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State of the System

September 2021





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Introduction

WHAT IS THINK TRANSIT?

StarMetro is conducting a systemwide 2021 Major Update, which is an assessment of its existing transit service and an opportunity to establish a vision for the transit network for the coming years. Called Think Transit, the initiative includes two parts:

- Comprehensive Operational Analysis (COA) a deep dive into StarMetro's existing service operations to identify ways to strengthen the system in the short term
- Transit Development Plan (TDP) Major Update a longer-term strategy for system development over a 10-year planning horizon

Think Transit will culminate in recommendations for short-term improvements and a 10-year reimagining of the system. The initiative began in December 2020 and will continue into early 2022.

About the State of the System Report

The State of the System report provides a starting point for Think Transit through an evaluation of existing services and a detailed understanding of transit markets, demand, and service need in Tallahassee. As a first step in understanding the strengths and opportunities associated with the existing system, this document provides an overview of:

- StarMetro services, network, and operating characteristics
- Ridership trends
- Collaborations and partnerships with community organizations and institutions
- Transit markets defined according to population, employment, and socioeconomic characteristics as well as activity centers and commute patterns
- How well existing services are matched with demand and community needs

The report concludes with a description of system strengths and opportunities for transit improvements for Tallahassee residents and people who travel to Tallahassee for school, work, and as visitors.



WHY TRANSIT?

Cities and regions support public transportation services for a variety of reasons, including that transit provides travel choices beyond the private automobile, creating a diversified, accessible, and equitable transportation network. A successful transit system creates opportunities to support a variety of community interests:

- Economic Development Transit has a demonstrated ability to attract economic investment along corridors across the United States.
- Affordability Well-functioning transit services can reduce household expenses for individuals and families.
 On average, Tallahassee residents spend about 24% of their incomes on transportation costs (H+T Index).
 These costs of owning and operating

a car, including gas, insurance, and maintenance, are estimated at \$10,860 a year; this compares with spending \$456 for a year's worth of unlimited transit access.

- **Congestion** Street space is a limited resource in urban environments, including Tallahassee. Buses use less road space to carry more people, helping reduce congestion and preserve access for travelers and vehicles who must drive.
- Safety and Environment Transit service is among the safest ways to travel. Bus riders help reduce the number of vehicles on the road and reduce air pollution and greenhouse gas emissions.

COVID-19 Pandemic

Governor Ron DeSantis confirmed the arrival of the coronavirus in Florida on March 1, 2020, following two positive cases. A year later, the death toll in Florida was over 30,000 and the number of positive cases topped 1.9 million. Over the last year, StarMetro has implemented a series of service changes to improve safety and combat revenue losses.

Locally and nationally, transit ridership was substantially affected by the pandemic. As some workers shifted to working from home and non-essential trips were avoided, transit ridership dropped precipitously. However, transit remains crucial for many people who rely on buses to get to work and social services. As we recover from the global crisis, the COVID-19 pandemic has highlighted the impact and value of StarMetro and other public services in terms of quality of life and access to economic opportunities.

The State of the System primarily relies on data collected prior to the pandemic for its analyses, based on the assumption that pre-pandemic ridership trends may return in the near future. When possible, data collected in 2020 and 2021 was used to highlight current ridership and service trends.



StarMetro and the City of Tallahassee

StarMetro provides a public service for residents, employers, students, and visitors. As part of its role within the City of Tallahassee, StarMetro prioritized serving residents that need transit the most and connecting riders to important community resources, like employment, shopping, education, and medical services. This approach to providing access meant StarMetro has created special services to support access to critical events, like free rides to the polls, and more recently to free COVID testing sites and vaccination sites.

Through this work, StarMetro has built relationships with institutions and organizations that help connect transit with community members. These relationships and collaborative efforts include local, city-affiliated departments, like Community Redevelopment Agency, Downtown Improvement Authority, and Blueprint, as well as regional and state agencies such as the Regional Planning Council, Metropolitan Planning Organization, and Florida Department of Transportation.

