FINAL REPORT

CHATHAM AREA TRANSIT MASTER TRANSIT PLAN



JULY 2023

INVESTMENT STRATEGY 2024 - 2050

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1 INTRODUCTION

Overview

Savannah and Coastal Georgia have been experiencing significant changes as the local and regional economies have grown and diversified, expanding beyond traditional markets into new manufacturing, warehouses, education, and medical industries. The changing economy is also changing regional transit patterns, creating new opportunities for transportation choices and options.

While the region has changed, needs and opportunities for public transportation services are also evolving. The Chatham Area Transit Authority, like many transit agencies around the country, was experiencing ridership declines before the pandemic. Just as transit agencies were beginning to understand ridership changes, the COVID pandemic erupted in Spring 2020, causing widespread disruption, forcing entire industries, including transit, to reevaluate existing service models.

Within the context of change and growth, the Chatham Area Transit Authority (CAT) is evaluating its role locally in Savannah and Chatham County but also the broader region. Historically, CAT has focused its service on the City of Savannah, providing access to jobs and services within downtown and surrounding neighborhoods. It also served some of the city's most critical resources, like area hospitals, schools, and shopping centers.

In response to these changes and opportunities, CAT initiated the development of a Master Transit Plan, branded as Chatham Connects, that outlines a strategic plan for the future of mobility in Coastal Georgia. Chatham Connects positions CAT to respond to opportunities created through local and regional growth, new transportation technologies, and lessons learned about travel needs and patterns.

Chatham Area Transit

Chatham Area Transit Authority (CAT) provides a combination of bus and ferry service in the City of Savannah plus parts of the unincorporated Chatham County, and portions of Garden City and Port Wentworth. There are nearly 300,000 people living in CAT's service area. In 2022, CAT provided 1.7 million trips.

CAT serves all types of riders – including residents but also tourists – making sure people can get to and from work, go shopping, reach medical appointments, see friends, and do all the other things that are important in our lives. Many people use CAT because it is the travel option that works best for them. For others, CAT provides a lifeline that connects them to daily needs that otherwise would be difficult to reach.

CAT's public transportation services include three "modes" or types of service:

- 1. **CAT Bus Service** includes 16 "fixed route" bus routes and 2 downtown "dot" shuttles. Bus routes serve major corridors and neighborhoods in Savannah and parts of Chatham County. The dot shuttles offer zero fare transportation in downtown Savannah, the Victorian District south to Victory Drive as well as the Historic Carver Village and Cloverdale neighborhoods.
- 2. **CAT Mobility provides** transportation for people with disabilities. People can use this service to travel anywhere in Chatham County.
- 3. **Savannah Belles Ferry System** connects Savannah's River Street with the Savannah International Trade and Convention Center and Hutchinson Island.

CAT is an independent agency led by an Executive Director or Chief Executive Officer (CEO) and governed by a nine-member Board of Directors. The Board of Directors sets the policy and strategic vision for CAT and is responsible for approving the annual budget. CAT's Board of Directors includes representation from the Chatham County Commission and Savannah City Council as well as residents representing the City of Savannah plus incorporated and unincorporated Chatham County.

Chatham Connects

Chatham Connects includes work associated with the Master Transit Plan as well as a separate related project, CAT's Comprehensive Operations Analysis and Transit Development Plan (COA/TDP). While this report presents the Master Transit Plan, it incorporates and builds upon work conducted as part of the COA/TDP. This reflects the independent but coordinated analyses: the COA/TDP focused on a strategy for the next few years, while the Master Transit Plan is oriented around a longer-range horizon through 2050. Despite taking a longer-term perspective, the Master Transit Plan lays out a strategy that can be initiated in the short-term and expanded over the next decade, as CAT secures funding and staff.

Chatham Connects – as a coordinated strategy - was developed with extensive input from transit riders, community members, stakeholders, and CAT staff, including front line staff like bus operators and supervisors. A Stakeholder Advisory Committee was formed to oversee and guide both efforts; Chatham Connects also received direction and support from the CAT Board of Directors. In particular, the Stakeholder Advisory Committee and CAT Board were active in refining study goals, setting priorities, and balancing the recommended investment strategy.

Report Structure

The Master Transit Plan report is organized around five chapters, immediately following this introductory section:

Chapter 2: State of the System provides an overview of the Chatham Area Transit agency, existing services and the performance and productivity of those services.

Chapter 3: Market Analysis explores the demand and need for public transportation services in the City of Savannah, Chatham County, and the coastal Georgia region more broadly.

Chapter 4: Master Transit Plan Goals and Investment Priorities describes the goals behind the Master Transit Plan. It also describes the equity framework used to evaluate and prioritize projects included in the plan.

Chapter 5: Recommended Master Transit Plan outlines the recommended Master Transit Plan. Recommendations are organized by time frame.

Chapter 6: Funding the Plan summarizes CAT's existing financial status and explains funding opportunities that could be used to implement the Master Transit Plan. It provides financial scenarios to fund the Master Transit Plan for the short-, medium-, and longer-term.

The main report includes four appendices that provide more detailed information:

- A. Index of Terms serves as a reference with a list of the acronyms and technical terms used in the report.
- B. List of Stakeholder and Community Engagement Activities conducted as part of the Master Transit Plan
- C. Master Transit Plan recommended frequency and span of service levels by route and microtransit zone for each design year.
- D. Potential Federal, State and Local Grants and Funding Sources

There are reports and technical memos developed as part of the Master Transit Plan that are available for reference and additional information. These are published on CAT's website under a separate cover.

- 1. Master Transit Plan Engagement and Communications Plan
- 2. Stakeholder Advisory Committee Meeting Agendas, Materials and Summary
- 3. Summary of Findings: Stakeholder Interviews and Focus Groups
- 4. Market Analysis
- 5. State of the System
- 6. Savannah Belles: Needs and Opportunities
- 7. Master Transit Plan Equity Framework
- 8. CAT Board Presentations

2 STATE OF THE SYSTEM

OVERVIEW

The first step in the Chatham Connects Master Transit Plan was a detailed investigation of how CAT's existing public transportation services operate and perform. The analysis was developed using historic and current ridership data, CAT's existing cost data, plus input from stakeholders and members of the community. The information was used to evaluate the strengths and weaknesses of CAT's current network of services and the opportunities for improvements. This analysis – the State of the System – together with an analysis of the market for transit service (see Chapter 3) together with community and stakeholder drive the strategic recommendations led to the recommendations and strategies input included in the Master Transit Plan.

Public Transportation Services

CAT's transit network is concentrated in the City of Savannah with connections to and between the City of Garden City, the City of Port Wentworth and parts of unincorporated Chatham County. CAT's service area is constrained by South Carolina to the north and mostly serves areas to the east, west, and south of downtown Savannah.

Before the temporary service cut implemented on October 31, 2022, CAT's network included:

- 18 weekday bus routes
- 15 Saturday bus routes
- 11 Sunday bus routes
- ADA Complementary paratransit
- Savannah Belles Ferry, which provides passenger ferry service connecting downtown
 Savannah with Savannah Convention Center and hotels on Hutchinson Island.

Fixed-Route Transit (Bus) Service

CAT's bus transit network operates using a combination of "grid" and "hub-and-spoke" models (see Figure 1). The grid model, where bus routes operate on parallel streets creating opportunities to change direction at intersections, is used in downtown Savannah including the historic district as far south as Anderson Street. Bus routes operate on most major north/south and east/west streets, enabling passengers to change directions by connecting with another CAT bus route at most major intersections.

CAT's service also functions as a hub-and-spoke model with the Joe Murray Rivers Intermodal Transit Center (ITC) in downtown Savannah acting as a connecting point for passengers to transfer to other routes. Twelve of the 18 bus routes connect at the ITC (only Routes 6, 12 and 20 and both dot shuttles do not). Most bus routes radiate from the ITC on

major corridors and connect to major destinations. The ITC is open 24 hours a day, 7 days a week with climate controlled indoor waiting areas, tourist information, and connections to intercity bus service via Greyhound.

The adult cash one-way fare for CAT fixed-route bus service is \$1.50. CAT offers reduced fares for older adults, differently abled people, veterans, and youths as well as discounts for bulk purchases such as daily, weekly, and monthly passes. CAT's dot shuttle service is fare free.

ADA Complementary Paratransit

CAT also operates complementary paratransit service in accordance with the Americans with Disabilities (ADA) Act of 1990. This service, branded as CAT Mobility, is available to individuals with a disability. Per ADA requirements, transit agencies must operate paratransit service with origins and destinations up to ³/₄ of a mile from the fixed route service. However, CAT goes beyond the minimum federal requirements by providing CAT Mobility for eligible riders throughout Chatham County. The one-way fare on CAT Mobility is \$2.00.

Belles Ferry Service

CAT operates the Savannah Belles Ferry service, which provides zero-fare passenger ferry service across the Savannah River between downtown Savannah's Riverwalk and Hutchinson Island, providing service from hotels and other amenities downtown to the Savannah Convention Center (see Figure 9). The ferries are fully accessible and operate from 7:00 AM to 10:00 PM seven days per week. Ferry service runs between City Hall Landing and Trade Center Landing, with departures scheduled every 30-minutes on the hour and half hour from City Hall. An additional stop is made at Waiving Girl Landing on the east end of River Street from 8:20 AM to 6:20 PM. CAT increases service levels upon request and in response to conventions and other events in Savannah and/or on Hutchinson Island.

SERVICE EVALUTION

Fixed-Route Transit (Bus) Service

The core of CAT's public transportation services is fixed-route transit, or bus service. Bus services account for the largest part of CAT's operating and financial resources and serve the most riders. CAT's bus network has suffered in the past few years, due to the COVID-19 pandemic and subsequent challenges in the labor markets. In 2019, CAT operated 259,730 hours of transit service and carried 4,069,157 riders. By 2021, the hours of service were reduced by 23% and carried 56% fewer riders. A significant focus on the Master Transit Plan involves developing a strategy to restore service in a way that reflects the market, need for transit services, and serves the community in a way that is convenient, cost effective and useful for riders.

Downtown Savannah Effingham Downtown Savannah (See Inset) 28 27

Figure 1 CAT Fixed Route Bus Alignments

Source: 2022 GTFS

Bus Service Levels and Ridership

The quality and usefulness of the bus service is often described in terms of the span (hours and days of operation) and frequency (how often the buses operate). These are essential characteristics of service because the service span determines when people can travel, and the frequency of service tells how convenient service is to use. Infrequent bus service is inconvenient because riders must plan their travel around when the bus is available, rather than when they want or need to travel. When bus service is inconvenient, it is also difficult to transfer between routes. While service span and frequency determine the quality and convenience of service, they are also the primary drivers of the cost of operating transit

service. The following section describes CAT's current level of service and uses these service levels to understand the performance and productivity of individual routes.

TRANSIT TERMS

Service Span - Hours and days of operation

Frequency – The time between buses, or how often the bus passes by a bus stop.

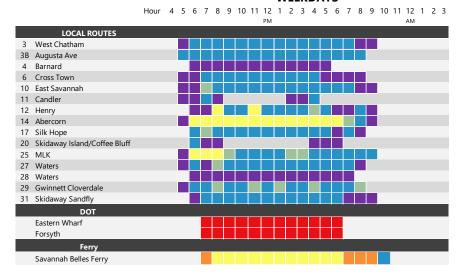
Boardings - When a rider gets on (or boards) the bus, ferry, shuttle, or van

Alightings - When a rider gets off (or alights) the bus, ferry, shuttle, or van

Outside of the dot shuttles, CAT's bus network is operating at minimum levels in terms of the frequency of service and schedule (see Figure 2). Indeed, only one bus route – Route 14 Abercorn – operates every 30 minutes on weekdays and Saturdays. The remaining bus services operate hourly or in some cases, once every two hours. On the other hand, the span of service on many CAT routes is good, with most bus routes starting at 6 AM and operating until 9 PM on weekdays and Saturdays. The span of service on Sundays is much shorter with routes starting service at 7 AM or 8 AM and ending at 6 PM or 7 PM.

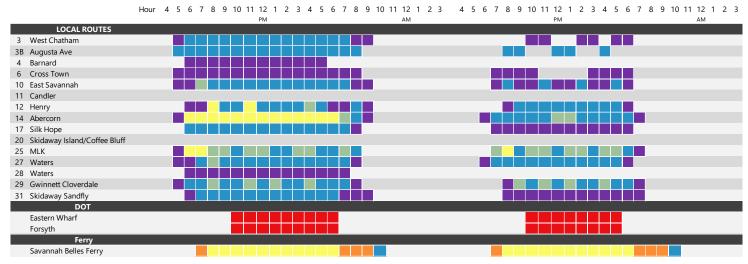
Figure 2 CAT Fixed Route Bus Service: Service Frequency by Hour of Day by Day of Week

WEEKDAYS



LEGEND		
Approximate Frequency	Approximate Trips per Hour	
10	4	
20	3	
30	2	
40	1.5	
60	1	
120	0.5	

SATURDAYS SUNDAYS



Source: 2022 GTFS

CAT Ridership

CAT's ridership was consistent leading up to 2019 across all modes. In FY 2019, CAT carried 3,168,774 passengers on the fixed-route network, 112,915 on CAT Mobility, and 787,468 on the Savannah Belles Ferry. The COVID-19 pandemic had a significant impact on transit ridership, with all modes showing a sharp decline in ridership in Spring 2020 (see Figure 3). Ridership decreased by 21% in March 2020, and then again by 71% in April 2020. Ridership increased over the summer of 2020 and has remained mostly stable since. Overall, however, annual ridership for FY 2022 was only 42% of FY 2019.

Since the pandemic, CAT – like transit agencies nationally – has been challenged by an ongoing and persistent shortage of drivers. The driver shortage has had an impact on the quality and reliability of service, such that in October 2022, CAT had to reduce the amount of service it operates to match their workforce capability. CAT is currently working diligently to attract, hire and train drivers as fast as possible, with service being added as drivers are added to the workforce.

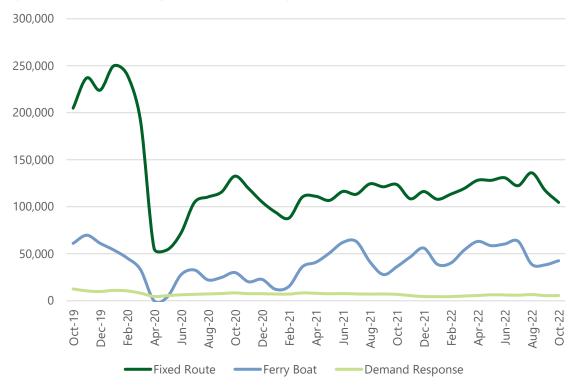


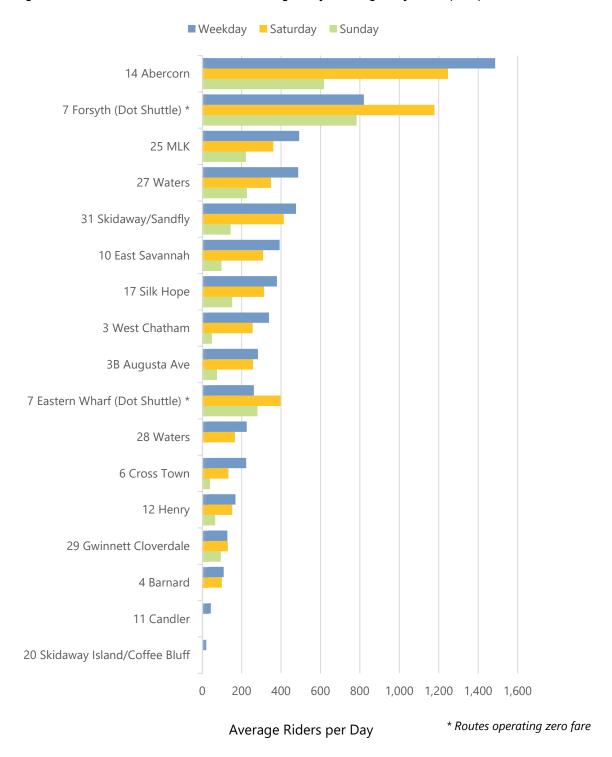
Figure 3 CAT Ridership by Mode Fall 2019 through Fall 2022

Source: Nelson\Nygaard adapted from CAT data

CAT's Ridership varies by route. Indeed, eight bus routes – Routes 3,7, 10, 14, 17, 25, 27 and 31 carry 77% of all weekday riders and 78% of Saturday riders. CAT's highest ridership route is Route 14 Abercorn (see Figure 4). In fact, the average daily ridership for Route 14 Abercorn is nearly twice as high as the second highest ridership route, the Route 7 Forsyth (dot shuttle).

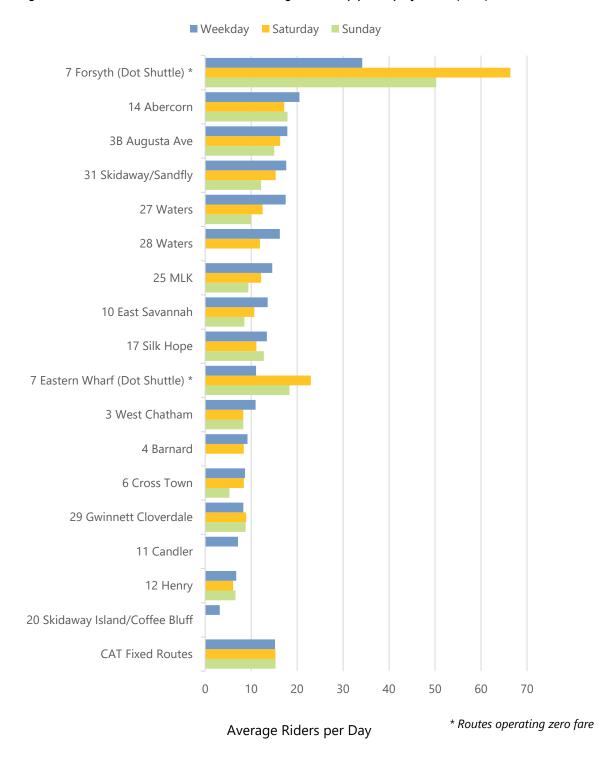
Another way to understand and evaluate transit ridership is to consider ridership in proportion to the amount of service provided, or for example considering riders per hour rather than overall riders (see Figure 5). Some CAT routes, such as the dot shuttles and Route 14 Abercorn, operate more frequently. With more trips, they should carry more riders. Measuring riders per hour instead of total ridership is a fairer comparison. Looking at CAT routes in terms of riders per hour shows that many of the same routes – including Routes 7 and 14 - stand out as CAT's most productive routes (see Figure 4).

Figure 4 CAT Fixed Route Bus Service: Average Daily Passengers by Route (2022)



Source: WRA COA, 2022 CAT service statistics report

Figure 5 CAT Fixed Route Bus Service: Average Ridership per Trip by Route (2022)



Source: WRA COA, 2022 CAT service statistics report

Ridership by Time of Day

Understanding ridership by time of day is important because CAT wants to match the service provided with the times when people want to travel. The data show that on weekdays, bus riders travel throughout the day, with slight peaks in the morning and afternoon (see Figure 6). These peaks reflect slightly more people traveling to and from work during traditional work times (e.g., "9-to-5" type schedules) and to and from school.

Ridership is proportionate to the amount of service available. Times when ridership is lower, at the beginning and end of the day, the availability of service is also lower.

Weekend fixed route ridership shows similar trends as weekday ridership but with less service and fewer riders. However, ridership on Saturdays and Sundays is slightly more concentrated towards the middle hours of the day¹.

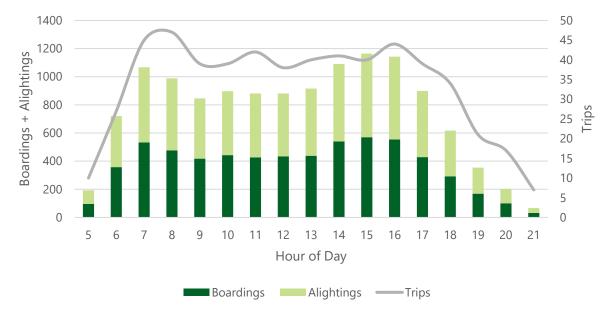


Figure 6 CAT Fixed Route Bus Service: Weekday Ridership and Trips by Hour of Day

Source: August 2022 CAT APC data

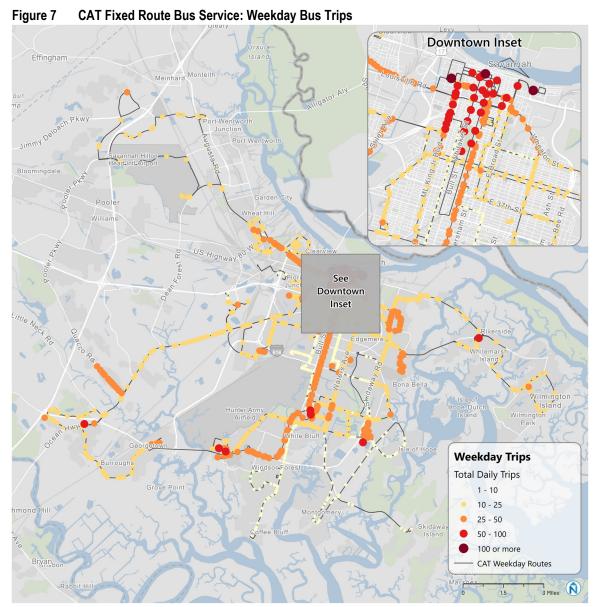
¹ Data on weekday ridership by time of day is available in the State of the System report.

Transit Ridership: Supply and Demand

Another way to understand the performance and productivity of bus service is to understand how well the service is used compared to how much service is provided. Like our analysis of ridership per hour for individual bus routes, the Chatham Connects team considered how many times each bus stop is served by a bus over the course of a day (see Figure 7). The results show there is a lot more service in downtown Savannah (MLK King Jr Boulevard, Whitaker Street, and Drayton Street) and along key corridors such as Abercorn Street and Augusta Avenue. There is also more transit service in locations where multiple routes connect such as popular retail locations around Oglethorpe Mall, Savannah Mall, and Walmart locations.

