipalities in Chatham County (Bloomingdale, Garden City, Pooler, Port Wentworth, Savannah, Thunderbolt, and Tybee Island).

Savannah is the largest city and the county seat of Chatham County. A strategic port city in the American Revolution and during the American Civil War, Savannah is today an industrial center and an important Atlantic seaport. It is Georgia's fifth largest city and third largest metropolitan area.

Savannah's downtown area, which includes the Savannah Historic District, the Savannah Victorian Historic District and 22 park-like squares, is one of the largest National Historic Landmark Districts in the United States (designated by the U.S. government in 1966).

Demographic Information

Population Characteristics

The 2010 Census reported that Chatham County had an estimated population of 265,128. That was a population increase of approximately 14.3 percent since 2000. The U.S. Census Bureau estimates an increase of 2.4 percent for 2011. The Savannah Metropolitan Statistical Area (MSA) had a population of 347,611 in 2010.

Table 3-1. Population

| Area | 2000 | 2010 | 2011 (Estimate) | 10-Yr. Compounded Annual Growth Rate |
|----------------|-------------|-------------|--------------------|---|
| Chatham County | 232,048 | 265,128 | 271,544 | 1.3% |
| Savannah MSA | 293,000 | 347,611 | 355,576 | 1.7% |
| Georgia | 8,186,453 | 9,687,653 | 9,815,210 | 1.7% |
| United States | 281,421,906 | 308,745,538 | 311,591,917 | 0.9% |

U.S. Census Bureau, 2011 Population Estimate

Age Distribution

As illustrated in Table 3-2, the age distribution in the Savannah MSA is skewed to the young age groups, with the largest percentage of residents being ages 0-19 and 77 percent of the population being under the age of 55. Since 1990, this is trending somewhat older however, with slight increases in the 35-54, 55-74, and 75+ age groups and decreases in the younger age groups.

Table 3-2. Population Age Distribution- Savannah MSA

| Age group | 1990 | 2000 | 2010 |
|------------|-------|-------|-------|
| 0 - 19 | 30.0% | 29.2% | 27.5% |
| 20 - 34 | 25.2% | 22.0% | 23.3% |
| 35 - 54 | 24.3% | 28.6% | 26.4% |
| 55 - 74 | 15.6% | 14.8% | 17.6% |
| 75 - Older | 4.6% | 5.5% | 5.1% |

U.S. Census Bureau, 2010 Population Count

Table 3-3 displays the race and ethnic characteristics of the residents of Savannah MSA. More than 57 percent are White, 33.5 percent are Black or African American and less than 9 percent of the population is considered Hispanic, Asian, American Indian or are of two or more races.

The analysis of race and ethnic characteristics can assist a transit agency in identifying the appropriate format and media for public outreach and communication activities. Due to the low number of Hispanic residents in Savannah MSA, for example, it may not be appropriate to incorporate Spanish in customer information materials.

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Table 3-3. Population by Race- Savannah MSA

| Race | Percent |
|--|---------|
| White alone | 57.3% |
| Black or African American alone | 33.5% |
| Hispanic or Latino (of any race) | 5.0% |
| Asian alone | 2.1% |
| Native Hawaiian and Other Pacific Islander alone | 0.1% |
| American Indian and Alaska Native alone | 0.1% |
| Some other race alone | 0.2% |
| Two or more races | 1.7% |

U.S. Census Bureau, 2010 Population Count

Table 3-4 shows the population by race for each municipality within Chatham County. The three municipalities with the greatest percentages of the population that are White are Bloomingdale City, Tybee Island, and Vernonburg Town. Garden City and Port Wentworth both had the greatest percentages of the population that are Black or African American.

Table 3-4. Population by Race – Municipalities

| Geographic Area (municipalities) | Total Population | Race | | | | | | | | Hispanic or Latino (of any race) |
|----------------------------------|------------------|----------|-------|---------------------------|------------------------------------|-------|--|-----------------|-------------------|----------------------------------|
| | | One Race | | | | | | | Two or more Races | |
| | | Total | White | Black or African American | American Indian and Alaskan Native | Asian | Native Hawaiian and Other Pacific Islander | Some Other Race | | |
| Bloomingdale City | 2,713 | 98.7% | 87.7% | 7.6% | 0.3% | 1.4% | 0% | 1.7% | 1.3% | 4.7% |
| Garden City | 8,778 | 97.5% | 49.2% | 37.4% | 0.4% | 1.4% | 0.2% | 8.9% | 2.5% | 16.7% |
| Pooler | 19,140 | 97.1% | 65.4% | 25.4% | 0.2% | 3.8% | 0.1% | 2.2% | 2.9% | 6.6% |
| Port Wentworth | 5,359 | 97.4% | 61.1% | 31.4% | 0.2% | 1.7% | 0.1% | 2.8% | 2.6% | 8.2% |
| Tybee Island | 2,990 | 98.9% | 93.5% | 3.1% | 0.1% | 1.2% | 0% | 0.1% | 1.1% | 1.5% |
| Vernonburg Town | 122 | 100% | 98.4% | 0% | 0% | 1.6% | 0% | 0% | 0% | 0% |

Figure 3-1 shows the educational attainment of Savannah MSA residents. The pie chart reveals that in 2010, 81 percent of Savannah MSA residents attained at least a high school

education. Fifty-eight percent had at least some college, and 35 percent had college degrees.

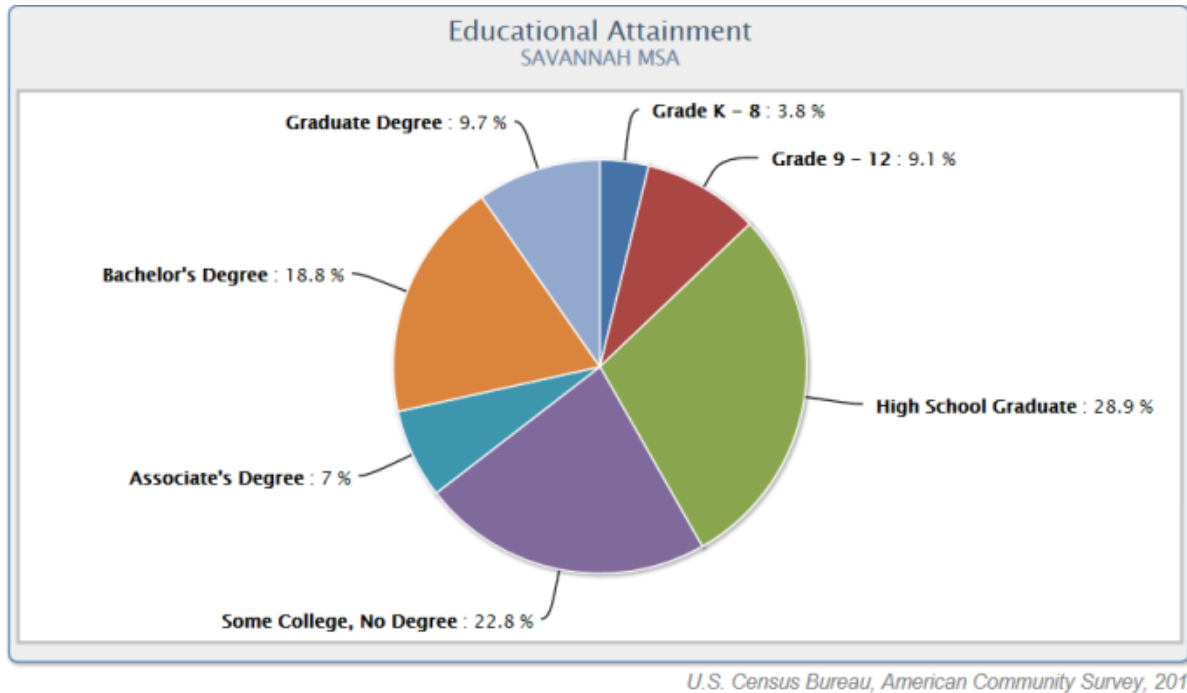


Figure 3-1. Educational Attainment - Savannah MSA

Socio-Economic Information

Household income is another factor in determining the demand and usage of public transportation. Households with less disposable income will likely drive fewer cars and spend less on transportation expenses. In the Savannah MSA, 38.5 percent of residents were under the \$35,000 per year annual income threshold in 2010. The next largest segment were households above \$75,000.

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Table 3-5. Household Income Distribution - Savannah MSA

| Income per Year | 2000 | 2000 (%) | 2010 (Estimate) | 2010 (% Estimate) |
|----------------------|---------|----------|--------------------|----------------------|
| Total Households | 111,080 | - | 130,517 | - |
| Under \$35,000 | 49,600 | 44.6% | 50,249 | 38.5% |
| \$35,000 to \$49,999 | 18,638 | 16.8% | 19,186 | 14.7% |
| \$50,000 to \$74,999 | 20,385 | 18.4% | 24,929 | 19.1% |
| \$75,000 - Above | 22,457 | 20.2% | 36,283 | 27.8% |

U.S. Census Bureau, ACS 2010. Income is in 2010 inflation-adjusted dollars

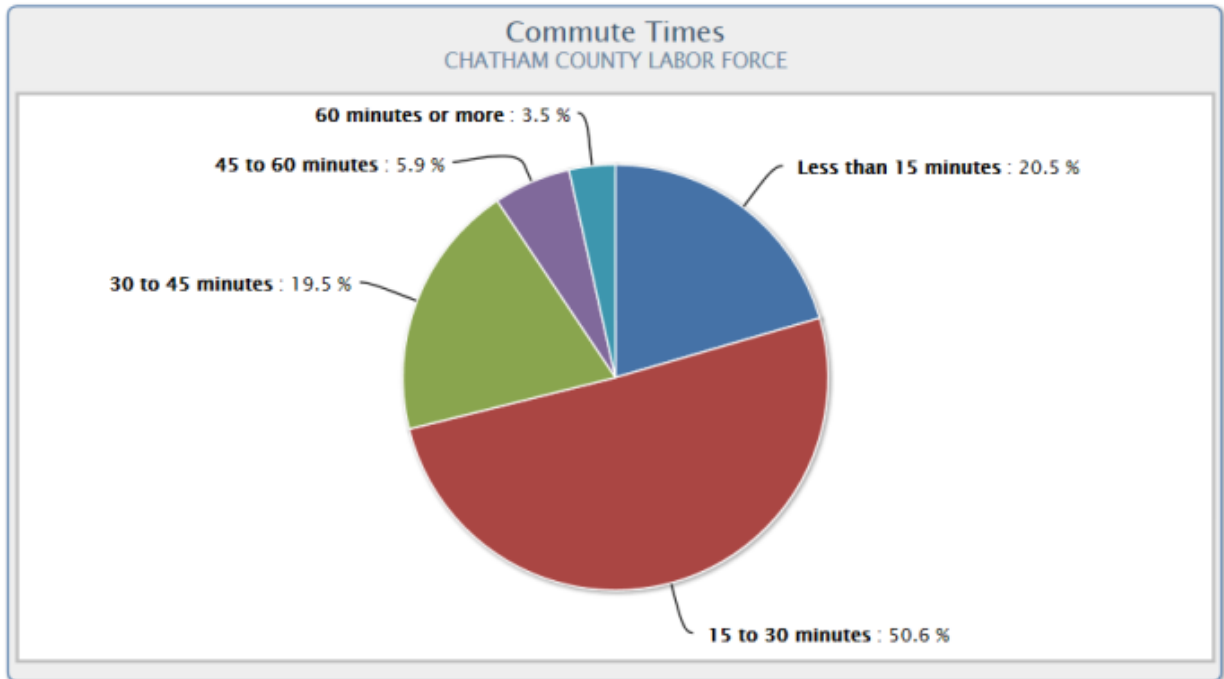
Table 3-6 shows some further income characteristics for the Savannah MSA. While median and per capita incomes have risen, they have risen at less than 2 percent annually which has not kept pace with the inflation rate.

Table 3-6. Income Characteristics - Savannah MSA

| | 2000 | 2009 | 2010 (Estimate) | % Change 2000-2010 |
|----------------------------|----------|----------|--------------------|-----------------------|
| Total Number of Households | 111,105 | 127,926 | 130,517 | 17.4% |
| Median Household Income | \$39,671 | \$46,015 | \$46,755 | 17.8% |
| Per Capita Income | \$20,752 | \$23,427 | \$24,273 | 17.0% |

U.S. Census Bureau, American Community Survey, 2010

Figure 3-2 shows commute times for the Chatham County labor force. The pie chart reveals that in 2010, 51 percent of the Chatham County workforce drove between 15 to 30 minutes to get to work. The next highest category was less than 15 minutes (20.5 percent of Chatham County workers). Just behind that was 30 to 45 minutes with 19.5 percent.



U.S. Census Bureau, 2010 American Community Survey

Figure 3-2. Commute Times

Commuter inflow and outflow are the number of work related trips in and out of Chatham County. As shown in Figure 3-3, the highest commuter inflow is from Effingham County. Liberty County has the lowest number of commuters traveling into Chatham County. Over 100,000 Chatham County residents work within the County. For those residents who commute outside the County, Liberty County is the most popular destination.

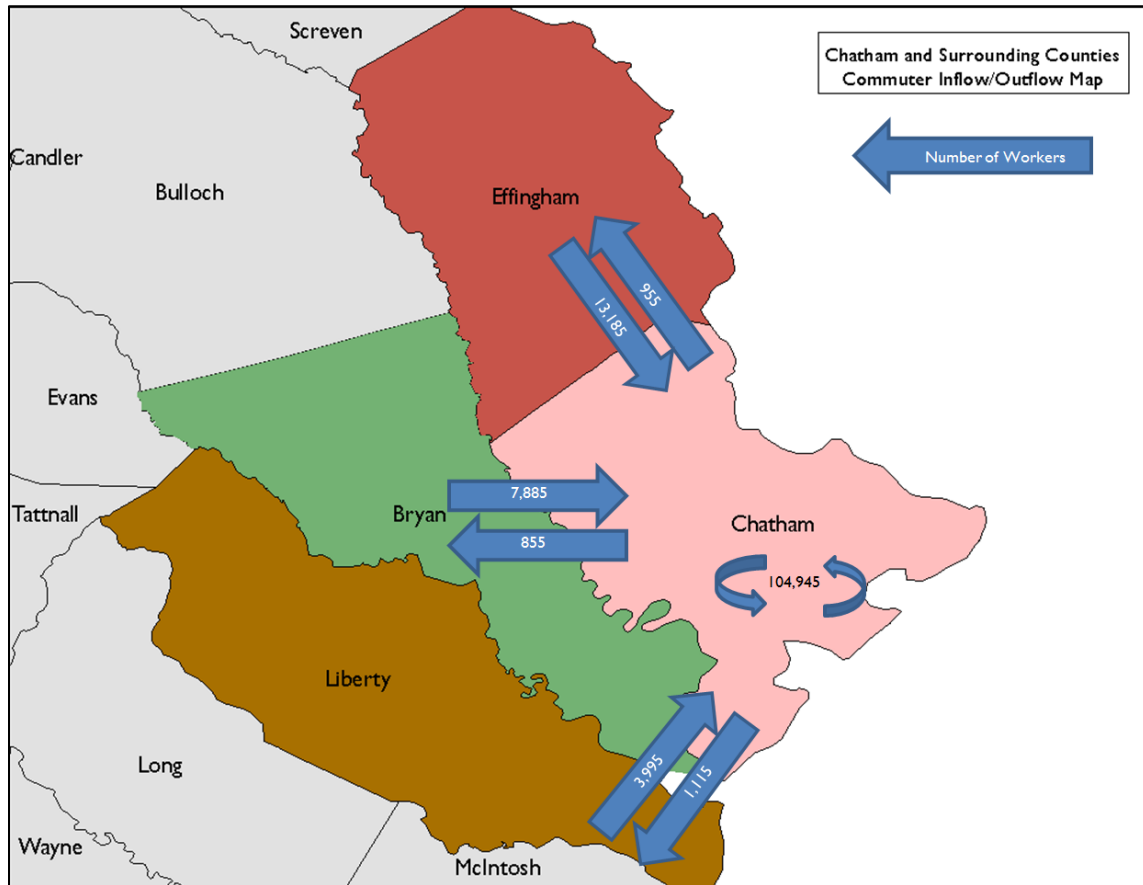


Figure 3-3. Work Commuting Patterns

Savannah's Diverse Economy



The Savannah area boasts a flourishing economy balanced on a strong foundation that includes a thriving port, increasing tourism, a stabilizing manufacturing sector, and significant military presence.

The Savannah area's manufacturing sector, with a local economic impact of \$2.3 billion, produces a variety of consumer goods that range from corporate jets to baked goods to dental equipment. The Savannah MSA's manufacturing firms create approximately 17.5% of the area's economic output as measured in GDP.

Among the high-profile manufacturers are International Paper, Georgia Pacific and Weyerhaeuser, three giants of the pulp and paper industry; Gulfstream Aerospace, a producer of world-class business aircraft; and JCB, which produces heavy construction equipment.

This segment of the economy received a boost in 2009 when the construction of a \$325 million Mitsubishi Power Systems America plant in west Chatham County was announced.

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The plant will ultimately create about 500 jobs, and its first phase was operational in late 2010.

There are many other thriving businesses, of course, and they are not all manufacturing. More and more major retailers are making Savannah the port of choice for their import distribution centers. The latest announcements have included Coby Electronics, Dorel Juvenile, and Diageo-Guinness Brands.

Two major hospital systems employ thousands. And the tourism industry, attracting more than 6 million visitors a year, is booming. New hotel construction is visible on almost every corner.

The influence of the Savannah College of Art and Design has been very positive economically, and not only through the direct impact of students and faculty living and working in Chatham County. A number of creative and technical businesses have been created by or attracted to the unique talent here. There are also 18 other colleges or universities in the area that contribute to this talent pool.

Finally, there are a number of Fortune 500 and International companies within these various economic sectors.

Savannah is also the hub of an 11-county labor draw area with a population of over 700,000 and a labor pool of nearly 350,000. Tables 3-7 through 3-9 show data on the labor force in the Savannah MSA. Approximately 62 percent of residents are in the labor force according to 2010 ACS data. The unemployment rate in the Savannah MSA is 8.3 percent which is slightly lower than Chatham County (8.5 percent), the State of Georgia (8.8 percent), and the U.S. as a whole (8.4 percent) as of March 2012.

Table 3-7. Labor Force Participation Rate – Savannah MSA

| Labor Participation Rate | Total | In Labor Force | Percent of Total |
|------------------------------|---------|----------------|------------------|
| Population 16 years and over | 274,091 | 170,819 | 62.3% |
| Male | 130,118 | 88,782 | 68.2% |
| Female | 143,973 | 82,037 | 57% |

U.S. Census Bureau, 2010 American Community Survey

Table 3-8. Labor Force Statistics – Savannah MSA

| Civilian Labor Force | March, 2012 |
|-----------------------------|--------------------|
| Labor Force | 176,238 |
| Employed | 161,584 |
| Unemployed | 14,654 |
| Unemployment Rate (%) | 8.3% |

Georgia Dept. of Labor as of 6/2012

Table 3-9. Unemployment Rates - March 2012

| Area | Unemployment Rate |
|----------------|--------------------------|
| Chatham County | 8.5% |
| Savannah MSA | 8.3% |
| Georgia | 8.8% |
| United States | 8.4% |

Georgia Dept. of Labor. Rates are not seasonally adjusted. 6/2012

Business establishments numbered 9,015 in the Savannah MSA in 2011, a net increase of 54 firms from 2010. The non-manufacturing company with the largest number of employees in the Savannah MSA as of January 2013 was Memorial Health University Medical Center as shown in Table 3-10. The manufacturing company with the largest number of employees as of January 2013 was Gulfstream Aerospace Corporation as shown in Table 3-11. Its 8,406 employees are far and away the largest of any manufacturing company in the Savannah MSA.

Table 3-10. Major Employers (Non-Manufacturing)

| Company | Service | Employment |
|---|---------------------------------|-------------------|
| Memorial Health University Medical Center | Hospital | 4,600 |
| St. Joseph's/Candler Health System | Hospital | 3,170 |
| Georgia Power Company- Coastal Region | Electric utility | 473 |
| Goodwill Industries of the Coastal Empire | Adult vocational rehabilitation | 560 |
| CSX | Railroad line | 308 |
| SouthCoast Medical Group | Medical care | 601 |
| The Landings Club | Private club | 400 |
| TMX Finance | Financial | 302 |

SEDA, January 2013

Table 3-11. Major Employers (Manufacturing)

| Company | Product/Service | Employment |
|--|--|-------------------|
| Gulfstream Aerospace Corporation (Direct & Contract Workers) | Jet aircraft, aerospace equipment | 8,406 |
| International Paper | Paper products, chemicals, corrugated containers | 650 |
| JCB Americas, Inc. | Construction equipment | 558 |
| Imperial Sugar | Refined Sugar | 450 |
| Brasseler USA, Inc. | Dental Instruments | 400 |
| Mitsubishi Power Systems Americas, Inc. | Gas turbines and steam turbines used by power plant | 315 |
| Weyerhaeuser | Bleached pulp | 300 |
| Derst Baking Company | Bread, rolls, cakes | 275 |
| Diamond Crystal Brand | Salt, Pepper, Sugar Packaging | 250 |
| Roger Wood Foods | Smoked sausage and meats | 220 |
| Kerry Ingredients & Flavours | Formulation, manufacture, & containerization of technology-based ingredients, flavors & integrated solutions | 200 |
| Savannah Morning News | Information company - paper and pixels | 200 |
| Arizona Chemical | Specialty Resins & pine-based chemicals | 175 |
| EMD Chemical | Industrial Pigments | 154 |

Source: SEDA, January 2013

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The top employer in the public sector in the Savannah MSA is the public school system as shown in Table 3-12. Ft. Stewart, a military base, is a close second. Government institutions (the City of Savannah and Chatham County) and the Savannah College of Art & Design round out the top five.

Table 3-12. Education/Government/Public Service (2011)

| Government/Agency | Service | Employees |
|--|-------------------------|-----------|
| Savannah-Chatham County Board of Education | Public schools | 4,808 |
| Ft. Stewart/Hunter Army Airfield | Civilian personnel | 4,637 |
| City of Savannah | Government | 2,795 |
| Savannah College of Art & Design | Education | *1,750 |
| Chatham County | Government | 1,600 |
| Georgia Port Authority | Ship terminal operation | 988 |
| Armstrong Atlantic State University | Education | 602 |
| US Army Corp of Engineers | Civil Engineering | 600 |
| Savannah State University | Education | 586 |

SEDA, January 2013

Port of Savannah

Georgia's deep-water ports and inland barge terminals support more than 352,000 jobs throughout the state annually and contribute \$18.5 billion in income, \$66.9 billion in revenue and \$2.5 billion in state and local taxes to Georgia's economy.



The Port of Savannah was the second busiest U.S. container port for the export of American goods by tonnage in FY2012, handling 13.27 million tons, second only to Los Angeles. It also handled 8.1 percent of the U.S. containerized cargo volume and 11.6 percent of all U.S. containerized exports.

Other records included 26.5 million cargo tons moved, an increase of more than half a million tons from FY 2011; growth of 15.6 percent in break-bulk cargo and a record 569,984 auto/machinery units moved, up more than 19 percent.

The port serves approximately 21,000 companies in all 50 states, more than 75% of which are headquartered outside of Georgia.

Savannah's Garden City Terminal and Ocean Terminal are strategic gateways to rail and road distribution networks that offer the most efficient and reliable intermodal access to markets across the U.S. Southeast and Midwest, as well as 70% of the U.S. population. Both terminals are served by Class I rail services (Norfolk Southern Railroad and CSX Transportation). In addition, Garden City Terminal's on-terminal ICTF provides unrestricted double-stack service offering two- to three-day transit times to major hubs throughout the Midwest, Gulf Coast and Southeast, including overnight service to Atlanta, the fastest of any North American port.

Immediate interstate access is available via Interstates 95 (North/ South) and 16 (East/ West), which are within minutes of both terminals. Combine this with the rail efficiencies noted above and Savannah's ports put the U.S. consumer within fast, easy reach.

With Savannah's earned recognition as "the retail port," 17 high-volume retail import distribution centers in the Savannah area are taking advantage of the port's intermodal strength, as well as depth in ocean carrier services, to satisfy just-in-time inventory requirements. Together, Savannah-area distribution centers combine to cover over 14 million square feet and generate in excess of 500,000 TEUs annually.

Educational Institutions

Georgia Tech Savannah

Georgia Tech Savannah is a satellite campus of the Atlanta-based Georgia Institute of Technology. It is located in Savannah, Georgia. Georgia Tech is known throughout the state, the nation, and the world for its highly ranked programs. The campus has distributed-learning capable classrooms, laboratories, faculty and staff offices, as well as a student center, cafe, library and learning commons and a bookstore. In addition GT-S is the home to the regional offices of the Georgia Tech Economic Development Institute and the Advanced Technology Development Center, Georgia Tech Enterprise Innovation Institute.

Armstrong Atlantic

Situated on the Atlantic coast in Savannah, Georgia, Armstrong Atlantic State University is a dynamic public university known for excellent arts and sciences along with outstanding professional programs. With approximately 7,500 students, Armstrong is small enough to foster a genuine sense of community and large enough to offer more than 100 academic programs. Armstrong is part of the University System of Georgia.

Savannah State University

For 122 years, Savannah State University has been an important part of higher education. As the oldest institution of higher learning in the historic city of Savannah, SSU has served this community with distinction while meeting the educational needs of an increasingly diverse student population.

The 200+ acre campus is by far the most picturesque in the state of Georgia. Beneath the beauty and splendor is a vibrant residential campus of quality collegiate life: relevant academic majors, engaging lectures, cutting-edge research, quality student-faculty engagement and a nurturing environment.

Savannah Technical College

Savannah Technical College, the region's leading provider of market-driven, quality technical and adult education, has been meeting the needs of its community for more than three-quarters of a century. Building on a tradition of partnership, pride and service, the college serves nearly 5,000 students each semester in Bryan, Chatham, Effingham and Liberty Counties, offering more than 70 certificate, diploma and associate degree programs in fields ranging from automotive technology to surgical technology and from marketing to computer information systems to culinary arts and beyond.

Working closely with its business partners, the College develops programs that are designed to meet the changing needs of the regional economy with the flexibility and creativity necessary to sustain the workforce of the future. Through its commitment to quality, service and responsiveness to its community, Savannah Technical College will remain an integral force in the future growth and development of southeast Georgia.

Savannah College of Arts and Design (SCAD)

In Savannah, Ga., SCAD offers a full university experience in a charming historic environment abundant with parks and near the beautiful beaches of the coastal South.

Nearly 70 SCAD facilities, encompassing more than 2 million square feet, are woven into the fabric of one of the largest and most renowned National Historic Landmark districts in the United States.

SCAD has been recognized for adaptive reuse and urban revitalization by the National Trust for Historic Preservation, the American Institute of Architects and the International Downtown Association.

The Savannah experience includes championship intercollegiate athletics, a variety of intramurals and numerous student organizations, as well as signature SCAD events such as the Savannah Film Festival, Sidewalk Arts Festival and student Fashion Show.

Savannah Tourism

The tourism industry continues to be one of the largest economic drivers of Savannah. Travel to Savannah remains strong as the readers of Travel+Leisure Magazine ranked Savannah among the “Top 10 Cities in the U.S. and Canada” and Facilities & Destinations Magazine recognized Savannah with a “Top Destination Award.”



Savannah’s tourism and hospitality industry has truly established itself as one of the region’s primary economic drivers along with the Georgia Port and a strong manufacturing and military presence. Recently named “Best Southern City” by Southern Living Magazine, Savannah now enjoys visitors from all over the world.

Savannah exudes an authentic beauty and charm that not many destinations can match. Some of the top reasons people visit Savannah: beauty/visual appeal, variety of restaurants and shops, unique/relaxing place to visit.

Savannah attracted more than 12 million visitors in 2011 with over half staying overnight. Currently 62 percent of visitors stay approximately 2.2 nights. Eighty three percent are considered from the “leisure” segment, with the remaining 17 percent traveling to the area for business or meetings/conventions.

Almost half of visitors come for the historic and cultural experience with another 10 percent visiting for Savannah’s coastal cuisine and nearly 7 percent for outdoor and eco-friendly activities.

Visitor spending in 2011 exceeded \$1.9 billion dollars with 38 percent for lodging, 26 percent for food and beverage, 17 percent for retail, 10 percent for recreation and the remaining 9 percent for transportation.

Of Savannah’s visitors in 2011, 76 percent were adults (18 or older) with approximately 44 percent in the age group of 25-44 and another 44 percent ages 45-64.

Savannah is full of activity year-round. The busiest months in terms of hotel occupancy are March, April, May and June. Visitors to Savannah are loyal: 60% return, half of whom return four or more times.

Savannah also enjoys year-round visitation with 28 percent coming during January-March, 30 percent during April-June, 24 percent during July-September and 18% during October-

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

December. Top feeder market states traditionally include Georgia, Florida, the Carolinas, Tennessee, Ohio, Virginia, New York and New Jersey. International visitors come primarily from Canada, the United Kingdom, Germany, Italy and France, with a growing presence from South America and Asia.

Table 3-13. Tourism’s Impact on Savannah and Chatham County

| Description | 2007 | 2008 | 2009 | 2010 | 2011 |
|-----------------------------|-----------------|-----------------|------------------------------|-----------------------------|-----------------------------|
| Number of Lodging Rooms (1) | 13,110 | 13,898 | 14,745 | 14,893 | 15,026 |
| Person Stays (2) | 6.63 Million* | 6.15 Million* | 6.13 Million^ (Overnight) | 6.3 Million^ (Overnight) | 6.8 Million^ (Overnight) |
| | | | 5.1 Million^ (Day-Trip) | 5.1 Million^ (Day-Trip) | 5.3 Million^ (Day-Trip) |
| Room Night Demand (1) | 2.886 Million | 2.805 Million | 2.832 Million | 3.240 Million | 3.343 Million |
| Direct Spending (2) | \$1.98 Billion* | \$1.94 Billion* | \$1.63 Billion^ | \$1.7 Billion | \$1.94 Million |
| Room Tax Revenue (3) | \$14.37 Million | \$14.04 Million | \$12.99 Million | \$14.4 Million | \$15.5 Million |

Sources: Visit Savannah

(1) Smith Travel Research – Chatham County

(2)* D. K. Shifflet and Associates, Ltd. – City of Savannah Only

(2) ^ Longwoods International

(3) City of Savannah/Chatham County/Tybee Island

Savannah Military Presence

Savannah, along with neighboring southeast Georgia and coastal South Carolina, has an active military presence supported by a long military history.

The city is the site of Hunter Army Airfield, a vital part of the Fort Stewart complex, which is the largest military installation east of the Mississippi River. Boasting the U.S. Army’s longest runway in the eastern United States, Hunter serves as a location from which troops and equipment based at Hunter and Fort Stewart can be deployed rapidly throughout the world. Fort Stewart, with headquarters located 40 miles southwest of Savannah in Liberty County, is the home of the 3rd Infantry Division. The two installations accounted for a payroll of more than \$1.38 billion in 2009.

Savannah is also home to the 165th Airlift Wing of the Georgia Air National Guard, as well as units of the Coast Guard and other components of the Air Guard.

Table 3-14. Military Presence

| Fort Stewart Army Base (Liberty County) and Hunter Army Airfield (Savannah) | Persons |
|--|----------------|
| Military Personnel | 25,099 |
| Civilian Employment | 4,719 |
| Military Dependents | 35,809 |
| Military Personnel Turnover (FY 2011) | 4,182 |
| Military Retirees (within 50 mile radius) | 8,953 |

Fort Stewart/HAAF Command Data Summary FY 2011

Chapter 4

Existing Services and Performance Evaluation

Fares and Revenue

Since 2003, the base cash fare for a single ride has risen twice. In 2003, the base fare was \$.75. In 2004, the fare was raised to \$1.00 and in 2010 to \$1.50. Teleride fares remained steady between 2003 and 2009 at \$1.20 per one way trip. In 2010, the fare for a single ride on Teleride was raised to \$1.80. Between FY 2003 and FY 2008, the ferry service had a cash fare of \$1.00; in 2009 the fare for ferry services had been dropped and the service has been free ever since. Table 4-1 below displays the full fare history for CAT since 2003.

Table 4-1. CAT Fare Policy

| YEAR | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Fare Type | | | | | | | | | |
| Full Fare | \$0.75 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.50 | \$1.50 |
| Adult Ticket | \$0.75 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.50 | \$1.50 |
| Adult Booklets (10 Tickets) (now a pass) | \$7.50 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | \$15.00 | \$15.00 |
| Senior /Disabled Tkns (20 Tokens) (now a pass) | \$7.50 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | \$10.00 | N/A | N/A |
| Senior/Disabled Cash | \$0.37 | \$0.50 | \$0.50 | \$0.50 | \$0.50 | \$0.50 | \$0.50 | \$0.75 | \$0.75 |
| Swipe Card (1) Week | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$16.00 | \$16.00 |
| Swipe Card (1) Month | NA | \$48.00 | \$48.00 | \$48.00 | \$48.00 | \$48.00 | \$48.00 | \$60.00 | \$60.00 |
| Teleride Fare (one way) | \$1.20 | \$1.20 | \$1.20 | \$1.20 | \$1.20 | \$1.20 | \$1.20 | \$1.80 | \$1.80 |
| Teleride Booklets (10 Tickets) | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$12.00 | \$18.00 | \$18.00 |
| Water Ferry Full Fare | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | \$1.00 | FREE | FREE | FREE |
| Water Ferry Senior/Disabled | \$0.50 | \$0.50 | \$0.50 | \$0.50 | \$0.50 | \$0.50 | FREE | FREE | FREE |
| Charter | \$60.00 | \$60.00 | \$70.00 | \$70.00 | \$70.00 | \$70.00 | \$70.00 | \$70.00 | \$70.00 |
| Transfers | | | | | | | | FREE | FREE |
| ***NEW All-day Multiple Ride Card | | | | | | | | \$3.00 | \$3.00 |

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In the FY 2011 budget, cash fares were estimated at \$2.7 million, about 79 percent of all farebox revenues. Cash fares for seniors and people with disabilities account for 4.0 percent of all cash fares. Swipe cards are the most popular form of fare media with forecast revenue of \$349,000, or 10.1 percent of all fares paid. Overall, total passenger fares have increased 8.6 percent from \$3.175 million in FY 2007 to \$3.449 million in FY 2011. Table 4-2 displays CAT's fare revenue history.

Table 4-2. Fare Revenue

| OPERATING/GENERAL FUND ACCOUNTS | FY 2007 ACTUAL | FY 2008 BUDGET | FY 2008 ACTUAL | FY2009 BUDGET | FY2009 ACTUAL | FY2010 ADOPTED BUDGET | FY2011 PROPOSED BUDGET | % OF TOTAL | % CHANGE FROM 2010 BUDGET |
|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|------------------------|----------------|---------------------------|
| FAREBOX REVENUE: | | | | | | | | | |
| FULL FARES | \$2,517,413 | \$2,525,000 | \$2,477,018 | \$2,554,915 | \$2,365,463 | \$2,706,545 | \$2,710,000 | 78.58% | 0.13% |
| ELDERLY/DISABLED | \$139,632 | \$155,000 | \$134,045 | \$135,620 | \$112,057 | \$138,182 | \$139,000 | 4.03% | 0.59% |
| CASH ADVANCE TICKETS | \$166,856 | \$175,000 | \$120,835 | \$122,565 | \$102,883 | \$123,600 | \$123,600 | 3.58% | 0.00% |
| SWIPE CARDS | \$284,194 | \$290,000 | \$311,450 | \$302,341 | \$307,104 | \$349,582 | \$349,000 | 10.12% | -0.17% |
| MONTHLY SWIPE CARDS | \$67,032 | \$60,000 | \$75,358 | \$70,534 | \$128,921 | \$125,376 | \$127,000 | 3.68% | 1.30% |
| CHAT. CO. LIBRARY | \$0 | \$0 | \$2,000 | \$2,000 | \$2,928 | \$0 | \$0 | 0.00% | 0.00% |
| TOTAL FAREBOX REV | \$3,175,127 | \$3,205,000 | \$3,120,706 | \$3,187,975 | \$3,019,356 | \$3,443,285 | \$3,448,600 | 100.00% | 0.15% |

CAT Service Area

A vast majority of current CAT services are found in four areas: the Savannah Historic District, Midtown, Southside, and Eastside/Thunderbolt. CAT also operates at least one route in West Chatham, Southwest Chatham, and Islands/Tybee. The incorporated areas of Garden City, Thunderbolst and Vernonburg are members of the Authority and have a limited amount of transit service. Figure 4-1 below displays a sub-area map of the Savannah/Chatham County market.

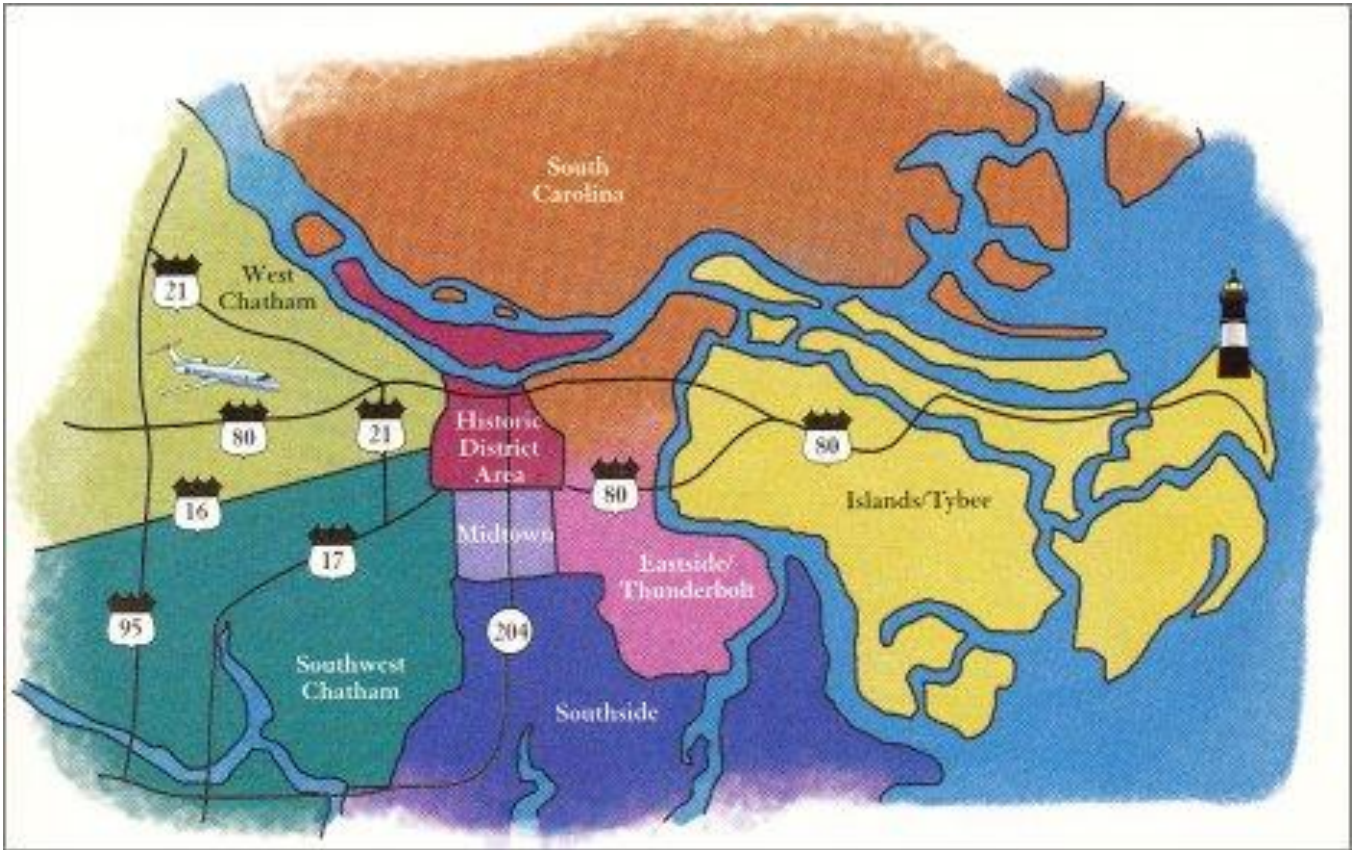


Figure 4-1. Service Sub Area Map

Administration, Operations and Maintenance Facility

The Administration, Operations and Maintenance facility is currently being refurbished. When completed the facility located at 900 E. Gwinnett Street will cover 3.25 acres and house the Administrative offices as well as the Operations and Maintenance Departments. Total square footage for the facility will be approximately 45,250 square feet. The Administrative offices will be located on the first and second floors and include a training room and a library. The vehicle maintenance area includes a bus wash and eight maintenance bays. The Operations department includes a fitness center, break room, quiet room, and a control center. The total number of parking spaces for buses will include 58 spaces for 40 foot buses and 16 spaces for 30 foot buses. There will be two parking spots for the disabled and eight visitor parking spots. Completion of the facility is expected by November 2013. A conceptual site plan for the re-modeled facility is shown in Figure 4-2 below.



Figure 4-2. Future Administration, Operations and Maintenance Facility-Architectural Site Plan

Bus Fleet

CAT fixed route bus fleet consists of a total of 72 vehicles. Sixty-six are low-floor buses and two of these vehicles are listed as inactive. The average age of the fleet is 6.01 years old. All of the fixed route vehicles are displayed in Tables 4-3 and 4-4 below.

Paratransit Fleet

CAT paratransit vehicles consist of 35 vehicles and are listed in Table 4-5 below. The average age of the fleet is 3.28 years old.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 4-3. CAT Fixed-Route Fleet

| Unit Number | LTD Miles as 7/12/12 | Avg. LTD Miles | Year | Age of Unit in Years | Model |
|----------------------|----------------------|----------------|------|----------------------|-------------------------------|
| 501 | 95,081 | | 2005 | 7 | Goshen E450 Ford |
| 502 | 62,396 | | 2005 | 7 | Goshen E450 Ford |
| 503 | 60,004 | | 2005 | 7 | Goshen E450 Ford |
| Total Miles on fleet | 217,481 | 72,494 | | | |
| 601 | 222,644 | | 2006 | 6 | 29 ft. Gillig Lowfloor |
| 602 | 288,325 | | 2006 | 6 | 29 ft. Gillig Lowfloor |
| 603 | 225,930 | | 2006 | 6 | 29 ft. Gillig Lowfloor |
| 604 | 261,039 | | 2006 | 6 | 29 ft. Gillig Lowfloor |
| 605 | 206,729 | | 2006 | 6 | 29 ft. Gillig Lowfloor |
| Total Miles on fleet | 1,204,667 | 240,933 | | | |
| 606 | 385,130 | | 2006 | 6 | 35 ft. Gillig Lowfloor |
| 607 | 369,638 | | 2006 | 6 | 35 ft. Gillig Lowfloor |
| 608 | 371,318 | | 2006 | 6 | 35 ft. Gillig Lowfloor |
| 609 | 366,360 | | 2006 | 6 | 35 ft. Gillig Lowfloor |
| 610 | 322,294 | | 2006 | 6 | 35 ft. Gillig Lowfloor |
| Total Miles on fleet | 1,814,740 | 362,948 | | | |
| 801 | 93,578 | | 2007 | 5 | ELDorado |
| 802 | 90,559 | | 2007 | 5 | ELDorado |
| Total Miles on fleet | 184,137 | 92,069 | | | |
| 901 | 106,316 | | 2009 | 3 | 29 ft. Gillig Hybrid Lowfloor |
| 902 | 106,401 | | 2009 | 3 | 29 ft. Gillig Hybrid Lowfloor |
| Total Miles on fleet | 212,717 | 106,359 | | | |
| 903 | 139,755 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 904 | 144,335 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 905 | 142,849 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 906 | 152,719 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 907 | 153,224 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 908 | 140,695 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 909 | 154,114 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 910 | 150,212 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| 911 | 140,952 | | 2009 | 3 | 35 Ft. Gillig Hybrid Lowfloor |
| Total Miles on fleet | 1,318,855 | 146,539 | | | |
| 1101 | 89,290 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1102 | 82,554 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1103 | 86,480 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1104 | 84,139 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1105 | 84,732 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1106 | 77,713 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1107 | 88,955 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1108 | 84,272 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| 1109 | 84,430 | | 2011 | 1 | 35 Ft. Gillig Hybrid Lowfloor |
| Total Miles on fleet | 762,565 | 84,729 | | | |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 4-4. Cat Fixed-Route Fleet (Continued)

| Unit Number | LTD Miles as 7/12/12 | Avg. LTD Miles | Year | Age of Unit in Years | Model |
|----------------------------|----------------------|----------------|------|----------------------|-------------------------------|
| 3001 | 536,090 | Inactive | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3002 | 556,563 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3003 | 645,828 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3004 | 469,390 | Inactive | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3005 | 599,248 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3006 | 506,494 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3007 | 475,857 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3008 | 586,024 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3009 | 554,490 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3010 | 538,615 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3011 | 470,336 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3012 | 538,215 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3013 | 592,712 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3014 | 487,307 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3015 | 506,818 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3016 | 495,726 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3017 | 550,176 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3018 | 512,894 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3019 | 334,183 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3020 | 504,676 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3021 | 566,996 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3022 | 517,842 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3023 | 585,785 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3024 | 451,888 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3025 | 459,599 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3026 | 477,051 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3027 | 575,431 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3028 | 453,252 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3029 | 459,691 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3030 | 503,399 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| 3031 | 421,366 | | 2003 | 9 | 35 ft. Gillig Lowfloor |
| Total Miles on fleet | 15,933,942 | 513,998 | | | |
| 9607 | 881,781 | Inactive | 1996 | 16 | 35 ft. Gillig Phantom |
| Total Miles on fleet | 881,781 | 881,781 | | | |
| 1110 | 31295 | | 2011 | 1 | 40 Ft. Gillig Hybrid Lowfloor |
| 1111 | 28965 | | 2011 | 1 | 40 Ft. Gillig Hybrid Lowfloor |
| 1112 | 27041 | | 2011 | 1 | 40 Ft. Gillig Hybrid Lowfloor |
| 1113 | 30014 | | 2011 | 1 | 40 Ft. Gillig Hybrid Lowfloor |
| 1114 | 29507 | | 2011 | 1 | 40 Ft. Gillig Hybrid Lowfloor |
| Total Miles on fleet | 146822 | 29364 | | 433 | |
| Grand Total Miles on fleet | 22,677,707 | 338,473 | | 6.01 | |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 4-5. CAT Paratransit Fleet

| Unit Number | LTD Miles as 7/12/12 | Avg. LTD Miles | Year | Age of Unit in Years | Model |
|----------------------------|----------------------|----------------|------|----------------------|-----------------------------|
| 1001T | 113,019 | | 2010 | 2 | ELDorado,Aerotech Chevy 200 |
| 1002T | 113,748 | | 2010 | 2 | ELDorado,Aerotech Chevy 201 |
| 1003T | 114,863 | | 2010 | 2 | ELDorado,Aerotech Chevy 202 |
| 1004T | 87,661 | | 2010 | 2 | ELDorado,Aerotech Chevy 203 |
| 1005T | 107,164 | | 2010 | 2 | ELDorado,Aerotech Chevy 204 |
| 1006T | 103,626 | | 2010 | 2 | ELDorado,Aerotech Chevy 205 |
| Total Miles | 640,081 | 106,680 | | | |
| 600T | 194,118 | | 2006 | 6 | Goshen E450 Ford |
| 601T | 187,929 | | 2006 | 6 | Goshen E450 Ford |
| 602T | 183,854 | Inactive | 2006 | 6 | Goshen E450 Ford |
| 603T | 181,981 | | 2006 | 6 | Goshen E450 Ford |
| 604T | 221,760 | | 2006 | 6 | Goshen E450 Ford |
| 605T | 172,114 | | 2006 | 6 | Goshen E450 Ford |
| 606T | 177,529 | | 2006 | 6 | Goshen E450 Ford |
| 607T | 192,723 | | 2006 | 6 | Goshen E450 Ford |
| Total Miles | 1,512,008 | 189,001 | | | |
| 1110T | 35,592 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1111T | 40,629 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1112T | 34,194 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1113T | 36,344 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1114T | 37,001 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1115T | 35,485 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1116T | 43,208 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1117T | 25,440 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1118T | 33,181 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1119T | 25,772 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1120T | 17,553 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1121T | 15,957 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1122T | 31,572 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| 1123T | 23,073 | | 2011 | 1 | ELDorado,Aerotech Chevy |
| Total Miles | 435,001 | 31,072 | | | |
| 805T | 262,984 | Inactive | 1998 | 14 | Goshen/ Ford |
| Total Miles | 262,984 | 262,984 | | 88 | |
| Grand Total CAT Fleet | 2,850,074 | 98,278 | | 3.03 | |
| 701T | 145,350 | | 2007 | 5 | Chev Star Trans |
| 702T | 149,179 | | 2007 | 5 | Chev Star Trans |
| 704T | 137,444 | | 2007 | 5 | Chev Star Trans |
| 705T | 133,631 | | 2007 | 5 | Chev Star Trans |
| 706T | 145,542 | | 2007 | 5 | Chev Star Trans |
| 707T | 112,785 | | 2007 | 5 | Chev Star Trans |
| Total Miles | 823,931 | 137,322 | | 30 | |
| Grand Total Veolia Fleet | 823,931 | 137,322 | | 4.285714286 | |
| Grand Total Teleride Fleet | 3,674,005 | 104,972 | | 3.28 | |

Downtown Savannah Intermodal Facility

The new Downtown Savannah Intermodal Facility was completed in the fall of 2013. It accommodates 14 bus bays for CAT, four bus bays for Greyhound, one Kiss-n-Ride parking spot for paratransit, and one bus bay for the three downtown shuttle routes. There will also be a location for a streetcar stop in the future. Other amenities include:

- A covered transfer platform with built-in lighting for safe, secure and efficient off-street boarding and alighting,
- Climate-controlled facility open 24/7 for transit patrons, commuters and employees; cool during summer months and warm during winter months,
- Indoor waiting area, ticketing, and passenger services including Wi-Fi,
- Opportunity for utility companies and retail services, such as a coffee shop, bakery, etc., to be located in this facility,
- Tourist information available on-site and the Visitors Information Center 3 blocks away,
- Art in Transit, cultural and historic display areas, and
- Additional CAT administrative office and meeting areas.
- An artist's rendering of the Downtown Savannah Intermodal Facility can be seen in Figure 4-3 below.



Figure 4-3. New Downtown Savannah Intermodal Facility

Existing Fixed Route Services

Route 2-West Chatham

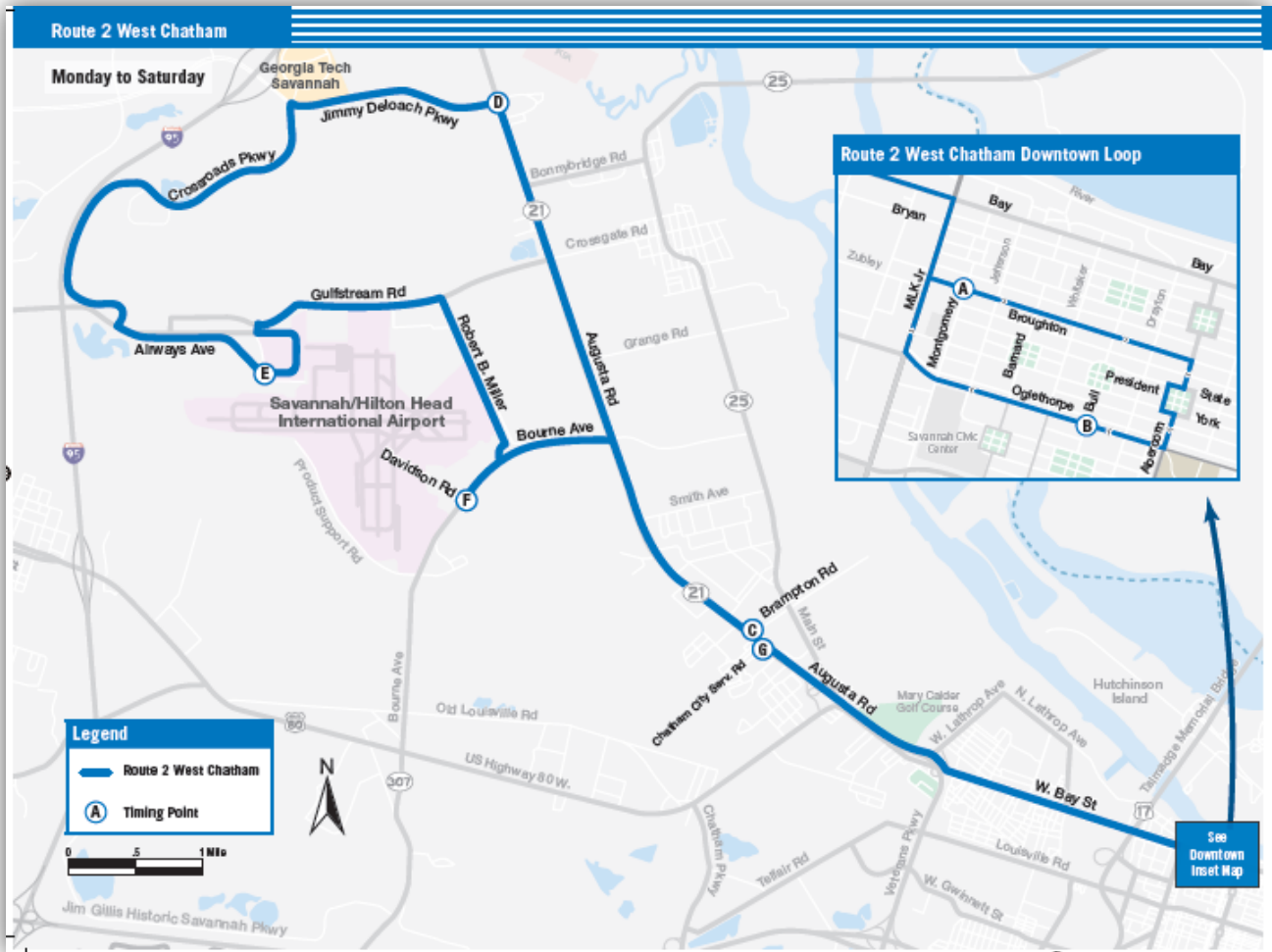
The West Chatham route serves between the Savannah Downtown Historic District and Crossroads Parkway along Augusta Road and also serves the Savannah Hilton Head International Airport. This route provides service on Mondays through Saturdays with service on holidays (MLK Day, Memorial Day, 4th of July, and Labor Day) *CAT does not operate on Thanksgiving, Christmas or New Year's day.* Existing service characteristics can be seen below in Table 4-6. The route map can be seen below in Exhibit 4-1.

Table 4-6. Route 2-West Chatham - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------|--|--------------------------|
| Monday through Saturday | 5:37 am to 9:58 am and from 1:00 pm to 6:58 pm | Every 60 minutes |
| Holidays | 5:40 am to 9:45 am and from 2:30 pm to 5:24 pm | Approx. every 90 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Exhibit 4-1. Route 2-West Chatham - Route Map



Route 3A-Augusta Ave/Garden City

The Augusta Ave/Garden City route serves between the Savannah Downtown Historic District and Brampton Road. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-7. The route map can be seen below in Exhibit 4-2.

Table 4-7. Route 3A-Augusta Ave/Garden City - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|---|-------------------|
| Monday through Friday | 5:35 am to 10:28 pm | Every 30 minutes |
| Saturdays | 5:35 am to 12:15 am | Every 60 minutes |
| Sundays | 7:35 am to 7:23 pm | Every 120 minutes |
| Holidays | 5:45 am to 10:23 am and from 2:30 pm to 5:23 pm | Every 60 minutes |



Exhibit 4-2. Route 3A-Augusta Ave/Garden City - Route Map

Route 3B-Augusta Ave/Garden City/Hudson Hill

The Augusta Ave/Garden City/Hudson Hill route serves between the Savannah Downtown Historic District and 3rd and Minus Streets. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-8. The route map can be seen below in Exhibit 4-3.

Table 4-8. Route 3B-Augusta Ave/Garden City/Hudson Hill - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|-------------------|
| Monday through Friday | 5:45 am to 12:22 am | Every 60 minutes |
| Saturdays | 6:50 am to 11:28 pm | Every 60 minutes |
| Sundays | 8:30 am to 6:32 pm | Every 180 minutes |
| Holidays | 6:00 am to 9:48 pm | Every 60 minutes |



Exhibit 4-3. Route 3A-Augusta Ave/Garden City/Hudson Hill - Route Map

Route 4-Barnard

The Barnard Hill route serves between the Savannah Downtown Historic District and Chatham Plaza. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-9. The route map can be seen below in Exhibit 4-4.

Table 4-9. Route 4-Barnard - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 5:45 am to 10:19 pm | Every 30 minutes |
| Saturdays | 5:45 am to 11:24 pm | Every 30 minutes |
| Sundays | 8:35 am to 7:17 pm | Every 60 minutes |
| Holidays | 5:45 am to 9:32 pm | Every 60 minutes |



Exhibit 4-4. Route 4-Barnard - Route Map

Route 6-Cross Town

The Cross Town route serves between Hodgson Memorial/Mall Way and the Super Wal-Mart on Highway 17 with service to the Veterans Administration Clinic and the Savannah Mall. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-10. The route map can be seen below in Exhibit 4-5.

Table 4-10. Route 6-Cross Town - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|-------------------|
| Monday through Friday | 5:55 am to 10:05 pm | Every 60 minutes |
| Saturdays | 6:45 am to 10:15 pm | Every 60 minutes |
| Sundays | 7:50 am to 7:34 pm | Every 120 minutes |
| Holidays | 6:45 am to 8:05 pm | Every 90 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

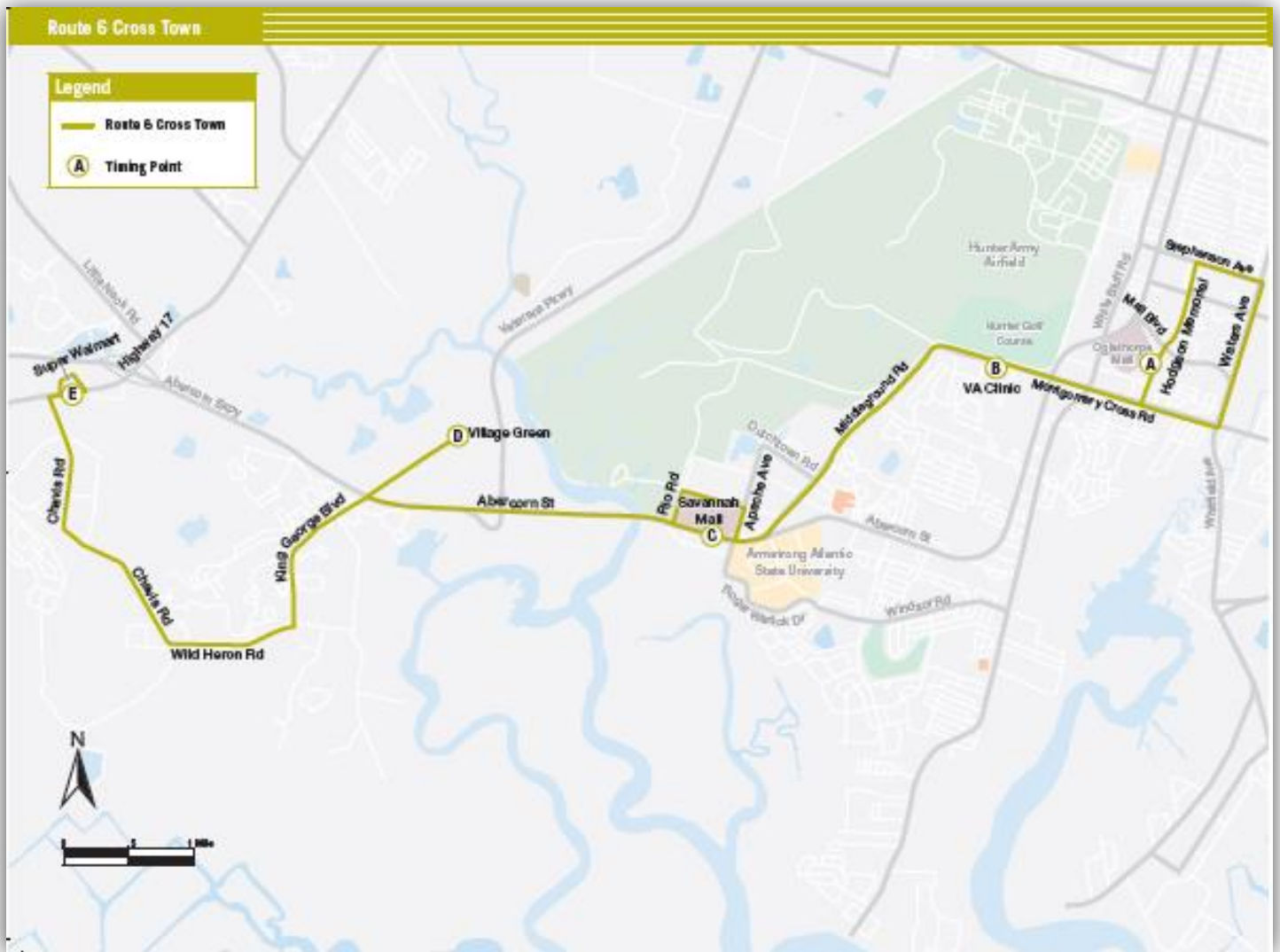


Exhibit 4-5. Route 6-Cross Town - Route Map

Route 10-East Savannah

The East Savannah route serves between the Savannah Downtown Historic District and Wilmington Island with service to the Island Towne Centre. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-11. The route map can be seen below in Exhibit 4-6.

Table 4-11. Route 10-East Savannah - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|-------------------|
| Monday through Friday | 5:54 am to 11:02 pm | Every 60 minutes |
| Saturdays | 5:54 am to 12:01 am | Every 60 minutes |
| Sundays | 7:32 am to 7:01 pm | Every 90 minutes |
| Holidays | 5:54 am to 8:24 pm | Every 120 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

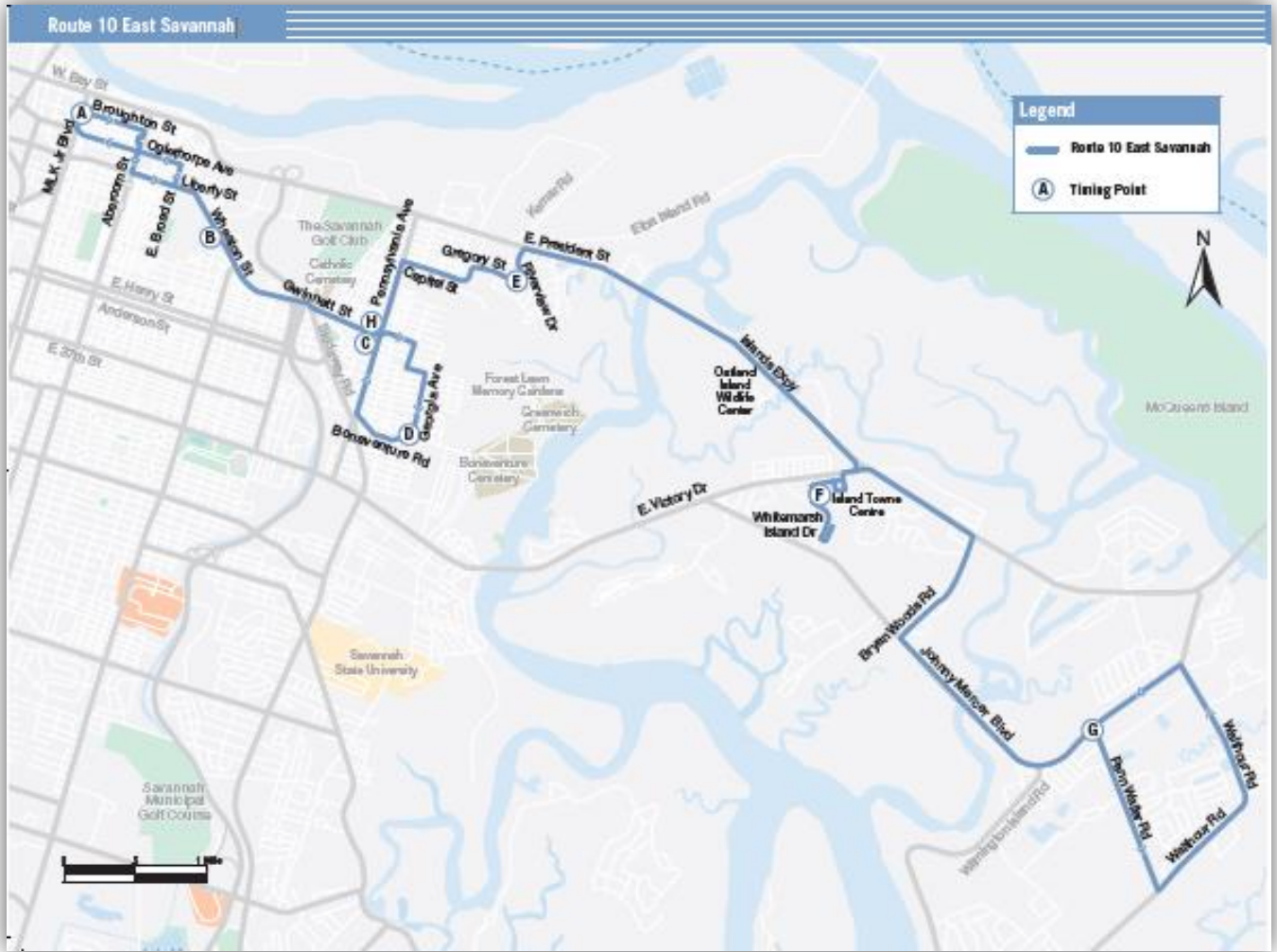


Exhibit 4-6. Route 10-East Savannah - Route Map

Route 11-Candler

The Candler route serves between the Savannah Downtown Historic District and the Wal-Mart on Montgomery Cross Road with service to Candler Hospital. This route provides service Mondays through Fridays and on holidays. Existing service characteristics can be seen in Table 4-12. The route map can be seen below in Exhibit 4-7.

Table 4-12. Route 11-Candler - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|---|------------------|
| Monday through Friday | 5:45 am to 9:57 am and from 2:30 pm to 5:27 pm | Varies |
| Holidays | 8:30 am to 11:30 am and from 2:30 pm to 5:30 pm | Every 90 minutes |

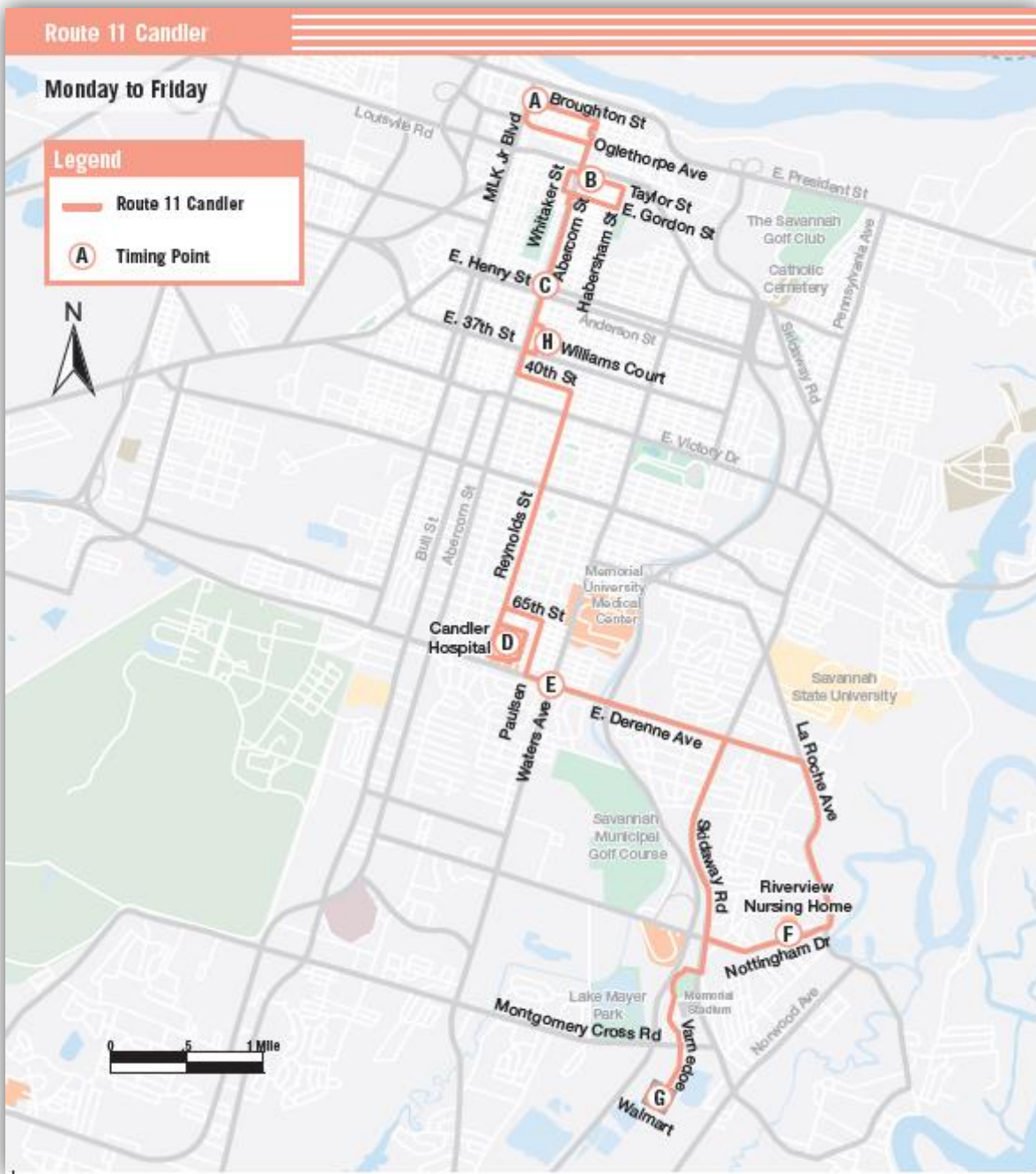


Exhibit 4-7. Route 11-Candler – Route Map

Route 12-Henry

The Henry route serves between the Savannah State University and 51st Street and Hopkins Street. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-13. The route map can be seen below in Exhibit 4-8.

Table 4-13. Route 12-Henry - Existing Service Characteristics.

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 5:55 am to 11:33 pm | Every 30 minutes |
| Saturdays | 6:23 am to 10:33 pm | Every 30 minutes |
| Sundays | 8:35 am to 6:33 pm | Every 60 minutes |
| Holidays | 6:05 am to 9:30 pm | Every 60 minutes |



Exhibit 4-8. Route 12-Henry - Route Map

Route 13-Coffee Bluff

The Coffee Bluff route serves between Hodgson Memorial/Mall Way and Coffee Bluff Marina. This route provides service Mondays through Saturdays and on holidays. Existing service characteristics can be seen in Table 4-14. The route map can be seen below in Exhibit 4-9.

Table 4-14. Route 13-Coffee Bluff - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------|--|------------------|
| Monday through Saturday | 6:30 am to 9:35 am and from 2:30 pm to 6:25 pm | Every 60 minutes |
| Holidays | 7:00 am to 8:42 am and from 2:00 pm to 3:37 pm | Every 60 minutes |

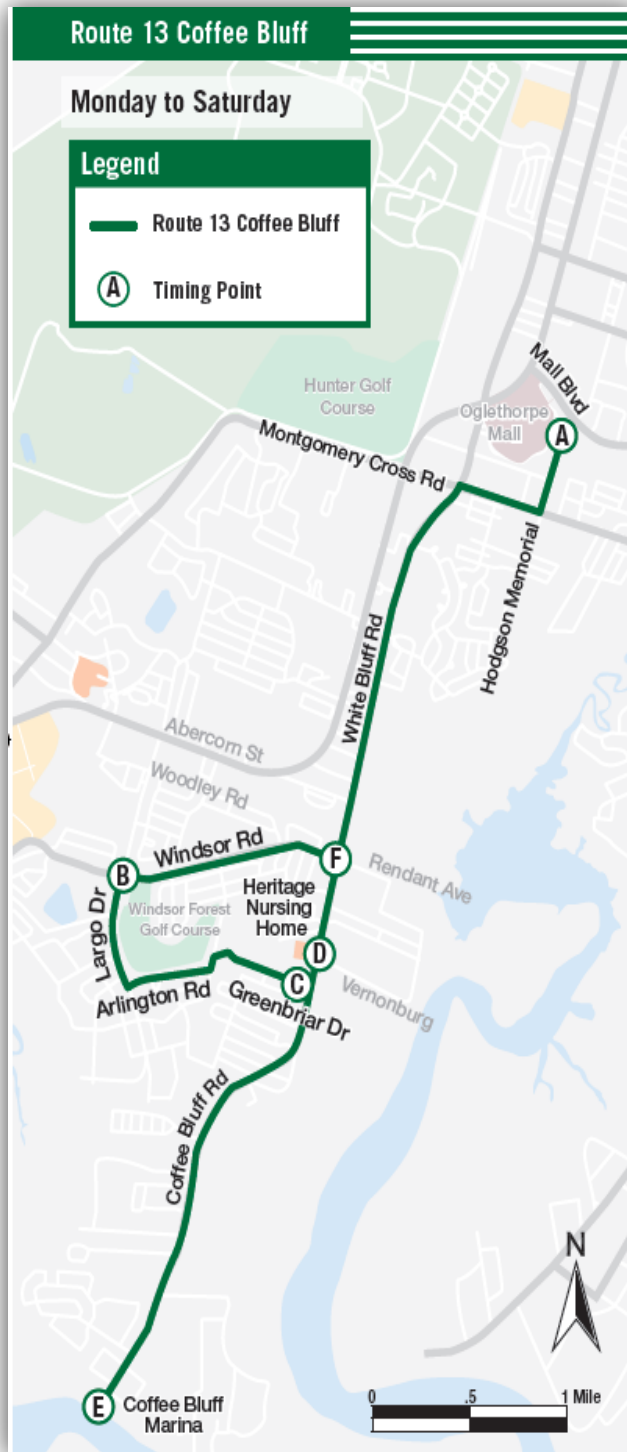


Exhibit 4-9. Route 13-Coffee Bluff - Route Map

Route 14-Abercorn Local

The Abercorn Local route serves between the Savannah Downtown Historic District and the Savannah Mall with service to Candler Hospital, Oglethorpe Mall, and St. Joseph’s Hospital. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-15. The route map can be seen below in Exhibit 4-10.

Table 4-15. Route 14-Abercorn Local - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 6:45 am to 12:15 am | Every 30 minutes |
| Saturdays | 6:45 am to 12:10 am | Every 30 minutes |
| Sundays | 7:05 am to 8:55 pm | Every 60 minutes |
| Holidays | 6:00 am to 9:55 pm | Every 30 minutes |

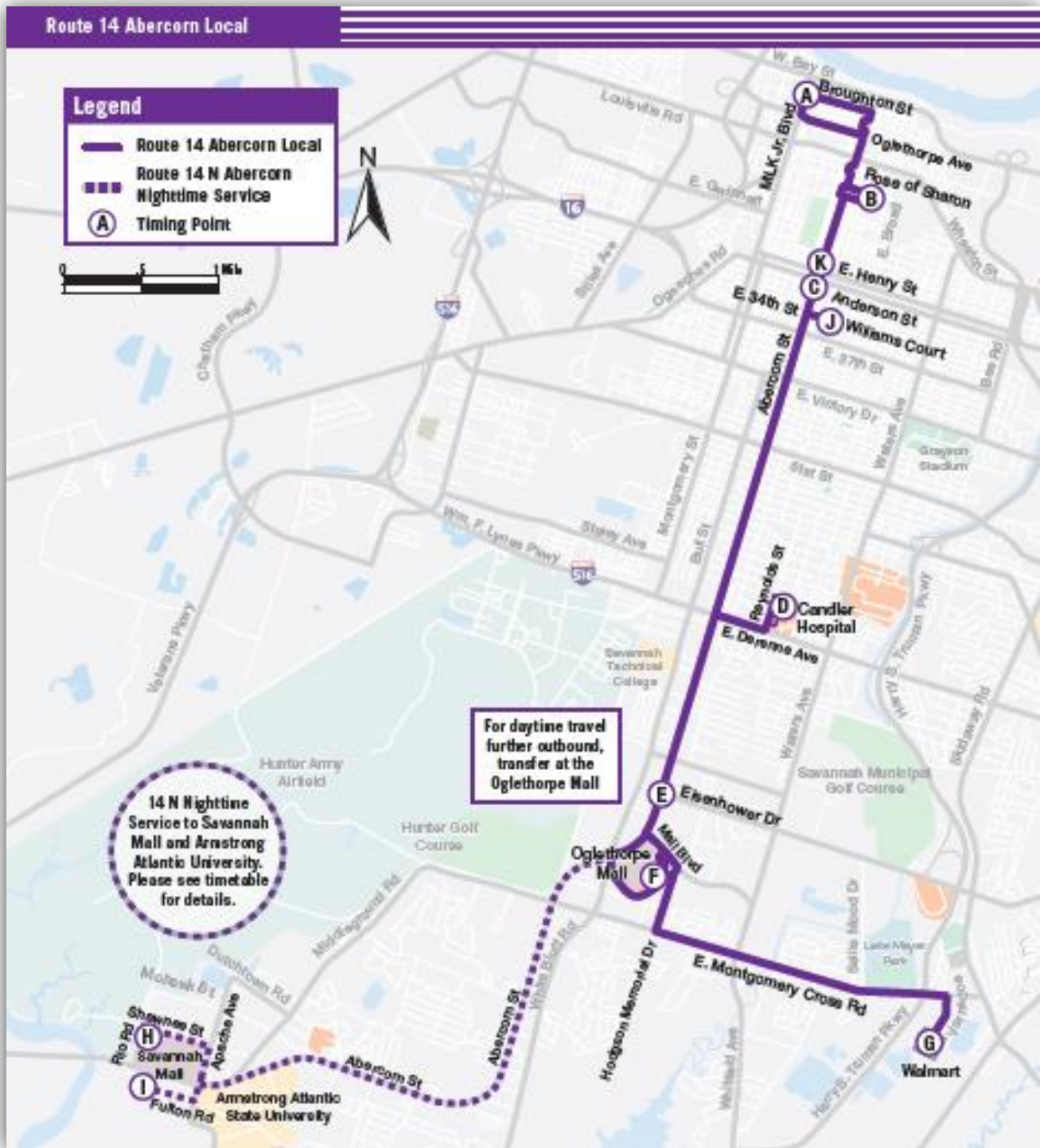


Exhibit 4-10. Route 14-Abercorn Local - Route Map

Route 17-Silk Hope

The Silk Hope route serves between the Savannah Downtown Historic District and the Savannah Festival Outlet with service to Chatham Detention Center and the Super Wal-Mart on Highway 17. This route provides service all days of the week and on holidays. Existing service characteristics can be seen in Table 4-16. The route map can be seen below in Exhibit 4-11.