StarMetro has been particularly collaborative with other city departments helping to integrate connections between land use planning and transportation, access to community resources like schools, parks, and shopping, and coordinating transit services with new developments. From a policy and planning perspective, StarMetro's service is linked with several citywide initiatives and efforts:

- The City of Tallahassee Five-Year Strategic Plan (2020) identifies improvements in transit infrastructure, such as the redevelopment and construction of existing and new transit centers, construction of new sidewalks and bikeways, and improvement and addition of bus stops with shelters and amenities.
- The City of Tallahassee Comprehensive Plan (1990, with 2021 amendments) has a clear focus on sustainable transportation options, in part by identifying districts where density increases will support higher frequency transit service.
- Tallahassee's Multimodal Transportation District designation (2009) promotes this vision of greater density through developer incentives and a funding stream for transit improvement initiatives and safer bicycle and pedestrian accommodations.
- StarMetro's pledge to transition the bus fleet to 100% electric by 2035 reinforces the city's sustainability commitments to reducing greenhouse gases and its fossil fuel dependence.
- The Community Resiliency Plan (2019) reinforces StarMetro's pledge to greening its fleet; the plan also identifies the agency's new transit center as an ideal opportunity to incorporate community spaces and other resilience hub services.





Transit in Tallahassee Today

STARMETRO

StarMetro is a department within the City of Tallahassee. The service is managed and guided by a General Manager with input provided through the Transit Advisory Committee. The Tallahassee City Council has ultimate oversight of agency budgets, staffing, service development and operations.

StarMetro's administration offices are located at 555 S. Appleyard Drive, also called "The Barn." Most StarMetro employees work at this location, which is home to the agency's administrative offices, bus parking facility, and maintenance garage. Dispatch, scheduling, vehicle maintenance, accounting, and safety training, as well as planning, are provided at this location for both fixed-route and demand-response services. In 2019, StarMetro spent \$20.8 million to operate transit service plus another \$11.6 million on capital projects, like purchasing buses and maintaining passenger infrastructure. The agency raises funds through fares (about 25% of operating costs), plus grants provided through the federal and state government. StarMetro also earns revenues through contracts with Florida State University and other partners as well as contributions from the City of Tallahassee. In 2019, revenues for capital projects were raised through the City of

Tallahassee and federal grants.¹

¹ National Transit Database, 2019 Annual Agency Profile



TALLAHASSEE'S TRANSIT NETWORK

StarMetro's transit network is centered around the City of Tallahassee and includes a handful of services targeted around specific purposes. The network operates according to a radial or "hub-and-spoke" model with most bus routes beginning or ending at C.K. Steele Plaza in downtown Tallahassee. The hub-and-spoke model is supported by a handful of routes that connect outside of C.K. Steele Plaza as part of a strategy to shorten travel between destinations at the outer parts of the network without having to travel into downtown.

StarMetro's network includes the following services:

- Fifteen weekday fixed routes
- Twelve Saturday fixed routes
- Four Night and Sunday fixed routes
- Eight Florida State University (FSU) Campus routes
- Two FLEX routes
- Three Trolley routes
- Dial-A-Ride service (ADA complementary paratransit)
- Two intercity routes (provided by Big Bend Transit)

Existing services are anchored at one transit center, C.K. Steele Plaza, in downtown Tallahassee. StarMetro is planning a second transit hub, the South City Transit Center about 2.5 miles south of C.K. Steele Plaza. StarMetro will reconfigure routes around this second hub, especially for routes and services that travel through south Tallahassee. The goal of the South City Transit Center is to make it easier and more convenient for people living south of downtown to travel within south Tallahassee.

Major Service Changes Timeline

The City of Tallahassee began providing public transportation in 1973 with the purchase of Cities Transit Company and renamed the system "Taltran." Dial-A-Ride service began being offered in 1984. In 1986, C.K. Steele Plaza was built to serve as the system's central hub, which it still does today. In 2005, Taltran changed its name to StarMetro as part of a rebranding effort alongside capital improvements.