The places with more transit service are also the places where we expect more riders. Our analysis shows that service and ridership are well balanced – meaning that places with higher levels of service also have more riders. Figure 8 shows the proportion of riders to the amount of service available on weekdays (weekend maps are included in the full market analysis). The analysis confirms some of the earlier findings – that transit is productive and well-used in and around downtown Savannah. It also provides new insights:

- Some areas, especially around Augusta Road and Augusta Avenue, including Chatham City, West Savannah, have very high riders per bus trip. Pennsylvania Avenue near East Savannah also has very high riders per bus trip. This analysis suggests the need for more service.
- Routes 3 West Chatham and Route 17 Silk Hope both have primarily low efficiency service but have select stops towards the end-of-lines that have very high riders per bus trip. This suggests that some stops may be removed to limit the number of times the transit vehicles stop along these routes, which may reduce the travel times.
- CAT's Sunday service, despite operating at lower levels, is as productive as weekday and Saturday service. This suggests a need for more service on Sunday because riders are using the service, even when it is less convenient.



Source: August 2022 CAT APC data

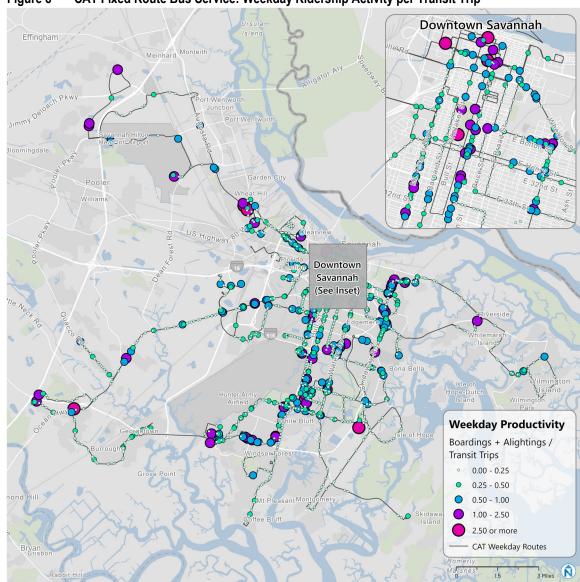


Figure 8 CAT Fixed Route Bus Service: Weekday Ridership Activity per Transit Trip

Source: August 2022 CAT APC data

BELLES FERRY SERVICE

The CAT Savannah Belles ferry service provides zero fare passenger service across the Savannah River connecting downtown Savannah with Hutchinson Island. The service is named after four noteworthy women of Savannah's history: Juliette Gordon Low, Susie King Taylor, Florence Martus, and Mary Musgrove.

CAT operates the ferry service and all marine service personnel are employed by CAT. The service is provided in partnership with local, state, and federal agencies², including the Savannah Mobility Management Inc. (SaMMI), a local non-profit organization. About half of the funding for the ferry service is provided through a Per Occupied Room (POR) fee of \$1.00 per night on hotel rooms downtown fee, with the Westin Savannah Harbor Golf Resort and Spa (located on Hutchinson Island) contributing \$2.50 per occupied room. Other funding sources include contributions from the City of Savanah, the Hutchinson Island Transportation District, and the Savannah-Georgia Convention Center.

In FY22, CAT's annual budget forecast \$1.3 million for ferry service operations. A series of federal grants will provide CAT with more than \$6 million in capital funding for the ferry maintenance facility, dock rehabilitation and investments in new ferry vessels.

Ferry Service Design

The Belle's Ferry is integral to the character and success of the Savannah Convention Center on Hutchinson Island and supports the City of Savannah's River Street and Historic District, all of which are critical to the Coastal Georgia's economy. In total, over the past 20 years, the Convention Center had an economic impact of \$1.4 billion dollars in Georgia³.

The Belle's Ferry provides a direct link from downtown Savannah to Hutchinson Island, integrating visitors to the Convention Center with the local history and economy of downtown Savannah. The Convention Center attracts tens of thousands of visitors every year; in Fiscal Year 2022 (FY22) there were a total of 129 events with162,987 attendees. The ferry also serves workers who commute to one of the approximately 750 jobs on Hutchinson Island, about half of which are located at the Savannah Convention Center and the Westin hotel immediately adjacent to the Trade Center Landing Ferry stop⁴. Ferries are the quickest way for visitors and workers to cross the river; the distance is less than ¼ mile and takes less than ten minutes. In comparison, the surface connection is about 3.5 miles over the

² Partner agencies include Chatham County, the City of Savannah, Georgia Department of Transportation, and the Federal Transit Administration.

³ Savannah-Georgia Convention Center Authority Annual Report 2021.

⁴ 2022 Data Axle data show that there were 752 jobs on Hutchinson Island, with 309 jobs at the Westin Savannah Harbor Resort and 60 jobs at Savannah Convention Center.

Talmadge Bridge and takes about 15-20 minutes, depending on traffic. The ferries are ADA accessible and can accommodate bicycles as well.

The Convention Center is expanding and will double the size and capacity of the existing facility. "The expansion project is projected to add \$490 million dollars in economic impact, creating 600 direct construction jobs, hiring more than 30 Georgia based companies, supporting more than 3,200 jobs in Georgia, and spurring the growth of new business locally and statewide"⁵. This growth will increase the demand and need for convenient and quick transportation access from Hutchinson Island to downtown Savannah.

Operating Characteristics

Ferry service is available daily between 7:00 AM and 10:00 PM. Ferries depart every 20 to 30 minutes from one of three landings, two of which are on the Savannah side and one on Hutchinson Island (see Figure 9):

- City Hall Landing (along Savannah Riverwalk)
- Waving Girl Landing (at Morrell Park along Savannah Riverwalk)
- Trade Center Landing (at Convention Center on Hutchinson Island)

In the early morning and after 6:30 PM at night, ferry service operates directly between City Hall Landing and the Trade Center Landing. During these times, ferries depart every 20 minutes. Between 8:00 AM and 6:30 PM, the ferry also serves the Waving Girl Landing, located at the southern end of Savannah's Riverwalk. During these times, ferries depart every 30 minutes. On normal operating days, the CAT Savannah Belles ferry service is operated by a single vessel and provides 35 round trips. When a large convention is in town, CAT will collaborate with local partners to increase the level of ferry service, adding vessels to accommodate the additional volumes of passengers and workers.

-

⁵ Visit Savannah Website (https://www.visitsavannah.com/profile/savannah-international-trade-convention-center/5975)

Trade Center Landing

City Hall Landing

Savannah

Waving Girl Landing

NE Hadro Bouston

Savannah

Savann

Figure 9 CAT Savannah Belles Ferry Service Route

Ferry Ridership

In 2022, the Savannah Belles ferry service carried just over 580,000 customers. Ridership is strongest in the spring and summer, aligned with Savannah's peak tourism season. Average ridership during these five months is nearly 60,000 passengers per month, while the average for the other seven months is about 40,000 (see Figure 10).

Ridership trends show that the ferry services continue to attract riders but are still recovering from the impact of the COVID-19 pandemic. CAT suspended ferry services between late March until late May during peak of the pandemic. When service was restored, hours were reduced, ending at 10:00 PM (reduced from 12:30 AM). By Summer 2021, ridership was about 70% of pre-pandemic levels, and in 2022, annual ridership was 76% of 2019 levels. While ridership losses are never encouraging, CAT's Savannah Belles ferry services, like Savannah's tourism and convention market are rebounding, closing the gap to pre-pandemic levels (see Table 1).

140,000
120,000
100,000
80,000
40,000
20,000
0

Interest Reptrief Rock Rock Reptrict Rock Reptrict Reptrict Reptrict Rock Reptrict Reptrict Reptrict Rock Reptrict Re

Figure 10 CAT Savannah Belles Ferry Monthly Ridership, 2018-20226

Source: Nelson\Nygaard adapted from CAT data

Table 1 Convention Center Events, Attendees and Savannah Belles Ferry Ridership

Fiscal Year	Convention Center Events	Convention Center Attendees	CAT Savannah Belles Ferry Ridership
FY18	160	>217,000	839,444
FY19	170	179,957	806,520
FY20	102	127,867	317,281
FY21	87	60,644	488,632
FY22	129	162,987	609,978

Source: Annual Reports Savannah-Georgia Convention Center Authority and National Transit Database.

Weekdays and Weekends

Ferry ridership varies by day with weekend service carrying more customers than on weekdays. Higher weekend ridership reflects convention schedules, which often overlap with weekend dates, as well as higher volumes of tourists on weekends. However, ridership trends persist even when conventions are not occurring (see Table 1). Data shows higher demand on weekend days, including Friday, Saturday, and Sunday, suggesting a need for longer hours of service, especially during the peak seasonal periods (March through July). The offpeak period also shows softening ridership with a similar pattern to peak periods. Friday and Saturday services have been slower to rebound as compared with other days.

⁶ 2018-2021 is NTD data. Ridership reports were substituted for 2022 due to reporting errors.

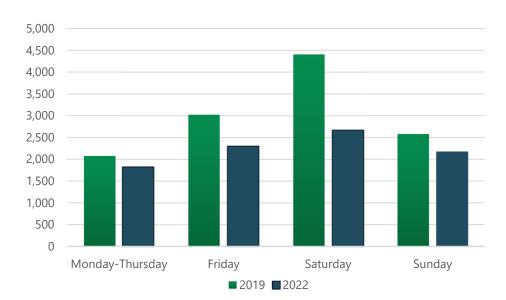


Figure 11 CAT Savannah Belles Average Ridership: March through July

Source: Nelson\Nygaard adapted from CAT data

Capital Resources

Ferry services are supported by capital investments, including vessels (ferries) and passenger loading docks, or landings. The ferry service also requires operating and maintenance facilities to store parts, provide space to work on engines and other parts of the vessels.

Ferry Vessels

CAT has a fleet of four ferries, which allows for at least one ferry in normal service operations and a second vessel available to support events and large conventions. The rest of the fleet provides backup equipment and allows vessels to be removed from service for ongoing maintenance. CAT's maintenance schedule requires that vessels be rotated through operations regularly, such that two spares are required to ensure consistent, reliable operations.

CAT has secured grant funds to replace three of the ferries with diesel-electric hybrid vessels. Replacing the vessels reflects historic two key CAT initiatives - ensuring all capital assets are in a state of good repair and transitioning to alternative fuels. Historic underinvestment in maintenance means the existing vessels are expensive to maintain. In addition, the ferries operate with long times where the engine idles for passengers to embark and disembark, which both wears on the engine and produces carbon emissions. Transitioning the fleet to hybrid-electric saves engine wear and tear, reduces operating costs and reduces emissions in the Downtown Savannah area. This strategy is also

consistent with CAT's ongoing commitment to energy efficiency and sustainability and part of its overall electrification plan.

Two vessels have been ordered and are expected to be delivered and in service in FY25. CAT intends to purse grant funds for a fourth hybrid vessel in FY24; grant process and delivery schedules means the fourth hybrid vessel would be available in FY26.

Passenger Facilities

The Belles Ferry serves three passenger landings: City Hall, Waving Girl, and the Trade Center. The landings on the Savannah Riverfront are in good condition. In June 2022, the Trade Center Landing site collapsed, leaving the location unusable for ferry services. After this collapse, CAT moved the ferry service to a landing in front of the Convention Center. When repairs are complete, service will be returned to the Trade Center Landing.

CAT has secured funding for a fourth landing adjacent to the Plant Riverside development west of City Hall landing. This new facility will support the increased development and facilities at the west end dock (west end of River Street). It would also create an opportunity for a new ferry route, with direct connections to the Convention Center. Development of the new landing facility is scheduled to begin in the next two years.

Operations and Maintenance Facilities

Currently, the ferries are stored at piers adjacent to the Convention Center and Westin Hotel on Hutchinson Island. There are no permanent facilities for ferry parts and equipment storage, which creates challenges for regular vessel maintenance. CAT anticipates the construction of an Operations and Maintenance base for ferry operations with vessel storage later this summer.

Growth and Development

In addition to the expansion of the Savannah Convention Center, a second project under construction, the Savannah Harbor, will bring additional development to the area east of the Convention Center and Westin Hotel. The planned project includes a marina, a public park, residential units, and mixed-use development (see Figure 12).

The current Convention Center expansion will mean Savannah can host larger and more diverse events and growth on Hutchinson Island promises new opportunities for the region. These projects will strain the local transportation network, including local parking resources and the Talmadge Bridge. This growth creates additional opportunity for the CAT Savannah Belles ferry service and suggests incremental additions of ferry capacity will be warranted.

ACCE PASS AND PASS BOCK PA

Figure 12 Savannah Harbor Planned Development

NEEDS AND OPPORTUNITIES

The ongoing labor shortages led CAT to reduce service in October 2022 to improve service reliability. The sharp reduction in bus service eroded the convenience, productivity, and performance of bus service for many riders. Restoring bus service to levels operated before the COVID pandemic is among the highest priorities for CAT. Key findings from the service evaluation suggest the following needs and opportunities for service improvements:

- Despite the existing low levels of bus service, select routes perform very well, suggesting there are opportunities to increase the frequency of several routes.
 - Route 14 Abercorn is CAT's most productive transit service, carrying 23% of all riders on weekdays and 17% of systemwide riders on Saturdays. It also has the most service in terms of hours and frequency. It offers the most promise for service improvements such as more frequent service and infrastructure upgrades.
 - In addition to Route 14, seven "core" CAT bus routes Routes 3, 7, 10, 17, 25, 27,
 and 31 carry 53% of all riders on weekdays and 61% of all riders on Saturday.

Combined with Route 14, these 8 bus routes account for 77% of all weekday riders and 78% of Saturday riders.

- Ridership data shows that riders use CAT services consistently throughout the day, with high ridership from 7:00 AM to 5:00 PM. This suggests that CAT riders use bus service for more than just traditional AM and PM commute trips.
- The cost per revenue hour of service increased for all modes (fixed route, demand response, and ferryboat), but it has increased more dramatically for fixed-route bus service.
- Outside of downtown Savannah, transit ridership clusters, especially when normalized for the amount of service provided, around six critical locations:
 - Chatham City, along Augusta Road in Garden City
 - Island Towne Centre
 - Walmart on Montgomery Cross
 - Oglethorpe Mall
 - Savannah Mall
 - Walmart at Highway 17 and Abercorn
- There are opportunities for CAT to add services on several corridors during weekdays and weekend days. There are also opportunities to change service models on some corridors and places where ridership is low.

Needs and opportunities for the Savannah Belle's ferry service include:

- The CAT Savannah Belles ferry service should operate late night service hours as soon as possible. Based on budget and human resource constraints, Friday and Saturday evenings during the spring and summer months should be prioritized for increased service hours.
- Advance development of CAT's Operations and Maintenance base for ferry operations with vessel storage. This project is funded with a Federal Transit Administration (FTA) grant with an expected start date in Summer 2023. For this facility to operate optimally, the dredging of Slip 3 by Chatham County will be required.
- Create an additional route to serve the planned Plant Riverside dock. This additional route will also create a need for one additional vessel for the fleet, based on CAT's practice of maintaining two spare vessels.
- Ongoing development on Hutchinson Island expands the market for the Belle's Ferry service. While there are opportunities to serve this market, it would require new financial agreements and partnerships to serve the new development (east of Slip 1).
 Current ferry revenue streams would need to be augmented to support additional service not directly related to service to the Convention Center.

3 MARKET ANALYSIS

OVERVIEW

The Market Analysis is a companion analysis to Chapter 2, State of the System. The performance and productivity of existing bus and ferry routes indicates what is working well and what is working well, but only within the context of what is already available. The market analysis, on the other hand, looks at the community and region to consider the market potential through analysis of broader travel patterns, land use patterns and population and employment to identify where people want and need to go, including places not currently reachable by transit. In this way, the market analysis is a broader and more holistic assessment of where people want and need to go. When combined with the State of the System, it helps create a clear picture of needs and opportunities for transit in the region.

UNDERSTANDING TRANSIT MARKETS

Transit exists to get people where they want to go, such as home, work, school, a friend's house, or an appointment. Chatham Connects conducted a detailed analysis of the market and need for transit services in CAT's existing service area as well as Coastal Georgia region.

Research conducted nationally shows that the need and success of transit services is related to five factors:



Population: Population density (the number of people per a defined area) is highly correlated with transit ridership, primarily because where there are more people, there are more people who can access transit service. Areas with higher population density can support higher levels of transit service.



Passenger Characteristics: Socio-economic characteristics also influence who uses transit. For example, people living in households that do not own a car are much more likely to use transit than those living in households that do own a car(s). As a result, the market analysis considers the socio-economic and demographic characteristics of the underlying population.



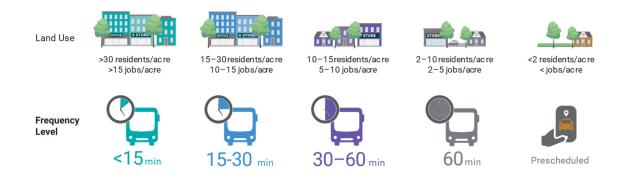
Job Density: Employment density (the number of jobs per a defined area) is a strong indicator of transit demand because traveling to and from work is the most frequent trip many people make.



Major Activity Centers: Universities, tourism destinations, retail locations, and other high-activity areas can attract large volumes of people and therefore can also generate transit trips.

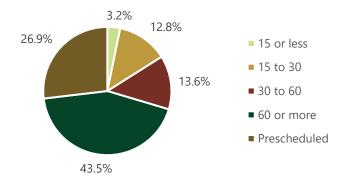


Travel Flows: People use transit to get from one place to another. Major transit lines such as rapid transit services and or high frequency bus routes are designed to serve corridors with high volume travel flows.



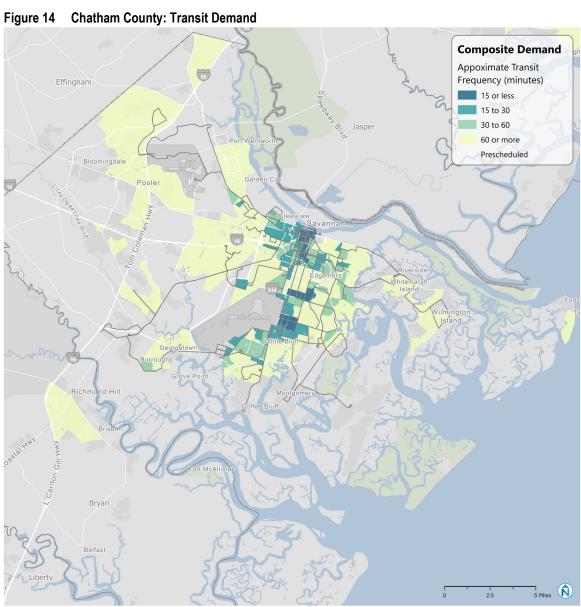
Areas with higher residential and/or job density can better support transit because the number of potential riders is much higher. The relationship between density and transit service levels is shown in the above graphic; while not prescriptive the link between density and transit service is a guide to determine how much and what types of transit service could be provided. The Chatham Connects team used these standards to evaluate land use, population and employment density and demographic characteristics to understand how much transit service could be provided to meet the needs of the underlying market. This analysis (see Figure 13) shows that more than half of all people living in Chatham County live in areas that could support relatively frequent bus service. Chatham County's transit markets are also mapped and described in the following section.

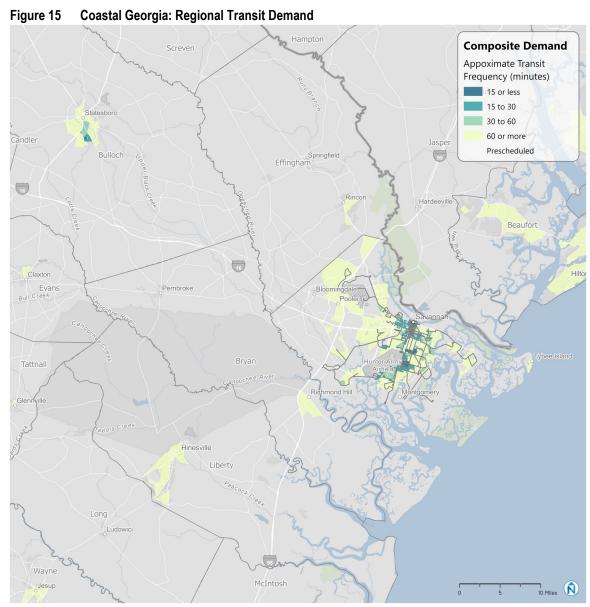
Figure 13 Percent of Chatham Population Living in Transit Supportive Environments



Source: 2020 5-Year American Community Survey and 2019 LEHD

Generally, neighborhoods in and around the historic core of Savannah, which were primarily developed prior to the mid-19th century, have the strongest transit demand (Figure 14), along with corridors along and connecting to Abercorn Street. There are also several regional locations with a high demand for transit, including the areas around the Georgia Southern University campus in Statesboro. Other parts of Chatham County and the wider region have densities that support less frequent transit service (Figure 15). Also, low-density neighborhoods become increasingly more difficult to effectively serve because land use becomes more auto centric. This is especially true in areas farther away from central Savannah.





Source: 2020 5-Year American Community Survey and 2019 LEHD

Access to Jobs and Employment

Evaluating the density of jobs can define clusters or areas of smaller and medium sized employers. In addition to employment clusters, large employers, defined here as employers with 100 or more jobs, create an important market for transit. Of the 158,400 jobs in Chatham County, approximately 34.5% (54,700) are with large employers. Overall, the majority (61%) of large Chatham County employers are in Savannah, followed by unincorporated Chatham County, Pooler, and Garden City (Figure 16 and Figure 17).