Table 4-16. Route 17-Silk Hope Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|-------------------|
| Monday through Friday | 5:37 am to 10:35 pm | Every 60 minutes |
| Saturdays | 5:37 am to 10:22 pm | Every 60 minutes |
| Sundays | 7:30 am to 7:27 pm | Every 120 minutes |
| Holidays | 6:00 am to 8:27 pm | Every 60 minutes |

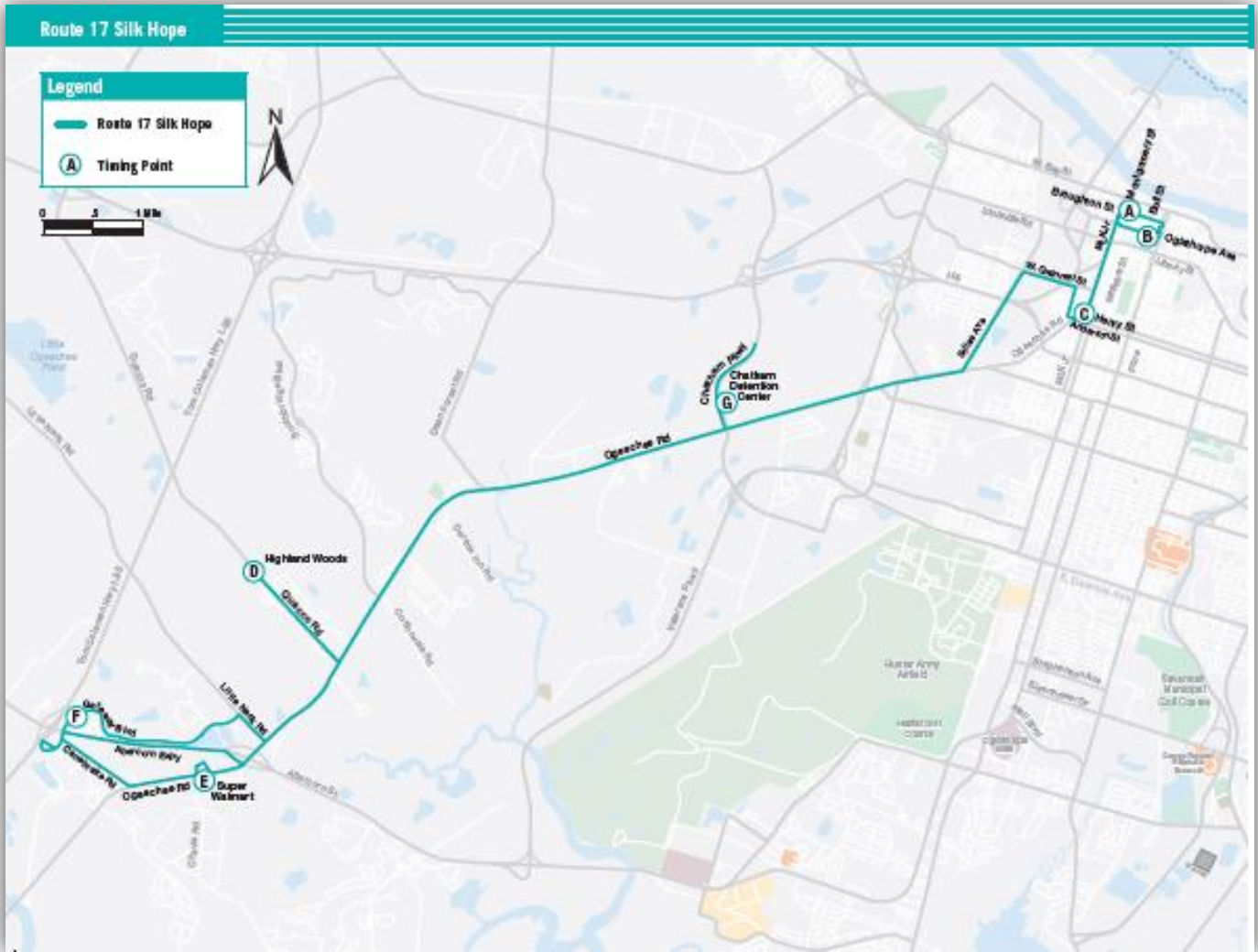


Exhibit 4-11. Route 17-Silk Hope - Route Map

Route 20-Montgomery/Skidaway Island

The Montgomery/Skidaway Island route serves between Hodgson Memorial Drive/Mall Way and Wal-Mart on Montgomery Cross Road. This route provides service Monday through Saturday with no service on holidays. Existing service characteristics can be seen in Table 4-17. The route map can be seen below in Exhibit 4-12.

Table 4-17. Route 20-Montgomery/Skidaway Island - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------|--|------------------|
| Monday through Saturday | 6:30 am to 9:26 am and from 3:30 pm to 7:26 pm | Every 60 minutes |

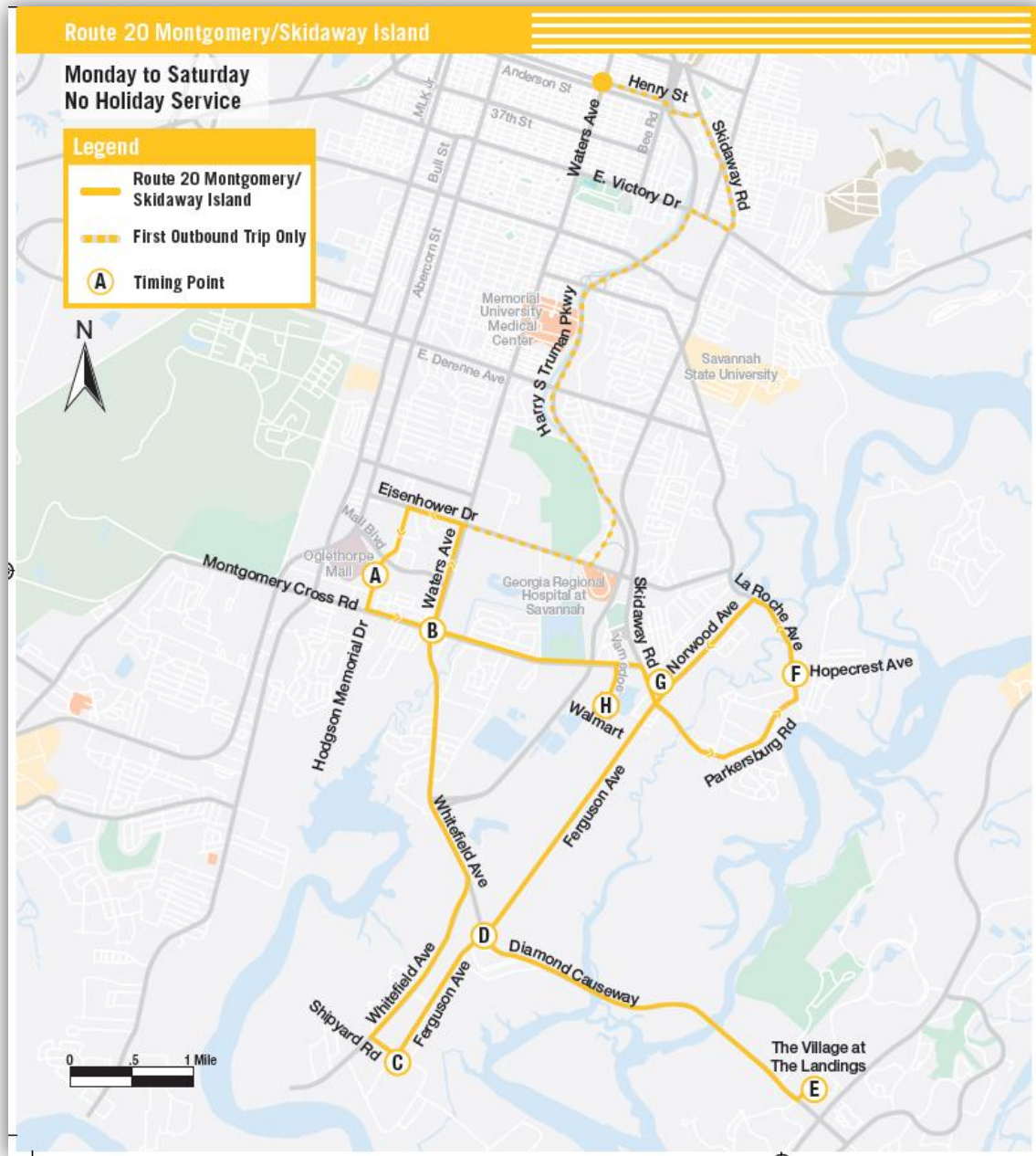


Exhibit 4-12. Route 20-Montgomery/Skidaway Island – Route Map

Route 24-Savannah State University/Island Towne Centre

The Savannah State University/Island Towne Centre route serves between the Savannah Downtown Historic District and the Island Towne Centre with service to Savannah State University. This route provides service on Monday through Saturdays with service on holidays but no service is provided on Sundays. Existing service characteristics can be seen in Table 4-18. The route map can be seen below in Exhibit 4-13.

Table 4-18. Route 24-Savannah State University/Island Towne Centre - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|---|--------------------------|
| Monday through Friday | 6:30 am to 7:11 pm | Every 45 minutes |
| Saturdays | 7:00 am to 6:57 pm | Every 60 minutes |
| Holidays | 7:00 am to 11:20 am and from 2:30 pm to 6:40 pm | Approx. every 90 minutes |

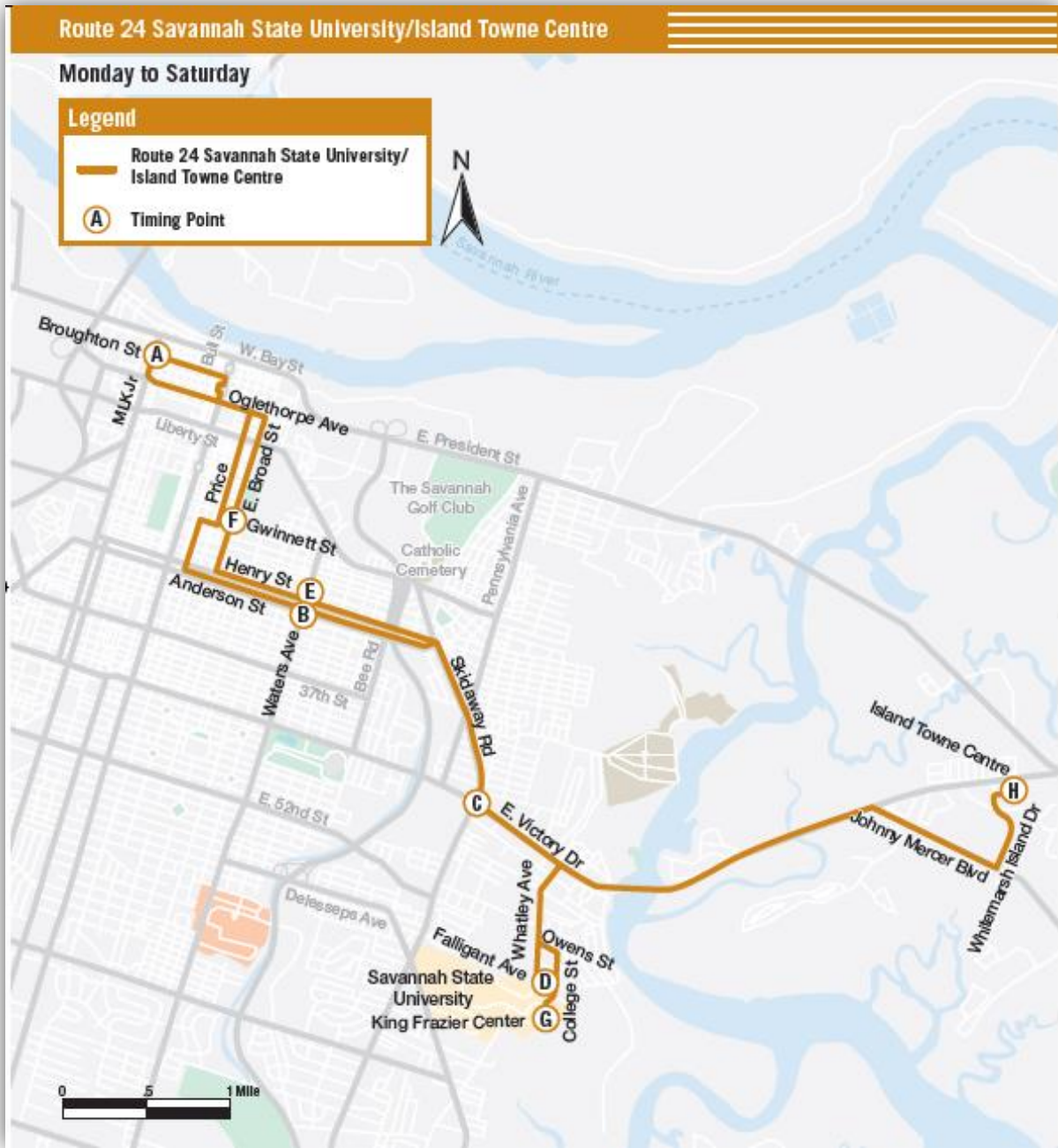


Exhibit 4-13. Route 24-Savannah State University/Island Towne Centre - Route Map

Route 25 MLK Jr. Blvd/Westlake Apartments

The MLK Jr. Blvd./Westlake Apartments route provides service between the Savannah Downtown Historic District and the Westlake Apartments with service to Savannah Probation Office, Chatham County Detention Center, and Chatham County Juvenile Court. This route provides service every day of the week and on holidays. Existing service characteristics can be seen in Table 4-19. The route map can be seen below in Exhibit 4-14.

Table 4-19. Route 25-MLK Jr. Blvd./Westlake Apartments - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 5:45 am to 11:28 pm | Every 30 minutes |
| Saturdays | 5:45 am to 11:22 pm | Every 30 minutes |
| Sundays | 7:33 am to 7:25 pm | Every 30 minutes |
| Holidays | 5:50 am to 8:17 pm | Every 30 minutes |

Route 27-Waters

The Waters route provides service between the Savannah Downtown Historic District and the Oglethorpe Mall with service to Memorial Health University Medical Center and Candler Hospital. This route provides service every day of the week and on holidays. Existing service characteristics can be seen in Table 4-20. The route map can be seen below in Exhibit 4-15.

Table 4-20. Route 27-Waters - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------|-------------------------|-------------------|
| Monday through Saturday | 5:55 am to 11:45 pm | Every 60 minutes |
| Sundays | 6:55 am to 7:40 pm | Every 60 minutes |
| Holidays | 6:00 am to 7:53 pm | Every 120 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

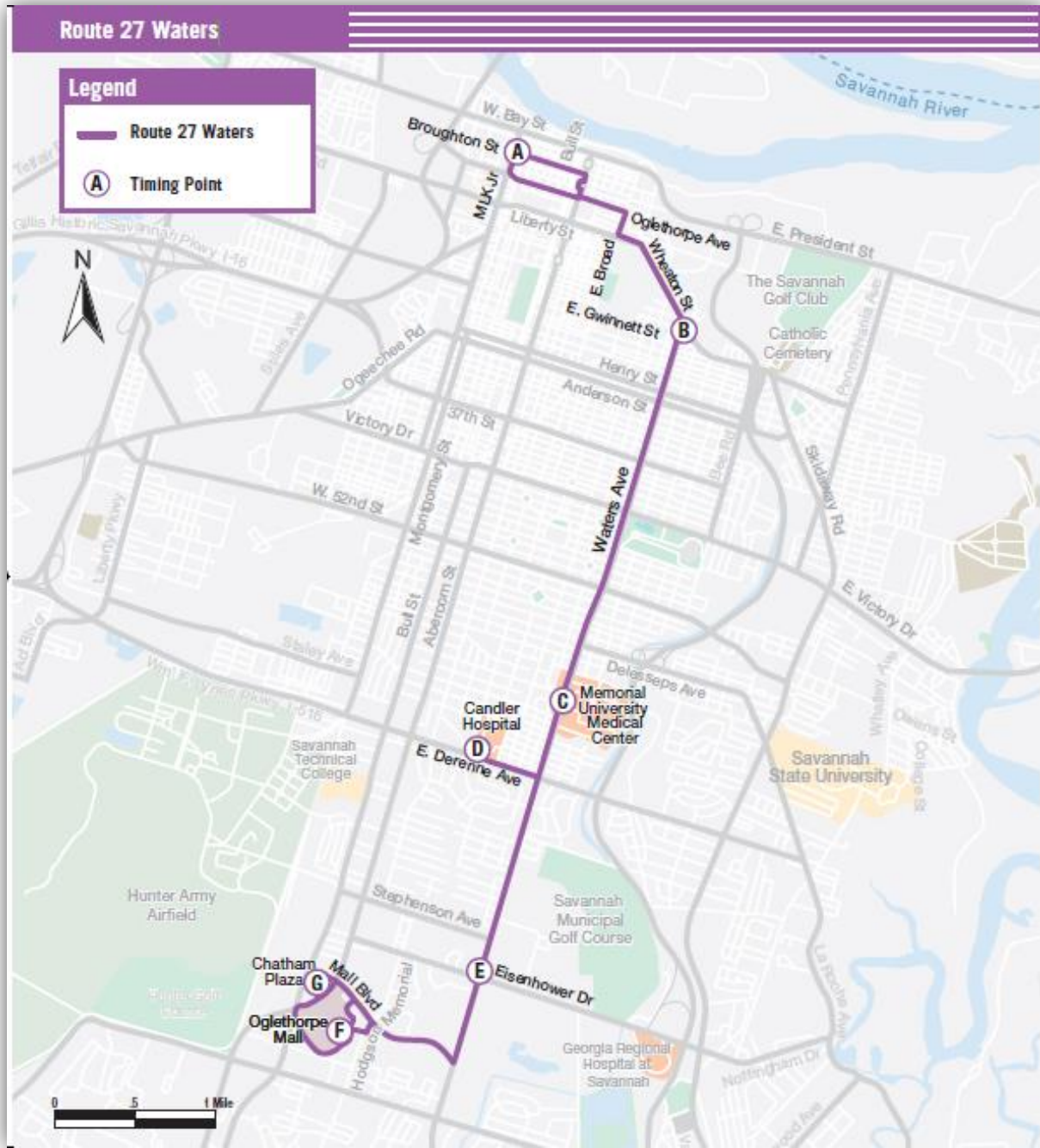


Exhibit 4-15. Route 27-Waters - Route Map

Route 28-Waters

Also called the Waters route, this route provides service between the Savannah Downtown Historic District and the Wal-Mart on Montgomery Cross Road providing service to Memorial Health University Medical Center and Hodgson Memorial Monday through Saturday and on holidays. Existing service characteristics can be seen in Table 4-21. The route map can be seen below in Exhibit 4-16.

Table 4-21. Route 28-Waters - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------|-------------------------|-------------------|
| Monday through Saturday | 6:05 am to 8:50 pm | Every 60 minutes |
| Holidays | 6:00 am to 8:27 pm | Every 120 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

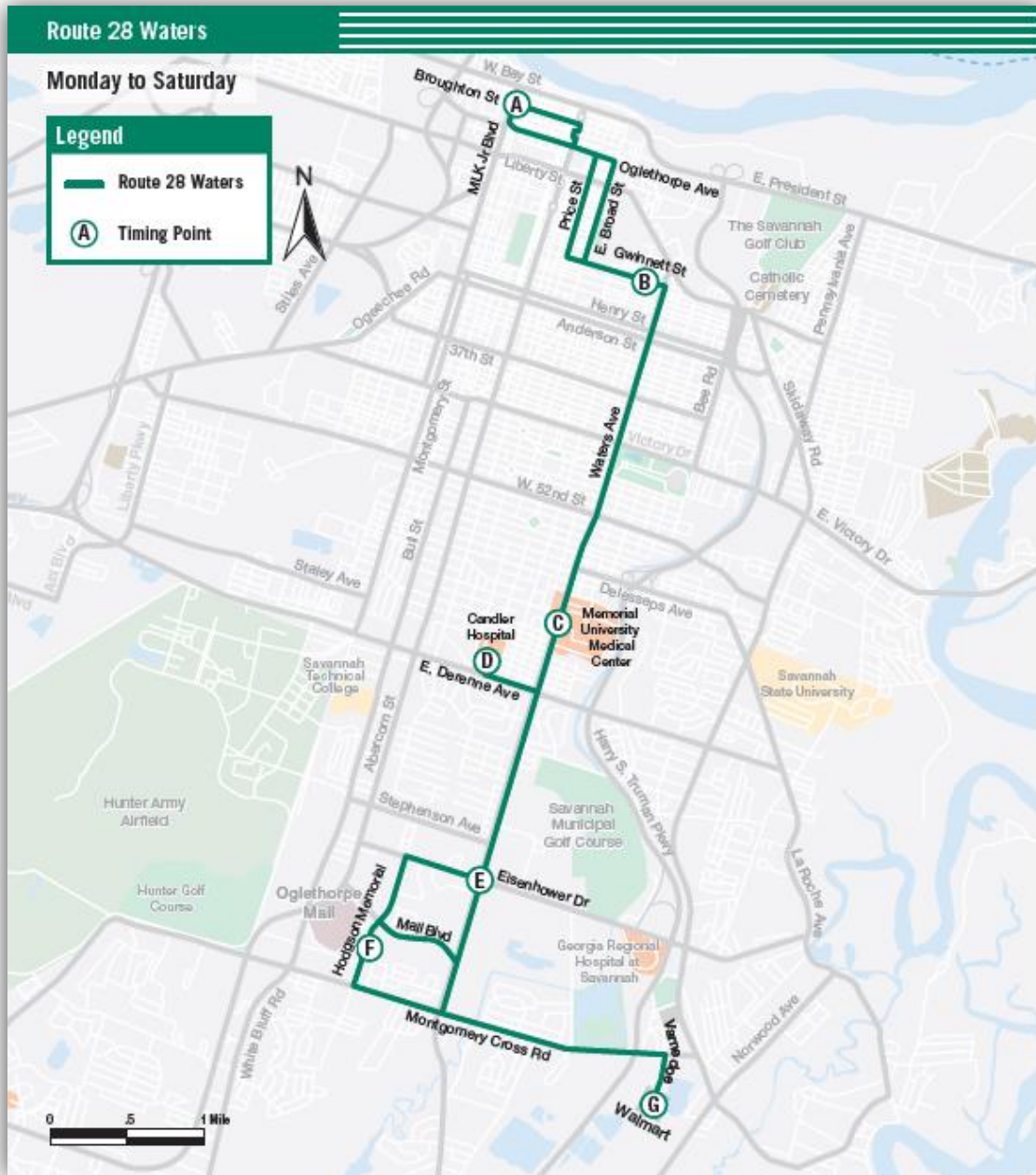


Exhibit 4-16. Route 28-Waters – Route Map

Route 29-W. Gwinnett/Cloverdale

The W. Gwinnett/Cloverdale route provides service between the Savannah Downtown Historic District and Winburn Street and Carrol Street. This route provides service every day of the week and on holidays. Existing service characteristics can be seen in Table 4-22. The route map can be seen below in Exhibit 4-17.

Table 4-22. Route 29-W. Gwinnett/Cloverdale - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 5:38 am to 9:30 pm | Every 30 minutes |
| Saturdays | 5:45 am to 10:30 pm | Every 60 minutes |
| Sundays | 8:50 am to 7:30 pm | Every 60 minutes |
| Holidays | 6:50 am to 8:30 pm | Every 60 minutes |

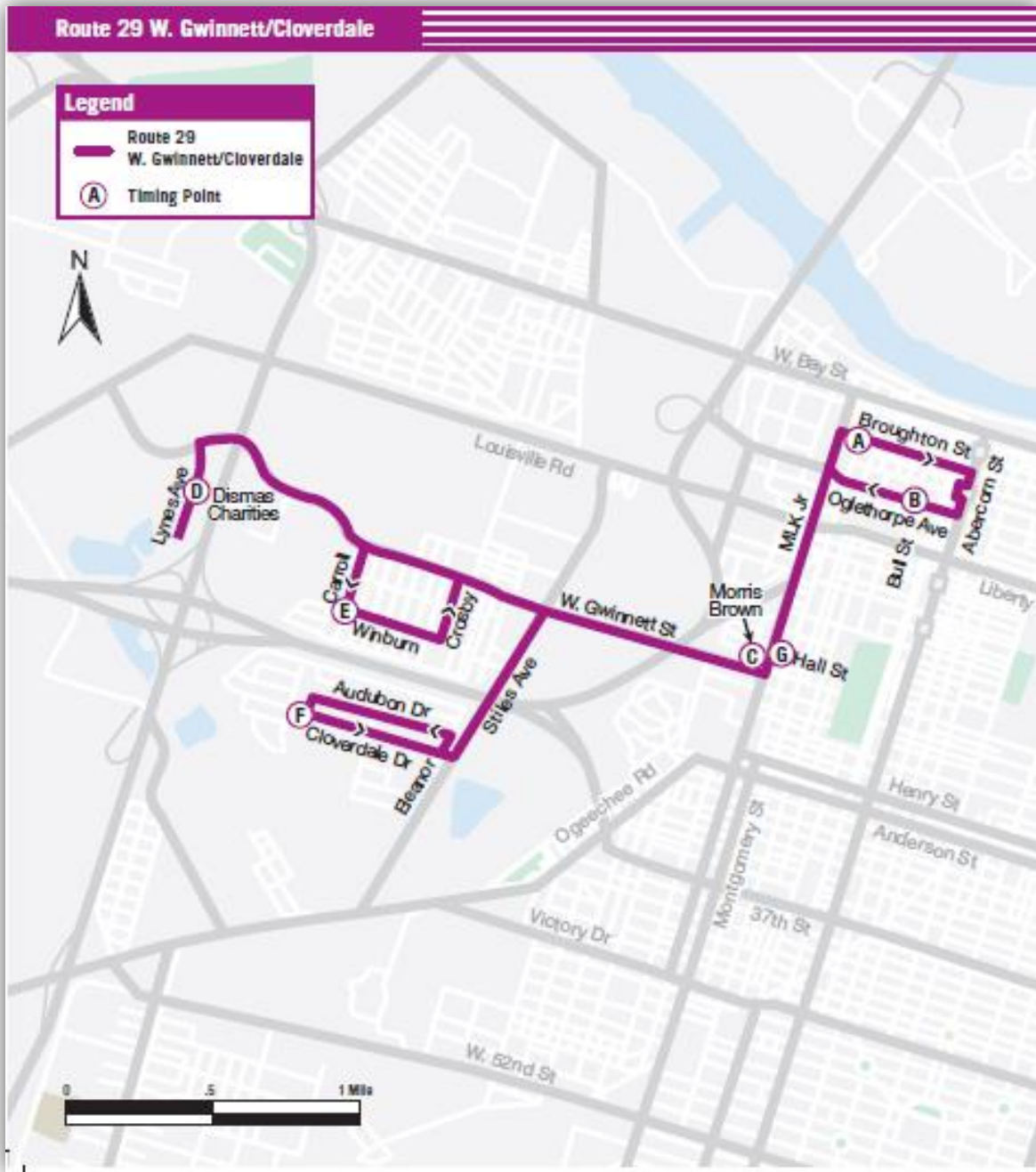


Exhibit 4-17. Route 29-W. Gwinnett/Cloverdale - Route Map

Route 31 Skidaway/Sandfly

The Skidaway/Sandfly route provides service between the Savannah Downtown Historic District and Hodgson Memorial Drive and Mall Way. This route provides service every day of the week and on holidays. Existing service characteristics can be seen in Table 4-23. The route map can be seen below in Exhibit 4-18.

Table 4-23. Route 31-Skidaway/Sandfly - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|-------------------|
| Monday through Friday | 6:15 am to 11:55 pm | Every 60 minutes |
| Saturdays | 6:30 am to 11:55 pm | Every 60 minutes |
| Sundays | 8:30 am to 8:25 pm | Every 120 minutes |
| Holidays | 6:30 am to 8:25 pm | Every 60 minutes |

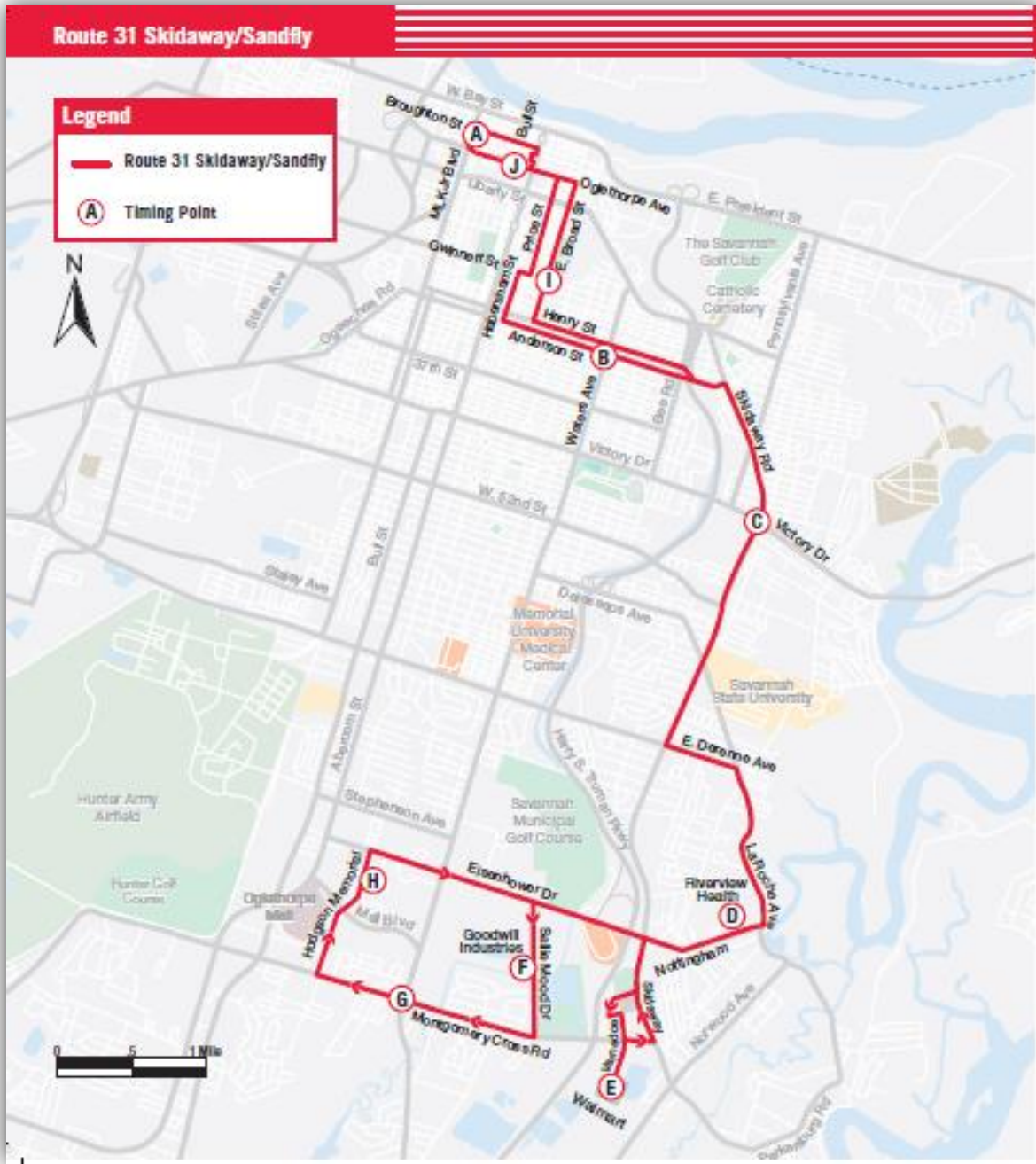


Exhibit 4-18. Route 31-Skidaway/Sandfly - Route Map

Route 60-Savannah State University Shuttle

The Savannah State University Shuttle route provides service to the Jasmine Apartments, Alhambra Apartments, Victory Square shopping Center and the new student union. This route provides service Mondays through Fridays. Existing service characteristics can be seen in Table 4-24. The route map can be seen below in Exhibit 4-19.

Table 4-24. Route 60-Savannah State University Shuttle - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 7:30 am to 4:56 pm | Every 15 minutes |

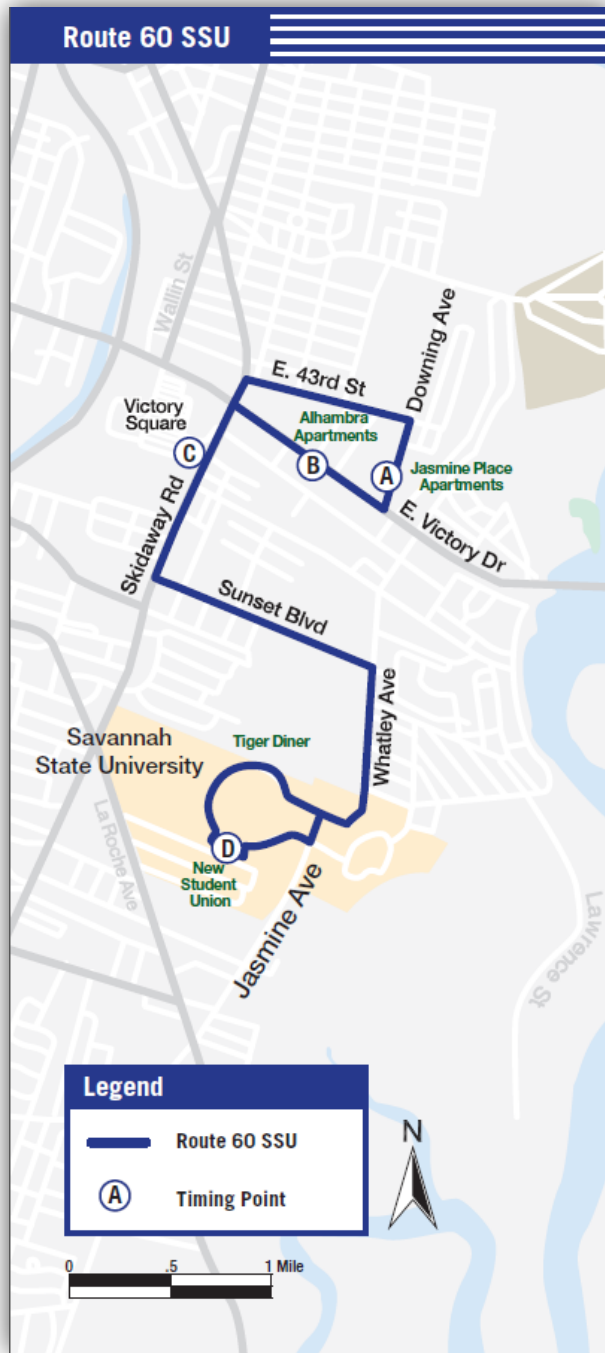


Exhibit 4-19. Route 60-Savannah State University Shuttle - Route Map

Route 61-Savannah State University Orange Shuttle

The Savannah State University Orange Shuttle route provides service to the Colonial Grand Apartments, Island Tree Apartments, and the new student union. This route provides service Mondays through Fridays. Existing service characteristics can be seen in Table 4-25. The route map can be seen below in Exhibit 4-20.

Table 4-25. Route 61-Savannah State University Orange Shuttle - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|---------------------|
| Monday through Friday | 7:30 am to 4:00 pm | Every 15-20 minutes |

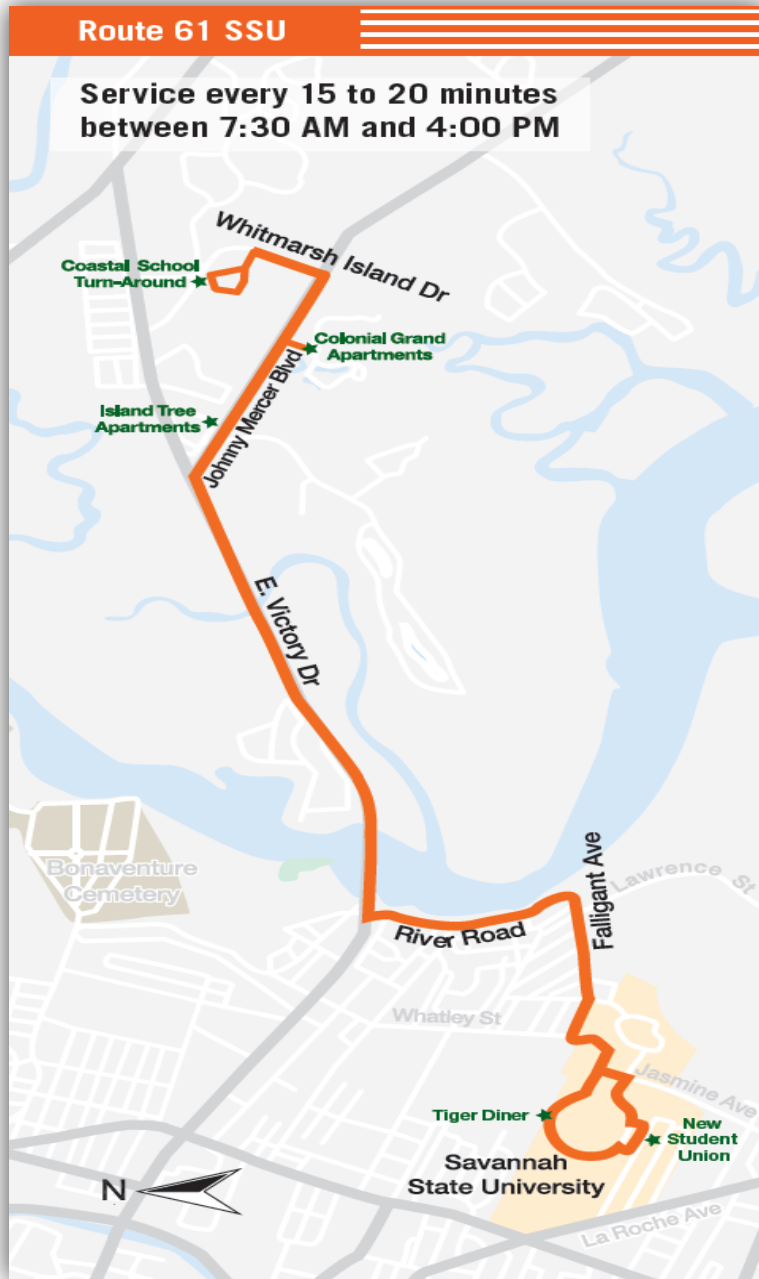


Exhibit 4-20. Route 61-Savannah State University Orange Shuttle - Route Map

Route 75-Eastside CAT Prowler

The Eastside CAT Prowler route provides service to the Colonial Grand Apartments, Island Tree Apartments, Alhambra Apartments, Jasmine Apartments, and the new student union. This route provides service on Fridays and Saturdays. Existing service characteristics can be seen in Table 4-26. The route map can be seen below in Exhibit 4-21.

Table 4-26. Route 75-Eastside CAT Prowler - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Friday and Saturday | 8:00 pm to 2:00 am | Every 30 minutes |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Route 75 Eastside Prowler

CAT around all night... or at least until 2 a.m.

The CAT Prowler allows you to travel car-free and carefree to and from historic downtown Savannah every Friday and Saturday night.

You don't have to worry about finding parking or the hassle of driving back home after you've had a night out on the town!

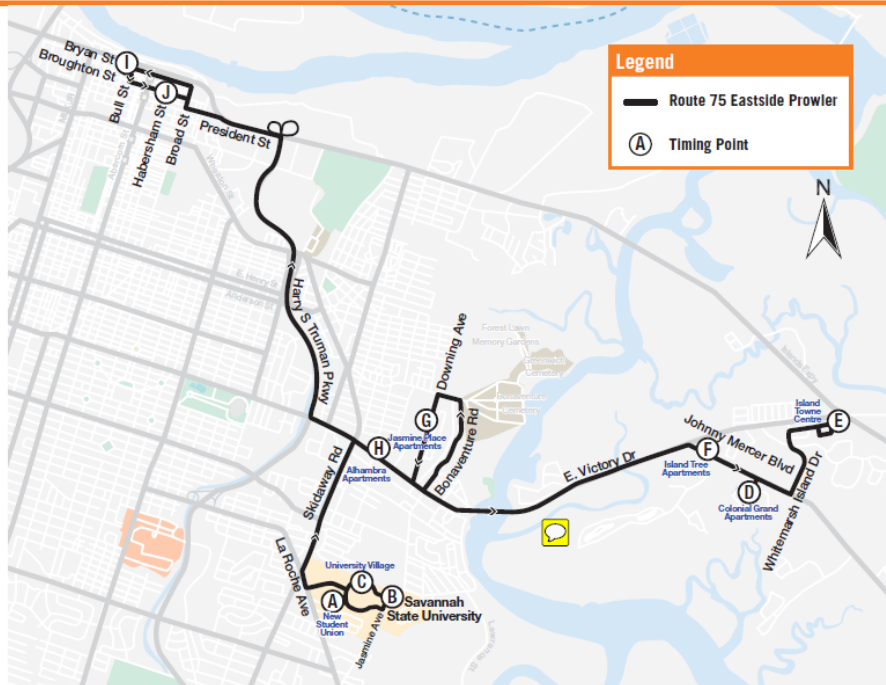
Please remember to...

- ▶ Enjoy yourself and leave the driving to us.
- ▶ Be considerate of your fellow passengers.
- ▶ Respect that eating, drinking or smoking onboard is not allowed.

Show your personal and valid SSU Student ID and you ride for free.

| To Downtown | | | | From Downtown | |
|-----------------------|---------------------|--------------------|------------------------|------------------------|-----------------------|
| The New Student Union | Island Towne Centre | Jasmine Apartments | Broughton at Habersham | Broughton at Habersham | The New Student Union |
| A | E | G | J | J | A |
| 8:00pm | 8:15 | 8:20 | 8:36 | 8:39P | 8:57 |
| 8:30 | 8:45 | 8:50 | 9:06 | 9:09 | 9:27 |
| 9:00 | 9:15 | 9:20 | 9:36 | 9:39 | 9:57 |
| 9:30 | 9:45 | 9:50 | 10:06 | 10:07 | 10:25 |
| 10:00 | 10:15 | 10:20 | 10:36 | 10:37 | 10:55 |
| 10:30 | 10:45 | 10:50 | 11:06 | 11:07 | 11:25 |
| 11:00 | 11:15 | 11:20 | 11:36 | 11:37 | 11:55 |
| 11:30 | 11:45 | 11:50 | 12:06am | 12:07 | 12:25 |
| 12:00am | 12:15 | 12:20 | 12:36 | 12:37 | 12:55 |
| 12:30 | 12:45 | 12:50 | 1:06 | 1:07 | 1:25 |
| 1:00 | 1:15 | 1:20 | 1:36 | 1:37 | 1:55 |
| 1:30 | 1:45 | 1:50 | 2:06 | 2:07* | 2:25 |

* Service from Downtown is ONLY to Time Point A, The New Student Union Center.



75 Prowler Stops

- (A) The New Student Union
- (B) N. Thompkins at Jasmine
- (C) University Village
- (D) Colonial Grand Apartments
- (E) Island Towne Centre
- (F) Island Tree Apartments
- (G) Jasmine Place Apartments
- (H) Alhambra Apartments
- (I) Bryan at Bull
- (J) Broughton at Habersham

Service to labeled Time Points ONLY.

Exhibit 4-21. Route 75-Eastside CAT Prowler - Route Map

Route 80-Savannah State University Tiger Shuttle

The Savannah State University Orange Shuttle route provides service on the Savannah State University Campus providing service to University Village, the Tiger Diner, Morgan Hall, King Frazier Center, and the new student union. This route provides service Mondays through Fridays. Existing service characteristics can be seen in Table 4-27. The route map can be seen below in Exhibit 4-22.

Table 4-27. Route 80-Savannah State University Tiger Shuttle - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|---------------------|
| Monday through Friday | 7:30 am to 4:00 pm | Every 15-20 minutes |



Exhibit 4-22. Route 80-Savannah State University Tiger Shuttle - Route Map

Route 114X-Abercorn Express

The Savannah State University Orange Shuttle route provides service to the Savannah Downtown Historic District, the Oglethorpe Mall, and St. Joseph’s Hospital, Armstrong Atlantic State University, the Wal-Mart on Fulton Road, and the Savannah Mall. This route provides service every day of the week and on holidays. Existing service characteristics can be seen in Table 4-28. The route map can be seen below in Exhibit 4-23.

Table 4-28. Route 114X-Abercorn Express - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|------------------------|-------------------------|------------------|
| Monday through Friday | 5:35 am to 9:45 pm | Every 30 minutes |
| Saturdays | 5:35 am to 8:52 pm | Every 60 minutes |
| Sundays | 6:45 am to 7:30 pm | Every 60 minutes |
| Holidays | 6:25 am to 8:20 pm | Every 60 minutes |

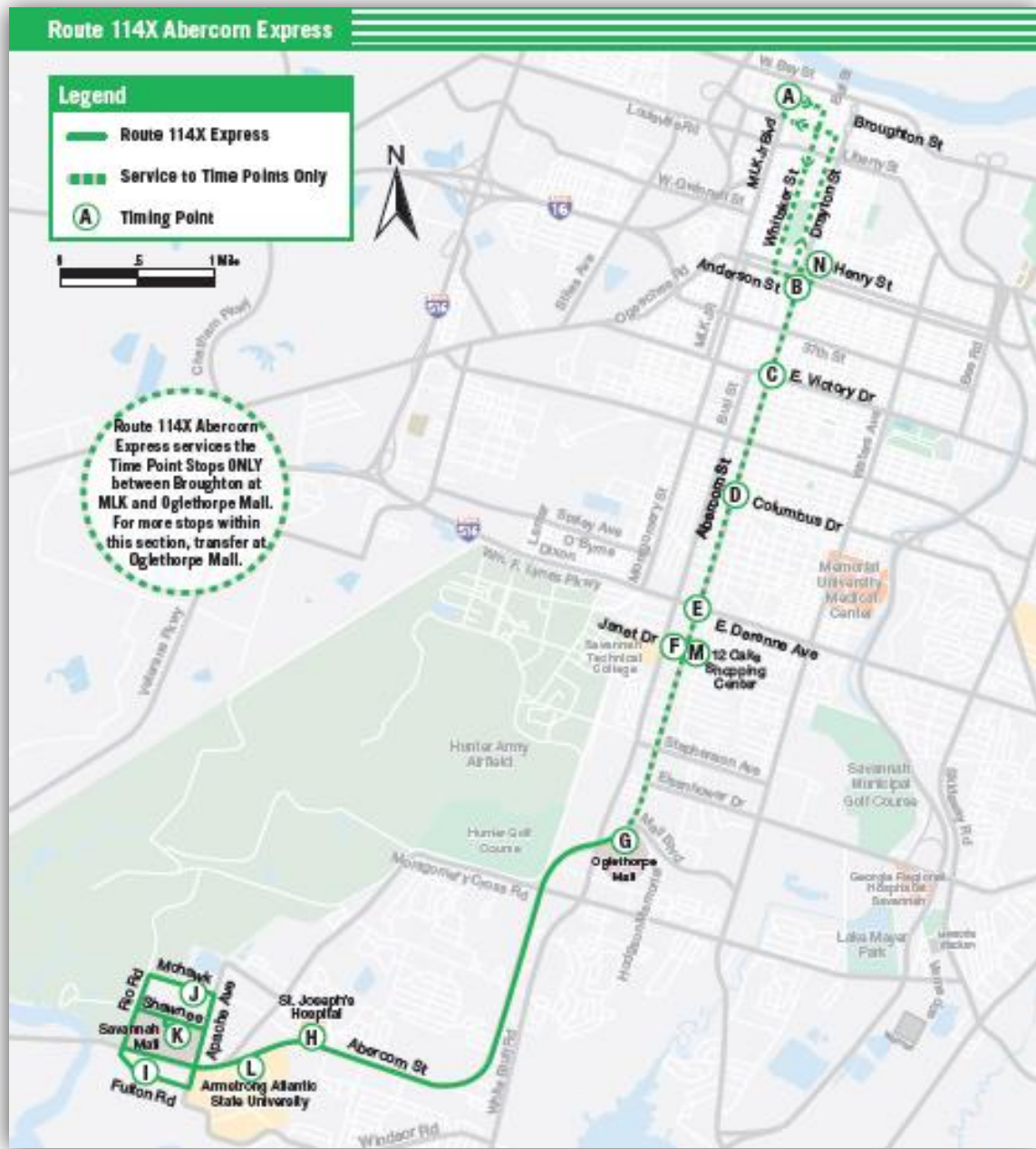


Exhibit 4-23. Route 114X-Abercorn Express - Route Map

Route 120-Twilight Shuttle

The Twilight Shuttle route provides service to the Savannah State University, the Wal-Mart on Montgomery Cross Roads, and the Oglethorpe Mall. This route provides service Mondays through Wednesday and on Fridays. Existing service characteristics can be seen in Table 4-29. The route map can be seen below in Exhibit 4-24.

Table 4-29. Route 120-Twilight Shuttle - Existing Service Characteristics

| Days of Service | Hours of Service | Frequency |
|-------------------------------------|-------------------------|------------------|
| Monday through Wednesday and Friday | 4:15 pm to 9:00 pm | Every 90 minutes |

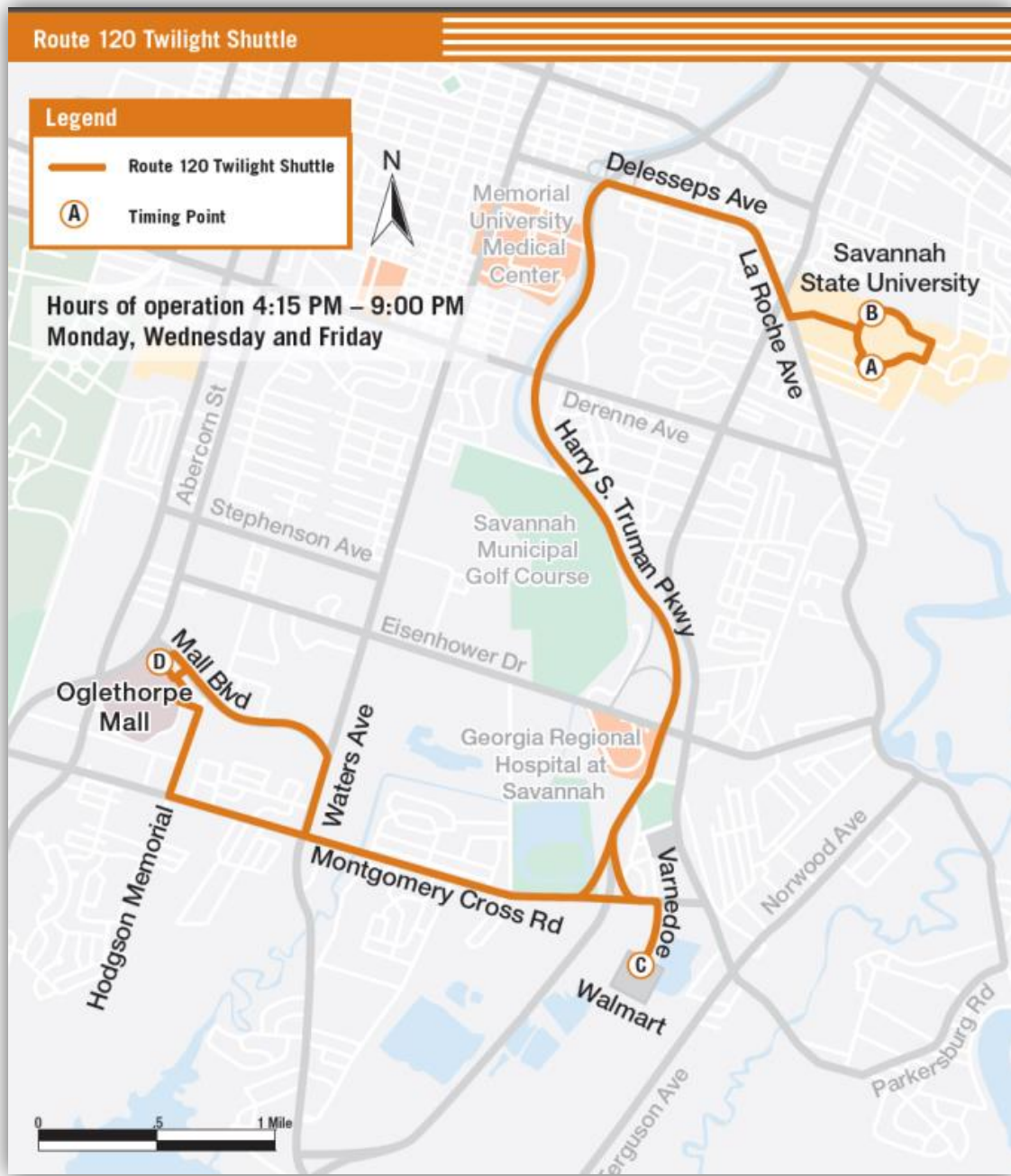


Exhibit 4-24. Route 120-Twilight Shuttle - Route Map

Paratransit

Current Service Area

CAT paratransit service is provided by Teleride. Teleride is a door-to-door service specifically designed to transport eligible persons with disabilities in Chatham County. This includes people who are unable, due to a permanent or temporary physical or mental disability, to use the fixed-route public transportation system. State-of-the-art wheelchair lifts make boarding the vehicle safe and convenient. Teleride vans are lift-equipped and accommodate three passengers in wheelchairs or up to 10 seated passengers. The vehicles are equipped with a six-point tie-down system which holds the passenger and wheelchair securely in place. Teleride operators assist passengers on and off the van.

CAT Freedom

CAT Freedom is a program provided by Chatham Area Transit that helps increase mobility options for the citizens of Chatham County. The Freedom program is provided by Southern Belles Taxicab and passengers enrolled in the program can purchase vouchers in advance for discounted rides to anywhere in Chatham County.

Coastal Regional Coaches of Georgia

Coastal Regional Coaches is the regional rural public transit program that provides general public transit service in the counties of Bryan, Bulloch, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh, and Screven. This service is available to anyone, for any purpose, and to any destination in the coastal region. There are no eligibility criteria as this is public transit.

Coastal Regional Coaches coordinates public transit service with a variety of other transportation services simultaneously in order to make the program more cost-effective and efficient. Coastal Regional Coaches is a demand-response, advance reservation service that operates Monday through Friday from 6:00 A.M. until 6:00 P.M.

LogistiCare

LogistiCare is a private company that provides transportation to Medicaid recipients with access to health care services, who may not have any means of transportation. The Non-Emergency Transportation Program (NET) provides a way for Medicaid recipients to get transportation so they can receive necessary medical services covered by Medicaid.

Service Performance at the Route Level

For purposes of this TDP, CUTR conducted a performance evaluation of CAT service at the route level. Such an analysis requires five inputs, as follows:

- Total passengers
- Total fare revenue
- Total annual revenue hours
- Total annual revenue miles
- Total cost

From these five inputs, a series of performance indicators are gained for the purpose of comparing individual route performance. These performance indicators include:

- Passengers per revenue hour
- Passengers per revenue mile
- Operating ratio (fare revenue: cost)
- Cost per passenger trip
- Subsidy per passenger trip

These indicators are then compared to the overall system average for each category and then assigned a percentage score. For instance, if a route scores better than the system average for a category, then its score exceeds 100%. If the route scores at exactly the system average, the score is 100% and if the route scores less than the system average then the percentage is less than 100%. Finally, a composite score is assigned to each route based on all five performance indicators (the average of the five) and ranked. For the period October 1, 2011 through August 31, 2012, Table 4-30 below displays the overall performance and ranking by route in the system.

The highest ranked route in the system is the Tiger Shuttle largely because of its relative low cost to operate in relation to a very high ridership for the year. The route 3A is the second highest performer with Routes 27 and 28 Waters as rank 3 and 4 and the Abercorn routes (Route 14 and 114) rounding out the top 5. The Savannah State Orange and Blue routes are among the lowest performers with relatively high cost and low ridership. The route 20, Montgomery, is the lowest performing route in the system.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 4-30. Overall Performance and Ranking by Route

| Route No. | Route name | Total Passengers | Total Revenue | Total Revenue Hours | Total Revenue Miles | Total Cost | Passengers/ Hour | Passengers /Mile | Operating Ratio | Cost/ Passenger Trip | Subsidy/ Passenger Trip | Composite Score | Rank |
|-----------|--|------------------|------------------|---------------------|---------------------|---------------------|------------------|------------------|-----------------|----------------------|-------------------------|-----------------|------|
| 2 | WEST CHATHAM | 75,702 | \$8,288 | 3,923 | 82,815 | \$322,040 | 19.30 | 0.91 | 2.6% | \$4.25 | \$4.14 | 100.6% | 10 |
| 3A | AUGUSTA AVE | 185,893 | \$20,351 | 6,679 | 67,903 | \$548,344 | 27.83 | 2.74 | 3.7% | \$2.95 | \$2.84 | 166.2% | 2 |
| 3B | AUGUSTA AVE - HUDSON | 62,490 | \$6,841 | 4,963 | 70,099 | \$407,435 | 12.59 | 0.89 | 1.7% | \$6.52 | \$6.41 | 69.8% | 18 |
| 4 | BARNARD | 203,146 | \$22,240 | 13,204 | 133,041 | \$1,084,004 | 15.39 | 1.53 | 2.1% | \$5.34 | \$5.23 | 91.8% | 15 |
| 6 | CROSSTOWN | 107,824 | \$11,804 | 9,220 | 148,349 | \$756,962 | 11.69 | 0.73 | 1.6% | \$7.02 | \$6.91 | 63.4% | 20 |
| 10 | EAST SAVANNAH | 174,746 | \$19,131 | 8,847 | 136,306 | \$726,268 | 19.75 | 1.28 | 2.6% | \$4.16 | \$4.05 | 108.1% | 9 |
| 11 | CANDLER | 23,507 | \$2,574 | 2,300 | 28,588 | \$188,847 | 10.22 | 0.82 | 1.4% | \$8.03 | \$7.92 | 58.1% | 22 |
| 12 | HENRY | 196,032 | \$21,461 | 11,827 | 120,050 | \$970,993 | 16.57 | 1.63 | 2.2% | \$4.95 | \$4.84 | 98.7% | 11 |
| 13 | COFFEE BLUFF | 13,218 | \$1,447 | 1,910 | 31,917 | \$156,794 | 6.92 | 0.41 | 0.9% | \$11.86 | \$11.75 | 37.2% | 26 |
| 14 | ABERCORN | 410,482 | \$44,939 | 18,831 | 200,961 | \$1,545,956 | 21.80 | 2.04 | 2.9% | \$3.77 | \$3.66 | 128.5% | 5 |
| 141 | ABERCORN Limited changed to 114 Abercorn Express | 341,833 | \$37,424 | 15,315 | 188,359 | \$1,257,284 | 22.32 | 1.81 | 3.0% | \$3.68 | \$3.57 | 127.5% | 6 |
| 17 | SILK HOPE | 177,993 | \$19,487 | 9,778 | 196,895 | \$802,779 | 18.20 | 0.90 | 2.4% | \$4.51 | \$4.40 | 95.5% | 14 |
| 20 | MONTGOMERY | 9,538 | \$1,044 | 1,978 | 46,334 | \$162,348 | 4.82 | 0.21 | 0.6% | \$17.02 | \$16.91 | 24.7% | 27 |
| 24 | SAVANNAH STATE | 60,183 | \$6,589 | 4,951 | 71,294 | \$406,423 | 12.16 | 0.84 | 1.6% | \$6.75 | \$6.64 | 67.2% | 19 |
| 25 | WEST LAKE APARTMENTS | 119,348 | \$13,066 | 13,256 | 190,939 | \$1,088,273 | 9.00 | 0.63 | 1.2% | \$9.12 | \$9.01 | 49.7% | 24 |
| 27 | WATERS | 222,850 | \$24,397 | 10,424 | 93,664 | \$855,789 | 21.38 | 2.38 | 2.9% | \$3.84 | \$3.73 | 131.4% | 4 |
| 28 | WATERS | 190,746 | \$20,883 | 8,068 | 88,760 | \$662,329 | 23.64 | 2.15 | 3.2% | \$3.47 | \$3.36 | 138.4% | 3 |
| 29 | WEST GWINNETTE | 100,311 | \$10,982 | 7,163 | 65,058 | \$588,039 | 14.00 | 1.54 | 1.9% | \$5.86 | \$5.75 | 85.7% | 16 |
| 31 | SKIDAWAY/SANDFLY | 187,795 | \$20,560 | 9,237 | 123,233 | \$758,295 | 20.33 | 1.52 | 2.7% | \$4.04 | \$3.93 | 114.2% | 8 |
| | Subtotal | 2,863,637 | \$313,509 | 161,873 | 2,084,568 | \$13,289,201 | 17.69 | 1.37 | 2.4% | \$4.64 | \$4.53 | 100.0% | |
| | Contracted Service | | | | | | | | | | | | |
| 1 | CAT SHUTTLE | 132,764 | \$151,713 | 7,163 | 58,054 | \$588,078 | 18.53 | 2.29 | 25.8% | \$4.43 | \$3.29 | 98.1% | 12 |
| 5 | DOT | 114,301 | \$268,800 | 6,660 | 40,206 | \$546,763 | 17.16 | 2.84 | 49.2% | \$4.78 | \$2.43 | 119.5% | 7 |
| 8 | LIBERTY SHUTTLE | 24,877 | \$57,485 | 2,618 | 15,722 | \$214,929 | 9.50 | 1.58 | 26.7% | \$8.64 | \$6.33 | 61.5% | 21 |
| | Subtotal | 271,942 | \$477,997 | 16,441 | 113,983 | \$1,349,771 | 16.54 | 2.39 | 35.4% | \$4.96 | \$3.21 | 100.0% | |
| | SSU Service | | | | | | | | | | | | |
| 60 | SSU Blue Shuttle | 6,111 | \$48,541 | 2,296 | 25,292 | \$188,514 | 2.66 | 0.24 | 25.7% | \$30.85 | \$22.91 | 55.2% | 23 |
| 61 | Orange Shuttle | 5,282 | \$46,426 | 2,223 | 44,244 | \$182,474 | 2.38 | 0.12 | 25.4% | \$34.55 | \$25.76 | 38.7% | 25 |
| 75 | SSU PROWLER | 4,855 | \$532 | 911 | 22,145 | \$74,823 | 5.33 | 0.22 | 0.7% | \$15.41 | \$15.30 | 95.6% | 13 |
| 80 | TIGER SHUTTLE | 172,654 | \$18,902 | 2,653 | 8,009 | \$217,795 | 65.08 | 21.56 | 8.7% | \$1.26 | \$1.15 | 279.2% | 1 |
| 120 | SSU TWILIGHT SHUTTLE | 4,929 | \$540 | 532 | 6,926 | \$43,675 | 9.27 | 0.71 | 1.2% | \$8.86 | \$8.75 | 70.3% | 17 |
| | Subtotal | 193,831 | \$114,940 | 8,615 | 67,771 | \$707,281 | 22.50 | 2.86 | 16.3% | \$3.65 | \$3.06 | 100.0% | |
| | Totals | 3,329,410 | \$906,447 | 186,929 | 2,266,322 | \$15,346,253 | 17.81 | 1.47 | 5.9% | \$4.61 | \$4.34 | | |

Performance Evaluation

Introduction

The results of the performance evaluation of Chatham County's fixed route and demand response systems operated by CAT are presented below. The performance evaluation was conducted using a sample of peers which were selected based on similar urbanized area demographics and operating statistics to CAT.

The Purpose of Performance Review

A performance review is one method of evaluating transit performance and consists of those aspects of the transit agency's operation that can be measured quantitatively with data from a standard reporting instrument, in this case the National Transit Database (NTD). The NTD provides a consistent reporting format over a period of years, allowing for the measurement of performance indicators over time and a comparison of performance indicators between transit systems. However, a performance review does not provide insight into the quality of service or the level of passenger satisfaction. On-board surveys and other surveying techniques must complement the performance review in order to get a complete picture of the value of transit to the community.

In addition to understanding the limits of this analysis, caution should be exercised in interpreting the meaning of the various measures. The performance review does not provide information regarding what aspects of performance are within the control of the agency and what measures are not. For instance, local policy decisions on land use, zoning, and parking can greatly dictate the types of services that will work for the community and therefore greatly affect performance. Another example is the operating expense measure, which can vary greatly between transit systems based on work rules and collective bargaining agreements.

National Transit Database

To receive federal funds, transit properties are required to report a variety of data in a standardized format to the Federal Transit Administration (FTA), resulting in what is known as the National Transit Database (NTD). These documents provide standardized measures of reporting that enable a more accurate comparison of information between properties. Since 1979, when this reporting requirement was instituted, additional refinements in data collection and reporting have increased the accuracy and comparability of the data.

Data Reliability

All NTD data submitted to the FTA are subject to considerable review and validation through manual and automated methods. Each report is thoroughly examined by the FTA's data analysts for identification of any errors or inconsistencies. The analyst then notifies the reporting agency of these errors and requires the agency to resubmit its data after addressing the FTA's concerns. Once the FTA is satisfied with the data, the final report is accepted. The latest validated NTD data at the time this report was written was FY 2010. This report uses this data for the peer analysis. For this performance review, CUTR was given permission to use unvalidated NTD data by the agency through 2012, so the trend

period is actually from FY 2008-12. CUTR did not collect any original data or conduct any audits or on-site analyses.

Data Definitions

To fully understand the data presented in NTD reports, it is important to understand the definitions of the terms. For example, "passenger trip" refers to an individual boarding a transit vehicle. A person riding a bus from the corner to the office takes one passenger trip and a second passenger trip to return home. Likewise, a person transferring from one bus to another is considered to have made two passenger trips to get to his or her destination. In spite of these definitions and continued refinements in data collection procedures, there remain some discrepancies between systems as to how terms are defined and how information is collected. Accordingly, caution should be used in interpreting findings, especially for those variables that are more likely to be subject to variation in definitions.

Performance Measure Categories

The evaluation measures that are used throughout the performance review are divided into two major categories: operational measures and financial measures. These categories are further subdivided into service characteristics, vehicle utilization, service utilization/productivity, expense/revenue, and efficiency/effectiveness measures. Operational measures indicate the productivity and effectiveness of day-to-day transit operations. Financial measures display the overall expenses and revenues as well as the cost efficiency and effectiveness of the system. The substantial amount of data available through NTD reporting provides an opportunity to develop a large number of measures. Performance measures that typically provide a good representation of overall transit system performance have been selected for this review.

Part One: Fixed-Route Transit Service

Table 4-31 lists the performance measures selected for the review of the fixed route transit services.

Table 4-31. Selected Performance Review Measures – Fixed-Route Transit Services

| Operational Measures | Financial Measures |
|---|---|
| <p><i>Service Characteristics</i> Service Area Population Service Area Density Average Headway Average Speed Vehicle Miles Revenue Miles Revenue Miles / Vehicle Miles Ratio Revenue Hours Total Employee FTEs</p> <p><i>Vehicle Utilization</i> Vehicles Available Vehicles Operated in Max. Service (VOMS) Spare Ratio Revenue Miles per VOMS Revenue Hours per Employee FTE Vehicle Miles per Gallon Revenue Miles between Failures Average Age of Fleet (in yrs.)</p> <p><i>Service Utilization and Productivity</i> Passenger Trips Passenger Miles Average Passenger Trip Length Passenger Trips per VOMS Passenger Trips per Revenue Hour Passenger Trips per Revenue Mile</p> | <p><i>Expense and Revenue</i> Total Operating Expense Total Maintenance Expense Base Cash Fare Passenger Fare Revenue Fare Revenue per Revenue Hour Average Fare Average Fare Percent of Base Cash Fare</p> <p><i>Efficiency and Effectiveness</i> Operating Expense per Capita Operating Expense per Passenger Trip Operating Expense per Revenue Hour Maintenance Expense per Vehicle Mile Farebox Recovery</p> |

The fixed-route peer review analysis was conducted to compare CAT's performance with other similar transit systems in the United States. The Florida Transit Information System online program (FTIS), which was jointly developed by FDOT and the Lehman Center for Transportation Research (LCTR) at Florida International University (FIU), was utilized to select potential peer systems using the methodology outlined in Transit Cooperative Research Program (TCRP) Report 141 – A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry.

TCRP Report 141 was developed by Kittleson & Associates, Inc. with assistance from other transportation research centers (CUTR, TTI, LCTR at FIU, and Nakanishi Research & Consulting). The peer selection methodology was programmed into the Florida Transit Information System online program (FTIS) along with corresponding 2006 American Community Survey (ACS) data when it was released. It has since been updated to use 2010 ACS data. Within the FTIS software, there is a select peer tool which allows for the selection of peers on an agency-wide basis or on a specific mode basis.

The methodology used by the tool calculates a likeness score for each measure and then averages the likeness score across all variables. Some of the variables include:

- Urban Population
- Population Density
- Population Growth Rate
- Vehicle Miles
- Operating Budget
- Percent Low Income
- Percent College Students
- Service Area Type (there are 8 different types specified in the report)
- Geographic distance between potential peers

In order to narrow down the potential peers, the top 30-40 peers with the lowest likeness scores are initially selected. For these peers, an additional measure is added to the analysis: Vehicles in Maximum Service (an NTD measure). From this final list, the six systems with the closest likeness scores to CAT (values closest to zero) were selected as peer systems for this analysis as shown in Table 4-32.

Table 4-32. CAT Fixed Route Peer Systems

| Selected Peer Systems | Likeness Score |
|---|----------------|
| Shreveport Area Transit System (Shreveport, LA) | 0.308 |
| Stark Area Regional Transit Authority (Canton, OH) | 0.311 |
| Kanawha Valley Regional Transportation Authority (Charleston, WV) | 0.356 |
| Central Arkansas Transit Authority (North Little Rock, AR) | 0.363 |
| Greensboro Transit Authority (Greensboro, NC) | 0.428 |
| Greater Roanoke Transit Company (Roanoke, VA) | 0.458 |

In addition to the peer comparisons, a fixed route trend analysis was conducted using CAT’s FY 2008 through FY 2012 NTD reports. CAT supplied CUTR with direct access to their FY 2012 NTD data for inclusion in this analysis. Performance measures utilized are grouped into their categories and presented in tabular form (Figures 4-4 through 4-8), including the percent change for each measure for the five year period.

Figures

Figures in this evaluation illustrate the selected operational and financial measures. There are two types of graphs displayed: trend area graphs and peer group bar graphs. The trend area graphs show CAT’s trends for each performance measure. The percent change over the period is shown at the top right of each graph. The second graph, the peer group graphs, show CAT’s performance in relation to the selected peer systems for the most recent validated year of data, FY 2010. The group peer median is displayed with a dark gray bar and a vertical black line. CAT values are shown with a bright orange bar. All other systems are shown with bright green bars. Figures 4-5 and 4-6 provide a graphical representation of CAT as compared to its peer group in all measures (showing the minimum, median, and maximum values for each performance measure).

Peer and Trend Tables

Peer and trend tables show CAT’s values for each performance measure for FY 2008 through FY 2012 as well as the percent change over the trend period. They also show the peer median for each measure for FY 2010 and how SCAT’s FY 2010 values compare to it.

Operational Measures: Service Characteristics

Service characteristic measures refer to measures that are basic data of the system and from which other measures can be derived from. Table 4-33 shows CAT’s five-year peer and trend comparison for these measures.

Table 4-33. Peer and Trend – Fixed Route Service Characteristic Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 | Peer Median | % From Peer Median |
|---------------------------------|---------|---------|---------|---------|---------|--------------------|-------------|--------------------|
| Service Area Population (000's) | 232 | 232 | 232 | 265 | 265 | 14.3% | 226 | 2.7% |
| Service Area Density | 530 | 530 | 530 | 605 | 605 | 14.3% | 1,948 | -72.8% |
| Average Headway | 23.62 | 24.68 | 21.28 | 22.36 | 20.67 | -12.5% | 39.46 | -46.1% |
| Average Speed | 13.35 | 12.50 | 13.34 | 12.72 | 13.23 | -0.9% | 14.75 | -9.6% |
| Vehicle Miles (000's) | 2,784 | 2,643 | 2,643 | 2,765 | 2,638 | -5.2% | 2,324 | 13.7% |
| Revenue Miles (000's) | 2,540 | 2,509 | 2,500 | 2,620 | 2,557 | 0.7% | 2,196 | 13.8% |
| Rev Miles / Veh Miles | 0.91 | 0.95 | 0.95 | 0.95 | 0.97 | 6.2% | 0.95 | 0.0% |
| Revenue Hours (000's) | 190 | 201 | 187 | 206 | 193 | 1.5% | 145 | 29.2% |
| Total Employee FTEs | 162.3 | 158.3 | 156.3 | 148.5 | n/a | -8.5% | 122.3 | 27.8% |

As specified by the NTD, service area population is calculated using a formula (area around ¾ of a mile from service) specified by the National Transit Database (NTD). Most agencies do not update this figure on an annual basis and therefore it remains unchanged over the trend period. CAT's service area population was adjusted upward in FY 2011 by 14.3 percent. As a result the service area density was adjusted by the same amount.

The average headway of a CAT fixed bus route was 20.7 in FY 2012. This represented a 12.5 percent decrease from an average headway of 23.6 in FY 2008. The average headway of a fixed route bus system is defined as the average time it takes a bus to arrive at a stop, also known as service frequency. The lower the headway, the more frequent the service is and therefore the higher quality of service to the riders who are required to wait less time and have more flexibility in when to take trips. As compared to its peer group, CAT ranked first, 46 percent lower than the peer median of 39 minutes.

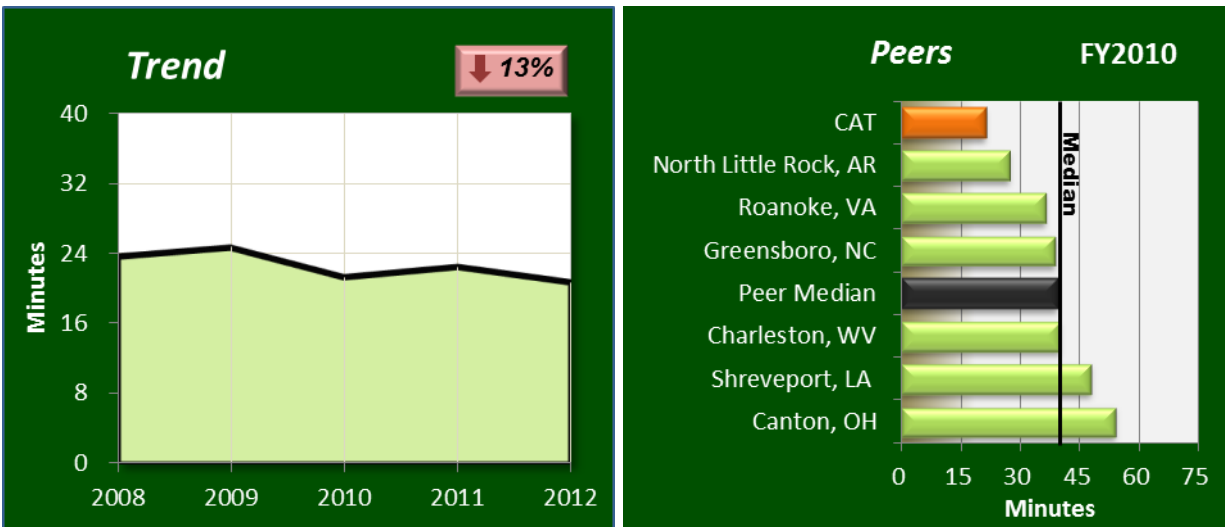


Figure 4-4. Average Headway
Source National Transit Database 2008-2012

Average speed is calculated by dividing the number of revenue miles of service by the number of revenue hours of service. This number generally reflects the amount of congestion on the roads, but also reflects the amount of city service versus rural service as well as the number of regular routes versus limited stop or express routes. A fixed route system that serves less dense areas and provides a greater percentage of express service will have a higher average speed. CAT’s average speed stayed in a small range over the trend period. CAT ranked 6th among its peer group and 10 percent below the peer median for this measure.

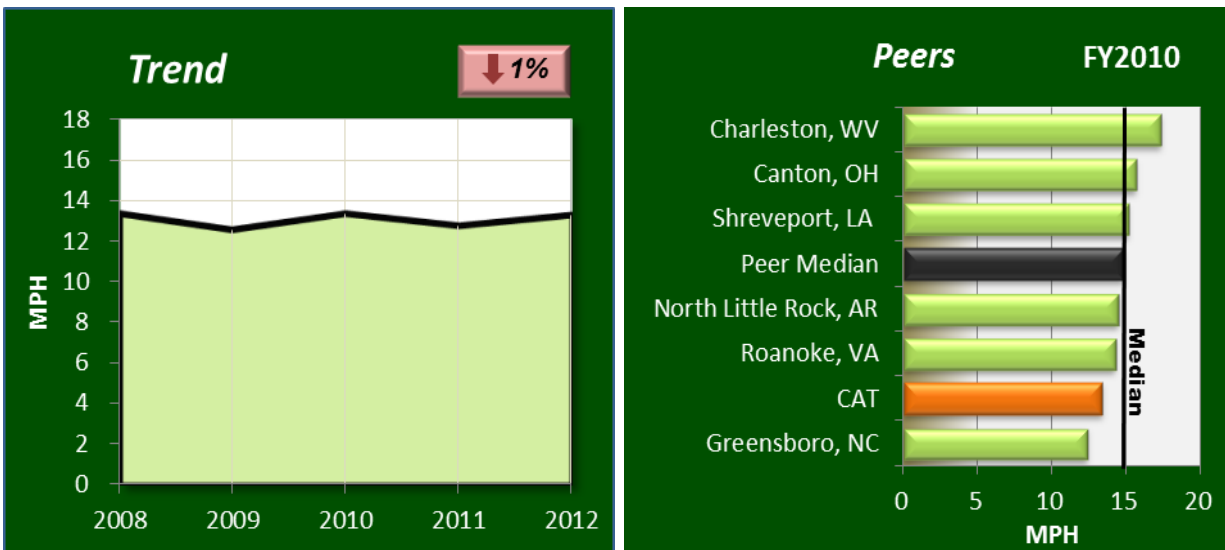


Figure 4-5. Average Speed
Source National Transit Database 2008-2012

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Revenue miles of service are a measure that gives an indication of the level of service provided by a transit system. CAT's revenue miles of service increased just 1 percent over the trend period. Regardless, CAT ranked first in this measure, 13.8 percent above the peer group median.