Since StarMetro's inception, the network has been focused on bringing people downtown, with all routes serving C.K. Steele Plaza, the downtown transit center, and radiating outwards to other parts of the city. A series of major service changes occurred over the last decade, as follows:

- **2011** The network was entirely restructured and decentralized into a grid-like pattern, with the intention of providing more access between major destination without having to go downtown. StarMetro implemented a series of stops that act as major transfer points.
- **2016** StarMetro restructured back to a primarily radial (or hub-and-spoke) network, with a promise of greater connectivity and shorter commute times. Almost all routes serve C.K. Steele Plaza at the same time, allowing for quick transfers
- **2019** The network underwent a series of moderate routing and frequency changes. The Canopy Route was discontinued, and the new Hartsfield Route was added.
- **2020** The COVID-19 pandemic led to the need for improved safety measures and service reduction due to decreased revenue. Bus capacity was reduced to 15 passengers, the Park route and Trolley service were suspended, and bus service ended at 8 PM. In August, the 15 passenger bus capacity was lifted, and following the end of 2021 (on January 1, 2022), night service returned.



319

Parks

10

90)

0

Miles

3

2

Î

Weekday Daytime Routes

On weekdays, StarMetro operates 15 fixed routes and two FLEX services, as shown in the map at left. All fixed routes except Live Oak serve C.K. Steele Plaza. Nine bus routes begin or end at C.K Steele Plaza. The remaining five bus routes travel north-south or east-west through the city, stopping at the transit center midway through the route. Buses depart the transit center at the hour or half hour mark, making it easy for riders to remember when buses depart from C.K. Steele and transfer between services.

Live Oak is the lone crosstown route; it connects neighborhoods in the southern half of the city. However, some routes that serve downtown provide crosstown connections between routes on the outer parts of their routes. For example, Red Hills serves Capital Circle NE along a north-south corridor before traveling west to downtown. Likewise, Forest provides north-south connections on the west side of downtown via Mission Road and Appleyard Drive before heading into downtown on Jackson

StarMetro's network includes two FLEX services: Lake Jackson and Southside. These routes provide demand-responsive service where customers can call ahead to request a pickup or dropoff. These routes provide travel within the zones, as well as connections to fixed-route services. Lake Jackson customers can transfer to Big Bend or Forest, and Southside customers can transfer to Big Bend, Gulf, or Moss.

Other StarMetro services include the Night, FSU Campus, and Trolley routes, as well as Dial-A-Ride service; each of these services are discussed in later sections.



Service Levels

Bus service levels are defined by two characteristics: span and frequency. Span refers to the hours of the day when service is available, and frequency refers to how often (or frequently) a bus passes a stop. These two characteristics determine both how useful a service is to riders and how much service costs to operate.

On weekdays, StarMetro's daytime routes operate for roughly 14 hours a day, starting around 6:00 AM and ending at 7:30 PM. In terms of frequency, most StarMetro routes operate with a 30-minute frequency during peak periods and 60-minute service during the off-peak. A handful of routes operate with 30- or 60-minute service all day (see chart below). One route, the Southwood Express, offers peak period and midday service, with two short breaks in service during the day. Southwood Express is also the only route in the StarMetro fixed route network that is operated by Big Bend Transit, rather than the City of Tallahassee.

The FLEX services are designed to integrate with fixed-route service, so they share operating schedules. Southside FLEX service is available all day, while the Lake Jackson FLEX Service is only available during peak periods (6:00 to 9:00 AM and 4:00 to 6:30 PM).



AM PM 5 5 7 9 11 7 10 11 12 8 10 West A - Azalea East South B - Big Bend North D - Dogwood E - Evergreen Frequency F - Forest 15 min G - Gulf H - Hartsfield 20 min K - Killearn 30 min L - Live Oak 40-45 min M - Moss P - Park 60 min R - Red Hills S - San Luis T - Tall Timbers W - Southwood Express Lake Jackson Flex Service Southside Flex Service

Weekday Service Frequency



Weekday Peak Frequency

During the morning and afternoon peak periods, most of the service area is covered by buses that come every 30 minutes, as shown in this map. The west side of the city is almost entirely served by 30-minute frequency routes. On the eastern half of the city, Azalea, Evergreen, Red Hills, and Park run every 30 minutes during peak times, and Killearn runs every 30 minutes in the mornings. The southeastern quadrant of the city has the lowest frequencies at peak.