Given the region's rapid growth, Chatham Connects also considered regional employment. In 2022, the largest regional employer is Fort Stewart, located 25 miles outside of Chatham County⁷. In addition to existing employment, this recognizes the growth of jobs outside of Chatham County including several existing large employers as well as planned employment sites, like the Hyundai plant in Bryan County and several large employers in Statesboro, which is approximately 35 miles northwest of Chatham County. The closest large employer outside of Chatham County is Georgia-Pacific, which is 21 miles away in Effingham County and has 1,395 employees. Locations of large employers are shown in Figure 18 and Figure 19.

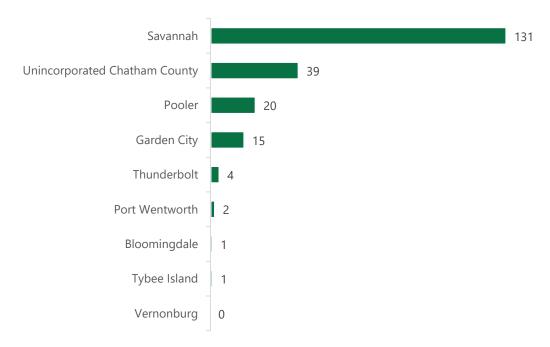


Figure 16 Number of Large Employers in Chatham County

Source: ESRI Business Analyst 2022 Data Axle

⁷ Location data represent the number of employees at specific site locations to understand the needs for transit service. However, employees may be aggregated to nearby locations in some cases because of limitations in location precision for government and military-related employee counts.

Figure 17 Coastal Georgia Largest Employers and Locations

Rank	Employer	Location	Number of Employees
1	Fort Stewart 3rd Infantry Division	Fort Stewart	20,000
2	Ft Stewart-Hunter Army Airfield	Fort Stewart/Savannah	19,000
3	Gulfstream Aerospace Corp	Unincorporated Chatham County	3,500
4	Savannah College-Art-Design	Savannah	2,200
5	Savannah College-Art-Design	Savannah	2,000
6	Advanced Imaging at St Josephs	Savannah	1,800
7	Candler Hospital	Savannah	1,675
8	US Air National Guard	Savannah	1,400
9	Georgia-Pacific Corp	Rincon	1,395
10	St Joseph's Hospital	Savannah	1,254
11	Georgia Ports Authority	Unincorporated Chatham County	1,200
12	Chatham County Police Dept	Savannah	800
13	Savannah Acid	Unincorporated Chatham County	703
14	Georgia Regional Hosp at Savannah	Savannah	700
15	UTC Overseas, Inc.	Savannah	645
16	Walmart Supercenter	Statesboro	620
17	East Ga Regional Medical Ctr	Statesboro	604
18	Briggs & Stratton, LLC	Statesboro	600
19	JCB, Inc. of Georgia	Pooler	600
20	Spirit Construction Svc Inc	Savannah	600
21	Georgia Southern Univ	Savannah	600
22	Walmart Supercenter	Hinesville	587
23	Walmart Supercenter	Unincorporated Chatham County	580
24	Walmart Supercenter	Unincorporated Chatham County	550
25	Pineland CSB	Statesboro	500

Source: ESRI Business Analyst 2022 Data Axle

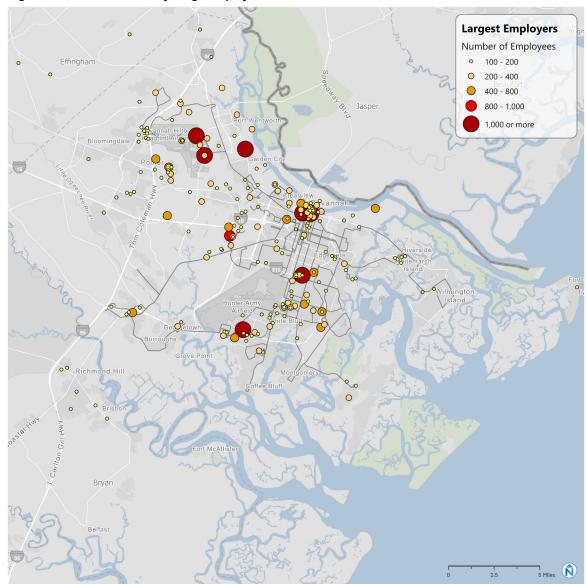


Figure 18 Chatham County Large Employers

Source: ESRI Business Analyst 2022 Data Axle

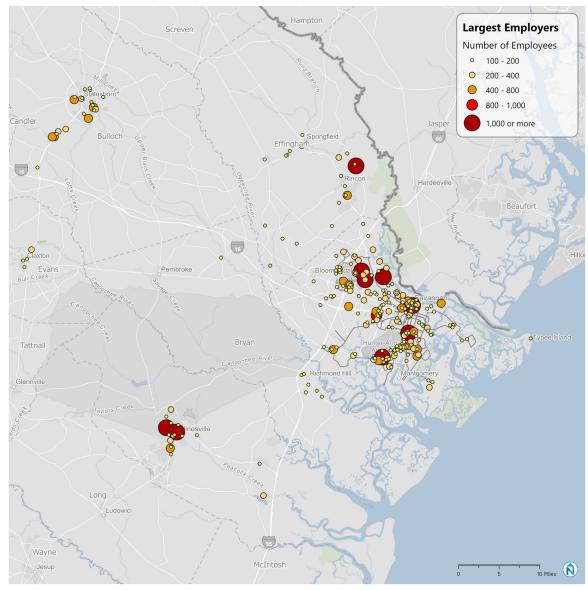


Figure 19 Coastal Georgia: Large Regional Employers

Source: ESRI Business Analyst 2022 Data Axle

Activity Centers and Other Destinations

Activity centers generate demand for transit not captured by the jobs alone. These include hospitals, colleges, clusters of shopping and other destinations that attract employees and patrons, generating more trips than suggested by jobs alone (Figure 20).

Oftentimes these destinations have specific travel patterns that differ from the more common travel patterns during peak direction and commuting patterns. For instance, hospitals and major medical facilities are active throughout the day and into the evening, with second and third shift employees that require transportation during early mornings and

late evenings. Many shopping and entertainment trips occur during the midday and throughout weekends. College, university, and high school travel also occurs outside of peak travel periods that align more with class schedules and after school activities. Colleges and high schools can also have special trips that link the two, providing important opportunities for joint enrollment. Sometimes these travel patterns are best served with specialized service that is tailored to the specific needs of the community, rather than regular all-day service. Some of the major local and regional destinations include:



Hospitals and major medical facilities, such as St Joseph's Hospital, Memorial Health University Medical Center (Memorial Health), Georgia Regional Hospital, and Candler Hospital.



Shopping and entertainment, such as Tangier Outlets, Oglethorpe Mall, strip mall commercial development and grocery stores



Colleges, universities, and high schools, such as Savannah State University, Savannah Technical College, Georgia Southern Armstrong Campus, and Savannah College of Art and Design (SCAD).

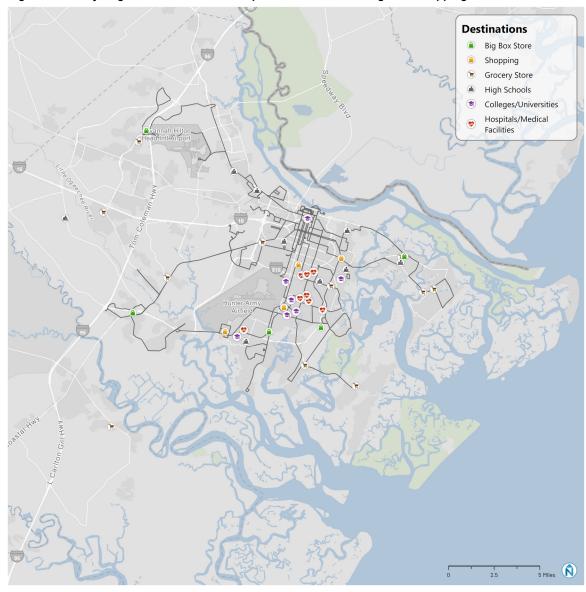


Figure 20 Key Regional Destinations: Hospitals, Schools, and Regional Shopping Centers

Source: Homeland Infrastructure Foundation-Level Data (HIFLD)

COMPARING TRANSIT SUPPLY AND DEMAND

The Chatham Connects team also compared the demand for transit with the availability of service. The analysis helps in understanding if there are areas where more service is needed or if there are areas where too much service is available. Figure 21 is shows this comparison; areas where there are gaps between service levels and underlying demand are highlighted in magenta and blue. Cases where supply and demand are more balanced show up as purple.

The analysis suggests that many parts of the city, especially in the historic parts of downtown Savannah and along the Abercorn corridor, are in balance. The supply of transit is roughly equal to the demand. Other areas, however, suggest that the supply and demand of transit is not well-matched. In Savannah, these areas include:

- Memorial Health, Medical Arts, and Abercorn Heights
- Several neighborhoods along Abercorn, including Poplar Place, Habersham Woods, and Oakdale

There are also areas with unmet transit need in Garden City, especially along Augusta Avenue and in parts of Pooler (US Highway 80/Louisville Highway) and Port Wentworth (State Route 21/Augusta Avenue). A gap is also noted in parts of unincorporated Chatham County, especially in the Lamarville neighborhood along Veterans Parkway.

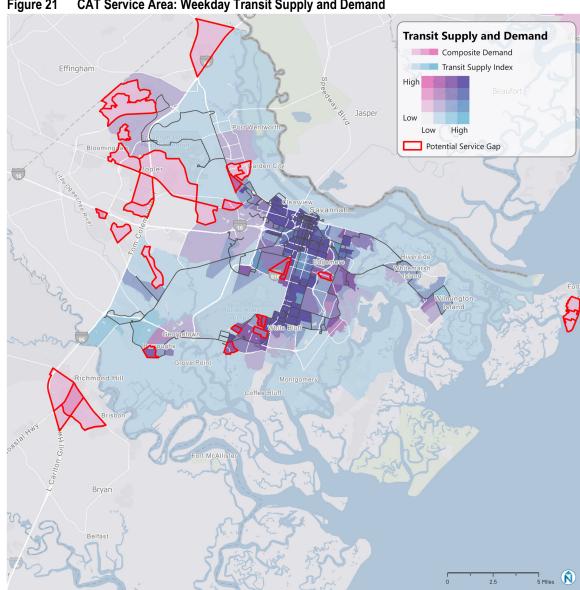


Figure 21 **CAT Service Area: Weekday Transit Supply and Demand**

Source: 2020 5-Year American Community Survey, 2019 LEHD, and 2022 GTFS

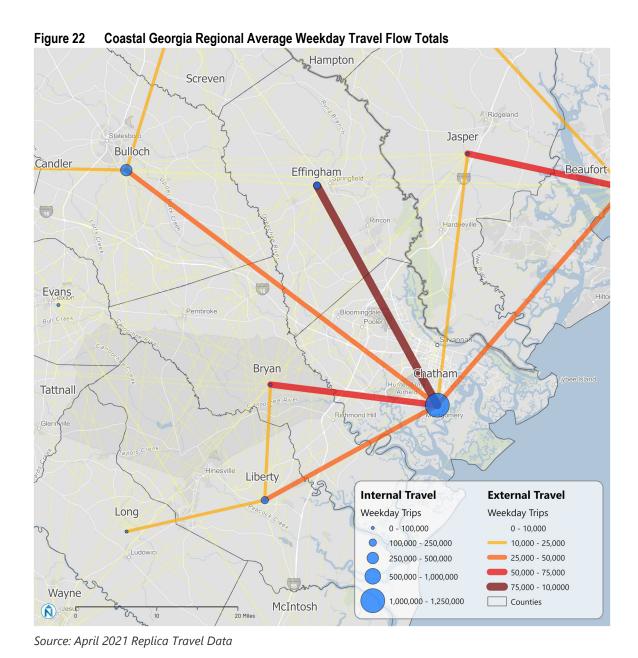
TRAVEL PATTERNS

For transit to be effective, it must take people where they want to go. Examining travel flows or the number of trips between two areas is one way to determine where direct and effective transit connections should be made. This analysis reflects travel movements recorded by cell phones, also known as locational based service (LBS) data.

High travel flows, shown by total trip counts, represent high travel demand. Trips between counties are considered first to uncover the large-scale travel movements. Trips within Chatham County are then shown to reveal the most common daily travel movements in the CAT service area. Over 300,000 trips are made to and from Chatham County every weekday. Of these trips, slightly over half are to/from the two closest counties in Georgia, with 31% to/from Effingham and 21% to/from Bryan. This is followed by trips to/from Beaufort (SC) (12%), Liberty (11%) and Bulloch (10%) counties (Figure 22).

Chatham County has an average of approximately 1,160,000 daily trips that start and end within the county. The density of trips is strongest in downtown and historic Savannah (Figure 23). There is also strong demand for travel along the Abercorn Street corridor, particularly around the Oglethorpe Mall area.

The data underscores the importance of travel within the City of Savannah, including within downtown and historic Savannah as well as along the Abercorn corridor. Transit services that follow these patterns will meet an important need. Other important travel flows include trips between Chatham County to Effingham County and Bryan County. These are the strongest markets for commuter and express bus services.



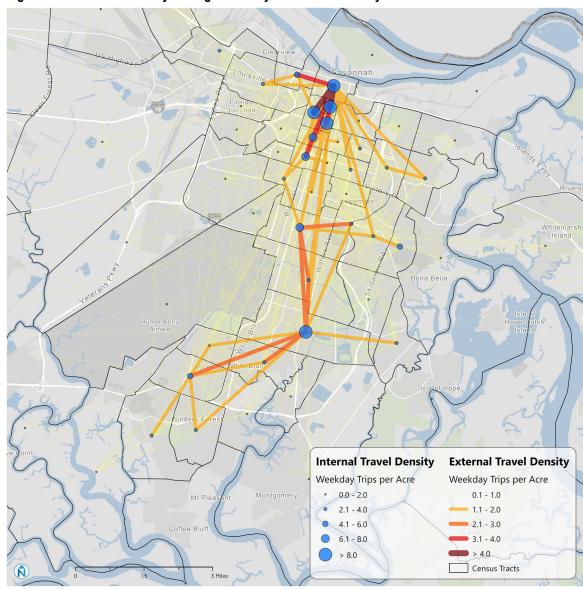


Figure 23 Chatham County Average Weekday Travel Flow Density

Source: April 2021 Replica Travel Data

NEEDS AND OPPORTUNITIES

The market analysis reveals several findings regarding opportunities to improve transit service in Chatham County.

- The strongest markets for transit are in Chatham County. There is transit service in most of these places, although most areas could support more frequent service, especially in Downtown Savannah, the hospital district, and Abercorn Street.
 - o **Greater Downtown Savannah**, primarily in and around the Historic and Victorian districts, has a strong demand (and need) for transit because there are a lot of people and jobs. The area is currently served by dedicated downtown circulators (dot shuttles) as well as service from the combination of nearly every route in the system (only route 6 Cross Town and 20 Skidaway Island/Coffee Bluff do not operate downtown).
 - The hospitals (Memorial Health and Candler Hospital) and adjacent medical facilities in Abercorn Heights, Medical Arts, and Memorial Health neighborhoods drive high demand for transit with high job density.
 The high demand in these areas suggests that more frequent service may be beneficial.
 - The commercial development along Abercorn Street, particularly
 Oglethorpe Mall and nearby retail, drives high demand for transit. The
 pronounced demand exists along most of the corridor, from downtown to
 Georgia Southern University Armstrong Campus and Savannah Mall area.
- Transit demand in Savannah clusters around four main corridors. These corridors offer the most promise for frequent or rapid transit service with buses arriving every 15 minutes:
 - Abercorn Street from downtown to Georgia Southern University Armstrong Campus. The data suggests that most of this corridor could support 15minute service with some segments showing slightly less demand.
 - An east-west corridor close to the river connecting areas just west of downtown Savannah. This corridor is strongest in the historic districts of downtown Savannah, but demand is elevated along Augusta Avenue west to Garden City.
 - A shorter, east-west corridor in central Savannah between Martin Luther King
 Jr., Blvd., and Truman Parkway on Gwinnett Street.

- Another east-west corridor north of the Hunter Army Airfield connects neighborhoods west of Abercorn with the hospitals and Savannah State University east of Harry Truman Parkway. The challenge with this corridor is the lack of a single connecting roadway.
- CAT currently provides service to neighborhoods and communities where
 transit is needed most, including areas with concentrations of households
 without access to a vehicle and with low incomes. CAT also serves
 neighborhoods with concentrations of racial minorities. In some cases, however,
 increased service levels or new service models may be warranted.
 - O Currently, 45% of the population in Chatham County lives within ¼ mile of a bus stop. A larger portion (70%) of people who live in households without a vehicle are within ¼ mile of a bus stop. Sixty-one percent of low-income residents and 54% of the minority population are within a ¼ mile of a bus stop.
 - The demographic data suggest Augusta Avenue and Augusta Road may benefit from additional service, including the West Savannah neighborhood and Garden City. The area south of Hunter Army Airfield in the Wilshire Estates area near Georgia Southern University Armstrong Campus also suggest additional service.
- Employment growth has occurred to the north and west of Savannah. Most new
 jobs sites have been developed as suburban style business parks, making them
 more challenging to serve with traditional transit services. Many of these
 locations may be connected by public transit using vanpool and/or commuter
 express type services.
 - Several large employers (with 100 or more employees) are between 20 and 35 miles from the population center in Savannah. This means some workers are spending between \$7.00 and \$8.00 every day driving to and from work. Transit services can help reduce these costs and open job markets for people who do not own a car or don't always have access to one.
 - Potential regional employment markets are in Statesboro, Rincon, Pooler, and Hinesville. More analysis into the shift days and times is needed to ensure services are aligned with schedules.
 - The data also suggests that regional service to Tybee Island may provide connections to seasonal employment and recreation. The availability of parking would be a key factor in the success of any regional service to Tybee.

- There are also service gaps that are places where there is a market (or need) for bus service, but densities are not high enough to warrant fixed route service. The best type of service in these areas may be microtransit or mobility ondemand options. These service models offer more flexibility about where and when to travel without increasing service costs.
 - Within the city of Savannah, there are neighborhoods with a strong need for transit. Several of these areas are underserved and would benefit from more transit service. These areas included the hospital districts and several parts of Abercorn Street.
 - Outside of Savannah, the market analysis suggests gaps in west Chatham County, including Garden City, Pooler, and Port Wentworth. Most of these areas have high numbers of people and jobs, but the population and employment density are low. Transit service to these areas is warranted but requires thoughtful design.
 - Neighborhoods along Veterans Parkway also have a gap or need for service because service levels are low and the demographic characteristics of the people who live there suggest a higher need for service.

4 MASTER TRANSIT PLAN GOALS AND INVESTMENT PRIORITIES

OVERVIEW

The first stage of the Master Transit Plan focused on identifying what needs to be done. The State of the System, for example, used the performance and productivity of existing transit services to suggest needs for future investments, while the Market Analysis (Chapter 3) relied on land use patterns, community development and socio-economic and demographic factors to lead the team to needs. Conversations with stakeholders and members of the public during the early phases of the project likewise focused on how CAT could best improve its services and better meet local and regional needs.

The Master Transit Plan used the initial analysis to create a set of programs and projects that would address the needs and take advantage of opportunities. As a second step, the Master Transit Plan developed a framework to prioritize individual strategies into an implementable and fundable strategy for future investment. The prioritization process was built around a set of goals, initially established by the CAT Board, and refined by the Stakeholder Advisory Committee, which in turn guided development of an evaluation framework. This chapter describes the process of prioritizing investments included in the Master Plan, starting with the goals established for Chatham Connects, outlining the projects and programs that address needs and goals, and describing the framework used to prioritize the project.

GOALS AND PRIORITIES

As part of strategic planning conversations held in 2022, CAT's Board of Directors identified a series of priorities for CAT (see **Error! Reference source not found.**). A significant portion of these goals were oriented around financial responsibility and ensuring the agency's actions work within the funding available to support transit operations and capital needs. Indeed, the Board of Director's ranked the operating budget as their highest priority, while revenue enhancing strategies ranked third and capital budget and capital needs was fifth. Priorities nestled in and between the attention on agency funding include strategies to expand service, be equitable, address regional needs and expand service.

Figure 24 CAT Board of Director Priorities (2022)



Source: Chatham Area Transit

Chatham Connects started with the agency goals to draft an initial set of goals for the Master Transit Plan that reflect the needs and opportunities identified through the technical analysis as well as comments and feedback received from riders, community members and stakeholders. As part of developing the draft goals, the Chatham Connects team tied goals to

specific investment programs and projects; by tying goals to project and programs, stakeholder and community members were more easily able to understand the goal in practical terms. This initial set of goals and priorities included:

- **Expand Geographically** expanding CAT's service area to serve new markets.
- **Invest in Existing Service** improving and investing in existing service through expansion in the frequency of service and hours of operations.
- Try New Service Types try new service types, like microtransit.
- Expand Sustainable Infrastructure invest in clean fuel technologies.
- **Expand Ferry Services** offer more ferry service at more times and to more places.
- Develop Commuter Services develop new and expanded programs to help people get to work, including express bus service.
- Improve Passenger Facilities develop hubs, build shelters, and add amenities.

POTENTIAL PROJECTS AND PROGRAMS

By establishing and clarifying goals, the Master Transit Plan was able to create a clear and focused list of potential projects and programs. As discussed, these projects and programs reflect a combination of technical analysis and community input. They are also designed to align with the goals established by CAT's Board of Directors and reflect the priorities established by the Stakeholder Advisory Committee and confirmed with members of the public.

Increased Investment in Transit Service

The State of the System and Market Analysis confirmed the need for investment in CAT's existing transit service. The need for increased investment in transit includes more frequent service, longer hours of service, more service on weekend days (especially Sundays) and an expansion of the service area. Consideration of new types of transit service such as microtransit and commuter express are also important. Future investments should fully contemplate a new model for system service from traditional fixed routes and paratransit services.