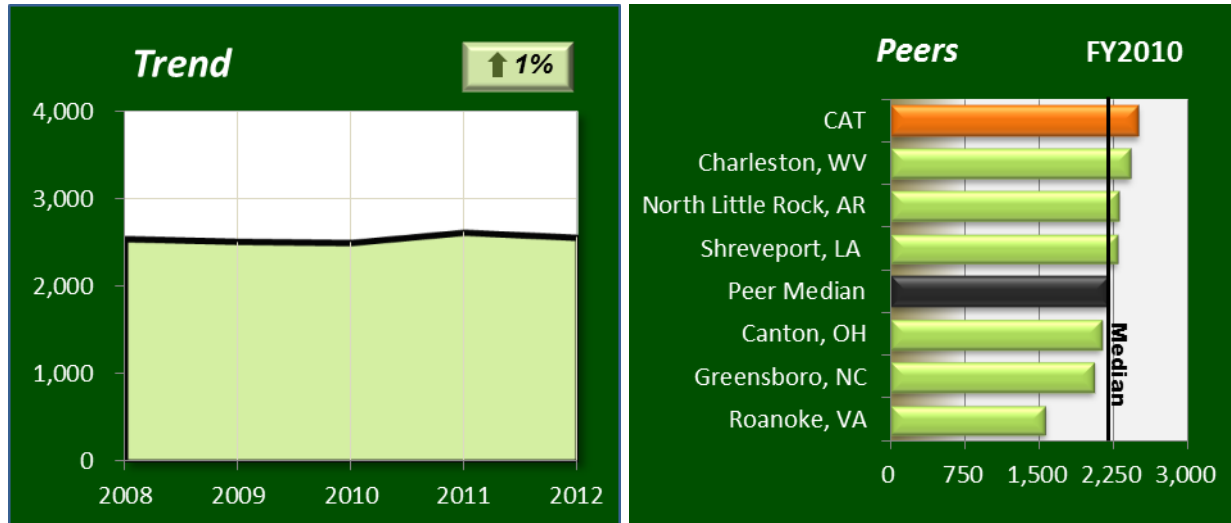


Figure 4-6. Revenue Miles (in thousands)
Source: National Transit Database 2008-2012

The ratio of revenue miles to vehicle miles measures the amount of deadhead miles an agency has. Deadhead miles are defined as miles that the bus has to operate without passengers onboard (to and from the garage). CAT's ratio improved 6 percent from 0.91 to 0.97 over the trend period. CAT sits right at the peer median for this measure based on FY 2010 data.

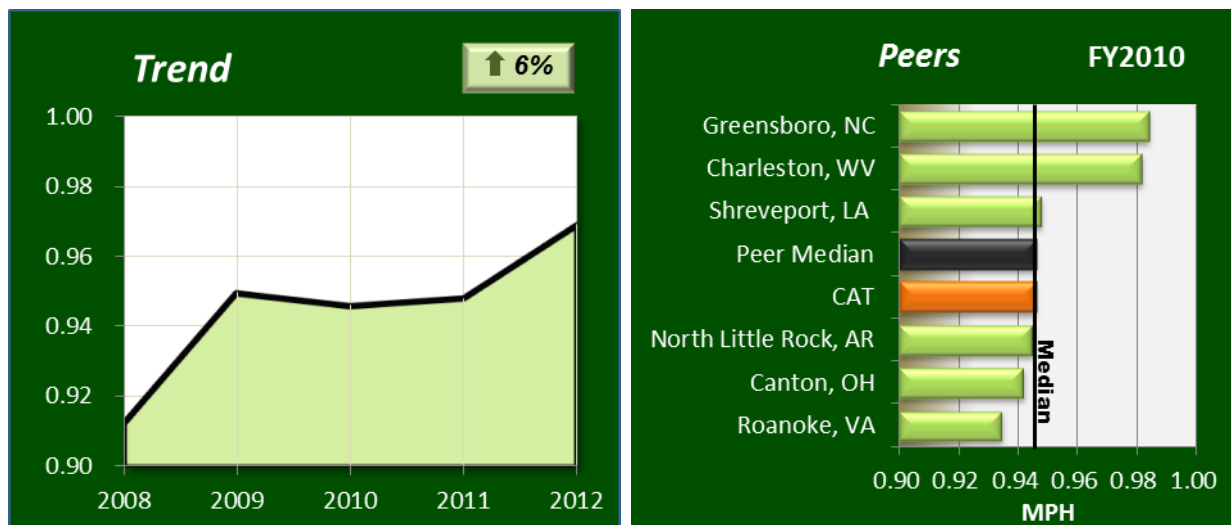


Figure 4-7 Revenue Miles / Vehicle Miles
Source: National Transit Database 2008-2012

Revenue hours of service is another measure of the amount of service provided. Like revenue miles, CAT’s revenue hours of service changed only slightly (2 percent increase) over the trend period. Also, like revenue miles, CAT ranked first among its peers.

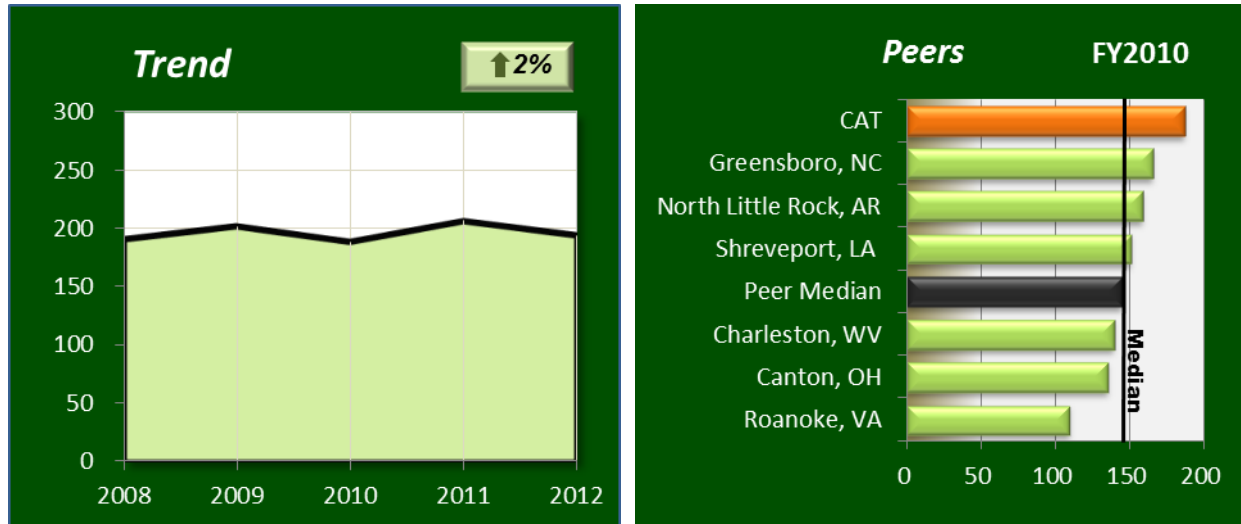


Figure 4-8. Revenue Hours (in thousands)
Source: National Transit Database 2008-2012

Operational Measures: Vehicle Utilization

Vehicle utilization measures reflect transit vehicle usage, performance, and other data associated with the level of use of the vehicles. Table 4-34 shows CAT’s five-year trend and the peer comparison for these measures.

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Table 4-34. Peer and trend – Fixed Route Vehicle Utilization Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 | Peer Median | % From Peer Median |
|---|---------|---------|---------|---------|---------|--------------------|-------------|--------------------|
| Vehicles Available | 55 | 56 | 58 | 67 | 73 | 32.7% | 53.0 | 9.4% |
| Vehicles Operated in Maximum Service (VOMS) | 47 | 47 | 50 | 50 | 52 | 10.6% | 40.5 | 23.5% |
| Spare Ratio | 17.0% | 19.1% | 16.0% | 34.0% | 40.4% | 137.3% | 26.1% | -38.7% |
| Revenue Miles per VOMS (000) | 54 | 53 | 50 | 52 | 49 | -9.0% | 50 | 0.0% |
| Revenue Hours per Employee FTE (000's) | 1.17 | 1.27 | 1.20 | 1.39 | n/a | 18.3% | 1.18 | 2.0% |
| Vehicle Miles / Gallon | 4.67 | 4.12 | 4.23 | 4.60 | 4.53 | -3.0% | 4.29 | -1.2% |
| Revenue Miles between Failures (000's) | 3.37 | 4.94 | 5.71 | 5.84 | 6.57 | 94.8% | 7.02 | -18.8% |
| Average Age of Fleet (yrs.) | 5.64 | 6.48 | 5.22 | 5.39 | 5.87 | 4.1% | 4.60 | 13.2% |

Figures 4-9, 4-10, and 4-11 depict the peer and trend data for vehicles available and operated in maximum service (VOMS). CAT increased their fleet size by 33 percent since FY 2008, but vehicles operated in maximum service increased just 11 percent. CAT ranked first among its peers in both measures.

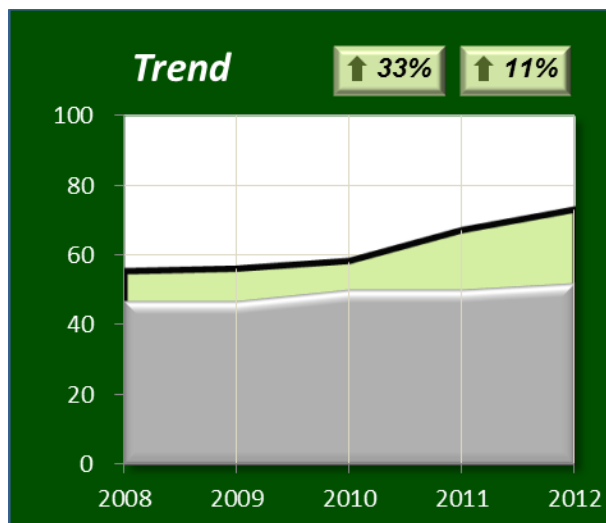


Figure 4-9. Vehicles Available and Operated in Maximum Service (VOMS)
 Source: National Transit Database 2008-2012

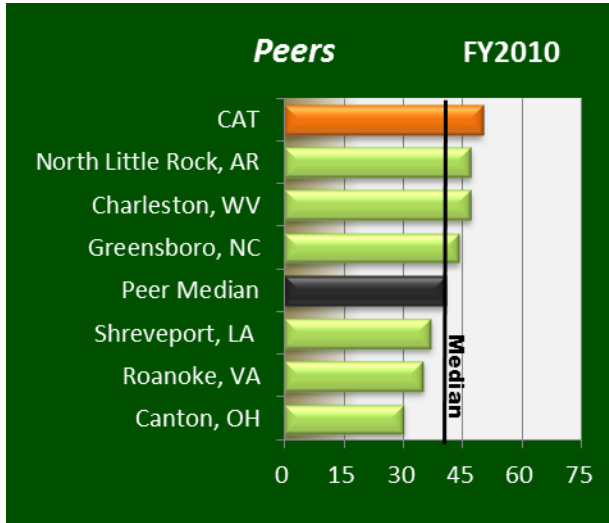


Figure 4-10. VOMS

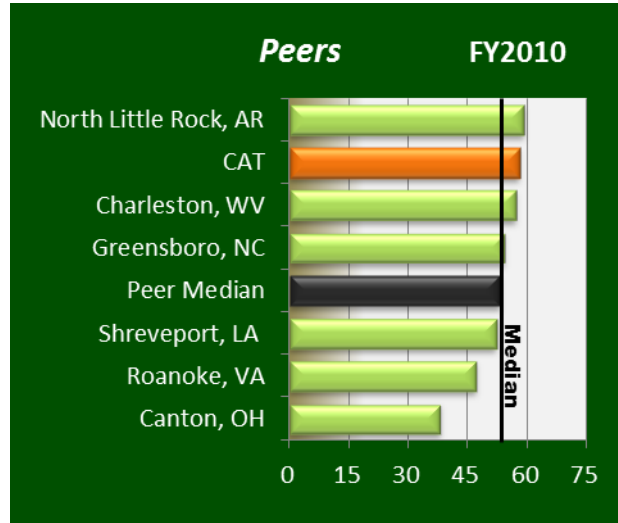


Figure 4-11. Total vehicles

Source: National Transit Database 2008-2012

Spare ratio measures the difference between the number of vehicles available and the number of vehicles operated in maximum service, divided by the number of vehicles in maximum service. Low spare ratios may indicate potential issues in scheduling preventative maintenance and lack of vehicle capacity to respond to increased demand for service, while high spare ratios may indicate an inefficient use of capital and maintenance funds. FTA circular 9030 1A states that agencies that have over 50 vehicles in their fleet should normally not have a spare ratio greater than 20 percent. However, 2010 NTD data reveals that of the 209 systems that have over 50 vehicles, the average spare ratio is 27 percent. This increases to 31 percent for a subset of agencies with 50-100 vehicles.

In FY 2010, CAT's spare ratio stood at 16 percent which ranked lowest among its peers. Since then, its spare ratio has risen to over 40 percent which would rank highest. The peer median for this measure in FY 2010 was 26 percent.

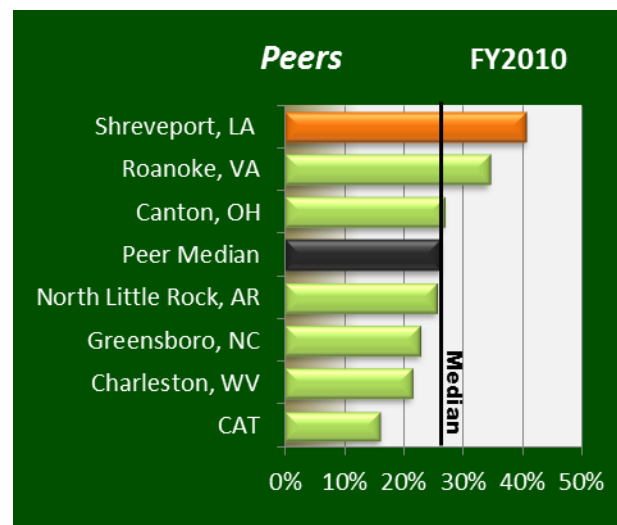
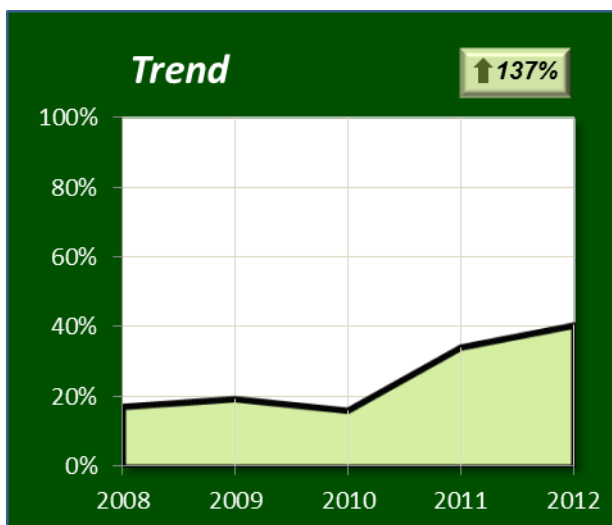


Figure 4-12. Spare Ratio

Source: National Transit Database 2008-2012

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Revenue miles per vehicle in maximum service (VOMS) is a measure showing the degree of utilization of each vehicle in service. The larger the number of revenue miles, the more demand placed upon each vehicle. Figure 4-13 shows that CAT's revenue miles per VOMS has decreased 9 percent over the trend period as the number of VOMS has increased while the number of revenue miles of service has remained about the same. CAT sits right at the peer median for this measure.

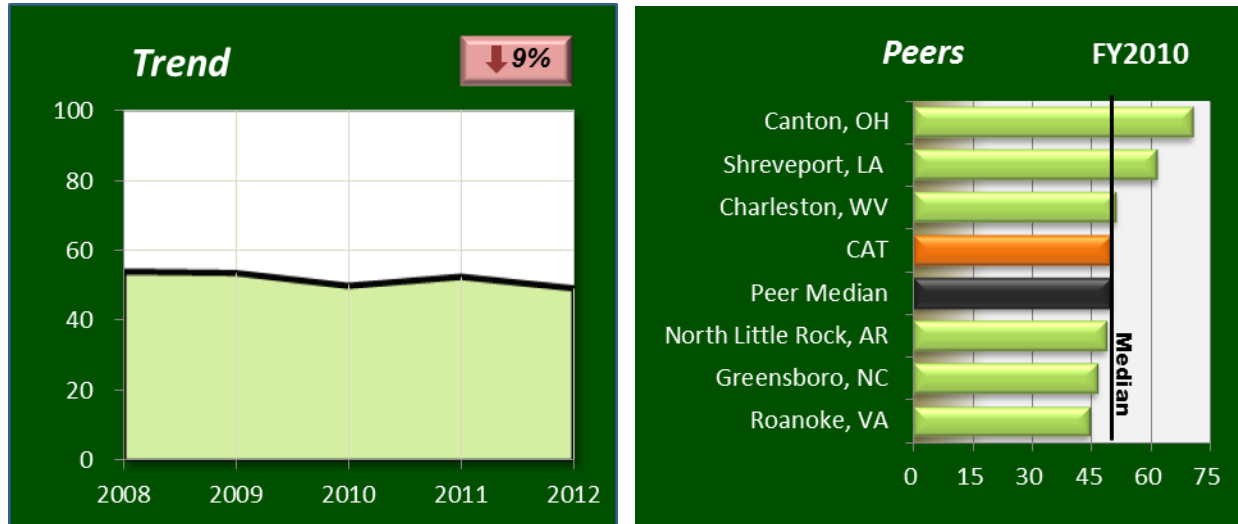


Figure 4-13. Revenue Miles Per VOMS (in thousands)

Source: National Transit Database 2008-2012

Revenue hours per employee FTE is a measure of how well an agency is using its labor resources. As revenue hours increased, the number of employees decreased, leading to an 18 percent change for this measure from FY 2008 to FY 2011. Note that FY 2012 employment data was not available at the time this analysis was done, so only four years of data are shown for the trend. CAT ranked third among its peer group and 2 percent above the peer mean for this measure.

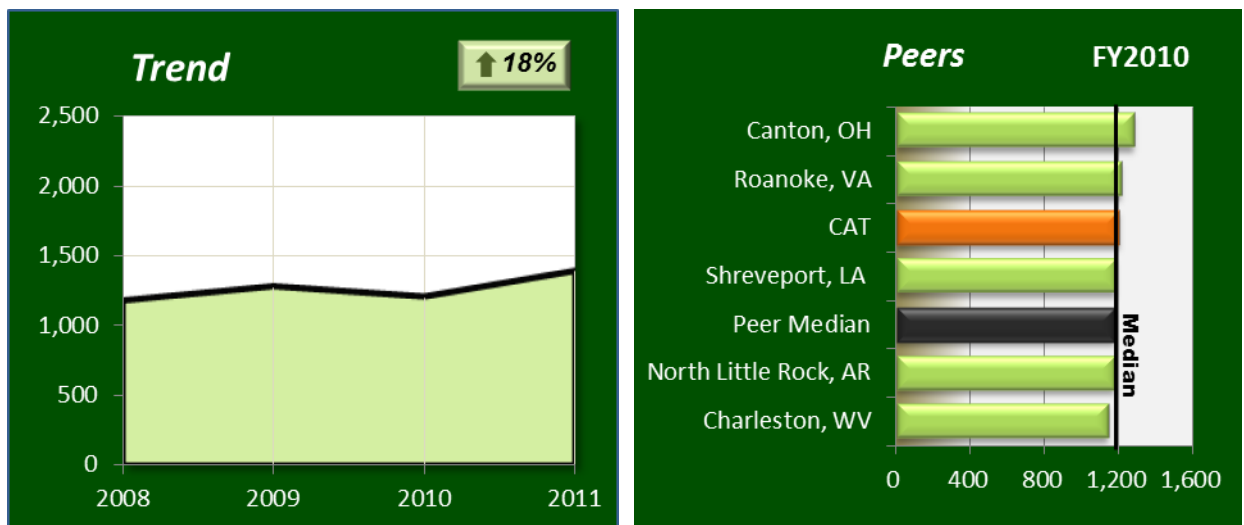


Figure 4-14. Revenue Hours Per Employee FTE

Source: National Transit Database 2008-2012

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Vehicle miles per gallon is another resource utilization measure, measuring the fuel efficiency of the agency's vehicles. There is a correlation between this measure and average speed as typically vehicles get better mileage when not in stop and go traffic. More dense service areas with a greater frequency of stops will likely decrease this measure as well. CAT's vehicle miles per gallon decreased 9 percent over the five year trend period but still is ranked in the middle of its peers just 1 percent below the peer median.

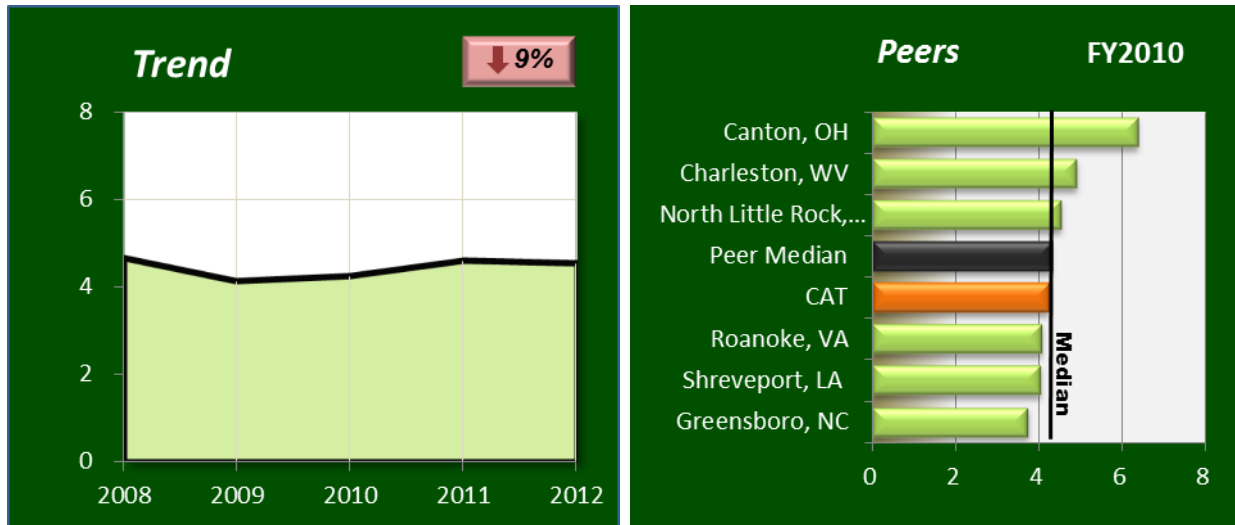


Figure 4-15. Vehicle Miles per Gallon
Source: National Transit Database 2008-2012

Revenue miles between failures is a measure that may provide insight into the overall condition of the vehicle fleet. It measures how often vehicles are breaking down while in service. The number of failures reported has almost been cut in half since FY 2008, resulting in a 95 percent increase in this measure. CAT still has yet to reach the peer median for this measure which is 7,029 revenue miles between failures.

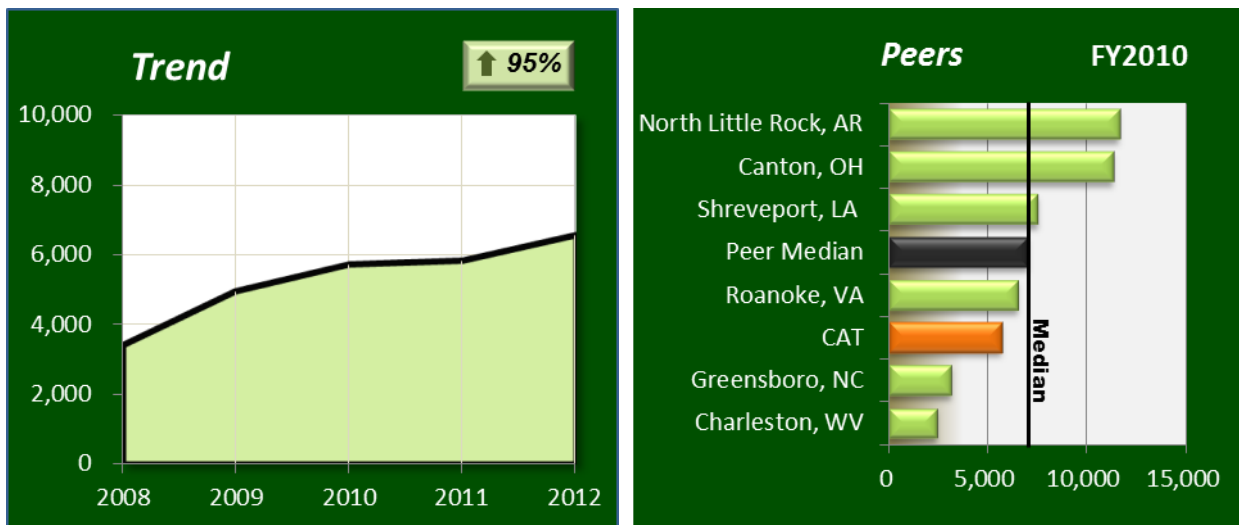


Figure 4-16. Revenue Miles between Failures
Source: National Transit Database 2008-2012

The average age of CAT’s fleet increased 4 percent over the trend period from 5.6 years to 5.9 years. CAT’s average age of fleet was at its low point of 5.2 years in FY 2010, but this was still 13 percent above the peer median of 4.6 for this measure.

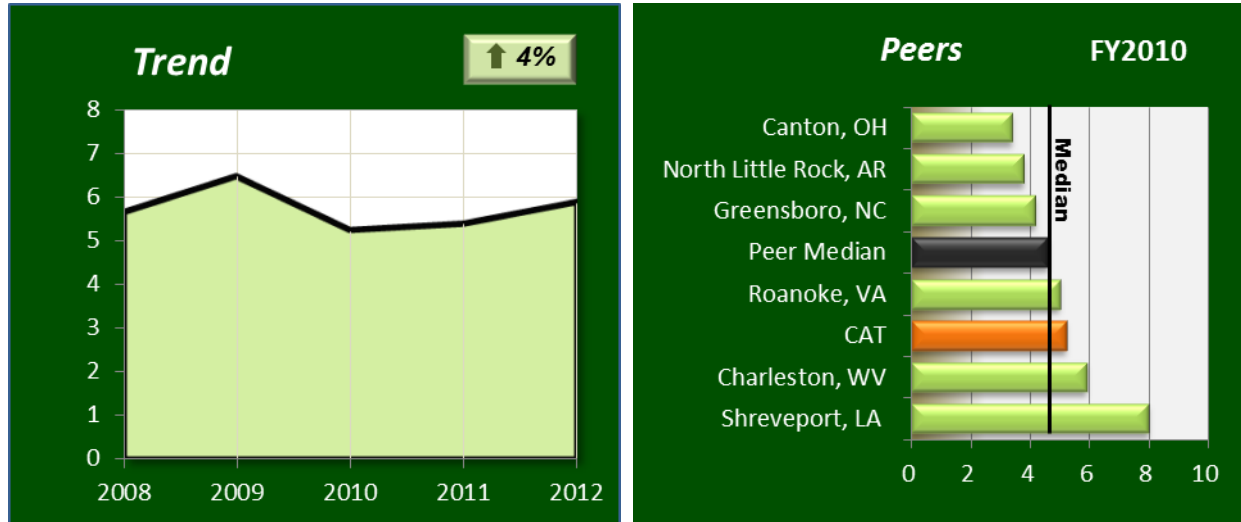


Figure 4-17. Average Age of Fleet
Source: National Transit Database 2008-2012

Operational Measures: Service Utilization and Productivity

This set of performance measures examine how the passengers use the service that is provided as well as the productivity or effectiveness of those services. Table 4-35 shows CAT’s five-year trend and the peer comparison for these measures.

Table 4-35. Peer and Trend – Fixed Route Service Utilization and Productivity Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 | Peer Median | % From Peer Median |
|----------------------------------|---------|---------|---------|---------|---------|--------------------|-------------|--------------------|
| Passenger Trips (000’s) | 3,541 | 3,278 | 3,348 | 3,537 | 3,839 | 8.4% | 2,415 | 38.7% |
| Passenger Miles (000’s) | 12,977 | 12,050 | 12,076 | 13,252 | 13,306 | 2.5% | 13,689 | -11.8% |
| Average Passenger Trip Length | 3.66 | 3.68 | 3.61 | 3.75 | 3.47 | -5.4% | 4.91 | -26.6% |
| Passenger Trips per VOMS (000’s) | 75.3 | 69.7 | 67.0 | 70.7 | 73.8 | -2.0% | 67.9 | -1.3% |
| Passenger Trips per Revenue Hour | 18.61 | 16.32 | 17.86 | 17.17 | 19.87 | 6.8% | 19.11 | -6.5% |
| Passenger Trips per Revenue Mile | 1.39 | 1.31 | 1.34 | 1.35 | 1.50 | 7.7% | 1.22 | 10.1% |

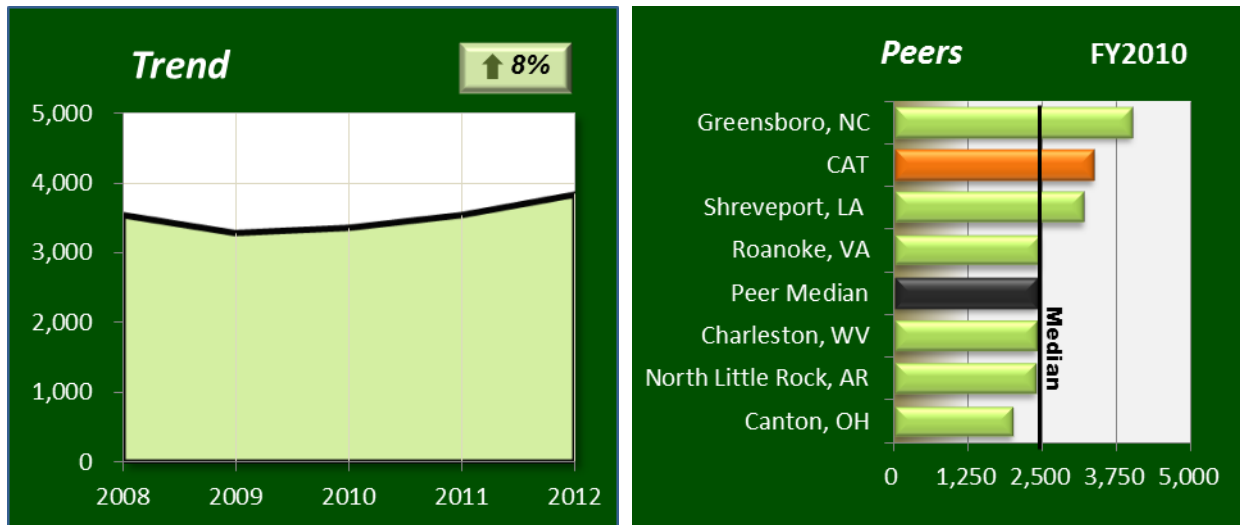


Figure 4-18. Passenger Trips
Source: National Transit Database 2008-2012

The number of passenger miles is a NTD measure that multiplies the number of passenger trips by the average passenger trip length to estimate the total number of miles passengers traveled. In some regards, passenger miles more accurately portray actual utilization of the bus system since a system could have a high volume of short passenger trips while the bus is empty for a majority of its trip. CAT’s passenger miles increased 3 percent over the trend period and lagged behind the increase of passenger trips. Unlike passenger trips, CAT ranked below the peer median for this measure.

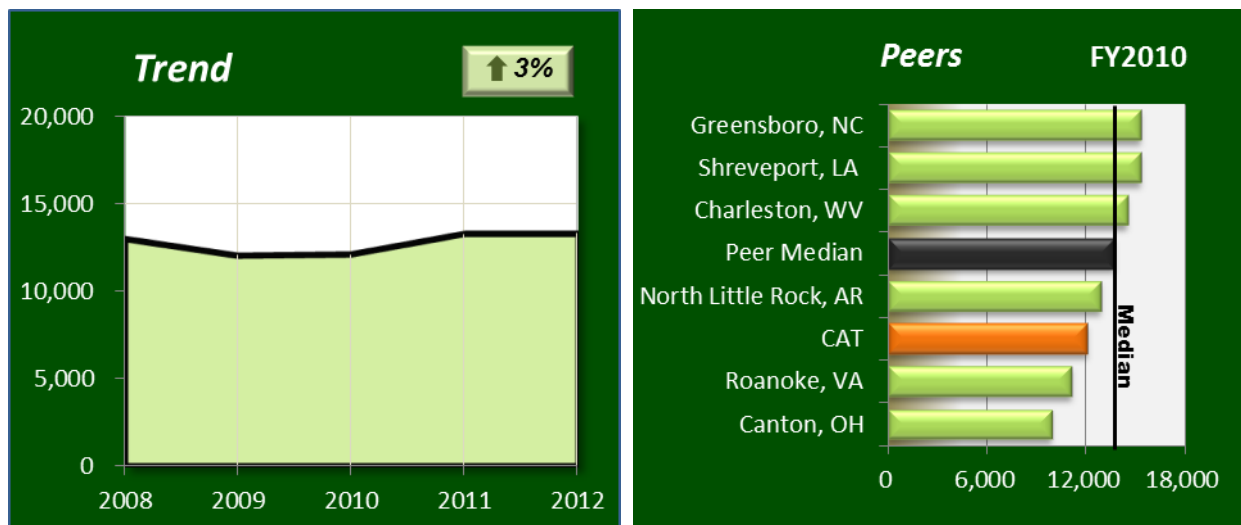


Figure 4-19. Passenger Miles
Source: National Transit Database 2008-2012

The average passenger trip length for CAT decreased 5 percent over the trend period (from 3.66 miles to 3.47 miles). This is why passenger miles increased at a smaller rate than passenger trips. CAT ranks last in this measure reflecting that a majority of their trips are confined to a smaller service area.

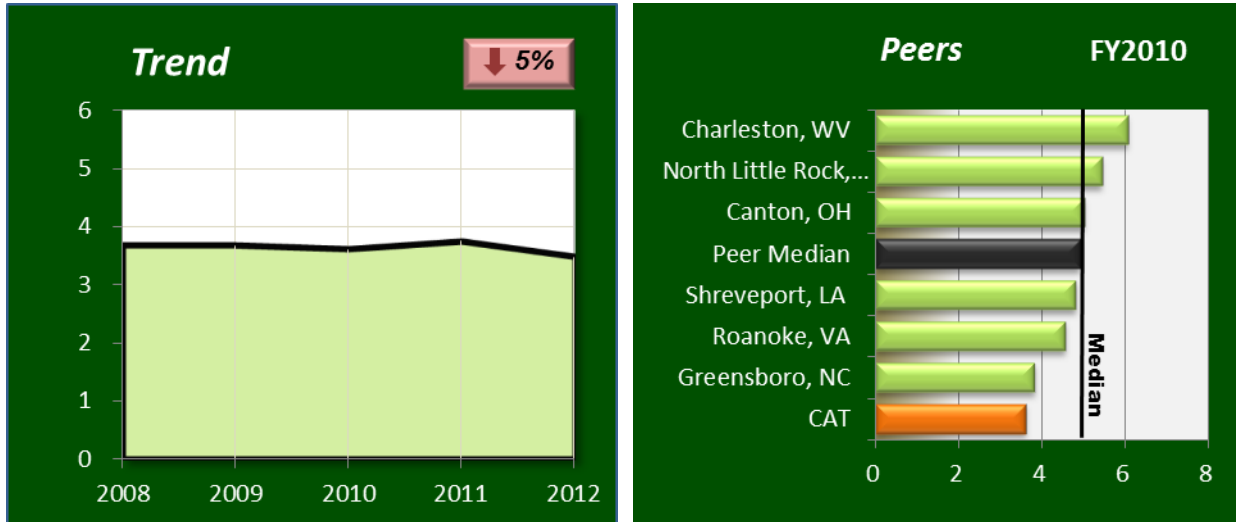


Figure 4-20. Average Passenger Trip Length
Source: National Transit Database 2008-2012

Three measures that reflect the productivity of a fixed route system are passenger trips per vehicle operated in maximum service, passenger trips per revenue hour, and passenger trips per revenue mile. CAT’s peer and trend data for these measures are shown in the next set of Figures (4-21 through 4-23). Passenger trips per VOMS dipped from FY2008 to FY2010, but has since rebounded to end only 2 percent down for the period. Passenger trips per revenue hour and per revenue mile rose 7 percent and 8 percent respectively. Versus their peers, CAT is either slightly above or below the peer median for these measures.

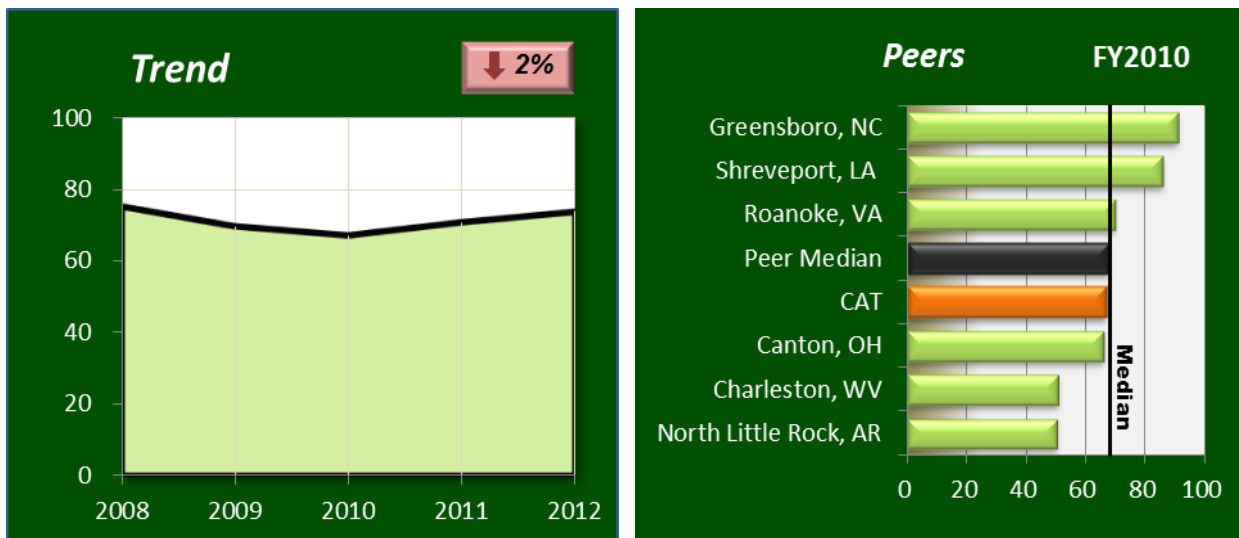


Figure 4-21. Passenger Trips Per VOMS
Source: National Transit Database 2008-2012

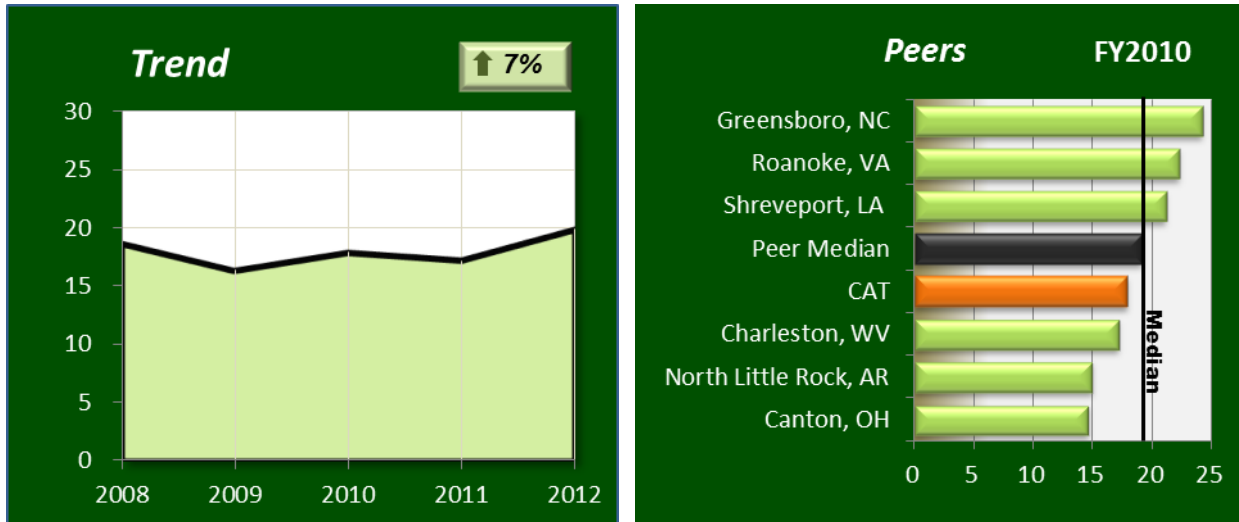


Figure 4-22. Passenger Trips Per Revenue Hour
Source: National Transit Database 2008-2012

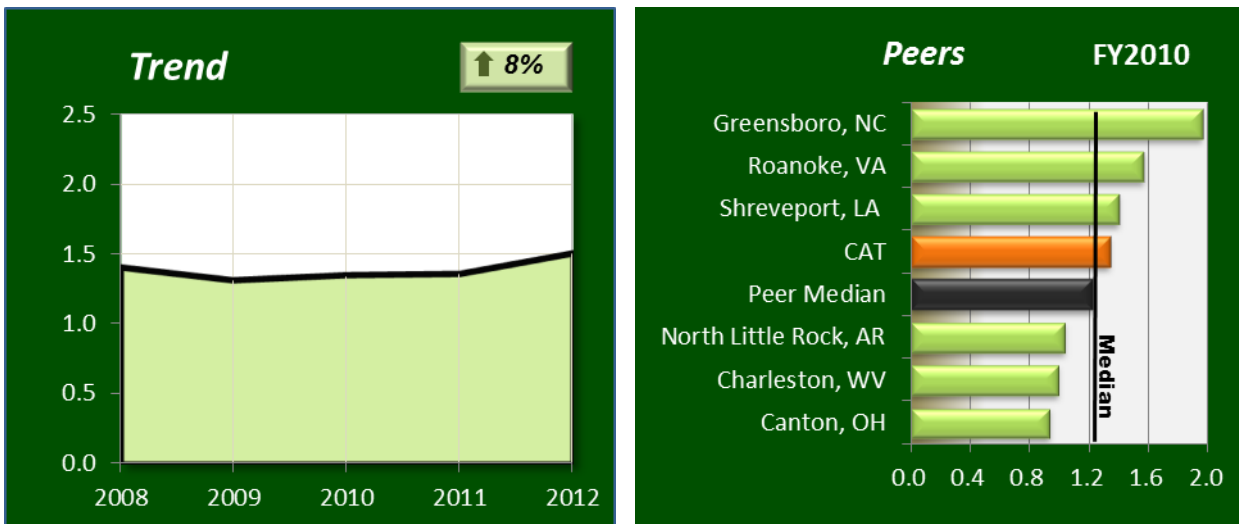


Figure 4-23. Passenger Trips Per Revenue Mile
Source: National Transit Database 2008-2012

Financial Performance Measures: Expense and Revenue

The financial performance measures include expense and revenue measures as well as financial efficiency and effectiveness measures. Table 4-36 shows SCAT’s five-year trend and the peer comparison for the expense and revenue measures.

Table 4-36. Peer and Trend –Fixed Route Expense and Revenue Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 | Peer Median | % From Peer Median |
|--------------------------------|----------|----------|----------|----------|----------|--------------------|-------------|--------------------|
| Operating Expense (000's) | \$12,854 | \$13,467 | \$12,649 | \$13,248 | \$13,224 | 2.9% | \$11,021 | 14.8% |
| Maintenance Expense (000's) | \$2,330 | \$2,700 | \$2,665 | \$2,934 | \$2,849 | 22.3% | \$2,466 | 8.1% |
| Passenger Fare Revenue (000's) | \$3,426 | \$3,091 | \$3,176 | \$3,226 | \$3,325 | -2.9% | \$1,799 | 76.6% |
| Base Fare | \$1.50 | \$1.50 | \$1.50 | \$1.50 | \$1.50 | 0.0% | \$1.43 | 5.3% |
| Fare Revenue per Revenue Hour | \$18.01 | \$15.04 | \$16.95 | \$15.66 | \$17.21 | -4.4% | \$14.46 | 17.2% |
| Average Fare | \$0.97 | \$0.92 | \$0.95 | \$0.91 | \$0.87 | -10.5% | \$0.72 | 31.2% |
| Average Fare % of Base Fare | 64.5% | 61.4% | 63.2% | 60.8% | 57.7% | -10.5% | 50.9% | 24.2% |

Figure 4-24 shows that CAT’s operating expenses increased just 3 percent over the five-year trend period. CAT ranks second among its peers, behind the system in Greensboro, NC for this measure.

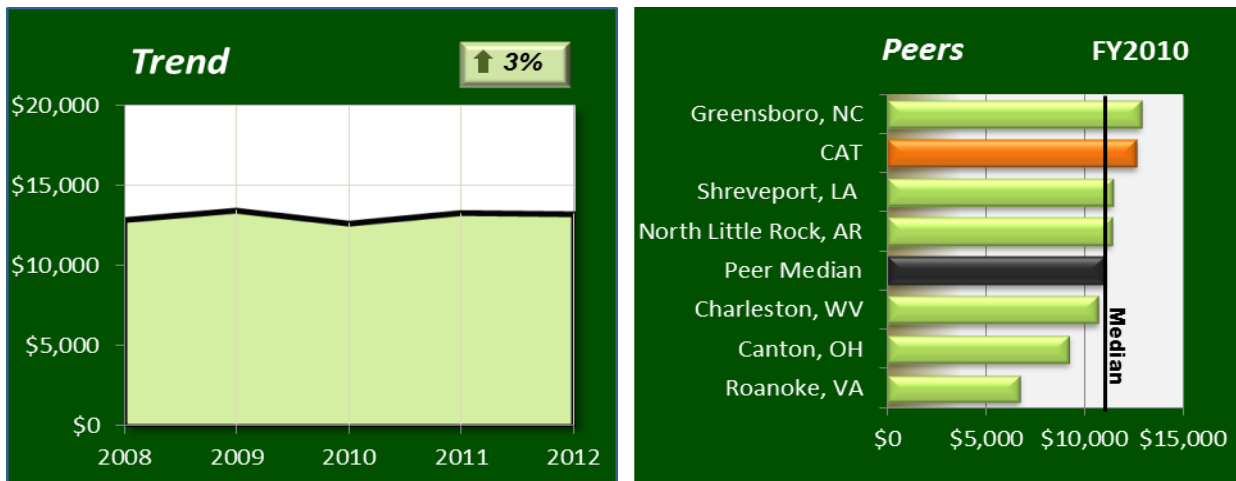


Figure 4-24. Operating Expense (in thousands \$)
Source: National Transit Database 2008-2012

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Maintenance expense as a subset of operating expense is shown in Figure 4-25. Maintenance expenses rose at a faster pace than operating expenses as a whole (22 percent versus 3 percent). As compared to its peers, CAT had the third highest maintenance expenses, and was 8 percent above the peer median.



Figure 4-25: Maintenance Expense (in thousands \$)
Source: National Transit Database 2008-2012

CAT's base cash fare is \$1.50 and did not change over the trend period. Three other systems also have a base cash fare of \$1.50 which is tops in the peer group. Three other systems have lower base fares with the system in Charleston, WV having the lowest base cash fare at \$1.00. The peer median for this measure is \$1.43.

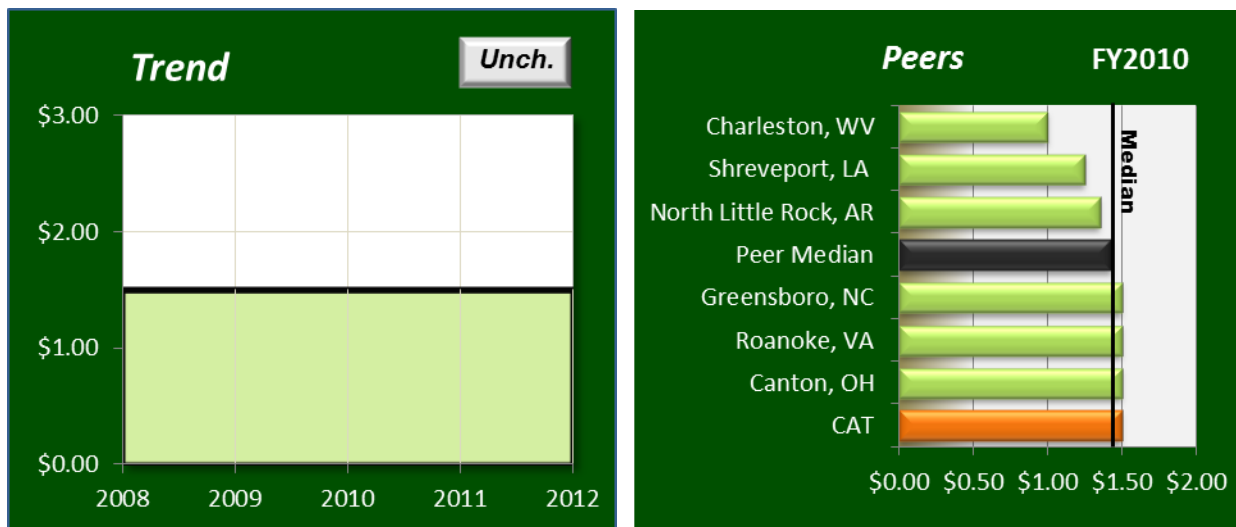


Figure 4-26. Base Cash Fare
Source: National Transit Database 2008-2012

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CAT's passenger fares have decreased 3 percent over the five-year trend period. The amount of fare revenue per revenue hour of service has declined even more, at 5 percent. However, CAT ranks first among its peers for this measure.

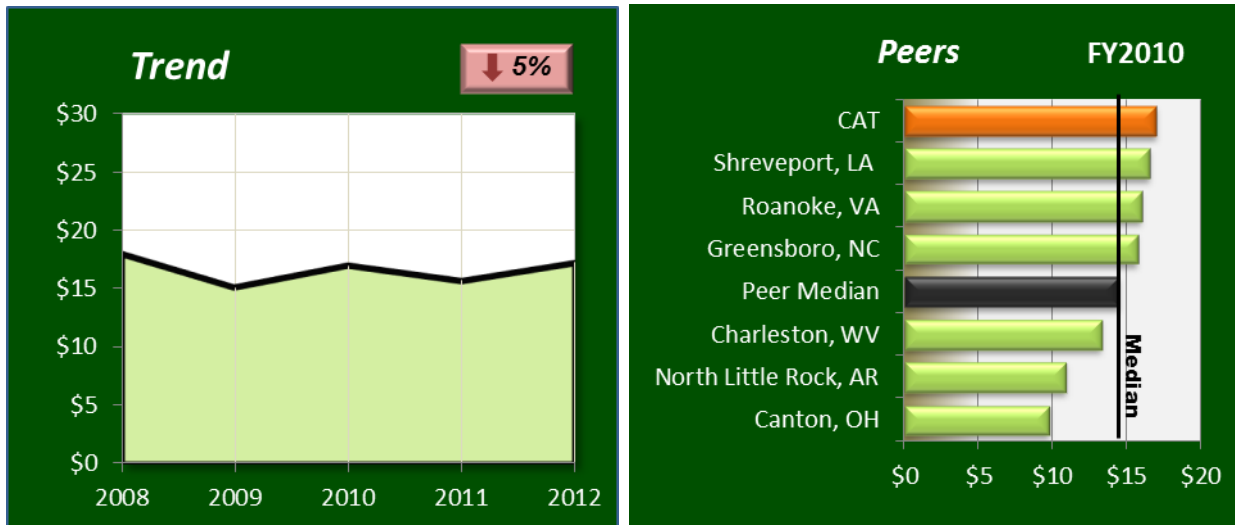


Figure 4-27. Fare Revenue per Revenue Hour
Source: National Transit Database 2008-2012

Average fare is calculated by dividing the total passenger fare revenue by the total number of passengers. Average fare may be higher in systems that do not offer a special rate for transfers, but require passengers to pay full fare for each trip. The average fare may be lower in systems in which more passengers utilize discounted daily or monthly passes. CAT's average fare dropped from \$0.97 to \$0.87 over the trend period or 10 percent. Because CAT's base cash fare did not change, the drop may be attributed to more riders using discount passes. CAT still ranks second highest among its peers for this measure.

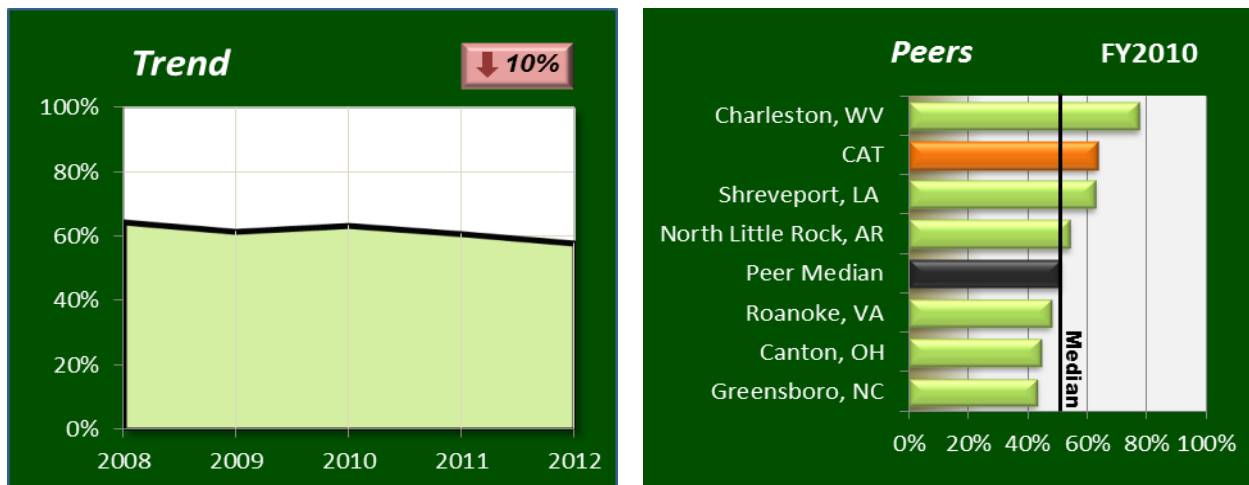


Figure 4-28. Average Fare percent of base Cash Fare
Source: National Transit Database 2008-2012

Financial Performance Measures: Efficiency and Effectiveness

The financial performance measures include expense and revenue measures as well as financial efficiency and effectiveness measures. Table 4-38 shows CAT’s five-year trend and the peer comparison for the efficiency and effectiveness measures.

Table 4-37. Peer and Trend – Fixed Route Efficiency and Effectiveness Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 | Peer Median | % From Peer Median |
|--------------------------------------|---------|---------|---------|---------|---------|--------------------|-------------|--------------------|
| Operating Expense Per Capita | \$55.39 | \$58.03 | \$54.51 | \$49.97 | \$49.88 | -10.0% | \$47.10 | 15.7% |
| Operating Expense Per Passenger Trip | \$3.63 | \$4.11 | \$3.78 | \$3.75 | \$3.44 | -5.1% | \$4.03 | -6.2% |
| Operating Expense Per Revenue Hour | \$67.56 | \$67.07 | \$67.49 | \$64.31 | \$68.44 | 1.3% | \$73.54 | -8.2% |
| Maintenance Expense per Vehicle Mile | \$0.84 | \$1.02 | \$1.01 | \$1.06 | \$1.08 | 29.0% | \$1.01 | -0.3% |
| Farebox Recovery | 26.7% | 22.4% | 25.1% | 24.3% | 25.1% | -5.7% | 18.7% | 34.0% |

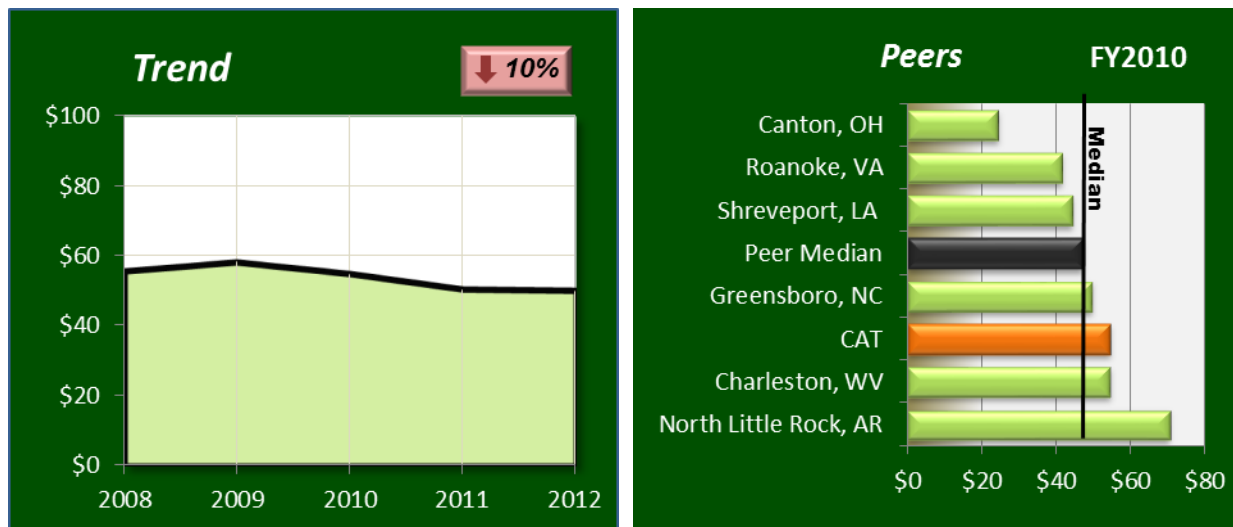


Figure 4-29. Operating Expense Per Capita
Source: National Transit Database 2008-2012

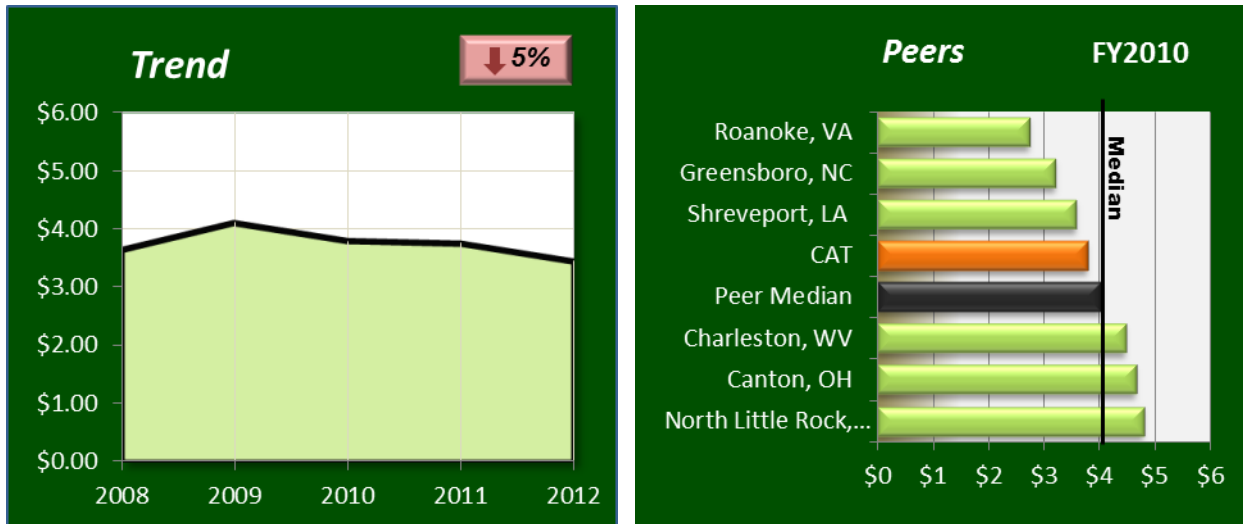


Figure 4-30. Operating Expense Per Passenger Trip
Source: National Transit Database 2008- 2012

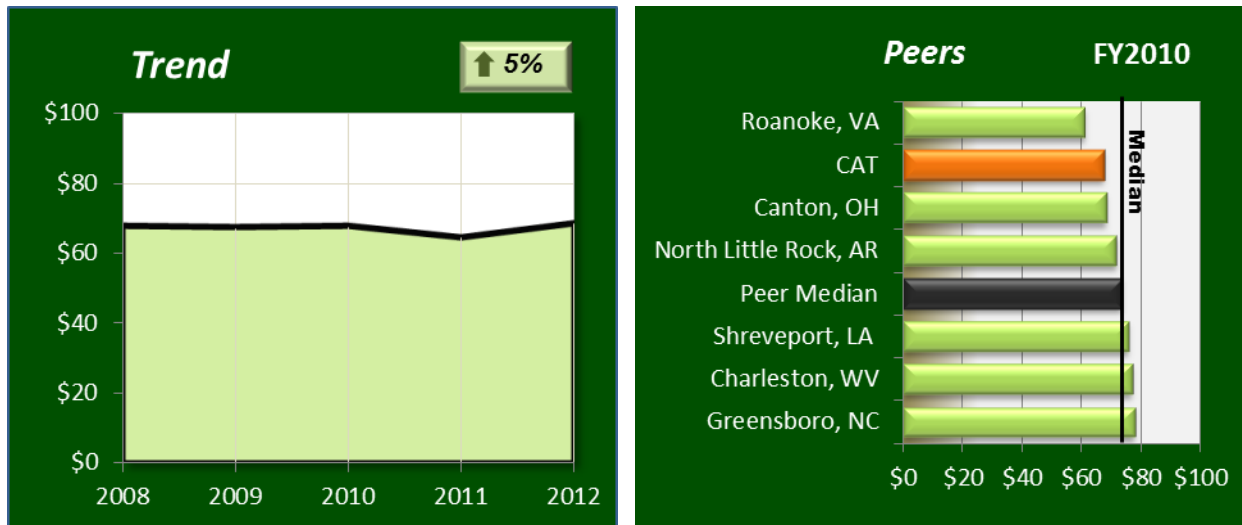


Figure 4-31. Operating Expense Per Revenue Hour
Source: National Transit Database 2008-2012

Maintenance expense per vehicle mile is another measure that can indicate the overall health of the vehicle fleet. If this measure is high, it may mean that the condition of the vehicles are poor and they require more maintenance. If it is low, then that may mean the fleet is in overall good condition. CAT had an increase of 29 percent for this measure over the trend period. CAT’s maintenance expense per vehicle mile of \$1.01 was just slightly lower than the peer median.

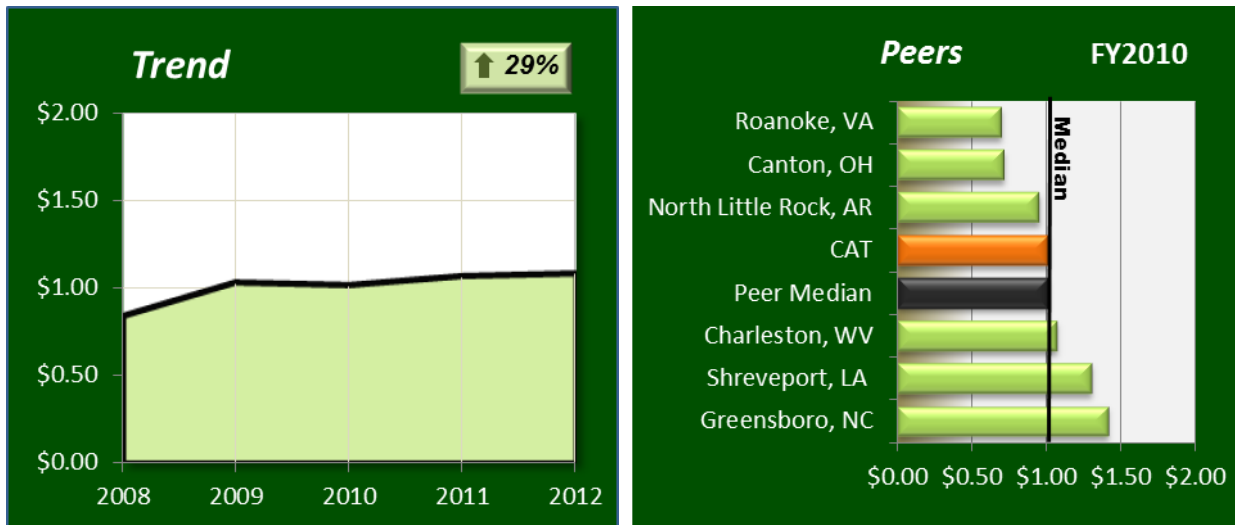


Figure 4-32. Maintenance Expense Per Vehicle Mile
Source: National Transit Database 2008-2012

Farebox recovery is a ratio that shows the amount an agency receives in the form of passenger fares as a percentage of total operating expenses. CAT’s farebox recovery was down 6 percent over the trend period. However, CAT’s farebox recovery remains on the high side among its peers. At 25 percent, it is 34 percent higher than the peer median.

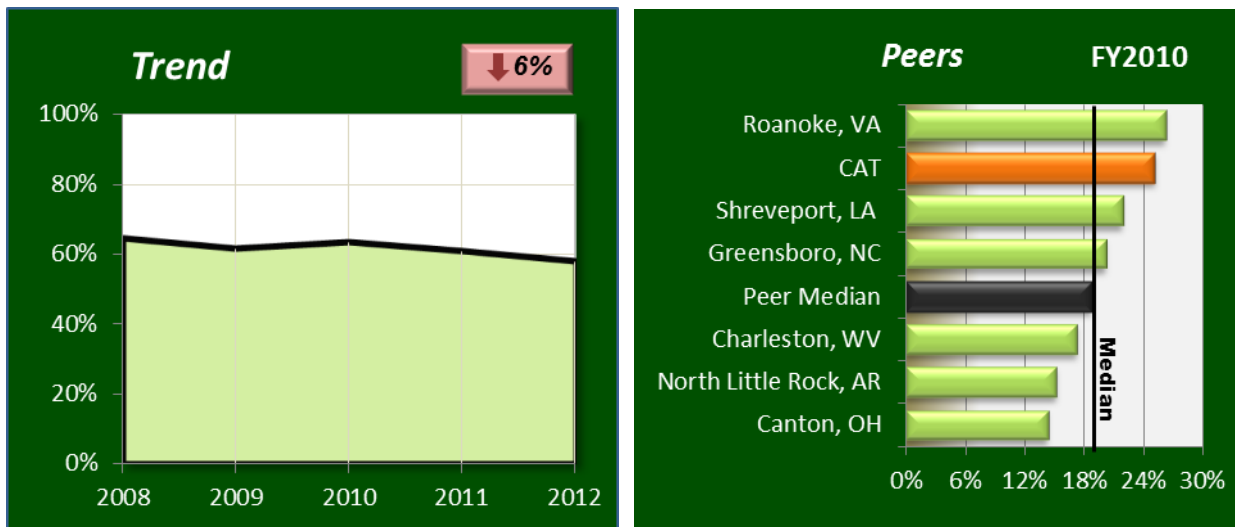


Figure 4-33: Farebox Recovery
Source: National Transit Database 2008-2012

Peer Summary

A summary of CAT as compared to its peers for the selected measures is displayed in the following figures. Figure 4-34 graphically displays how CAT’s values for the operational measures compare to the peer group minimum, maximum, and median. CAT ranks near the peer maximum for some measures, near the peer minimum for other measures, and in the middle for others.

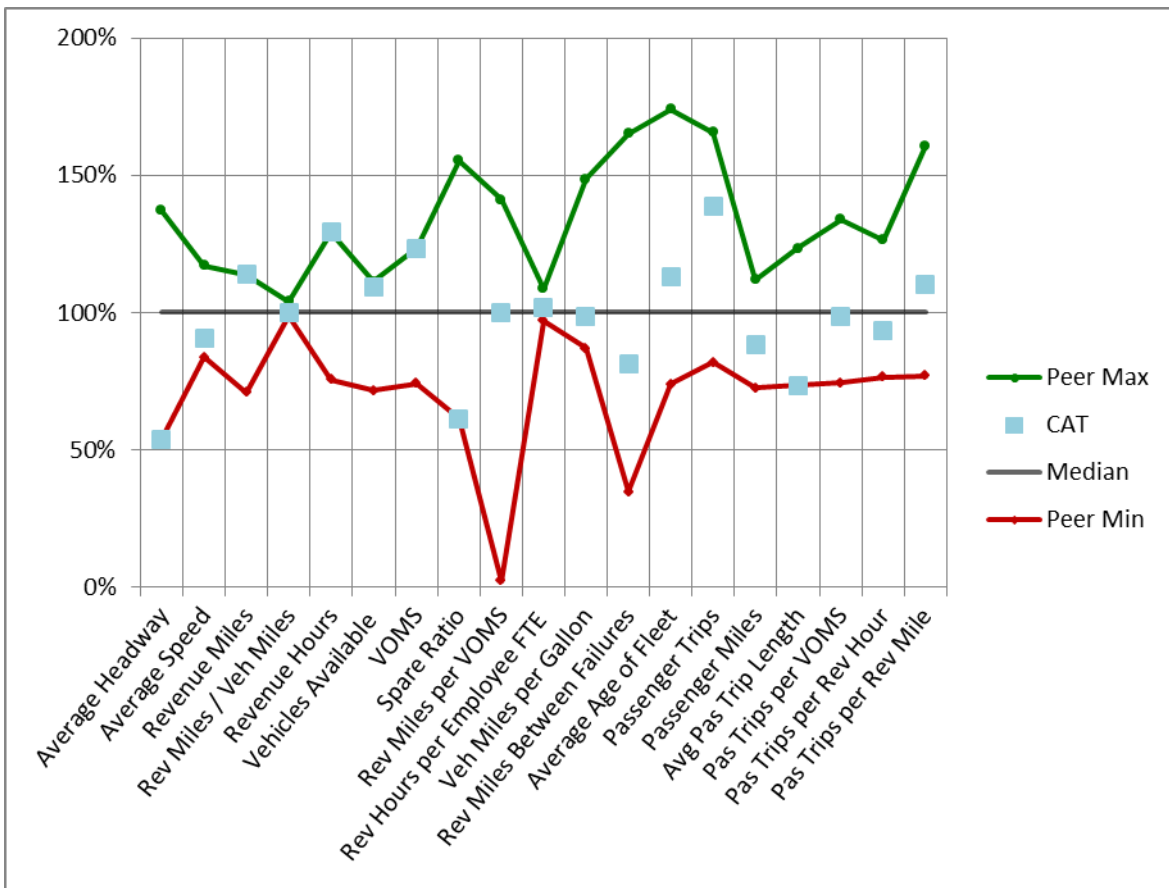


Figure 4-34. Peer Analysis – Operational Measures, FY 2010.

Figure 4-35 shows how CAT’s values compare to the peer group minimum, maximum, and median for the financial measures. CAT ranked above the peer median for all financial measures except for operating expense per passenger trip and operating expense per revenue hour.

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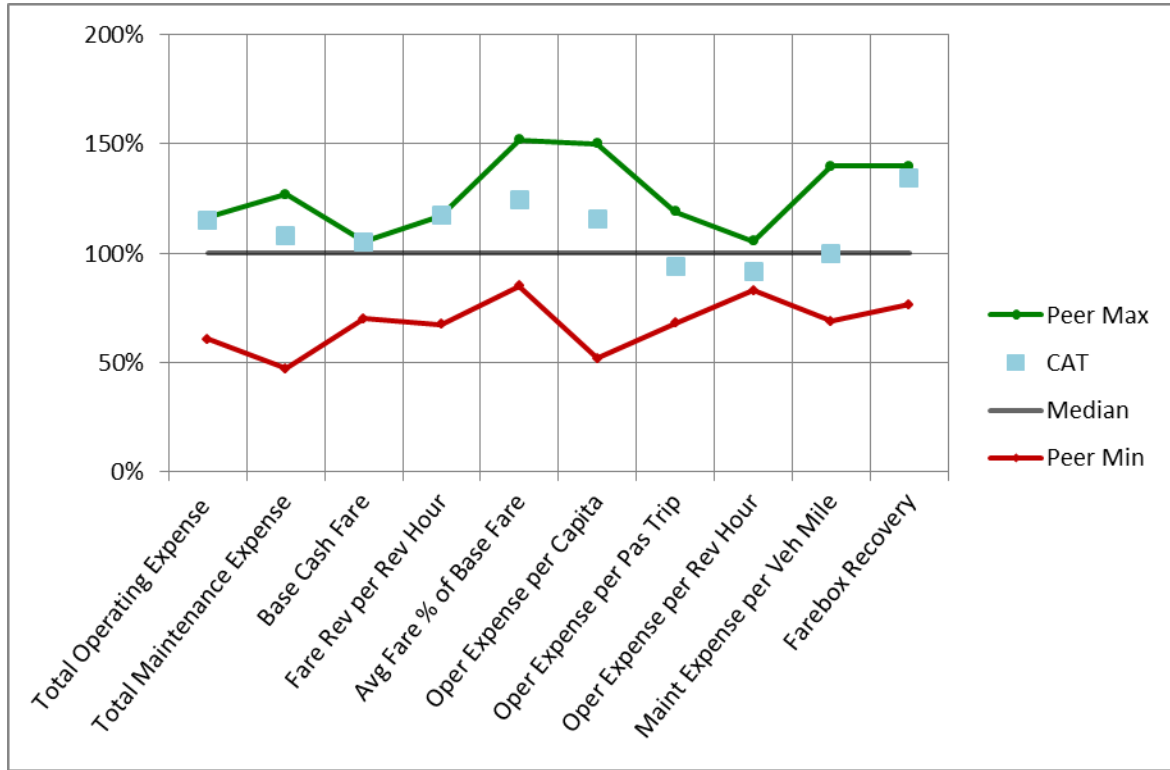


Figure 4-35. Peer Analysis – Financial Measures, FY 2010.

Part Two: Demand Response Transit Service

Table 4-38 lists the performance measures selected for the review of CAT’s demand response service.

Table 4-38. Selected Performance Review Measures Demand Response

| Operational Measures | Financial Measures |
|---|--|
| <p><i>Service Characteristics</i> Vehicle Miles Revenue Miles Revenue Miles / Vehicle Miles Ratio Revenue Hours</p> <p><i>Vehicle Utilization</i> Vehicles Available Vehicles Operated in Max. Service (VOMS) Spare Ratio Revenue Miles per VOMS Vehicle Miles per Gallon Revenue Miles between Failures Average Age of Fleet (in yrs.)</p> <p><i>Service Utilization and Productivity</i> Passenger Trips Passenger Miles Average Passenger Trip Length Passenger Trips per VOMS Passenger Trips per Revenue Hour Passenger Trips per Revenue Mile</p> | <p><i>Expense</i> Total Operating Expense Total Maintenance Expense</p> <p><i>Efficiency and Effectiveness</i> Operating Expense per Capita Operating Expense per Passenger Trip Operating Expense per Revenue Hour Maintenance Expense per Vehicle Mile</p> |

Figures in this evaluation illustrate the selected operational and financial measures. The trend graphs show CAT’s trends for each performance measure. The percent change over the five-year period is shown at the top right of each graph.

Operational Performance Measures

Table 4-39 shows CAT’s operational measures for its demand response services for FY 2008 through FY 2012 as well as the percent change over the trend period.

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Table 4-39. Trend Analysis – Demand Response Operational Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 |
|---|---------|---------|---------|---------|---------|--------------------|
| Vehicle Miles | 578,478 | 603,245 | 667,573 | 693,666 | 762,863 | 31.9% |
| Revenue Miles | 543,398 | 585,432 | 652,100 | 660,828 | 702,935 | 29.4% |
| Rev Miles / Vehicle Miles | 0.94 | 0.97 | 0.98 | 0.95 | 0.92 | -1.9% |
| Revenue Hours | 43,665 | 46,115 | 45,449 | 44,236 | 53,128 | 21.7% |
| Vehicles Available | 17 | 19 | 26 | 26 | 26 | 52.9% |
| Vehicles Operated in Maximum Service (VOMS) | 17 | 19 | 20 | 20 | 20 | 17.6% |
| Spare Ratio | 0.0% | 0.0% | 17.9% | 30.0% | 30.0% | n/a |
| Revenue Miles per VOMS | 31,965 | 30,812 | 16,721 | 33,041 | 35,147 | 6.4% |
| Vehicle Miles / Gallon | n/a | 11.01 | 8.36 | 8.43 | 19.68 | 78.8% |
| Revenue Miles between Failures | n/a | 1,829 | 6,521 | 18,881 | 25,105 | 1272.2% |
| Average Age of Fleet (yrs.) | 4.70 | 5.70 | 4.80 | 4.00 | 3.03 | -35.5% |
| Passenger Trips | 66,647 | 63,006 | 70,950 | 77,320 | 78,906 | 18.4% |
| Passenger Miles | 582,162 | 585,432 | 652,100 | 612,926 | 656,928 | 12.8% |
| Average Pas Trip Length | 8.74 | 9.29 | 9.19 | 7.93 | 8.33 | -4.7% |
| Pas Trips per VOMS | 3,920 | 3,316 | 3,548 | 3,866 | 3,945 | 0.6% |
| Pas Trips per Revenue Hour | 1.53 | 1.37 | 1.56 | 1.75 | 1.49 | -2.7% |
| Pas Trips per Revenue Mile | 0.12 | 0.11 | 0.11 | 0.12 | 0.11 | -8.5% |

Operational Measures: Service Characteristics

Revenue miles of service is a measure that gives an indication of the level of service provided by a transit system. CAT's revenue miles of service increase 29 percent over the trend period. As compared to its peer group, CAT was 4.7 percent above the peer median in FY 2010. For a complete comparison of how CAT compared to its peer group for all measures, refer to Tables 4-38 and 4-39.

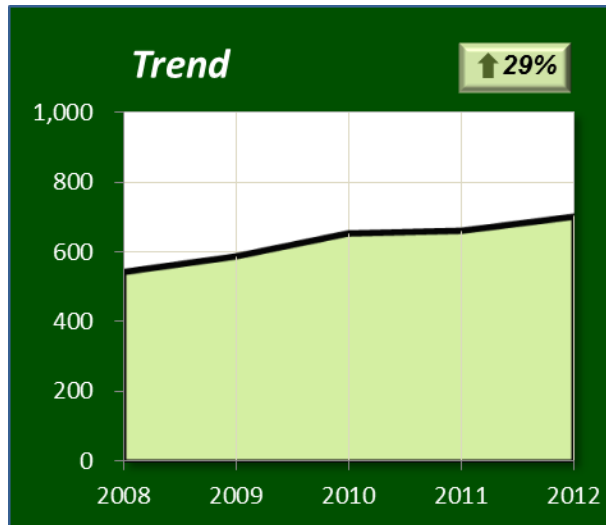


Figure 4-36: Revenue Miles (in thousands)
Source: National Transit Database 2008-2012

The ratio of revenue miles to vehicle miles measures the amount of deadhead miles an agency has. Deadhead miles are defined as miles that the bus has to operate without passengers onboard (to and from the garage). CAT’s ratio dropped 2 percent from 0.94 to 0.92 with a peak near 0.98 in FY 2010.