Weekday Midday Frequency

During midday hours, frequencies on many routes decrease. As shown in the map below, routes or sections of routes with 30-minute frequencies are all in the western half of the city. The eastern and northern parts of the city mostly have buses that come every hour during the midday. Azalea and Big Bend have routes that short-turn at the Transit Center, so that every bus serves the western and southern halves of the routes, respectively, and only every other bus serves the eastern and northern halves, respectively.

Saturday Daytime Routes

Saturday service consists of 12 fixed routes, three fewer than the weekday network, as Hartsfield, Park, and Southwood only operate on weekdays. All routes except Live Oak serve C.K. Steele, with all routes departing from the transit center every hour on the 30-minute mark.

Saturday routes operate from 7:00 AM to 7:30 PM with hourly frequencies, with one exception, Live Oak, which operates once every 45 minutes.

8

9

10



Saturday Service Frequency AM

5

A - Azalea B - Big Bend D - Dogwood E - Evergreen

F - Forest

K - Killearn L - Live Oak

G - Gulf

M - Moss

R - Red Hills

S - San Luis T - Tall Timbers



Night and Sunday Routes

StarMetro operates four Night routes; these routes are available on weekday and Saturday evenings and all day on Sundays. As shown in the map below, these routes travel on different corridors as compared with weekday and Saturday service. The four routes are concentrated in the western half of Tallahassee and all of them serve C.K. Steele

As compared with weekday service, StarMetro's Night and Sunday services are oriented around "coverage", which means they are designed to provide a lower level of service (less frequent) in order to serve a larger geographic area. This approach to providing service is able to cover a larger area with fewer routes, but it also makes service slower and more difficult to understand.

Night service operates once per hour starting between 7:00 PM and 7:30 PM and ending between 10:00 PM and 11:00 PM.

Sunday service also operates hourly, starting around 11:00 AM and ending around 7:00 PM.



FSU Campus Routes

StarMetro operates eight routes, called Seminole Express, under contract with Florida State University (FSU). The Seminole Express services are designed around the FSU Campus and essentially function as a sub-network of transit service. The routes provide on-campus circulation as well as connections between neighborhoods and the FSU campus. Given the proximity of FSU and Tallahassee Community College (TCC), Seminole Express routes also provide connections to TCC. The eighth Seminole Express route, Night Nole, circulates through the entire area at night.

Seminole Express routes operate every 20 minutes for between 12 and 13 hours a day (7:00 AM to either 7:00 PM or 8:00 PM). Night Nole operates between 8:00 PM and 11:00 PM.





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Trolley Service

StarMetro operates three trolley services, all of which are designed to provide access to restaurants and other entertainment venues.

During the Legislative Session (either January to March or March to May depending on the year), two trolleys— Midtown and College Town—provide lunchtime service and operate on weekdays from 11:30 AM to 2:50 PM on 20-minute headways. The Dinner Trolley operates Fridays and Saturdays from 4:30 PM to 1:00 AM on 30-minute headways, serving both Midtown and College Town all year. Fares for the trolley are free.

Dial-A-Ride

StarMetro offers complementary paratransit service in accordance with the federal American with Disabilities Act (ADA) for riders unable to ride fixed-route service because of a disability. The service is branded as Dial-A-Ride. StarMetro does not operate this service directly and instead contracts with four private providers: Big Bend Transit, Sessaly Rose, Tomahawk, and Yellow Cab.

Riders with a qualifying disability can request a ride on the Dial-A-Ride service by scheduling a trip at least 24 hours and up to 14 days in advance. The service is available for travel within ³/₄ of a mile of one of StarMetro's fixed routes during the same hours of operation of fixed route service: weekdays from 5:00 AM to 11:00 PM, Saturdays from 5:45 AM to 7:45 PM, and Sundays from 10:30 AM to 7:00 PM.