Expand Fare Free Transit

There may be opportunities for CAT to consider operating service fare free. While some transit agencies around the country have always operated select transit services fare free (for example, the dot shuttles), the practice became more widespread during the pandemic; some transit agencies have not returned to the practice of charging fares.

CAT may consider the benefits and costs of operating fare free as part of the overall Master Transit Plan. The benefits of operating fare free are clear: it helps attract riders to the system.

Eliminating fares also has operational benefits associated with keeping buses operating on time and expanding access to the service.

Use Corridor-Based Service Investments

There are opportunities for CAT to invest in roadway treatments on key corridors, like updating intersection signals to prioritize the movement of buses, dedicating space on roadways for bus use and increasing passenger amenities so riders can board through multiple doors. These types of investments work to improve bus service speed and reliability; they can also lower the cost of service by reducing how long it takes buses to travel on key corridors. CAT could consider these types of investment on high ridership roadways, like Abercorn Street, Waters Avenue, Martin Luther King Jr. Blvd., and Augusta Avenue to improve reliability and help buses move faster. Investments in these corridors can help CAT start to build a "backbone" network that offers riders the fastest, most frequent, and most reliable service.

Improve Passenger Amenities and Mobility Hubs

There is a need for CAT to strengthen its passenger facilities, especially at locations where a lot of riders are using the system and where multiple routes connect. These improvements are most opportune at the fringe of the network where ridership is strongest, like shopping centers, Walmart stores, and hospitals.

There are also opportunities for mini-hubs (or super stops) and/or mobility hubs to create places where people can transfer between travel modes, such as parking and bus service, ferry and bus service, or bicycle and transit. The need and opportunities for these types of hubs will increase as CAT invests in new transit modes (see microtransit and express bus).

Try New Service Models: Microtransit

Some parts of the CAT service area show a strong need for transit. In some cases, the land uses in these neighborhoods make traditional fixed-route transit inappropriate. There are opportunities to consider new service models, such as microtransit. Microtransit adapts the technology and service models used by ride-hailing companies, like Uber and Lyft, for public transit to expand coverage and improve flexibility for passengers.

Try New Service Models: Commuter and Express Bus

The Coastal Georgia region is growing rapidly, fueled by employment growth. While there continues to be strong growth in Savannah and Chatham County, employment is also increasing west and northwest of Savannah. There is a strong need, expressed by multiple stakeholders and demonstrated in the Market Analysis, to find opportunities to connect workers with jobs. Transportation services are necessary to ensure employers have access to workers, but also to ensure regional residents have equal access to opportunities.

CAT could play an important role in supporting economic development and equal access to opportunity with commuter services focused on key employment markets. To be useful and cost-effective, services should be tailored to work schedules (days of the week and times of the day) and connected to key residential areas, recognizing that the region's largest employers will draw workers from a broad geographic region.

Offer Commuter Services / Transportation Demand Management

Coastal Georgia is also diversifying in the types of industries moving to the region and types of jobs available. Given the range of employment types and the size of individual job sites, it will not be cost-effective to serve all (or even most) of the job sites with commuter or express bus service. In addition, driver shortages also suggest that investing in bus service across multiple fronts will be challenging.

Recognizing the cost, time, and labor demands of starting new commuter bus services, CAT could consider transportation demand management (TDM) or mobility type services to support access to employment. TDM solutions include strategies such as vanpools, carpool matching programs, and support services like Guaranteed Ride Home⁸. These solutions typically lower cost services and can help individuals access jobs in the short term.

Allow Bus on Shoulders

Another strategy to connect workers and jobs is to operate commuter or express bus services on highway "shoulders." This strategy allows transit buses to use breakdown lanes on a highway to travel at or near free-flowing speed through congested arterials and freeway routes. The strategy could help CAT offer reliable and competitive travel times for commuter bus services. There are multiple examples of "bus on shoulder" programs nationally, including in Pinellas County, Florida, San Diego, California, and Minneapolis, Minnesota. This program would require partnership with the Georgia Department of Transportation (GDOT).

Expand Partnerships

Another area of opportunity for CAT is partnerships. Stakeholder interviews and the State of the System analysis demonstrate the success of existing partnerships (Belles Ferry Service and the hospitality industry) and the need for more services. What about GDOT, major employers and destinations (especially regional emerging manufacturing), public private partnerships, higher education?

Partnerships with the highest potential in the short-term include other regional transportation service providers, such as the Savannah-Chatham County Public School System and the Coastal Regional Commission (CRC) to coordinated rural demand response service. In both cases, the opportunity for increased partnerships is multi-fold, including

⁸ Guaranteed Ride Home programs offer people who commute by transit or carpool a free taxi ride home in case of emergency.

sharing resources such as drivers, jointly operated training programs, and developing shared mini-hubs or mobility hubs.

There are also opportunities for partnerships with large regional employers and institutions to help design and tailor transportation services to specific needs and share the cost of operating these services.

Simplified and integrated technology

CAT has invested in a variety of technologies including technologies and systems aimed at making it easy to understand and use transit. Currently, CAT offers two primary smart phone apps – one to plan and track services and another for mobile ticket payments. As CAT considers expanding information and services available through smart phone apps, it should consider consolidating and integrating systems, so they are as simple and streamlined as possible for all riders, including native and non-native English speakers.

Transit Oriented Development (TOD) and Land Use / Development Coordination

The region's rapid growth has led to dispersed and sprawling land uses, which are difficult to serve with transit. An opportunity for CAT, therefore, is to guide and encourage transit-oriented development locally on corridors in the City of Savannah and/or regionally with as new projects are developed and built. The goal with these projects would be to address the land uses, pedestrian facilities, and site designs to make them more interconnected, less auto-oriented, and more easily served by transit. As compared with some of the other opportunities, outcomes associated with this strategy are slower to accrue but help encourage structural changes with lasting impacts.

EVALUATION FRAMEWORK

The CAT Board of Directors, CAT's leadership and the Stakeholder Advisory Committee were unified with their direction that the Master Transit Plan be grounded in equity. With this goal in mind, the Chatham Connects team developed an evaluation framework that is based on equity principles and designed to be equitable in terms of both how projects were selected and their expected outcomes. The purpose of using an equity framework for evaluation is to:

- Invest in public transit as a way for Chatham County and the City of Savannah work towards socioeconomic equity and racial equity.
- Ensure that investments prioritize communities that have been disproportionately burdened by current and past government decisions and deprioritize communities that have disproportionately benefited.
- Ensure that investments prioritize connections to services and destinations that will help people access opportunities, such as education, jobs, and healthcare.

Historical and Current Conditions

Moving towards a more equitable transportation system requires an understanding of the historical and current conditions in Chatham County and the City of Savannah. The following key points helped to guide the Chatham Connects team as they developed the evaluation framework and Master Transit Plan strategies:

- Many areas of Savannah, especially in the western half of the city and closer to downtown, are classified as disadvantaged communities by the federal Justice40 initiative, which highlights areas burdened by climate change, health outcomes, housing costs and underinvestment, pollution, transportation barriers, wastewater, and poverty and unemployment.
- Overburdened populations—especially people of color, those with low household incomes, and those without access to private vehicles—have a higher propensity to use transit. Investing in routes that serve the greatest demand means more mobility for people who rely on transit the most.
- While the City of Savannah has many jobs, some of the region's largest employers are located outside of the city, so prioritizing transit connections to these job centers increases access to opportunities.

Master Transit Plan public outreach efforts identified that key community priorities include: 1) fixing unreliable and infrequent service; 2) increasing transit service levels and improving bus stops; 3) improving school transportation options; and 4) piloting microtransit.

Transit Strategies

The Chatham Connects team developed a series of potential strategies for the Master Transit Plan in three categories: 1) Transit Services, 2) Capital Investments, and 3) Policies and Programs. Within each of these categories, the strategies were evaluated according to a series of criteria grounded in equity.

Evaluating Transit Service Improvements

Transit service improvement strategies, such as increasing spans and frequencies on existing routes and adding new service types like microtransit or commuter buses, were evaluated based on their service area and characteristics. Within the service area of each route (0.5 miles from a transit stop or the area within a microtransit zone), the team analyzed the total population; total jobs; population of people of color, low-income individuals, zero-car households, differently abled persons, and older adults; and level of education attainment, healthcare, and grocery stores. The team also assessed the quality of the service by looking at spans, frequency, ease of use, and how the strategy improves service over the existing level in the area.

Evaluating Capital Improvements

For bus stops, mobility hubs, and transit center improvements, the Chatham Connects team evaluated where these strategies would be located and would help make it easier to use the transit network. For the area around each of these investments, the team analyzed the total population and the population of people of color, low-income individuals, zero-car households, differently abled persons, and older adults. It is also crucial to connect capital improvements with related service improvement strategies. The team evaluated and chose to prioritize improvements to passenger facilities in corridors that have major service improvements planned, with relatively high current ridership, with major key destinations served, and where there are frequent and/or multiple routes serving the location.

Evaluating Programmatic Improvements

For the policy and programmatic strategies, the Chatham Connects team conducted a qualitative assessment based on the following questions:

- To what extent does the strategy increase access to jobs, education, and healthcare?
- To what extent does the strategy increase access to affordable and sustainable mobility options?
- To what extent does the strategy increase CAT's presence in the community, ensuring that CAT can continue to provide important services for the long term?

An Equitable Investment Program

After transit strategies were created and evaluated individually, the Chatham Connects team developed draft short-, medium-, and long-term investment programs, prioritizing strategies that scored well based on the criteria described above. To get a sense of how well these strategies work together when combined, the team evaluated the full transit network proposed in each time frame based on the following metrics, compared to the existing network:

- Network Coverage: Total population and jobs within 0.5 miles of a bus stop or within a microtransit zone
- *Transit Quality*: Total population and jobs within 0.5 miles of a bus stop with service that comes at least every 30 minutes or better or within a microtransit zone.

The recommended investment programs for each time frame are described in the following chapter.

5 MASTER TRANSIT PLAN RECOMMENDATIONS

OVERVIEW

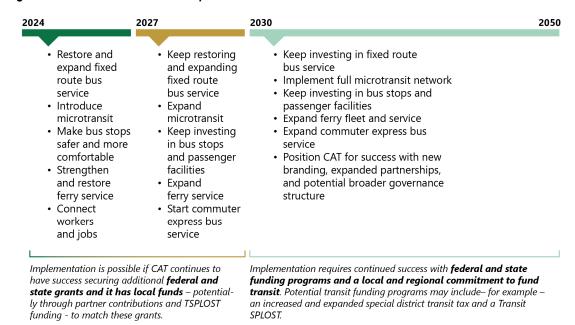
The Master Transit Plan was focused on creating a strategic plan for CAT's future that addresses transportation service needs, balanced with available funding and financial resources, and grounded in an equitable framework. Short-term strategies and projects, therefore, are focused on CAT's available financial resources and constrained by existing revenue streams and reasonable expectations about external funding available through state and federal grants. As the Master Transit Plan looks further in the future, it is more strategic and ambitious about potential and expanded funding opportunities and less constrained by existing funding. In this way the plan is both ambitious and grounded, so it has a realistic opportunity to be implemented and realized.

The evaluation process focused the Master Transit Plan around six core strategies:

- 1. Build a Faster, More Reliable Transit Network
- 2. Use Microtransit to Connect Communities
- 3. Make Transit More Comfortable
- 4. Support the Travel Needs of Target Audiences, like students, older adults, and differently abled individuals (includes ferry services).
- 5. Make it Easter to Get to Work
- 6. Position CAT for the Long Term

The Master Transit Plan is designed to advance each of these strategies, taking steps to implement and advance investment in line with available and potential funding. The Master Transit Plan is organized around three future "design" year time frames with capital and operating investments recommended for the short-term, medium-term, and longer-term. Recommendations included in the short-term were coordinated with CAT's COA/TDP and are designed to work within existing funding and known grant funding that CAT has already or is well positioned to receive. Recommendations slated for the medium and longer-term, however, will require CAT to pursue additional funding sources, including expanded financial participation from regional partners, organizations, and jurisdictions (see Figure 25 on the following page).

Figure 25 Master Transit Plan Implementation Timeline



Outcomes and Benefits

The Master Transit Plan reflects CAT's investment strategies for the next decade and beyond. While the recommendations reflect a data-driven and community-guided process, it is also valuable to understand how the plan benefits transit riders as well as employers, residents and taxpayers in Chatham County and City of Savannah.

Many of the projects and programs included in the Master Transit Plan were specifically designed to improve access to employment – both for workers traveling to jobs and employers seeking a reliable workforce. They were also designed to make it easier and more reliable for people to get to school, medical facilities and other activities. One of the ways that we measure benefits is in terms of access to transit service.

Access to Transit Services

The recommended Master Transit Plan improves both the coverage and quality of the transit network for Savannah and Chatham County residents. Figure 26 and Figure 27 shows the number of people and jobs within 0.5 miles of transit service. Currently, just under 200,000 residents have access to any level of transit service, with 28% of these people having access to service that comes at least every 30 minutes. Approximately 80,000 jobs today are within 0.5 miles of a bus stop, and 50% of these jobs close to stops with 30-minute frequency service.

The short- and medium-term investment programs increase overall transit coverage slightly, but dramatically increase access to higher quality and more convenient transit service, such as 30-minute or better frequency fixed routes as well as new microtransit services.

The long-term investment increases both overall coverage and quality of transit. By the end of the Master Transit Plan timeframe, approximately 270,000 people and 110,000 jobs will be within 0.5 miles of a bus stop or in a microtransit zone, the majority of whom will have more frequent service.

250000
200000
150000
100000

Existing Short Term Medium Term Long Term

Figure 26 Chatham County Population within Half-Mile (0.5 miles) of Transit Service

Source: Nelson\Nygaard, US Census 2020 (via Remix)

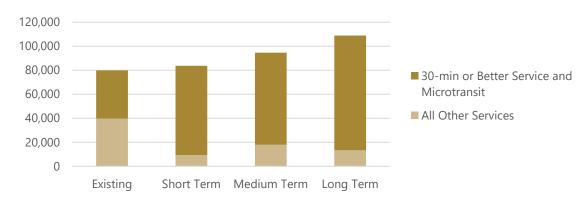


Figure 27 Chatham County Jobs within Half-Mile (0.5 miles) of Transit Service

Source: Nelson\Nygaard, US Census LEHD 2019 (via Remix)

SHORT-TERM PLAN

The short-term investment program is focused on completing capital investment programs in planning or underway and focus on staff development to restore service levels to prepandemic levels. New projects and programs included in the short-term schedule include leveraging new grant funds to implement microtransit and using available capital funds to

improve bus stops with benches, shelters, and lighting. A final strategy involves developing new partnerships to build commuter programs (see Figure 27).

The projects and programs included in the short-term strategy are scheduled for implementation between FY24 and FY27. Advancing the short-term strategies requires that CAT expand its annual operating budget to \$40 million annually by FY27. Capital resources required to implement the projects included in the short-term are estimated at \$45 million over the four-year period.

Microtransit Zones Fixed-Route Frequency 15 minutes or better East Savannah 20 minutes NW Chatham Effingham 30 minutes West Chatham 45 to 60 minutes Whitemarsh Wilmington More than 60 minutes

Figure 28 CAT Proposed Short-Term Local Transit Network

Source: Nelson\Nygaard

Capital Budget

CAT has several large capital projects scheduled over the short term, including programmed – and funded - investments associated with replacing ferries, updating maintenance facilities, and purchasing vehicles. Most of these investments reflect historic under-investment in CAT's capital assets, with short-term spending designed to bring existing assets into a state of good repair. These capital investments are designed to help CAT reduce and manage operating costs over the long term. The capital program is expected to cost between \$45 and \$50 million over the four-year period, with 55% (approximately \$25 million) expected from federal and state grant programs and the remaining 45% (\$20.7 million) from local sources.

The largest portion of short-term capital projects relate to marine services, with the purchase of new ferry vessels and improvements to maintenance and passenger facilities scheduled for 2023 and 2024. In 2023, with the purchase of new ferry boats and preventative maintenance investment, marine services account for about \$12.3 million, or roughly 65% of CAT's capital budget. While spending in 2024 is much lower, expenses associated with maintenance facilities and dock repairs amount to \$4.8 million and represent 27% of CAT's capital budget.

Other capital expenses in the short-term are associated with vehicle purchases, including infrastructure to support fleet electrification; all projects are scheduled in line with CAT's electrification and vehicle replacement schedules. The budget also includes an investment in vehicles to support microtransit services. Other projects include updates to CAT's paratransit maintenance facility, electric vehicle charging equipment and other technology investments. Most of these purchases were scheduled in advance of the Master Transit Plan; the Master Transit Plan does, however, build from these early investments as part of planning for service expansion and agency growth.

Short-Term Investment Program

Restore Fixed-Route Bus Service

Restoring fixed-route bus service is the highest priority strategy identified in the Master Transit Plan. Between FY24 and FY27, the Master Transit Plan recommends restoring transit service as quickly as staffing levels and funding allow. Restoring service includes increasing the frequency of service as well as expanding the hours of service and days of the week when service is available. Bus service investments also include a handful of route extensions, like in Port Wentworth and Garden City, to meet existing needs. Service expansions are concentrated on routes with the most riders to ensure the impact of these investments reaches the greatest number of riders.

Service investments recommended for the short-term include:

- Invest in CAT's highest ridership routes daily so they operate with 30-minute service on weekdays for at least 15 hours per day. Investments are also recommended for weekends, with investments in frequency and hours of service. These investments will establish a "core" network of bus routes.
- 2. Create frequent bus corridors using a strategy of overlapping routes/patterns to offer more frequent service in areas of higher demand and less frequent service in areas of lower demand. Key corridors identified for frequent service include:
 - a. Augusta Avenue The neighborhoods extending from downtown Savannah along Augusta Avenue have strong ridership and a higher propensity for transit. CAT can create a frequent corridor by using two overlapping bus routes (3 West Chatham and 3B Garden City) combined with a new third route (3C Groves HS). The combination of three hourly routes (3A, 3B, and 3C) will provide frequent service in areas where it is needed most balanced with more coverage-oriented service in areas with lower demand.
 - b. Waters Avenue Waters Avenue is one of the most productive corridors in Savannah and Chatham County. CAT serves Waters Avenue with two routes (27 Waters and 28 Waters). Improving Route 27 Waters to 30 minutes and Route 28 Waters to 60 minutes will create frequent service along the trunk and less frequent service along each branch.
 - c. **Barnard Street** Barnard Street intersects low-income and minority neighborhoods from downtown to 52nd Street. The short-term plan calls for two patterns of Route 4 Barnard: 4A and 4B. The shared segment of Route 4 operates south of downtown with the highest demand, while the branches serve areas with lower demand.

3. **Bring all CAT bus routes to a minimum standard of 60-minute frequency.** The CAT transit network will have a total of 16 routes with hourly service. Only two routes would have less than hourly service: 4A Barnard and 4B Southside, each with 120-

Highest Ridership Route Slated for Investment in Short Term

Route 10 East Savannah Route 27 Waters

Route 14 Abercorn Route 31 Skidway / Sandfly

Route 25 MLK Boulevard

minute service. The 4A and 4B routes would, however, combine to create a 60-minute service along Barnard Street, representing a significant improvement over the existing 120-minute service (see above).

4. Transition from fixed route service to microtransit in areas that are better served with an on-demand option. Whitemarsh Island, Wilmington Island, and Talahi Island have low density development patterns, accounting for low ridership on fixed route service. Truncating the existing fixed route services (10 East Savannah and 12 Henry) in areas where demand declines saves resources for improved frequency on fixed route, while maintaining service levels in areas that need service. Another potential location for replacing fixed route service with microtransit service is along Quacco Road, where microtransit could replace a section of Route 17 Silk Hope to help improve service reliability. Additional details on microtransit are included in the following section.

Use SMART Grant Funds to Offer Microtransit

In 2023, CAT was awarded federal grant funds through the FTA's Strengthening Mobility and Revolutionizing Transportation (SMART) program to pilot microtransit service in Chatham County and the City of Savannah. CAT will work with partners, including the Georgia Institute of Technology (Georgia Tech) to test new systems and technology for deploying service. The grant funds are especially valuable because they do not require matching local funding and if the project is successful, there is potential for additional funds.

The Master Transit Plan recommends advancing microtransit in three high-need locations: Northwest Chatham County, West Chatham County and East Savannah. These zones will provide connections to new and expanding job sites currently not accessible by CAT bus service; the microtransit services will also connect to CAT's fixed route transit network, including routes identified for service investment. All microtransit zones in the Master Transit

Plan are created with targeted average wait times of 15 minutes, meaning most passengers will be picked up by a microtransit vehicle approximately 15 minutes after booking a ride.

The cost to operate three microtransit zones in FY24 is \$1.1 million annually. The costs assume microtransit service is available 10 hours per day (roughly 8 AM to 6 PM) on weekdays and Saturdays. In FY26, a fourth microtransit zone (Whitemarsh Wilmington) will be added, increasing the annual operating costs of all zones to \$1.45 million annually. The Master Transit Plan capital program assumes CAT will purchase eight electric microtransit vans (3 in 2023, 3 in 2024 and 2 in 2026).

Recommended microtransit zones include (see also Figure 28):

- 1. **Northwest Chatham Microtransit Zone** Microtransit zone serving Jimmy Deloach Parkway and adjacent jobs such as Georgia Tech Savannah, Gulfstream, as well as numerous distribution centers and logistics centers. The microtransit zone would create the opportunity to operate bi-directional service on Route 3 West Chatham.
- 2. West Chatham Microtransit Zone Microtransit zone serving Ogeechee Road north to I-16, connecting passengers to jobs on Pine Meadow Drive (Amazon Fulfillment, Mitsubishi, and Georgia Quickstart Manufacturing). The West Chatham microtransit zone also serves Quacco Road, giving CAT the opportunity to straighten out Route 17 Silk Hope to improve operations. The zone also includes the development along Abercorn Street at I-95 and US 17.
- 3. **East Savannah Microtransit Zone** Microtransit zone from Habersham Street in downtown Savannah east to Wilmington River. The zone would include neighborhoods south to Victory Drive, including the Cove at Dundee (Tiny House Project) off of Wheaton Street.
- 4. Whitemarsh / Wilmington Island Microtransit Zone Microtransit zone covering sections of Chatham County east of the Wilmington River including Whitemash Island, Talahi Island, and Wilmington Island. This zone would connect riders to the commercial development at Islands Expressway and Hwy 80 (Walmart, Publix, etc.), as well as various other destinations on Johnny Mercer Boulevard. Implementation of this microtransit zone enables Route 10 East Savannah to terminate at Walmart for more frequent service on the remaining alignment.