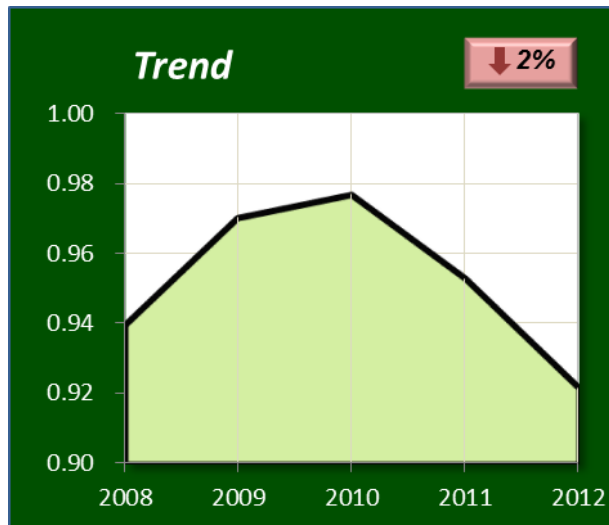


Figure 4-37. Revenue Miles / Vehicle Miles
Source: National Transit Database 2008-2012

Revenue hours of service is another measure of the amount of service provided. CAT's revenue hours of service increased 22 percent over the trend period and was 6 percent higher than the peer median in FY 2010.

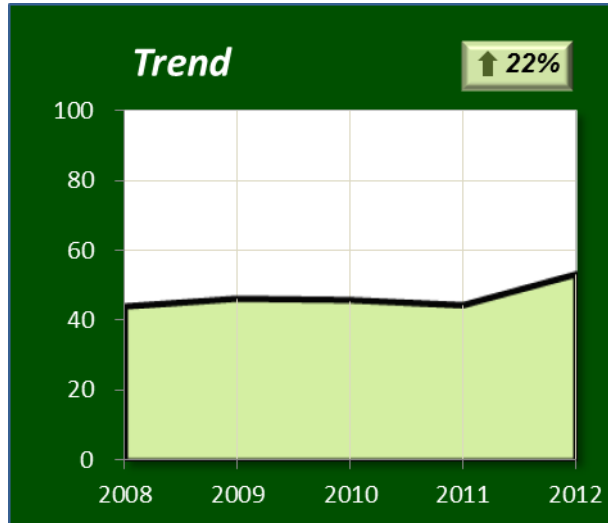


Figure 4-38. Revenue Hours (in thousands).
Source: National Transit Database 2008-2012

Vehicle Utilization Measures

Figure 4-39 depicts the trend data for vehicles available and operated in maximum service (VOMS). In FY 2008 and 2009 and half of 2010, there were 20 vehicles operated as purchased transportation (the Authority purchased from First Transit) provided by outside providers and did not report any spare vehicles. In FY 2010, CAT brought their paratransit services in house and increased the fleet size by 6. Over the five year trend period, the total vehicles in the fleet have increased 53 percent while VOMS only increased by 18 percent.

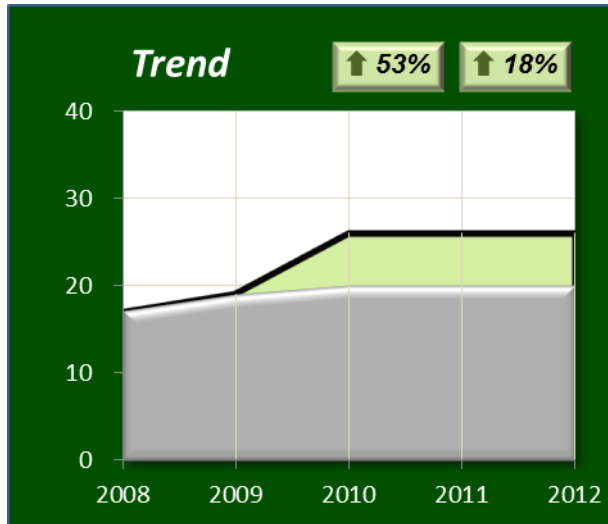


Figure 4-39. Vehicles Available and Operated in Maximum Service (VOMS)
Source: National Transit Database 2008-2012

Spare ratio measures the difference between the number of vehicles available and the number of vehicles operated in maximum service, divided by the number of vehicles in maximum service. CAT did not operate with any spares in FY 2008 and 2009 but since then the spare ratio has been 30 percent.

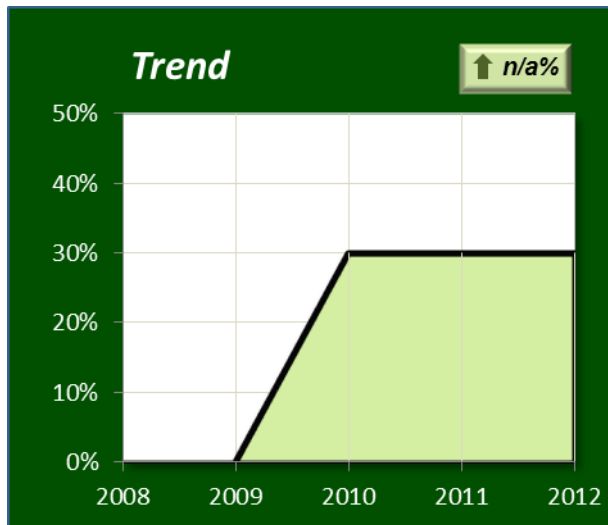


Figure 4-40. Spare Ratio
Source: National Transit Database 2008-2012

Revenue miles per vehicle in maximum service is a measure showing the degree of utilization of each vehicle in service. The higher the number of revenue miles, the more demand is placed upon each vehicle. Figure 4-41 shows that CAT's revenue miles per vehicle in maximum service increased 10 percent over the trend period.

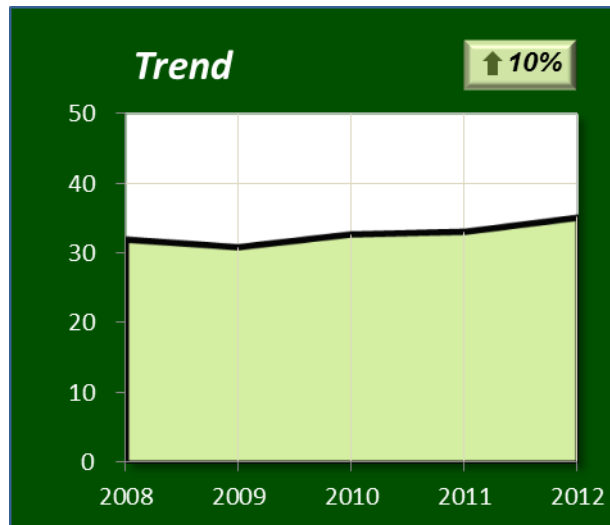


Figure 4-41. Revenue Miles Per VOMS (in thousands)
Source: National Transit Database 2008-2012

Vehicle miles per gallon is another resource utilization measure, measuring the fuel efficiency of the agency’s vehicles. There is a correlation between this measure and average speed as vehicles typically get better mileage when not in stop and go traffic. More dense service areas with a greater frequency of stops will likely decrease this measure as well. CAT’s vehicle miles per gallon decreased by 23 percent from FY 2009 to FY 2011. There were only three years of reliable data available for this measure as CAT did not report total vehicle gallons consumed in FY 2008 and FY 2012. The total number of gallons consumed rose 50 percent over the 3 year period. CAT’s FY 2010 figure of 8.4 miles per gallon was 2 percent higher than the peer median.

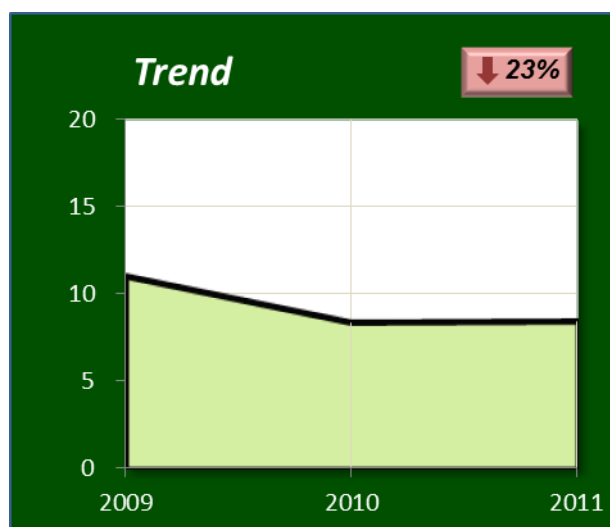


Figure 4-42: Vehicle Miles per Gallon
Source: National Transit Database 2009-2011

Revenue miles between failures is a measure that likely provides insight into the overall condition of the vehicle fleet. The number of failures reported has plummeted from 320 in FY 2008 to 28 in FY 2011.

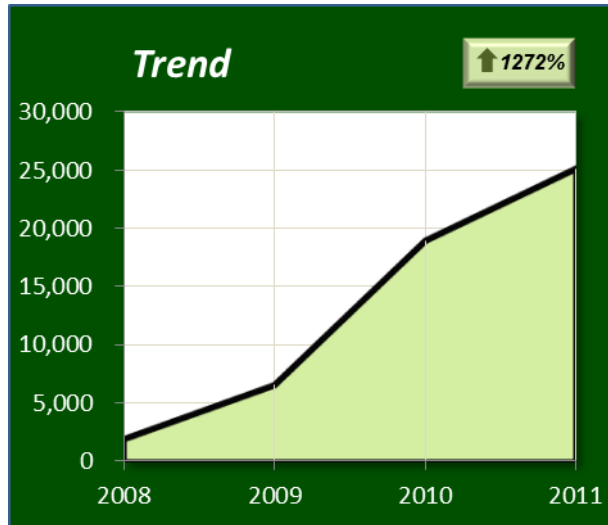


Figure 4-43: Revenue Miles between Failures
Source: National Transit Database 2008-2012

The average age of CAT's fleet decreased 36 percent over the trend period from 4.7 years to 3.0 years. The addition of newer vehicles to the fleet is very likely a contributing factor to fewer vehicle failures on the road.

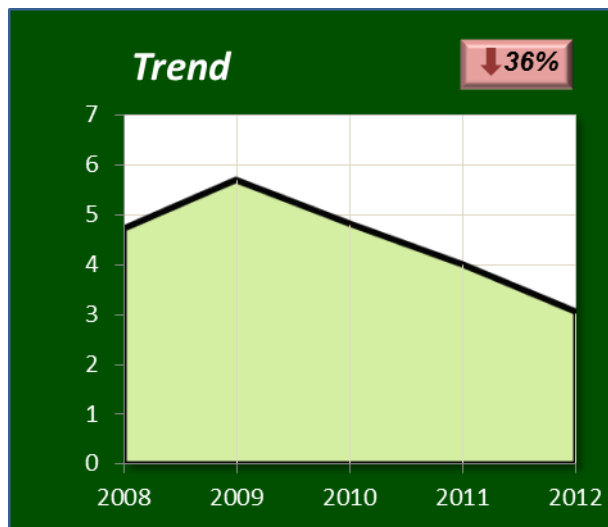


Figure 4-44: Average Age of Fleet
Source: National Transit Database 2008-2012

Service Utilization and Productivity Measures

Ridership on CAT’s demand response services has increased by 18 percent over the trend period. CAT’s demand response ridership was 31 percent below the peer median in FY 2010.

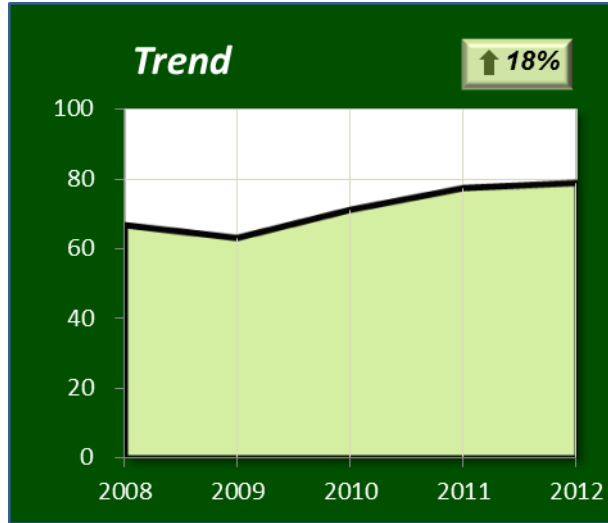


Figure 4-45: Passenger Trips
Source: National Transit Database 2008-2012

Passenger miles decreased 25 percent over the trend period and closely matched the trend of passenger trips. CAT’s passenger miles are still 45 percent higher than the peer median.

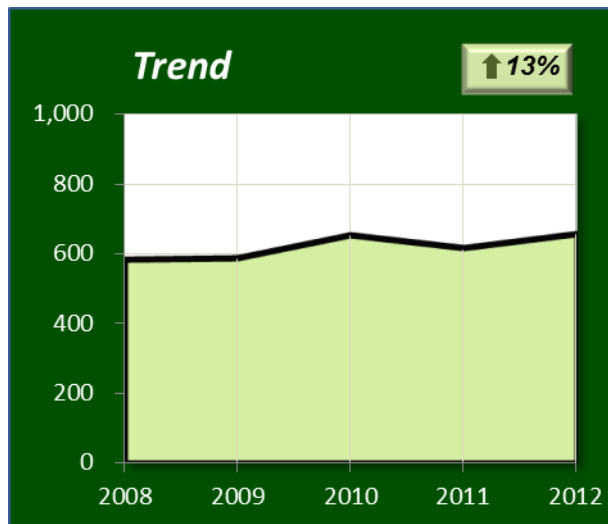


Figure 4-46. Passenger Miles
Source: National Transit Database 2008-2012

The average passenger trip length for CAT decreased 5 percent over the trend period (from 8.7 miles to 8.3 miles). CAT's average passenger trip length is 18 percent longer than the peer median.

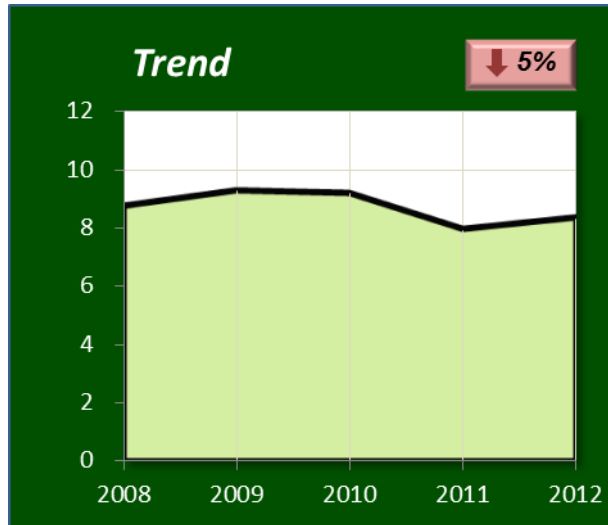


Figure 4-47. Average Passenger Trip Length
Source: National Transit Database 2008-2012

Three measures that reflect productivity for a public transportation service are passenger trips per vehicle operated in maximum service, passenger trips per revenue hour, and passenger trips per revenue mile. The peer and trend data for CAT is shown in the next set of Figures (4-48 to 4-50). All three of these measures remained within +/- 10 percent over the trend period.

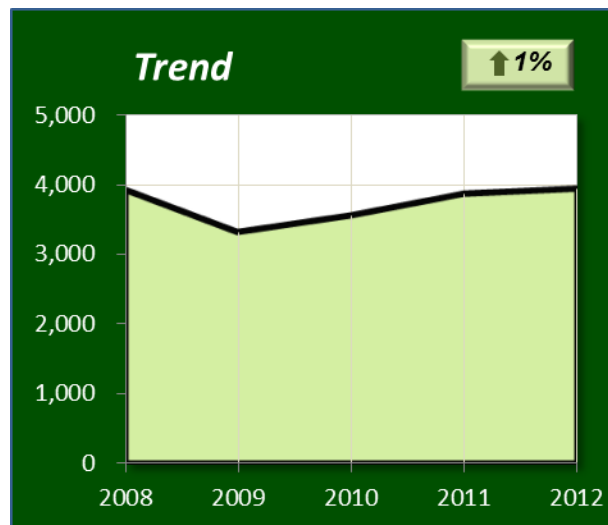


Figure 4-48: Passenger Trips Per VOMS
Source: National Transit Database 2008-2012

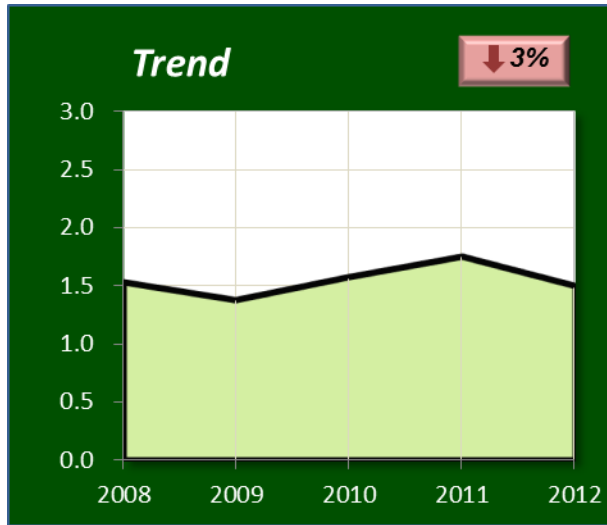


Figure 4-49: Passenger Trips Per Revenue Hour
Source: National Transit Database 2008-2012

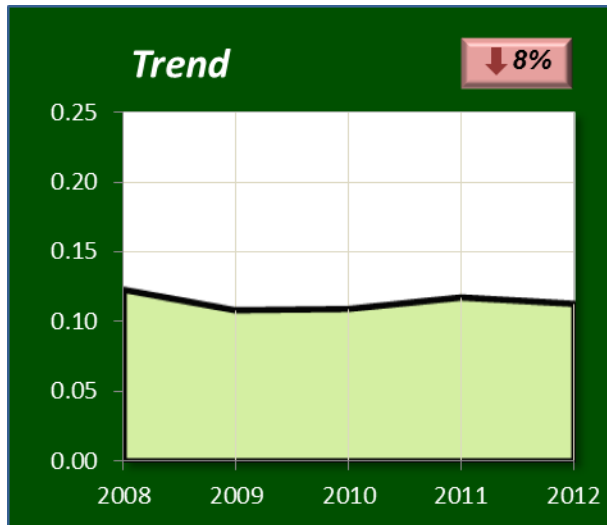


Figure 4-50. Passenger Trips Per Revenue Mile
Source: National Transit Database 2008-2012

Financial Performance Measures

Table 4-40 shows CAT’s demand response financial measures for FY 2008 through FY 2012 as well as the percent change over the trend period.

Table 4-40. Trend Analysis – Demand Response Financial Measures

| Measure | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | % Change 2008-2012 |
|---------------------------------|---------|---------|---------|---------|---------|--------------------|
| Operating Expense (000’s) | \$1,499 | \$1,969 | \$2,277 | \$2,591 | \$2,095 | 39.8% |
| Maintenance Expense (000’s) | \$384 | \$504 | \$510 | \$587 | \$242 | -37.0% |
| Oper. Expense Per Capita | \$6.46 | \$8.49 | \$9.81 | \$9.77 | \$7.90 | 22.4% |
| Oper. Expense Per Pas Trip | \$22.49 | \$31.25 | \$32.09 | \$33.51 | \$26.56 | 18.1% |
| Oper. Expense Per Rev Hour | \$34.33 | \$42.70 | \$50.10 | \$58.56 | \$39.44 | 14.9% |
| Maint. Expense per Vehicle Mile | \$0.66 | \$0.84 | \$0.76 | \$0.85 | \$0.32 | -52.2% |

Expense Measures

Figure 4-51 shows that CAT’s operating expenses increased 40 percent over the five-year trend period. Considering the growth of the system and factoring in inflation, this is a reasonable increase.

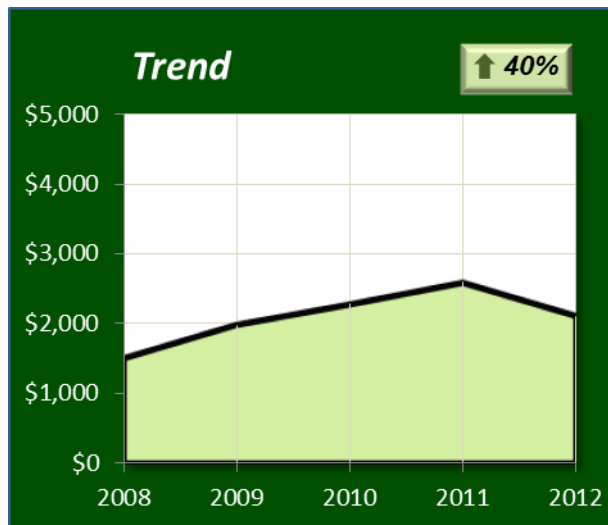


Figure 4-51. Operating Expense (in thousands \$)
Source: National Transit Database 2008-2012

As a subset of total operating expenses, CAT's maintenance expenses decreased 37 percent, with a large decrease in the final year of the trend period.

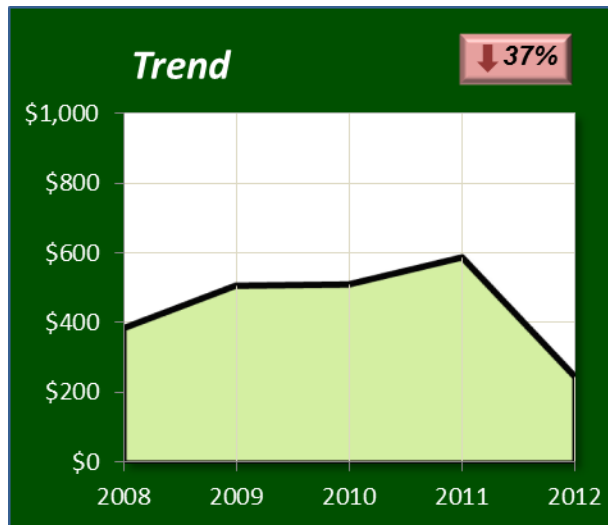


Figure 4-52. Maintenance Expense (in thousands \$)
Source: National Transit Database 2008-2012

Efficiency and Effectiveness Measures

The first set of efficiency measures use the overall operating expense and other performance measures to create ratios of cost efficiency. The measures include operating expenses per capita, per passenger trip, and per revenue hour. Figures 4-53 through 4-55 display CAT's trend data for these measures. CAT showed increases in all three measures, with the largest increase in operating expense per capita. All of these measures peaked in FY 2011 and decreased in FY 2012.

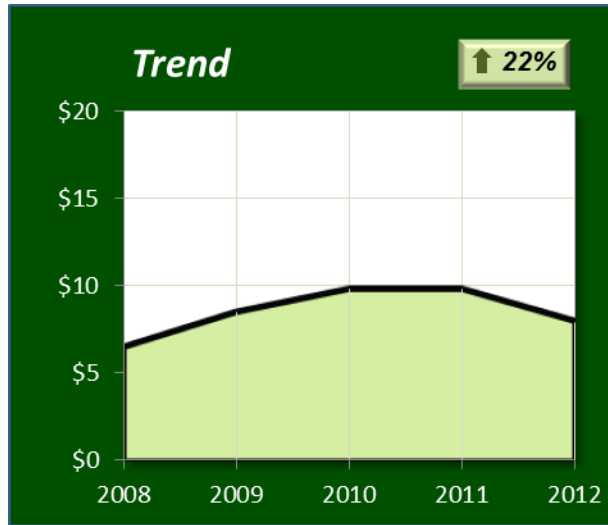


Figure 4-53: Operating Expense Per Capita
Source: National Transit Database 2008-2012



Figure 4-54. Operating Expense Per Passenger Trip
Source: National Transit Database 2008-2012

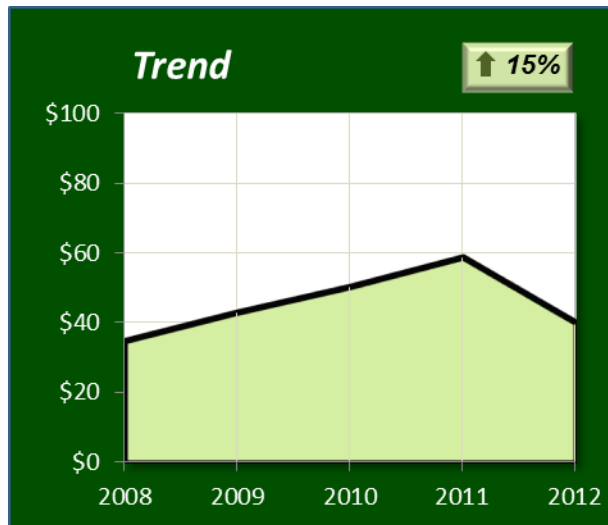


Figure 4-55. Operating Expense Per Revenue Hour
Source: National Transit Database 2008-2012

Maintenance expense per vehicle mile is another measure that can indicate the overall health of the vehicle fleet. If this measure is high, it may mean that the condition of the vehicles are poor and they require more maintenance. If it is low, then it may mean that the fleet is in overall good condition. CAT’s maintenance expense per vehicle mile decreased 52 percent over the trend period with a large drop in FY 2012.

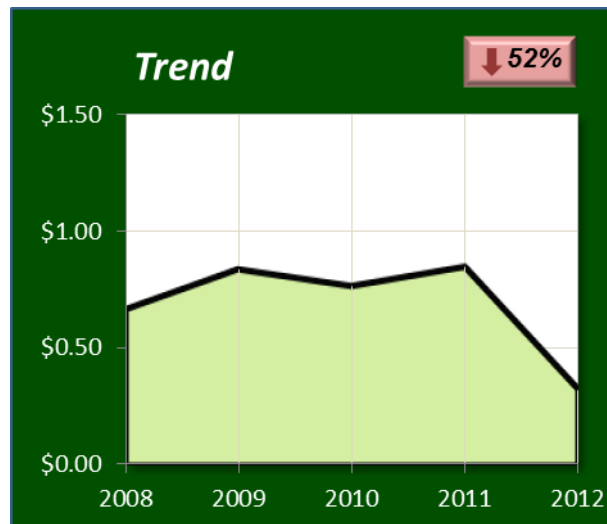


Figure 4-56. Maintenance Expense Per Vehicle Mile
Source: National Transit Database 2008-2012

Peer Summary

A peer review analysis similar to what was conducted for the fixed route was also completed for the demand response service in order to compare CAT’s performance with other similar transit systems in the United States.

The same peer selection tool (FTIS Software) and methodology was used to select the six systems with the closest likeness scores to CAT (values closest to zero) as shown in Table 4-41.

Table 4-41. CAT Demand Response Peer Systems

| Selected Peer Systems |
|--|
| Western Piedmont Regional Transit Authority (Conover, NC) |
| The Wave Transit System (Mobile, AL) |
| Metropolitan Transit Authority of Black Hawk County (Waterloo, IA) |
| Topeka Metropolitan Transit Authority (Topeka, KS) |
| Rockford Mass Transit District (Rockford, IL) |
| Stark Area Regional Transit Authority (Canton, OH) |

A summary of CAT’s operational measures as compared to the peer systems is displayed in the following table and figure. Table 4-42 shows CAT’s values for the selected financial measures and a comparison to the peer group median. Figure 4-57 shows how CAT’s values compare to the peer group minimum, maximum, and median.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 4-42. Peer Analysis – Operational Measures, FY 2010

| Performance Measures | CAT | Peer Median | % From Peer Median |
|---|---------|-------------|--------------------|
| Vehicle Miles | 667,573 | 697,493 | -4.3% |
| Revenue Miles | 652,100 | 622,775 | 4.7% |
| Rev Miles / Vehicle Miles | 0.98 | 0.90 | 8.6% |
| Revenue Hours | 45,449 | 42,977 | 5.8% |
| Vehicles Available | 26 | 37 | -29.7% |
| Vehicles Operated in Maximum Service (VOMS) | 20 | 24 | -16.7% |
| Spare Ratio | 30.0% | 20.8% | 44.0% |
| Revenue Miles per VOMS (000) | 32,605 | 26,795 | 21.7% |
| Vehicle Miles / Gallon | 8.36 | 8.19 | 2.0% |
| Revenue Miles between Failures | 6,521 | 12,246 | -46.8% |
| Average Age of Fleet (yrs.) | 4.80 | 4.27 | 12.4% |
| Passenger Trips | 70,950 | 102,466 | -30.8% |
| Passenger Miles | 652,100 | 796,752 | -18.2% |
| Average Passenger Trip Length | 9.19 | 7.77 | 18.3% |
| Passenger Trips per VOMS | 3,548 | 4,542 | -21.9% |
| Passenger Trips per Revenue Hour | 1.56 | 2.42 | -35.4% |
| Passenger Trips per Revenue Mile | 0.11 | 0.17 | -34.1% |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

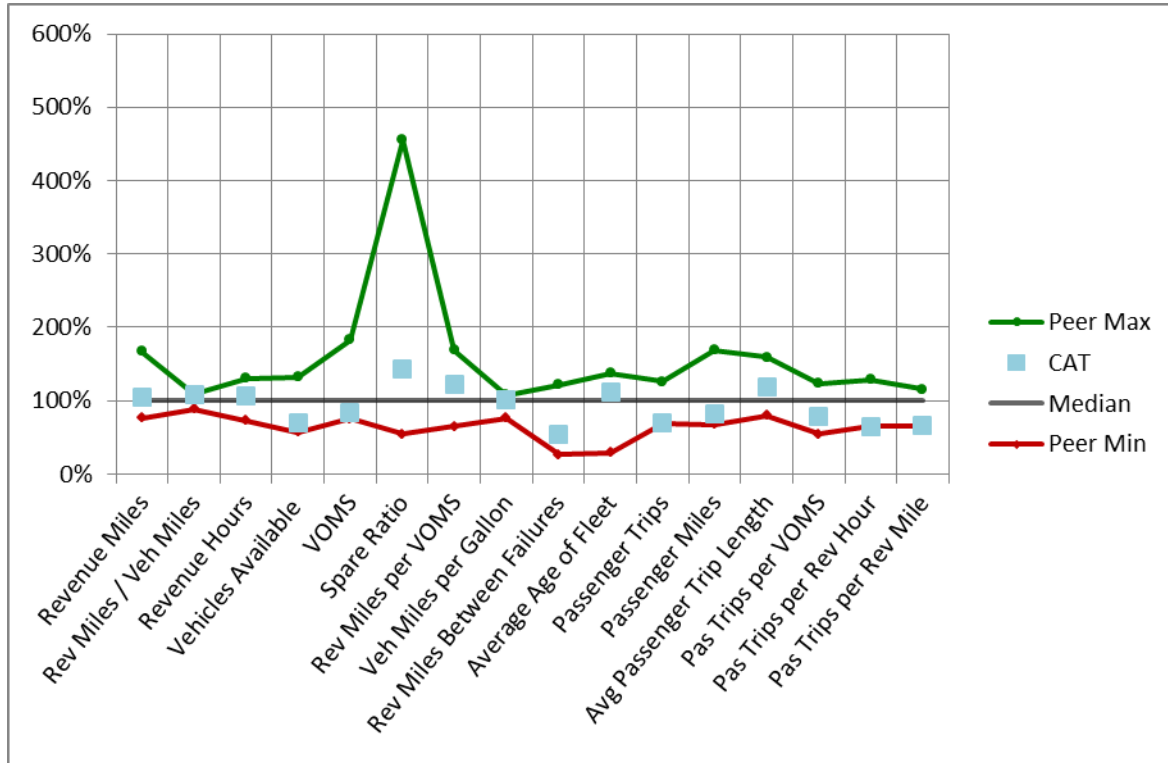


Figure 4-57: Peer Analysis -- Operational Measures, FY 2010

A summary of CAT’s financial measures as compared to the peer systems is displayed in the following table and figure. Table 4-43 shows CAT’s values for the selected financial measures and a comparison to the peer group median. Figure 4-58 shows how CAT’s values compare to the peer group minimum, maximum, and median.

Table 4-43. Peer Analysis – Financial Measures, FY 2010

| Performance Measures | CAT | Peer Median | % From Peer Median |
|--------------------------------------|---------|-------------|--------------------|
| Operating Expense (000) | \$2,277 | \$2,284 | -0.3% |
| Operating Expense Per Capita | \$9.81 | \$10.90 | -10.0% |
| Operating Expense Per Passenger Trip | \$32.09 | \$22.33 | 43.7% |
| Operating Expense Per Revenue Hour | \$50.10 | \$57.80 | -13.3% |
| Maintenance Expense (000) | \$510 | \$324 | 57.2% |
| Maintenance Expense per Vehicle Mile | \$0.76 | \$0.55 | 38.5% |

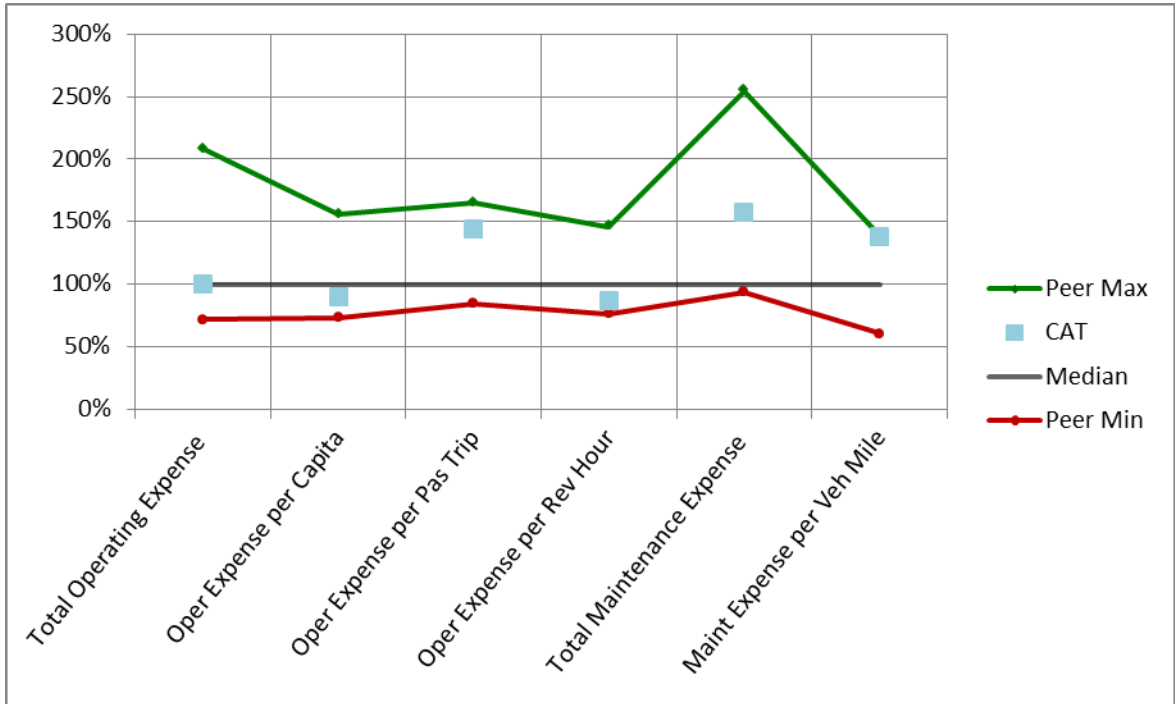


Figure 4-58: Peer Analysis -- Financial Measures, FY 2010

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Chapter 5

Situation Appraisal

A situation appraisal is an assessment of the environment in which Chatham Area Transit Authority operates and a recognition of factors that define opportunities for CAT to respond to with mobility services and coordination management.

“Spheres of Influence” or agencies, organizations and business groups were identified as important entities that shape the community and define issues, concerns, hopes and initiatives. Within these spheres are related stakeholders and customer markets for CAT to assess in its efforts to address mobility needs through enhancements to existing services and the development of new service types. The following examples of spheres of influence and stakeholders present CAT with a strategic outlook of the relevance of mobility services. This situation appraisal blends the research and information collected in previous chapters of the TDP to establish and refine CAT’s role and responsibilities as a “Regional Mobility Manager” with an emphasis on customer service and collaboration/coordination across modes, organizations and jurisdictions versus a “capacity provider”.

Local Governments

- Chatham County
- City of Savannah
- Bloomingdale
- Garden City
- Pooler
- Port Wentworth
- Tybee Island
- Thunderbolt
- Vernonburg

Regional Governmental Entities

- Bryan County
- Effingham County
- Metropolitan Planning Commission / CORE MPO
- Coastal Regional Commission

Economic Development / Tourism

- SEDA
- Port
- Airport
- Savannah Area Chamber of Commerce
- Tourist Attraction and Services
- Tourism Leadership Council
- Historical Sites and Structures

Housing / Real Estate

- Housing Authority of Savannah
- Savannah Board of Realtors
- Commercial and Retail Businesses
- Health / Human Services

Faith Based Services

Private Sector Health Facilities and Services

- Senior Services

Step Up Savannah

Education

- Savannah State University, Armstrong, SCAD, etc.
- Savannah – Chatham County Public School System

Community Organizations

- Chatham Environmental Forum
- Neighborhood Associations

Private Sector Transportation

- Tourism Services
- Taxi Services

Federal / State Government Administration/Federal Highway Administration - FHWA

- US DOT/Federal Transit Administration
- Georgia Department of Transportation

Following is an overview of CAT's organizational structure, service area characteristics, and public transportation's relationships to the various spheres of influence in the Chatham County Region.

Existing Conditions

Like most transit systems across the nation, demand for CAT services continues to grow. At the same time, it is operating in a fiscally constrained environment with fierce competition for scarce resources.

In July 2012, voters rejected a proposal to increase the sales tax from 7 percent to 8 percent to fund various transportation projects throughout the region. Chatham County would have received approximately \$513 million for 19 regional projects, of which CAT would receive \$30 million for transit operations and \$35 million for capital projects. Critics of the tax argued the extra 1 percent would be especially burdensome to lower income residents while others called for an alternative funding source including a gas tax increase. Proponents of the sales tax cited claimed that approximately 40 percent of the Chatham's revenue currently comes from non-residents and tourists and that the tax would generate about \$132 million more than funds generated by County residents.

In the absence of a dedicated funding source, it will continue to be important for CAT to build community support for additional financial resources and seek new partnerships for mobility service initiatives.

Institutional Arrangements

CAT

Chatham Area Transit is governed by a thirteen member Board of Directors consisting of the nine Chatham County Commissioners and citizen appointees, with one citizen appointee representing the disabled community. CAT employs approximately 235 employees responsible for: operations, safety, maintenance customer service, route design and scheduling, administration, planning, grant administration and human resources. Chatham County retains ownership of the buses, equipment, facilities and other infrastructure.

Core MPO

The Coastal Region Metropolitan Planning Organization (CORE MPO) is the transportation policy making organization for the Savannah urbanized area and areas expected to be urbanized within the next 20 years in the savannah region. It ensures that transportation planning is carried out through a continuing, comprehensive, cooperative, and coordinated process. The MPO Board is comprised of elected local officials (including CAT Board representatives), and agencies. The MPO staff provides information and technical support to the Board and its committees, manages the planning process, and facilitates public involvement in the planning process. The three committees that support the MPO are as follows:

The Technical Coordinating Committee (TCC) provides information and technical advice to the MPO Board. It has approximately thirty members from local and state government agencies, private industry, and citizen coalitions who are involved in the technical aspects of transportation planning. The CAT Executive Director also serves on the TCC. The TCC reviews and evaluates all transportation studies and provides technical guidance and direction to the MPO.

- The CAC is made up of 30 private individuals of the Chatham County and local jurisdictions. Public officials in Chatham County and each of the County's municipalities appoint members for a two year term. The CAC represents a cross-section of the community and functions as a public information and involvement committee. It reviews transportation plans, programs and studies, and provides recommendations to MPO and also provides information to the community about transportation policies and issues. The CAC is entrusted with informing the MPO of the community's perspective while providing information to the community about transportation policies and issues. The CAC provides the MPO Board and the TCC with citizen perspectives on transportation issues.
- The Advisory Committee on Accessible Transportation (ACAT) serves as the forum for cooperative decision-making regarding accessible transportation related issues in the County. The ACAT advises the MPO Board and CAT on issues of particular importance to populations with underserved transportation needs including low income, minority, persons with disabilities, and the elderly. The committee includes CAT staff representation.

Metropolitan Planning Commission

- The Metropolitan Planning Commission (MPC) is a local agency that provides staff support for the MPO, as well as support for other types of planning that are outside of the federally specified transportation planning process (land use planning, development review, community development, natural resource planning, historic preservation, and resource protection). The MPC is also a board that makes recommendations to the City Council and County Commission on zoning and development proposals. Having MPO staff in the same agency with other planning staffs makes coordination between the specialized areas of planning easier.

Coastal Regional Commission

The Coastal Regional Commission (CRC) is a multi-county planning and development agency that serves municipal and county governments. The CRC serves 10 counties (including Chatham County) and 35 cities.

The CRC provides local and regional comprehensive planning services as well as specialized planning services in transportation, water resources, and historic preservation. The CRC serves as the Economic Development District for Coastal Georgia and the Area Agency on Aging. The CRC also manages transportation services including Coastal Regional Coaches.

Mobility Management Board

In the late 1990s, the local Savannah hospitality industry set out to provide effective connections between downtown Savannah and the new International Trade and Convention Center across the river from downtown, a critical step in attracting major convention activity to the new facility and the Savannah area. With a shared economic interest in serving the region's growing tourist, visitor and convention markets, the hospitality industry and local officials began in 2002 to frame the idea of an independently managed set of transportation

services for the convention and visitor market funded from surcharges levied by the city's major hotels. From that beginning, a Mobility Management Plan (MMP) was developed and adopted by the City in 2005 that aims to reduce parking and traffic congestion and increase the use of an expanded array of transit-related services targeted to these markets. In 2006, a Mobility Management Board (MMB) was created as a 501(c)6 organization for the purpose of implementing the Plan and its related programs, and full-time Administrator hired to manage the activities of the Board.

The MMB has an 11-member volunteer Board including representation from the City of Savannah, Chatham Area Transit (CAT), the Georgia International and Maritime Trade Center Authority, the Savannah Area Chamber of Commerce, Savannah Area Convention and Visitors Bureau along with hospitality sector representatives. The efforts of the MMB as well as support for its varied programs and services is funded through an city-authorized 'Per Occupied Room Fee' (POR) of \$1.00 per room per night (\$1.75 for facilities on Hutchinson Island across the river from downtown) charged to visitors staying in the 29 hotels that have more than 25 rooms and located in the designated downtown Convention District. The room fee generated slightly more than \$1.0 million in 2009 and is passed through by city ordinance to the MMB.

Services directed and managed through the MMB are focused on the downtown area and the visitor, tourist and convention market(s). An integrated system of fare-free services under the MMBs direction includes: the three-boat Savannah Belles ferry fleet operating 17 hours per day serving three landing sites daily (operated by CAT); express shuttles operated for the MMB by CAT using two 30-passenger vehicles operating on 20 minute frequencies; and, a seven-stop streetcar route using an 1930s Melbourne 54-passenger streetcar updated to hybrid propulsion (operated by the City of Savannah). These services have been effectively branded as the "Downtown Transportation" or DOT system. These services are fully integrated with CATs shuttle services as well as the City's parking facilities.

Land Use

Chatham County continues to benefit from the early influence of James Oglethorpe's 1733 development plan for Downtown Savannah and surrounding areas. The plan called for a square mile area devoted to the town and commons, a three square mile area on either side of the town laid out for five acre garden lots, a 24 square mile area beyond the town for larger farms and a 42 square mile area beyond the farm lots laid out for villages each to occupy a square mile. The resulting grid system and compact development has resulted in a very walkable and pedestrian friendly environment, particularly in Downtown Savannah.

During what is now known as the streetcar era (1869-1920) the additional accessibility created growth in the City's Victorian District and what is now known as the Thomas Square Streetcar Historic District. Greater mobility offered by the automobile stimulated a second ring of suburban growth in the 1920s that continues today. This growth has resulted in larger housing lots, additional multi-family uses, and commercial opportunities for suburban residents primarily accessible by private automobiles.

More recently, a focus on neo-traditional development has emerged along with a renewed interest in reinvesting and stabilizing older established neighborhoods. This type of

development and redevelopment presents opportunities to reduce automobile dependence and increase walking, bicycling and transit trips.

As shown in Figure 5-1, single and multi-family housing is generally concentrated in the center of the county with commercial and retail uses interspersed throughout.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

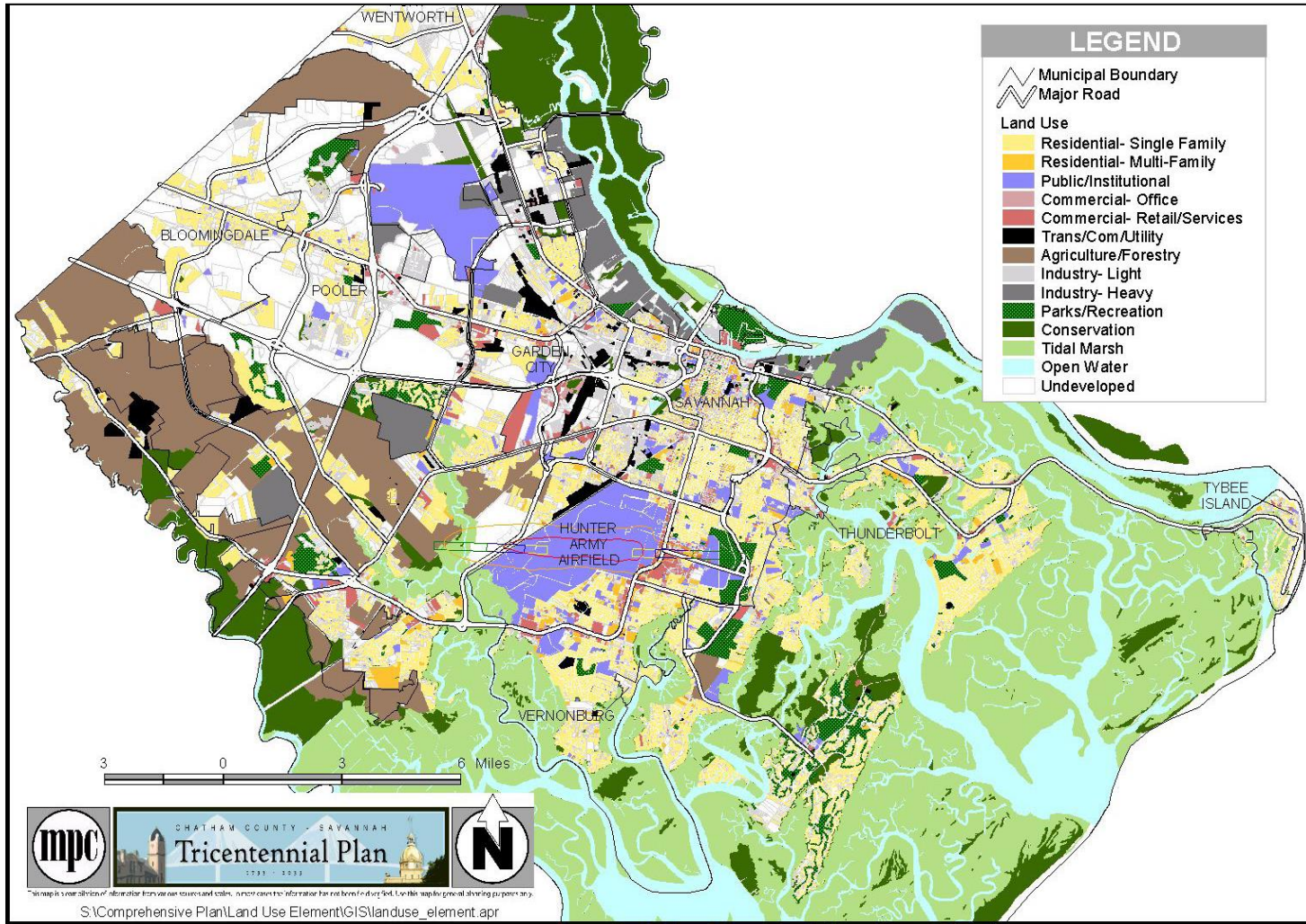


Figure 5-1. Existing Land Use

Figure 5-2 below shows that future development will occur in the central and northern areas of Chatham County. Currently CAT has somewhat limited service in these areas. In the southwestern area of the County there is a crosstown route (#6) that travels between the Oglethorpe Mall west to Highway 17 and Route #17 travels between Downtown Savannah and I-95 primarily along Ogeechee Rd. Serving northern Chatham County, Route #2 travels between Downtown and the Savannah/Hilton Head Airport area

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

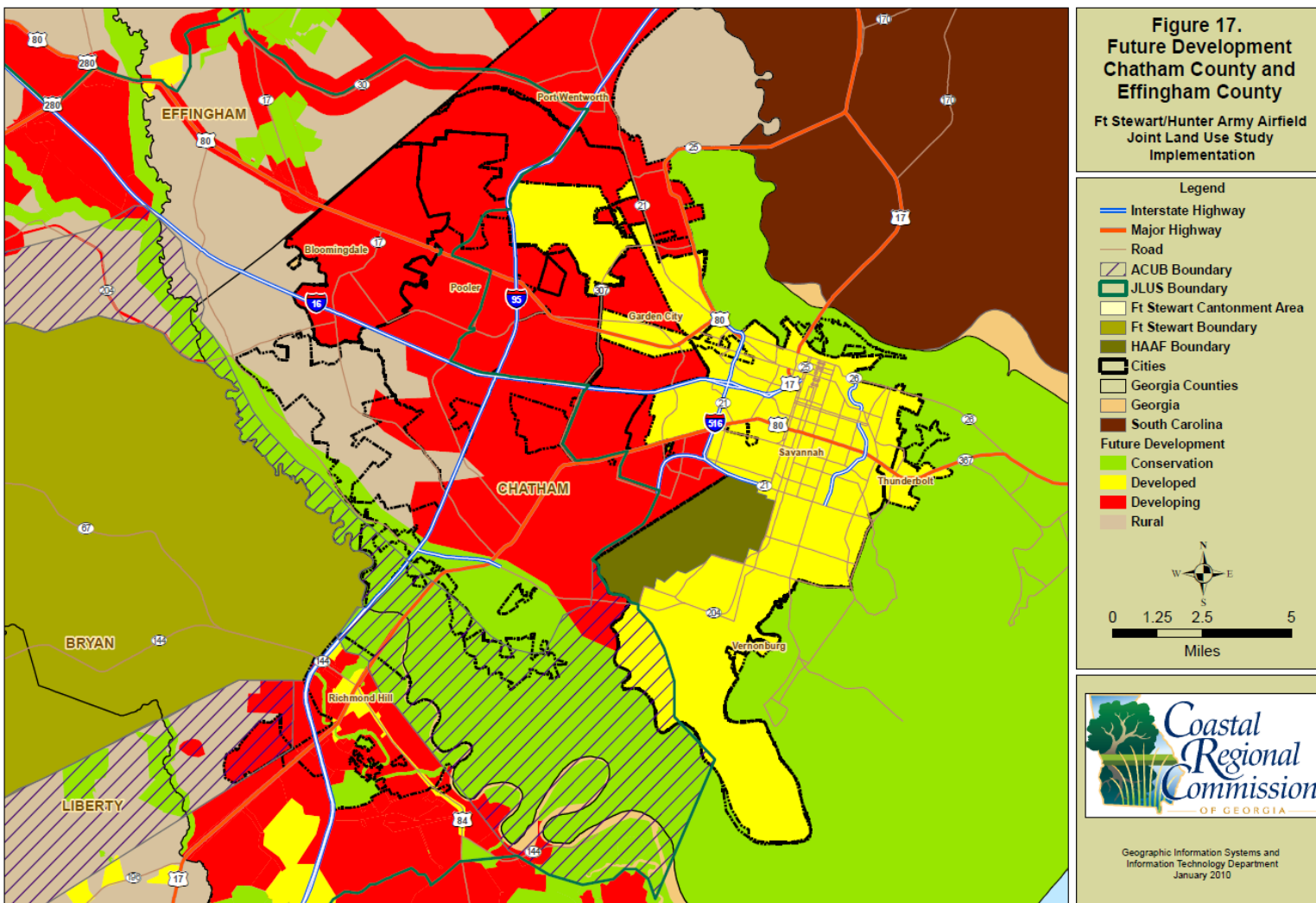


Figure 5-2. Future Development

Bicycle and Pedestrian Network

Public transportation services are more attractive in an environment with a well-developed network of bicycle and pedestrian facilities. Sidewalks afford easy and safer access to bus stops, and bicycle paths and lanes allow cyclists access to transit stops that may not be within walking distance or to reach destinations beyond the transit service coverage area.

As shown in Figure 5-3 sidewalks in Chatham County are primarily located in the urban core areas. The City of Savannah has a large number of sidewalks particularly in the downtown historic districts and in the mid-town area. The need for additional sidewalks outside of the urban core area was identified as a priority by the MPO in the 2035 Long Range Transportation Plan.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

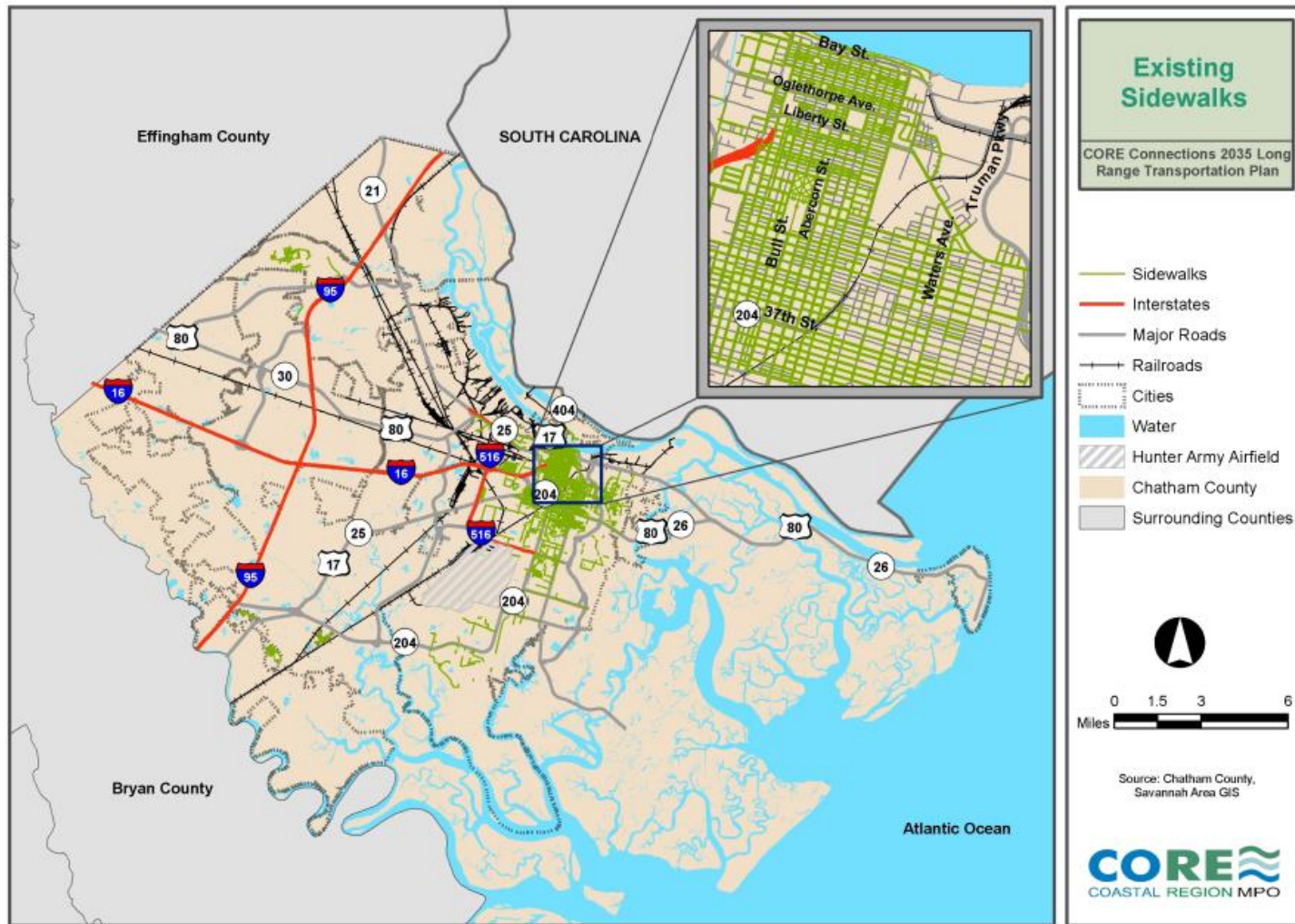


Figure 5-3. Existing Sidewalk Network

As shown in Figure 5-4 a significant expansion of Chatham County's bicycle network is planned beyond the existing network which is concentrated primarily in Savannah. The network will complement public transit services as the CAT service area expands to meet future growth and development.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

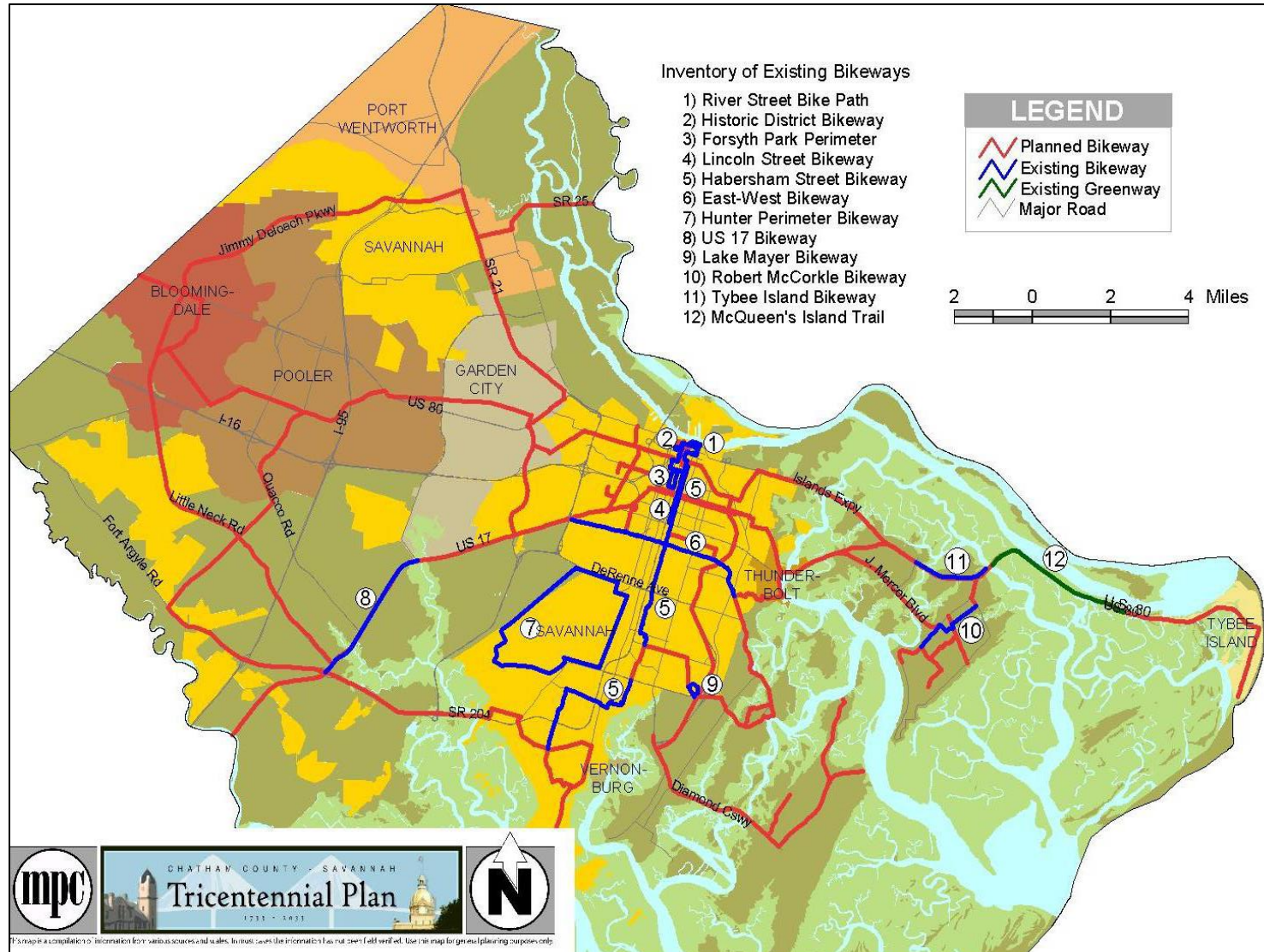


Figure 5-4. Existing and Planned Bikeways

Economic Development

As previously described, Chatham County's economy is comprised of diverse set of business and economic drivers ranging from the Port of Savannah, to manufacturing, to the military. Tourism is another major source of revenue for the local economy. According to Visit Savannah, Travel + Leisure Magazine ranked Savannah among the "Top 10 Cities in the U.S. and Canada. The Savannah Historic District, a National Historic Landmark, is a popular destination for visitors. In 2011, Savannah attracted more than 12 million national and international visitors who spent over \$1.9 billion dollars on lodging, food and beverage, retail, recreation and transportation.

The Port of Savannah is the fourth largest and fastest growing container port in the U.S. In FY2011, it had handled the highest volume of throughput in the port's history. The port is responsible for moving 8.7% of the U.S. containerized cargo volume and more than 18% of all East Coast container trade. The port serves approximately 21,000 companies in all 50 states, more than 75% of which are headquartered outside of Georgia. The Georgia Ports Authority (GPA) recently received full approval for its Savannah Harbor Expansion project which will see the Port of Savannah being deepened to 47 ft. in order accommodate larger vessels calling at US east coast ports when the Panama Canal extension is completed. The Corps of Engineers studies show that vessels more efficiently served by a deeper harbor in Savannah will lower shipping costs for containerized trade by \$213 million a year over the next 50 years, for a total economic benefit of \$10.65 billion dollars.

Savannah's manufacturing sector, with a local economic impact of \$2.3 billion produces a variety of consumer goods including corporate jets, baked goods and dental equipment. According to the Savannah Area Chamber several of the area's high profile manufacturers are International Paper, Georgia Pacific and Weyerhaeuser, three giants of the pulp and paper industry; Gulfstream Aerospace, a producer of world-class business aircraft; and JCB, which produces heavy construction equipment. The manufacturing sector received a boost in 2009 when the construction of a \$325 million Mitsubishi Power Systems America plant in west Chatham County was announced which will ultimately create about 500 jobs.

There is an active military presence in Savannah and the surrounding area. The city is the site of Hunter Army Airfield, a vital part of the Fort Stewart complex, which is the largest military installation east of the Mississippi River. Boasting the U.S. Army's longest runway in the eastern United States, Hunter serves as a location from which troops and equipment based at Hunter and Fort Stewart can be deployed rapidly throughout the world. Fort Stewart, with headquarters located 40 miles southwest of Savannah in the Liberty County town of Hinesville, is home of the 3rd Infantry Division (Mechanized). The two installations accounted for a payroll of more than \$1.38 billion in 2009.

The Chatham/Hilton Head Airport is also important to the regional economy. The Airport generates over 3 million dollars per month in gross rental car revenue, and serves approximately 140,000 travelers each month.

In addition to the areas major employers, organizations such as the Savannah Area Chamber of Commerce, the Tourism Leadership Council, and Savannah Economic Development Council are "Spheres of Influence" and each has a vested interest in

promoting Chatham County as a great place to do business and to enhance the regional economy.

Poverty

As a result of work conducted by Savannah's Anti-Poverty Task Force (now known as Step Up) and business, government and community leaders, "A Poverty Reduction Action Plan for Savannah" was published in 2005. This report was intended as a framework to serve as Savannah's road map for poverty reduction. The report concluded that while a comprehensive and sustained approach is necessary to address barriers to community progress and economic development, one of the five most important strategic goals in Savannah should be a focus on improved access to quality jobs through an improved transportation system.

At the time the Poverty Reduction Action Plan was prepared, the 2000 U.S. Census Bureau estimates were the most current and reliable data available. Table 5-1 displays the percentage of individuals living below the poverty level in 2000.

Table 5-1. Poverty Levels 2000

| Area | Population Below Poverty Level |
|----------------|--------------------------------|
| Savannah | 22% |
| Chatham County | 16% |
| Georgia | 13% |
| United States | 12% |

More current data (U.S. Census Bureau’s 2011 three year estimates) indicate the population living below the poverty level has continued to increase. The percentage of people living in Savannah who have incomes below the poverty level is 25.8 percent. This is significantly higher than the U.S. average of 15.2 percent and approximately 7 percent higher than Chatham County as a whole. See Table 5-2.

Table 5-2. Poverty Levels (2011)

| Area | Population Below Poverty Level |
|----------------|--------------------------------|
| Savannah | 25.8.% |
| Chatham County | 18.9% |
| Georgia | 17.8% |
| United States | 15.2% |

The Poverty Reduction Action Plan reported that a comprehensive approach is necessary to address underlying trends and barrier to progress, and one of five key components to reducing poverty was improved access to quality jobs through an improved transportation system.

Unemployment

Based on preliminary June 2013 unemployment statistics released by the Georgia Department of Labor, Savannah continues to have a relatively high rate of unemployment as compared to Chatham County (see Table 5-3), the State of Georgia and the U.S. In addition to a double digit unemployment rate, Savannah also experienced a slight increase in the unemployment rate between June 2012 and June 2013.

Table 5-3. Unemployment

| Area | Unemployment | % Change 2012 - 2013 |
|----------------|--------------|----------------------|
| Savannah | 10.6% | + 0.1% |
| Chatham County | 9.1% | 0.0% |
| Georgia | 9.3% | - 0.2% |
| United States | 7.8% | - 0.6% |

Automobile Ownership

While some low income people do not own cars and must rely on public transportation, current estimates suggest that nationally approximately 75 percent of low income households do own at least one vehicle. The Poverty Reduction Action Plan reported that individuals who owned a car and made \$8.00 per hour and commuted 12 miles per day spent 23 percent of their income on transportation needs. Those who made a longer commute (22 miles/day) spent approximated 32 percent of their income on transportation. These estimates were based on an average annual cost of \$0.38 per mile to own, operate and insure a vehicle. Since the time the Poverty Reduction Action Plan was prepared, the mileage estimate has increased significantly. Based on American Automobile Association estimates, the average cost to own, operate and insure a vehicle has now reached an average cost of nearly \$0.61 per mile.

Housing

As reported in the U.S. Department of Housing and Urban Development's 2011 Comprehensive Housing Market Analysis for Chatham County Region, homebuilding activity, as measured by the number of building permits issued, declined slightly during the 12 months ending September 2011, when developers reduced building in response to decreased demand. Based on preliminary data, nearly 880 single-family homes were permitted, 3 percent fewer than during the 12 months ending September, 2010. The number of single-family homes permitted peaked in 2006, when 4,200 homes were permitted, and has declined every year through 2011.

Demand for new homes through 2014 is expected to reach 4,150 units, although a portion of the estimated 8,500 vacant units may come back on the market and satisfy some of the demand. Demand is expected to be strongest for homes in the \$250,000 - \$350,000 range.

Savannah's low-income residents continue to face great challenges in purchasing and renting affordable homes in decent conditions. The City of Savannah's Affordable Housing and Regulatory Barrier Task Force defines affordable housing as "privately or publicly owned housing in good condition, for households who generally earn less than \$48,000 a year and who pay not more than 30 percent of their gross household income to rent or purchase a dwelling."

The City's Task Force estimated that creating 5,000 new affordable housing units over the next 15 years (at an estimated cost of \$550,000,000) would reduce the number of households paying more than 30 percent of their income by about 20 percent. The 2011 Savannah/Chatham Community Indicators Database reported that in 2010 76.8 percent of Chatham County's population was spending more than 30 percent of their household income on housing.

At the same time, housing costs continue to escalate in the region. As shown in Figure 5-5 below, as of June 2013, the median home price in Savannah was approximately \$95,300, an increase of 6.4 percent over 2012. In Chatham County, the median price increased 5.5 percent to \$133,200 during the same period.

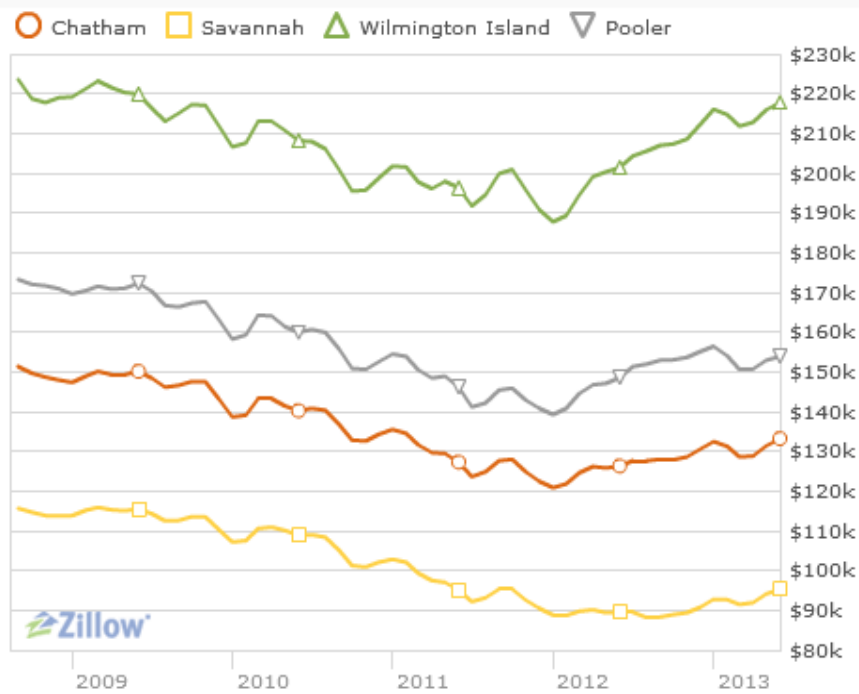


Figure 5-5. Median Home Prices

The Savannah Board of Realtors and the Housing Authority of Savannah are “Spheres of Influence” in terms their ability to share market trend information and coordinate initiatives related to housing and transportation.

Education

In addition to serving most area high schools, CAT also provides service to many of the areas colleges and universities. Examples include Savannah State University with approximately 4,500 students, Armstrong Atlantic State University with approximately 7,000 students and Savannah College of Art and Design with an enrollment of more than 10,000 students.

Approximately 10 of CAT’s regular fixed routes serve various campuses in the County. In addition, CAT operates shuttles serving Savannah State University (SSU) and a CAT Prowler shuttle which runs between SSU and Downtown Savannah on Friday and Saturday nights. Through a Universal Pass arrangement between CAT and SSU, whereby SSU contributes funding to CAT, students with a valid I.D. travel free of charge on CAT services.

Based on the results of the recent on-board survey, approximately 4 percent of survey respondents indicated they were using CAT to travel to or from school on the specific day and trip surveyed. It is likely, however, that students also use CAT to travel to work, appointments and for recreational purposes.

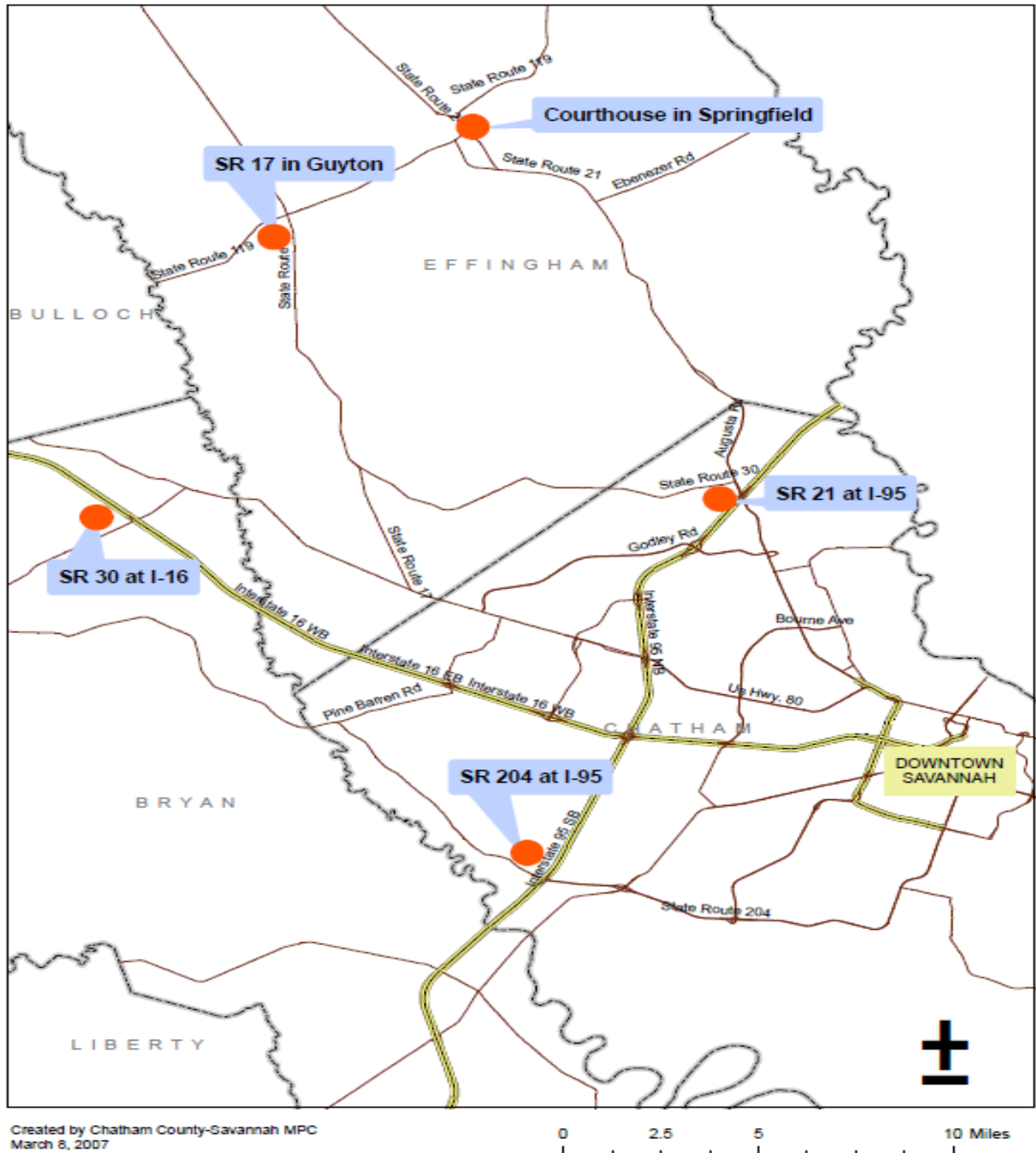
Parking Availability and Pricing

There are seven public parking facilities in Downtown Savannah. Parking fees vary by location, but are generally affordable with most priced at \$1.00 per hour or \$10.00 per day. There are also approximately 3,000 metered spaces, with most also priced at \$1.00 per hour.

Even with the relatively large parking inventory and affordable prices, the travel website TripAdvisor.com describes parking in Savannah's Historic District as a "sticky situation" and recommends visitors purchase a 1 or two day parking pass and take advantage of CAT shuttle services to travel around the City.

Within Chatham County there are two Georgia Department of Transportation (GDOT) Park and Ride facilities with a total of 65 parking spaces and there are three additional Park and Ride facilities in the region. See Figure 5-6.

GDOT primarily promotes these facilities for ridesharing purposes, but there may be future opportunities for CAT to develop express services for commuters traveling to Savannah.



Created by Chatham County-Savannah MPC
March 8, 2007

Figure 5-6. Regional Park and Ride Lots

Private Transportation Providers

A recent review of an online directory of transportation providers revealed eight private trolley operators and 100+ private taxi companies in the Savannah area. Although both target specific markets, such as tourists and other short term visitors, these services could be used to complement and/or integrate with CAT services. CAT should continue to coordinate with private transportation operators and consider their potential role as partners in meeting regional mobility needs. As a mobility manager, CAT could also serve as a conduit to share information about privately operated transportation alternatives.

Community Organizations

In Savannah alone, there are eighty-eight neighborhoods and the majority have neighborhood associations whose members are committed to preserving and improving their neighborhoods. Because these associations can be vocal proponents (or opponents) of transportation initiatives they can play an important role in communicating with neighborhood residents and providing feedback on transit plans and programs.

Other special interest groups and organizations such as the Chatham Environmental Forum, can also shape and influence the future of public transportation in the County. As described later in this Chapter, the Chatham Environmental Forum created the Join Plan which identified transportation as one of the region's most pressing problems and emphasized the importance of transit in addressing environmental concerns.

State and Federal Government

As the State and Federal Governments are responsible for programming grant funding for transportation programs in both urban and rural areas of the County, both have significant influence in how transit will be provided throughout the region. Recently, emphasis has been placed on funding projects that enhance safety and security, maintaining capital infrastructure, job creation, and services targeting veterans and persons with disabilities.

Intelligent Transportation Systems

In the summer of 2012, Chatham County entered into a 1.7 million dollar Intelligent Transportation System (ITS) contract with Indra, a large European based multinational company. The scope of this project includes a fixed and mobile computer aided dispatch and automatic vehicle location system (CAD/AVL), automatic passenger counters (APCs), real time traveler information and mobile surveillance. The project schedule includes a 4 stage implementation plan; a preliminary design review, final design review, pilot and finally, full system test phase.

CAT can translate its investments in ITS into improved management of operations, planning, and scheduling and customer relations. (See Appendix C). ITS use communications-based technologies that make travel more efficient and effective using the transportation network that exists, while building smarter infrastructure to meet future demands. The documented benefits of ITS technologies are measured in safety, time, money and preservation of the environment.

Health and Human Services

Among a community's most vulnerable population are seniors, persons with disabilities and low income residents who, in many instances, must rely on some form of public transportation to meet their most basic mobility needs such as access to health care services and grocery shopping.

In many instances, CAT's fixed route and paratransit services provide a good option for meeting the needs of the "transportation disadvantaged" population, but in some instances, CAT's service area or capacity constraints on the door-to-door services limit CATS ability to meet demand. Sometimes, other organizations such as senior centers or private health care facilities offer ancillary transportation services, which may be cost prohibitive for the person in need.