Intercity Services

Big Bend Transit, one of StarMetro's partners, provides two intercity services to and from Tallahassee:

- Gadsden Express: The Gadsden Express is a joint venture between Gadsden County, the Florida Department of Transportation, StarMetro, Commuter Services of North Florida, and the Capital Region Transportation Planning Agency. The commuter bus route connects Quincy and Tallahassee with stops in Midway and TCC. There are four trips a day in each direction from 6 AM to 7 PM on weekdays.
- Havana Express: The Havana Express is a deviated fixed-route bus that provides service between Havana and Tallahassee. Depending on the stop, the bus comes every 30 minutes to an hour at peak times, plus a few additional trips midday. Service runs from 6:00 AM to 6:30 PM on weekdays.

Fares for both services are \$1 per trip.



TECHNOLOGY, FARES, AND PASSENGER INFORMATION

Implementing new technologies can help make transit easier to understand and increase convenience for both current and potential riders. Over the last few years, StarMetro has improved customer information access through using new technologies. The agency has also recently upgraded their fare system, giving customers more convenient payment options.

Fare Options	Cost
One-Trip Regular	\$1.25
One-Trip Reduced	\$0.60
One-Day Unlimited - Regular	\$3.00
One-Day Unlimited - Reduced	\$1.50
Seven-Day Unlimited - Regular	\$10.00
Seven-Day Unlimited - Reduced	\$7.50
Monthly Pass - Regular	\$38.00
Monthly Pass - Reduced	\$19.00
Children - Under 5 Years Old	Free
Students - K-12, FAMU, & FSU	Free
Transfers	Free

Fares

The adult, one-way standard fare to ride StarMetro is \$1.25 per trip. StarMetro offers discounts for bulk purchases, such as oneday, seven-day, and monthly passes; adult, full-price monthly passes cost \$38. A oneway ride on the Dial-A-Ride service is \$2.50.

Reduced fares on the fixed-route service are available to older adults 60 years or older, people with disabilities, and those with a Medicare card. Children five years of age and younger may ride fare free. Transfers between services are also free.

StarMetro has pass programs with regional educational institutions, including Leon County K-12, FSU, and Florida Agricultural and Mechanical University (FAMU). Pre-paid fare agreements mean students at Leon County schools and FSU ride for free using their student IDs, while TCC students can purchase reduced price transit passes.

Bus passes may be purchased in person at C.K. Steele Plaza or the StarMetro administrative office, or through the Token Transit mobile application. In addition, riders can pay for fixed-route trips on-board using rechargeable smart cards, magnetic stripe cards, mobile tickets/QR codes, and cash. The Token Transit app also allow for individuals or social service agencies to purchase a pass for someone else, which has proven particularly helpful to paratransit riders.



Passenger Information

In order to effectively ride transit, current and potential customers need to be able to access information about schedules, fares, and alerts. This information is primarily available at C.K. Steele Plaza, on StarMetro's website, and on mobile apps. C.K. Steele Plaza has an information booth, system maps, and printed schedules, as well as real-time information signs with upcoming bus arrivals at its bays.

The StarMetro website has the following functionalities:

- Route schedules and interactive route maps
- Fare information
- Trip planner
- Real-time information on bus location and upcoming arrivals, through the TransLoc webapp
- Alerts and detours
- Information about current StarMetro initiatives

The website also details three mobile apps that riders can download:

- **TransLoc Rider,** which has real-time arrival information, route maps, and alerts
- **Token Transit,** where riders can purchase bus passes and use their phones to show bus tickets at boarding
- **DigiTally,** which is the City of Tallahassee's non-emergency services app and includes a Find My Bus widget with an interactive map

StarMetro has recently integrated its services with Moovit. A Mobility as a Service (MaaS) provider, the Moovit app provides information to travelers on a range of transportation options. For example, a traveler may be given a number of options or combination of options for getting to a destination, such as using transit, a scooter, and/or a ride-hail service. Tallahassee's private scooter provider, Spin, will be part of the Moovit app.