Invest in Passenger Amenities

The Master Transit Plan recommends that CAT develop an ongoing program to invest in bus stops and passenger infrastructure. The recommendation is consistent with comments received from riders, community members and stakeholders calling for more and better passenger amenities.

At the lower end, a simple bus stop with a bench, solar light post, signage, and trash can will cost approximately \$4,000 to update per stop. Including a shelter increases the costs to approximately \$25,000 per stop, and assuming more extensive work (sidewalk extensions,

curb cuts and crosswalk markings) drives the cost up to around \$76,000 per stop. Actual costs will vary by location. Development of bus stops also requires staff time to manage the process, including site development and permitting as well as coordination with the City of Savannah and other partners.

The Master Transit Plan recommends CAT advance a bus stop improvement program in 2025 as soon as CAT completes its planned capital programs. In 2025, CAT could fund the passenger amenity program with \$1.5 million annually to update approximately 50 bus stops per year. To equitably allocate resources, CAT should consider the following to prioritize stops for upgrades:

- Ridership prioritizing the highest ridership corridors means that more people can benefit from the bus stop improvements.
- Transfer opportunities if multiple routes serve a stop, investing in its amenities would allow for a more comfortable transfer experience.
- Service improvements new and improved bus stops should be ready for the implementation of new or improved bus routes.
- Service area bus stops in disadvantaged communities—especially those who rely on transit the most, older adults, and differently abled persons—should be prioritized.

Strengthen and Restore Ferry Services

As the hospitality sector, including Convention Center events, expands beyond pre-pandemic levels, CAT should strengthen and restore ferry services. This includes restoring service levels as well as continuing with the planned program of capital investments – including purchasing new vessels, investing in maintenance facilities, and improving passenger amenities.

- **Expand Ferry Service Hours.** As the number and size of Convention Center events increases, and Savannah continues to grow its tourism industry, there is a need to increase the hours of ferry service in line with pre-pandemic levels. As staffing capacity allows, CAT should increase service on Friday and Saturday evenings operating until 12:30 AM; an interim step would be to increase service on weekend evenings (Friday, Saturday and on holidays), during the peak visitor months between March and July. With staff expansions, later service hours could be expanded on all days of the week during the peak periods.
- Invest in an Operations and Maintenance Facility. CAT has secured a Federal Transit
 Administration (FTA) grant to build a new operations and maintenance facility on
 Hutchinson Island. This project is funded and scheduled for implementation Fiscal Year
 2024 (summer of 2023). When this is complete, CAT will have more flexibility and
 control over vessel maintenance, strengthening the efficiency of the operations.
 Optimal operations of this facility, however, will require dredging of Slip 3 by Chatham
 County.

- Improve Passenger Landing Facilities on both sides of the Savannah River. The Belles Ferry serves three passenger landings: City Hall, Waving Girl, and the Trade Center. The landings on the Savannah River Front are in good repair. In June 2022, the Trade Center Landing site collapsed, leaving the location unusable for ferry services. After this collapse, CAT moved the ferry service to a landing in front of the Convention Center. When repairs are complete, service will be returned to the Trade Center Landing. CAT has secured funding for a fourth landing adjacent to the West End Dock, west of City Hall landing with the work to begin within two years. This new facility will support the increased development and facilities at the Plant Riverside.
- Replace Diesel Vessels with Hybrid Electric. CAT has secured grant funding to
 replace two vessels and will pursue funding to replace two additional vessels. These
 vehicles are funded and scheduled for delivery in 2023; an additional vessel will be
 procured in 2025. The strategy of replacing poorly maintained diesel vessels with
 hybrid-electric vessels will increase the cost effectiveness of the service by lowering
 fuel costs and maintenance costs; it is also consistent with CAT's transition to energy
 efficient vehicles overall.

Connect Workers and Jobs

The Master Transit Plan identified five action items or investments to make it easier for people to get to work, including three low-cost strategies that can be implemented in the short-term:

- 1. Establish a **voucher program** that gives workers a discount on Lyft or Uber for rides home from work during hours when fixed route service is not available.
- 2. Partner with local non-profits to develop **a Jobs Access program** to provide free transportation for people traveling to job interviews, job training and up to the first three weeks of employment.
- Create a vanpool program to support small groups of people traveling to the same worksite.

The commuter-oriented programs, inclusive of vouchers, a jobs access program and vanpools are estimated to cost \$425,000 per year; this estimate includes the cost of a staff person to manage the program, directs costs for subsidies and marketing and information.

MEDIUM TERM PLAN

The medium-term network builds on the foundation laid by the short-term network to create a more robust transit system with even more options and flexibility for riders. Service improvements during this phase include the first high-frequency fixed route service, expanded hours on most routes, and express bus service. Capital improvements in the medium-term plan are intended to support these service improvements with investments in key corridors to create rapid bus style service on the most productive routes. Additional capital investments include continuation of passenger facility improvements (bus stops and mobility hubs), fleet replacement, and maintaining a state of good repair for all transit assets (see Figure 29).

The projects and programs included in the medium term are scheduled for implementation between FY28 and FY30, although achieving the schedule will require changes to CAT's funding structure, which may take longer to realize. Annual operating costs over the medium term are anticipated to be \$45 million in FY28 and grow to \$74 million in FY30. The operating costs in FY30 represent a 43% increase from the final year in the short-term Plan (\$74 million in FY30 compared to \$43 million in FY27).

Capital costs are expected to be about \$40 million over the three-year period. The capital program includes ongoing investments to replace and electrify vehicles, expansion of three microtransit vans, the addition of a vessel to the Savannah Belles' fleet, continued investment in bus stops and passenger amenities. The capital plan includes \$2.2 million annually for the capital fund to support the maintenance of CAT facilities.

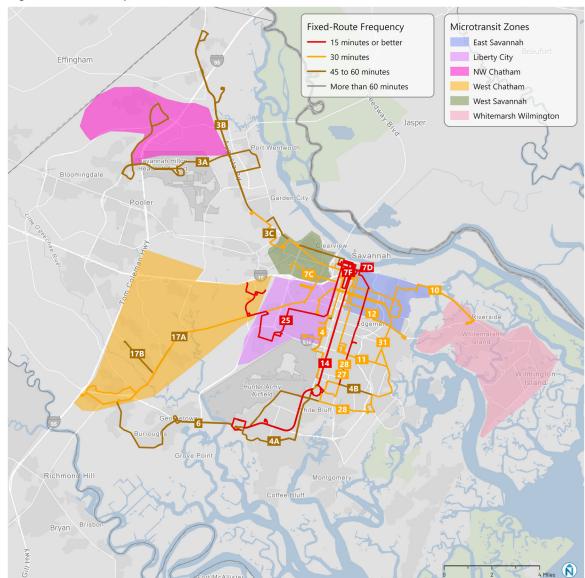


Figure 29 CAT Proposed Medium Term Local Transit Network

Restore and Expand Fixed-Route Bus Service

From FY28 to FY30, the Master Transit Plan recommends bus service improvements to the highest ridership corridors to create frequent transit corridors with service every 15 minutes. In the medium term, the plan also recommends improving the span of service to at least 15 hours on weekdays and Saturdays on most routes and 18 hours on high ridership routes. Specific medium term bus service improvements include:

- 1. Create frequent transit corridors (15-minutes or better) on the region's key corridors and highest ridership routes.
 - a. **Route 14 Abercorn** Abercorn Street is the transportation spine for the City of Savannah and has more riders per mile than any other corridor in Chatham

County (97 boardings per mile). Land use and density along the corridor show a demand and need for increased service levels. Improving Route 14 Abercorn to operate every 15 minutes will reach the greatest number of riders and strengthen the network core.

- b. Route 15 MLK Martin Luther King Jr Boulevard has the second highest passenger count per mile in the CAT system (81 boardings per mile). Improving Route 15 MLK to operate every 15 minutes will create more opportunities for riders to board the bus, improving mobility in neighborhoods with greater transit needs.
- c. **Route 27 Waters and Route 28 Waters** Waters Ave has the third highest passenger activity in the network (61 boardings per mile). The medium-term plan calls for improving both routes operating on Waters Ave (27 and 28) to 30-minute headways, effectively bringing most of Waters Ave to 15-minute service.
- d. dot Shuttles The dot shuttles have high ridership activity, especially on weekends. In fact, Route 7F Forsyth and Route 7D Eastern Wharf are the top two routes in terms of ridership on Saturdays and Sundays. The medium-term recommendations call for improving Route 7F and Route 7D, so shuttles arrive every 10 minutes seven days a week.
- 2. Expand the span of service to 18 hours of service six days a week (Monday Saturday) on the highest ridership routes. Recommended routes to increase the span to 18 hours are Route 14 Abercorn, 17A Silk Hope, 17B Silk Hope, 25 MLK Jr., Boulevard, 27 Waters, 28 Waters, 31 Skidaway / Sandfly, and 3C Groves High School.

Expand Microtransit

In the medium term, CAT can build on lessons and experience with its microtransit service to expand service to add two additional, creating a total of six zones (see Figure 29). As part of this expansion, the Master Transit Plan recommends improving the hours of service from 10 hours to 16 hours per day on weekdays and Saturdays, while Sunday service would operate 14 hours per day. Serving these zones would require expanding the microtransit fleet by three additional vehicles. The recommended additional microtransit zones are:

- West Savannah Microtransit Zone The West Savannah microtransit zone would cover the area west of downtown from Highway 17 Atlantic Coastal Highway to Highway 80, serving Bay Street, Augusta Avenue, and part of Augusta Road. The West Savannah and Hudson Hill / Bayview, and Woodville / Bartow, and Carver Village neighborhoods would be served by this zone. The microtransit service would provide service to neighborhoods of high low-income and minority populations.
- 2. **Liberty City Microtransit Zone** The Liberty City microtransit zone would extend from Montgomery Street on the east to I-516 and Veterans Parkway on the west. The zone would extend north to the West Savannah microtransit zone and I-516 to the

south. Several of the neighborhoods included in the Liberty City zone would be Lamarville, Tatumville, Liberty City, Tremont Park, Cloverdale, and Cann Park. Like the West Savannah zone, the Liberty City zone would provide service to neighborhoods of high low-income and minority populations.

Continue to Invest in Passenger Amenities

The Master Transit Plan recommends that CAT maintain its bus stops and passenger program through the medium term. Assuming the program is funded with \$1.5 million per year, CAT can continue to improve 50 bus stops per year. The investments should be allocated equitably allocate, using a consistent structure prioritize stop investment:

- Ridership prioritizing the highest ridership corridors means that more people can benefit from the bus stop improvements.
- Transfer opportunities if multiple routes serve a stop, investing in its amenities would allow for a more comfortable transfer experience.
- Service improvements new and improved bus stops should be ready for the implementation of new or improved bus routes.
- Service area bus stops in disadvantaged communities—especially those who rely on transit the most, older adults, and differently abled persons—should be prioritized.

As CAT's microtransit services gain experience and ridership, CAT can expand its capital program to develop mobility hubs at locations where fixed route bus routes and microtransit services meet. Mobility hubs are expected to cost between \$150,000 and \$500,000 depending on the amount land acquisition and roadway work required. The Master Plan recommends building one mobility hub in 2028 and two more in 2029. The exact locations will be determined based on ridership and are likely to include locations in Northwest Chatham near Route 3, West Chatham near Route 17 and East Chatham near Route 7 or routes 27/28.

Commuter Express Bus Program

As employment in manufacturers, warehouses and other industries grows in Coastal Georgia and continues to locate outside of the urbanized area, there will be an increasing need for more traditional public transportation programs and services, like commuter express bus service. Commuter express buses are different from traditional bus services because they have fewer stops and travel longer distances to bring people to employment centers. Service is often provided using a "commuter coach" bus that offers more amenities like padded seats and Wi-Fi.

In Coastal Georgia, the data shows a need for commuter express service to connect residential areas with new employment centers in Bulloch, Effingham, and Bryan counties. In particular, the Hyundai Electric Vehicle Assembly Plant and Battery Manufacturing Plant being developed in Bryan County will be a "mega site" with an expected 8,100 jobs.

Connecting workers to this facility – both to avoid congestion and to ensure access to jobs - will be a priority as the facility comes online. Analysis completed by the COA/TDP, shows that roughly 250,000 people are within a 30-minute commute of the facility, another 545,800 are within 25 minutes and close to 724,000 are within an hour's drive⁹.

Estimated Costs

WRA's analysis prepared for the Hyundai Mega Site is based on four express bus routes (see Figure 30 and Figure 31 on the following pages). Starting two commuter express routes in the medium term would require five commuter coaches as well as investments in marketing and passenger information, bus stops and park and ride lot locations. The cost estimate suggests \$1.5 million per year to operate two routes, plus an additional \$5 million to support stops, marketing and park and ride lots.

Figure 30 Proposed Commuter Express Bus Routes to Hyundai Mega Site

Bus Route	Communities Service	Days	Hours
Georgia Southern – Hyundai – Savannah Hilton Head International Airport	Statesboro Hyundai Plant Pooler Airport CAT ITC	Monday – Sunday	6 AM – 9 AM 2 PM – 6 PM
Savannah – Hyundai	Savannah Victory Square Shopping Center CAT ITC Hyundai Plant	Monday - Friday	5 AM – 8 AM 2 PM – 6 PM

Source: WRA Associates, 2022

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⁹ Commuter Express Bus analysis was developed by WRA as part of the COA/TDP.

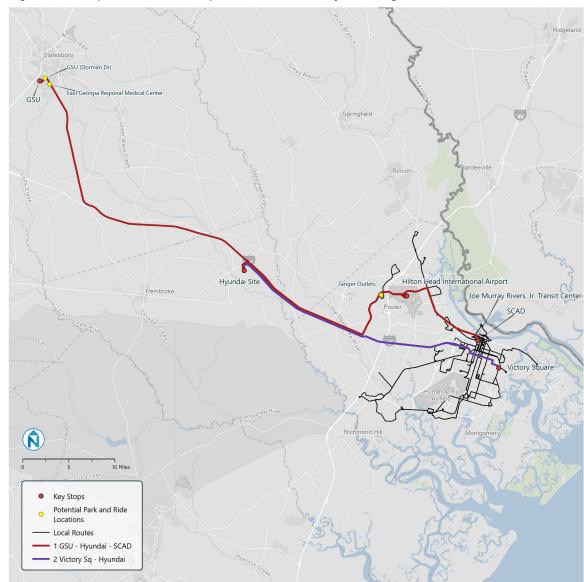


Figure 31 Proposed Commuter Express Bus Service to Hyundai Mega Site

Source: WRA Associates, 2022 adapted by Nelson\Nygaard

Expand Ferry Services

One of the Master Transit Plan's short-term strategies is for CAT to open the West End Dock serving businesses on the west side of Savannah. This dock is funded and could open in 2026 or 2027. Assuming the dock is operational in Summer 2027, CAT could advance a new ferry route network to fully integrate the updated and expanded ferry infrastructure. remain comparable to current levels. The recommended route structure would add a ferry route, so one route would connect the West End Dock and Waving Girl to Savannah Convention Center, while the other would run directly between City Hall Landing and Savannah Convention Center (see

Figure 32). This alignment creates a fast, direct link between the two highest ridership locations (City Hall Landing and the Convention Center), creates a ferry connection between the west and east end of River Street and maintains the simplicity for riders - any ferry on River Street will bring riders to the Convention Center. Operating two routes will also help CAT manage space constraints at the Savannah Convention Center Landing by creating separate passenger queues (e.g., one for City Hall and one for Waving Girl).

The addition of another route as recommended would push the number of vehicles in operation higher, and result in a peak vehicle need of three vessels (the number of routes would itself add capacity, but not enough to accommodate all surge events). CAT's goal is to maintain two spares to minimize potential service interruptions; this suggests that the new service can be added with a fleet of five vessels.

New Landing

Trade Genter Landing

We have St. Savannam

We plants. New Historia

We plant st. Savannam

We plant

Figure 32 Recommended Route Alignments with Addition of Plant Riverside Landing

Source: Nelson\Nygaard Consulting Associates

LONGER TERM PLAN

The longer-term plan expands the quality and reach of transit throughout Savannah, Chatham County, and the region. This includes more than doubling transit service from the current levels by increasing frequency and span of the fixed route network, expanding microtransit county-wide, a new bus route to Hutchinson Island, a new ferry route, and expanded commuter express service (see Figure 33). The Master Transit Plan's longer-term strategy is intended to be implemented FY31 and FY35. It is an aggressive schedule that is designed to meet the needs of people in Chatham County needing to get to work, school and other activities. Fully realizing the projects and programs included in this plan will almost certainly stretch beyond the FY35 time frame.

The annual cost to operate the longer-term network is \$110 million. Capital costs are expected to be nearly \$60 million over the five-year period. The capital program includes ongoing investments to replace vehicles, expanding CAT's bus fleet to include more microtransit and commuter bus vehicles, adding another vessel to the Savannah Belles' fleet, and continued investment in bus stops, passenger amenities and mobility hubs. The capital plan includes \$2.2 million annually for the capital fund to support the maintenance of CAT facilities.

As CAT moves forward with the Master Transit Plan and expands funding sources and strategies, it will need to consider potential strategies to align its marketing and governance structures to align with its expanded role in the region. The longer-term phase of the Master Transit Plan includes strategies to align CAT with this broader role, including such as developing a cohesive and comprehensive branding strategy, expanding partnerships, and potential new governance structures that align with funding strategies. Combined these strategies are designed to position CAT for the long term.

Restore and Expand Fixed-Route Bus Service

Over the long term, CAT can continue to improve its bus network, strengthening the frequency and span of service on key bus routes where ridership is strongest (see Figure 33). Recommendations also include a new route connecting downtown Savannah to Hutchinson Island. Fixed-route improvements in the longer term include:

- Standardize all fixed routes to 30-minute frequency or better. Improving all
 routes in the transit network to 30-minute headway would provide passengers
 increased mobility throughout Savannah and Chatham County. This would involve
 improving frequency on six routes (3A West Chatham, 3B Garden City, 3C Groves HS,
 4A Barnard, 4B Southside, 6 Crosstown). Route 17A and 17B would continue to
 operate every 60 minutes, but the combined headway would be 30 minutes.
- Standardize the span of service on all fixed routes to 18 hours Monday through Saturday and 15 hours on Sundays. Expanding the service hours on all routes would create consistent operating hours for all routes. This would create more

- opportunities to make connections and offer more return trips for passengers that need to travel later into the evening. Operating the same schedules Monday through Saturday is more in line with how the region travels. Operating 15 hours on Sundays reflects the modified travel patterns and reduced demand earlier and later in the day.
- 3. Introduce bus service to Hutchinson Island. The longer-term recommendations include adding a new route that would operate through downtown Savannah, connecting to the ITC before traveling to Hutchinson Island via Hwy 17. The service would supplement the existing Belles Ferry service by providing another connection from Savannah to Hutchinson Island that wouldn't require passengers to first reach the riverfront.

Figure 33 **CAT Proposed Longer Term Local Transit Network** Fixed-Route Frequency Microtransit Zones 15 minutes or better Bloomingdale 30 minutes East Savannah Effingham 45 to 60 minutes Garden City More than 60 minutes Liberty City Medical / Savannah State NW Chatham Pooler Sandfly West Chatham West Savannah Whitemarsh Wilmington Windsor Forest Mobility Hubs 17A

Implement Full Microtransit Network

As CAT expands and develops its transit network, microtransit service can be implemented throughout Chatham County to expand access and coverage to county residents. This service model will help reach parts of the county that are difficult to serve with traditional bus service but have a clear need for transit service. Longer term recommendations call for building out the microtransit network from six to 12 zones by 2035.

In the long term, microtranist service could also be improved to operate 18 hours per day on weekdays and Saturdays, while Sundays would improve from 14 to 15 hours. The annual operating costs of the microtransit network would grow \$9 million annually. The corresponding capital investment includes an additional 12 microtransit vans, plus up to six additional mobility hubs. The six new microtransit zones include:

- 1. Pooler Microtransit Zone The Poole Microtransit Zone would cover the developed areas of city of Pooler, including the jobs on Pine Meadow Drive, Pooler Parkway at I-16, and Pooler Parkway at I-95. Passengers would have the opportunity to connect to Route 3A West Chatham for service to Augusta Ave and downtown Savannah. This zone represents an opportunity to expand CAT service into the City of Pooler to increase coverage to new potential riders.
- 2. **Bloomingdale Microtransit Zone** The Bloomingdale Microtransit Zone would serve the City of Bloomingdale, covering the developed areas along US Highway 80. Although this zone doesn't include service covered by a fixed route, Route 3A is nearby and could offer an opportunity for an external connection point, likely at Pooler Parkway at Benton Boulevard.
- 3. **Garden City Microtransit Zone** The Garden City Microtransit Zone would create coverage throughout the City of Garden City not covered by the West Chatham Microtransit zone. This zone would create opportunities for passengers to connect to the fixed route service that is being improved on Augusta Avenue (3A West Chatham, 3B Garden City, and 3C Groves HS).
- 4. Medical / Savannah State Microtransit Zone The Medical / Savannah State Microtransit Zone would serve the neighborhoods from Victory Drive to DeRenne Avenue, extending from Habersham Street on the west to Wilmington River. This zone would include destinations such as Candler Hospital, Memorial Health University Medical Center, and Savannah State University. Operating microtransit throughout these neighborhoods connects more potential passengers that would otherwise have longer walks to access fixed route service, such as Oakland Park, Spring Hill, Fernwood, and Parkwood.
- 5. **Windsor Forest Microtransit Zone** The Windsor Forest Microtransit Zone supplements service along the Abercorn Street corridor just south of Oglethorpe Mall to Coffee Bluff, including Savannah Mall area and retail development east of Little Ogeechee River. This microtransit zone would give passengers the ability to access

- Oglethorpe Mall both as a destination and connection point for routes 4A Barnard, 4B Barnard, 6 Crosstown, 14 Abercorn, 27 Waters, and 28 Waters. The Windsor Forest Microtransit Zone also restores access for passengers who lost service when Route 20 Skidaway Island / Coffee Bluff was eliminated.
- 6. Sandfly Microtransit Zone The Sandfly Microtransit Zone would extend from DeRenne and serve the neighborhoods east of Harry S Truman Parkway south to Vernon River. The zone would restore service to neighborhoods that lost service when Route 20 Skidaway Island / Coffee Bluff was eliminated. A connection with Route 4A Barnard, 28 Waters, and 31 Skidaway / Sandfly 28 at the Montgomery Cross Walmart would facilitate transfer opportunities as well as a destination for shopping.