Commuter Services

There are several organizations in the Chatham region that administer or provide commuter assistance services. The Coastal Regional Commission, in partnership with a private vanpool service provider, introduced the Coastal Georgia Vanpool Program in 2010. The program provided vehicles and comprehensive maintenance and insurance services for groups of individuals sharing a similar commute, particularly those traveling longer distances or where public transportation options are not available.

The Coastal Vanpool Program was supported with state and federal funds, and employer and rider contributions. Although a 2007 study revealed strong interest in the program, demand was lower than anticipated. In mid-2011, the program was suspended while the Commission determined it would take steps to evaluate and reassess future vanpool program options.

In 2005, the CORE MPO approved the Connecting Savannah Action Plan, outlining the recommendations from the community's 6-month, consensus-building process for transportation planning. One of the recommendations in the Action Plan was for MPO staff to coordinate with the hospitals along DeRenne Avenue to encourage their employees to carpool or use public transit for their commutes. As a result, the CORE MPO now coordinates regional commuter assistance and employer based programs to promote alternatives to automobile travel.

The CORE MPO offers a free computer based ridematching system to help individuals identify others who have similar travel patterns for the purpose of organizing carpools or finding bicycle/walking partners. Everyone is eligible to enroll in the system, but for larger employers or groups of smaller employers who provide financial support for program administration or offer transportation related employee benefits, the MPO also administers an emergency ride home program and an employer/participant tracking program.

CAT works with area employers to coordinate and promote Commuter Choice, a federal tax program which allows employers to pay up to \$245 per month in 2013 for an employee's cost of commuting via transit or vanpool. Commuter Choice incentivizes the use of high occupancy vehicle travel by offsetting the associated costs without increasing the employee's taxable income. Employers reap the benefits of increased employee satisfaction

and a reduction in payroll taxes and parking demand. See Appendix D for additional Commuter Services information and potential enhancement opportunities.

Summary of Local and Regional Transportation Plans

As previously described, there are three primary entities (CAT, CORE MPO, and the MPC) involved in regional transportation planning initiatives. The respective plans of these agencies and others involved in regional planning efforts, such as the Coastal Regional Commission, the GDOT and Liberty County Transit, will have a significant impact on the future of public transportation in the region. To ensure mobility initiatives are well balanced and appropriately prioritized given the competition for scarce resources, it is important that regional mobility plans are consistent and well-coordinated.

For the most part, transportation planning and land use planning are well coordinated due to the fact that the Savannah area's MPO is housed in the MPC office. Transportation planning functions as a department within the MPC, and MPC management also supervises the MPO's activities. This helps to ensure that the policies of both the MPC and the MPO work in the best interest of the greater community. A limiting factor, however, is that the MPC only has planning jurisdiction in the City of Savannah and unincorporated Chatham County. The other seven municipalities in Chatham County (Bloomingdale, Garden City, Pooler, Port Wentworth, Thunderbolt, Tybee Island, and Vernonburg) do not participate in the MPC, but are members of the MPO. Because of their participation in joint transportation planning, but not joint land use planning, these seven municipalities do not benefit from the MPC and MPO's planning arrangement to the same degree as the City of Savannah and unincorporated Chatham County.

Following is a summary of some of the key elements of various local and regional transportation plans that will have a future impact on the provision of transit services.

Tricentennial Plan

The Comprehensive Plan was adopted in the Fall of 2006 by the Chatham County Board of Commissioners and the Mayor and Aldermen of the City of Savannah. The update process was named the Tricentennial Plan when a planning horizon of 2033 WAS ESTABLISHED. The Comprehensive Plan represents the first phase of the two-part Tricentennial Planning Process.

The MPC was designated as the Executive Committee to manage the Tricentennial Plan process. A Steering Committee was established to ensure broad-based participation and advocacy, and a Technical Committee was established to secure the involvement of local planning, development, design, and environmental professionals.

Several key themes included in the Tricentennial Plan include:

- *Multi-Modal Efficiency.* The need for an efficient multi-modal transportation system.
- *Public Transportation (Local).* As the city grows, planning for additional public transportation services, including train or streetcar service linking the downtown expansion areas to the Central Business District.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

- *Public Transportation (Regional)*. The development of a regional public transportation system to serve adjacent counties, including counties in South Carolina.
- *Automobile Dependency*. Reducing automobile dependency through the promotion of public transit and construction/rehabilitation of walkable neighborhoods.

Following are several examples of transit supportive goals and strategies identified in the Tricentennial Plan:

- Support the Chatham Area Transit (CAT) Authority and other entities in their efforts to expand their service areas and the frequency and types of service.
- Encourage the expansion of CAT Authority route timetables during non-traditional second and third shifts in order to serve industries such as manufacturing and healthcare.
- Encourage the use of remote parking with responsive shuttle service to employment centers
- Incorporate other modes of transportation (walking, bicycling, bus, ferry, streetcar, light rail) as viable alternatives in the long-range transportation plan.
- Encourage the development of self-sufficient commercial/residential centers that are connected by public transportation.
- Provide convenient pedestrian and bicycle access from public transportation termini to employment centers, institutions, commercial areas, schools, and recreational facilities.
- Identify employment centers, institutions, commercial areas, schools, and recreational facilities as well as all bus stops and evaluate the level of service of public transportation systems to the areas and the level of pedestrian and bicycle access from the drop-off point to the entrance to the facilities.
- Encourage company-sponsored van service to and from public transportation termini.
- Improve selected streetscapes and intersections within the Pedestrian Transit Priority Area (PTPA) to accommodate pedestrians, cyclists, and transit riders.
- Establish safe and effective commuter routes from outlying residential areas and parking lots. Publish walking and cycling maps for both visitors and residents showing scenic routes and commuter routes. Make materials available in alternative formats (e.g. Braille, audio recordings).
- Analyze the CORE/MPO Transportation Improvement Program in light of the proposed Land Use Plan and determine whether alternative modes of transportation could result in greater efficiency.

- Enlist the support of businesses and residents within the PTPA through a public relations campaign to develop a strong sense of local identity and unity.

The plan also acknowledged that areas that are dense and walkable also tend to be better-suited to support public transit service, as is the case in Downtown Savannah. Public transit in suburban areas, however, is not as viable. The solution proposed in the Comprehensive Plan is to build denser suburbs or “amenity communities” that include a mix of residential, commercial, light industrial, civic, and recreational uses which will lead to new zoning that will allow for denser development. For suburban areas already built out at low densities, the primary solution identified in the plan are Park and Ride lots that provide a centralized facility from which to provide public transit services.

CORE Connections Framework Mobility Plan

Adopted in 2009, the Core Connections Framework Mobility Plan identified 7 goals related to regional mobility and specific measures related to performance. The focus of the goals was on the following areas which are all supportive of and conducive to the provision transit:

- Economic Activity
- Safety
- Security
- Accessibility, Mobility, and Connectivity
- Environment and Quality of Life
- System Management and Maintenance
- Intergovernmental Coordination

Specific objectives identified in the plan that can be achieved through continued enhancements to public transit services are: minimized congestion and travel delays, increased safety and security for motorized and non-motorized modes, increased employment accessibility, and the protection of environmental and other community resources.

To ensure the desired goals and objectives are achieved, the Framework Mobility Plan also included specific performance measurement standards related to transit. These include:

- Reductions in VMT
- Implementation of transit and other safety projects
- Encourage use of transit and non-motorized modes, focusing on areas with low rates of automobile ownership or high population of elderly and/or disabled populations
- Minimize delays in corridors served by transit
- Expand transit service area and increase service frequency
- Percent of population within ½ mile of transit route or facility connecting to regional activity center(s)

- Transit user satisfaction (such as reliability)

CORE Transit Mobility Vision Plan

Building upon the goals in the Framework Mobility Plan, the Transit Mobility Vision Plan provides additional details to address community concerns about livability and sustainability that will be incorporated in the final Core Total Mobility Vision Plan. Published in April 2010, initial mobility goals were presented. These initial goals are consistent with many of the service and strategic initiatives presented later in the CAT Transit Development Plan.

- Provide information on the variety of modes of transportation available to the user and maximize awareness of transportation options.
- Develop services to meet the demand of specific target groups such as students, commuters, military personnel, etc.
- Integrate land use and transportation policies and programs to effectively meet the mobility needs of the region.
- Create and expand alliances and partnerships with other community groups and affected agencies, a vital factor for improving transit access and creating a sustainable transit environment.
- Develop a family of services which effectively meets diverse needs and increases the connections to a more customer focused service network that in turn changes the current perception regarding services and users.
- Develop the public transportation network that responds to changing demographics, economic trends and other livability features.
- Achieve long-term financial stability to provide the levels of investment that meet the growing demand for mobility options.
- Develop the Transit Mobility Vision Plan in a manner that is consistent with the Total Mobility Plan for the region.

Coordinated Public Transit – Human Services Transportation Plan for the Savannah Area

Enacted in 2005, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) mandated greater coordination of funding and services for human services transportation. Beginning in 2007, agencies were required to prepare a locally developed coordinated public transit –human services program to maintain eligibility for certain federally funded transportation projects.

The Coordinated Public Transit – Human Services Transportation Plan for the Savannah Area (HST) was initially developed in 2007 and was revised in 2009 and 2011 to reflect program or project changes. The planning team included staff representatives from CORE MPO and CAT as well as transportation planning consultants.

The goals of this plan reflect the intent of the human services programs:

- Improve services to the elderly, handicapped, and limited-income populations. These services include transportation services for accessibility and mobility, public information, and customer service.
- Improve the efficiency of transportation services by minimizing duplicate services, pooling resources, and improving the overall cost-effectiveness of service provision.
- Improve the coordination of services and planning efforts. Coordination of both planning and services will facilitate public information, ease of use, and cost-efficiency.

The plan includes needs identified by the planning team, stakeholder resource group and the public that focused on customer service improvements and increased mobility and accessibility. The highest priority projects identified in the coordinated plan include:

- #2 West Chatham route (Crossroads Business Center segment)
- #6 Cross-town route
- Expansion of the Savannah Belles Ferry service
- Express bus service to better transport target populations
- Expanded bus service or more efficient bus scheduling
- Taxi cab and vanpool operator incentives to purchase new accessible vehicles
- Continued activity of the MPO Advisory Committee on Accessible Transportation to address human services transportation planning and provision within the urbanized area.

Fort Steward/HAAF Regional Growth Plan

The four counties of Bryan, Liberty, Long, and Tattnall and their 12 municipalities formed the Fort Steward Growth Management Partnership (FSGMP) in April 2008 to develop a Regional Growth Management Plan (RGMP) that prepares the region for growth related to mission transformation at Fort Stewart and Hunter Army Airfield (HAAF). The RGMP, published in 2010, contained a section that summarized existing transportation analyses for the Fort Stewart region and identified mobility issues, challenges, and opportunities in support of detailed transportation recommendations.

The RGMP recognized a lack of transportation alternatives in the region, but it did not include any reference to needs or opportunities related to connectivity with CAT transit services. Rather, the plan noted that in certain instances transportation demand strategies as well transit should be promoted before capacity improvements are considered. The plan also identified the need to continue support for the start-up transit service in Liberty County and pursue the Army Mass Transportation Benefit Program to provide transit passes to Federal employees.

Coastal Regional Commission Comprehensive Economic Development Strategy (2012)

The Coastal Regional Commission (CRC) is a multi-county planning and development agency that serves municipal and county governments. The Coastal Regional Commission (CRC) serves 10 counties and 35 cities. The region encompasses the six coastal counties and four inland counties and has a total land area of over 5,110 square miles. The CRC provides local

and regional comprehensive planning services as well as specialized planning services in the areas of transportation, water resources, and historic preservation.

The CRC prepared a Comprehensive Economic Development Strategy Report in 2012. The report is designed to serve as a strategic tool to integrated coastal Georgia's human and physical capital with economic development planning and goals.

There was little emphasis placed upon public transportation in the plan, although attracting businesses with airports, transit systems and other regional transportation initiatives was cited as an economic development opportunity. One of several proposed project included initiating regional programs to assist and address employer needs such as fixed route transit and commuter pools, access to training and capital and access to new markets. Ultimately, the CEDS Committee identified the need for a regional transportation plan and transportation infrastructure plan (plan transportation in and out of the region, counties and cities) including specific plans to create adequate infrastructure for growth, corridor development and public transportation options.

Transformation Plan for the East Savannah Gateway

The Housing Authority of Savannah (HAS) was awarded a 2011 Choice Neighborhood Initiative Planning Grant through the U.S Department of Housing and Urban Development's HOPE VI Program. The \$300,000 grant will be matched with \$300,000 from HAS funds and \$569,684 of in-kind funding from a diverse group of partners. These resources will be used to develop a Transformation Plan for the East Savannah Gateway which will become the guiding document for the revitalization of the public and/or assisted housing units while simultaneously directing the transformation of the surrounding neighborhood and positive outcomes for families.

Choice Neighborhoods Planning Grants support the development of comprehensive neighborhood transformation plans that emphasize public transportation and improved access to jobs as described in the HOPE VI Program's three core goals:

- *Housing:* Transform distressed public and assisted housing into energy efficient, mixed-income housing that is physically and financially viable over the long-term;
- *People:* Support positive outcomes for families who live in the target development(s) and the surrounding neighborhood, particularly outcomes related to residents' health, safety, employment, mobility, and education; and
- *Neighborhood:* Transform neighborhoods of poverty into viable, mixed-income neighborhoods with access to well-functioning services, high quality public schools and education programs, high quality early learning programs and services, public assets, public transportation, and improved access to jobs.

The Savannah Economic Development Authority Business Plan

Although The Savannah Economic Development Authority's 2013 Business Plan did not specifically indicate any planned activities or initiatives related to public transportation, the Authority does plan to institute a study to compile workforce data, identify shortfalls and

determine why individuals are unable to obtain employment. The study will also incorporate advice from other communities that have made gains in overcoming workforce deficiencies. The results of this study may reveal some new opportunities for CAT and the business community related to transportation and workforce development.

Chatham Environmental Forum

In October 2007, The Board of Commissioners of Chatham County passed a resolution calling for Chatham County to become the "Greenest County in Georgia." The resolution requested the Chatham Environmental Forum (the Forum) take on the challenge of developing a county-wide plan for achieving the stated goal.

The Forum and its members and interested County residents identified, discussed and prioritized the most pressing environmental issues over the course of more than six months. The JOIN Plan, the result of this effort, was published in early February 2009 and adopted by Chatham County Commission on February 29, 2009. The JOIN Plan identified seven focus areas, and recognized public transportation as an important element for addressing environmental concerns. The plan specifically noted the need for street design to better accommodate transit riders, modal integration to increase transit ridership and improved regional connectivity as described below.

Goal 1: COMPLETE STREETS

Objective: Enhance existing and create new streets designed and operated to enable safe, attractive and comfortable access and travel for all users ("complete" streets) including users such as pedestrians, bicyclist, motorists, transit riders, and those with a disability.

Objective 1: By August 2009, compile guidelines for complete streets for new development, including guidelines for retrofitting existing development where possible.

Objective 2: By January 2010, incorporate complete streets concepts and guidelines into development regulations to establish complete street networks.

Objective 3: Adjust the transportation planning process, including funding priorities, to emphasize and accelerate complete streets implementation.

Goal 2: MODAL INTEGRATION

Objective: Create an integrated, multimodal transportation system that reduces negative impact on the environment, including greenhouse gases; while at the same time improving accessibility, mobility and efficiency for people and commercial traffic.

Objective 1: Increase usage while decreasing greenhouse gas emissions and general carbon footprint of mass transit.

Objective 5: Improve Regional Connectivity. Recognize that transportation conditions within Chatham County are significantly impacted by traffic originating outside the county. Encouraging, supporting, and actively participating in regional planning and implementation is essential to improvement of Chatham's intra-county and inter-county conditions.

Multi-Modal Transportation Study for Effingham County

The Georgia Department of Transportation (GDOT), in cooperation with Effingham County completed a multi-modal transportation study for Effingham County and the Cities of Guyton, Rincon, and Springfield in July 2008. The study noted that commuter travel into Chatham County results in congestion along some of Effingham County's major roadways. As shown in Figure 5-7, over 13,000 residents of Effingham County commute into Chatham County on a daily basis.

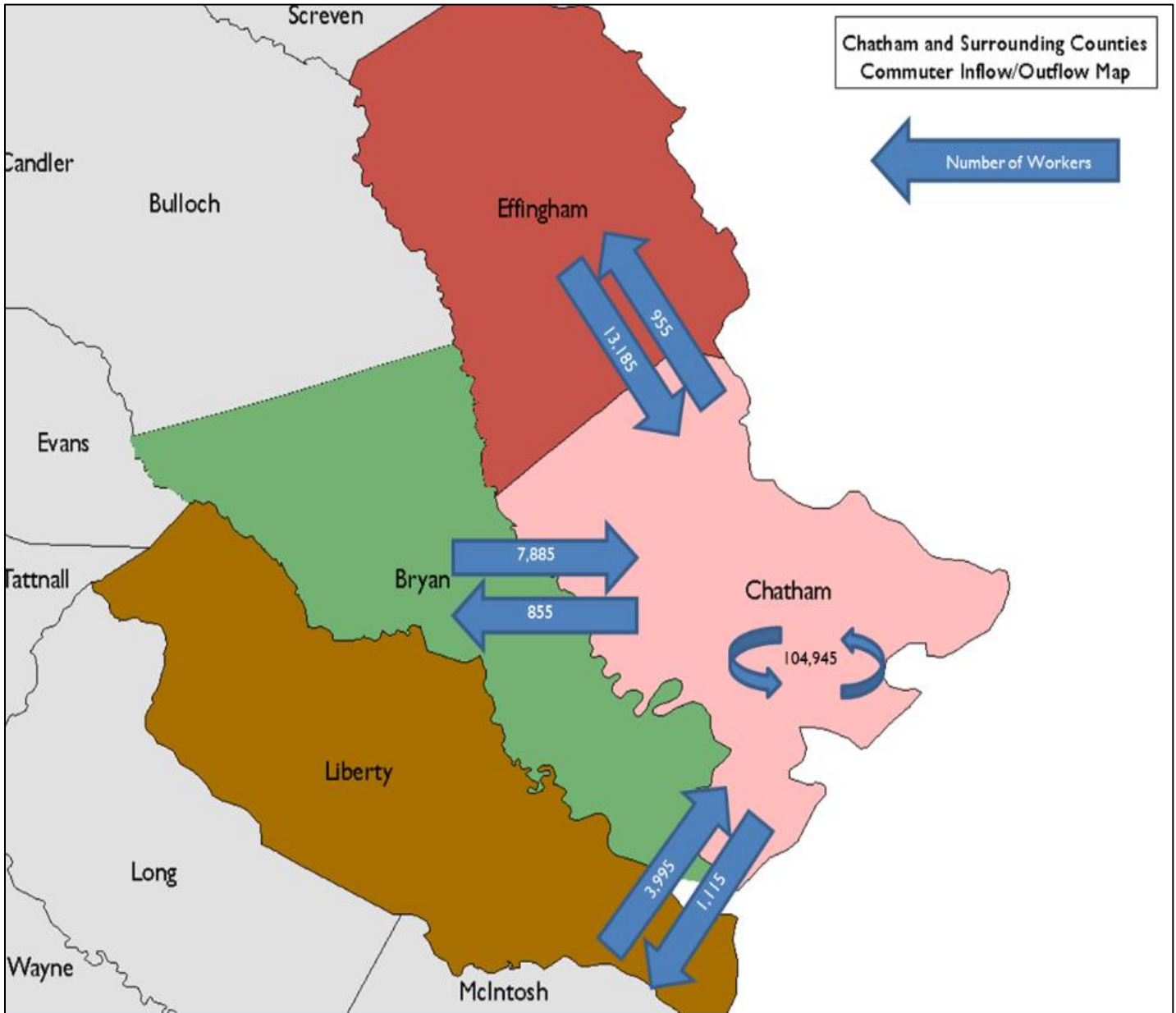


Figure 5-7. Chatham County Commuter Inflows/Outflows

The Effingham Study also concluded that high frequency regularly scheduled fixed route transit service within the County was not practical given the potential demand and cost, however vanpools and peak hour regional commuter service into Chatham County would be warranted.

There are currently two Park-and-Ride lots in Effingham County and the report identified the need for three additional locations (two in Rincon and one in Eden) that could be used for ridesharing commuters as well as riders of any future regional commuter routes.

The Effingham study proposed the use of Travel Demand Management (TDM) or strategies that increase transportation system efficiencies by increasing utilization of modes other than the single occupant vehicle. Examples of TDM strategies suggested in the report include: employer based programs such as flex-time, telecommuting or incentives such as preferential parking, carpools, vanpools and economic incentives.

Economic Impact Study/ Transportation and Childcare

In 2003, a poverty reduction task force was initiated by the City of Savannah to identify barriers to self-sufficiency. The task force, now known as Step Up, is a partnership of approximately 100 local business, government, and non-profit organizations that continue to identify opportunities to help communities prosper and grow. Step Up strives to develop an educated and skilled workforce, improve access to quality jobs, support working families, help families build assets, and build quality neighborhoods

In anticipation of the opening of a new Daimler-Chrysler production facility that was tentatively scheduled to open approximately 12 miles west of Savannah in the town of Pooler, Step Up prepared an Economic Impact Study focused on transportation and childcare. The DaimlerChrysler facility was projected to create approximately 3,300 new jobs that would pay an average of \$22.50 per hour.

Transportation was identified as a significant barrier to employment at the new facility. To provide access to the new facility, the plan recommended the creation of a new express route from Downtown Savannah, shuttle services in the communities southwest portion of the County, on-site bicycle and walking paths, and carpooling/vanpooling programs for residents living in the rural portions of western Chatham County. Additionally, the plan recommended implementation of a variety of transportation demand management (TDM) strategies including: subsidies for users of alternative transportation services, guaranteed ride home programs, carpool/vanpool ridematching services, and promotion of employer based tax incentives.

The Economic Impact Study also involved an analysis of what potential employees might face in terms of impacts on childcare. An inventory of childcare providers determined that approximately 62 percent were located within $\frac{1}{4}$ mile of existing transit stops and over 76 percent were located within $\frac{1}{2}$ mile of the nearest bus stop. The study concluded that once employment levels at the new facility reached a critical mass, Step Up would work to establish an on-site childcare program.

Observations

As a result of early land use and development patterns, Downtown Savannah has evolved into an environment that is particularly conducive to transit. There is an extensive sidewalk network and a focus on neo-traditional development with a mixture of homes and businesses, small lot sizes, and multi-family residences. Although there is relatively good transit coverage in the downtown core, demand will likely continue to grow as a result of the community's emphasis on infill development and revitalization of existing neighborhoods.

In addition to meeting the demand for services in Savannah, CAT will also need to develop urban and rural mobility service appropriate for the entire region. Anticipated development

in the central and northern areas of the County, as well as existing and potential growth in inter-county commuter trips may be better served with a mix of service types. These could include express service from Park-and Ride facilities as suggested in the Effingham County Multi-Modal Transportation Study, for example. Other specialized service types, such as shuttle service to employment sites (Tricentennial Plan), carpool/vanpool services recommended in the Step Up Economic Impact Study and the Connecting Savannah Action Plan, or Transportation Demand Management Strategies included in the Fort Stewart/HAAF Regional Growth Plan could be used to effectively meet regional demand.

CAT should pursue additional opportunities to coordinate and collaborate with local and regional planning activities including those of neighboring counties and municipalities that are not yet members of CAT. This will help to ensure that transit is given appropriate consideration in the comprehensive planning process in terms of land use development supportive of public transportation access and related amenities. Active involvement in planning activities could take the form of service development proposals and technical assistance for local and regional governments, and could also help to identify opportunities for joint public/private partnerships to enhance mobility

Chatham County's economy is comprised of a diverse set of business and economic drivers ranging from the Port of Savannah, to manufacturing, to the military. Tourism is another major source of revenue for the local economy. In 2011, Savannah attracted more than 12 million national and international visitors who spent over \$1.9 billion dollars on lodging, food and beverage, retail, recreation and transportation. Many of these tourists come to Savannah to explore historical points of interest, so transit plays an important role in providing access to these sites. Because the economic vitality of the region is largely dependent upon tourism, it will be important for CAT to continue to enhance services provided to this target market. It will be equally important to the region's economy that the business community can attract the workforce they need and that transportation is not perceived as a barrier for employers considering relocation or expansion in the region. Toward this end, CAT should actively participate in economic development initiatives and coordinate with the Savannah Area Chamber of Commerce and regional modal partners, such as the Savannah /Hilton Head International Airport and the Port of Savannah. Additional opportunities exist to collaborate with tourism industry partners such as the Savannah Tourist Board and the Tourism Leadership Council, local and regional realtor organizations, and commercial and retail businesses to develop mobility programs and services supportive of their organizational objectives.

In terms of coordination, CAT could also play a significant role in engaging private sector transportation providers in an overall regional mobility plan. This could take the form of direct contracts or agreements to enhance multi-modal connectivity or serve new markets, supplement existing CAT services, or CAT could act as a one stop shop for regional mobility information.

CAT should also be more proactive in communicating its value to the local and regional economy (e.g. every \$1 communities invest in public transportation generates approximately \$4 in economic returns).

Job access is also a critical issue for area residents. The percentage of area residents living below the poverty level exceeds state and national averages. In Savannah alone, approximately 22 percent of residents live below the poverty level, and within Chatham County nearly 16 percent of residents live below the poverty level. Regional unemployment figures also show Savannah and Chatham both exceed the national unemployment rate of 7.8 percent with Savannah's unemployment rate nearly 3 percent higher than the national average.

An analysis completed by the Step up Task Force in 2003, revealed that a lack of transportation to the proposed Daimler Chrysler facility in Pooler would preclude many area residents from potential job opportunities that were expected to pay a living wage of \$22.50 per hour on average. Savannah's Anti-Poverty Task Force also identified improved access to quality jobs through an improved transportation system as one of the five most important goals for the region.

Mobility and job access are also recognized as critical elements of successful neighborhood transformations. The Housing Authority of Savannah was awarded a 2011 Choice Neighborhood planning grant which will be used to develop a transformation plan for the East Savannah Gateway. The plan will focus on creating safe and affordable housing that is physically and financially viable over the long term, supports positive outcomes for families, and addresses community services, education, and job access. CAT should continue and enhance its support of the Housing Authority of Savannah, by developing mobility services that lead to economic self-sufficiency for residents of low-income neighborhoods.

CAT's Coordinated Public Transportation Plan identifies the need to improve transportation service and efficiency for the elderly, disabled and low income population through improved coordination and planning. Additional collaboration and communication with senior service agencies, private health care facilities, faith-based organizations and governmental health care service providers will help to eliminate duplicative services and appropriately allocate limited resources.

Another important sphere of influence in the Chatham region is educational institutions. For some students public transportation is their only viable option, but recent research reveals that the driving habits of people are changing. A 2102 report entitled Transportation and the New Generation found that increasingly young people are choosing to replace driving with alternative transportation (45%) versus 32 percent of the older population and many young people prefer to live in places where they can take public transportation. With the significant presence of students in Savannah, CAT should focus on efforts to expand service to education and training facilities and better communicate service information with this group via social media and school resources such as websites, catalogs and parent outreach. CAT should also create new programs tailored to the student market similar to the free unlimited ride pass program established at Savannah State University.

CAT has an opportunity to take advantage of the vast array of neighborhood associations and special interest groups to share information and build community consensus on mobility priorities. Additionally, special interest groups such as the Chatham Environmental Forum recognize transit as one tool that can be used to address quality of life issues. These associations can influence political policy decisions that impact government support for CAT.

As shown in this summary of community characteristics and the various planning and development initiatives that have taken place or are underway in the Chatham region, public transportation is more than just moving people. The mobility provided by public transportation programs and services are related to a broad spectrum of quality of life and livability considerations.

Finally, a well-developed and comprehensive regional transportation plan will make CAT a more viable investment partner from the perspective of the Federal Transit Administration and the Georgia Department of Transportation which may bring additional grant funding for new service initiatives.

Situation Appraisal

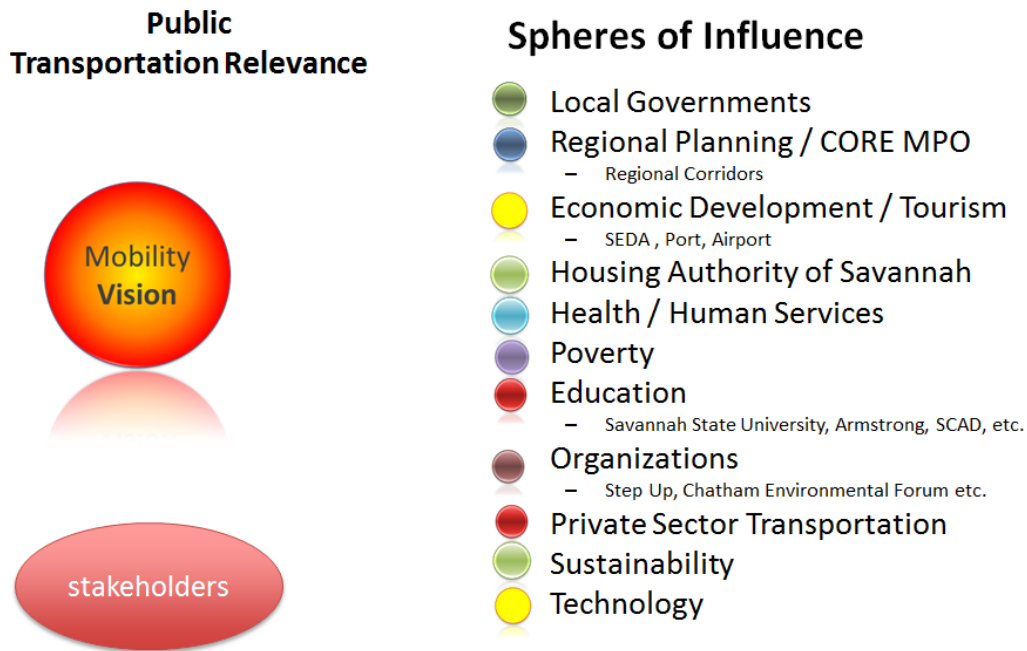


Figure 5-8. Situation Appraisal

The Situation Appraisal identified a number of influencing issues and factors that are highly relevant to defining CAT’s roles and responsibilities as a Mobility Manager now and in the future.

Situation Analysis Opportunities

Upon reviewing various conditions, programs, plans and emerging factors that influence the need for and types of mobility services, the following opportunities have been identified.

This is not a definitive list of opportunities. CAT may identify other opportunities through ongoing collaboration with both existing and new partners.

Local Governments

- Coordination and technical assistance with local comprehensive planning
- Land Use Development considerations for public transportation access and public amenities
- Service development proposals for municipalities not yet members of CAT
- CAT Participation and facilitation of joint private / public partnerships

Regional Governmental Entities

- Urban / Rural service coordination
- Regional express services
- Service development proposals for neighboring Counties
- Coordination and collaboration with regional planning activities
- Support of pedestrian and bicycle facilities coordinated with transit services
- Support the development of Transportation Demand Management Strategies (e.g. included in the Fort Stewart/HAAF Regional Growth Plan)

Economic Development / Tourism

- Participation with economic development services and initiatives
- Coordination with regional modal partners (e.g. Airport, Port of Savannah, Rail)
- Enhance existing fixed route service for weekend travel demand
- Partnership with Savannah Area Chamber of Commerce
- Tourism industry partnerships
- Access to historical destinations

Housing / Real Estate

- Maintenance and expansion of the partnership with the Housing Authority of Savannah
- Collaboration of service information with the Savannah Board of Realtors
- Travel planning services with commercial and retail businesses

Health / Human Services

- Coordination and support of faith based services
- Coordination of customer services with private sector health facilities and Services
- Partnerships with senior service agencies
- Collaboration with governmental support health services

Personal Income / Poverty

- Enhance mobility service that support low income household access to jobs and services
- Collaboration with Step Up Savannah

Education

- Maintenance and expansion of access to education and training facilities

- Partnerships with educational institutions e.g. Savannah State University, Armstrong, SCAD, etc.
- Coordination with Savannah – Chatham County Public School System

Community Organizations

- Collaboration with the Chatham Environmental Forum
- Communication outreach to neighborhood associations
- Identification of other community organization

Private Sector Transportation

- Collaboration with tourism market
- Exploration of collaboration with taxi services
- Exploration of collaboration with rental car services

Federal / State Government

- Seek new partnership / grants with the Federal Transit Administration
- Seek new investment partnerships with the Georgia Department of Transportation

Technology and Communications

- Promote transit information sharing and applications development
- Develop Regional Mobility Management services to offer communities surrounding Chatham County

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Chapter 6

Vision, Mission, Goals and Objectives

In order to develop goals and objectives for the Transit Development Plan, it was necessary to 1) evaluate the needs of the community, 2) understand customer, employee, and stakeholder perspectives and opinions, 3) afford public comment and input in the development of these goals, 4) relate public transportation objectives to the plans and policies of local governmental agencies, 5) identify areas where operating performance enhancements and efficiencies can be achieved, and 6) develop strategic objectives and actions that can implement the plan as well as measure progress and tactically re-align efforts to accommodate business environment changes in the future.

This chapter presents goals, objectives, and strategies developed for the Chatham Area Transit Authority that emerged from the TDP process.

Data Collection and Evaluation

As outlined in the previous chapters of this plan, a significant amount of data collection was conducted to understand the environment in which CAT operates and to evaluate its strengths and weaknesses from the perspective of the community and as compared to transit agencies with similar characteristics. First, a thorough analysis of CAT's demographic and socioeconomic data was conducted for purposes of identifying markets with a high propensity for transit utilization and potential new markets for CAT. Second, a comprehensive evaluation of trends in CAT's operating and financial performance was conducted along with a peer group comparison to highlight strengths and weaknesses in a variety of measures. Finally, as described in Chapter 4, several market research activities were undertaken to gain an understanding of the community's perceptions of CAT, the services it currently provides, the services most desired by users and non-users, and the community's vision for transit for the CAT service area now and in the future.

TDP Advisory Review Committee

The Advisory Review Committee also provided input and perspective in developing these goals as public transportation issues and ideals for community mobility were addressed.

Mission

Chatham Area Transit's continuing mission is to provide quality public transportation services in a professional and responsive manner.

The overall goal of the Transit Development Plan is to improve mobility and provide potential growth and development for the Chatham County region and surrounding counties. CAT will emerge beyond just a provider of service into a regional coordinator of service as a Regional Mobility Manager.

Goal 1 Service Delivery and Performance

To continuously improve delivery of existing service and expand CAT's role in providing a family of mobility services that include services actually operated by CAT as well as coordination services as a mobility manager

Objective 1.1 Establish a customer focused perspective with service designed to provide excellence to existing customer markets and expand mobility services for new choice rider markets

Strategy 1.1.1 Continue customer research activities utilized during the TDP process to understand customer market needs and preferences

Objective 1.2 Enhance fixed route bus services to optimize system design and meet customer demand

Strategy 1.2.1 Improve accessibility to major health care, recreation, education, employment, cultural and social services facilities

Strategy 1.2.2 Utilize TDP service planning analysis and subsequent updates to prioritize service improvements

Strategy 1.2.3 Maintain the service review committee to analyze service performance and adjust service appropriately

Strategy 1.2.4 Maintain and enhance performance reporting process to include quarterly reports of key indicators to the CAT board

Objective 1.3 Develop flex route zonal services

Strategy 1.3.1 Establish a pilot flex service

Strategy 1.3.2 Seek partnerships within flex service zones to provide customer amenities and/or operational revenues

Strategy 1.3.3 Develop and integrate flex service with mixed land use development and existing transit service

Objective 1.4

Establish a commuter service program

- Strategy 1.4.1 Establish a commuter service program to promote use of existing and new public transportation services
- Strategy 1.4.2 Develop a commuter assistance program composed of marketing and sales materials focused upon employer and employee benefits
- Strategy 1.4.3 Initiate a new CAT van plan program that offers commuter van service to commuters throughout the Savannah region. Coordinate this service with employers, local governments, and existing service providers

Objective 1.5

Optimize the integration of county-wide mobility services

- Strategy 1.5.1 Foster partnerships with all municipalities and seek additional transit district membership
- Strategy 1.5.2 Establish a mobility working group that meets regularly to discuss mobility needs, options and strategies

Objective 1.6

Develop a regional express program

- Strategy 1.6.1 Prepare a detailed operational and financial plan for an express bus program in collaboration with the MPO to include counties interested in commuter travel to/from Chatham County.

Objective 1.7

Manage efficient coordination between CAT's family of services

- Strategy 1.7.1 Refine and maintain a coordinated travel training program with an emphasis on moving paratransit customers to fixed route services
- Strategy 1.7.2 Develop travel training programs for specific target markets including: senior citizens, persons with disabilities and youths.

Goal 2 Image and Business Approach

To enhance CAT’s image as a new regional mobility manager with the responsibility of serving existing social and transit dependent markets and to vastly expand its role to serve new choice rider markets

Objective 2.1 Maintain a comprehensive customer information program that creates awareness, educates and promotes the use of mobility services provided by CAT

Strategy 2.1.1 Establish a corporate sales program to include business development with major employers, health service agencies, educational institutions and local governments

Strategy 2.1.2 Develop travel planning materials and accessible information programs

Strategy 2.1.3 Maintain and develop internet travel planning services as well as telephone customer service travel planning assistance

Strategy 2.1.4 Develop a “One Call Mobility Travel Center” to include customer tools to access service information and permit user friendly travel planning

Strategy 2.1.5 Develop a public outreach program to educate and provide awareness of public transportation issues, benefits and opportunities

Objective 2.3 Maintain and expand educational and training institution partnerships

Strategy 2.3.1 Continue to promote the Universal Pass Program and travel planning services

Objective 2.4 Target the real estate and housing industry to develop mutual interest opportunities for accessibility and increased market values

Strategy 2.4.1 Initiate information exchange and technology support for real estate interests related to mobility service access

Objective 2.5 Continue to support various community-based human service functions with necessary mobility accessibility

Strategy 2.5.1 Strengthen existing relationships with human service and health providers

Objective 2.6 Enhance regional mobility coordination among public and private operators

Strategy 2.61 Facilitate discussions for coordinated mobility services throughout the region

Objective 2.7 Establish, maintain and measure performance of an annual marketing and sales program

Strategy 2.7.1 Develop an annual marketing and sales work program that details activities and measures accomplishments

Goal 3 Economic Development

Enhance economic development by fostering public transportation partnerships with CAT as an equal stakeholder with the business and development community

Objective 3.1 Proactively partner with the business community and the regional workforce agencies for the development and refinement of mobility services

Strategy 3.1.1 Engage in a continuous and consistent dialogue with the business community to maintain an understanding of mobility needs and mobility solutions

Strategy 3.1.2 Provide a focused job access program to coordinate employer and employee mobility needs with existing and new CAT services as well as trip planning choices

Objective 3.2 Support community initiatives for affordable housing with strategic investments aligned with existing and programmed mobility services

Strategy 3.2.1 Provide technical support to affordable housing agencies and interest groups for planning and implementing housing projects

Objective 3.3 Promote a linkage between mobility services and education and training facilities

Strategy 3.3.1 Develop outreach activities to create greater awareness of CAT mobility services that can benefit education and training resource accessibility

Objective 3.4 Actively participate with various community stakeholders involved with economic development and business recruitment/relocations

Strategy 3.4.1 Design a "Customer Call List" of key public and private economic development stakeholders

Objective 3.5 Promote and support the unique tourist markets attracted to Savannah

Strategy 3.5.1 Engage with tourist related industries (accommodations, retail, associations, service providers, etc.) to support mobility demands and joint business opportunities

Objective 3.6

Engage other modal partners including air, rail, and sea port

Strategy 3.6.1

Assess mobility service opportunities for mutual customers, workforce and joint development potential

Goal 4 Capital Investments and Mobility Infrastructure

Provide associated capital vehicles, inventory, infrastructure, amenities and equipment for mobility services

Objective 4.1 Develop and maintain a comprehensive capital improvement program (CIP) and asset management process

Strategy 4.1.1 Assess all existing equipment and facilities, creating an asset management inventory and process to manage resources

Strategy 4.1.2 Establish a process to itemize and prioritize capital investment needs that address system maintenance, replacement and expansion. Include specific investment costs and financing strategies

Strategy 4.1.3 Establish a master bus stop and infrastructure program which provides minimum design standards, criteria for prioritizing stop improvements, meets ADA requirements and promotes accessibility convenience and attractiveness

Strategy 4.1.4 Coordinate with local governments, business interests, community associations etc. to partner and participate in capital mobility investments

Objective 4.2 Continuously upgrade and maintain existing transit infrastructure and facilities in a state of good repair and plan for new infrastructure

Strategy 4.2.1 Maintain facilities (operating bases, terminals, major equipment etc.). Conduct needs assessment and CIP master scheduling plan

Strategy 4.2.2 Plan, design and implement transit facilities (benches, shelters, superstops, stations, etc.) in coordination with service development activities

Strategy 4.2.3 Utilize CIP for input to urban transportation planning process (TIP), state capital funding programs, and local capital funding mechanisms

Strategy 4.2.4 Establish an Intelligent Transportation System (ITS) Technology Program to prioritize and share technology procurements that enhance efficiency, effectiveness, safety, and customer benefits

Goal 5 Support Regional and Community Sustainability Policies and Programs

Actively participate with sustainability and livability initiatives and serve as a leader in facilitating more environmentally friendly forms of mobility, such as walking, biking, and choice trips on public transportation

Objective 5.1 Optimize smart growth, redevelopment and land use coordination with mobility service priorities

Strategy 5.1.1 Participate in land use and growth management agency processes to encourage consideration and support of transit oriented design and investments

Objective 5.2 Increase the role of public transportation to support the reduction of greenhouse gas emissions and provide alternatives to lessen the overall carbon footprint within CAT

Strategy 5.2.1 Establish an external outreach program as well as an internal "green" mobility program that promotes the reduction of greenhouse gas emissions

Objective 5.3 Engage in regional and local efforts to address the impact of energy costs and energy conservation

Strategy 5.3.1 Promote choice transportation services and promote conservation to include community partnerships for service enhancements to attract choice riders

Objective 5.4 Provide public transportation design resources to local governments, development agencies and the business development community

Strategy 5.4.1 Establish mobility guidelines, criteria and technical support materials for the planning and construction phases of land use development as a resource for local government and regulatory agencies

Goal 6 Intergovernmental and Regional Transportation Coordination

Facilitate a collaborative communication and coordination process to holistically approach the provision of mobility services that are seamless and customer oriented.

Objective 6.1 Ensure the plans and programs of local governments within CAT's service area include appropriate consideration of improvements and potential funding partnerships

Strategy 6.1.1 Review local plans annually and provide technical recommendations to address mobility needs and service development

Strategy 6.1.2 Engage with local government planning processes and provide transit development technical assistance

Objective 6.2 Facilitate partnerships with municipalities for capital and operational mobility improvements and promotion

Strategy 6.2.1 Create a dialogue with all municipalities to evaluate service alternatives and provide technical support

Objective 6.3 Support pedestrian and bicycle improvements and promote integration with mobility services

Strategy 6.3.1 Maintain coordinated services and pursue additional service partnerships

Strategy 6.3.2 Initiate a transit bike share partnership

Objective 6.4 Coordinate service development with surrounding counties to address customer travel needs and connectivity

Strategy 6.4.1 Provide leadership in facilitating awareness and developing coordination opportunities by sponsoring topical forums and transportation summits

Goal 7 Stewardship of Resources

Ensure prudent public stewardship of financial resources and secure additional funding for system maintenance and improvements

Objective 7.1 Maintain administrative and operational efficiencies through sound business policies and practices

Strategy 7.1.1 Along with annual third party financial audits, conduct internal budgetary procedures for all cost centers to assess expenditures and needs directly related to CAT organizational mission and goals

Objective 7.2 Maintain management oversights and accountability of a proactive grant function to fulfill obligations and aggressively compete for new funding opportunities

Strategy 7.2.1 Prepare for FTA triennial reviews and grant assurance requirements

Strategy 7.2.2 Initiate competitive grant funding opportunities and collaborate with local partners to elevate project ranking and leverage commitments

Objective 7.3 Strengthen financial position of Authority in order to build operating and capital reserves.

Strategy 7.3.1 Maintain a highly capable financial function and provide updated financial tools

Strategy 7.3.2 Maintain an upgraded accounting software system

Objective 7.4 Develop a long range financial plan that establishes a funding relationship with TDP strategic improvements and long range transportation improvements

Strategy 7.4.1 Coordinate TDP and MPO LRTP financial analysis

Strategy 7.4.2 Promote the utilization of urbanized area flexible funding to support transit, pedestrian and bicycle improvements

Objective 7.5 Seek to address local mobility plans and programs with local funding revenue and maximize leveraging of state and federal funding partnership investments

Strategy 7.5.1 Investigate local and regional funding opportunities such as benefit assessment district opportunities [e.g. potential Tax Allocation District (TAD)]

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Strategy 7.5.2 Develop an explicit service and capital improvement program defining use of new local funding sources and financing techniques

Strategy 7.5.3 Maintain a legislative funding priority program to seek state and federal funding partnerships

Objective 7.6 Maintain an equitable fare policy

Strategy 7.6.1 Conduct a fare analysis and establish target revenue income

Objective 7.7 Provide public access to information and involvement with mobility initiatives to earn public trust and confidence in CAT as a public servant organization

Strategy 7.7.1 Coordinate all departmental service development and marketing activities for public outreach efforts

Strategy 7.7.2 Utilize public involvement task force methods, such as the TDP Advisory Review Committee to provide public insight and understanding of mobility needs and recommended solutions

Objective 7.8 Monitor the progress of overall TDP goals, objectives and initiatives

Strategy 7.8.1 Provide departmental progress reporting and an annual TDP Update

Goal 8 Employee BEST Place to Work Environment

To continuously improve the knowledge and skills of CAT employees to better serve customers as well as to enrich the professional development of employees to create a best place to work environment

Objective 8.1 Provide training and professional development programs for CAT employees

Strategy 8.1.1 Implement an advanced operator development program

Strategy 8.1.2 Implement a transit-focused Customer Service program

Strategy 8.1.3 Establish a management certification program

Objective 8.2 Develop a meaningful and dynamic employee communication program that elevates pride and motivation and welcomes constructive employee participation to serve customers

Strategy 8.2.1 Establish a new employee orientation program

Strategy 8.2.2 Improve workplace morale as measured by internal opinion and suggestions surveys

Strategy 8.2.1 Maintain an organizational work program that addresses professional development and training needs, task assignments by department, performance measures and quarterly reporting

Goal 9 Safety and Security

CAT will provide a safe, secure, comfortable and clean environment. Continuous Quality Improvement: CAT will improve the quality of its services through the development of innovative and efficient utilization of resources

Objective 9.1 Maintain a Comprehensive System Safety Program Plan

Strategy 9.1,1 Annually review and update plan to ensure system safety and to maintain compliance with the Federal Transit Administration’s Safety and Security Management Plan (SSMP)

Objective 9.2 Maintain and Implement Safety and Security Systems for CAT’s Facilities, Fleet, and Public Stops and Stations

Strategy 9.2.1 Establish design guidelines and priority system improvements

Strategy 9.2.2 Coordinate system safety and security improvements with local governments, private concerns and general public interest groups

Objective 9-3 Provide Efficient Maintenance of the Bus Fleet and Facilities to Ensure Reliable Service for the Riding Public

Strategy 9.3.1 Continue to improve on quality assurance in the maintenance department and implement a paperless shop.

Strategy 9.3.2 Conduct regular preventative maintenance activities and a mid-life vehicle overhaul program

Chapter 7

Service Alternatives and System Design

Introduction

How to Approach Service Alternatives and System Design

In an article published on March 28, 2013 in the Savannah Journal, new figures emerged regarding unemployment in the Savannah metro area. "The Georgia Department of Labor announced today that metro Savannah's unemployment rate declined to 7.8 percent in February, down five-tenths of a percentage point from 8.3 percent in January and approximately 3 percentage points lower than 2010 levels. The rate was 8.7 percent in February a year ago. The number of jobs in metro Savannah increased by 1,500 climbing to 157,100 from 155,600 in January. Most of the growth came in professional and business services, education and health care, *leisure and hospitality*, and state and local government. Over-the-year, metro Savannah added 3,600 jobs, or 2.4 percent, from 153,500 in February 2012. Most of the growth was in *leisure and hospitality*, retail trade, financial services, state and local government, and personal services," the Journal reported.

In approaching a strategic service plan for transit, it is important to have sharp eyes and even better ears to listen. As the CUTR team preparing this TDP, several themes regarding transit in Savannah began and continue to emerge:

- The public is keenly aware of the challenges the CAT organization has faced over the past few years and believes that current leadership is turning things around for the better, slowly but steadily.
- Public transportation is very important to residents of Savannah even if they do not use the service.
- Residents of Savannah are not only proud of the tourists drawn to their historic downtown, they are highly aware of the importance of tourism to overall economic vitality.
- From a transit perspective, Saturday and Sunday are equally viable in terms of service levels as weekdays. This is because Friday, Saturday and Sunday are the peak days of the week when tourists are staying in the historic district.
- Higher education, through the many eclectic colleges, universities and technical institutions located in the metro area, is both a solid market for

transit services and a critical component to an educated work force to shape the community's future.

- Though not substantiated with realized data, SCAD, with its vast system of routes and schedules, is probably a larger operation than CAT. Although the service is only for students, faculty and staff, the presence of SCAD transit service underscores the appeal of transit mobility to a younger generation.
- The public would like CAT to move more quickly in refining the organization to deliver excellence in terms of a viable transit product that is reliable and on-time with service levels and service area saturation sufficient to meet demand.
- Finally, the public has demonstrated a legitimate and substantiated *need* for improved transit service and service levels.

The Service Alternatives and System Design chapter is unique in the sense that most previous activities in the TDP in some way feed the presentation of information in this chapter. Figure 7-1 below displays the other elements of the TDP that are of greatest importance in developing a Service Plan.

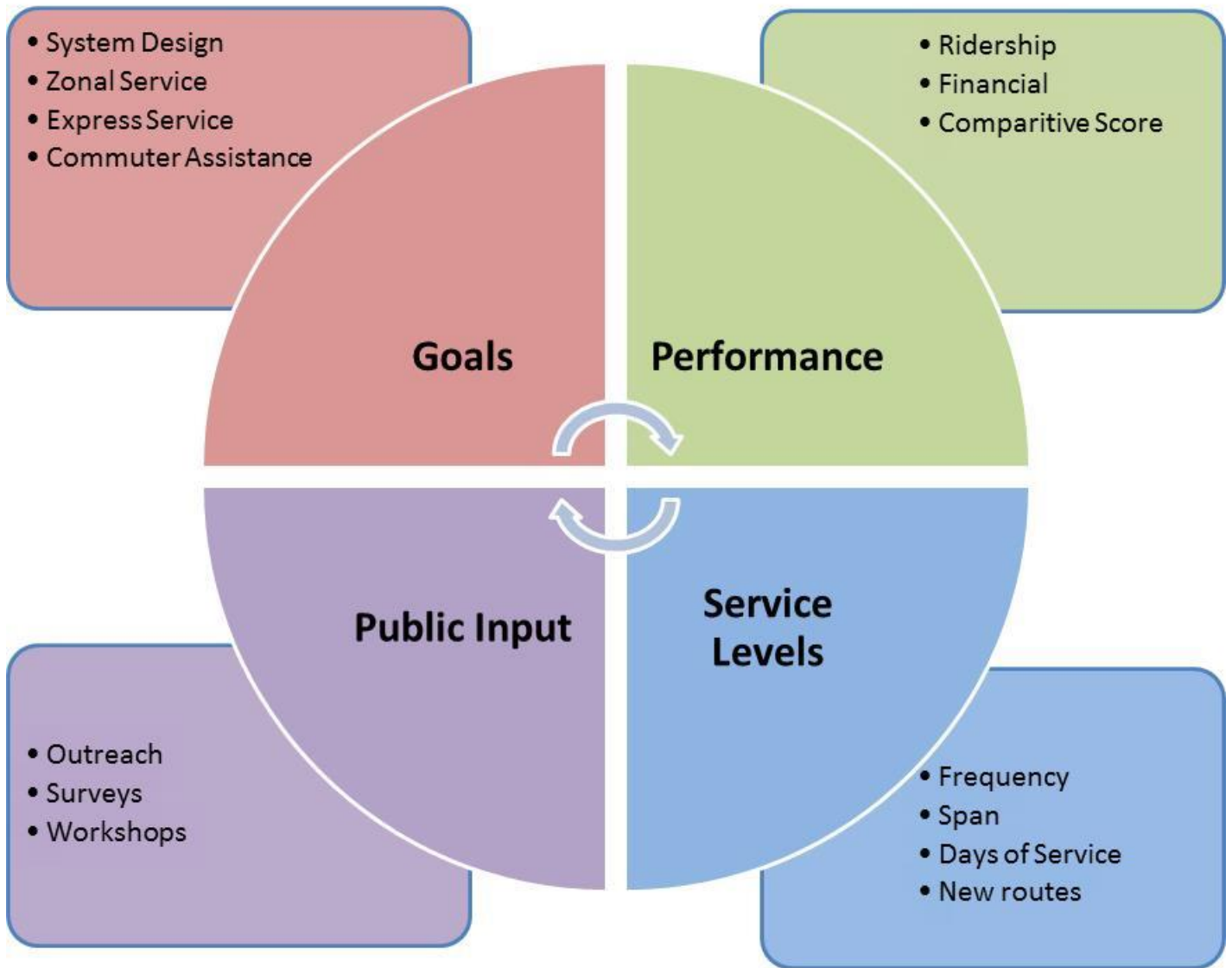


Figure 7-1. TDP Elements Important to Service Plan

Service Related Goals, Objectives and Strategies

The goals and objectives of the TDP provide guidance in establishing a focus for developing service plan alternatives. Goal #1 is to “To Continuously Improve Delivery of Existing Service and Expand CAT’s Role of Providing a Family of Mobility Services that Include Services Actually Operated by CAT as well as Coordinated Services as a Mobility Manager.” Objective 1.2 seeks to “enhance fixed-route bus service to optimize system design and meet customer demand.” This objective is supported by several strategies such as improving accessibility to health care, recreation, employment, cultural and social service facilities. Objective 1.3 calls for the development of flex route zonal service with the strategy of establishing a pilot flex service (discussed in greater detail later in this chapter). Objective 1.4 calls for establishing a commuter assistance program with the strategy of promoting the use of existing and new public transportation services. Objective 1.6 calls for a regional express program with a strategy to include counties interested in commuter travel to and from Chatham County.

Finally, Objective 4.1 calls for the development and maintenance of a comprehensive capital improvement program (CIP) and Asset Management Process, which includes the orderly replacement of transit vehicles over the plan period.

Public Involvement

Customer-Supported Service Improvements

An on-board survey was conducted of transit customers and included a question on satisfaction with certain aspects of transit service. Customers were least satisfied with the start time and end time on Sunday, and the end time on Saturday. Customers also were less satisfied with the frequency of service and on-time performance. At public workshops customers expressed concerns about the new transit hub and how it will operate and several concerns regarding on-time performance of certain routes.

Elected Official-Supported Service Improvements

When probed about existing services, elected officials were very supportive of weekend service improvements as a means of supporting the tourism industry in the historic district. They were also supportive of having more east-west service to complement the spine north-south routes. In terms of future services, elected officials were supportive of CAT expanding the family of services in order to appeal to more customer markets on top of the existing customer market.

Performance Evaluation

Chapter 4 presented a performance of CAT services at the route level. Routes are scored and then ranked based on performance criteria such as passengers per hour, passengers per mile, subsidy per passenger, etc. The highest performing routes in the system follow the primary corridors for all traffic including the Route 3A (Augusta Avenue), 10 (East Savannah), 14 and 114 (Abercorn), 27 and 28 (Waters Avenue), and 31 (Skidaway). Considerations for improvements were given to these top performing routes.

CAT Service Area

A vast majority of CAT services operate currently within the city limits of Savannah. However, CAT also provides service to Whitemarsh Island, Wilmington Island, Thunderbolt, and Garden City. The charter for the authority allows for service in all of Chatham County as well as the adjacent counties of Bryan and Effingham.

Current Network Configuration and Considerations

Network route structure

Since Downtown Savannah is bound by the river to the north, which is a natural barrier, the route network of CAT is a radial network with most routes serving Downtown and then serving to the east, west and south of Downtown. Most routes are north-south routes serving between Downtown and major corridors south such as Montgomery, Waters, Abercorn, Reynolds, Truman Parkway, and Skidaway. In discussions with staff and the public, CUTR noted that there is a lack of east-west connectivity for those north-south spine routes. Therefore, this plan will call for additional east-west corridors to be served on Victory Drive, 37th Street, 59th Street and Delesseps.

Transfer Centers

As of the time of plan adoption, the new Downtown Intermodal Facility was complete and scheduled to open in early Fall 2013. In addition, CAT maintains transfer centers at three major destinations: the Montgomery Cross Wal-Mart on East Montgomery Road (Routes 11, 14, 20, 28, and 31), Oglethorpe Mall on Abercorn (Routes 14, 27 and 114), and Savannah Mall on Abercorn (Routes 6, 14, and 114).

Potential/Future Transfer Centers

This plan calls for CAT to utilize Savannah State University as an anchor for transit transfers for future east-west routes . CAT should work with SSU officials to make transit improvements that can accommodate more bus arrivals and departures. In addition, there is no anchor in the central west sector of the service area for future east-west pattern routes. This is the area roughly bound by Montgomery, Hopkins, 52nd Street and Victory Drive. CAT should work to identify a location for buses to converge for the purpose of effectuating transfers.

Categorization of Service Alternatives

Throughout the course of developing a TDP, there is an exchange of ideas between planners, the public, and elected officials regarding how to make services better. In this TDP, there is consensus that improvements to CAT entail a Family of Services designed to appeal to different markets and market segments throughout the Savannah region. This Family of Services includes the following:

- A series of ***improvements to the quality of existing services*** including span of service (hours of operation), frequency of service (how often a bus arrives), and time adjustments to improve on-time performance;
- **Additional routes** within the existing route network to facilitate east-west travel and connectivity;

- **Zonal services** which entail smaller vehicles that can operate on residential streets and deliver customers to the fixed-route system;
- **Regional commuter express services** to enhance mobility for Chatham, Effingham and Bryan county residents working in the primary Savannah employment market; and
- **Commuter services** to include car pools, ride matching, and van pools for employers throughout the region.

Improvements to the Quality of Existing Services

There was wide agreement among all stakeholders that weekend service is a priority for span improvements because of the jobs in the tourism industry. As a result, CUTR and CAT staff decided to standardize the span of service on the highest performing routes for which there is the most demand. Weekday and Saturday span of service will be standardized to operate from 5:30 a.m. to midnight for top performing routes. Not all routes start at exactly 5:30 a.m. nor do they end exactly at midnight. However, most routes start and end within a half hour window of the standardized span. Sunday span is standardized to operate from 7:30 a.m. to 9:00 p.m. for top performing routes. Frequency of service is standardized to be one bus every 60 minutes for middle and lower performing routes and one bus every 30 minutes for top performing routes (many already have 30 minute frequencies).

In order to devise a scheme by which to prioritize improvements to existing services, CUTR used the performance report at the route level that ranks routes in terms of performance. Then, a crosstab was run from the on-board survey displaying satisfaction ratings for individual service characteristics at the route level based on a scale of 1 to 5 where 5 is very satisfied and 1 is very unsatisfied. From there, any satisfaction rating below 3.5 was highlighted in red.

Customers overall were less satisfied with the frequency of service for all 11 top performing routes; however, only five routes will have frequency improvements because the remaining routes already operate at the standard of one bus every 30 minutes. Overall, customers are satisfied with the early morning start times and three routes had a satisfaction rating of less than 3.5 for the late evening end time. The Routes 3A and 27 already operate until midnight and Route 4 ends at 10:16 p.m. Four routes had satisfaction less than 3.5 for the start time on weekends; however, those fall within the standard as well (5:30 a.m.) Virtually every route had lower satisfaction for the late evening span on weekends. Table 7-1 below displays the top performing routes with satisfaction ratings from the on-board survey.

Table 7-1. Top Performing Routes with Average Satisfaction Ratings

| Route No. | Route name | Rank | Average Satisfaction Ratings at Route Level - Scale of 1 to 5 | | | | | |
|-----------|------------------|------|---|----------------------|---------------------|----------------------|---------------------|---------------------|
| | | | Frequency | Weekday Span (Early) | Weekday Span (Late) | Weekend Span (Early) | Weekend Span (Late) | On-time Performance |
| 3A | AUGUSTA AVE | 1 | 3.15 | 3.51 | 3.15 | 3.58 | 3.15 | 3.06 |
| 28 | WATERS | 2 | 3.40 | 3.80 | 3.63 | 3.59 | 3.36 | 3.55 |
| 27 | WATERS | 3 | 3.30 | 3.85 | 3.26 | 3.40 | 2.86 | 3.04 |
| 14 | ABERCORN | 4 | 3.32 | 3.89 | 3.63 | 3.55 | 3.32 | 3.32 |
| 31 | SKIDAWAY/SANDFLY | 5 | 3.21 | 3.76 | 3.50 | 4.27 | 3.07 | 3.16 |
| 114 | ABERCORN LIMITED | 6 | 2.97 | 3.85 | 3.78 | 3.40 | 3.25 | 2.92 |
| 10 | EAST SAVANNAH | 7 | 3.45 | 3.55 | 3.68 | 3.55 | 3.65 | 3.40 |
| 2 | WEST CHATHAM | 8 | N/A | N/A | N/A | N/A | N/A | N/A |
| 12 | HENRY | 9 | 3.46 | 4.02 | 3.78 | 3.41 | 3.38 | 3.37 |
| 17 | SILK HOPE | 10 | 3.45 | 4.24 | 3.66 | 3.59 | 3.21 | 3.45 |
| 4 | BARNARD | 11 | 3.28 | 3.53 | 3.35 | 2.93 | 2.81 | 3.96 |

Saturday Span of Service Improvements

Five top performing routes require additional service hours in order to meet the standard of operating until midnight. Those are the Routes 28, 14, 12, 17 and 4. Table 7-2 displays the additional service hours needed.

Table 7-2. Saturday Span of Service Improvements

| Route No. | Route name | Rank | Saturday Span (Late) | Net New Service Hours | Net New Annual Service Hours |
|-----------|------------|------|----------------------|-----------------------|------------------------------|
| 28 | WATERS | 2 | X | 3.12 | 162 |
| 14 | ABERCORN | 4 | X | 3.13 | 163 |
| 12 | HENRY | 9 | X | 1.5 | 78 |
| 17 | SILK HOPE | 10 | X | 1.83 | 95 |
| 4 | BARNARD | 11 | X | 1.75 | 91 |

Sunday Span of Service Improvements

All eleven routes need additional service hours in order to meet the standard of operating until 9:00 p.m. on Sundays. In addition, CUTR is recommending that CAT consider

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operating Route 2 on Sunday. Table 7-3 below displays additional service hours needed to achieve the standardized span for Sunday.

Table 7-3. Sunday Span of Service Improvements

| Route No. | Route name | Rank | Sunday Span (Late) | Net New Service Hours | Net New Annual Service Hours |
|-----------|------------------|------|--------------------|-----------------------|------------------------------|
| 3A | AUGUSTA AVE | 1 | X | 1.62 | 84 |
| 28 | WATERS | 2 | X | 14.8 | 770 |
| 27 | WATERS | 3 | X | 1.33 | 69 |
| 31 | SKIDAWAY/SANDFLY | 5 | X | 0.58 | 30 |
| 114 | ABERCORN LIMITED | 6 | X | 1.62 | 84 |
| 10 | EAST SAVANNAH | 7 | X | 2 | 104 |
| 2 | WEST CHATHAM | 8 | X | 13.42 | 698 |
| 12 | HENRY | 9 | X | 2.5 | 130 |
| 17 | SILK HOPE | 10 | X | 1.63 | 85 |
| 4 | BARNARD | 11 | X | 2.56 | 133 |

Weekday and Saturday Frequency improvements

Five routes require additional service hours in order to achieve the standard frequency of one bus every 30 minutes on weekdays and Saturdays. Tables 7-4 and 7-5 below displays the routes and additional service hours needed.

Table 7-4. Weekday Frequency Improvements

| Route No. | Route name | Rank | Frequency | Weekday Frequency | Net New Service Hours | Net New Annual Service Hours |
|-----------|------------------|------|-------------|-------------------|-----------------------|------------------------------|
| 3A | AUGUSTA AVE | 1 | 3.15 | X | 18.23 | 4,594 |
| 28 | WATERS | 2 | 3.40 | X | 14.8 | 3,730 |
| 27 | WATERS | 3 | 3.30 | X | 17.83 | 4,493 |
| 31 | SKIDAWAY/SANDFLY | 5 | 3.21 | X | 17.67 | 4,453 |
| 10 | EAST SAVANNAH | 7 | 3.45 | X | 17.12 | 4,314 |

Table 7-5. Saturday Frequency Improvements

| Route No. | Route name | Rank | Frequency | Saturday Frequency | Net New Service Hours | Net New Annual Service Hours |
|-----------|------------------|------|-----------|--------------------|-----------------------|------------------------------|
| 3A | AUGUSTA AVE | 1 | 3.15 | X | 17.85 | 928 |
| 28 | WATERS | 2 | 3.40 | X | 14.8 | 770 |
| 27 | WATERS | 3 | 3.30 | X | 17.83 | 927 |
| 31 | SKIDAWAY/SANDFLY | 5 | 3.21 | X | 17.42 | 906 |
| 10 | EAST SAVANNAH | 7 | 3.45 | X | 18.12 | 942 |

Service Delivery Improvements

Throughout the public involvement process, members of the public expressed concern over on-time performance which, in many cases can mean that more time is needed for operators to complete a trip. More time equates to more service hours. Six routes were identified for running time adjustments to improve on-time performance. The allowance is 10 minutes per hour times 18 hours, or 3.0 net new service hours. Table 7-6 below displays routes and hours needed to make running time adjustments.

Table 7-6. Service Delivery Improvements

| Route No. | Route name | Rank | Running Time Adjustments | Net New Service Hours | Net New Annual Service Hours |
|-----------|------------------|------|--------------------------|-----------------------|------------------------------|
| 3A | AUGUSTA AVE | 1 | X | 3.0 | 756 |
| 27 | WATERS | 3 | X | 3.0 | 756 |
| 31 | SKIDAWAY/SANDFLY | 5 | X | 3.0 | 756 |
| 10 | EAST SAVANNAH | 7 | X | 3.0 | 756 |
| 12 | HENRY | 9 | X | 3.0 | 756 |
| 17 | SILK HOPE | 10 | X | 3.0 | 756 |

New Services

There was significant agreement among stakeholders that there is a lack of east-west service in the network to facilitate transfers to the spine north-south route network and to facilitate travel for customers who need to travel in east-west patterns. A total of four new routes in the existing network are recommended to make better grid service for more access and choice trip planning. While Savannah State University will be used as an anchor in the east central service area, there was no corresponding anchor in the west central

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service area. Therefore, the following streets were identified for bus circulation on the west side: Victory Drive, Hopkins, 52nd Street and Montgomery. In addition, a fifth route is recommended to serve as an express route between Downtown Savannah and the Savannah-Hilton Head International Airport. Below is a discussion of new routes to be incorporated into the network.

New Route A – 37th Street

As designed, this route would terminate at Hopkins and 52nd Street to the west, traveling north on Hopkins to Victory Drive, north on Montgomery to east on 37th Street to Bee Road, then east on Victory Drive to Skidaway, and south into the Savannah State University campus. Figure 7-2 below displays the routing for the New Route A – 37th Street.

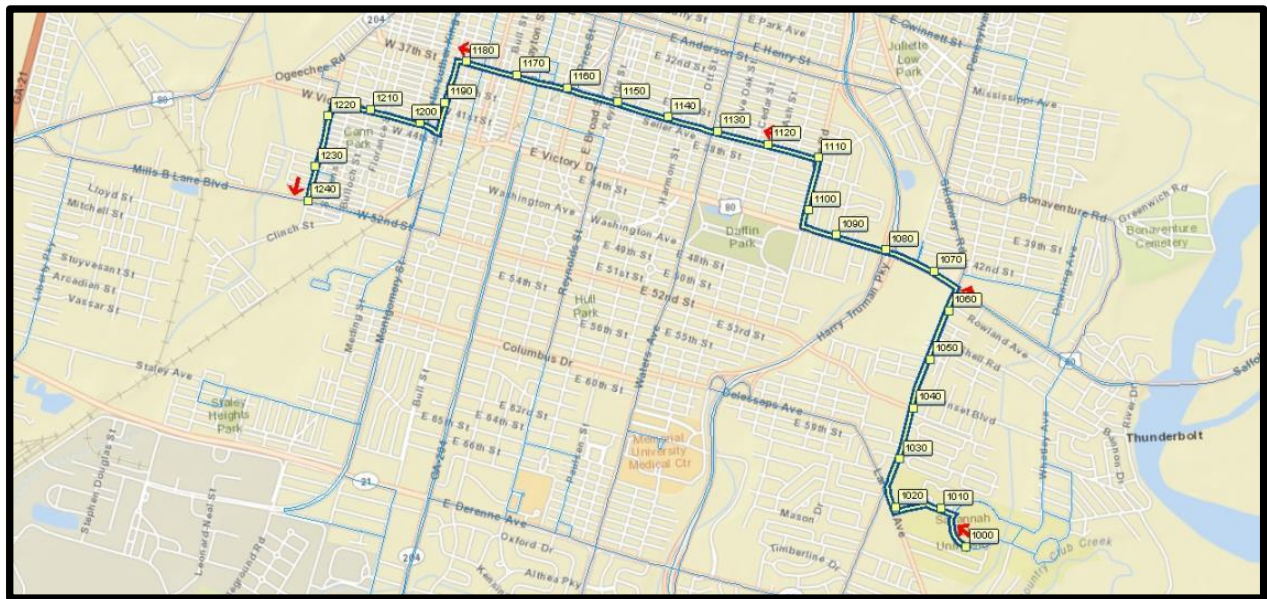


Figure 7-2. New Route A – 37th Street

New Route B – Victory Drive

This route would terminate at Hopkins and 52nd Street to the west, traveling north to Victory Drive and then east to Skidaway and south to Savannah State University. Figure 7-3 displays the routing for New Route B – Victory Drive.

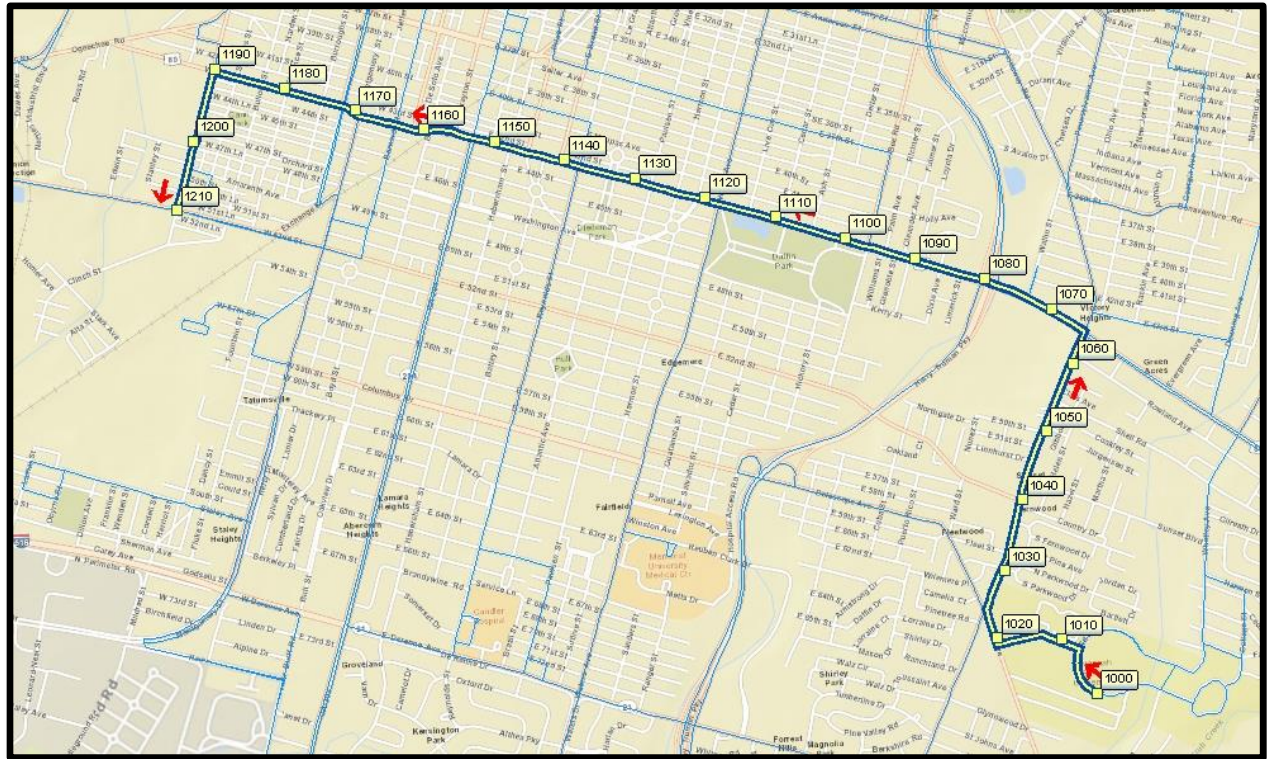


Figure 7-3. New Route B – Victory Drive

New Route C – 59th Street

This route will terminate to the west at Hopkins and 52nd Street, north to Victory Drive, then south to 59th Street/Columbus, east to a slight north jog on Waters to Delesseps and then east to the Savannah State University Campus. Figure 7-4 displays the routing for New Route C – 59th Street.

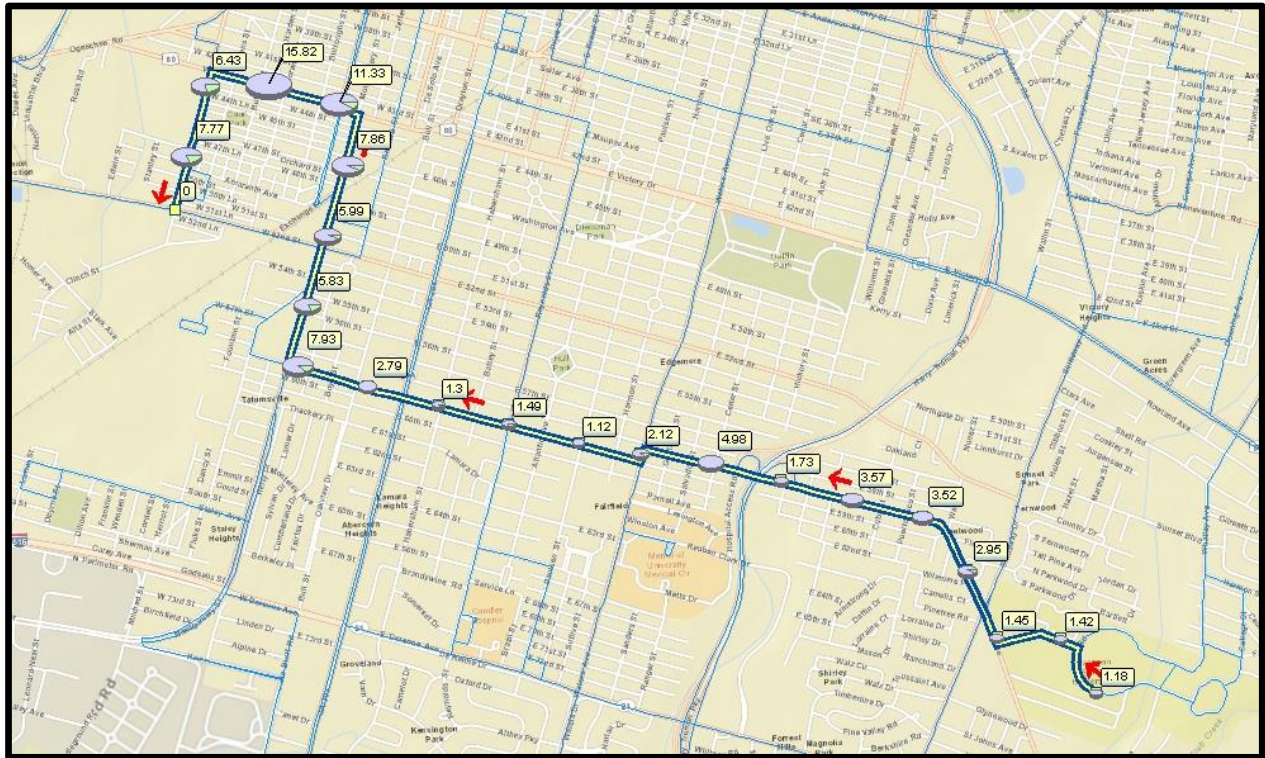


Figure 7-4. New Route C - 59th Street

New Route D – Delesseps

In the southern service area, the grid network is lost due to the military base. Therefore, in order to achieve east-west connectivity, the Delesseps route will terminate at Oglethorpe Mall to the south, north on Abercorn to east on Delesseps, then north on Skidaway to the Savannah State University campus. Figure 7-5 below displays the routing for the New Route D – Delesseps.