Continue to Invest in Passenger Amenities

The Master Transit Plan recommends that CAT maintain its bus stops and passenger program through the long term. Assuming the program is funded with \$1.5 million per year, CAT can continue to improve 50 bus stops per year. The investments should be allocated equitably allocate, using a consistent structure prioritize stop investment:

- Ridership prioritizing the highest ridership corridors means that more people can benefit from the bus stop improvements.
- Transfer opportunities if multiple routes serve a stop, investing in its amenities would allow for a more comfortable transfer experience.
- Service improvements new and improved bus stops should be ready for the implementation of new or improved bus routes.
- Service area bus stops in disadvantaged communities—especially those who rely on transit the most, older adults, and differently abled persons—should be prioritized.

As CAT's microtransit services expand, CAT will need to expand its investment in mobility hubs where riders transfer between fixed route bus routes and microtransit services. The Master Plan calls for six mobility hubs in the longer-term timeframe.

Commuter Express Bus Program

The Master Transit Plan will expand commuter bus service between 2030 and 2035 with the addition of two commuter express bus routes. Based on information available in when the Master Transit Plan was developed (2023), the recommended commuter bus routes are designed to connect residential areas with employment centers in Bulloch, Effingham, and Bryan counties, including the Hyundai Electric Vehicle Assembly and Battery Manufacturing Plant in Bryan County.

The Master Transit Plan assumes two routes were implemented in the medium term and two more will be added in the longer term. These new routes are designed to support regional connections (see Figure 34 and Figure 35). The cost to operate two new commuter express

routes is estimated at \$1.5 million per year; an additional \$10 million is set aside for commuter coaches, park and ride lot development, and marketing and information.

Figure 34 Proposed Commuter Express Bus Routes to Hyundai Mega Site

Bus Route	Communities Service	Days	Hours
Hinesville-Hyundai	Hinesville Richmond Hill Hyundai Plant	Monday - Friday	5 AM – 8 AM 2 PM – 6 PM
Bluffton-Airport-Hyundai	Bluffton Hardeeville Savannah Airport Hyundai Plant	Monday – Sunday	6 AM – 9 AM 2 PM – 6 PM

Source: WRA Associates, 2022

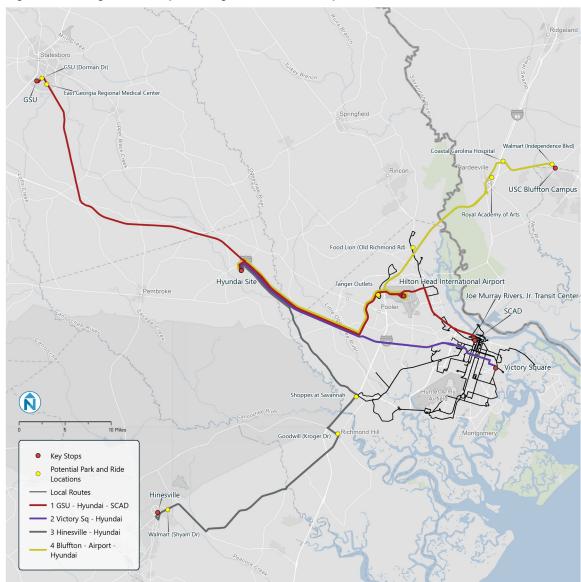


Figure 35 Longer Term Proposed Regional Commuter Express Bus Service

Source: WRA Associates, 2022 adapted by Nelson\Nygaard

Expand Belles Ferry Fleet and Services

Over the short- and medium-term CAT will restore and expand its marine operations, updating passenger and maintenance facilities and expanding ferry service. Two remaining strategies for the longer term, including serving development on Hutchinson Island and potentially expanding the fleet.

As the Savannah Harbor project moves forward, there could be a need for an additional passenger landing facility on Hutchinson Island. To access Trade Center Landing at the Convention Center, potential customers from the development would need to walk over ½ mile, around the slip, to reach the ferry. An additional facility, therefore, could be built to the

east of Slip 1 on Hutchinson Island and serve the destination with a ferry route (Figure 36 shows a potential alignment). Service to this development would not directly benefit the Savannah Convention Center and downtown hotels; implementation should require an additional revenue source to ensure financial resources are in place to fund the service. If this facility is added, CAT may want to revisit the need for an additional (sixth) vessel.

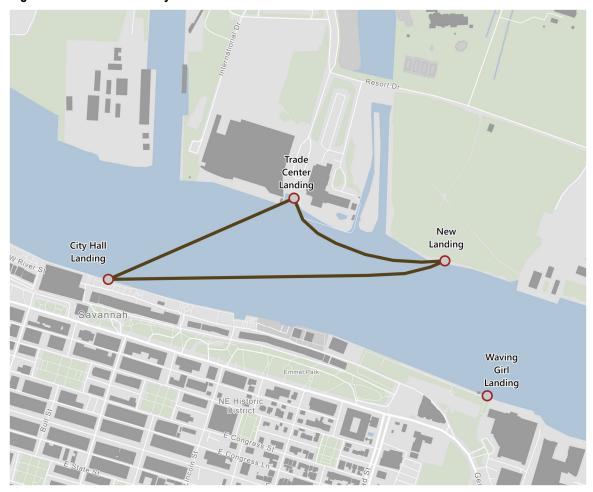


Figure 36 Alternative Ferry Service Routes

Source: Nelson\Nygaard

Positioning CAT for Success

As CAT implements the Master Transit Plan, the size of the agency and its role in the region will likewise expand. The growth and expansion of the agency will require a corresponding investment in agency leadership and governance as well as a broader and more comprehensive communications strategy. These organizational investments are designed to position CAT for success over the long term, preparing the agency to deliver quality services across the region.

Cohesive Branding and Passenger Information Systems

Currently, CAT operates different types of services that do not share branding. CAT bus service, CAT Mobility, the dot Shuttles and Savannah Belles Ferry operate with distinct brands. While there are some advantages with unique branding, creating a single unified brand and supporting that brand with clear, consistent, and integrated passenger information systems will communicate the comprehensive and integrated local and regional public transit network. It will strengthen CAT's role in the region and set the services apart from Savannah's other privately-operated transportation services. Cohesive branding and passenger information systems may include:

- Updating and expanding the use of CAT's logo and color scheme so it can be applied
 to all CAT operated service. The branding and logo may be tailored for each service
 but should be linked to CAT as the operator of the service. New programs and
 services recommended in the Master Transit Plan including microtransit, commuter
 services and commuter express bus service should also be included in the CAT family
 of services brand.
- Incorporating all modes into the general CAT website, so people searching up the services know that the shuttles and ferries are operated by CAT. If other sites, like the City of Savannah or Convention Center wish to market specific services, they should also link to the CAT website. As the web covers the full range of CAT services, so should passenger information systems, like the CAT Tracker app (for example), so that riders can compare choices with the full suite of public transportation services available to them. The apps should also provide real-time information on all modes. Incorporating CAT's logo and branding more visibly on transit infrastructure throughout Savannah and Chatham County, including at bus stops, mobility hubs, transit centers, and other areas.
- Making the branding more comprehensive would help bolster CAT's role as the primary public transit provider in the region.

Expanded Partnerships

CAT already has significant experience working across partners and agencies to fund and deliver services. Key partners include the City of Savannah, SaMMi, CORE MPO as well as several jurisdictions in Chatham County. Forming new partnerships and strengthening existing ones would better position CAT for success as the region's public transit provider in the long term. Potential partners include schools and colleges, major employers, hospitals, shopping centers, social services agencies, and other institutions. CAT can also partner with municipalities and counties looking for expanded service.

These partnerships typically consist of the organizations providing funds to CAT in exchange for expanded service or bus passes for their customers or clients. For these agreements, CAT should aim to direct the funds into the general agency budget, rather than earmarked just

for the specific service expansion, as the flexibility would allow for CAT to comprehensively plan its whole network to serve all partners, rather than piecemeal partner-by-partner.

Governance and Funding

To provide transit beyond Chatham County, CAT could consider reorganizing its governance structure into a Regional Transit Authority (RTA). This change would also reorganize the CAT Board, expanding it to include representatives from other counties and municipalities that would be served by CAT. An RTA would allow CAT more flexibility to make decisions and provide services across the region. It would also increase opportunities for transit revenue, including an expanded tax base and/or new partnerships with regional governments and organizations.

A change in Georgia State Law would be needed to create an RTA with multiple counties, and the counties would need to vote and approve this change. Creating an RTA could also unlock regional funding opportunities, such as the existing multicounty Transit SPLOST authority.

6 FUNDING THE PLAN

OVERVIEW

The third pillar of the Master Transit Plan is the budget and financial analysis. While the State of the System and Market Analysis show what could be done to improve transportation and mobility in Savannah, Chatham County, and Coastal Georgia, the financial analysis tells us what we can do within available resources and what additional funds will be needed to advance CAT's vision. This chapter is divided into two sections: the first describes CAT's current financial circumstances while the second section provides a summary of funding opportunities that can be used to implement the Master Transit Plan recommendations.

CURRENT FINANCIAL STATUS

CAT's operating budget includes day-to-day costs associated with operating and maintaining transit services, including salaries and wages, employee benefits, repairs, maintenance, supplies, fuel, insurance, contract services, training, and other operating expenses. Like transit agencies nationally, the cost of operating transit services has been impacted by the broader economy, especially inflationary pressures related to labor, fuel prices, and the supply of parts and equipment. CAT's operating costs have grown on average 3.3 percent between 2018 and 2023, with significant variability in 2020 and 2021 due to COVID-19 salary and wage increases, hazard pay, staff shortages, and temporary service reductions.

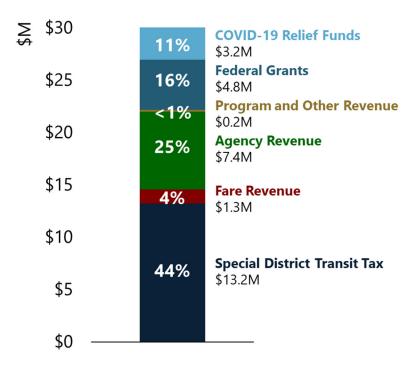
CAT's operating budget also sets aside funds to comply with CAT's Reserve Fund Policy. This policy, adopted in April 2021, sets a goal of maintaining at least three months of budgeted expenditures or a minimum of 30 percent of the annual operating budget. The policy is designed to ensure CAT has stability and flexibility in the face of unanticipated external impacts, like a pandemic or spike in operating costs.

Operating Revenues

Transit agencies in the United States use several different sources to fund transit operations and capital projects. Federal funds, for example, are more oriented towards capital investment, while revenue to operate services is more dependent on local resources. The Special Service District Transit Tax is CAT's primary operating revenue source, accounting for 44% of FY 2023 operating revenue (see Figure 37). CAT's operating costs are also funded by agency revenues (25%), federal funds (16%), COVID-19 relief funds (11%), passenger fares (4%), and other sources (<1%). Federal COVID-19 relief funds will be fully expended by FY

2027, which will result in a projected fiscal cliff, where operating costs exceed operating revenue, if an additional operating funding source is not identified.

Figure 37 CAT Operating Revenue Sources for FY 2023



Source: Infrastrategies adapted from data provided by CAT

Special Service District Transit Tax

The Special Service District Transit Tax Chatham County is a property tax levied on property owners within CAT's Special Service District (SSD), which includes Savannah, Unincorporated Chatham County, and portions of Garden City. The SSD transit tax is critical and much valued source of revenue, but it also has challenges, including variations in both the taxation rate and revenue collected (see **Error! Reference source not found.**). After holding steady for several years, the millage rate increased from 1.00 to 1.15 mills in 2017. However, in 2023, Chatham County rollbacked the tax to 1.056 mills as a strategy to provide local relief from the impacts of COVID-19 and global inflation. Tax revenues are estimated at \$13.2 million in 2023, as compared with \$13.4 million raised in 2022.

Federal Grant Revenue

Federal grants contributed \$8.0 million (27 percent) of the FY 2023 operating budget. Funding includes \$4.6 million in Federal Transit Administration (FTA) Section 5307 funds and \$0.2 million in FTA Section 5310 Enhanced Mobility of Seniors and Individuals with

Disabilities. These grants are allocated based on formula and are expected to continue in the future, although federal funds do not increase annually in line with inflation.

CAT's FY 2023 operating budget also includes \$3.2 million in federal COVID-19 relief funding. These funds are left over from federal COVID-19 relief funds issued in 2020 and 2021 to address pandemic-related operating cost and revenue impacts. These funds are available to support CAT's operating budget until FY 2026, after which time replacement funds will be needed.

Agency Revenue

Agency revenue, earned from intergovernmental agreements and contracted services, accounts for \$7.4 million (25 percent) of CAT's FY 2023 operating budget. Ferry operations are funded using local hotel motel revenue from the City of Savannah, property tax revenue from Hutchinson Island, and contributions from the Westin Harbor and Savannah Convention Center. The City of Savannah also contributes funding to the dot shuttle and Senior Circulator. Chatham County contributes funding to paratransit services. Savannah State University (SSU) funds a university shuttle service with a \$45 per enrolled student fee, paid each SSU semester. Agency revenues decreased between 2019 and 2022 due to COVID-19 but are trending toward pre-pandemic levels.

Passenger Fare Revenue

CAT charges passengers a fare to use fixed-route bus and ADA paratransit services; revenue collected from fares accounts for a total of \$1.3 million, or 4% of the FY 2023 operating budget. Other CAT services, such as ferries, the dot shuttle, and Senior Circulator operate "zero fare" and instead are funded by partner agencies (see Agency Revenues).

Passenger fare revenue dropped between 2019 and 2022, due to COVID-19 and CAT's response, which included temporary service reductions and suspensions as well as temporary fare free service provided to enhance safety conditions. Passenger fare revenue, however, is slowly trending toward pre-pandemic levels.

Other Revenue

Other revenue accounts for less than 1% of the FY 2023 operating budget. This includes program revenue derived from summer passes for students and fare free employee passes for City of Savannah employees, annual shuttle service revenue (e.g., Savannah's St. Patrick's Day shuttle is operated annually by CAT), and other miscellaneous revenue.

Capital Budget

CAT's capital budget funds vehicle purchase, maintenance and development of facilities, stations, passenger amenities (bus stops and terminals) as well as technology, security

upgrades, and other capital initiatives. Unlike the operating budget, CAT's capital budget varies from year to year, largely because capital investments reflect spending on recurring investments, like maintaining and replacing assets, which vary annually. Capital budgeting also accounts for unplanned (opportunistic) opportunities, like the availability of federal grant funding and local funding to match grants.

In FY 2023, CAT's capital budget focuses on maintaining and improving CAT's ferry operations, with planned ferry vessel purchases, a ferry maintenance facility, and ferry dock upgrades. It also includes funds to support the purchase of equipment and rehabilitation, renovation, and upgrades at CAT Central facility.

Capital Revenues

In FY 2023, CAT's capital budget includes federal grants (78 percent), Special Purpose Local Option Sales Tax (SPLOST) revenue (20 percent), and other local revenue (2 percent) (see Figure 38).

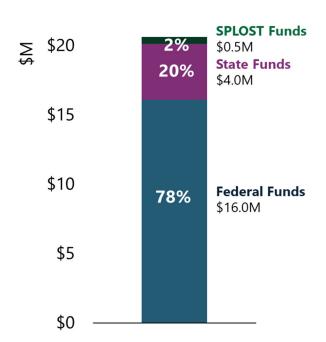


Figure 38 CAT Capital Revenue Sources for FY 2023

Source: Infrastrategies adapted from data provided by CAT

Federal Grant Revenue

Federal funds administered by the Federal Transit Administration (FTA) are available to support capital needs and are administered through a combination of formula and competitive grant programs. In FY 2023, FTA formula grants accounted for \$16.0 million, or 78 percent of CAT's capital budget¹⁰. CAT also receives capital funding through the Federal Highway Administration (FHWA) "flex" funds¹¹. Individual programs have specific requirements, with most requiring a 20 percent local match minimum.

Special Purpose Local Option Sales Tax (SPLOST) Revenue

Chatham County levies a 1 percent SPLOST to fund local capital projects, including transit. CAT uses SPLOST revenues to match federal grant funding. SPLOST revenue accounts for \$4.0 million, or 20% of the FY 2023 capital budget. However, CAT increased actual usage of SPLOST revenue in FY 2023 to provide the required local match for ferry purchases. The existing SPLOST revenue is considered fully committed to existing needs. County SPLOSTs require voter renewal every five or six years, are used for a variety of local projects (buildings, bridges, roads, and more), including transit operations.

Other Local Revenue

Other local revenue, primarily from local partners and general operating funds, accounts for \$0.5 million, or 2 percent of the FY 2023 budget.

FUNDING THE MASTER TRANSIT PLAN

Like transit agencies around the country, CAT's operating costs are outpacing operating revenue. This industry-wide trend emerged prior to the pandemic and was accelerated by COVID-19 related operating cost increases, ridership decreases, and fare revenue decreases. The federal government stepped in to support transit agencies during the pandemic and CAT will continue to offset revenue impacts using remaining federal COVID-19 relief funds and prior year savings. As the remaining COVID-19 relief funds are expended, however, CAT will need to actively develop strategies to manage the transition, including new sources of operating funds and building on the momentum generated by the Master Transit Plan to transform how transit is envisioned in Chatham County. CAT already has several notable achievements over the past few years, including securing millions in new federal and state

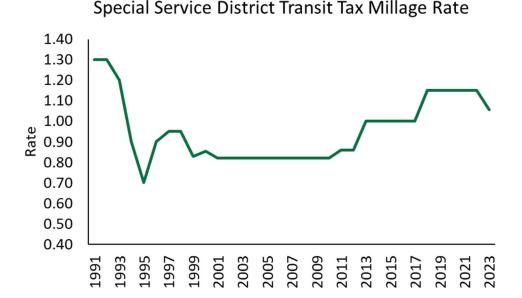
¹⁰ Sources included FTA Section 5307 Urbanized Area, Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities, Section 5339 Bus and Bus Facilities, and Section 5337 State of Good Repair formula funds.

¹¹ Surface Transportation Block Grant (STBG) funds, Transportation Alternatives (TA), Congestion Mitigation and Air Quality Improvement (CMAQ), and Ferry Boat Program (FBP) funds.

dollars, fostered new partnerships, expanded its service area, and made temporary service modifications to increase service reliability.

As rapid growth in the Savannah-Chatham region generates new and expanded needs for transit services, CAT will need more funding to serve the growing demand. CAT's primary local funding source, the Special Service District Transit Tax, has not been increased since 2017, and most recently was rolled back during the 2023 budget cycle. Additional local support is needed to continue existing service levels and meet Savannah-Chatham's mobility needs in FY 2027 and beyond.

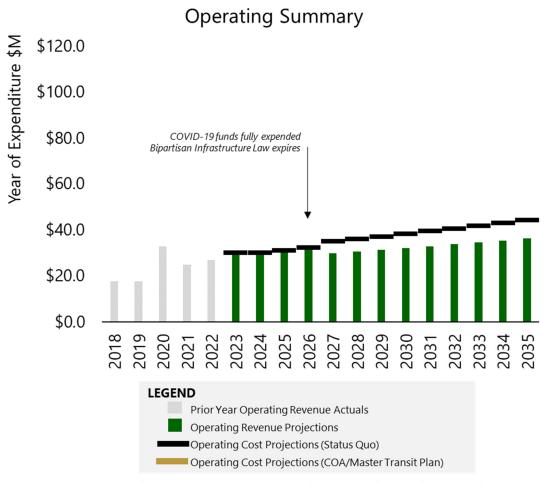
Figure 39 CAT Special Service District Transit Tax Millage Rate Over Time



Source: Infrastrategies adapted from data provided by CAT

CAT is projecting a fiscal cliff, where anticipated costs exceed anticipated revenue, beginning in FY 2027. This projection assumes that CAT continues with the levels of service presented in the FY 2024 operating budget, CAT fully expends the remaining COVID-19 relief funds by FY 2026, and CAT is not able to identify a new annual operating funds in that time period (see Figure 40). Under this projection, operating costs are anticipated to exceed operating revenue by an estimated \$5 million per year beginning in FY 2027.

Figure 40 CAT Operating Budget Projections and 2027 Fiscal Cliff

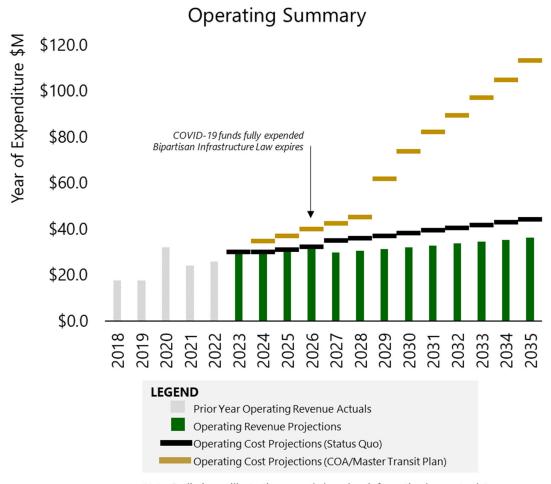


Note: Preliminary, illustrative example based on information known to-date.

Source: Infrastrategies adapted from data provided by CAT

In addition to the projected fiscal cliff, another \$7 million per year is needed beginning in FY 2027 to fund the Master Transit Plan recommendations (see Figure 41).

Figure 41 CAT Operating Budget Projections and 2027 Fiscal Cliff with Master Transit Plan Recommendations



Note: Preliminary, illustrative example based on information known to-date.

Source: Infrastrategies adapted from data provided by CAT

Combined, CAT will need a total of \$12 million per year in new operating funds to manage the fiscal cliff and fund the Master Transit Plan recommendations in FY 2027. Under this short-term scenario, CAT would have a \$42 million operating budget target and \$25 million capital budget target.

FY 2027 Status Quo Operating Revenue	\$30M
FY 2027 Status Quo Operating Costs	\$35M
FY 2027 Master Transit Plan Operating Costs	\$42M

Total FY 2027 Operating Needs

+\$12M

Funding Sources

There are a handful of potential funding sources can be used to fund CAT's operating and capital budgets (see Figure 42). This short list was developed using a comprehensive list of over 100 potential sources and an evaluation framework that considered revenue potential, eligibility, stability, legal barriers, local political support, and other relevant factors (see Appendix B for the full list of grant funds). Potential funding sources include:

Federal Sources - The federal government provides several opportunities for funding, including new federal dollars available through the Bipartisan Infrastructure Law (BIL) over the next few years. CAT has successfully secured millions in new federal dollars, including the recent \$1.2 million USDOT SMART Grant award. CAT will also continue to use all available federal formula funds and federal "flex" funds to support the capital and operating budgets.

State Sources - On the state level, two state transportation trust funds were recently created: (1) the Georgia Transit Trust Fund, funded by state ride hailing fees and (2) the Transportation Trust Fund, funded by various state transportation fees. These two trust funds offer a new opportunity for CAT to partner with the State of Georgia to advance mobility in Savannah-Chatham. CAT has already successfully secured millions in new state dollars, including new annual Georgia Transit Trust Fund allocations and a \$3.0 million Georgia Transit Trust Fund line-item request.

Local Funds - On the local and project-specific levels, CAT continues to maximize its remaining SPLOST revenues, Special District Transit Tax revenue, and program revenue by expanding partnerships and strategically pursuing federal and state support; however, even with these notable accomplishments, CAT will need additional local support to fund existing service levels and implement the Master Transit Plan recommendations.

Figure 42 Short List of Potential Funding Sources

Federal	State	Local	Project-Specific
 Congressional Directives FHWA Flex Formula Funds FTA Formula Funds FTA Bus and Bus Facilities and Low or No Emissions Programs FTA Capital Investment Grants FTA Areas of Persistent Poverty Grants FTA AIM Grants FTA IMI Grants USDOT MEGA Grants USDOT PROTECT Grants USDOT SMART Grants USDOT SMART Grants USDOT TIFIA Loans 	 Georgia Transit Trust Fund Annual Allocations Georgia Transit Trust Fund Line-Item Requests Georgia Transportation Trust Fund State Bonds* Georgia Transportation Infrastructure Bank (GTIB)* State Economic and Infrastructure Development Grant (SEID) Program 	 SPLOST Single-County TSPLOST Special District Transit Tax Increase Special District Transit Tax Expansion Chatham County Maintenance and Operations (M&O) Funding City of Savannah Funding Transit SPLOST Local Hotel Motel Fee Increase Curb Monetization 	 Naming Rights and Sponsorships Private Contributions Development Partnership Coordination Agency/Program Revenue Advertising Revenue/Other Agency Revenue Tax Increment Financing Special Assessment Districts Joint Development

Source: Infrastrategies

Local Funding for Operating and Capital Needs

Identifying expanding operating support is a critical piece of the Master Transit Plan's financial strategy. In addition, CAT will need to identify additional local capital support (e.g., SPLOST, local contributions) to provide the local match needed to fully leverage the new federal and state funding opportunities available to CAT. The lack of matching funds has historically limited CAT's ability to secure federal and state discretionary funding, which has in turn impacted CAT's ability to maintain a state of good repair.

Each potential funding source has certain requirements and limitations, including eligibility, revenue potential, stability, legal requirements, local political support, and more. For example, federal and state discretionary funds are largely restricted to capital projects and not available for transit operations. Alternatively, local funding (e.g., CAT's Special District Transit Tax) is the most common source annual transit operations, supplemented by smaller amounts of federal formula funds and fare revenue.

Nationally, the most common local transit funding sources are dedicated sales taxes, dedicated property taxes, and/or contributions from local governments. A dedicated funding source, like a sales tax or property tax, is preferred to local contributions because it offers a stable dedicated resource that is not subject to annual budgeting conversations. Over the longer-term, CAT's goal is to achieve financial sustainability through a dedicated revenue stream that will support CAT's operating and capital needs.

There are various types of sales taxes, property taxes, and local contributions in Savannah-Chatham that could be used to support CAT's operating and capital budgets (see Figure 43). Each source has specific applicability to CAT's capital and operating budgets. The most preferred sources are dedicated sources, like the single-county TSPLOST and Transit SPLOST. As a comparison, CAT's current local funding source, the Special District Transit Tax, is subject to annual budgeting. CAT experienced a rollback during the 2023 budgeting cycle, reducing the agency's primary local funding source during a time of significant need.

Figure 43 Chatham County Local Funding Opportunities for Transit

Local Funding Opportunities	Capital	Operating
SPLOST	Χ	
Single-County TSPLOST	Χ	X (5-6 years)
Special District Transit Tax	Χ	X (annual)
Chatham County Maintenance and Operations (M&O) Funding	Χ	X (annual budget)
City of Savannah Funding	Χ	X (annual budget)
Transit SPLOST	Χ	X (30 years)
Local Hotel Motel Fee	Χ	X (annual)
Curb Monetization	Χ	X (annual)

Source: Infrastrategies

Financial Scenarios

The Master Transit Plan includes three financial scenarios, each of which was designed to support the short, medium, and long-term strategies described in Chapter 6. These scenarios reflect preliminary, illustrative examples based on information known to-date using several revenue and cost assumptions that are subject to material change. The scenarios show one of many ways that CAT could incrementally build its case for long-term local support and full implementation of the Master Transit Plan.



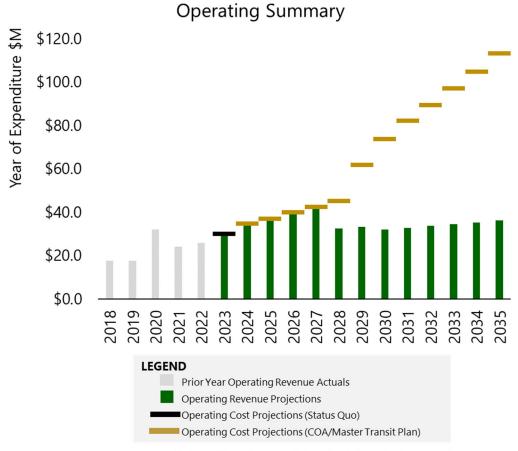
Short-Term Financial Scenario

In FY 2027, CAT's operating budget is forecasted to be \$42 million with a target capital budget of \$25 million. The short-term financial scenario focuses on the FY 2024-2027 period, which requires new sources for estimated operations and capital needs to both manage the FY 2027 fiscal cliff and fund the Master Transit Plan recommendations.

The short-term financial scenario assumes that CAT adds new local operating sources, assumed to be from the Chatham County Maintenance and Operations (M&O) Funding and City of Savannah Funding (however, new operating funds could be committed from any of the local sources described above). In this scenario, a future TSPLOST is approved by voters with \$11.5 million dedicated to support CAT's capital budget plus \$10 million for transit operations. The funding scenario assumes CAT secures additional grant funding, including the USDOT SMART grant, federal discretionary grant programs, and the Georgia Transit Trust Fund.

In this scenario, new revenue sources will be used to support CAT's transition to the "new normal" while COVID-19 relief funds would be used for time strategic capital investments, like bus stop investments, vehicle purchases and access to jobs programs. Figure 44 illustrates how this short-term funding increase supports the implementation of the initial phase of the Master Transit Plan and manages the fiscal cliff previously estimated in FY 2027.

Figure 44 CAT Master Transit Plan: Short Term Financial Scenario



Note: Preliminary, illustrative example based on information known to-date.

Source: Infrastrategies

Medium-Term Financial Scenario

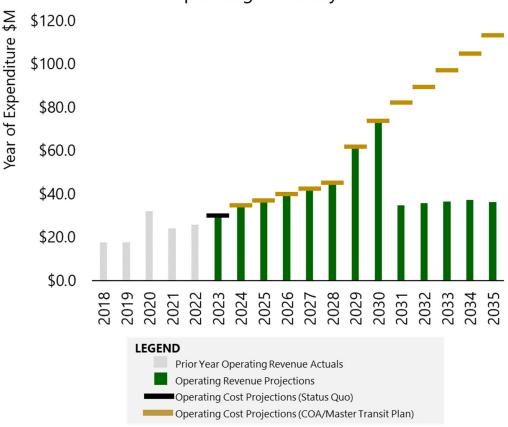
In FY 2030, the operating budget is forecasted to be \$75 million with a target capital budget of \$45 million over the three-year period. The medium-term financial scenario focuses on the FY 2027-2030 period, which requires increased additional local support compared to the short-term to advance the operating and capital program recommended in the Master Transit Plan.

With this increase in local operating and capital support (again assumed from the County and City), CAT would be able to apply for and secure additional federal and state funds and advance several key initiatives. This period of increased funding also assumes that CAT can make the case for increased funding through the future TSPLOST renewal (5 years after the first passage) (see Figure 45).

Figure 45 CAT Master Transit Plan: Medium-Term Financial Scenario

Operating Summary

≥ \$120.0



Note: Preliminary, illustrative example based on information known to-date.

Source: Infrastrategies

Longer-Term Financial Scenarios

In FY 2035, the operating budget is forecasted to be \$115 million with a target capital budget of \$40 to \$45 million. Two longer-term financial scenarios are considered to show two illustrative examples of long-term dedicated funding for CAT:

- An increase and expansion of the Special District Transit Tax
- A single-county Transit SPLOST.

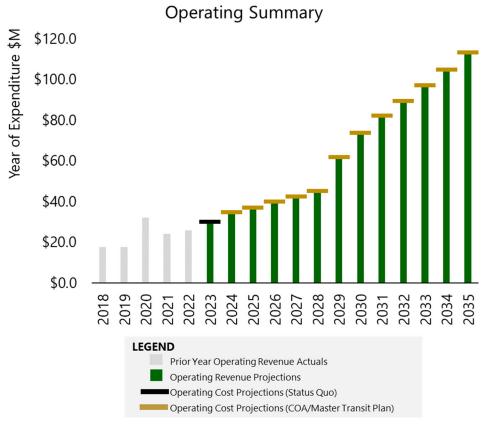
The longer-term scenarios build upon the prior scenarios, focusing on more visionary funding and investments during the FY 2030 to 2035 time period. With a dedicated and robust long-term funding source, CAT would be able to unlock several new opportunities, including FTA Capital Investment Grant funds, additional discretionary grant programs, federal financing tools, more state and local partnerships, and value capture opportunities.

Scenario A pursues an increase and expansion of the CAT's Special District Transit Tax with an assumed increase of 5 mills in 2031 with a 25% expansion of the current district. Scenario B pursues a 0.5 percent countywide sales tax increase for transit in 2031.

Both options would allow CAT to fund the Master Transit Plan recommendations and leverage new funding and financing opportunities. The Special District Transit Tax generates less revenue for capital costs compared to the Transit SPLOST because property taxes tend to grow at a lower annual rate compared to sales taxes. The Special District Transit Tax also would still be subject to annual budgeting, which would limit CAT's ability to conduct long-term financial planning and potentially leverage the revenue stream with financing tools.

In comparison, a Transit SPLOST would allow for more annual budgeting certainty and an increased ability to leverage the revenue stream with financing tools. However, this mechanism currently requires changes to existing state authorization to allow for single county Transit SPLOSTs outside of the Atlanta Metro area. The only current authorization would require CAT to partner with one or more neighboring counties. This authorization requires voter approval by each individual county for the tax to be imposed, which could be a difficult barrier to overcome.

Figure 46 CAT Master Transit Plan: Longer-Term Financial Scenario A-B Operating Summary



Note: Preliminary, illustrative example based on information known to-date.

Source: Infrastrategies

The three illustrative examples demonstrate one of many potential ways that CAT could use the Master Transit Plan to build the case for increased funding. While the short-term and medium-term financial strategies in the Master Transit Plan focus on expanding operating and capital funding more broadly, the longer-term strategies focus on achieving financial sustainability through the commitment of a new long-term dedicated revenue stream that CAT can use for both transit operations and capital needs. Change cannot occur overnight and instead will require persistent and proactive advancement of the Master Transit Plan vision. As the recommendations are implemented each year, CAT will begin to advance a business case for the agency and its value to the Savannah Chatham community as a reliable regional partner in advancing mobility. As additional partnerships are made and new local funding is secured, CAT will use the tools provided in the Master Transit Plan to proactively leverage these investments, which will in turn help CAT build the case for future investment.

SHORT	TEDM	FY 2027 Operating Budget	\$42M
31101(1		FY 2024–2027 Capital Budget	\$47M
		EV 2030 Operating Budget	\$75M
MEDIUM	TFRM	FY 2030 Operating Budget	
		FY 2028-2030 Capital Budget	\$40M
LONCED	TEDM	FY 2035 Operating Budget	\$115M
LONGER	TERM	FY 2031-2035 Capital Budget	\$60M

APPENDIX A:

Index of Terms

ACS American Community Survey (U.S. Census)

ADA Americans with Disabilities Act
APC Automatic Passenger Counters

BRT Bus rapid transit

CAT Chatham Area Transit

CIP Capital Improvement Program

COA Comprehensive Operational Assessment

CORE MPO Coastal Georgia Metropolitan Planning Organization

FHWA Federal Highway Administration
FTA Federal Transit Administration

FY Fiscal Year

GTFS General transit feed specification

HCT High-capacity transit

HOV High-occupancy vehicle (lane)

LEHD Longitudinal Employer-Household Dynamics

MPH Miles per hour

NACTO National Association of City Transportation

RTA Regional Transit Authority

SPLOST Special Purpose Local Option Sales Tax

SSD Special Service District

TAC Technical advisory committee

TDM Transportation demand management

TDP Transit Development Plan

TMA Transportation management association

TNC Transportation network company
TOD Transit-oriented Development

TSP Transit signal priority

TSPLOST Transportation Special Purpose Local Option Sales Tax

WRA Whitman, Requardt and Associates

Definition of Terms

ADA Complementary Paratransit: The federal Americans with Disabilities (ADA) Act of 1990 requires that publicly funded transit agencies must provide complementary paratransit service for riders unable to use fixed route service due a disability. ADA paratransit service must be available at the same days and times as fixed route service and provide service to origins and destinations up to ³/₄ of a mile from the fixed route service. CAT's ADA complementary paratransit service is branded as CAT Mobility.

Automatic Passenger Counters (APC): APCs are sensors placed near a bus door or entrance that measure people getting on (boarding) or getting off (alighting) a bus. APCs can record the location, time of day, and day of week that a rider boarded or alighted from a bus.

Alighting: The act of getting off or out of a transit vehicle (bus, train, streetcar). The "number of alightings" is the number of people who alight a transit vehicle.

Amenities, stop or station: Objects or facilities (such as a shelter, bench, or information display) to enhance passenger comfort, safety, and transit usability at stops or stations.

Average daily boardings: The average number of people using a bus route per day. Average daily boardings references whether the day is a weekday, Saturday, or Sunday.

Average Ridership per Trip: This measure divides the average daily riders by the number of bus trips per day. The measure is almost aways shown for individual bus routes and provides more insights into the usage of the bus route relative to the amount of service (or trips) provided.

Autonomous vehicle (AV): A vehicle that can operate without human assistance.

Boarding: The act of getting on or into a transit vehicle (bus, train, streetcar). The "number of boardings" is the number of people who board a transit vehicle.

Bus rapid transit (BRT): A bus transit mode that provides service similar to rail transit, at a potentially lower cost depending on the level of investment. Features of BRT include exclusive transitways or busways, enhanced stations, branded vehicles, high-frequency all-day service, simple route structures, off-board (pre-paid) fare collection, and technologies such as real-time information. These combined features improve bus speed, reliability, and identity.

Capital Improvement or Capital Investment: Capital projects, including improvements and investments, refer to the purchase of physical assets for use in long-term goals or objectives. For CAT, this means buses, ferries, and other vehicles, as well as bus stops, and maintenance facilities (for example).

Capital Investment Grants: Refers to funding provided by the Federal Transit Administration for capital transit projects. The FTA has several capital investment programs. Capital Investment Grants (CIGS) refers to a competitive grant program that is designed for corridor-based transit services, like BRT (see above).

Circulator service: Transit service confined to a specific locale, such as a downtown area or a suburban neighborhood, with connections to major corridors.

Composite demand: The market analysis combined data to understand the need or market for transit service. We refer to the combined data as "composite" because it combines and weights density data with demographic information so that people who are more likely to use transit (income, race, and access to a vehicle) are assigned more importance in the analysis.

Daily boardings: The number of passengers getting into or onto a transit vehicle per day. May be counted by stop, by route, or by system.

Dedicated transit lane: A highway or street lane reserved for buses, light rail or streetcar vehicles, or both. Also called an "exclusive" transit lane.

Enhanced transit: Transit service that includes elements that improve speed and reliability of operation and the quality of the passenger experience. Enhanced transit falls between standard fixed-route service and bus rapid transit. Changes from fixed-route service may include capital improvements, such as queue jumps and upgraded stop amenities (like higher-capacity shelters or real-time information), and service enhancements.

ESRI: ESRI is a type (or brand) of geographic information systems (GIS) mapping software.

First/last mile, first/final mile: How transit riders get to and from transit stops and stations. Since transit trips do not start precisely where transit riders live, work, shop or visit, people must walk, drive, or use another method to access a transit stop or station, completing the link between transit and the trip origin and destination.

Fiscal Year: Refers to the 12-month time frame used for accounting or budgeting purposes. CAT's fiscal year begins on July 1 and ends on June 30.

High-capacity transit (HCT): High-capacity transit includes any form of public transit that has an exclusive right-of-way, a non-exclusive right-of-way, or a combination of both. High-capacity transit vehicles make fewer stops, travel at higher speeds, have more frequent service, and carry more people than local service transit. High-capacity transit can include light rail, rapid streetcar, commuter rail, and bus rapid transit.

Intersection density: The number of street intersections per unit of area. Higher intersection density is associated with improved walkability because there are more opportunities and a shorter distance required to reach the same destination.

Longitudinal Employer-Household Dynamics (LEHD): Data provided by the Center for Economic Studies at the U.S. Census Bureau on employers and employees.

Microtransit: A shuttle service that can be on-demand in real-time, or fixed-route service updated frequently to meet market needs. Shuttles often operate during peak-period commute hours in areas where public transit is reaching capacity or may be unavailable. Microtransit companies vary by fleet type (buses or vans), route structure (fixed or dynamic), and fleet ownership. Microtransit is distinguished from private shuttles by its ability to automate routing, billing, customer feedback, and reservations (in addition to being available to the public).

Mobility hub: A transit stop or station area with access to a variety of transportation modes including pedestrian, bicycle, and shared mobility options. It is a safe, convenient, and attractive place that often includes commercial retail.

Mode: A mode is the type of transportation service. CAT, for example, operates four modes (or types) of service, fixed-route bus service, ADA complementary paratransit, ferry service and shuttle services.

Mode share: The proportion of total person trips that use each mode of transportation. For example, the number of commuters taking transit versus the number driving alone, bicycling, or other possible travel modes.

On-time performance: For fixed-route service, the percentage of on-time arrivals at stops along the route. For demand-response service, the percentage of scheduled trips that are picked up within the assigned on-time window (typically 30 minutes).

On-demand ride services: Services that provide people with point-to-point rides via a network of privately owned vehicles. Rides are scheduled using a computer or mobile device (smart phone). Examples of on-demand ride service providers include Lyft and Uber (also known as transportation network companies or TNCs). Rides may also be shared (shared ride services).

Park-n-ride: Transit access by driving private automobiles or riding bicycles to a transit station, stop, or carpool/vanpool waiting area and parking the vehicle in the area provided for that purpose (park-n-ride lot, park-n-pool lot, commuter parking lot, bicycle rack or locker). Passengers then ride the transit system or take a car or vanpool to their destinations.

Payment technology: The type of payment (fare) accepted for transit services. Examples include on-board cash fareboxes, electronic smart cards, tokens, and mobile phone ticket applications.

Rapid bus: A less full-featured version of bus rapid transit that is envisioned for many of the Medium-Capacity Transit corridors. Rapid bus differs from BRT in the level of passenger capacity and design quality, including the extent in which dedicated transit lanes are provided (full BRT operates in dedicated lanes along 50% or more of its route).

Real-time information: System that communicates to passengers exactly when the next bus will arrive. This information may be provided on electronic displays at transit stops, by an automated telephone system, by text message, on a website, or by mobile phone applications.

Regional Transit Authority: A regional transit authority is an independent agency that governs a regional public transportation network. RTA's may also manage and operate transit service. RTA's typically have financial authority to accept and disperse funds.

Rider experience: The overall perceived quality of riding transit, which is based on both physical characteristics of the system and the way in which it operates. Some contributing factors include route legibility (i.e., the simplicity or understandability of a route's path and schedule); availability and clarity of information; on-board comfort; real-time arrival information; quality of access to transit from other modes such as bicycling or walking; the convenience and flexibility of the fare system used; and stop amenities such as lighting, seating, and shelters.