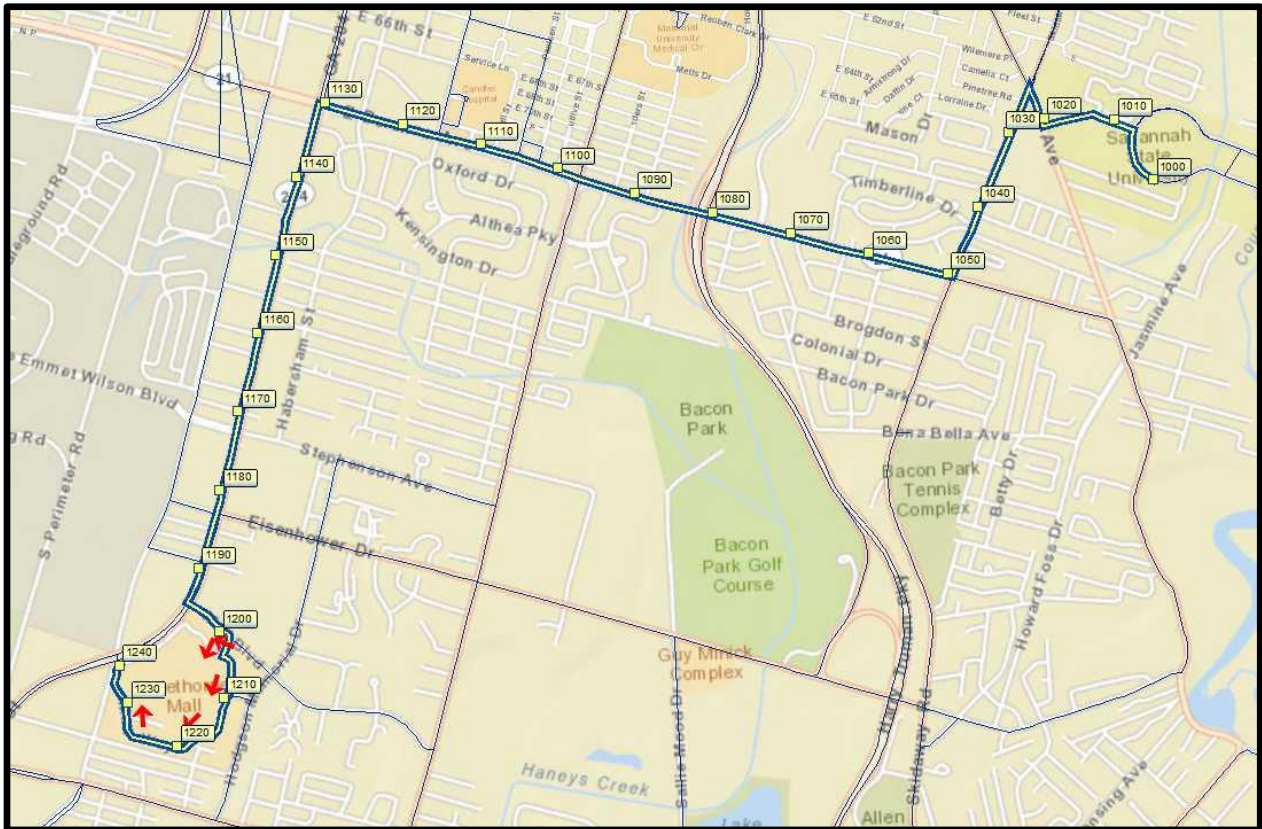


Figure 7-5. New Route D – Delesseps

New Route E – Downtown Savannah – Savannah-Hilton Head Airport

This route will terminate at Savannah-Hilton Head International Airport to the north and west, travel south on I-95 to I-16 East exiting at Montgomery Street and serving the new Downtown Intermodal Center. Figure 7-6 displays the routing for the New Route E – Downtown Savannah – Savannah-Hilton Head International Airport.

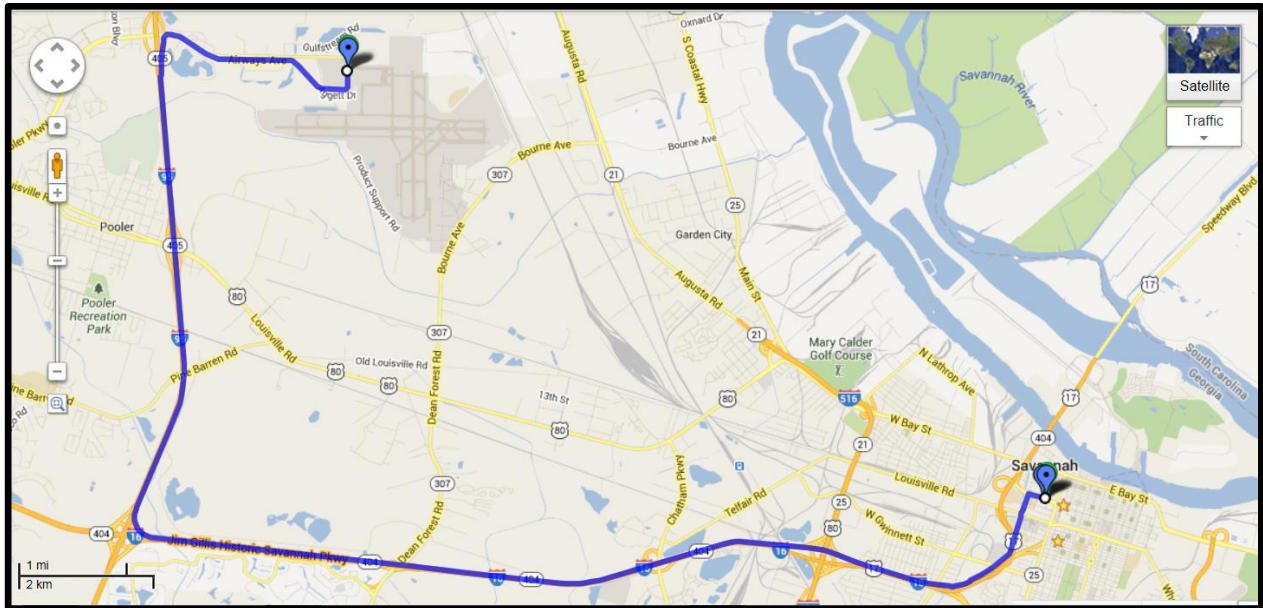


Figure 7-6. New Route E – Downtown Savannah – Savannah-Hilton Head Airport

Analysis of Service Improvements

As part of the analysis of service improvement alternatives in this TDP, CUTR utilized a modeling tool called the, "Transit Boardings Estimation Simulation Tool," or T-BEST. T-BEST provides a forecast of ridership into the future based on socio-economic data and growth rates (see Appendix E). For Savannah, T-BEST has derived its forecasts from both local and national data sources. TBEST utilizes this data within the model stream to estimate ridership at the individual stop-level. Below is a list of source data utilized in the model:

- Network – the T-BEST network was derived from the 2012 CAT GTFS (General Transit Feed Specification) files which are submitted for input to the Google Transit Trip Planner
- Socio-Demographic – Census 2010 geography with supporting SF1 demographics from the Census American Community Survey (ACS) (2006-2010) 5-Year Estimates
- Employment – Local 2012 zonal employment dataset obtained from the Savannah MPO
- Growth Rates – a compounded annual growth rate of 2.4% was applied to population and employment data
- 2012 Observed Ridership formed the basis for Model Validation obtained from CAT

T-BEST not only forms the foundation for forecasting future year ridership for the existing system, it also allows testing of service improvement scenarios and provides a forecast for what ridership will be if those improvements are made. In addition, T-BEST can display socio-demographic data at the route level for any new routes that do not currently exist. For the TDP, CUTR ran 10 scenarios, as follows:

1. Grow system to 2019 with no service improvements (baseline forecast).
2. Grow system to 2019 and make weekday frequency improvements on 5 routes.
3. Grow system to 2019 and make Saturday frequency improvements on 5 routes.
4. Grow system to 2019 and make Saturday span of service improvements.
5. Grow system to 2019 and make Sunday span of service improvements.
6. All weekday, Saturday, and Sunday improvements (maximum forecast)
7. New route – 37th Street.
8. New Route – Victory Drive.
9. New Route – 59th Street/Columbus.
10. New Route – SSU to Oglethorpe via Delesseps

Below is a discussion of the model results. It must be noted that each scenario is unique in its forecast and cannot be combined with other scenarios to compound into a new result.

This is done in Scenario 10 when all improvements are placed together in one scenario and a forecast is given.

Grow System to 2019 with No Service Improvements

The base year validated model ridership for CAT in 2012 is 3,367,777. Figure 7-7 below shows that with no service improvements beyond what is operated today, ridership would increase by 936,732 annual trips to 4,304,509, a 27.8 percent increase over 2012.

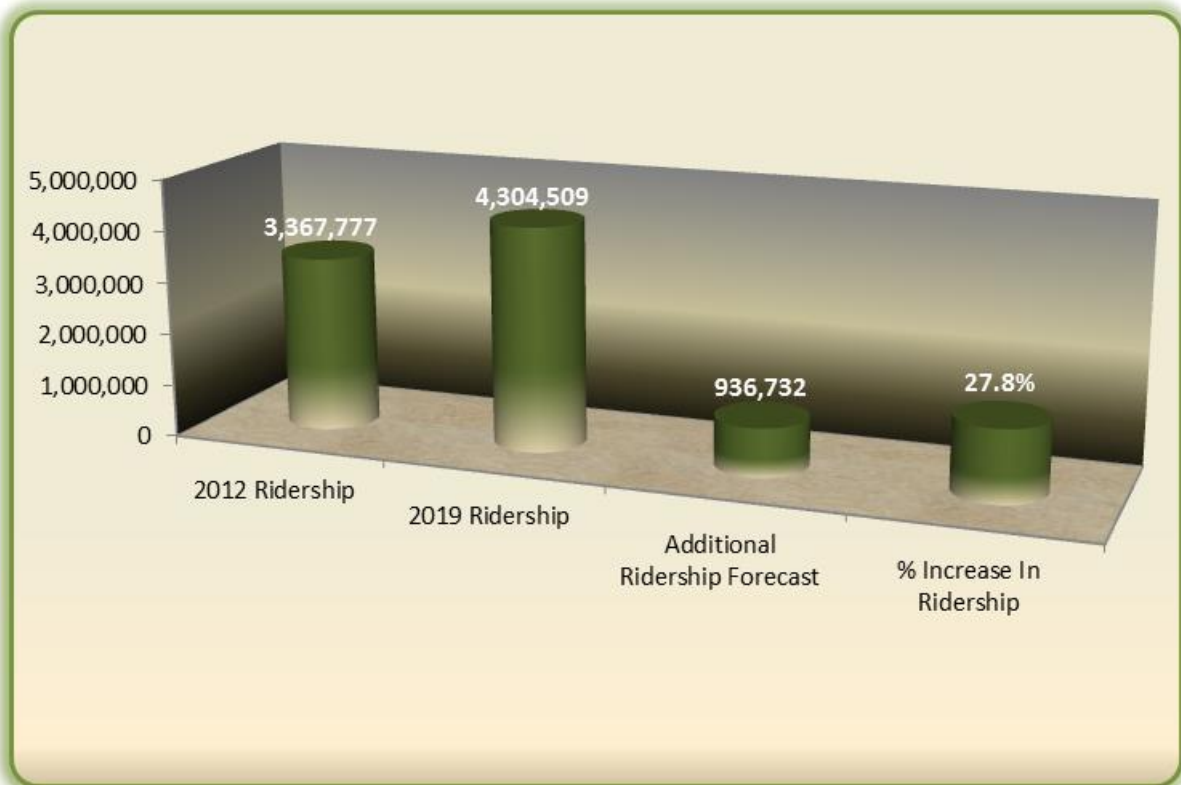


Figure 7-7. Model Results – Grow System to 2019, No Service Improvements

Grow System to 2019, make Weekday Frequency Improvements

Whereas the total 2012 validated model ridership is 3,367,777, the weekday portion of that total is 2,633,130. By making frequency improvements on 5 of the top performing routes (one bus every 30 minutes), ridership would grow by 972,410 for a 2019 total of 4,304,509, a 36.9 percent increase over current weekday ridership. Figure 7-8 displays the results of this scenario.

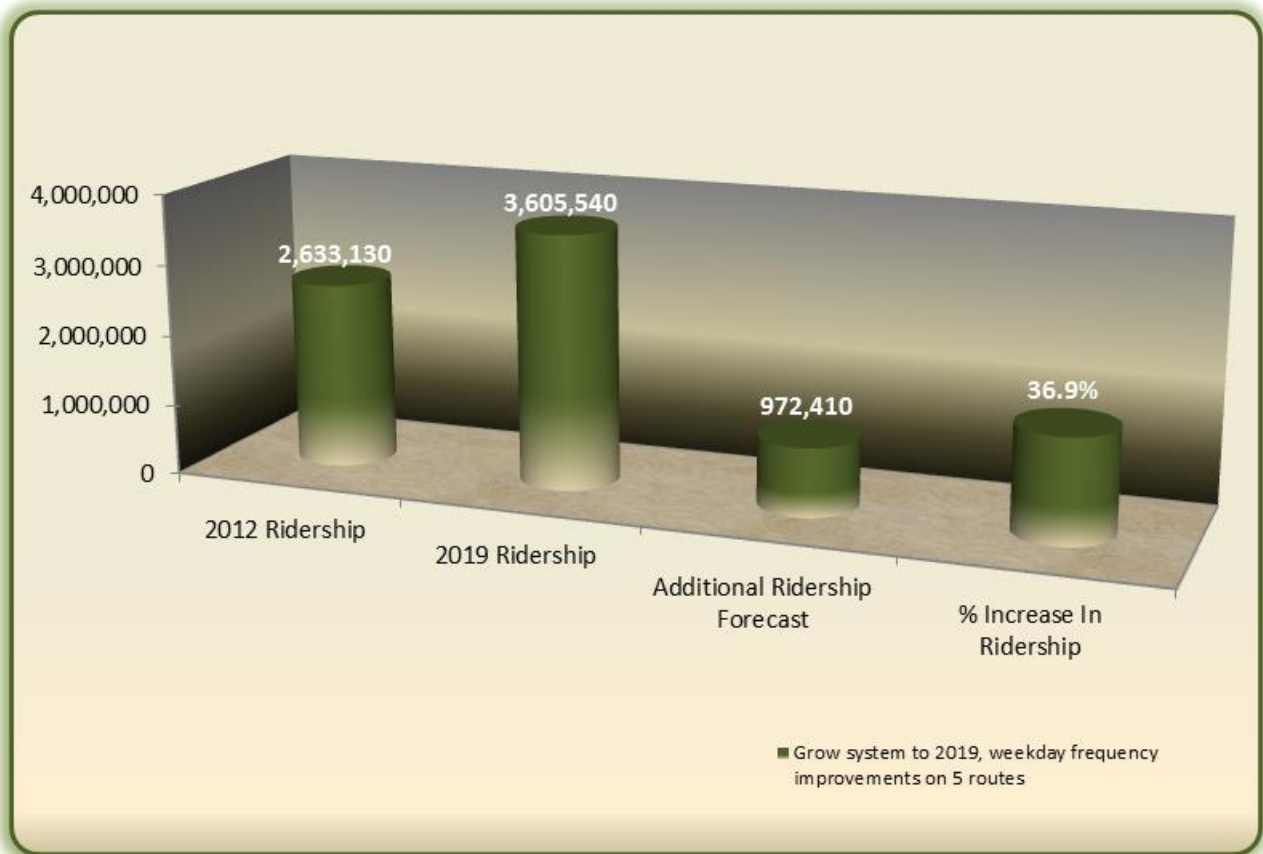


Figure 7-8. Model Results – Grow System to 2019 – Make Frequency Improvements on 5 Routes

Grow System to 2019, make Saturday Frequency Improvements

The validated model ridership for Saturday ridership in 2012 is 532,422. By making frequency improvements to the top 5 performing routes, ridership would increase by 124,533 to 656,966, a 23.4 percent increase over 2012. Figure 7-9 displays the results of this scenario.

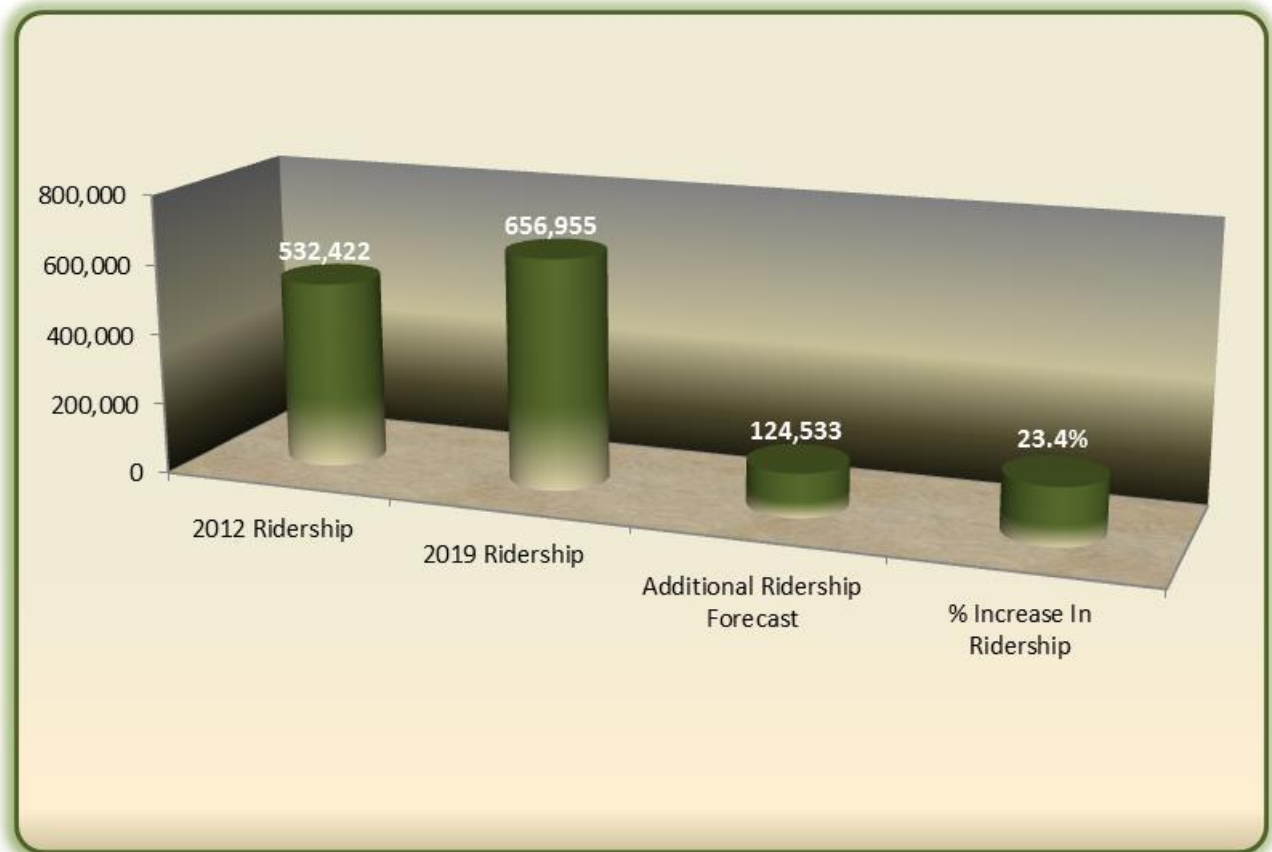


Figure 7-9. Grow System to 2019, Make Saturday Frequency Improvements on 5 Routes

Grow System to 2019, Make Saturday Span of Service Improvements

In this scenario, the base year Saturday ridership of 532,422 would increase by 191,046 to 723,468, a 35.9 percent increase over current Saturday ridership. Figure 7-10 below displays the results of this scenario.

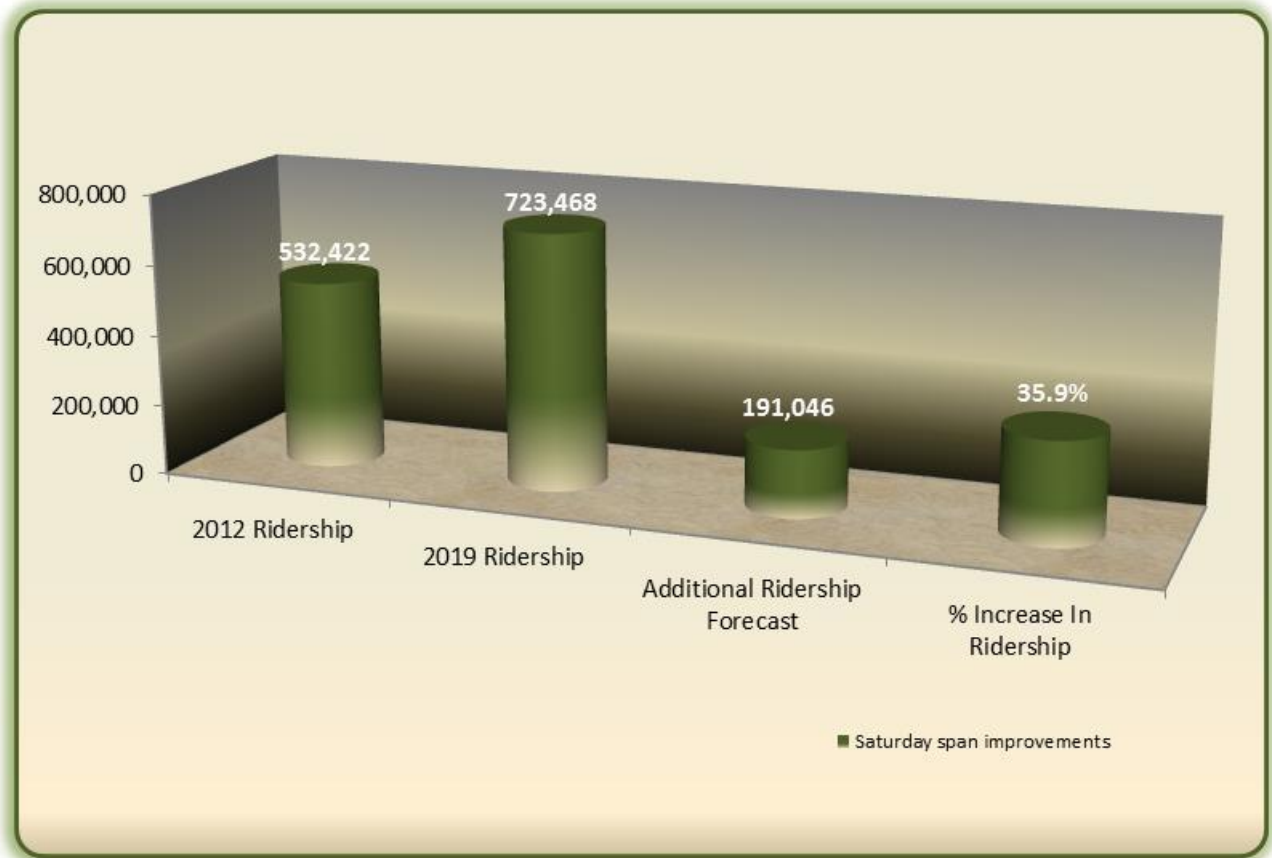


Figure 7-10. Grow System to 2019, Make Saturday Span of Service Improvements

Grow System to 2019, Make Sunday Span of Service Improvements

The base year model ridership for Sunday is 150,800. This scenario shows that by making span improvements on Sunday, from 7:00 a.m. to 9:00 p.m., ridership would increase by 110,800 to 261,600, a 73.5 percent increase over 2012. Figure 7-11 displays the results of this scenario.

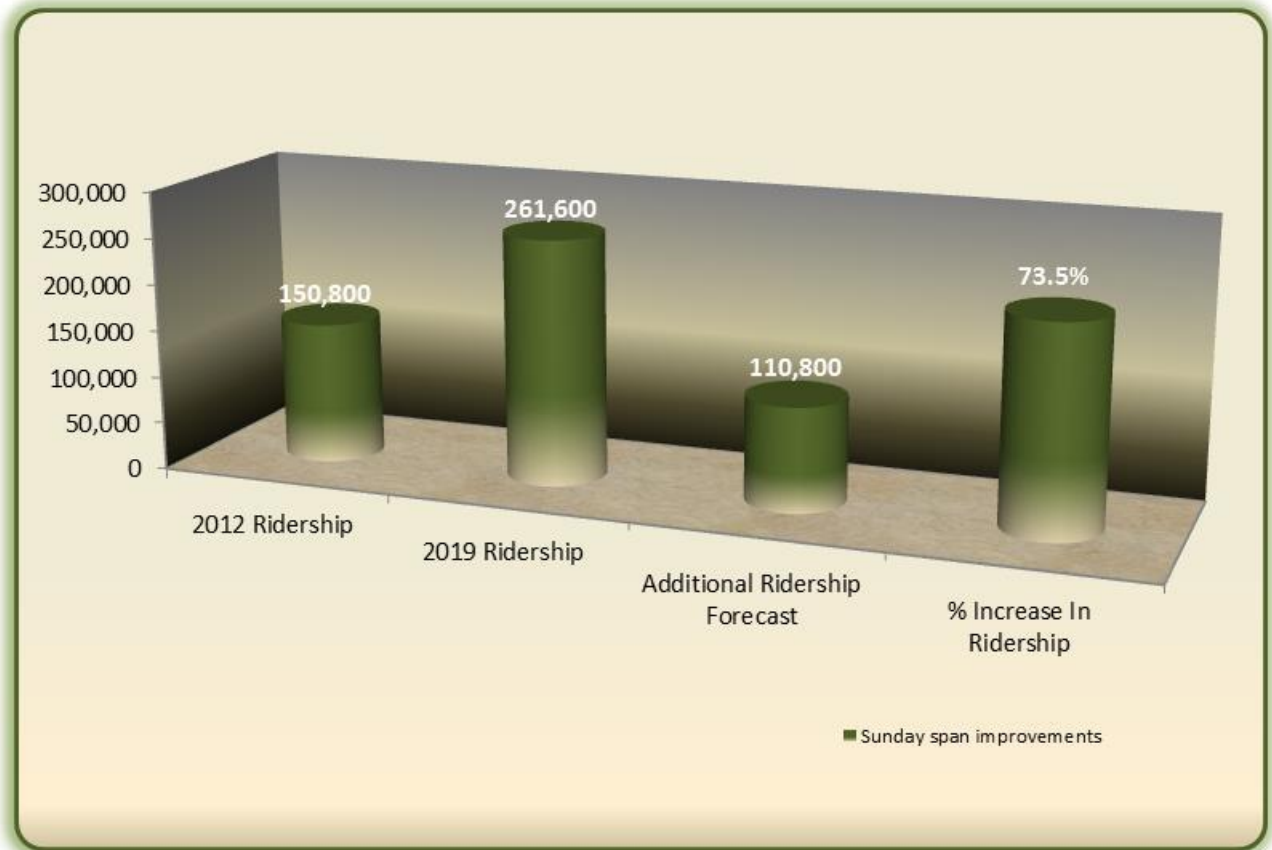


Figure 7-11. Grow System to 2019, Make Sunday Span of Service Improvements

Grow System to 2019, Make all Weekday, Saturday and Sunday Improvements

If all frequency improvements were made to weekday, Saturday and Sunday service, T-BEST forecasts that ridership would increase to 5,037,733 in 2019, which is 1,669,956 additional riders and a 50 percent increase over 2012. Figure 7-12 displays the results for this scenario.

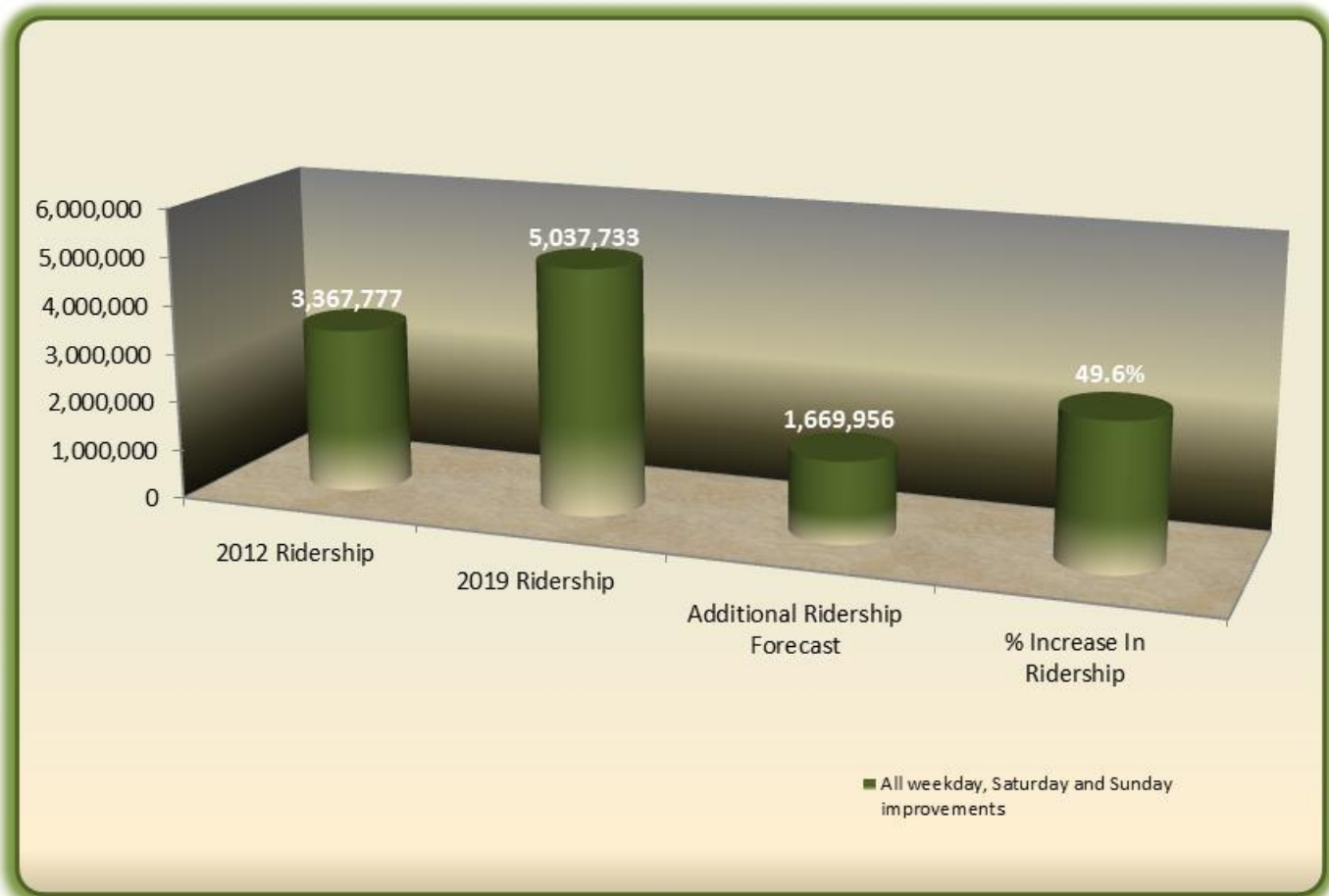


Figure 7-12. Grow System to 2019, Make All Weekday, Saturday and Sunday Improvements

New Routes

These scenarios generated an annual ridership in 2019 for the four new routes individually to be implemented in the existing network (the Airport Express route was not developed as of the time the T-BEST model was run and is not included in this analysis). Figure 7-13 below displays the annual ridership from the T-BEST Model.

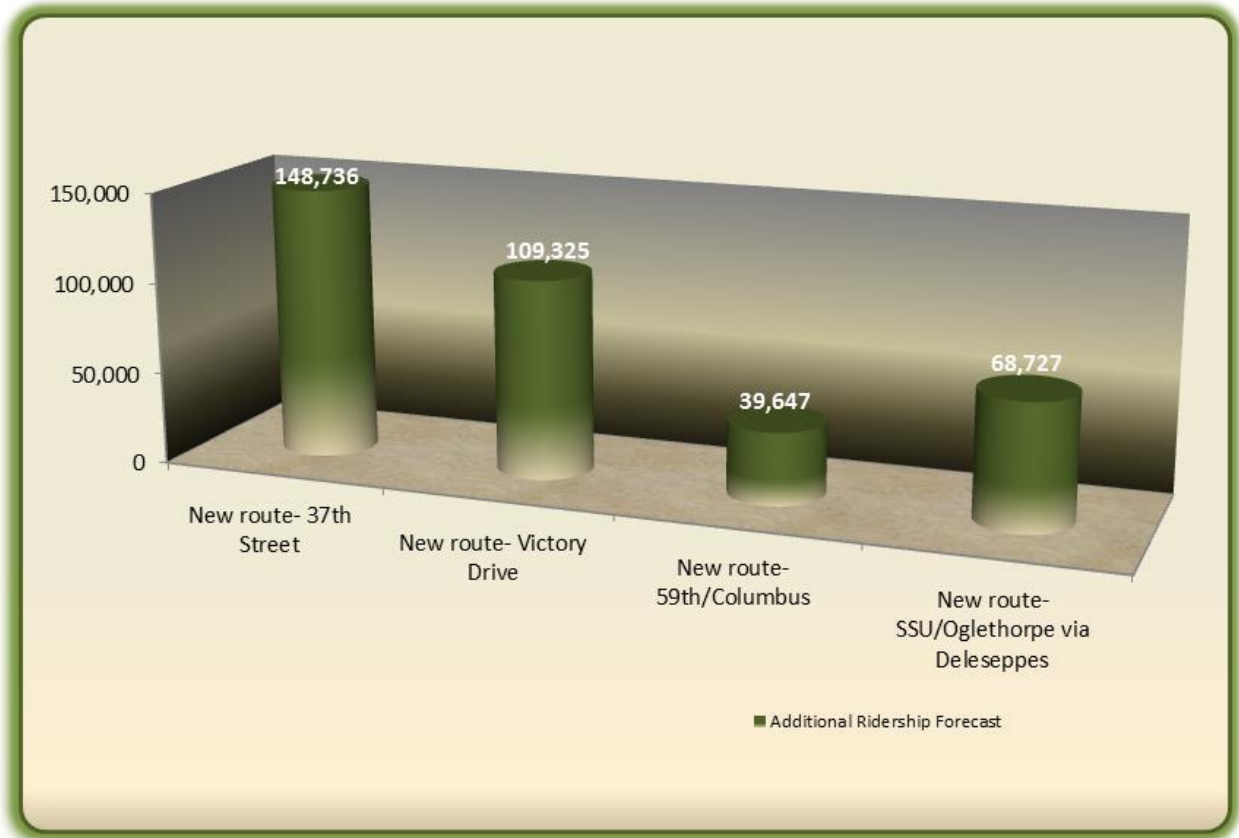


Figure 7-13. Forecast Ridership for New Route

Demographic Analysis – New Route - 37th Street

Demographic data with ¼ mile of the new routes were compiled to form an overall profile depicted in Figure 7-14 below. The graphic displays data for ethnicity, age, gender, working population, foreign-born population, population in multi-family units, and poverty. A total of 29 percent of residents within a quarter mile of this route live in poverty, 41 percent work, and 19 percent are under the age of 18.

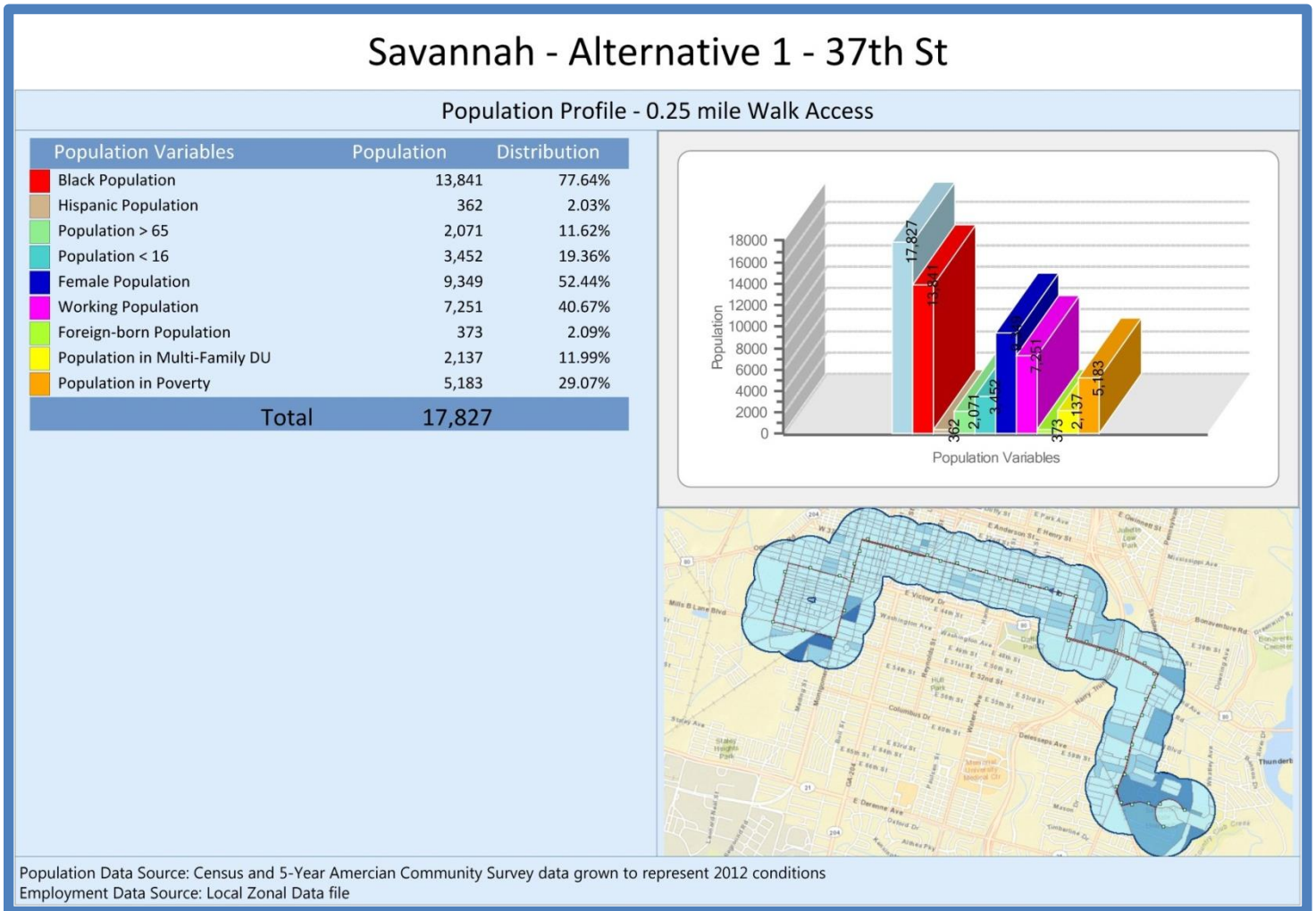


Figure 7-14. Overall Population Profile – New Route – 37th Street

Employees by Employment Category

Figure 7-15 below shows that of the 6,140 employees within a quarter mile of this route, 42 percent are employed in the commercial sector and 58 percent in the service sector.

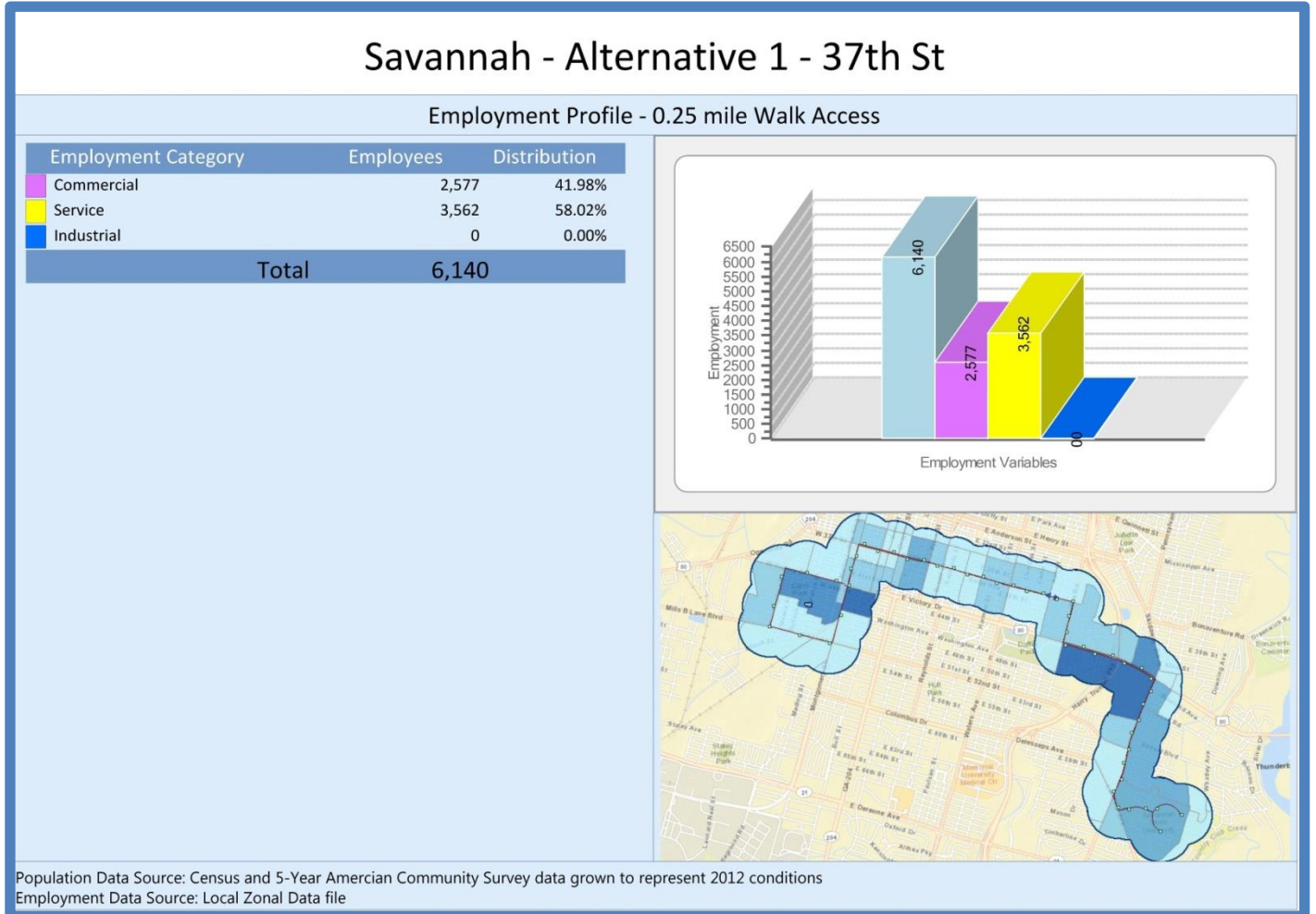


Figure 7-15. Employee by Employment Category – New Route – 37th Street

Per Capita Income

Figure 7-16 below shows that 96 percent of population within a quarter mile of this route have per capita incomes ranging between \$7,742 and \$24,908.

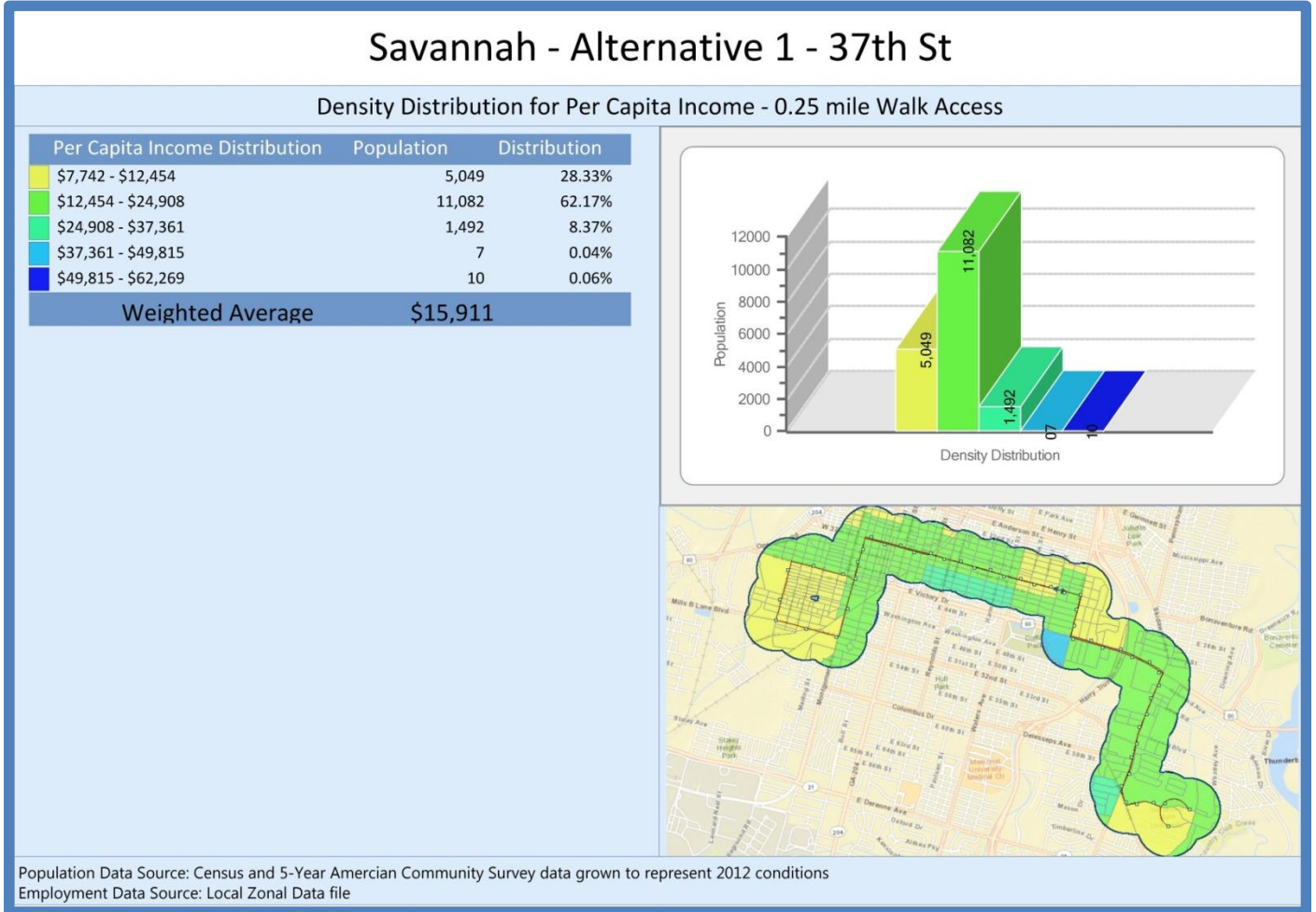


Figure 7-16. Per Capita Income – New Route – 37th Street

Demographic Analysis – New Route – Victory Drive

The overall demographic profile for the Victory Drive route shows that 24 percent of the population within a quarter mile live in poverty, 42 percent work, 52 percent are female and 20 percent are under the age of 16. Figure 7-17 below displays the overall demographic profile for this route.

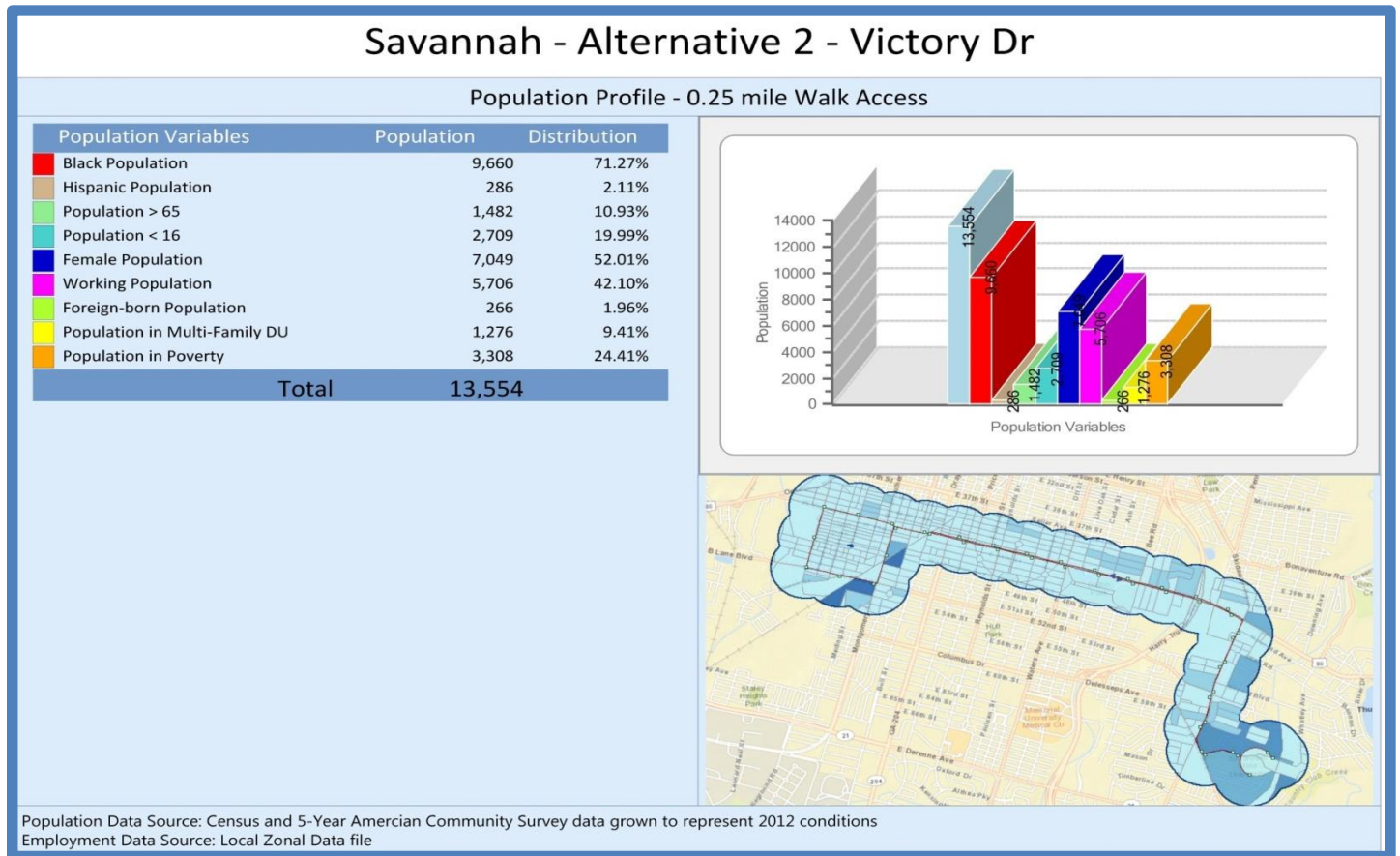


Figure 7-17. Overall Demographic Profile – New Route – Victory Drive

Employees by Employment Category

Figure 7-18 below shows that of the employees within a quarter mile of the Victory Drive route, 57 percent are employed in the service sector and 43 percent are employed in the commercial sector.

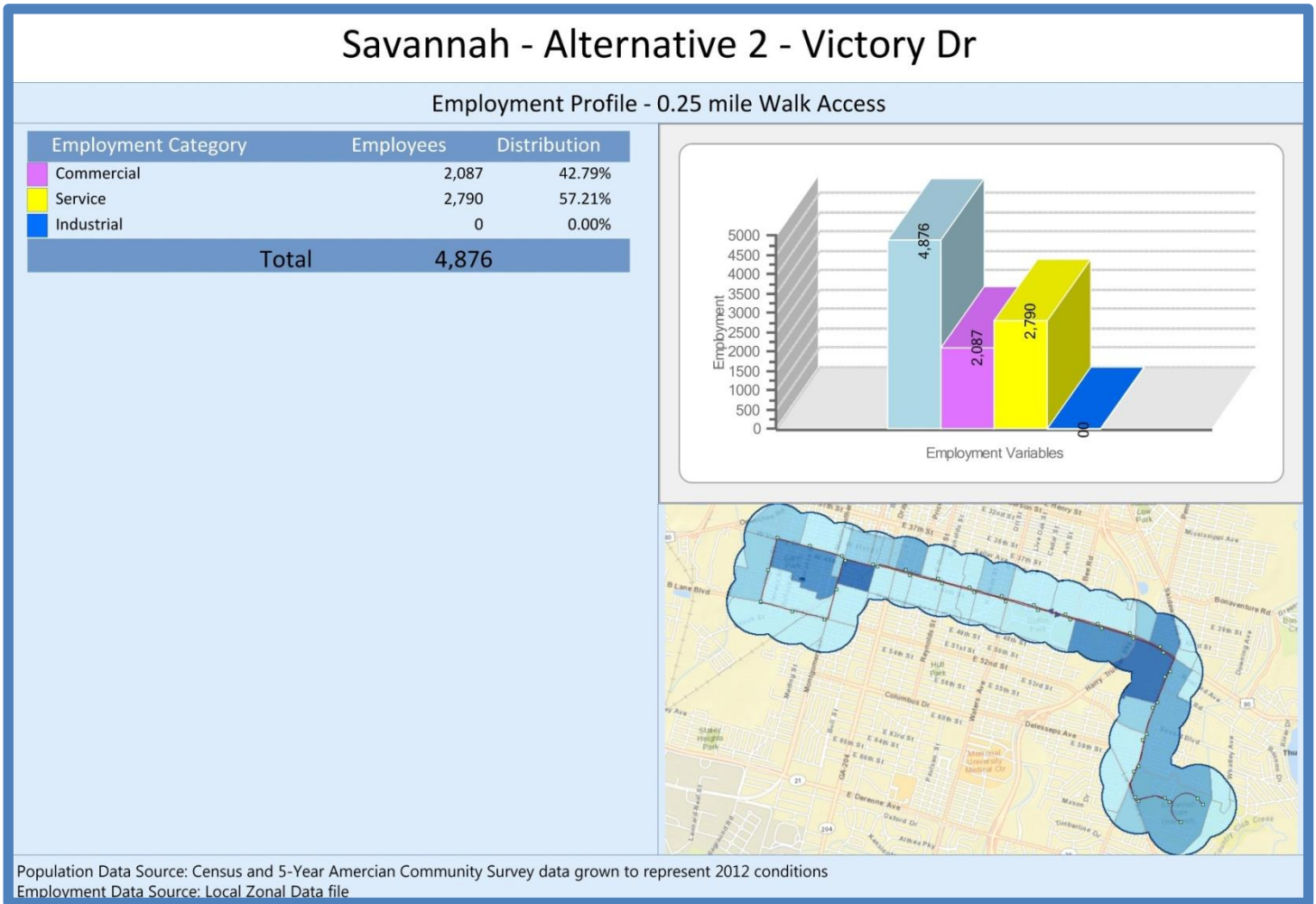


Figure 7-18. Employees by Employment Category – New Route – Victory Drive

Per Capita Income

Figure 7-19 below shows that 79 percent of the population within a quarter mile of the Victory Drive route have per capita income ranging from \$7,742 to \$24,908.

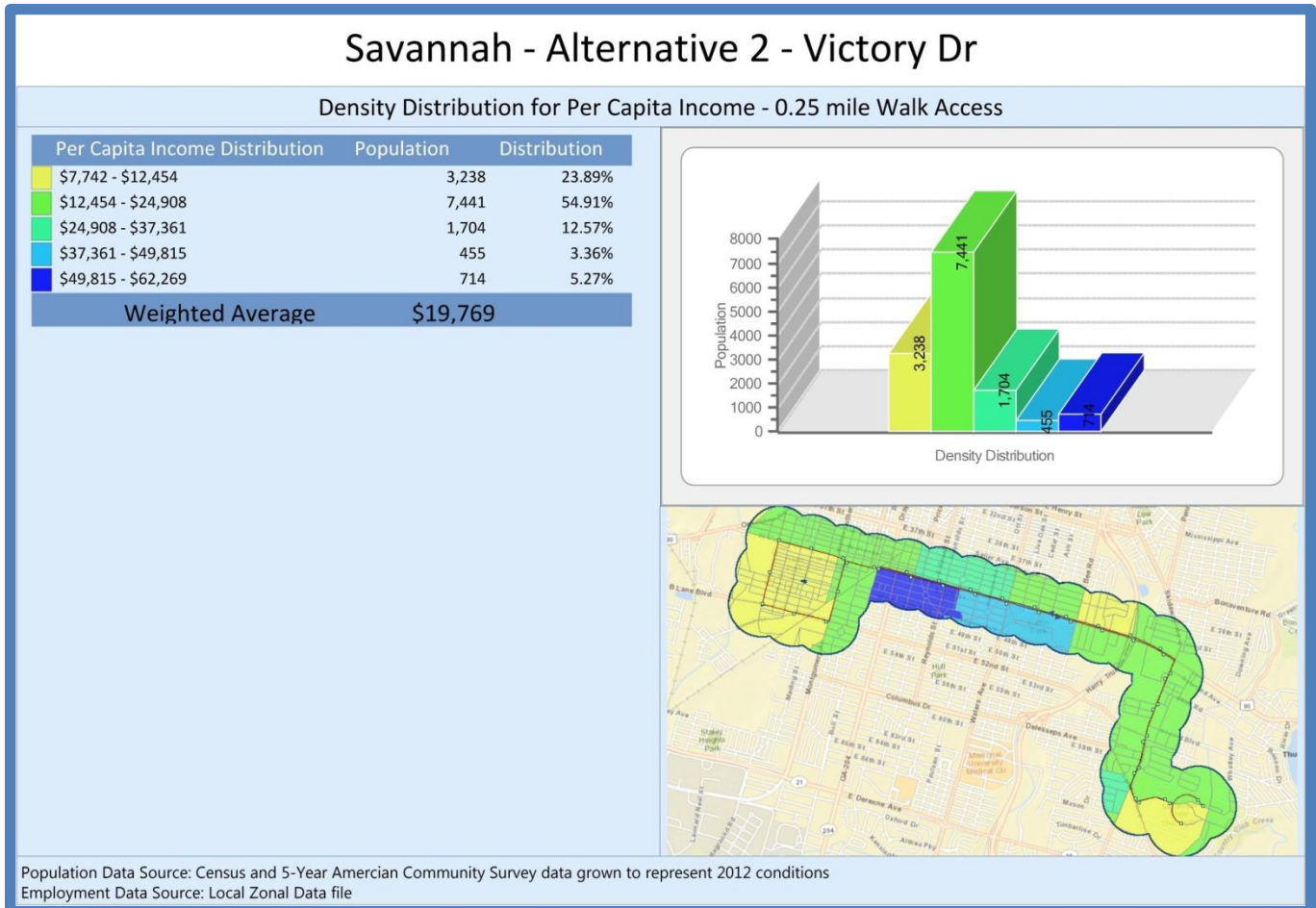


Figure 7-19. Per Capita Income – New Route – Victory Drive

Demographic Analysis – New Route – 59th Street/Columbus

The overall demographic profile for the 59th Street route shows that 22 percent live in poverty, 43 percent are employed, 53 percent are female and 21 percent are under the age of 18. Figure 7-20 below displays the overall population profile.

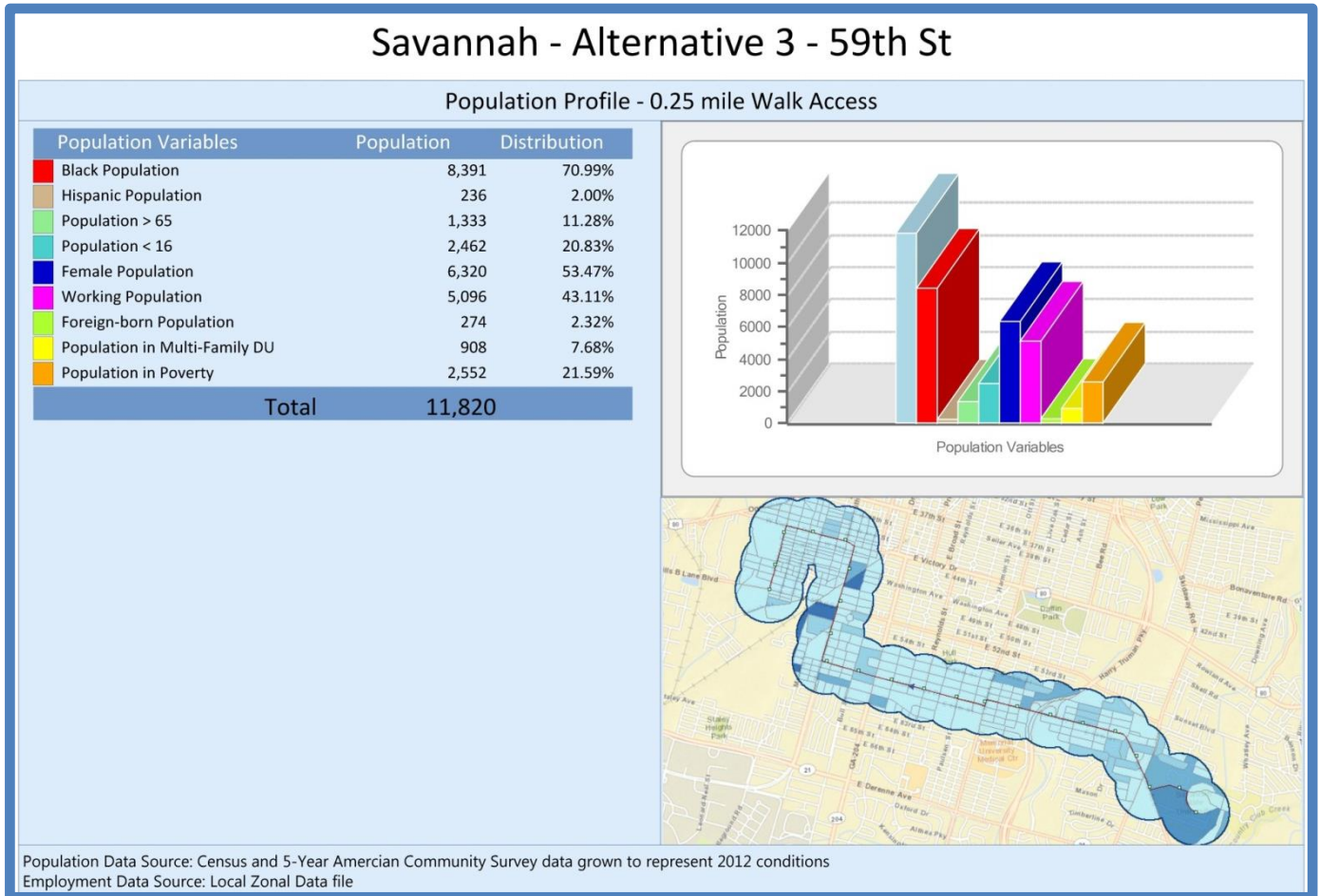


Figure 7-20. Overall Population Profile – New Route – 53th Street/Columbus

Employees by Employment Category

Figure 7-21 below shows that 69 percent of employees within a quarter mile of this route are employed in the service sector while 31 percent are employed in the commercial sector.

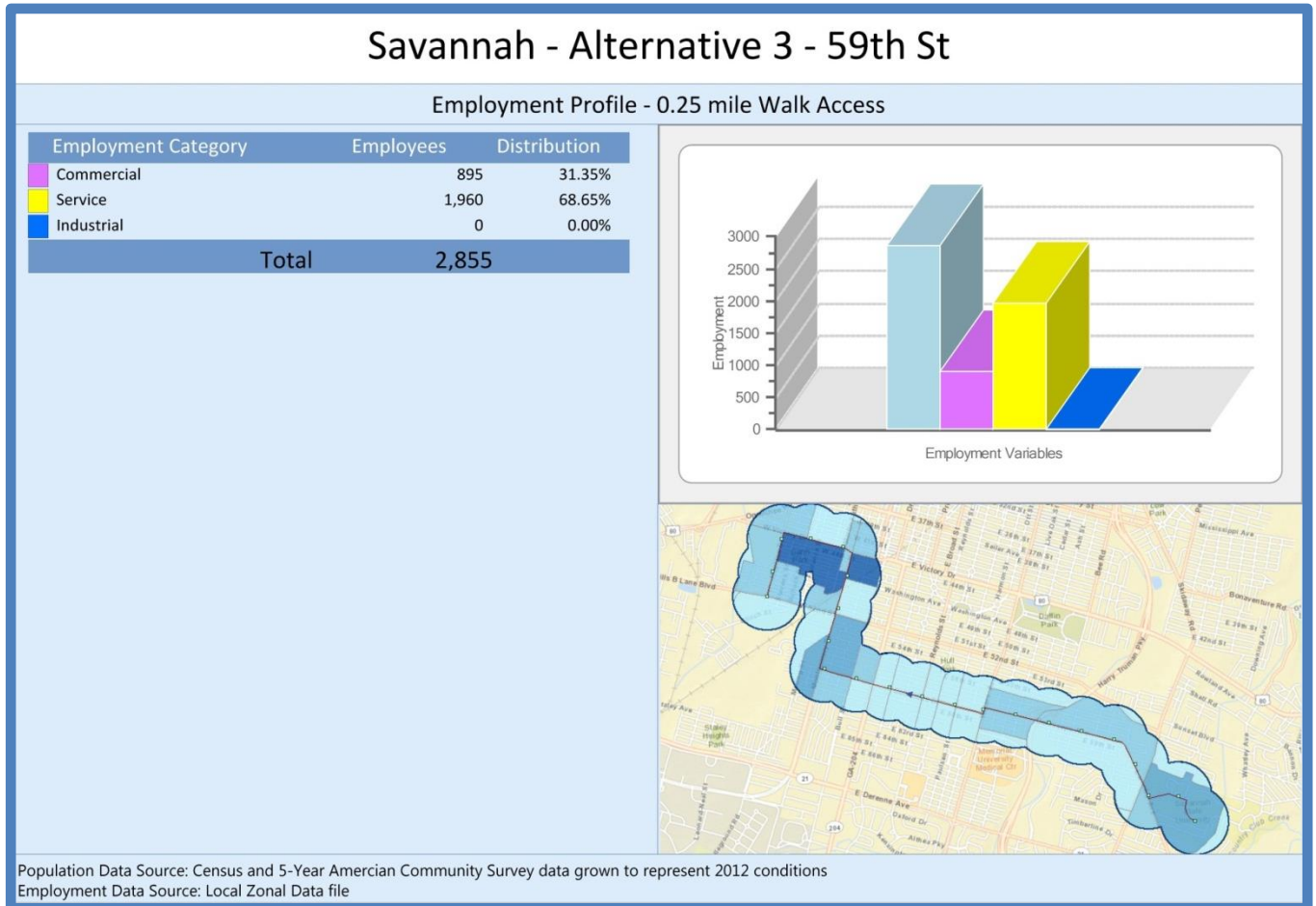


Figure 7-21. Employees by Employment Category – New Route – 59th Street/Columbus

Per Capita Income

Figure 7-22 below shows that of the total population within a quarter mile of the 59th Street/Columbus route, 84 percent have a per capita income ranging between \$7,742 and \$24,908.

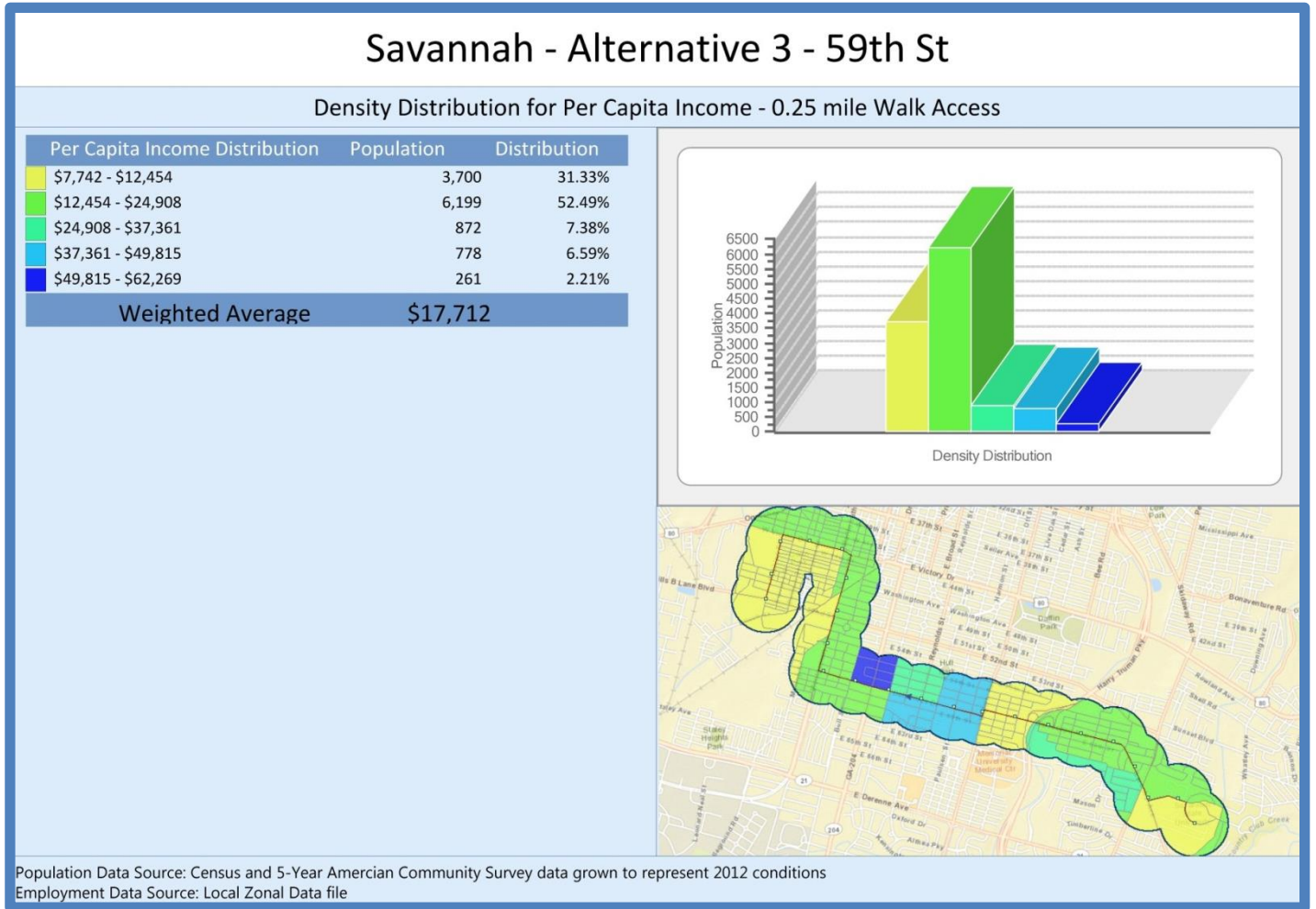


Figure 7-22. Per Capita Income – New Route – 59th Street/Columbus

Demographic Analysis – New Route – SSU to Oglethorpe Mall via Delesseps

The overall population profile within a quarter mile of this route shows that 15 percent live in poverty, 42 percent are employed, 53 percent are women, and 19 percent are under the age of 16. Figure 7-23 displays the overall population profile for this route.

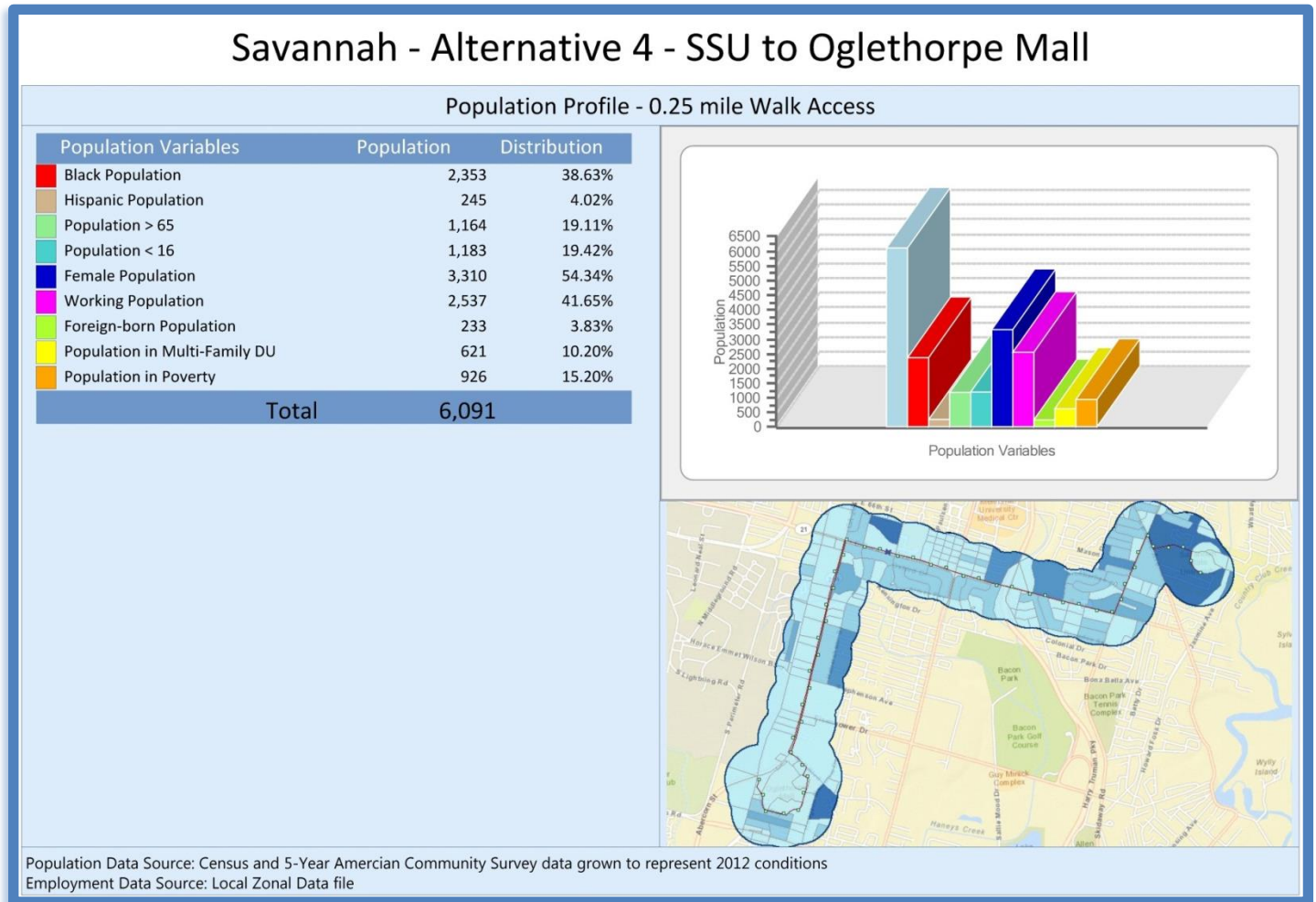


Figure 7-23. Overall Population Profile – New Route – SSU to Oglethorpe

Employees by Employment Category

Figure 7-24 below shows that of the employees within a quarter mile of this route, 60 percent are employed in the service sector and 40 percent are employed in the commercial sector.

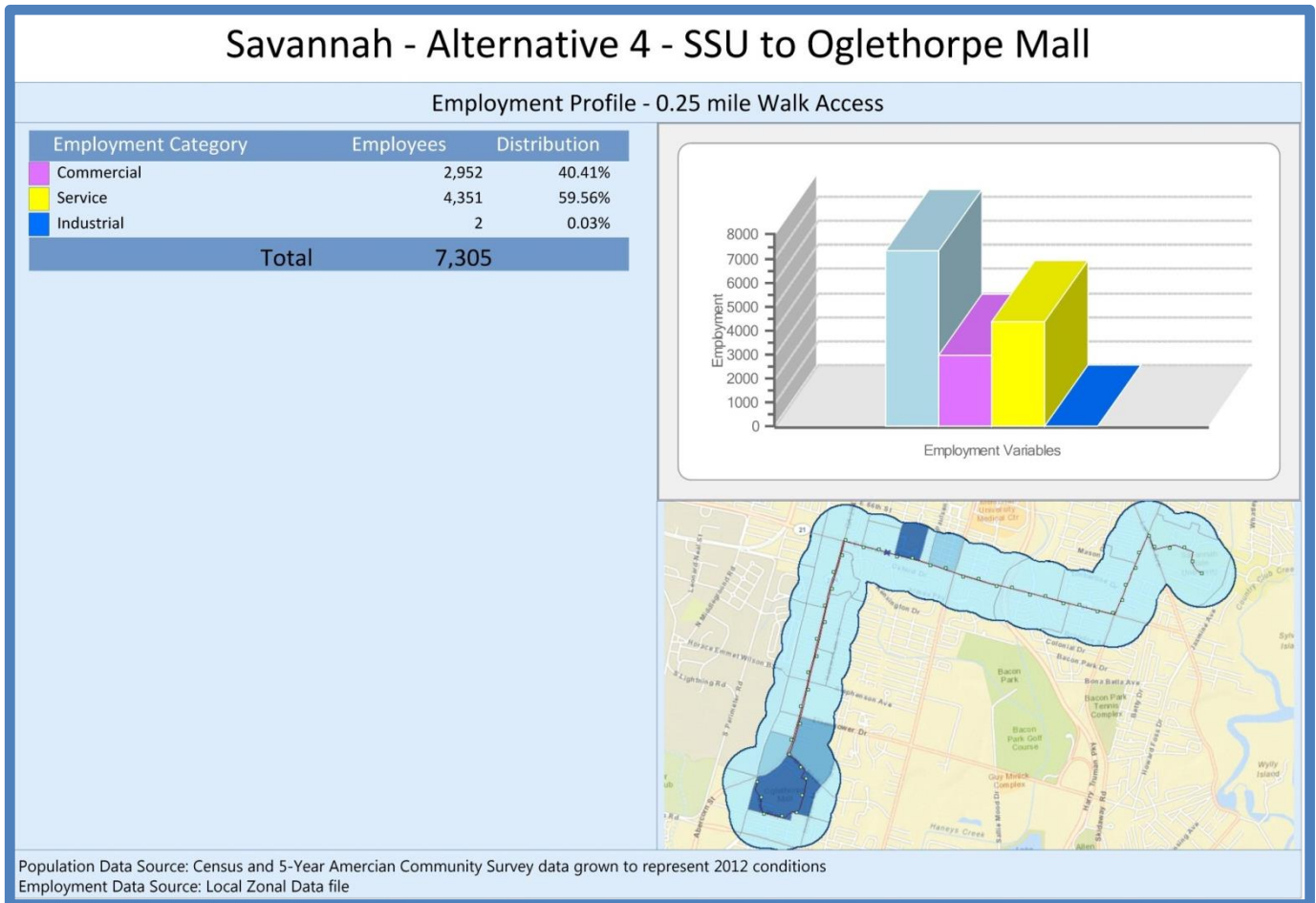


Figure 7-24. Employees by Employment Category – New Route – SSU to Oglethorpe Mall

Per Capita Income

Figure 7-25 below shows that 74 percent of the population with a quarter mile of this route have a per capita income ranging from \$11,081 to \$31,927.

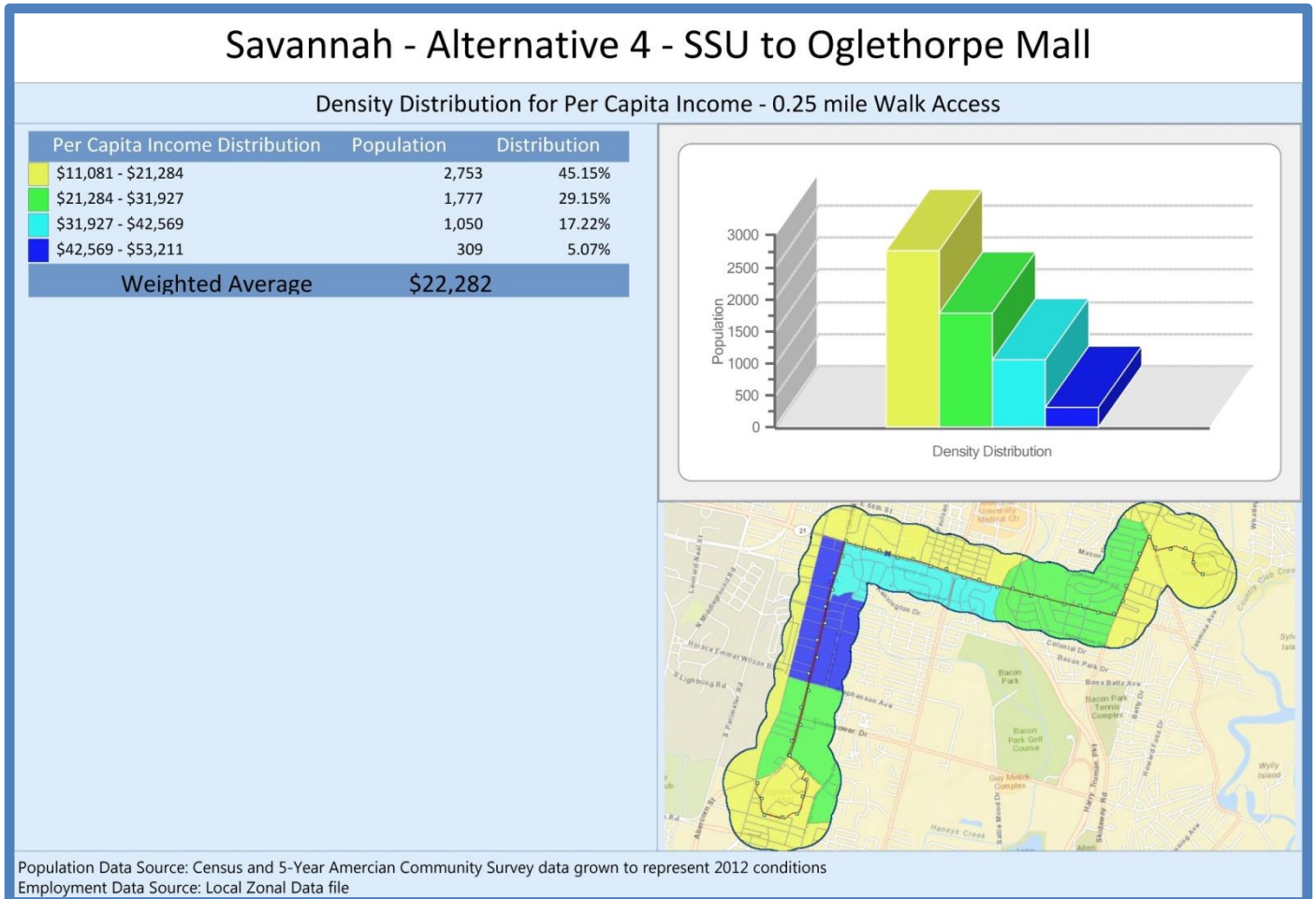


Figure 7-25. Per Capita Income – New Route – SSU to Oglethorpe Mall

Zonal Services

During the public involvement process, many customers expressed concern about walk distances to bus stops. Zonal services go a long way in addressing those concerns by providing a smaller vehicle that can pick customers up curbside at their home and deliver them to any one of the following: a major activity center in the zone to connect to the regional system or to any destination within the zone. Customers can make advanced reservations (usually by calling a call center), and in real time (usually by calling the operator directly). Reservations made in real time sometimes require that the operator negotiate the pick-up time with the customer if there are other customers who made advanced reservations. Zonal service can also accept walk up customers arriving at the activity center by bus to get home or any other destination within the zone.

For purposes of this TDP, CUTR and CAT staff developed five zones in the service area. It is anticipated that these services will operate 14 hours per day from 6:00 a.m. to 8:00 p.m.

West Airport

Zonal Service 1 - Savannah/Hilton Head International Airport West

This area is currently served by CAT Route 2 and serves the Savannah/Hilton Head International Airport. Within a short distance north of the airport is Georgia Tech Savannah as well as industrial and manufacturing complexes along the river. Residential areas of Bloomingdale and Pooler are west southwest of the airport along U.S. Highway 80. The boundaries of this zone are Jimmy DeLoach Parkway to the north, the freight train line and Hwy 80 to the west and south, and S.R. 21 to the east. Figure 7-26 below shows the boundaries of this zone in lavender.

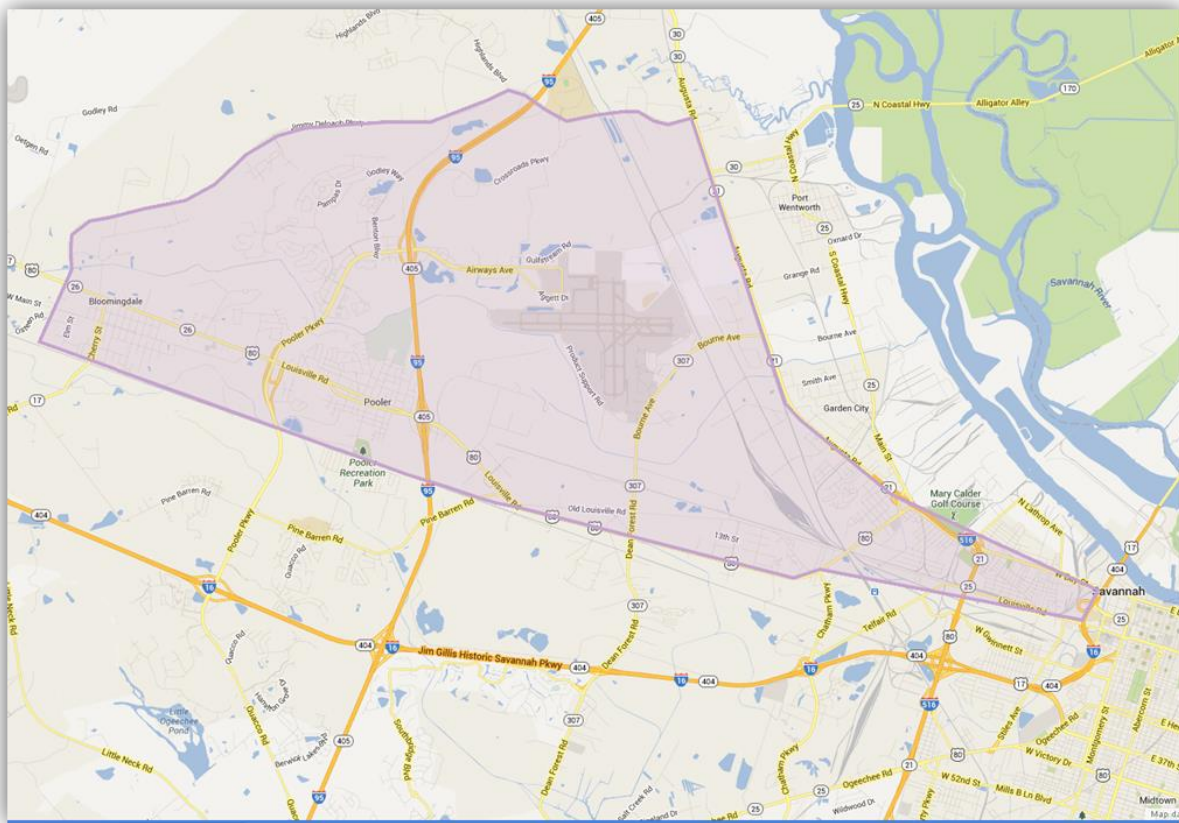


Figure 7-26. Zonal Service 1 – Savannah/Hilton Head International Airport West

Montgomery/Victory Southwest

Zonal Service 2 - Montgomery/Victory Southwest

This area is located just south of the downtown core and is currently served by CAT fixed Routes 4, 11, 12, 14, 17, 24, 25, 27, 28, 31, and 114. This is a historic district made up of residential neighborhoods, Savannah College of Arts and Design (SCAD) facilities, and Forsyth Park. The boundaries for this zone are Park Ave. to the south, MLK to the west, Waters Ave. to the east, and W. Liberty St. to the north. Figure 7-27 shows the boundaries of this zone in green.

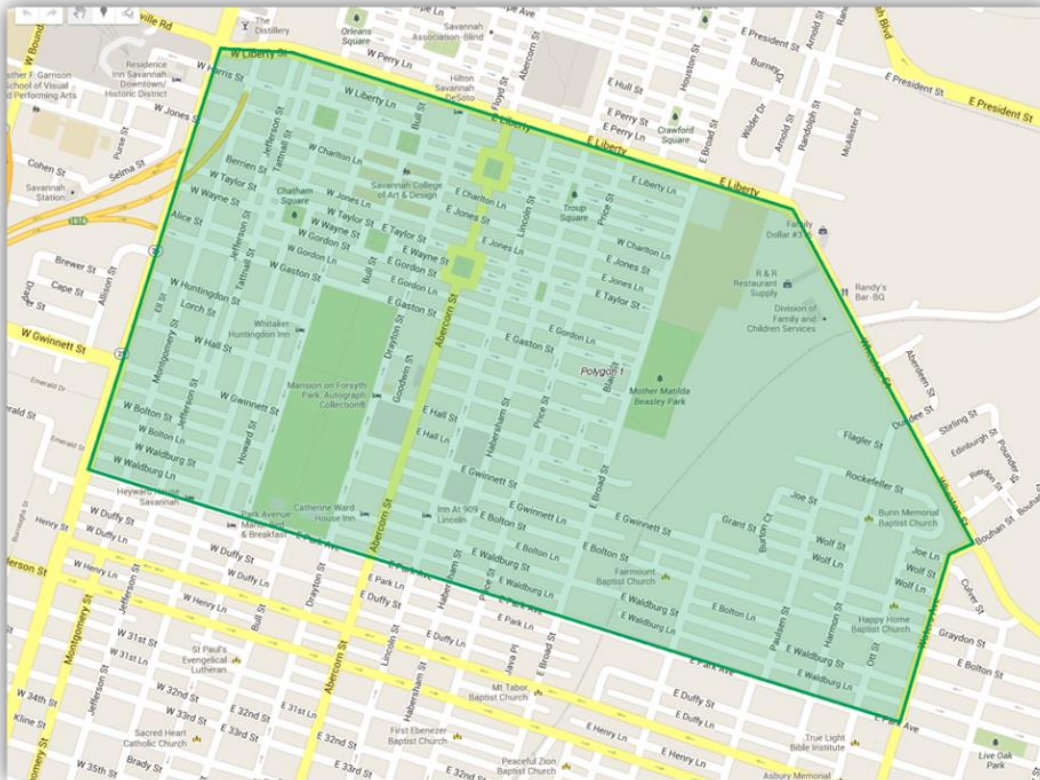


Figure 7-27. Zonal Service 2 – Montgomery/Victory Southwest

Mid-Town

Zonal Service 3 - Midtown

This zone is predominately a residential neighborhood served by CAT Routes 4, 11, 12, 14, 17, 20, 27, 28, and 114. Savannah Arts Academy formerly known as Savannah High School is within this zone. The boundaries for zonal flex service to Midtown are Park Ave. to the north, MLK to the west, Paulsen Ave to the east, and 52nd Street to the south. Figure 7-28 below shows the boundaries of this zone in yellow.

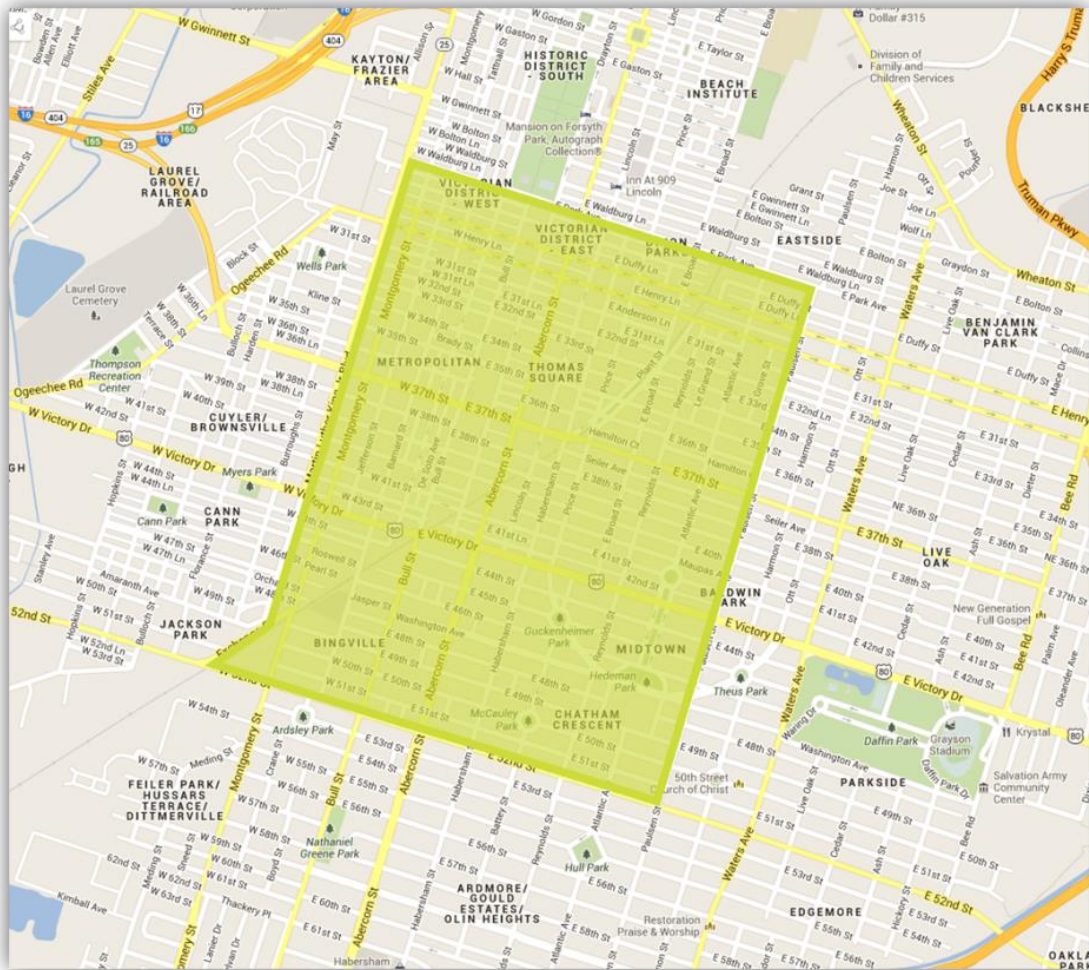


Figure 7-28. Zonal Service 3 - Midtown

Savannah State East

Zonal Service 4 - Savannah State East

This zone contains the Savannah State University (SSU) and the Victory Square Mall as well as residential neighborhoods surrounding the university. This area is served by the CAT Routes 12, 24, and 31 and by the SSU Routes 60, 75, 80, and 120. The boundaries for this zone are Truman Parkway on the west, SSU to the east, E. DeRenne Ave. to the south, and E. Victory Dr. to the north. Figure 7-29 below shows the boundaries of this zone in blue.



Figure 7-29. Zonal Service 4 – Savannah State East

South-Side

Zonal Service 5 - Southside

This zone contains residential neighborhoods as well as commercial and retail businesses. Medical facilities such as Memorial University Medical Center and N. and J.C. Lewis Cancer Research Pavilion are in this zone. Passengers using this service could also transfer to CAT's fixed route system at the Savannah Mall or Oglethorpe Mall or along the routes that serve the area which are the Routes 4, 6, 11, 14, 20, 27, 28, and 31. The zonal boundaries for Southside Flex service are 52nd to the north, Truman Parkway to the East, Hunter Army Airfield to the west, and Savannah Mall on Abercorn to the south. Figure 7-30 below shows the boundaries of this zone in yellow.

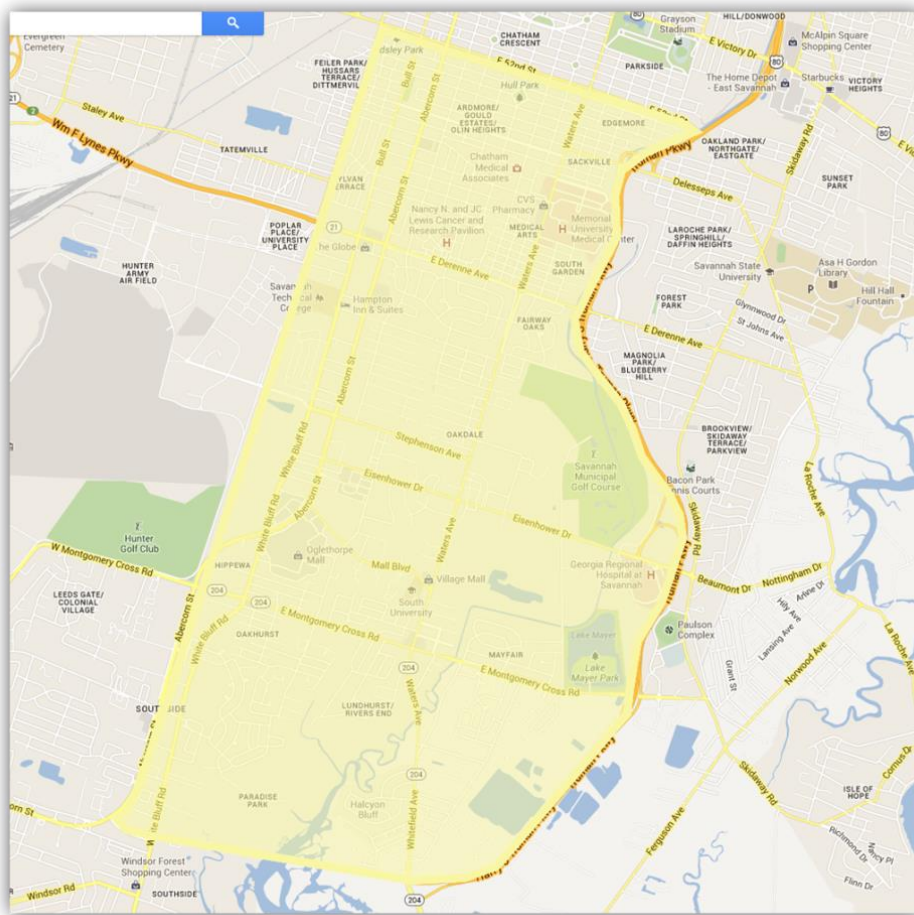


Figure 7-30. Zonal Service 5 – Southside

Regional Commuter Express Services

In the charter that created the current Chatham Area Transit Authority, there is an option for Effingham and Bryan Counties to join the Authority and have service within their own counties if they desire and regional commuter express services to and from Downtown Savannah. This will become important moving ahead as the Savannah Urbanized Area is no longer contained within Chatham County and extends in to surrounding counties. Although no specific routing was developed for this TDP, CAT should continue its outreach efforts to Effingham and Bryan Counties to address the need and market demand for regional connections for Inter-County travel and support access to growing employment centers. Figure 7-31 below shows the conceptual patterns of express bus service in the region.



Figure 7-31. Conceptual Patterns of Express Bus Service

Quantification of Service Improvements

Once all of the improvements to service had been outlined, the service hours were aggregated to assess the overall growth in annual revenue hours for the five year period. All frequency and span improvements on weekday, Saturday and Sunday combined will add an additional 35,158 service hours annually. The five new routes will bring another 23,766 annual service hours and will require capital expansion in the form of 5 new buses. Zonal services will add 17,640 annual service hours and may require capital expansion if the current paratransit fleet cannot spare 5 vehicles. Finally, the regional express routes would bring an additional 5,040 annual service hours and would require new vehicles. In total, 81,605 annual hours of service would be added to the system. Table 7-7 below shows the detail of service improvements and annual service hours.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 7-7. Service Improvements and Annual Revenue Hours

| Service Improvement Type | Net Total Daily Revenue Hour Increase | Net Total Annual Revenue Hour Increase |
|---|---------------------------------------|--|
| Weekday Frequency | 85.65 | 21,584 |
| Saturday Frequency | 86.02 | 4,473 |
| Saturday Span (Late) | 16.41 | 853 |
| Sunday Span (Late) | 42.31 | 2,200 |
| Running Time Adjustments | 24.00 | 6,048 |
| Subtotal | | 35,158 |
| New Route - 37th Street - Weekday | 14.67 | 3,697 |
| New Route - 37th Street - Saturday | 14.67 | 763 |
| New Route - Victory Drive - Weekday | 26.13 | 6,585 |
| New Route - Victory Drive - Saturday | 26.13 | 1,359 |
| New Route - 59th Street - Weekday | 6.40 | 1,613 |
| New Route - 59th Street - Saturday | 6.40 | 333 |
| New Route - Delesepps - Weekday | 14.40 | 3,629 |
| New Route - Delesepps - Saturday | 14.40 | 749 |
| New Route - Savannah - Airport Express | 10.00 | 2,520 |
| New Route - Savannah - Airport Express | 10.00 | 2,520 |
| Subtotal | | 23,766 |
| Zonal Service 1 - Savannah/Hilton Head Airport West | 14.00 | 3,528 |
| Zonal Service 2 - Montgomery/Victory Southwest | 14.00 | 3,528 |
| Zonal Service 3 - Savannah State East | 14.00 | 3,528 |
| Zonal Service 4 - Midtown | 14.00 | 3,528 |
| Zonal Service 5 - Southside | 14.00 | 3,528 |
| Subtotal | | 17,640 |
| Regional 1 - Effingham | 10 | 2,520 |
| Regional 2 - Bryan | 10 | 2,520 |
| Subtotal | | 5,040 |
| Grand Total | | 81,605 |

Priorities and Policy Guidance

Once service improvements have been quantified, the next step is to prioritize them for implementation to provide the CAT board and the public with policy guidance on the priority scheme. Based on the consensus of everyone involved, Saturday and Sunday span of service improvements are the overall number one priority to be implemented in the first year. In addition, the plan calls for the Airport Express service to be implemented in the first year. Zonal service implementation is designed to correspond with the implementation of new routes in the service area. Thus, the Airport West Zonal Service would be the first to be implemented along with the new route.

In year two, Saturday frequency improvements to 5 top performing routes would be made. The new route to be implemented is the 37th Street route and the associated Zonal Service 3 in Midtown. In year three, weekday frequency improvements to 3 top performing routes would be made along with the new Victory Drive route and the associated Zonal Service 2 – Victory Drive/Montgomery.

In year four, frequency improvements would be made to the remaining 2 top performing routes with the new route on 59th Street and Zonal Service 4 – Savannah State East. Finally, rounding out the improvements in Year 5 would be the regional services to Effingham and Bryan Counties along with the new route from SSU to Oglethorpe Mall via Delesseps and the associated Zonal Service 5 – Southside. Figure 7-32 below displays the five year prioritized program of improvements. These improvements were displayed to audiences in the final phase of public involvement and there was consensus that this guidance was appropriate for this plan. Table 7-8 below displays the detail five year plan with revenue hour growth and costs in 2013 dollars.



Figure 7-32. Five-Year Prioritized Program of Improvements

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 7-8. Detail Five Year Plan with Revenue Hour Growth and Costs in 2013 Dollars

| Affected Routes | Year | Improvements | Base Year Revenue Hours | Daily Revenue Hour Increase | Net New Total Service Hours | Total Annual Revenue Hours by Year | Percent Increase in Annual Revenue Hours | Net New Buses | Cost per Service Hour | Annual Cost of Improvement (2013 \$) |
|--|------|--|-------------------------|-----------------------------|-----------------------------|------------------------------------|--|---------------|-----------------------|--------------------------------------|
| Base Year Revenue Hours | 2013 | Base Year Annual Revenue Hours - 2013 | 186,929 | | | | | | \$68.00 | \$12,711,172 |
| Routes 4, 12, 14, 17, 28 | 2014 | Saturday Span of Service Improvements | | 16.41 | 853 | 187,782 | 0.5% | 0 | \$68.00 | \$58,026 |
| Routes 2, 3A, 4, 10, 12, 17, 27, 28, 31, 114 | 2014 | Sunday Span of Service Improvements | | 42.31 | 2,200 | 189,982 | 1.2% | 0 | \$68.00 | \$149,608 |
| New Route | 2014 | New Route - Airport Express | | 10.00 | 2,520 | 192,502 | 1.3% | 0 | \$68.00 | \$171,360 |
| New Zonal Service | 2014 | Zonal Service - Airport West | | 14.00 | 3,528 | 196,030 | 1.8% | 0 | \$68.00 | \$239,904 |
| Routes 3A, 10, 27, 28 and 31 | 2015 | Saturday Frequency Improvements | | 86.02 | 4,473 | 200,503 | 2.3% | 0 | \$68.00 | \$304,167 |
| New Route | 2015 | New Route - 37th Street | | 14.67 | 3,697 | 204,200 | 1.8% | 0 | \$68.00 | \$251,385 |
| New Zonal Service | 2015 | Zonal Service - Midtown | | 14.00 | 3,528 | 207,728 | 1.7% | 0 | \$68.00 | \$239,904 |
| Routes 3A, 10, and 27 | 2016 | Weekday Frequency Improvements | | 53.18 | 13,401 | 221,130 | 6.5% | 3 | \$68.00 | \$911,292 |
| New Route | 2016 | New Route - Victory Drive | | 26.13 | 6,585 | 227,714 | 3.0% | 0 | \$68.00 | \$447,764 |
| New Zonal Service | 2016 | Zonal Service - Victory/Montgomery | | 14.00 | 3,528 | 231,242 | 1.5% | 0 | \$68.00 | \$239,904 |
| Routes 28 and 31 | 2017 | Weekday Frequency Improvements | | 32.47 | 8,182 | 239,425 | 3.5% | 2 | \$68.00 | \$556,406 |
| New Route | 2017 | New Route - 59th Street | | 6.40 | 1,613 | 241,038 | 0.7% | 0 | \$68.00 | \$109,670 |
| New Zonal Service | 2017 | Zonal Service - Savannah State East | | 14.00 | 3,528 | 244,566 | 1.5% | 0 | \$68.00 | \$239,904 |
| New Routes | 2018 | Effingham/Bryan Regional Express Service | | 20.00 | 5,040 | 249,606 | 2.1% | 0 | \$68.00 | \$342,720 |
| New Route | 2018 | SSU to Ogelthorpe via Delesseps | | 14.40 | 3,629 | 207,829 | 1.8% | 0 | \$68.00 | \$246,758 |
| New Zonal Service | 2018 | Zonal Service - Southside | | 14.00 | 3,528 | 211,357 | 1.7% | 0 | \$68.00 | \$239,904 |
| | | TOTALS | | | 69,833 | 256,762 | 37.4% | 5 | | \$17,459,849 |

Fleet Replacement and Expansion Plan

As part of the service planning process, it is critical to have a plan to maintain an appropriate fleet to operate service over the plan period. This section provides replacements for the following fleets: fixed-route (buses), paratransit (cutaways), and non-revenue (support) vehicles (sedans, vans, and trucks). Table 7-9 below shows in summary that over the five year period CAT will need to purchase 43 buses, 34 cutaways, and 11 non-revenue vehicles.

Table 7-9. Summary of Fleet Acquisitions – FY 2013-2018

| Vehicle Type | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Total |
|----------------------|---------|---------|---------|---------|---------|---------|-------|
| Buses | 10 | 10 | 10 | | 3 | 10 | 43 |
| Paratransit Cutaways | 8 | 6 | | | 6 | 14 | 34 |
| Non-Revenue Vehicles | 6 | 2 | | 3 | | | 11 |

Table 7-10 below shows the detail of the replacement schedule for fixed route buses over the five year timeframe.

Table 7-10. Fixed Route Replacement Plan

| Age of Unit in Years (as of 2013) | Model | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|-----------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-----------|---------|----------|-----------|
| | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 10 | 35 ft. Gillig Lowfloor | 30 | | | | | | |
| | Replace 10 | | <i>R</i> | | | | | |
| | Replace 10 | | 10 | <i>R</i> | | | | |
| | Replace 10 | | 10 | 10 | <i>R</i> | | | |
| 8 | Goshen E450 Ford | 3 | 3 | 3 | 3 | 3 | <i>R</i> | |
| 7 | 29 ft. Gillig Lowfloor | 5 | 5 | 5 | 5 | 5 | 5 | <i>R</i> |
| 7 | 35 ft. Gillig Lowfloor | 5 | 5 | 5 | 5 | 5 | 5 | <i>R</i> |
| 6 | ELDorado | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 29 ft. Gillig Hybrid Lowfloor | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 2 | 35 Ft. Gillig Hybrid Lowfloor | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| | Replacement Bus | | 10 | 10 | 10 | 10 | 10 | 10 |
| | Replacement Bus | | | 10 | 10 | 10 | 10 | 10 |
| | Replacement Bus | | | | 10 | 10 | 10 | 10 |
| | Replacement Bus | | | | | | 3 | 3 |
| | Replacement Bus | | | | | | | 5 |
| | Replacement Bus | | | | | | | 5 |
| | Total FR Fleet | | | | | | | |
| | | 70 | 70 | 70 | 70 | 70 | 70 | 70 |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 7-11 below displays the detail of the fleet replacement plan for paratransit.

Table 7-11. Paratransit Fleet Replacement Plan

| Year | Age of Unit in Years as of 2013 | Model | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|------|---------------------------------|-----------------------------|-------------------------|---------------------------|---------|---------|---------|---------|---------|
| | | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 2006 | 7 | Goshen E450 Ford | 8 | R | | | | | |
| 2007 | 6 | Chev Star Trans | 6 | 6 | R | | | | |
| 2010 | 3 | ELDorado,Aerotech Chevy 200 | 6 | 6 | 6 | 6 | 6 | R | |
| 2011 | 2 | ELDorado,Aerotech Chevy | 14 | 14 | 14 | 14 | 14 | 14 | R |
| 2013 | | Replacement Cutaway | | 8 | 8 | 8 | 8 | 8 | 8 |
| 2014 | | Replacement Bus | | | 6 | 6 | 6 | 6 | 6 |
| 2017 | | Replacement Bus | | | | | | 6 | 6 |
| 2018 | | Replacement Bus | | | | | | | 14 |
| | | Total DR Fleet | 34 | 34 | 34 | 34 | 34 | 34 | 34 |

Table 7-12 below shows the detail replacement plan for non-revenue vehicles.

Table 7-12. Non-Revenue Vehicle Replacement Plan

| Year | Age in Years as of 2013 | Make/ Model/ Type | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|------|-------------------------|-------------------------|-------------------------|---------------------------|---------|---------|---------|---------|---------|
| | | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 1999 | 14 | Chevrolet Truck | 1 | R | | | | | |
| 2002 | 11 | Ford Winstar Van | 1 | R | | | | | |
| 2002 | 11 | Ford F-150 | 1 | R | | | | | |
| 2003 | 10 | Ford F-150 | 1 | R | | | | | |
| 2007 | 7 | Chev Impala | 1 | R | | | | | |
| 2008 | 5 | Chev Impala | 1 | R | | | | | |
| 2010 | 3 | Dodge Van | 1 | 1 | 1 | R | | | |
| 2010 | 3 | Ford F-150 | 1 | 1 | 1 | R | | | |
| 2011 | 2 | Dodge Entervan | 3 | 3 | 3 | 3 | R | | |
| 2013 | | Replacement Truck | | 3 | 3 | 3 | 3 | 3 | 3 |
| 2013 | | Replacement Van | | 1 | 1 | 1 | 1 | 1 | 1 |
| 2013 | | Replacement Sedan | | 2 | 2 | 2 | 2 | 2 | 2 |
| 2015 | | Replacement Van | | | | 1 | 1 | 1 | 1 |
| 2015 | | Replacement Truck | | | | 1 | 1 | 1 | 1 |
| 2016 | | Replacement Van | | | | | 3 | 3 | 3 |
| | | Total Non-Revenue Fleet | 11 | 11 | 11 | 11 | 11 | 11 | 11 |

Chapter 8

TDP Capital & Operating Program

Introduction

The TDP provides guidance toward strategic goals formulated throughout the planning process with specific objectives, defined mobility improvements and collaborative partnership input captured throughout the community.

An important aspect of the TDP is to organize a Strategic Operating and Capital Improvement Program that provides priorities (schedule) and quantifies investments (expenses and revenues). Since the nature of the TDP is strategic, this allows CAT to keep a view of funding needs of the Plan outside of existing annual budget constraints. This will prepare the agency to pursue funding opportunities and provide ample justification of need, fostering awareness of community stakeholders, and attracting potential partnerships.

Operating Program Estimates

Table 8-1 presents a five-year Strategic Operating Scenario that builds upon the existing core fixed route network. The new service alternatives developed during the TDP planning process and described in Chapter 7 provided service hour estimates to establish an order of magnitude of operating costs and associated capital needs.

Fixed route service hour costs were based upon a 2013 base year value of \$68.00 per hour. This cost was inflated at an annual rate of 1.5% through 2018. Paratransit costs used the total expense of service operations budgeted for 2014 by CAT and inflated annual costs by 3% for subsequent years through 2018. Zonal services utilized the fixed route rate of \$68.00 per hour as inflated through 2018. Regional Express service also utilized the \$68.00 per hour methodology.

It should be recognized that beyond the TDP planning process, more detailed service planning and a system-wide Comprehensive Operational Analysis (COA) will yield more refined costs. Additionally the implementation schedule of these services may be phased based upon available funding as well as possibly accelerated.

Capital Improvement Program (CIP) Estimates

Table 8-2 provides estimated capital costs associated with the maintenance of existing services as well as expanded services described in Chapter 7 - Service Alternatives and System Design. Significant capital investments are required to keep the CAT fleet in a State of Good Repair, which is a major priority of the federal government and will be discussed later in this chapter.

The following section describes CIP items by category:

Vehicles (lines 3-9)

A vehicle replacement plan was developed by analyzing age and mileage criteria as established by FTA procedures. Table 8-3 presents the results of this analysis which schedules the purchase of forty-three (43) replacement vehicles over the next five years.

Similarly table 8-3 analyzed the vehicle replacement needs of Teleride paratransit services which amounted to the procurement of thirty-four (34) vehicles over the next five years.

Replacement vehicles for maintenance, supervisory and administrative support can be viewed in table 8-4.

In Summary Table 8-5 all replacement vehicles are presented as well as ten (10) additional transit buses and 24 ADA related vehicles for future expansion of services. Forty (40) commuter vans are also included in the capital needs plan however these may be placeholders as to cost depending on the implementation model used that could include leasing vehicles versus an outright purchase.

All of these vehicle acquisitions are included in line items of the CIP shown in table 8.6.

Passenger Amenities (line 10)

This budget line continues to invest in passenger amenities such as signage, shelters, benches, superstops at level equal to recent budget years.

Ferry Boat Construction / Rehabilitation (line 11)

Budget for normal maintenance and repair of Ferry Boat service.

Downtown Intermodal Transit Center Project (line 12)

Upkeep maintenance of downtown intermodal

Operations and Maintenance Facility Rehabilitation Project (line 13)

Upkeep and maintenance for refurbished CAT maintenance facility and offices

Intelligent Transit System (line 14)

Software and Hardware updates and improvements

Unified Communication (line 15)

Maintenance and improvements

CCTV (line 16)

Maintenance and improvements for new equipment and facilities

Construction Management (line 17)

Management and support for construction activities

Transit Development Study (line 18)

Budgeted for implementation support, plan maintenance and next major update at end of 5 years.

Savannah Riverwalk Intermodal Facility (line 19)

Maintenance and improvements

Satellite Location (line 20)

Light Bus Maintenance and Storage

Street Car Study (line 21)

Capitalized Study

Bike Share Study (line 22)

Capitalized Study

Bike Share Implementation (line 23)

Program maintenance and expansion equipment / facilities

Capital Maintenance (line 24)

FTA permitted capitalized operating costs

Park n Rides (line 25)

New park and ride facilities

East Downtown TAD Project (line 26)

Major community investment program capital projects.

Planning / Preliminary Engineering (line 27)

Capitalized costs

Mobility Management (line 28)

Eligible FTA capital costs for Mobility Management coordination and planning

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Program Revenues

Table 8-1. Fixed-Route Vehicle Replacement Plan

| Year | Age of Unit in Years (as of 2013) | Model | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|------|-----------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-----------|---------|----------|-----------|
| | | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 2003 | 10 | 35 ft. Gillig Lowfloor | 30 | | | | | | |
| | | Replace 10 | | <i>R</i> | | | | | |
| | | Replace 10 | | 10 | <i>R</i> | | | | |
| | | Replace 10 | | 10 | 10 | <i>R</i> | | | |
| 2005 | 8 | Goshen E450 Ford | 3 | 3 | 3 | 3 | 3 | <i>R</i> | |
| 2006 | 7 | 29 ft. Gillig Lowfloor | 5 | 5 | 5 | 5 | 5 | 5 | <i>R</i> |
| 2006 | 7 | 35 ft. Gillig Lowfloor | 5 | 5 | 5 | 5 | 5 | 5 | <i>R</i> |
| 2007 | 6 | ELDorado | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2009 | 4 | 29 ft. Gillig Hybrid Lowfloor | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 2011 | 2 | 35 Ft. Gillig Hybrid Lowfloor | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 2013 | | Replacement Bus | | 10 | 10 | 10 | 10 | 10 | 10 |
| 2014 | | Replacement Bus | | | 10 | 10 | 10 | 10 | 10 |
| 2015 | | Replacement Bus | | | | 10 | 10 | 10 | 10 |
| 2017 | | Replacement Bus | | | | | | 3 | 3 |
| 2012 | | Replacement Bus | | | | | | | 5 |
| 2012 | | Replacement Bus | | | | | | | 5 |
| 2017 | | Total FR Fleet | | | | | | | |
| | | | 70 | 70 | 70 | 70 | 70 | 70 | 70 |

Table 8-2. Demand Response Vehicle Replacement Plan

| Year | Age of Unit in Years as of 2013 | Model | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|------|---------------------------------|-----------------------------|-------------------------|---------------------------|----------|---------|---------|----------|-----------|
| | | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 2006 | 7 | Goshen E450 Ford | 8 | <i>R</i> | | | | | |
| 2007 | 6 | Chev Star Trans | 6 | 6 | <i>R</i> | | | | |
| 2010 | 3 | ELDorado, Aerotech Chevy 20 | 6 | 6 | 6 | 6 | 6 | <i>R</i> | |
| 2011 | 2 | ELDorado, Aerotech Chevy | 14 | 14 | 14 | 14 | 14 | 14 | <i>R</i> |
| 2013 | | Replacement Cutaway | | 8 | 8 | 8 | 8 | 8 | 8 |
| 2014 | | Replacement Bus | | | 6 | 6 | 6 | 6 | 6 |
| 2017 | | Replacement Bus | | | | | | 6 | 6 |
| 2018 | | Replacement Bus | | | | | | | 14 |
| | | Total DR Fleet | 34 | 34 | 34 | 34 | 34 | 34 | 34 |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 8-3. Support Vehicles

| Year | Age in Years as of 2013 | Make/ Model/ Type | Number of Vehicles 2013 | Replacement Vehicle Years | | | | | |
|------|-------------------------|-------------------------|-------------------------|---------------------------|---------|----------|----------|---------|---------|
| | | | | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 |
| 1999 | 14 | Chevrolet Truck | 1 | <i>R</i> | | | | | |
| 2002 | 11 | Ford Winstar Van | 1 | <i>R</i> | | | | | |
| 2002 | 11 | Ford F-150 | 1 | <i>R</i> | | | | | |
| 2003 | 10 | Ford F-150 | 1 | <i>R</i> | | | | | |
| 2007 | 7 | Chevy Impala | 1 | <i>R</i> | | | | | |
| 2008 | 5 | Chevy Impala | 1 | <i>R</i> | | | | | |
| 2010 | 3 | Dodge Van | 1 | 1 | 1 | <i>R</i> | | | |
| 2010 | 3 | Ford F-150 | 1 | 1 | 1 | <i>R</i> | | | |
| 2011 | 2 | Dodge Entervan | 3 | 3 | 3 | 3 | <i>R</i> | | |
| 2013 | | Replacement Truck | | 3 | 3 | 3 | 3 | 3 | 3 |
| 2013 | | Replacement Van | | 1 | 1 | 1 | 1 | 1 | 1 |
| 2013 | | Replacement Sedan | | 2 | 2 | 2 | 2 | 2 | 2 |
| 2015 | | Replacement Van | | | | 1 | 1 | 1 | 1 |
| 2015 | | Replacement Truck | | | | 1 | 1 | 1 | 1 |
| 2016 | | Replacement Van | | | | | 3 | 3 | 3 |
| | | Total Non-Revenue Fleet | 11 | 11 | 11 | 11 | 11 | 11 | 11 |

Table 8-4. Vehicle Acquisition Summary

| Vehicle Type | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Total |
|-----------------------------------|---------|---------|---------|---------|---------|---------|-------|
| Buses | 10 | 10 | 10 | | 3 | 10 | 43 |
| Paratransit Cutaways | 8 | 6 | | | 6 | 14 | 34 |
| Non-Revenue Vehicles | 6 | 2 | | 3 | | | 11 |
| New Additional Buses | | | | 10 | | | |
| New Additional ADA Sedans & Taxis | | | | | | 24 | |
| Commuter Vans | | | 10 | 10 | 10 | 10 | |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 8-5. CAT Operating Costs

| Transit Development Plan CAT Strategic Planning Program Operating Costs | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Service | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| 1 Operations - | | | | | | |
| a Fixed Route | \$15,392,090 | \$14,713,998 | \$14,934,708 | \$15,158,729 | \$15,386,110 | \$15,616,901 |
| b Teleride | \$2,000,000 | \$2,200,000 | \$2,266,000 | \$2,299,990 | \$2,334,490 | \$2,369,507 |
| c Marine Services | \$864,000 | \$820,000 | \$832,300 | \$844,785 | \$857,456 | \$870,318 |
| d Debt Service | | \$2,137,724 | \$2,137,724 | \$0 | \$0 | \$0 |
| e Existing Services Sub-Total | \$18,256,090 | \$19,871,722 | \$20,170,732 | \$18,303,503 | \$18,578,056 | \$18,856,726 |
| | | | | | | |
| 2 Running time Adjustments | | \$83,487 | \$84,739 | \$86,010 | \$87,300 | \$88,610 |
| 3 Saturday Span Improvements | | \$67,869 | \$68,887 | \$69,920 | \$70,969 | \$72,033 |
| 4 Sunday Span Improvements | | \$162,009 | \$164,439 | \$166,906 | \$169,410 | \$171,951 |
| 5 Saturday Frequency Improvements | | | \$313,360 | \$318,061 | \$322,831 | \$327,674 |
| 6 New Route - 37th Street | | | \$307,807 | \$312,424 | \$317,111 | \$321,867 |
| 7 New Route - Victory Drive | | | | \$564,833 | \$573,305 | \$581,905 |
| 8 New Route - 59th Street | | | | | \$140,419 | \$142,526 |
| 9 New Route - Delesseps | | | | | | \$320,682 |
| 10 Weekday Frequency Improvements | | | | \$1,534,740 | \$1,557,762 | \$1,581,128 |
| 11 Zonal Service 1 | | | | \$250,862 | \$254,625 | \$258,445 |
| 12 Zonal Service 2 | | | | | \$254,625 | \$258,445 |
| 13 Zonal Service 3 | | | | | | \$258,445 |
| 14 Zonal Service 4 | | | | | | \$258,445 |
| 15 Zonal Service 5 | | | | | | \$258,445 |
| 16 Regional 1 - Effingham | | | | | | \$184,603 |
| 17 Regional 2 - Bryan | | | | | | \$184,603 |
| 18 | | | | | | |
| 19 Sub-Total | \$0 | \$229,878 | \$854,493 | \$3,217,747 | \$3,661,058 | \$5,181,197 |
| 20 Cost per hour | \$68 | \$69 | \$70 | \$71 | \$72 | \$73 |
| 21 Estimated Annual Cost | \$18,256,090 | \$20,101,600 | \$21,025,225 | \$21,521,250 | \$22,239,113 | \$24,037,923 |

Funding Analysis and Opportunities

The Chatham Area Transit Authority (CAT) was established on January 9, 1987. CAT is an independent public transportation agency with limited funding authority. A special district for transit services was created by the Commissioners of Chatham County, Georgia, pursuant to the authority granted by GA. Laws, 1986, page 5315 and as provided for in Article IX, Section II, Paragraph VI of the Constitution of the State of Georgia, which allows for levy ad valorem taxes for the provision of the services by Chatham County who in turn provides funding to CAT. The Special District is Not County wide at this time and each municipality has a choice to join the Authority.

CAT can establish a budget and request an ad valorem millage that must be approved and applied by Chatham County to include member municipalities. CAT must follow this budget process annually and is placed in a competitive position with other ad valorem budgeted services that includes the School Board and Public Safety services. Table 8-7 displays the history of overall millage tax rates and specifically CAT's designated rate since its availability in 1987. There has been a somewhat downward trend of CAT millage rates until recently for FY 2014 with an approved millage rate of 1.001 (CAT had requested 1.241). It is difficult for a service oriented business to evolve with funded uncertainty each year. The TDP can help establish a five year business "window" to develop services and additional revenue partnerships. A multi-year local funding scenario should be established with a base ad valorem level that provides for maintaining existing services, venture capital to initiate new services and a secured level of capital and operating reserves.

Local investments provide the increasing majority of funds to meet market demand. Federal funding has become limited for operating and less discretionary for capital bus and bus facility investments. CAT has been able utilize local funding to maximize the leveraging of Federal and State transit funding and should continue to do so. Leveraging funding will be discussed further in the federal section of this chapter. However, additional local funding sources need to be explored.

Local and State capital transit investments need to be pursued. The SPLOST funding source has recognized transit needs. SPLOST stands for "Special Purpose Local Option Sales Tax." This one-cent sales tax, paid on most goods, is part of the six percent sales tax that the public currently pays on items purchased in Chatham County.

The SPLOST law, enacted by Georgia legislators in 1985, authorizes a county tax of 1% on items subject to the state sales tax for funding capital projects. SPLOST carries more restrictions on its use than the Local Options Sales tax. For example, SPLOST funds can only be used for particular kinds of projects which must be approved in advance before the tax revenue is dispersed. The revenue generated cannot be used towards operating expenses or most maintenance projects. Additionally, SPLOST must be renewed once every five years by a voter referendum in order to remain in effect.

Additional local funding approaches can be developed such as benefit assessment activity areas or partnerships with new municipal memberships and surrounding Coastal Region Counties.

The recent Tiger Grant submitted by CAT in partnership with the City of Savannah illustrate an excellent example of utilizing a new source of funding to leverage federal and state

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

funding for the purpose of promoting investment by financing certain redevelopment activities in underdeveloped or blighted areas using public dollars. Public transit is an important part of this economic development initiative with local funds generated from a Tax Allocation Districts (TADs) established for the redevelopment area. The TAD provides local grant match and a sustainable operating funding source.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 8-7. Property Tax Rates

Property Tax Rates for Overlapping Governments
(per \$1,000 of Assessed Value)
2009-1983 Actual

| Fiscal Year | TAX RATE FOR CITY OF SAVANNAH RESIDENTS | | | | | | | | TAX RATE FOR UNINCORPORATED COUNTY RESIDENTS | | | | | | | |
|-------------|---|-------------------|----------------------|--------------|--------------------|-----------------------|-------|--------|--|---------------------------------------|-------------------|-----------------------------------|--------------------|--------|-------|--------------|
| | COUNTY PORTION | | | | Board of Education | Savannah ¹ | State | Total | COUNTY PORTION | | | | Board of Education | State | Total | |
| | General Fund M&O | Debt Service Fund | Chatham Area Transit | Total County | | | | | General Fund M&O | Special Service District ² | Debt Service Fund | Chatham Area Transit ³ | | | | Total County |
| 2012 | 11.109 | 0 | 0.859 | 11.968 | 14.631 | 12.500 | 0.20 | 39.299 | 11.109 | 3.590 | 0 | 0.859 | 15.558 | 14.631 | 0.20 | 30.389 |
| 2011 | 11.109 | 0 | 0.859 | 11.968 | 14.631 | 12.500 | 0.25 | 39.349 | 11.109 | 3.590 | 0 | 0.859 | 15.558 | 14.631 | 0.25 | 30.439 |
| 2010 | 10.537 | 0 | 0.820 | 11.357 | 14.131 | 13.000 | 0.25 | 38.738 | 10.537 | 3.475 | 0 | 0.820 | 14.832 | 14.131 | 0.25 | 31.298 |
| 2009 | 10.537 | 0 | 0.820 | 11.357 | 13.404 | 12.500 | 0.25 | 37.511 | 10.537 | 3.475 | 0 | 0.820 | 14.832 | 13.404 | 0.25 | 28.486 |
| 2008 | 10.537 | 0 | 0.820 | 11.357 | 13.404 | 12.500 | 0.25 | 37.511 | 10.537 | 3.475 | 0 | 0.820 | 14.832 | 13.404 | 0.25 | 28.486 |
| 2007 | 10.537 | 0 | 0.820 | 11.357 | 15.817 | 12.500 | 0.25 | 39.924 | 10.537 | 3.475 | 0 | 0.820 | 14.832 | 15.817 | 0.25 | 30.899 |
| 2006 | 10.837 | 0 | 0.820 | 11.657 | 15.817 | 12.700 | 0.25 | 40.424 | 10.837 | 3.475 | 0 | 0.820 | 15.132 | 15.817 | 0.25 | 31.199 |
| 2005 | 11.037 | 0 | 0.820 | 11.857 | 17.277 | 13.100 | 0.25 | 42.484 | 11.037 | 3.475 | 0 | 0.820 | 15.332 | 17.277 | 0.25 | 32.859 |
| 2004 | 10.367 | 0 | 0.820 | 11.187 | 17.600 | 13.100 | 0.25 | 42.137 | 10.367 | 3.475 | 0 | 0.820 | 14.662 | 17.600 | 0.25 | 32.512 |
| 2003 | 10.367 | 0 | 0.820 | 11.187 | 17.768 | 13.300 | 0.25 | 42.505 | 10.367 | 3.475 | 0 | 0.820 | 14.662 | 17.768 | 0.25 | 32.680 |
| 2002 | 10.367 | 0 | 0.820 | 11.187 | 17.550 | 13.300 | 0.25 | 42.287 | 10.367 | 3.475 | 0 | 0.820 | 14.662 | 17.550 | 0.25 | 32.462 |
| 2001 | 10.367 | 0 | 0.853 | 11.220 | 18.576 | 13.500 | 0.25 | 43.546 | 10.367 | 3.475 | 0 | 0.853 | 14.695 | 18.576 | 0.25 | 33.521 |
| 2000 | 10.439 | 0 | 0.858 | 11.297 | 18.840 | 13.800 | 0.25 | 44.187 | 10.439 | 3.489 | 0 | 0.858 | 14.786 | 18.840 | 0.25 | 33.876 |
| 1999 | 11.010 | 0 | 0.900 | 11.910 | 19.830 | 14.800 | 0.25 | 46.790 | 11.010 | 3.620 | 0 | 0.900 | 15.530 | 19.830 | 0.25 | 35.610 |
| 1998 | 11.640 | 0 | 0.950 | 12.590 | 19.140 | 16.500 | 0.25 | 48.480 | 11.640 | 3.740 | 0 | 0.950 | 16.330 | 19.140 | 0.25 | 35.720 |
| 1997 | 11.640 | 0 | 0.950 | 12.590 | 19.980 | 16.930 | 0.25 | 49.750 | 11.640 | 3.740 | 0 | 0.950 | 16.330 | 19.980 | 0.25 | 36.560 |
| 1996 | 11.880 | 0 | 0.900 | 12.780 | 19.980 | 17.460 | 0.25 | 50.470 | 11.880 | 3.760 | 0 | 0.900 | 16.540 | 19.980 | 0.25 | 36.770 |
| 1995 | 11.880 | 0 | 0.700 | 12.580 | 19.980 | 17.460 | 0.25 | 50.270 | 11.880 | 3.760 | 0 | 0.700 | 16.340 | 19.980 | 0.25 | 36.570 |
| 1994 | 12.880 | 0 | 0.900 | 13.780 | 19.980 | 17.460 | 0.25 | 51.470 | 12.880 | 4.210 | 0 | 0.900 | 17.990 | 19.980 | 0.25 | 38.220 |
| 1993 | 12.980 | 0 | 1.200 | 14.180 | 19.980 | 17.460 | 0.25 | 51.870 | 12.980 | 4.210 | 0 | 1.200 | 18.390 | 19.980 | 0.25 | 38.620 |
| 1992 | 11.140 | 0 | 1.300 | 12.440 | 20.000 | 15.190 | 0.25 | 47.880 | 11.140 | 3.910 | 0 | 1.300 | 16.350 | 20.000 | 0.25 | 36.600 |
| 1991 | 10.900 | 0 | 1.300 | 12.200 | 19.960 | 14.300 | 0.25 | 46.710 | 10.900 | 3.910 | 0 | 1.300 | 16.110 | 19.960 | 0.25 | 36.320 |
| 1990 | 9.430 | 0.15 | 1.300 | 10.880 | 19.970 | 14.300 | 0.25 | 45.400 | 9.430 | 3.060 | 0.150 | 1.300 | 13.940 | 19.970 | 0.25 | 34.160 |
| 1989 | 9.430 | 0.15 | 1.300 | 10.880 | 20.000 | 13.300 | 0.25 | 44.430 | 9.430 | 3.060 | 0.150 | 1.300 | 13.940 | 20.000 | 0.25 | 34.190 |
| 1988 | 7.530 | 0.15 | 1.300 | 8.980 | 20.000 | 13.300 | 0.25 | 42.530 | 7.530 | 3.060 | 0.150 | 1.300 | 12.040 | 20.000 | 0.25 | 32.290 |
| 1987 | 9.490 | 0.31 | 1.300 | 11.100 | 18.390 | 11.300 | 0.25 | 41.040 | 9.490 | 3.520 | 0.310 | 1.300 | 14.620 | 18.390 | 0.25 | 33.260 |
| 1986 | 10.090 | 0.43 | | 10.520 | 16.610 | 9.000 | 0.25 | 36.380 | 10.090 | 3.570 | 0.430 | | 14.090 | 16.610 | 0.25 | 30.950 |
| 1985 | 10.090 | 0.47 | | 10.560 | 16.610 | 9.000 | 0.25 | 36.420 | 10.090 | 3.570 | 0.470 | | 14.130 | 16.610 | 0.25 | 30.990 |

The millage rates below are those in effect as of September 1. Local governments adopt their millage rates at various times during the year. Chatham County makes every effort to assure that the information presented on these web pages are up to date, but to obtain the most accurate information you should verify this information with the individual municipality.

Existing Funding

This section illustrates the current financing program of CAT utilizing the completed FY 2012 audited "CHATHAM AREA TRANSIT AUTHORITY FINANCIAL REPORT" which ended June 30, 2012, as source information.

As displayed in Figure 8-1, the majority of expenses are related to Labor and Fringe Benefits (46%) as Cat is an Employer of local jobs. Maintenance accounts for 17% of expenses and is an area to pay attention to as the fleet ages and equipment is more expensive to maintain and repair. Teleride paratransit services account for 10 percent of expenses which have fluctuated over past years since this is the most expensive mode of transit cost per passenger which warrants efforts to provide efforts to maximize the use of fixed route services as well as to consider flex services that are part of the TDP initiatives.

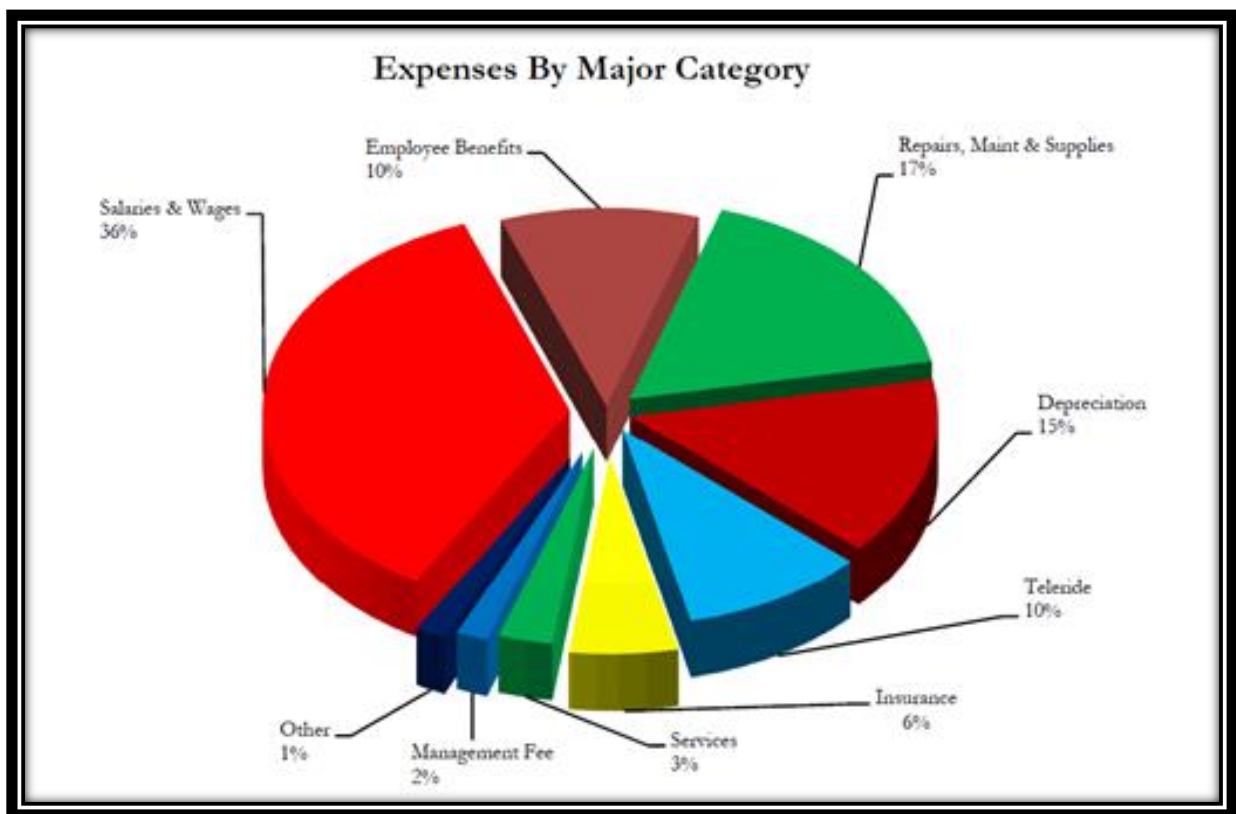


Figure 8-1. Expenses by Major Category

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Table 8-8 below presents a good picture of expenses by category over the three year period of 2010 through 2012. Figure 8-2 the breakdown of revenue by source.

Table 8-8. Expenses by Category Comparison

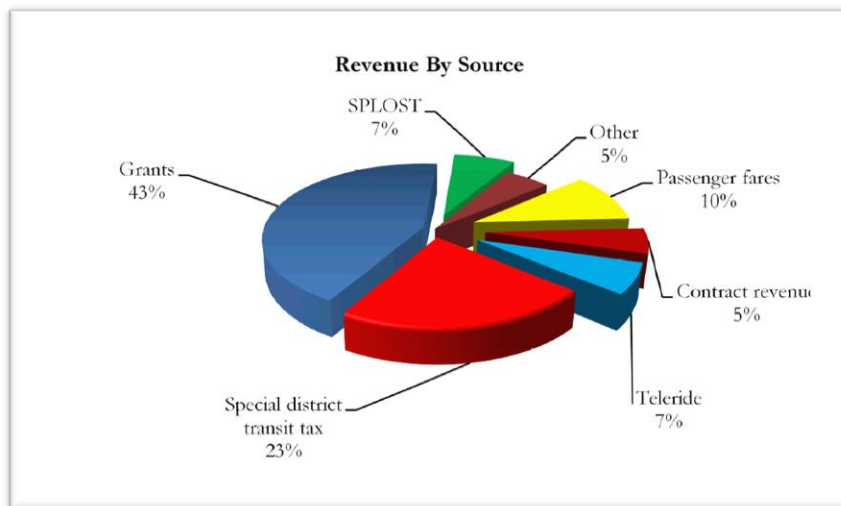
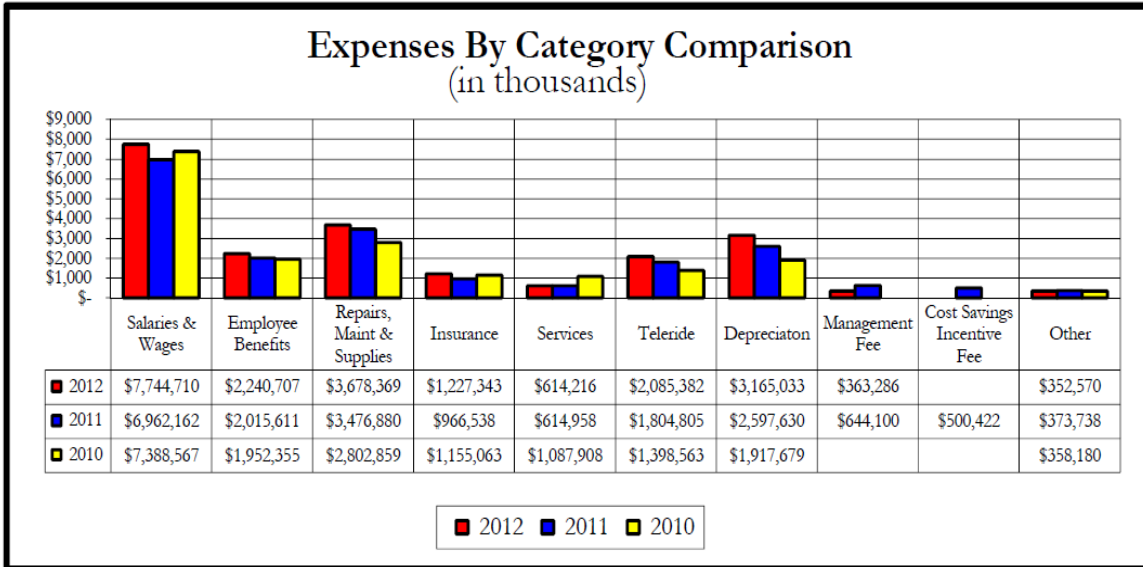


Figure 8-2. Revenue by Source

System Revenues 2012

Local Funding

Operating revenue is composed of passenger fares, contract revenue, vehicle advertising and other miscellaneous revenue and has represented about 20 percent of the operating funds for the agency.

Non-operating revenue is substantially comprised of tax revenue, Teleride, and revenue from federal and state grants. Take note that local funding from, Teleride (7%), the Special District Transit Tax (23%) and SPLOST (7%) represent 37% of the non-operating category, so in total local funds represented 57% of funding in 2012. Operating funding for service expansion will require a greater percent of local funding than years past. Federal funding has limitations for operations and capital funds a far less discretionary.

Federal and State Funding

On Friday, July 6, 2012, President Obama signed into law HR 4348 "Moving Ahead for Progress in the 21st Century" (MAP-21).

In General, Formula funds for urban transit, rural transit and transportation for seniors and people with disabilities all increase in MAP-21. The Job Access and Reverse Commute and New Freedom programs are consolidated into these formula funds. Capital funds for bus and bus facilities, an issue CTAA and its members have raised as vital, find their way into the new law, but with slight reductions from SAFETEA-LU levels. There is a new focus on safety and asset management in the law and CTAA is pleased to see the Transportation Emergency Relief Program emerge. Privatization and performance measurement are emphasized throughout MAP-21. The law avoids discretionary programs, favoring formula-based concepts.

CAT has been very successful in leveraging and maximizing use of federal funds both with formula based funds (e.g. 5307 Urbanized Area Formula Grants) and various discretionary grants that have existed under previous Transportation Legislation (e.g. 5309 Bus and Bus Facility Discretionary Grants). The challenge under MAP-21 is weave together various grant program opportunities with coordination among local and regional partners.

Table 8-9 presents a listing of relevant MAP-21 grant programs for CAT to continue to be familiar and active in monitoring for opportunities.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 8-9. Map-21 Transit Program

| Sec | Name | Funding For | Type | Funding Amounts | Local Match |
|------------------|--|--|---------------------------|--------------------------------------|------------------------------------|
| 5303, 5304, 5305 | Metropolitan, Statewide, and Nonmetropolitan Planning Programs | Multimodal transportation planning resulting in long-range plans and TIPS. | Formula-based | \$127M in FY2013, \$129M in FY2014 | 20% |
| 5307 | Urbanized Area Formula Grants | Urbanized Areas to support public transportation | Formula-based | \$4.9B in FY2013, \$5.0B in FY2014 | Operating: 50%, Capital: 20% |
| | | Passenger Ferry Systems | Discretionary/Competitive | \$30m annually | ? |
| 5309 | Fixed Guide way Capital Investment Grants (New Starts/Small Starts) | Major investments in new and expanded rail, bus rapid transit (BRT), and ferry systems | Discretionary/Competitive | \$1.9B in FY2013, \$1.9B in FY2014 | 20% |
| 5310 | Enhanced Mobility of Seniors and Individuals with Disabilities | The increase of mobility for seniors and persons with disabilities | Formula-based | \$255M in FY2013, \$258M in FY2014 | Operating: 50%, Capital: 20% |
| 5311 | Rural Area Formula Grants | Public transportation in rural areas, defined as areas with fewer than 50,000 residents | Formula-based | \$600M in FY2013, \$608M in FY2014 | Operating: 50%, Capital: 20% |
| 5312 | Research, Development, Demonstration, and Deployment | Public transportation research; innovation and development; and demonstration, deployment, and evaluation | Eligibility-based | \$70M annually | 20% (may be in-kind) |
| 5314 | Technical Assistance and Standards | Wide range of technical assistance activities and development of voluntary standards and best practices | Discretionary | \$7M annually | 20% (may be in-kind) |
| 5322 | Human Resources and Training | Employment training and outreach programs; research on public transportation personnel and training needs; and training and assistance for minority business opportunities | Discretionary/Competitive | \$5M annually | 50% |
| 5324 | Emergency Relief | Emergency-related expenses as a result of a natural disaster or catastrophic failure | Need-based | Appropriated from Congress as needed | 20%, but FTA may waive local match |
| 5326 | Asset Management Provisions | Development of transit asset management plans | Required for Sec 5337 | N/A – not grant based | N/A |
| 5329 | Safety | Safety oversight for heavy rail, light rail, and streetcar systems | Formula-based | Takedown from 5307 - \$22M | 20% |
| 5337 | State of Good Repair Grants | Replacement or rehabilitation of fixed route guide way or high intensity bus systems to keep in state of good repair | Formula-based | \$2.1M in FY2013, \$2.2M in FY2014 | 20% |
| 5339 | Bus and Bus Facilities | Replacement, rehabilitation and purchase of buses and related equipment, and to construct bus-related facilities | Formula-based | \$422M in FY 2013, \$428M in FY 2014 | 20% (Capital only) |
| | Transit-Oriented Development Planning Pilot | comprehensive planning in corridors with new rail, bus rapid transit, or core capacity projects | Discretionary/Competitive | \$10M annually | None |

Some specific programs that provide opportunity for CAT include:

Urbanized Area Formula Grants (5307)

The largest of FTA's grant programs, this program provides grants to urbanized areas to support public transportation. Funding is distributed by formula based on the level of transit service provision, population, and other factors. The program remains largely unchanged with a few exceptions:

- Job access and reverse commute activities now eligible: Activities eligible under the former Job Access and Reverse Commute (JARC) program, which focused on providing services to low-income individuals to access jobs, are now eligible under the Urbanized Area Formula program. This includes operating assistance with a 50 percent local match for job access and reverse commute activities.
- In addition, the urbanized area formula for distributing funds now includes the number of low-income individuals as a factor. There is no floor or ceiling on the amount of funds that can be spent on job access and reverse commute activities.
- Expanded eligibility for operating expenses for systems with 100 or fewer buses MAP-21 expands eligibility for using Urbanized Area Formula funds for operating expenses. Previously, only urbanized areas with populations below 200,000 were eligible to use Federal transit funding for operating expenses. Now, transit systems in urbanized areas over 200,000 can use their formula funding for operating expenses if they operate no more than 100 buses. Systems operating between 76 and 100 buses in fixed route service during peak service hours may use up to 50 percent of their "attributable share" of funding for operating expenses. Systems operating 75 or fewer buses in fixed route service during peak service hours may use up to 75 percent of their "attributable share" of funding for operating expenses. This expanded eligibility for operating assistance under the Urbanized formula program excludes rail systems.
- New discretionary passenger ferry grants (\$30 million per year) are set-aside from the Urban formula program totals to support passenger ferries. Funding will be awarded on a competitive selection basis.

Enhanced Mobility of Seniors and Individuals with Disabilities (5310)

This program provides formula funding to increase the mobility of seniors and persons with disabilities. Funds are apportioned based on each State's share of the targeted populations and are now apportioned to both States (for all areas under 200,000) and large urbanized areas (over 200,000). The former New Freedom program (5317) is folded into this program. The New Freedom program provided grants for services for individuals with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA). Activities eligible under New Freedom are now eligible under the Enhanced Mobility of Seniors and Individuals with Disabilities program. Projects selected for funding must be included in a locally developed, coordinated public transit-human services transportation plan; and the competitive selection process, which was required under the former New Freedom program, is now optional. At least 55 percent of program funds must be spent on the types of capital projects eligible under the former section 5310 -- public transportation

projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable. The remaining 45 percent may be used for: public transportation projects that exceed the requirements of the ADA; public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit; or, alternatives to public transportation that assist seniors and individuals with disabilities. Using these funds for operating expenses requires a 50 percent local match while using these funds for capital expenses (including acquisition of public transportation services) requires a 20 percent local match.

Rural Area Formula Grants (5311)

This program provides capital, planning, and operating assistance to support public transportation in rural areas, defined as areas with fewer than 50,000 residents. Funding is based on a formula that uses land area, population, and transit service. The program remains largely unchanged with a few exceptions:

- Job access and reverse commute activities eligible Activities eligible under the former Job Access and Reverse Commute (JARC) program, which provided services to low-income individuals to access jobs, are now eligible under the Rural Area Formula program. In addition, the formula now includes the number of low-income individuals as a factor. There is no floor or ceiling on the amount of funds that can be spent on job access and reverse commute activities.

Fixed Guide-Way Capital Investment Grants (5309)

Also known as “New Starts / Small Starts,” this program awards grants on a competitive basis for major investments in new and expanded rail, bus rapid transit (BRT), and ferry systems.

- Core capacity projects now eligible: MAP-21 adds new eligibility for core capacity improvement projects, that is, projects that expand capacity by at least 10 percent in existing fixed guide way transit corridors that are at or above capacity, or are expected to be at capacity within five years.
- Project development streamlined: MAP-21 streamlines the project development process for New Starts. It eliminates the alternatives analysis requirement and instead relies on the review of alternatives performed during the metropolitan planning and environmental review processes. It creates the “Project Development” phase, during which environmental reviews are completed. Project sponsors must complete this phase within two years, or seek an extension from FTA. MAP-21 reduces the number of FTA approval steps by consolidating the “Preliminary Engineering” and “Final Design” stages into a single “Engineering” step. It also requires FTA to develop an expedited review process for determining the technical capacity of project sponsors to undertake the proposed project if they have recently and successfully completed at least one other new fixed guide way or core capacity improvement project.
- Project evaluation and rating: Under certain conditions, MAP-21 allows for the use of “warrants,” in other words, ways in which projects may qualify for automatic ratings

on the project justification criteria. It also eliminates the operating efficiencies criterion and adds a congestion relief criterion. It requires FTA to evaluate the benefits of a Small Starts project against the Federal share of the project, rather than the total project cost when developing the project justification rating.

- **Reorganization:** The fixed guide way modernization and bus and bus facilities programs, which were previously funded under Section 5309, have now been restructured and moved to a new Section 5337 State of Good Repair Program and a new Section 5339 Bus and Bus Facilities Program.
- **Other Provisions:** MAP-21 creates a competitive pilot program for expedited project delivery. In addition, it funds Small Starts projects through a single year grant or an expedited grant agreement. New Starts and core capacity projects are funded through a full funding grant agreement (FFGA). Congressional notification of grant award is 10 days for Small Starts projects and 30 days for New Starts and core capacity projects. MAP-21 requires FTA to issue policy guidance on the process and evaluation criteria within 180 days of enactment, and a rule within one year of enactment.

MAP-21 Flexibility between Transit and Highway Programs

Under MAP-21 CAT has an important new role in participating with the Coastal Region Metropolitan Planning Organization (CORE MPO). CAT has had representation on the MPO and can influence consideration for certain federal funds to have some flexibility in use particularly to support the capital portion of the TDP.

To enhance flexibility, a State may transfer up to 50% of any apportionment to another formula program, except no transfers are permitted of Metropolitan Planning funds or funds sub-allocated to areas based on population (STP and TA).

MAP-21 continues the STP, providing an annual average of \$10 billion in flexible funding that may be used by States and localities for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, transit capital projects and public bus terminals and facilities.

State of Good Repair Grants (5337)

MAP-21 establishes a new grant program to maintain public transportation systems in a state of good repair. This program replaces the fixed guide way modernization program (Section 5309). Funding is limited to fixed guide way systems (including rail, bus rapid transit, and passenger ferries) and high intensity bus (high intensity bus refers to buses operating in high occupancy vehicle (HOV) lanes.) Projects are limited to replacement and rehabilitation, or capital projects required to maintain public transportation systems in a state of good repair. Projects must be included in a transit asset management plan (see Sec 5326) to receive funding. The new formula comprises: (1) the former fixed guide way modernization formula; (2) a new service-based formula; and (3) a new formula for buses on HOV lanes. Authorized funding for this program is \$2.1 billion in FY 2013 and \$2.2 billion in FY 2014.

Bus and Bus Facilities Program (5339)

A new formula grant program is established under Section 5339, replacing the previous Section 5309 discretionary Bus and Bus Facilities program. This capital program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. Authorized funding is \$422 million in FY 2013 and \$428 million in FY 2014. Each year, \$65.5 million will be allocated with each State receiving \$1.25 million and each territory (including DC and Puerto Rico) receiving \$500,000. The remaining funding will be distributed by formula based on population, vehicle revenue miles and passenger miles. This program requires a 20 percent local match. Although this program is formula driven providing funding each year the Transportation Act is in effect, the level of allocation is not significant enough to address the capital vehicle needs of CAT over the next five years. This may be another issue to discuss at the MPO level to suggest use of flexible funds.

Transit-Oriented Development Planning Pilot

MAP-21 creates a new discretionary pilot program for transit-oriented development (TOD) planning grants. Eligible activities include comprehensive planning in corridors with new rail, bus rapid transit, or core capacity projects. The comprehensive plans should seek to enhance economic development, ridership, and other goals; facilitate multimodal connectivity and accessibility; increase access to transit hubs for pedestrian and bicycle traffic; enable mixed-use development; identify infrastructure needs associated with the project; and include private sector participation. MAP-21 authorizes \$10 million for FY 2013 and \$10 million for FY 2014. The window of opportunity for this particular program may be closing but CAT should continue to monitor future funding and partner with the City of Savannah for mutually beneficial improvements.

State of Georgia Transit Funding

The State of Georgia has had limited support of public transportation system operating and capital needs however certain local funding sources are permitted under Georgia law.

The Georgia Transit Association (GTA) 2013 STATE LEGISLATIVE AGENDA provides some insight regarding opportunities for the State of Georgia to invest in public transportation operations and capital infrastructure. The following priorities of the GTA are of significant importance to CAT and the Coastal Region:

Transportation Revenue Sources State Funding:

- In light of the failure of most of the regional transportation referenda pursuant to Georgia's Transportation Investment Act, there is a critical need for new sources of funding for Georgia's transportation infrastructure. Any new sources of funding should address the following principles established by the Georgia Transit Association:
- Purpose (use of proceeds) should include all modes of transportation, including transit;
- Allow for funding of transit operations;
- Supplement, not replace, existing funding and

- Provide flexibility for regions of the state to address their transportation needs

The number of Georgia transit systems and their ridership has grown in recent years, and transit operations are becoming more regional and multi-regional. Georgia regrettably remains one of nine states and the only one of the ten most populous that does not allocate state funds to assist public transit to maintain a state of good repair. Both urban and rural Georgia transit systems would benefit greatly from authorization of such state appropriations.

Allow one or more Counties to vote for a Dedicated Transit Sales Tax: Current state transportation sales tax law does not provide all local governments the flexibility to create or operate transit systems outside their region. These efforts might include multi-county transit projects such as express bus systems and commuter rail. Five counties in the Atlanta metro area are allowed to vote a dedicated sales tax for transit. Outside of Fulton, DeKalb, Gwinnett, Cobb, and Clayton Counties, other Georgia jurisdictions cannot vote to dedicate sales tax revenues to local or regional transit capital and operating expenses.

CAT should actively participate with the GTA as well as on its own local Savannah Legislative Delegation to pursue Georgia legislative changes that would permit mobility funding partnerships with GDOT.

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Chapter 9

Mobility Action Program (MAP)

Introduction

The TDP has identified community issues and mobility needs, provided a situation appraisal of environmental conditions and opportunities; established goals, objectives and strategies; defined strategic initiatives to improve existing services and develop new services; developed a strategic capital and operational improvement program; and overall has conjured a Vision of a “New” Chatham Area Transit Authority with a significant Mobility Manger role with associated responsibilities for the future. CAT has been awakened as a major player in contributing to the attainment of Goals of the Public and Private Sectors throughout the Savannah-Chatham Region.

The challenge for the CAT organization is to implement the TDP in a balanced, responsible way recognizing there will be a major cultural shift in the organization as it will take an entire motivated “CATEam” to bring to fruition the goals of the plan and the implementation of mobility improvements.