Service frequency or headway: Frequency is the number of transit vehicles per hour that serve a particular route or line in each direction (e.g., 4 buses per hour). Headway is the interval of time between scheduled arrivals of a transit vehicle on a particular line in each direction (e.g., 15 minutes). These terms are often used interchangeably; headway is calculated by dividing 60 minutes by the frequency of a line (e.g., 60 minutes / 4 buses per hour = 15-minute headway).

Service span: The number of hours during the day between the start and end of service on a transit route.

Shared mobility/shared mobile services: Services such as car share, bike share, and ondemand transportation services such as Uber and Lyft (also TNCs or on-demand ride service providers).

Speed and reliability improvement: One of the levels of investment on Transit Capital Investment Corridors. Improvements include transit signal priority to make transit more reliable and rapid in existing traffic. These corridors also have improved stop amenities and pedestrian and bicycle access improvements.

Special Purpose Local Option Sales Tax (SPLOST): The State of Georgia allows for special purpose local option sales taxes to fund capital projects. It is an optional tax that can be levied by counties for the purpose of funding the building of parks, schools, roads, and other public facilities, including public transportation.

Special Service District: The Special Service District is a district within Chatham County that levies a property tax to pay for transit. CAT's Special Service District (SSD), which includes Savannah, Unincorporated Chatham County, and portions of Garden City.

Transfers: The act of transferring or switching between transportation modes, including between bus routes but also between buses and ferries (for example). Transferring between modes allows passengers to change direction or use different types of transportation to reach their final destination.

Transit-oriented development (TOD): A type of development that provides a mix of uses within walking distance of public transit. TOD can be implemented around rail lines or major bus lines, such as along the Frequent Transit Network.

Transit Priority Street: Corridors where transit is prioritized over other modes when making decisions about how to design or operate the right-of-way.

Transportation demand management (TDM): Various strategies that change travel behavior (how, when, and where people travel) in order to increase transport system efficiency and achieve objectives such as reduced traffic congestion, increased safety, or energy conservation. It may include programs to shift demand from single-occupant vehicles to other modes such as transit and ridesharing, to shift demand to off-peak periods, or to eliminate demand for some trips.

Transportation Management Association (TMA): An association of public or private agencies and firms joined to cooperatively develop transportation programs in a given area. TMAs work with employers, residents, and neighborhood organizations to improve awareness of transportation options and manage transportation demand.

Transit signal priority (TSP): A tool used to modify traffic signal phases to advance transit vehicles through intersections, helping to reduce delays at intersections and increase transit speeds. TSP is sometimes used in combination with queue jumps, bypass lanes, or dedicated transit lanes.

Transportation Special Purpose Local Option Sales Tax (TSPLOST or T-SPLOST): Georgia allows local communities to use a Transportation Special Purposes Local Option Sales Tax to support transportation projects and programs.

APPENDIX B:

Stakeholder and Community Engagement Activities

Fall 2022

- Project Website, Fact Sheet, and Other Collateral
- Stakeholder Interviews
- Stakeholder Advisory Committee Meetings (September and December 2023)
- Community Meeting (October 2023)
- Rider Survey (Conducted as part of the COA/TDP.)

Winter 2023

- Meetings with Neighborhood Committees
- Focus Groups with Older Adults, High School Students, and Community Members
- Presentation to CAT Board (March 2023)
- Presentations and Meetings with Municipal and Community Organizations
- Survey with Regional Employees
- Focus Groups with CAT Operators (Conducted as part of the COA/TDP.)

Spring 2023

- Stakeholder Advisory Committee Meetings (March and May 2023)
- Pop-Up Event at ITC
- Survey on Master Transit Plan Draft Recommendations
- Open House with Elected Officials
- Virtual Community Meeting
- Focus Groups with Older Adults, High School Students, New American Community and Community Members
- Presentation to SaMMi Board (April 2023)
- Presentations to the CAT Board (April, May, and June 2023)

APPENDIX C:

Schedule of Proposed Fixed Route and Microtransit Service Improvements

The following tables highlight the planned frequency and span of service for each CAT bus route by day of the week.

Short-Term Fixed Routes

	Doute	Frequency			Daily Ho	urs of Se	rvice
	Route	Wkdy	Sat	Sun	Wkdy	Sat	Sun
3	West Chatham	60	60	60	14	14	14
3B	Garden City	60	60	60	14	14	14
3C	Groves HS	60	0	0	14	-	-
4A	Barnard	120	120	120	14	14	-
4B	Southside	120	-	-	14	-	-
6	Crosstown	45	45	45	12.5	12.5	12.5
10	East Savannah	30	45	45	14	14	14
11	Candler	80	80	80	14	14	14
12	Henry	60	60	60	14	14	14
14	Abercorn Local	30	30	30	16.5	16.5	16.5
17A	Silk Hope	60	60	60	14	14	14
17B	Silk Hope/ Blue Moon	-	-	-	-	-	-
25	MLK Boulevard	30	40	40	16	16	16
27	Waters	30	45	45	15.5	15.5	15.5
28	Waters	60	60	60	14	14	-
7F	Dot Forsyth	15	15	15	12	12	12
7C	Dot Carver Village Cloverdale	30	30	30	12	12	12
7D	Dot Eastern Wharf	20	20	20	12	12	12

Medium-Term Fixed Routes

	D. C.	Free	quency		Daily Hours of Service		
	Route	Wkdy	Sat	Sun	Wkdy	Sat	Sun
3	West Chatham	60	60	60	15	15	14
3B	Garden City	60	60	60	15	15	14
3C	Groves HS	60	60	60	15	15	14
4A	Barnard	60	60	60	14	14	14
4B	Southside	60	60	60	14	14	14
6	Crosstown	45	45	45	12.5	12.5	12.5
10	East Savannah	30	30	30	15	15	14
11	Candler	30	30	30	14	14	14
12	Henry	30	30	30	14	14	14
14	Abercorn Local	15	15	15	18	18	16.5
17A	Silk Hope	60	60	60	18	18	14
17B	Silk Hope/ Blue Moon	60	60	60	18	18	14
25	MLK Boulevard	15	15	15	18	18	16
27	Waters	30	30	30	18	18	15.5
28	Waters	30	30	30	18	18	15.5
7F	Dot Forsyth	10	10	10	15	15	12
7C	Dot Carver Village Cloverdale	30	30	30	15	15	12
7D	Dot Eastern Wharf	10	10	10	15	15	12

Longer-Term Fixed Routes

	D. C.	Free	quency		Daily Hours of Service		
	Route	Wkdy	Sat	Sun	Wkdy	Sat	Sun
3	West Chatham	30	30	30	18	18	15
3B	Garden City	30	30	30	18	18	15
3C	Groves HS	30	30	30	18	18	15
4A	Barnard	30	30	30	18	18	15
4B	Southside	30	30	30	18	18	15
6	Crosstown	30	30	30	18	18	15
10	East Savannah	30	30	30	18	18	15
11	Candler	30	30	30	18	18	15
12	Henry	30	30	30	18	18	15
14	Abercorn Local	15	15	15	18	18	15
17A	Silk Hope	60	60	60	18	18	15
17B	Silk Hope/ Blue Moon	60	60	60	18	18	15
25	MLK Boulevard	15	15	15	18	18	15
27	Waters	30	30	30	18	18	15
28	Waters	30	30	30	18	18	15
7F	Dot Forsyth	10	10	10	18	18	15
7C	Dot Carver Village Cloverdale	30	30	30	18	18	15
7D	Dot Eastern Wharf	10	10	10	18	18	15

Microtransit Service Schedule

The planned microtransit service schedule by zone is shown in the following table.

Microtransit Zone Wait Times and Span by Implementation Phase

	Microtransit Zone F							Hours of Service		
	wicrotransit Zone	Phase	Wkdy	Sat	Sun	Wkdy	Sat	Sun		
1	NW Chatham		15	15	15	18	18	15		
2	West Chatham	Short	15	15	15	18	18	15		
3	East Savannah	311011	15	15	15	18	18	15		
4	Whitemarsh		15	15	15	18	18	15		
5	West Savannah	Medium	15	15	15	18	18	15		
6	Liberty City		15	15	15	18	18	15		
7	Pooler		15	15	15	18	18	15		
8	Bloomingdale		15	15	15	18	18	15		
9	Garden City		15	15	15	18	18	15		
10	Medical / Savannah State	Longer	15	15	15	18	18	15		
11	Windsor Forest		15	15	15	18	18	15		
12	Sandfly		15	15	15	18	18	15		

APPENDIX D:

Inventory and Summary of Potential Transit Funding Sources

Federal Sources	Description
Congressional Directives	Formerly referred to as earmarks, Community Project Funding and Congressionally Directed Spending are two opportunities for Members of Congress to provide federal authorization and/or appropriations for special purpose project grants to specially designated recipients. Transit projects are eligible.
FHWA "Flex" Funds (Ferry Boat Program (FBP); Congestion Mitigation and Air Quality Improvement Program (CMAQ); Surface Transportation Block Grant (STBG); Transportation Alternatives (TA); Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT); Carbon Reduction Program (CRP).	Includes several federal "flex" funding programs, with broad eligibility depending on the funding program: can fund transportation infrastructure, bike and pedestrian infrastructure, ferries, transit start-up operations, and more. The BIL increased the prior "flex" formula programs (FBP, CMAQ, STBG, TA) and created two new programs (PROTECT, CRP). Each program has specific requirements, including maximum federal shares that can range from 80 percent to up to 100 percent in some instances.
FTA Formula Funds (5307, 5310, 5339, 5337)	Each program, summarized below, has specific eligibility and matching requirements:
	Urbanized Area Formula Grants – 5307: Provides transit capital and operating assistance in urbanized areas and for transportation-related planning.
	Enhanced Mobility of Seniors & Individuals with Disabilities – 5310: Aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. Administration, capital, and operating expenses are currently eligible.
	Grants for Buses and Bus Facilities Formula Program – 5339 (a): Provides funding to capital projects to replace, rehabilitate and purchase buses and related equipment and to construct busrelated facilities.
	State of Good Repair Grants – 5337: Provides capital assistance for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and bus systems to help transit maintain assets in a state of good repair.

ETA Due and Due Easilities and Lawren	Koy fodoral discretionany grant program for him related for tilting
FTA Bus and Bus Facilities and Low or No Emissions (Low-No) Programs	Key federal discretionary grant program for bus-related facilities and bus replacement, rehabilitation, and/or purchase and related equipment. Recently combined with Low-No program, which funds technological changes or innovations to modify low or no emission vehicles or facilities. The BIL significantly increased annual federal funds for both programs, with nearly \$1.7 billion available in combined FY 2023 funding (closed April 13, 2023). The maximum federal share is typically 80 percent.
FTA Capital Investment Grant (CIG) Program	Key federal discretionary grant program for major fixed guideway projects, including new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, and ferries, as well as corridor-based bus rapid transit investments. There are three categories of eligible projects under the CIG program: New Starts, Small Starts, and Core Capacity. Each category has unique requirements, but all projects must go through a multi-year, multi-step development process and be rated "Medium" or higher using statutorily defined project justification and local financial commitment criteria. The BIL provides for the potential doubling of CIG funds, with \$4.2 billion in FY 2023 appropriations (out of \$4.6 billion in BIL authorization). Depending on the project type, CIG shares typically range between 30 and 60 percent.
FTA Areas of Persistent Poverty Grants	Federal discretionary grant program for planning, engineering, or development of technical or financing plans that improve transit in areas experiencing long-term economic distress. FTA recently announced \$20 million in FY 2021 and FY 2022 funding (closed March 10, 2023). The minimum federal share is not less than 90 percent.
FTA Accelerating Innovative Mobility (AIM) Grants	Federal discretionary grant program that promotes forward-thinking approaches to improve transit financing, planning, system design, and service. FTA awarded \$14 million in funding to 25 projects on August 27, 2020. The maximum federal share is 80 percent.
FTA Innovative Coordinated Access and Mobility (ICAM) Grants	Federal discretionary grant program that supports innovative projects for the transportation disadvantaged that will improve the coordination of transportation services and non-emergency medical transportation services. FTA awarded approximately \$8.4 million in FY 2021 and FY 2022 funding to 17 projects on June 16, 2022. The maximum federal share is 80 percent.
FTA Integrated Mobility Innovation (IMI) Grants	This demonstration program supports the transit industry's ability to leverage and integrate mobility innovations with existing services, while examining the impact of innovations on agency operations and the traveler experience. FTA awarded \$20.3 million in FY 2019 funding to 25 projects on March 16, 2020.

USDOT MEGA Program (the National Infrastructure Project Assistance program)	A new discretionary grant program was created by the BIL to fund large, complex projects that are difficult to fund by other means and are likely to generate national or regional economic, mobility, or safety benefits. Public transportation is listed as one of seven eligible project types. The first round of funding in FY 2022 awarded \$1.2 billion in funding to nine projects, with nearly half of the funds awarded to rail, transit, and transit supportive projects. The FY 2023 MPDG funding opportunity is anticipated soon.
USDOT PROTECT Grants	A new discretionary grant program created by the BIL to fund surface transportation resilience to natural hazards including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure. Transit projects are eligible. The program's first NOFO for \$848 million in FY 2022 and FY 2023 funds is currently open and closes August 18, 2023. The maximum federal share is 100 percent for planning grants.
USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants	Key federal discretionary grant program for surface transportation infrastructure projects that improve safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness, state of good repair, partnership and collaboration, and innovation. Transit projects are eligible. The BIL significantly increased funding for the program, with \$1.5 billion available in FY 2023 funding (closed February 28, 2023). The maximum federal share is 80 percent.
USDOT Strengthening Mobility and Revolutionizing Transportation (SMART) Grants	A new discretionary grant program was created by the BIL to fund demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety. The program is divided into two stages, where only recipients of Stage 1 Planning and Prototyping Grants will be eligible for the larger Stage 2 Implementation Grants. CAT received one of the 59 FY 2022 Stage 1 Planning and Prototyping Grants of \$1.2 million to deploy an on demand multimodal transportation system (ODMTS), introducing first mile-last mile microtransit to CAT's existing fixed route and paratransit service in the Savannah area. This round included \$94 million in Stage 1 grant funding. In Stage 2, CAT will be eligible to receive an additional grant award of up to \$15 million over 36 months to fund implementation.

USDOT Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans	Key federal credit assistance program for qualified projects of regional and national significance, including highway, transit, railroad, intermodal freight, and port access projects. Offers lower interest rates and more advantageous terms than traditional financing tools. New TIFIA 49 program focuses on transit and transit-oriented development projects, increasing available borrowing for these project types from the prior 33 to 49 percent.		
State Sources	Description		
Georgia Transit Trust Fund Annual Allocations	House Bill 105 of 2020 established a new flat fee of \$0.50 on for- hire ground transport trips and \$0.25 on shared trips for taxis,		
Georgia Transit Trust Fund Line-Item Requests	ride-hailing services, and limousines services in Georgia. The following year, House Bill 511 of 2021 established nine trust funds including the new Georgia Transit Trust Fund, which now holds revenue from the state ride hailing fees. Ride hailing fee revenue is appropriated annually to the fund and dedicated for use by one or more transit providers for capital transit projects throughout Georgia. CAT has successfully applied for new annual allocations from the Georgia Transit Trust Fund and a \$3.0 million Georgia Transit Trust Fund line-item request.		
Georgia Transportation Trust Fund	House Bill 511 of 2021 established the Georgia Transportation Trust Fund to hold revenue from fees on alternative fuel vehicles, highway impact fees for heavy vehicles, and hotel motel fees. Revenue is appropriated annually to the fund and dedicated for use and expended by the Commissioner for transportation purposes. Transit projects are eligible.		
State Bonds	Georgia has awarded state bond proceeds to several transit projects in recent years. House Bill 170 of 2015 authorized GO! Transit, a one-time award of \$75 million in general obligation bond proceeds to 11 transit projects in nine communities across the state. The Georgia General Assembly also approved \$100 million in state bond proceeds in 2018 for the Georgia 400 Bus Rapid Transit Project. The State of Georgia could choose to advance key transit projects with general obligation bond proceeds in future years.		

Georgia Transportation Infrastructure Bank (GTIB)	Georgia passed legislation in 2008 establishing a Georgia Transportation Infrastructure Bank (GTIB), which is a grant and low-interest loan program administered by the State Road and Tollway Authority (SRTA) and designed to include local, regional, and state government entities. Since its inception, GTIB has provided over \$182 million in grants and loans for transportation improvements (primarily highway and bridge projects). However, the FY 2022 round awarded \$500,000 to the Courtland Street Bus Lane in Atlanta, which may indicate some potential for future GTIB awards for transit supportive infrastructure. Grant and loan applications for the most recent round of \$14.5 million in funding were accepted through January 20, 2023.			
State Economic and Infrastructure Development (SEID) Grant Program	Grant program issued by the Southeast Crescent Regional Commission to fund projects that revitalize and transform communities, spurring economic development in parts of Alabama, Georgia, Mississippi, North Carolina, South Carolina, and Virginia. Transit projects are eligible. The pre-application for \$20 million in FY 2023 funding was released June 19, 2023, with a deadline of July 21, 2023. The full application will be released August 7, 2023, with a deadline of September 15, 2023.			
Local Sources	Description			
SPLOST	A county sales tax mechanism authorized in 1985. Counties may levy a 1% SPLOST to fund local capital projects (including public			
	transit). SPLOSTs require voter approval and must be renewed every 5 or 6 years. CAT currently uses SPLOST funds primarily to provide critical matching funds for priority capital projects. All existing SPLOST funds are fully committed.			
Single-County Transportation Special Purpose Local Option Sales Tax (TSPLOST)	every 5 or 6 years. CAT currently uses SPLOST funds primarily to provide critical matching funds for priority capital projects. All			

Chatham County Maintenance and Operations (M&O) Funding	General Fund budget adopted annually by Chatham County. CAT could partner with Chatham County for increased operating and capital support.				
City of Savannah Funding	General Fund budget adopted annually by the City of Savannah. CAT could partner with the City of Savannah for increased operating and capital support.				
Transit SPLOST	In 2018, the Georgia General Assembly authorized any county outside of the Metro Atlanta region to partner with a neighboring county to call a referendum for a sales tax increase of up to 1 percent in increments of 0.05 percent for up to 30 years. The tax must be approved by each individual county to be imposed. Unlike the 13 counties in the Metro Atlanta region, no current state authority exists for Chatham County to call for a single-county Transit SPLOST. CAT could consider partnering with a neighboring county to call for a Transit SPLOST referendum. Alternatively, CAT could choose to develop partnerships with other transit outside of Metro Atlanta to pursue changes to the existing legislative authority.				
Local Hotel Motel Fee Increase	Georgia authorizes cities and counties to levy local hotel fees, which must then be spent for activities that promote travel and tourism. The City of Savannah currently levies an 8 percent hotel motel tax, which was recently increased from 6 percent in May 2023 to fund revitalization of River Street, finishing the Tide to Town walking and biking trails, and renovating the Historic Waterworks building. transportation. The tax is now expected to generate \$52 million in revenue in 2023. This source is currently used to fund CAT ferry service operations.				
Curb Monetization	Revenues generated from actively managing and pricing curb space using demand-based parking rates and setting reserved zones for various curb uses (loading, passenger pick-up, shared mobility, etc.). This demand-based revenue strategy could be advanced in partnership with the City of Savannah.				

Project Specific	Description			
Naming Rights and Sponsorships	Sale or lease of naming rights for stations, corridors, or other assets in return for a one-time payment or annual payments. Can be structured to offset operations and maintenance costs or capital costs. Partnerships with third parties to provide in-kind or monetary contributions to deliver service and/or facilitate construction of transit projects. For example, Westin Harbor and Savannah Trade & Convention Center provides \$50,000 annually to CAT to support ferry operations. CAT can seek to form new partnerships and strengthen existing partnerships. Potential partners include schools and colleges, major employers, hospitals, shopping centers, social services agencies, and other institutions. CAT could also partner with municipalities and counties looking for expanded service.			
Private Contributions and Development Partnership Coordination				
Agency/Program Revenue Advertising Revenue/Other Agency Revenue	Revenue generated from fare collections, revenue generated by advertising on vehicles, and at stations, facilities, and other property of a transit owner. This will continue to be a secondary operating funding source for CAT.			
Tax Increment Financing	Tax Increment Financing (TIF) is a value capture tool that uses increased property or sales taxes (increment) generated by new developments to finance costs related to the development. In Georgia, TIF districts are referred to as Tax Allocation Districts (TADs). Cities and counties have the power to create TADs and the authority to sell bonds to finance infrastructure and other redevelopment costs within a TAD. The tax increments are deposited in a special fund to repay the bonds. CAT could advance some transit and transit supportive infrastructure in partnership with the County and/or City as part of a broader strategy to revitalize a neighborhood.			
Special Assessment District	A special assessment district is a district where an additional property tax is applied to fund one or more public improvements within the district. An additional property tax is applied to both existing and future properties for a 20 or 30-year period. Unlike TIF, the assessment is a tax increase that generates a consistent revenue stream throughout the taxing period. Commercial and residential properties are often taxed at different rates. A similar mechanism, Community Improvement District (CID), is a defined area where businesses are required to pay an additional tax or fee to fund projects within the district. CIDs are very popular in Georgia as a way to fund various improvements within a CID. CAT could potentially play a role in pursuing authorization for the creation of a new special assessment tool for transit. For example, the Atlanta Beltline successfully new authorization in 2021 for a Special Service District (SSD) to fund completion of the trail loop.			



Joint developments agreements are partnerships between a public entity and a private developer to develop certain assets. Joint development can occur when an agency owns land that can be leased to the developer for a long period of time, which allows the developer to build on the land at a low risk. In exchange, rents are paid to the agency, creating a revenue stream that can be bonded against to support the development of a transit improvement. Joint development may also take the form of the sale of development rights for upfront capital funding. Revenue potential can vary depending on market conditions.