This Chapter presents a process to implement the Transit Development Plan by addressing some key steps, as follows:

1. **Spread the Word and Meaning of the Plan:** Involve all levels of the CAT organization from Board Members, Senior Management, Supervisors, all Departments and most importantly, staff that interfaces with the public daily such as Bus operators, Customer Service Representatives and others, within and outside of the organization. Develop an external communication plan and use various communication media and formats, adapted to the audience - the Web, social networks, brief brochures, and detailed proposal action plans.
2. **Engage People and Develop Relationships:** Implementing the strategies within the TDP will be a significant effort, as it is implementing change. Engaging more private and public sector citizens people will make it possible to increase awareness and gain human resources to get the multitude of tasks done. Those people engaged in the implementation will feel more ownership of the plan and will become passionate in supporting positive outcomes.
3. **Set Internal Priorities:** All of the goals and strategies in the plan cannot be implemented and accomplished at the same time. Review the strategies and determine the best places to start. This may be influenced by opportunities for quick successes, by a logical ordering of strategies that depend on actions completed in earlier strategies, or by an annual cycle of organizational activities. A matrix that shows when each strategy will be started and how long it will take to complete may be a useful attachment to the plan. Set milestones and measureable achievements

within the plan and develop action plans for individual initiatives within the plan. An annual work program format is recommended and provided at the end of this chapter

4. **Designate Task Leaders and Teams that Facilitate Involvement Across Departmental Lines:** Have a point person or leader for each goal or initiative: One designated point of contact for an initiative will make it easier to share information, monitor the status, and coordinate work across all components of the plan. Determine who is responsible for what, when it will be started and completed, and what intermediate accomplishments are needed to achieve final results. This will help to determine when adjustments need to be made and make actual progress more apparent. Have an easy way to track and summarize progress: recognizing even partial accomplishments and progress can be rewarding and motivating. Keep resources appropriately focused on implementing the initiatives, not on burdensome tracking procedures. Department heads should convene quarterly to assess activities, resource allocation and achievements.
5. **Link the Plan to Here and Now Activities:** Keep the plan visible by integrating it into regular activities such as staff meetings and professional development plans. Drill down from strategies to show how they are related to daily activities and specifically how achievements benefit the customers and stakeholders CAT serves.
6. **Recognize Accomplishments:** Recognizing what has been done can generate energy to do more. Don't wait until a project or plan is completed to recognize and celebrate. Recognize past accomplishments, and recognize milestones during the implementation of an initiative. Keep the TDP implementation process fluid track the implementation approaches that work well and which need refinement, and then adapt future implementation approaches.
7. **Continuously Involve the Public and Stakeholders:** CAT should keep an on-going TDP public involvement program (PIP) to educate, maintain awareness of the plan and gain support. The PIP should address various interest groups in the community and seek to bind a mobility coalition that CAT use as a resource to receive valuable insight on mobility needs and strategies to meet those needs.
8. **Renew and Revise:** CAT should conduct a formal annual review and "minor" update of the TDP to properly adjust implementation activities based upon current conditions and urgencies. This will maintain the TDP Process of alignment with community needs, the CAT vision, relevant goals and effective actions.
9. **Incorporate the TDP into the Annual Budgetary Process:** CAT is challenged each year to secure adequate funding for services and products. The



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TDP can be used as a valuable instrument to communicate the overall relationship and benefits of mobility investments in the scheme of the region's economic vitality and livability. The TDP provides the Budget process with greater vision beyond a year to develop a more comprehensive mobility system serving existing customers and attracting new customer markets.

All of the elements of the TDP can be utilized to establish an annual implementation work program to address major strategic initiatives:

- Family of Service Improvements: fixed route bus routing, span of service and frequency, zonal circulator services, commuter services, regional express services, etc.
- Partnerships and Business Development: continuation of existing partnerships in the community and greater involvement with Employers, Economic Development Initiatives, Local Governments, Growth Management and Sustainable Community Concerns.
- Marketing and Sales: the establishment of a clear organizational function that aggressively seeks out business relationships for services and products.
- Regional Multi-Modal Coordination: a significant shift of persona for CAT to mature into more than a bus system for a limited market and geographical area. As a Regional Mobility Manager, CAT enhances coordination with existing services and develops new mobility choices, provides technological advances and integrates with other service providers with a perspective of supporting the entire Transportation System.
- Capital and Operating Program: this strategic initiative is the most complex and challenging to implement. It involves a continuous analysis of funding needs and pursuit of investment partnerships that provide a clear return on investments. Operating programs and capital projects must be developed in a ready to go mode to justify investments and to immediately take advantage of opportunities.



Service Priorities:



Service priorities have been developed throughout the TDP planning process with a sense of current issues, needs and opportunities. As situations change CAT will have the ability to adjust implementation strategies while keeping the overall 5 year plan in perspective.

The TDP Public Involvement Program along with the Situation Appraisal has provided a focus on important factors CAT must address to be successful as a Mobility Manager. One core success factor involves partnerships with stakeholders. Although CAT has established stakeholder relationships, a more extensive outreach for partnerships must be taken to attract new choice rider markets.

Strategic Initiative: Partnerships / Business Development



Strategic Initiative: Partnerships / Business Development



There are many business development opportunities for CAT as it expands its role as not only a provider of mobility services but as a CATalyst for the coordination of services and a partner in community development activities.

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CAT has had a successful partnership with FTA in capturing discretionary grants for major capital project investments such as the new Downtown Savannah Terminal. Along with continued coordination with FTA, CAT can develop local partnerships for additional federal grant opportunities that address livability issues (e.g. Housing and Urban Development and Environmental protection Agency grants)



The Marketing and Sales function of any service oriented business plays a critical role in driving revenues, retaining customers, and achieving overall company objectives. CAT should be active in the business community as a peer targeting new business accounts and relationships to utilize existing services and developing new model mobility services.

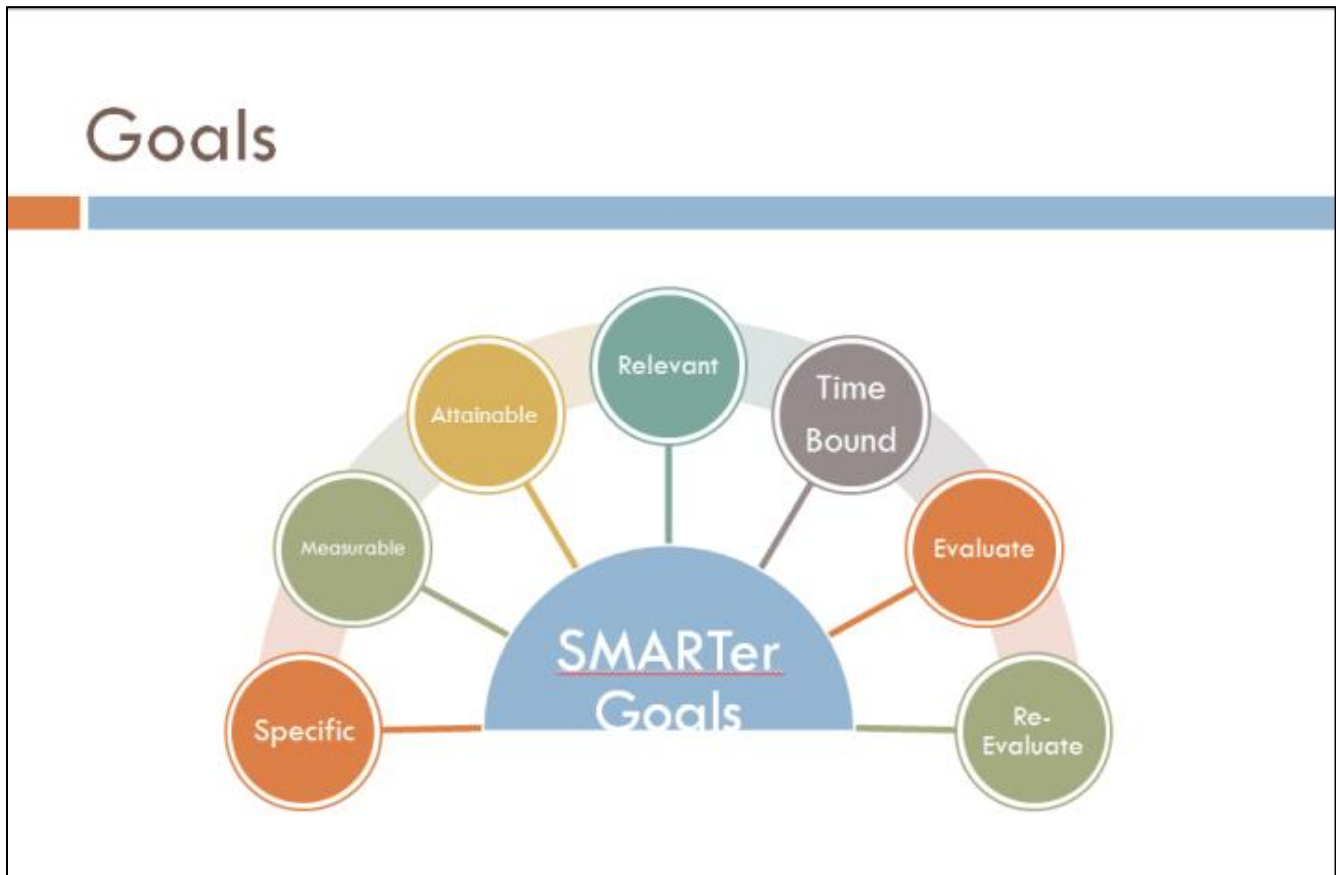
The CAT organization can maintain a high level of motivation with the realization that it can provide a significant contribution to the communities it serves. There is a high degree of relevance between mobility services CAT can coordinate and the major issues and initiatives that face the entire region. CAT can impact its customer's livelihood, their education, their health and overall prosperity. CAT employees are playing a significant role in the daily lives of the public that includes their neighbors, their friends and their own families.



Mobility Action Program

A Mobility Action Program (MAP) should be established internally for the CAT organization to implement the TDP. The Vision, Mission, Goals and Objectives developed for the TDP should form the foundation of the MAP. Table 9-1 provides an illustration of how CAT may methodically lay out a work program. In this example the Goal for Service Delivery and Performance is displayed. Objectives and strategies are presented in a matrix format with columns representing various departments and function of the CAT organization. Objectives and Strategies would be assigned to specific functions / individuals in order to give the TDP “legs”, meaning steps are taken to implement the Plan related to the steps cited in the beginning of this chapter. An executive staff committee should be formed to be responsible for this process and maintain a reasonable reporting process and perhaps quarterly meetings. The outputs and status of activities from this process can be regular input to the CAT Board Committees responsible for Service Development and Financing. As this process matures the Goals of the TDP become pertinent to the entire organization and meaningful as these goals are refined into SMARTER Goals. The Objectives and Strategies become very specific organizational work task that define resource needs, priorities and challenges.

The CAT MAP keeps the organization on course to implement the 5 year Plan, allows for detailed modifications and maintains awareness of progress and priorities.



CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Table 9-1. Annual Strategic Work Program

| | | A | B | C | D | E | F | G | H | I | J | | |
|----------------------|---|----------------|-------------|--------|----------|-----------|---------|-----------------|---------------------|----------|------------|--------------|--------|
| | | Transportation | Maintenance | Safety | Planning | Marketing | Finance | Human Resources | Community Relations | TeleRide | Management | Target Dates | Status |
| Goal 1 | Service Delivery and Performance | | | | | | | | | | | | |
| | To Continuously Improve Delivery of Existing Service and Expand CAT's Role of Providing A Family of Mobility Services That Include Services Actually Operated by CAT As Well As Coordinated Services As A Mobility Manager. | | | | | | | | | | | | |
| Objective 1.1 | Establish a Customer focused perspective with service designed to provide excellence to existing customer markets and expand mobility services for new choice rider markets | | | | | | | | | | | | |
| Strategy 1.1.1 | Continue customer research activities utilized during the TDP process to understand customer market needs and preferences. | | | | | | | | | | | | |
| Objective 1.2 | Enhance Fixed Route Bus Services to Optimize System Design and Meet Customer Demand | | | | | | | | | | | | |
| Strategy 1.2.1 | Improve accessibility to major health care, recreation, education, employment, cultural and social services facilities | | | | | | | | | | | | |
| Strategy 1.2.2 | Utilize TDP Service Planning Analysis and Subsequent Updates to Prioritize Service Improvements | | | | | | | | | | | | |
| Strategy 1.2.3 | Maintain the Service Review Committee to analyze service performance and adjust service appropriately | | | | | | | | | | | | |
| Strategy 1.2.4 | Maintain and enhance performance reporting process to include quarterly reports of key indicators to the CAT Board | | | | | | | | | | | | |
| Objective 1.3 | Develop Flex Route Zonal Services | | | | | | | | | | | | |
| Strategy 1.3.1 | Establish a Pilot Flex Service | | | | | | | | | | | | |
| Strategy 1.3.2 | Seek Partnerships within Flex service zones to provide customer amenities and/or operational revenues | | | | | | | | | | | | |
| Strategy 1.3.3 | Develop and integrate Flex service with mixed land use development and existing transit service. | | | | | | | | | | | | |
| Objective 1.4 | Establish a Commuter Service Program | | | | | | | | | | | | |
| Strategy 1.4.1 | Establish a commuter service program to promote use of existing and new public transportation services | | | | | | | | | | | | |
| Strategy 1.4.2 | Develop a commuter assistance program composed of marketing and sales materials focused upon Employer and Employee benefits. | | | | | | | | | | | | |
| Strategy 1.4.3 | Initiate a new CAT VanPlan Program that offers commuter van service to commuters throughout the Savannah Region. Coordinate this service with Employers, local governments, and existing service providers. | | | | | | | | | | | | |

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Appendix A - Executive Summary

Power Point

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Appendix B – Survey Instruments

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Chatham Area Transit (CAT) Passenger Survey

Dear CAT Rider: CAT is planning for the future. As part of this plan, we need information about your trip and your opinion to help improve transit services. Your participation in the attached survey is totally **voluntary**. If you do not wish to participate, please return the blank form to the surveyor on the bus. Your responses to this survey will be combined with responses from hundreds of other riders and will not in any way identify you personally. Even if you do not complete the survey, please return it to the bus driver, surveyor, or survey return box as you exit the bus. **THANK YOU for helping CAT improve services for you!**

1. Using the street location of your bus stop, a shopping center or other landmark, could you give a location of where you started your trip (your origin) and where your trip will end (your destination)?

_____ (Location where my trip began) _____ (Location where my trip will end)

2. What CAT route are you currently riding on? (Please ✓ only ONE)

- | | | | |
|----------------|------------------|-----------------|----------------------------|
| 1 ___ Route 2 | 7 ___ Route 11 | 13 ___ Route 20 | 19 ___ SSU Blue |
| 2 ___ Route 3A | 8 ___ Route 12 | 14 ___ Route 24 | 20 ___ SSU Prowler |
| 3 ___ Route 3B | 9 ___ Route 13 | 15 ___ Route 27 | 21 ___ SSU Twilight |
| 4 ___ Route 4 | 10 ___ Route 14 | 16 ___ Route 28 | 22 ___ Liberty St. Shuttle |
| 5 ___ Route 6 | 11 ___ Route 114 | 17 ___ Route 29 | 23 ___ CAT Shuttle |
| 6 ___ Route 10 | 12 ___ Route 17 | 18 ___ Route 31 | 24 ___ DOT Express Shuttle |

3. How did you get to the bus stop for this trip? (Please ✓ only ONE)

- | | | |
|-----------------------|-------------------------------|--------------------|
| 1 ___ Walked 1 block | 4 ___ Walked 4 blocks or more | 7 ___ Rode bicycle |
| 2 ___ Walked 2 blocks | 5 ___ Was dropped off | 8 ___ Other _____ |
| 3 ___ Walked 3 blocks | 6 ___ Drove and parked | |

4. What is the purpose of your trip today? (Please ✓ only ONE)

- | | | | |
|------------|----------------------|---------------------------|-------------|
| 1 ___ Home | 3 ___ School | 5 ___ Shopping/Errands | 7 ___ Other |
| 2 ___ Work | 4 ___ Doctor/Dentist | 6 ___ Visiting/Recreation | |

5. Does your current trip involve a transfer? 1 ___ Yes 2 ___ No

IF YES → Transferring from bus route number _____ to bus route number _____

6. Where are you going on this trip? (Please ✓ only your FINAL destination for this trip?)

- | | | | |
|------------|----------------------|---------------------------|-------------|
| 1 ___ Home | 3 ___ School | 5 ___ Shopping/Errands | 7 ___ Other |
| 2 ___ Work | 4 ___ Doctor/Dentist | 6 ___ Visiting/Recreation | |

7. Do you have a valid driver's license?

- 1 ___ Yes 2 ___ No

8. What is your gender? 1 ___ Male 2 ___ Female

9. How will you get to your final destination? (Please ✓ only ONE)

- | | | | |
|---------------------|-----------------------------|----------------------|--------------------|
| 1 ___ Walk 1 block | 3 ___ Walk 3 blocks | 5 ___ Get picked up | 7 ___ Ride bicycle |
| 2 ___ Walk 2 blocks | 4 ___ Walk 4 blocks or more | 6 ___ Drive and park | 8 ___ Other |

10. Which of the following were in place at the bus stop where you boarded? (Please ✓ all that apply)

- | | | |
|-------------|-----------------|--|
| 1 ___ Sign | 3 ___ Shelter | 5 ___ Route/System Information (including times) |
| 2 ___ Bench | 4 ___ Trash Can | |

11. What type of fare did you pay when you boarded this bus? (Please ✓ only ONE)

- | | | | |
|-----------------|-----------------------|--------------------|-------------------------------|
| 1 ___ Base Fare | 3 ___ Senior/Disabled | 5 ___ 31 Day Pass | 7 ___ 20 Ride Pass |
| 2 ___ Transfer | 4 ___ 7 Day Pass | 6 ___ All Day Pass | 8 ___ Free (Downtown Shuttle) |

12. On average, how many days per week do you ride the bus? (Please ✓ only ONE)

- | | | | |
|--------------|--------------|--------------|---------------------------|
| 1 ___ 1 day | 3 ___ 3 days | 5 ___ 5 days | 7 ___ 7 days |
| 2 ___ 2 days | 4 ___ 4 days | 6 ___ 6 days | 8 ___ 2-3 times per month |

13. Compared to other transportation alternatives available to you, what is the most important reason you use CAT? (Please ✓ only ONE)

- | | | |
|--|-----------------------------------|----------------------------|
| 1 ___ I prefer CAT to other alternatives | 4 ___ CAT is more convenient | 7 ___ I do not drive |
| 2 ___ Car is not available all the time | 5 ___ Parking too expensive | 8 ___ Car is not available |
| 3 ___ CAT fits my budget better | 6 ___ CAT is safer/less stressful | 9 ___ Other _____ |

14. How would you make this trip if not by bus? (Please ✓ only ONE)

- | | | |
|-------------------------|--------------------------|------------|
| 1 ___ Drive | 3 ___ Wouldn't make trip | 5 ___ Walk |
| 2 ___ Ride with someone | 4 ___ Bicycle | 6 ___ Taxi |

15. How long have you been using CAT bus service? (Please ✓ only ONE)

- 1 ___ Less than 6 months 2 ___ 6 months to 1 year 3 ___ 1 to 2 years 4 ___ More than 2 years

16. Your age is... (Please ✓ only ONE)

- | | | | |
|-------------------|----------------|----------------|----------------|
| 1 ___ 17 or under | 3 ___ 25 to 34 | 5 ___ 45 to 54 | 7 ___ 60 to 64 |
| 2 ___ 18 to 24 | 4 ___ 35 to 44 | 6 ___ 55 to 59 | 8 ___ Over 64 |

PLEASE CONTINUE ON BACK OF SURVEY →

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

17. What is your ethnic heritage? (Please ✓ only ONE)

1 ___ White 2 ___ Black 3 ___ Hispanic 4 ___ Asian 5 ___ Other _____

18. What was the range of your total household income for 2011?

1 ___ Less than \$10,000 3 ___ \$15,000 to \$19,999 5 ___ \$25,000 to \$29,999
 2 ___ \$10,000 to \$14,999 4 ___ \$20,000 to \$24,999 6 ___ \$30,000 and over

19. How many working vehicles (cars, vans, and/or light trucks) are available in your household?

1 ___ 0 vehicles 3 ___ 2 vehicles 5 ___ 4 vehicles
 2 ___ 1 vehicle 4 ___ 3 vehicles 6 ___ 5 or more vehicles

20. How many months out of the year do you reside in Chatham County? (Please ✓ only ONE)

1 ___ 12 months (full-time resident) 3 ___ 6-9 months 5 ___ 0-2 months
 2 ___ 10-11 months 4 ___ 3-5 months 6 ___ Tourist/Visitor

21. To help CAT design better service, please list the following:

Work Start Time _____ Work End Time _____

22. Are you eligible to use Teleride? 1 ___ Yes 2 ___ No 3 ___ Do not know

IF YES → Why did you choose to use CAT for your trip TODAY? (Please ✓ only ONE)

1 ___ More convenient 3 ___ Other _____ (Please Specify)
 2 ___ Could not get a paratransit trip

23. How satisfied are you with the following aspects of CAT communications.

| | Very Satisfied ☺ | | Neutral ☹ | | Very Unsatisfied ☹ |
|--|---------------------|---|--------------|---|-----------------------|
| <i>Please Circle the number that best reflects your opinion</i> | | | | | |
| a. Drivers' ability to answer YOUR questions | 5 | 4 | 3 | 2 | 1 |
| b. Drivers' communication to passengers in unexpected situations | 5 | 4 | 3 | 2 | 1 |
| c. Your ability to get where you want to go using the bus | 5 | 4 | 3 | 2 | 1 |
| d. Quality of website information | 5 | 4 | 3 | 2 | 1 |
| e. Next stop announcements on-board vehicle | 5 | 4 | 3 | 2 | 1 |
| f. Convenience of ticket purchase locations | 5 | 4 | 3 | 2 | 1 |

24. How satisfied are you with each of the following?

Please Circle the number that best reflects your opinion

| | Very Satisfied ☺ | | Neutral ☹ | | Very Unsatisfied ☹ |
|--|---------------------|---|--------------|---|-----------------------|
| a. Your overall satisfaction with CAT | 5 | 4 | 3 | 2 | 1 |
| b. Frequency of service (how often buses run) | 5 | 4 | 3 | 2 | 1 |
| c. Your ability to get where you want to go using the bus | 5 | 4 | 3 | 2 | 1 |
| d. The number of times you have to transfer buses to get to where you want to go | 5 | 4 | 3 | 2 | 1 |
| e. How easy it is to transfer between buses | 5 | 4 | 3 | 2 | 1 |
| f. How regularly buses arrive on time | 5 | 4 | 3 | 2 | 1 |
| g. The time it takes to make a trip by bus | 5 | 4 | 3 | 2 | 1 |
| h. Value of bus fare (service you get for what you pay) | 5 | 4 | 3 | 2 | 1 |
| i. How easy it is to get bus route and schedule | 5 | 4 | 3 | 2 | 1 |
| j. How easy it is to use bus route and schedule | 5 | 4 | 3 | 2 | 1 |
| k. The time of day the <i>earliest</i> buses run on weekdays | 5 | 4 | 3 | 2 | 1 |
| l. The time of day the <i>latest</i> buses run on weekdays | 5 | 4 | 3 | 2 | 1 |
| m. The time of day the <i>earliest</i> buses run on weekends | 5 | 4 | 3 | 2 | 1 |
| n. The time of day the <i>latest</i> buses run on weekends | 5 | 4 | 3 | 2 | 1 |
| o. How clean the buses and bus stops are | 5 | 4 | 3 | 2 | 1 |
| p. Safety at the bus stop | 5 | 4 | 3 | 2 | 1 |
| q. Safety while riding the bus | 5 | 4 | 3 | 2 | 1 |
| r. Safety after getting off the bus | 5 | 4 | 3 | 2 | 1 |
| s. Temperature inside the buses | 5 | 4 | 3 | 2 | 1 |
| t. Availability of seats on the buses | 5 | 4 | 3 | 2 | 1 |
| u. The bus driver's ability to drive the bus | 5 | 4 | 3 | 2 | 1 |
| v. The bus driver's courtesy | 5 | 4 | 3 | 2 | 1 |

25. Using letters "b" through "v" in Question 24 above, identify the three service characteristics that would most help YOU if CAT were to improve:

1. _____ 2. _____ 3. _____

THANK YOU FOR COMPLETING THE SURVEY.

Teleride Customer Survey

Dear Teleride Customer:

Chatham Area Transit (CAT) is preparing its Transit Development Plan (TDP). The TDP helps determine future transit improvements over the next 5 years and provides insight on the role of transit in making Chatham County a great place to live and work. As part of this effort, CAT would like to collect information about your travel experiences and solicit your opinions to help improve your transit services. Please take a few minutes to complete the following survey.

Your participation in this survey is completely voluntary and your responses will be kept anonymous and will be combined with the responses of other respondents.

Please check (✓), write in, or circle your answers. Please return it to us using the enclosed stamped return envelope.

THANK YOU IN ADVANCE FOR YOUR COOPERATION!

1. How often do you use Teleride services?

- | | |
|--------------------------------|--------------------------------|
| 1. _____ Daily | 4. _____ A few times per month |
| 2. _____ 2 to 4 times per week | 5. _____ Only occasionally |
| 3. _____ Once per week | |

2. Do you use a wheelchair for your travels on Teleride?

- | | |
|--------------|-------------|
| 1. _____ Yes | 2. _____ No |
|--------------|-------------|

3. How would you rate the overall quality of the Teleride service?

- | | |
|--------------------|---------------|
| 1. _____ Excellent | 4. _____ Fair |
| 2. _____ Good | 5. _____ Poor |
| 3. _____ Average | |

4. How would you rate the comfort of the Teleride vehicles?

- | | |
|--------------------|---------------|
| 1. _____ Excellent | 4. _____ Fair |
| 2. _____ Good | 5. _____ Poor |
| 3. _____ Average | |

(please see reverse side)

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

5. How would you rate the cleanliness of the Teleride vehicles?

- | | |
|---------------------------------------|----------------------------------|
| 1. <input type="checkbox"/> Excellent | 4. <input type="checkbox"/> Fair |
| 2. <input type="checkbox"/> Good | 5. <input type="checkbox"/> Poor |
| 3. <input type="checkbox"/> Average | |

6. How often do you arrive at your destinations on time?

- | | |
|--|---------------------------------------|
| 1. <input type="checkbox"/> Always | 3. <input type="checkbox"/> Sometimes |
| 2. <input type="checkbox"/> Most of the time | 4. <input type="checkbox"/> Never |

7. How long have you been using Teleride?

- | | |
|--|---|
| 1. <input type="checkbox"/> Less than six months | 3. <input type="checkbox"/> 1-2 years |
| 2. <input type="checkbox"/> Six months to a year | 4. <input type="checkbox"/> More than 2 years |

8. How would you rate the courtesy and helpfulness of the drivers when riding Teleride?

- | | |
|---------------------------------------|----------------------------------|
| 1. <input type="checkbox"/> Excellent | 4. <input type="checkbox"/> Fair |
| 2. <input type="checkbox"/> Good | 5. <input type="checkbox"/> Poor |
| 3. <input type="checkbox"/> Average | |

9. How would you rate the courtesy and helpfulness of the telephone reservationists when you call Teleride to schedule a trip?

- | | |
|---------------------------------------|----------------------------------|
| 1. <input type="checkbox"/> Excellent | 4. <input type="checkbox"/> Fair |
| 2. <input type="checkbox"/> Good | 5. <input type="checkbox"/> Poor |
| 3. <input type="checkbox"/> Average | |

10. How did you become aware of Teleride?

11. How would you get to your destination if Teleride service was not available?

- | | |
|-----------------------------------|---|
| 1. <input type="checkbox"/> Drive | 4. <input type="checkbox"/> Ride with someone |
| 2. <input type="checkbox"/> Taxi | 5. <input type="checkbox"/> Another CAT service |
| 3. <input type="checkbox"/> Walk | 6. <input type="checkbox"/> I would not make the trip |

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12. What is your **primary purpose** for using Teleride?

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Home | 6. <input type="checkbox"/> Doctor/Dentist |
| 2. <input type="checkbox"/> Work | 7. <input type="checkbox"/> Shopping |
| 3. <input checked="" type="checkbox"/> School | 8. <input type="checkbox"/> Recreation/Visiting |
| 4. <input type="checkbox"/> Workshop | |
| 5. <input type="checkbox"/> Senior Center | |

13. Check **all purposes** for which you use Teleride.

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Home | 6. <input type="checkbox"/> Doctor/Dentist |
| 2. <input type="checkbox"/> Work | 7. <input type="checkbox"/> Shopping |
| 3. <input checked="" type="checkbox"/> School | 8. <input type="checkbox"/> Recreation/Visiting |
| 4. <input type="checkbox"/> Workshop | |
| 5. <input type="checkbox"/> Senior Center | |

14. Your age is...

- | | |
|--|--|
| 1. <input type="checkbox"/> 24 years or less | 5. <input type="checkbox"/> 55 to 64 years |
| 2. <input type="checkbox"/> 25 to 34 years | 6. <input type="checkbox"/> 65 to 74 years |
| 3. <input type="checkbox"/> 35 to 44 years | 7. <input type="checkbox"/> 75 to 84 years |
| 4. <input type="checkbox"/> 45 to 54 years | 8. <input type="checkbox"/> 85 years or more |

15. You are...

- | | |
|----------------------------------|------------------------------------|
| 1. <input type="checkbox"/> Male | 2. <input type="checkbox"/> Female |
|----------------------------------|------------------------------------|

16. You are... (please check only **ONE**)

- | | |
|--|--|
| 1. <input type="checkbox"/> White | 3. <input checked="" type="checkbox"/> Hispanic, Latino, Spanish |
| 2. <input checked="" type="checkbox"/> Black | 4. <input type="checkbox"/> Other |

17. Your total annual **household income** is...

- | | |
|--|--|
| 1. <input type="checkbox"/> Less than \$10,000 | 5. <input type="checkbox"/> \$40,000 to \$49,999 |
| 2. <input type="checkbox"/> \$10,000 to \$19,999 | 6. <input type="checkbox"/> \$50,000 to \$59,999 |
| 3. <input type="checkbox"/> \$20,000 to \$29,999 | 7. <input type="checkbox"/> \$60,000 to \$69,999 |
| 4. <input type="checkbox"/> \$30,000 to \$39,999 | 8. <input type="checkbox"/> \$70,000 and over |

(please see reverse side)

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

18. How many vehicles are available in your **household**?

1. _____ Zero

3. _____ Two

2. _____ One

4. _____ Three or more

19. Do you have a valid driver's license?

1. _____ Yes

2. _____ No

20. If you have a driver's license, is it a **Georgia** issued license?

1. _____ Yes

2. _____ No

21. If you are currently employed outside of your home, do you use Teleride for work related trips?

1. _____ Yes

2. No 3. _____ Not currently employed

22. Please tell us the one thing that you like the most about Teleride.

23. Please tell us one thing you like the least about Teleride.

23. Please tell us how you feel we could improve the quality of our service or serve your transportation needs better.

THANK YOU FOR YOUR COOPERATION & ASSISTANCE !!

**PLEASE RETURN THE COMPLETED SURVEY USING
THE ENCLOSED STAMPED RETURN ENVELOPE |**



Chatham Area Transit Non-User Survey

1. Before today, were you aware that Chatham County had a public transportation system?

Yes ___ No ___

2. What public transportation services had you heard of before today? Please check all that apply.

Chatham Area Transit ___

CAT ___

SCAD ___

Coastal Regional Coaches ___

Belles Ferry ___

DOT Shuttle ___

Tybee Shuttle ___

None of the above ___

3. What would you say is the main reason you have never ridden public transportation in Chatham County?

I have a car ___

Public transportation doesn't operate when I need to travel ___

Public transportation doesn't operate where I need to travel ___

Public transportation is inconvenient ___

Public transportation is too expensive ___

Public transportation is unreliable ___

I don't know where the public transportation services go ___

I was not aware the services were available to me ___

(please see reverse side)

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

4. Public transportation is an important service for Chatham County residents and visitors. Do you?

Strongly agree _____
Somewhat agree _____
Neither agree nor disagree _____
Somewhat disagree _____
Strongly disagree _____

5. An effective public transportation system is important for the local economy. Do you?

Strongly agree _____
Somewhat agree _____
Neither agree nor disagree _____
Somewhat disagree _____
Strongly disagree _____

6. The following statements describe changes that might be made to the bus system. Please indicate if these changes would affect your willingness to ride the bus. For each statement, please circle the number that reflects your opinion (1 = strongly agree these changes would encourage me to use the bus, 2 = somewhat agree, 3 = neutral, 4 = somewhat disagree, and 5 = strongly disagree these changes would encourage me to use the bus.)

Buses came to my stop every 30 minutes or less _____
The bus ride time was shorter _____
Buses were cleaner and more comfortable _____
Buses were less crowded _____
The bus routes were closer to my home or work _____
Bus service was available later at night _____
Bus service was available earlier in the morning _____
More service was available on Saturday _____
More service was available on Sunday _____
Better information about the routes and schedules _____

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

7. Do you have any other comments or suggestions you would like to share?

Thank you.



CAT User Survey

1. How often do you ride CAT (Please ✓ only ONE)

- 4 or more days per week
- About 1 day per week
- 2 or 3 days per week
- Once or twice a month

2. What is the most important reason you ride the bus? (Please ✓ only ONE)

- I don't drive
- Car is not available
- Bus is more economical
- Traffic is too bad
- I don't have a valid driver's license
- Bus is more convenient
- Other _____ (Please specify)




3. How long have you been using CAT services?

- Less than 6 months
- 6 months to 2 years
- 2 years to 5 years
- More than 5 years

(Please see reverse side)

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

4. How satisfied are you with each of the following?

| Please Circle the number that best reflects your opinion | | Very Satisfied | Neutral | Very Unsatisfied | | |
|--|---|---|---|---|---|---|
| | |  |  |  | | |
| A | Your overall satisfaction with CAT | 5 | 4 | 3 | 2 | 1 |
| B | Frequency of service (how often buses run) | 5 | 4 | 3 | 2 | 1 |
| C | Your ability to get where you want to going the bus | 5 | 4 | 3 | 2 | 1 |
| D | How easy it is to transfer between buses | 5 | 4 | 3 | 2 | 1 |
| E | How regularly buses arrive on time | 5 | 4 | 3 | 2 | 1 |
| F | The time it takes to make a trip by bus | 5 | 4 | 3 | 2 | 1 |
| G | How easy it is to get bus route and schedule information | 5 | 4 | 3 | 2 | 1 |
| H | How easy it is to use bus route and schedule information | 5 | 4 | 3 | 2 | 1 |
| I | The time of day the <i>earliest</i> buses run on weekdays | 5 | 4 | 3 | 2 | 1 |
| J | The time of day the <i>latest</i> buses run on weekdays | 5 | 4 | 3 | 2 | 1 |
| K | The time of day the <i>earliest</i> buses run on Saturdays | 5 | 4 | 3 | 2 | 1 |
| L | The time of day the <i>latest</i> buses run on Saturdays | 5 | 4 | 3 | 2 | 1 |
| M | The time of day the <i>earliest</i> buses run on Sundays | 5 | 4 | 3 | 2 | 1 |
| N | The time of day the <i>latest</i> buses run on Sundays | 5 | 4 | 3 | 2 | 1 |
| O | How clean the buses and bus stops are | 5 | 4 | 3 | 2 | 1 |
| P | Safety at the bus stop | 5 | 4 | 3 | 2 | 1 |
| Q | The number of designated stops along the route | 5 | 4 | 3 | 2 | 1 |
| R | Temperature inside the buses | 5 | 4 | 3 | 2 | 1 |
| S | The bus driver's ability to drive the bus | 5 | 4 | 3 | 2 | 1 |
| T | The bus driver's courtesy | 5 | 4 | 3 | 2 | 1 |
| U | The availability of bus shelters along the route | 5 | 4 | 3 | 2 | 1 |
| V | The availability of route and schedule information | 5 | 4 | 3 | 2 | 1 |

Thank You.

Chatham Area Transit Employee Transportation Survey

Chatham Area Transit (CAT) is preparing its Five Year Transit Development Plan (TDP). The TDP helps determine future transit improvements and provides insight on the role of transit in making Chatham County a great place to live and work. As a CAT Bus Operator or Customer Service representative, we believe you can offer valuable insight regarding existing services and improvements desired by CAT customers. Your input will be incorporated in the TDP in an effort to develop future plans consistent with the public's vision for transportation services.

Your participation in this survey is strictly voluntary. Your responses will remain anonymous and will be combined with the responses of other CAT Operators and Customer Service employees and summarized in the TDP.

1. Which best describes **your position** within CAT?

- Bus Operator
- Customer Service Representative
- Other -- *please describe* _____

2. Following is a list of potential improvements to CAT service. Please **pick the top five (5) improvements in priority order (1 = most needed; 2 = second priority; 3 = third priority, etc.)** that you feel should be given priority for implementation.

- operate more frequent weekday service
- operate earlier weekday service
- operate later weekday service
- operate more frequent weekend service
- operate earlier weekend service
- operate later weekend service
- improve maintenance of transit vehicles
- add more shelters and accessible stops
- enhance ADA features (lifts, voice announcements, etc.)
- improve on-time performance
- reduce travel time
- improve passenger safety and security
- improve route and schedule information

3. Is there a problem with the running time of your route? If yes please specify route and time of day. Why do you think there is a problem?

(please see reverse side)

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

4. Are there areas of your route that you feel are dangerous to operate? If yes, please specify location by street name or landmark

5. Do you have other suggestions for modifications to CAT services? If so, please specify

6. Following is a list of complaints customers may have expressed to you. Please indicate the three (3) complaints that you hear most frequently in order (1 = heard most frequently; 2 = next most frequent; 3 = third most frequent) from the passengers.

- | | |
|---|---|
| <input type="checkbox"/> passengers can't get information | <input type="checkbox"/> service seems unsafe |
| <input type="checkbox"/> service doesn't go where I want | <input type="checkbox"/> vehicle is not comfortable |
| <input type="checkbox"/> transit service is early or late | <input type="checkbox"/> transit vehicle is not clean |
| <input type="checkbox"/> need later evening service | <input type="checkbox"/> no shelters/benches |
| <input type="checkbox"/> need earlier morning service | |
| <input type="checkbox"/> service isn't frequent enough | |
| <input type="checkbox"/> other complaint – please describe: _____ | |

7. Please rank the **validity** of the passenger complaints by telling us what complaints you agree with (1 = always agree with, 2 = often agree with, 3 = sometimes agree with, 4 = seldom agree with)

- | | |
|---|--|
| <input type="checkbox"/> passengers can't get information | <input type="checkbox"/> service seems unsafe |
| <input type="checkbox"/> service doesn't go where I want | <input type="checkbox"/> vehicle is not comfortable |
| <input type="checkbox"/> transit service is early or late | <input type="checkbox"/> transit vehicle is not clean |
| <input type="checkbox"/> need later evening service | <input type="checkbox"/> no shelters/benches |
| <input type="checkbox"/> transit vehicle is not comfortable | <input type="checkbox"/> service isn't frequent enough |
| <input type="checkbox"/> need earlier morning service | |
| <input type="checkbox"/> other complaint – please describe: _____ | |

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Appendix C – Intelligent Transportation Systems (ITS)

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Deployment and Use of Technology

CAT can translate its upcoming investments in Intelligent Transportation Systems (ITS) into improved management of operations, planning, and scheduling and customer relations. ITS are communications-based technologies that make travel more efficient and effective, using the transportation network that exists, while building smarter infrastructure to meet future demands. The documented benefits of ITS technologies are measured in safety, time, money and preservation of the environment.

The following suite of products are being either implemented or considered at CAT.

Fleet Management for Fixed Route Bus System & Paratransit

Computer Aided Dispatch (CAD) is a technology assisted form of communication with transit vehicles which can display a large amount of live operating information in an easy to organize manner for a dispatcher. CAD can be used in a fixed facility, typically onsite of the transit agency or co-located within shared traffic management center. It can also be used by road supervisors with in-vehicle laptops. CAD is typically complemented by Automatic Vehicle Location (AVL) provided by Global Positioning System (GPS) satellites which orbit the earth and provide accurate position information to vehicles which gets displayed on a map.



Figure C-9. Transit Dispatch CAD/AVL Display

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In vehicle systems are typically comprised of mobile data terminals (MDT), vehicle logic units/onboard computers, and either an analog or digital form of voice and data communication.

Fleet management within a paratransit system also utilizes CAD/AVL and similar in vehicle technology, but may also include functions such as turn by turn navigation to eliminate the need for paper maps, and dynamic updates for paratransit pickups and drop offs that allow for management be more adaptive.

Transit schedule information can be used in the development of transit trip planners. Trip planners, such as Google Transit, allow a rider to input an origin and destination into a service which returns the routes, stops and times needed to be taken to complete the trip. Real time transit information becomes possible with the installation of AVL. Using a published schedule, actual vehicle locations can be compared with a scheduled time to determine whether a vehicle is on time, early or late. These vehicle statuses can be communicated to the riding public via phone, web services, dynamic message signs, kiosks and mobile device apps.

Other in vehicle technologies include vehicle health monitoring, which processes outputs from the onboard communications systems to check the status of an engine, transmission and other critical systems for faults. Automatic passenger counters (APC) measure passengers boarding and alighting at bus stops so that amenities can be placed at high use locations. Mobile surveillance can take the form of onboard cameras and covert audio transmissions in real time to remotely manage incidents on vehicles.

ITS Project Management

In the summer of 2012, Chatham County entered into a 1.7 million dollar ITS contract with Indra, a large European based multinational company. The scope of this project includes a fixed and mobile CAD/AVL, APCs, real time traveler information and mobile surveillance. A fairly aggressive 10 month project schedule has been proposed, with Indra anticipating final system acceptance in May of 2013. The project schedule includes a 4 stage implementation plan; a preliminary design review, final design review, pilot and finally, full system test phase.

There can sometimes be difficulties when adapting products designed for South American & European transit systems to the USA. Terminology and methods of fleet management may be more varied between cultures, depending on which transit systems these products have been developed for in the past. Inevitably, these issues of compatibility tend to be worked out in time but can impact the project schedule if not quickly addressed. For Indra, these issues may have been addressed over previous North American installations. However, depending on the number of installations completed, there still may be issues encountered that will need to be resolved.

With a schedule leaving little time to work out any unexpected system under or non-performance, there are ITS project management best practices CAT can follow to protect their investment and ensure a successful system launch.

Be familiar with contract terms that address situations when there are delays in schedule or failure to meet requirements

Bundled ITS system installations tend to be complex, involve integration with existing systems and require explicitly defined roles and responsibilities for the agency, vendors and integrator. Typically only minor issues arise between the agency and integrator. There are scenarios where disputes can occur that result in project delays. Often, ITS contracts may include terms included such as liquidated damages, which provide for financial relief when the contractor fails to meet its obligations. The agency project manager should be well acquainted with these contract provisions and under which circumstances they apply, so that project critical path is maintained and the financial interest of the County is preserved.

Balance contract milestone payments over the course of the deployment

Front loading contract milestone payments can leave little leverage for negotiation, in the event of a dispute. Conversely, heavily back loaded payments can leave the integrator and vendors with insufficient capital to complete the project. Also, it is prudent to withhold a certain percentage of the contract value until the completion of warranty period so warranty claims are resolved to CAT's satisfaction. The contract milestone payment schedule appears to be well balanced.

Translate system specifications into the Acceptance Test Procedures

One of the great challenges of implementing so much technology so quickly is the possibility of certain functionality or requirements to not be successfully demonstrated prior to an integrator's request for system acceptance. This can be due to the sheer number of requirements which can range from several hundred to one thousand. Therefore, one method to address this gap is to turn individual requirements in the scope into the test procedures. Each component of the system should be operating and fully functional as demonstrated in the final acceptance test. This will ensure all of the promised system functions were 'turned on' as part of the build for CAT.

Validating the accuracy of finely tuned subsystems such as APCs and Real Time Information Systems

These systems tend to perform much better in a controlled environment than they do when presented with real world conditions. For this reason, special care should be taken to test a representative sample of the APCs within each vehicle type, for example. Real time transit information performs quite consistently when the transit network is fully operational and all vehicles are logged in to the AVL. However, when buses break down or are not logged in, passengers can be greeted by 'ghost buses', or vehicles that approach their stop that aren't found in the arrival predictions. It should be understood how the ITS system manages these types of conditions.

Using ITS to Improve Operations, Planning and Customer Service

One of the greatest challenges in deploying a bundled ITS system such as CAT's, will be adapting agency policy and procedures to ensure a smooth transition from existing protocol to a new operation enhanced by technology. The following section describes some best practices.

Update written Standard Operating Procedures (SOP) to change existing practice

Some examples of this include:

- Transitioning to an enhanced dispatch operation which can track vehicles and system performance in real time. One method is to divide responsibilities for normal operations dispatch to the fixed dispatch center and delegate certain dispatch responsibilities to mobile supervisor units under incident or accident conditions;
- New procedures for Customer Service representatives to access bus arrival times, statuses of paratransit vehicle delays and actively manage manifests; and
- Bus operator vehicle condition checklists may be automated, a new vehicle log-in and out process created, new bus hold passenger transfer policies and on time performance metrics developed.



Mobile Dispatch

Use reports as transit system feedback to improve operations, planning and customer service

CAT's operations based performance measures can be monitored through the ITS system reporting suite. The utilization of the AVL playback feature and reports can identify poor performing routes, unrealistic run times and measure on time performance (OTP). It is not uncommon for transit agencies that have previously used road supervisors to determine OTP to find much poorer schedule adherence in practice once the AVL system begins reporting a 100% sample that includes every trip. Many ITS systems allow for creation of custom reports tailored for the specific agency installation and can even feed such tools as executive dashboards which summarize high level data for top management.

Mobile cameras and public requests for information

The introduction of mobile surveillance may bring with it a number of responsibilities that did not previously exist before they were deployed. The benefits include the ability to deter crime, determine accident fault and manage incidents in real time. CAT may receive requests for video of activities not related to the transit system that happen to be caught on exterior facing cameras. These types of requests can put a burden on staff time, which absent a policy for reimbursement, can cost the system money. Therefore, CAT should refer to state and local law regarding open records access and develop a policy that both handles requests consistent with those laws and is possible for staff to manage.

Other Recommendations & Resources

Develop an ITS Master Plan

- An ITS Master Plan should take an inventory of existing technology and functionality, funding availability, future goals and objectives, and institute a methodical approach to management of an ITS program. An ITS Master Plan is important to
- Avoid implementing systems which are not compatible, potentially from different agency departments;
- Reduce overlap or duplicative capabilities of competing systems;
- Determine the amount of time certain ITS technologies are viable so that life cycle costs and replacement can be programmed;
- Identify future needs, based on projected changes within the transit system and the technological capabilities required to manage its operation.

The transit operator markets its Veolia Vision suite of technology products for CAT, which suggests there may be an actively managed plan for ITS.

Consider involvement with the Georgia ITS society

Coordinate with the local ITS America chapter so they can champion CAT's project to other policy makers to build support for future development. ITS society chapters are typically more traffic focused but are generally receptive to transit as a way to be more inclusive. The Georgia ITS society chapter publishes some useful guidance:

We believe that ITS is a valuable tool for improved management of any transportation system, regardless of the inherent complexity of the system. ITS can help operate, manage, and maintain the system once it has been constructed.

We believe that ITS should be systematically incorporated into the earliest stages of project development, especially into the planning and design of transportation projects. We believe the best way to achieve this systematic incorporation into the process is through a coordinated, comprehensive program to "get out the word" on ITS to constituencies that might not otherwise consider the relevance of ITS to their transportation system.

Towards achieving this goal, the Board adopted the following objectives:

- Develop a broader ITS constituency
- Educate policy makers (e.g., agency administrators, county commissioners, mayors, planning commissions, etc.) on benefits of continued operations and maintenance and how
- ITS can help. Educate our members of national directions and technologies
- Provide forums to share and coordinate ITSGA member missions and experiences

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

Access the U.S. DOT ITS Peer-to-Peer program

Another no-cost resource available to CAT to aide in ITS system management is the Peer to Peer program provided by the U.S. Department of Transportation. From the U.S. DOT regarding the program:

Any public agency or group that is involved in planning, evaluating, making decisions, or operating an ITS system or its components can access the Peer-to-Peer Program. The program is designed to provide short-term assistance to address specific, technical issues. The program staff will listen to the requestor's issues and suggest an approach to provide the assistance. Some issues may be resolved directly by the program staff; other specific, technical issues may be addressed through assistance from a Peer.

Transit agencies have successfully used the Peer-to-Peer program in the past. Contact information for the program is:

1-888-700-PEER

terry.regan@dot.gov

RITA ITS Costs and Benefits Website

Found at <http://www.benefitcost.its.dot.gov/>, this website from the Research and Innovation Technology Administration (RITA) provides data from other ITS projects and includes; product evaluations, cost of different technologies, feasibility and benefits measured in 6 distinct categories. This resource can be helpful to quantify the benefits produced in CATs ITS system.

Coordinate with State DOT for incorporation for real time transit data into 511 network

<http://www.georgia-navigator.com>

CHATHAM AREA TRANSIT DEVELOPMENT PLAN



Figure C-2. State DOT 511 with integrated transit information

Publish CAT's General Transit Feed Specification (GTFS) used for Google Transit for apps development

CAT may have created their GTFS data feed with the primary purpose of benefiting from the free Google Transit trip planner. Software developers who create applications quickly realized that they could also create many new types of services based on the same GTFS transit data. As a result, GTFS data is now being used for many different purposes, including trip planning, ridesharing, timetable creation, mobile data, visualization, accessibility, analysis tools for planning, real-time information and interactive voice response (IVR) systems.

Transit agencies like CAT can publish their GTFS data feeds for developers to access on the web at <http://www.gtfs-data-exchange.com/agencies>.

Currently, the only other Georgia transit property publishing their feed is MARTA. An example of a developer friendly web page for hosting the data at MARTA can be found at <http://www.itsmarta.com/marta-developer-resources.aspx>.

Appendix D - Chatham County Commuter Services Analysis

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Chatham County Existing Commuter Assistance Services

There are several organizations in the Chatham County region that administer or provide commuter assistance services. The Coastal Regional Commission, in partnership with a private vanpool service provider, introduced the Coastal Georgia Vanpool Program in 2010. The program provided vehicles and comprehensive maintenance and insurance services for groups of individuals sharing a similar commute, particularly those traveling longer distances or where public transportation options are not available.

The Coastal Vanpool Program was supported with state and federal funds, and employer and rider contributions. Although a 2007 study revealed strong interest in the program, demand was lower than anticipated. In mid-2011, the program was suspended while the Commission determined it would take steps to evaluate and reassess future vanpool program options.

In 2005 the Coastal Region MPO (CORE MPO) approved the Connecting Savannah Action Plan, outlining the recommendations from the community's 6-month, consensus-building process for transportation planning. One of the recommendations in the Action Plan was for MPO staff to coordinate with the hospitals along DeRenne Avenue to encourage their employees to carpool or use public transit for their commutes. As a result, the CORE MPO now coordinates regional commuter assistance and employer based programs to promote alternatives to automobile travel.

The CORE MPO offers a free computer based ridematching system to help individuals identify others who have similar travel patterns for the purpose of organizing carpools or finding bicycle/walking partners. Everyone is eligible to enroll in the system, but for larger employers or groups of smaller employers who provide financial support for program administration or offer transportation related employee benefits, the MPO also administers an emergency ride home program and an employer/participant tracking program.

Chatham Area Transit (CAT) works with area employers to coordinate and promote Commuter Choice, a federal tax program which allows employers to pay (up to \$245 per month in 2013) for an employee's cost of commuting via transit or vanpool. Commuter Choice incentivizes the use of high occupancy vehicle travel by offsetting the associated costs without increasing the employee's taxable income. Employers reap the benefits of increased employee satisfaction and a reduction in payroll taxes and parking demand.

What is a Vanpool?

A vanpool is a group of approximately 7 to 15 commuters who travel to work together in a van driven by a volunteer. The van's route and schedule are determined by the vanpool participants. Typically, the volunteer driver travels free of charge and the passengers share the monthly cost of the van's lease, maintenance, insurance, and fuel expenses.

Transit agencies have found that vanpool sponsorship is an effective way to meet the mobility needs of longer distance commuters, commuters who travel to or from regional locations not served by the same transit system, and residents of less dense areas where regular fixed route transit service isn't practical. An additional transit agency benefit is that passenger miles attributed to the vanpool program generate additional federal Section 5307 funding when reported to the National Transit Database (NTD). The NTD shows that

vanpools have the lowest operating expenses, the highest fare box recovery rates, the lowest passenger fare per mile, and the lowest subsidy per mile of any mode of transit.¹

Although some transit agencies operate the vanpool program with in-house staff, contracts with private vanpool program providers are more common. There are several national companies that provide turn-key programs, or offer a menu of services based on the transit agencies particular needs. For example, some transit agencies utilize capital funding to purchase or lease vanpool vehicles that are then sub-leased to the private provider who is responsible for maintenance and insurance services and sometimes program marketing and promotional activities.

Mobility Management Overview

In 2008 the American Public Transportation Association (APTA) conducted a year-long study with its membership to develop a collaborative vision that would help inspire and shape a sustainable world and enhance our quality of life. Known as Transit Vision 2050, the report identified scenarios for mobility and public transportation, including reference to a “network of fully integrated services.” Enabled by technology, the report concluded the future of public transportation is moving toward a concept commonly referred to as “mobility management.”

As reported by Michael Melaniphy, President and CEO of APTA, “Mobility management involves creating partnerships with transportation providers in a community or region to enhance travel options, and then developing the means to effectively communicate those options to the public through both traditional and state-of-the-art channels. It requires moving beyond the usual patterns of doing business. Through innovation and multi-agency activity, resources can be coordinated efficiently, customers can make better decisions, and customer service and satisfaction is enhanced. Among its benefits, mobility management:

- Complements fixed-route public transit service, moving large numbers of people while meeting the unique needs of each community.
- Coordinates an array of multimodal options (such as bikeshare, car share, and paratransit), expanding the customer’s choice far beyond the limited information found on the traditional fixed route schedule.
- Promotes a business strategy that addresses consumer needs by forming alliances among public and private organizations, including for-profit, not-for-profit, and community service providers. In contrast, current practices tend to focus exclusively on the management of owned transit assets.
- Provides an opportunity to improve the performance of public transportation in conjunction with the management of community-wide transportation resources, traffic management strategies, and coordination with infrastructure development and land use policies.

With increasing numbers of people relying on public transportation, consumers and public transit agencies recognize the need for highly coordinated and varied transit options. Mobility management also has the potential to enhance the quality of life for all Americans,

¹ Deitrick, S. (2010) *Impacts of Vanpooling in Pennsylvania and Future Opportunities*

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

and perhaps none more so than our veterans returning from overseas duties. As a user-driven, market-based approach to transportation services, mobility management promises greater efficiency in the use of resources, increased service effectiveness, and potential cost savings that can be used to reduce bottom-line costs or enhance services, or both.”

As presented in the Transit Cooperative Research Program Report 97 “A Guide to Fundamental Change in Local Public Transportation Organizations” there are six dimensions of change in moving toward Mobility Management:

- Mission Shift – from “capacity provider” to “mobility manager”
- Obsession for the Customer - Measure quality of the customer’s travel experience
- Collaboration – Across modes, organizations and jurisdictions
- Integration – Of assets, services and business processes
- Information Technology – Universal fares, real-time info, unified scheduling and dispatching, unified accounts, etc.
- Organizational Structure Change – New business units, functions, skills and processes.

Chatham County Mobility Management Assessment

As noted in the American Public Transportation Association’s “Mobility Management Customer – Focused Public Transportation” brochure, Chatham County has been recognized as a good example of a mobility management program; specifically the vision of a “mobility enterprise” to expand the scope of public transit and planning and delivery beyond Chatham County, to the four-county, two-state region to provide effective connections between downtown Savannah and the International Trade and Convention Center.

With a shared economic interest in serving the region’s growing tourist, visitor and convention markets, the hospitality industry and local officials began in 2002 to frame the idea of an independently managed set of transportation services for the convention and visitor market funded from surcharges levied by the city’s major hotels. From that beginning, a *Mobility Management Plan* was developed and adopted by the City in 2005 that aims to reduce parking and traffic congestion and increase the use of an expanded array of transit-related services targeted to these markets. In 2006, a *Mobility Management Board (MMB)* was created as a 501(c)6 organization for the purpose of implementing the Plan and its related programs, and full-time Administrator was hired to manage the activities of the Board.

The efforts of the MMB as well as support for its varied programs and services is funded through an city-authorized ‘Per Occupied Room Fee’ (POR) of \$1.00 per room per night (\$1.75 for facilities on Hutchinson Island across the river from downtown) charged to visitors staying in the 29 hotels that have more than 25 rooms and located in the designated downtown Convention District. The room fee generated slightly more than \$1.0 million in 2009 and is passed through by city ordinance to the MMB.

An integrated system of fare-free services under the MMBs direction includes: the three-boat Savannah Belles ferry fleet operating, express shuttles operated for the MMB by CAT, and a streetcar route. These services have been effectively branded as the “Downtown Transportation” or DOT system and are fully integrated with CATs shuttle services as well as the City’s parking facilities.

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In 2007 the Chatham County – Savannah Metropolitan Planning Commission working in cooperation with CAT and other interested parties prepared the Coordinated Public Transit – Human Services Plan for the Savannah Area to assess existing conditions and evaluate opportunities to better serve individuals with specialized transportation needs, particularly for the elderly, low income and persons with disabilities. Consistent with the Mobility Management approach the plan has four guiding principles:

- People with specialized transportation needs have a right to mobility;
- In providing public transportation, the needs of the customer should always be kept at the forefront;
- Gaps in human services transportation should be eliminated to ensure individuals have a viable transportation option; and
- Maximizing efficiency of service delivery will help reduce program costs and reduce gaps in service.

Although Downtown Savannah has a well-developed multi-modal mobility management program focused on the tourism industry and the region has a mobility management program (in the form of the coordinated plan) designed to better coordinate transportation programs offered by human services providers, non-traditional services, particularly those geared towards commuters, remain somewhat fragmented both locally and regionally. There is no single coordinator or operator and no comprehensive approach to providing or promoting the benefits of multi-modal mobility management programs.

The Chatham region could benefit from the creation of a one stop travel planning center similar to what the Georgia Department of Transportation and other states offer through the one call or one click 511 systems which offer a variety of transportation and travel service information including transit providers and rideshare organizations. Similarly, many 211 systems across the country offer a single point of access for information and referrals to health and human service providers and often public transportation resources.

Regional Mobility Management Program Recommendations

As the largest and most publically recognizable transportation provider in the region it is recommended that CAT assume a leadership role in enhancing the area's mobility management initiatives. CAT should evaluate its existing "family of services" to identify opportunities to provide and/or coordinate programs and services that better meet the needs of the varied markets in the region including but not limited to: educational institutions, economic development interests, inter-county commuters and employers.

- Establish a working group to address regional mobility services and coordination. Potential members could include:
 - Other transportation providers in the region (e.g. Coastal Regional MPO and the Coastal Regional Commission of Georgia) to evaluate the appropriate roles and responsibilities of the organizations based on each agencies' vision, mission and resource availability.
 - Representatives from area colleges and universities to gain insight into the unique needs of the student market.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

- Employer representatives who are familiar with employee transportation challenges and who can act as a conduit for information dissemination.
- Military, Port, Airport and other major industries/institutions with a vested interest in regional mobility and economic development.
- With the support of the working group, continue efforts to expand and enhance existing CAT services and better coordinate regional travel and connectivity.
- Evaluate opportunities to supplement CATs family of services with new product offerings. Examples include: reservation based flex service, intercity bus service and commuter vanpools.
- Create a one-stop Travel Planning Center (telephone or virtual) to provide comprehensive information on the regions mobility resources and ensure information is current and consistent.
 - The CAT website provides information about fixed route, paratransit and DOT services. Although CAT does not have any current involvement in the region's carpooling and vanpooling programs, at a minimum the website should direct customers to information resources. Following is an example of how SunTran in Tucson Arizona has used its website to integrate information about "commute to work" regional services it does not directly operate.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN



Figure 1: SunTran Website

The Chapel Hill Ride Guide brochure is another example of how the transit provider incorporates information about carpool and vanpool services it does not directly operate.



Figure 2: Chapel Hill Transit Ride Guide Brochure

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- a. The Coastal Regional Metropolitan Planning Organization is responsible in part for promotion of the regions carpool matching service, communication of CAT route and schedule information, and Park and Ride lot and bicycle information etc. It is likely that many members of the general public are not familiar with the MPO or its role in disseminating information about the area's mobility options. The service information is not easily identifiable on the MPO website, unless an individual is familiar with and knows to search for the term "Coastal Commuters."
- b. The Coastal Regional Commission presents vanpool program information on its website although a reader is directed to the company that is or was its contracted provider. It is not clear if the program still exists with the support of the Commission (Commission provided vehicles) or if the Commission is serving only in a referral capacity.
- c. Both CAT and the Coastal Regional MPO websites present outdated information describing Commuter Choice which provides the option for most employers to provide transit and vanpool tax free benefits or allows employees to use pretax dollars to pay for transit passes, vanpool fares and parking but not for bicycle benefits. In 2013 the benefit was increased to an amount of up to \$245 per month as described below.

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

| | Transit | Vanpool | Qualified Parking | Qualified bicycle commuting reimbursement |
|----------------------|---|--|---|--|
| Incentive Levels | Up to \$245/month* for transit expenses | Up to \$245/month* for vanpool expenses | Up to \$245/month** for parking at or near an employer's worksite, or at a facility from which employee commutes via transit, vanpool, or carpool | Up to \$20 per qualified bicycle commuting month. This exclusion for qualified bicycle commuting reimbursement includes any employer reimbursement during the 15-month period beginning with the first day of the calendar year for reasonable expenses incurred by the employee during the calendar year. |
| Employer Tax Benefit | Employers give their employees up to \$245/month* to commute via transit; gets a tax deduction and saves over providing same value in gross income or Employers allow employees to use pre-tax income to pay for transit and employers save on payroll tax (at least 7.65% savings) or A combination of both up to statutory limits | Employers give their employees up to \$245/month* to commute via vanpool; gets a tax deduction and saves over providing same value in gross income or Employers allow employees to use pre-tax income to pay for vanpooling and employers save on payroll tax (at least 7.65% savings) or A combination of both up to statutory limits | Employers give their employees up to \$245/month** for qualified parking; gets a tax deduction and saves over providing same value in gross income or Employers allow employees to use pre-tax income to pay for qualified parking and employers save on payroll tax (at least 7.65% savings) or a combination of both up to statutory limits | Employers reimburse their employees up to \$20/month for qualified bicycle commuting; gets a tax deduction and saves over providing same value in gross income According to the IRS, "Generally, you can exclude qualified transportation fringe benefits from an employee's wages even if you provide them in place of pay. However, qualified bicycle commuting reimbursements do not qualify for this exclusion." |
| Employee Tax Benefit | Employee receives up to \$245/month* tax free for transit or vanpool (this value will not appear on their W-2 form) or Employee pays for commute benefit with the pre-tax income and saves on income tax or A combination of both | Employee receives up to \$245/month* tax free (not on their W-2 form) or Employee pays for commute benefit with the pre-tax income and saves on income tax or A combination of both | Employee receives up to \$245/month** tax free (not on their W-2 form) for qualified parking or Employee pays for commute benefit with the pre-tax income and saves on income tax or A combination of both | Employee reimbursed up to \$20/month for reasonable expenses related to commuting by bicycle |

Table 1: 2013 Commuter Choice Program Descriptions

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

- CAT should develop and promote a more comprehensive employer based program.
 - As previously described, CAT does include Commuter Choice information on its website, but the information should be conveyed in a user friendly format that highlights the value and benefits participating employers and their employees will receive through program participation.
 - The Coastal Regional MPO's Coastal Commuter webpage presents information about Commuter Choice, a carpool matching application and a description of how and why an employer could benefit from participation in an alternative transportation program including: preferential parking, bicycle racks, a guaranteed ride home program and employee participation statistics, but the description of the cost to an employer is vague. Public transit information is limited and readers are directed to CAT information via a link that does not work.
 - CAT should pursue opportunities to develop a UPASS program in partnership with the areas colleges and universities. In a UPASS Program the transit system enters into an agreement where in exchange for funding students, faculty and staff ride the bus for free. Funding is sometimes supplied directly from the university either out of general or parking revenues or from the student body through an assessment of student fees. The transit system can either be paid on a per-fare basis or as a lump sum. The transit agency benefits from an increase in ridership-most often during off peak times when there is adequate capacity. The college or university benefits from a reduction in parking demand and traffic congestions
 - CAT should also pursue opportunities to develop employer based unlimited pass programs. Following is a description of VIA transit's (San Antonio) corporate pass programs, distribution policies and the benefits of participation. VIA offers a significantly reduced rate (\$76/year) annual unlimited ridership pass if an employer provides the pass to all employees.

VIA METROPOLITAN TRANSIT

home | fares & passes | corporate transit benefit program


Corporate Transit Benefit Program

The job market today is tight, which means that businesses constantly compete to get and keep good employees. What kinds of benefits does your company offer your potential or current employees? VIA can work with you to develop a new transit benefit that can make a big difference to your bottom line.

There are many ways to offer a transit benefit program through VIA. Here are the basic options:

EZ Ride program

An annual pass program in the form of a sticker applied to an employee's company photo ID. This pass entitles EZ Riders to ride all of VIA's mainline bus and streetcar service for no additional cost. This program offers the convenience of using existing photo ID and not having to manage monthly passes.



Option 1 - Provide annual pass for all employees

- Cost is \$76 per year for every employee on your payroll. Government agencies pay \$56 per year.
- Must have at least 25 employees for this option.

Option 2 - Provide annual pass for selected employees

- Pay \$365 per year for each employee you select to be on the program.

For both options, stickers can be transferred if an employee leaves your company.

BusinessPass Program

- Subsidize all or a portion of the cost for a monthly bus passes
- Offer monthly bus passes for sale on-site with no subsidy
- Passes are issued on consignment so you only pay for what you sell
- VIA currently sells nearly 6,000 passes monthly through this program

The BusinessPass program is very simple. Every month VIA delivers a number of monthly Big Passes to participating businesses on consignment. Each business then provides the passes to their employees at cost or at a reduced rate, depending on whether the company wishes to subsidize the passes. At the end of the month, the company just pays for the passes that have been issued to employees.

Sign Up & Find Out More Information

Sign up for VIA's transit benefit program today! The benefits of are great - from employee recruiting and retention to an improved bottom line, not to mention a cleaner environment. Set up a meeting with a VIA representative to discuss the VIA transit benefit program by calling 362-2370 today, or [send us an e-mail](#).

TRANSIT BENEFIT EXTRAS

- It's the Right Time
- Benefits for employers
- Benefits for employees
- Environmental benefits of the program
- VIA will help your employees get involved
- The CARE program - an emergency backup
- Commuter tax benefits

Fares & Passes

fares & passes
commute savings calculator
corporate transit benefits

Contact Us

Figure 3: VIA Corporate Transit Benefits Program

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

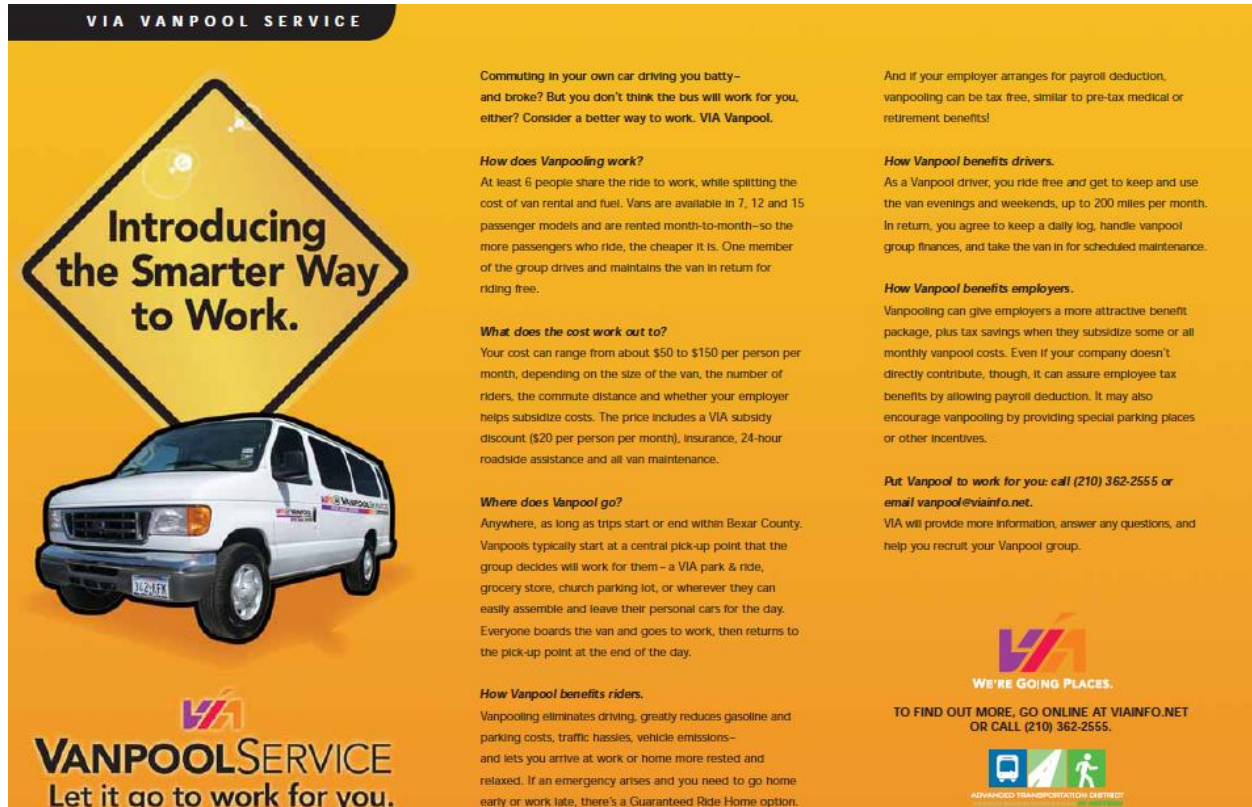
In addition to providing information on its fixed route and paratransit services VIA transit also takes a comprehensive approach to communicating commuter service program information. Figure 4 below displays VIAs home page where it presents information about its family of services (fixed route, accessible, vanpool and special event services). The vanpool program is provided through a partnership agreement between VIA and a private vanpool provider. VIA provides services to match commuters with existing vanpools and offers organizational support for new vanpool groups as shown in Figure 5. Collateral materials highlight how vanpooling benefits individuals and employers and the environment. In 2011 VIA operated 157 vanpools (approx. 2.3 million revenue miles)

Additionally, VIA provides a free Guaranteed Ride Home program (CARE) for eligible bus and vanpool customers, and promotes a Corporate Transit Benefits Program that provides discounted bus passes, consignment sales, and Commuter Choice tax information.



Figure 4: VIA Family of Services

CHATHAM AREA TRANSIT DEVELOPMENT PLAN



VIA VANPOOL SERVICE

Introducing the Smarter Way to Work.

Commuting in your own car driving you batty—and broke? But you don't think the bus will work for you, either? Consider a better way to work. VIA Vanpool.

How does Vanpooling work?
At least 6 people share the ride to work, while splitting the cost of van rental and fuel. Vans are available in 7, 12 and 15 passenger models and are rented month-to-month—so the more passengers who ride, the cheaper it is. One member of the group drives and maintains the van in return for riding free.

What does the cost work out to?
Your cost can range from about \$50 to \$150 per person per month, depending on the size of the van, the number of riders, the commute distance and whether your employer helps subsidize costs. The price includes a VIA subsidy discount (\$20 per person per month), insurance, 24-hour roadside assistance and all van maintenance.

Where does Vanpool go?
Anywhere, as long as trips start or end within Bexar County. Vanpools typically start at a central pick-up point that the group decides will work for them—a VIA park & ride, grocery store, church parking lot, or wherever they can easily assemble and leave their personal cars for the day. Everyone boards the van and goes to work, then returns to the pick-up point at the end of the day.

How Vanpool benefits riders.
Vanpooling eliminates driving, greatly reduces gasoline and parking costs, traffic hassles, vehicle emissions—and lets you arrive at work or home more rested and relaxed. If an emergency arises and you need to go home early or work late, there's a Guaranteed Ride Home option.

And if your employer arranges for payroll deduction, vanpooling can be tax free, similar to pre-tax medical or retirement benefits!

How Vanpool benefits drivers.
As a Vanpool driver, you ride free and get to keep and use the van evenings and weekends, up to 200 miles per month. In return, you agree to keep a daily log, handle vanpool group finances, and take the van in for scheduled maintenance.

How Vanpool benefits employers.
Vanpooling can give employers a more attractive benefit package, plus tax savings when they subsidize some or all monthly vanpool costs. Even if your company doesn't directly contribute, though, it can assure employee tax benefits by allowing payroll deduction. It may also encourage vanpooling by providing special parking places or other incentives.

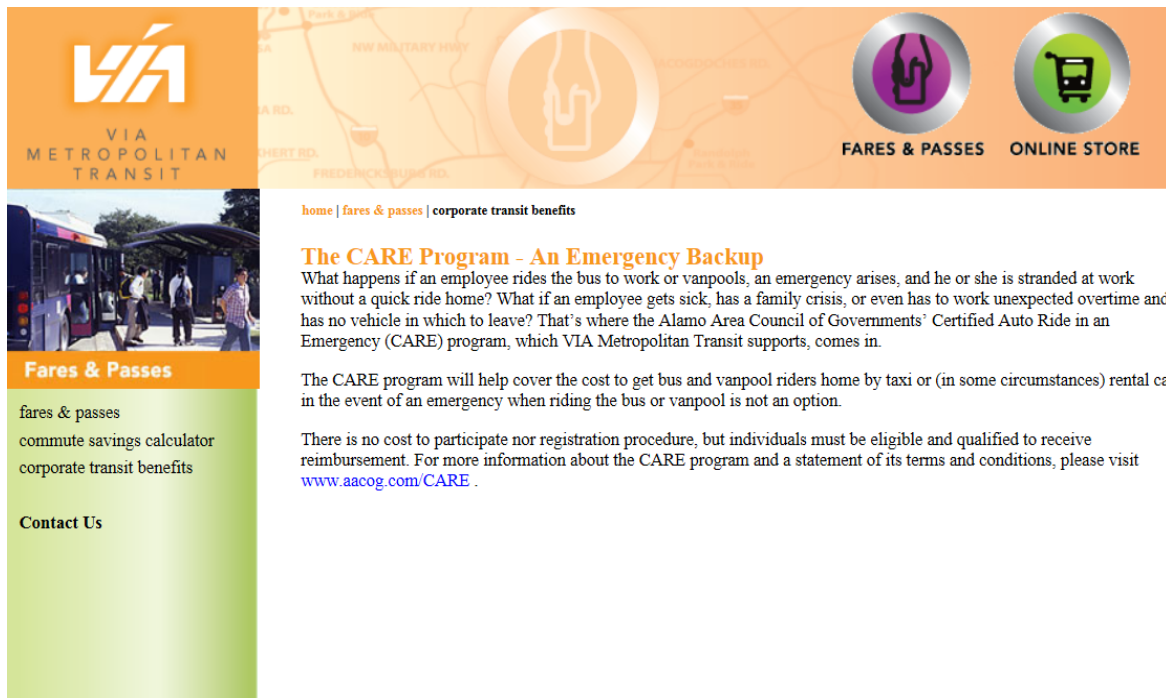
Put Vanpool to work for you: call (210) 362-2555 or email vanpool@viainfo.net.
VIA will provide more information, answer any questions, and help you recruit your Vanpool group.

VIA
WE'RE GOING PLACES.

TO FIND OUT MORE, GO ONLINE AT VIAINFO.NET OR CALL (210) 362-2555.

ADVANCED TRANSPORTATION DESIGN

Figure 5: VIA Vanpool Brochure



VIA METROPOLITAN TRANSIT

FARES & PASSES ONLINE STORE

[home](#) | [fares & passes](#) | [corporate transit benefits](#)

The CARE Program - An Emergency Backup
What happens if an employee rides the bus to work or vanpools, an emergency arises, and he or she is stranded at work without a quick ride home? What if an employee gets sick, has a family crisis, or even has to work unexpected overtime and has no vehicle in which to leave? That's where the Alamo Area Council of Governments' Certified Auto Ride in an Emergency (CARE) program, which VIA Metropolitan Transit supports, comes in.

The CARE program will help cover the cost to get bus and vanpool riders home by taxi or (in some circumstances) rental car in the event of an emergency when riding the bus or vanpool is not an option.

There is no cost to participate nor registration procedure, but individuals must be eligible and qualified to receive reimbursement. For more information about the CARE program and a statement of its terms and conditions, please visit www.aacog.com/CARE.

Fares & Passes
fares & passes
commute savings calculator
corporate transit benefits

Contact Us

Figure 6: Emergency Ride Home Program

CHATHAM AREA TRANSIT DEVELOPMENT PLAN

A final example of a transit supported commuter services program is the program sponsored by MetroTransit. MetroTransit offers a carpool matching service, promotes a vanpool program subsidized by the Metropolitan Council which provided 182,000 trips in 2010 and offers a Guaranteed Ride Home program for commuters who use bus, light rail, carpool/vanpool or bicycle at least three times per week.

The screenshot displays the MetroTransit website interface. At the top, there is a navigation bar with 'Home > Rider Services'. Below this, the 'Rider Services' section features five icons: BICYCLE (green), RIDESHARE (blue), BUS (red), LIGHT RAIL (yellow), and COMMUTER RAIL (grey). A colorful line graphic connects these icons. To the right is a 'Trip Planner' widget with fields for 'From', 'To', 'Depart at', and 'Arrive by', along with a 'PLAN MY TRIP' button. Below the main content, there are sections for 'Ridership 101' (with a bus image and links like 'How to Ride', 'Maps & Schedules', 'Fares & Passes', 'Accessibility', 'Safety & Security', 'Outreach in Your Community') and 'Why Metro Transit?' (with a map image and links like 'Ride the Bus', 'Ride Light Rail', 'Ride the Northstar Line', 'Carpool or Vanpool', 'Bicycle', 'Telework'). On the right side, there are two promotional banners: 'Central LRT updates at metrotransit.org/construction' and 'Get Auto Refill Set it and forget it.' with a 'go' logo.

Figure 7: MetroTransit Family of Services

- CAT should develop a communication and outreach program to promote all of the programs and services available (whether or not CAT is the direct operator or coordinator).
 - Develop a brand(s) for the outreach program and new services. Examples of transportation outreach program names, services and slogans include: GoodGoing, Missoula in Motions, DART Travel Agents, SmartTrips, Partners in Transit, Commuter Connection, In Motion, and Hate Traffic? Start Your Day A Different Way. SmartBenefits, and Traffic.
 - Prepare collateral materials tailored to individual markets (e.g. employers, students, economic development groups, environmental interests).
 - Commuter Choice Program Information coupled with employer advantages. CAT employer services description – pass programs, employee mobility assessment services, carpool ridematching services, guaranteed ride home program, commuter vanpool information and site specific new hire transportation information.

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- Site specific university/college transportation information.
- Economic benefits of transit – (e.g. every \$1 invested in public transit generates \$4 in economic returns, every billion invested in public transit creates or supports 36,000 jobs, every \$10 million in capital investment in public transportation yields \$30 million in increased business sales, public transportation not only gets people to work it puts people to work (APTA).
- Environmental benefits of transit – (e.g. public transportation’s overall effects save the United States 4.2 billion gallons of gasoline annually, Households near public transit drive an average of 4,400 fewer miles than households with no access to public transit. This equates to an individual household reduction of 223 gallons per year, communities that invest in public transit reduce the nation’s carbon emissions by 37 million metric tons annually: equivalent to New York City; Washington, DC; Atlanta; Denver; and Los Angeles *combined* stopped using electricity, A single commuter switching his or her commute to public transportation can reduce a household’s carbon emissions by 10%, or up to 30% if he or she eliminates a second car (APTA).
- Provide CAT customer service employees education and training on all regional services and programs.

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**Appendix E - Transit Boardings Estimation
and Simulation Tool 2019 Scenario
Summaries Documentation**

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