PASSENGER FACILITIES AND AMENITIES

Investing in transit facilities can improve the quality of the bus riding experience, providing comfort to transit riders waiting for a bus. In Tallahassee, where people may walk to the transit center and bus stops in incredibly hot climates, providing seating and shading are especially important. Having good walking and biking infrastructure also helps with improving access to the transit center and bus stops.

Passenger Facilities

C.K. Steele Plaza

C.K. Steele Plaza is StarMetro's main transfer hub. It is located at 111 W. Tennessee Street in downtown Tallahassee. The majority of StarMetro's routes begin, end, or stop at this location as part of the regularly scheduled service. C.K. Steele Plaza has 24 gates serving 15 weekday routes. The facility also includes public restrooms, ticket vending machines, and an information booth.

StarMetro and the City of Tallahassee have plans to develop C.K. Steele Plaza into a multi-story and multi-use facility. The redevelopment could facilitate the co-location of StarMetro administrative offices and the transit center allowing for maintenance yard expansion opportunities at the current headquarters on Appleyard Drive. The StarMetro existing customer operations call center is located at the Gemini Building on North Adams Street, about two blocks north of C.K. Steele Plaza.

Proposed South City Transit Center

StarMetro's current network creates opportunities for transfers between routes across the system. Most transfer locations are supported with passenger amenities, including shelters and/or benches.

In 2021, StarMetro is currently planning a second passenger transfer facility at the northwest corner of Orange Avenue and Meridian Street. This strategic location is south and slightly east of downtown and close to high-ridership corridors and neighborhoods in south Tallahassee. The new Southside Transit Center will include bus bays as well as passenger amenities that will make it safer and more comfortable to connect between services. StarMetro will consider how best to incorporate the South City Transit Center into the network; likely routes that could be routed through the facility include Big Bend, Gulf, Live Oak, and Moss.





Bus Stop Amenities

There are approximately 966 bus stops in the StarMetro's system. Among these stops, 32% have seating (e.g., two-seat bus pole or bench), 15% have a shelter, 42% have a trash can, and 3% have a bike rack (see chart overlay on map at right).

The distribution of amenities within StarMetro's system is shown in the map below. While there are benches at bus stop across the city, bus shelters are mostly placed at major intersections and concentrated around FSU. Many of the routes going into and alongside residential neighborhoods lack bus shelters.



Transit Supportive Infrastructure

The pedestrian environment is an integral part of the transit network because transit trips begin or end with a walk to or from a bus stop. Investments in sidewalks, crosswalks, and curb cuts support transit riders by making it safer and more comfortable to access service. Other transit supportive infrastructure, like bike facilities and micromobility (scooters and bike share networks) support transit services by making it easier and more comfortable to travel longer distances to and from a bus stop.

Pedestrian and Bicycle Facilities

Tallahassee's pedestrian facilities, including sidewalks and crosswalks, vary by location. Most major streets have sidewalks, but many residential neighborhoods outside downtown— including around the FSU campus—lack pedestrian infrastructure (see the map at left showing pedestrian and bicycle infrastructure within the Tallahassee Urbanized Area). Without adequate sidewalks, conveniently located street crossings, and crosswalks, transit riders are challenged to safely walk from their homes to a bus stop.

Bike infrastructure is also important for transit service because bicycle facilities, including bike lanes and parking amenities, can expand the reach of transit. In Tallahassee, most bike lanes are located on major corridors and primarily consist of unprotected bike lanes. There are also a handful of off-street, separated bike/multi-use paths. Downtown has some protected bike lanes and bike boulevards, but most streets in Tallahassee do not have bicycle infrastructure. Only about 3% of bus stop locations currently have bike parking. StarMetro buses are equipped with bike racks, but those often fill up, according to rider feedback.



Micromobility

As of 2021, the City of Tallahassee has two micromobility services:

- Pace Bike Share is a flexible docking bike share service, where bikes can be docked either at a Pace station or tethered to any other fixed object. Stations are all located downtown.
- **E-Scooters** are available throughout the city through the company Spin. Scooters do not have docks and can be left anywhere.

Devices are stationed at C.K. Steele Plaza and several major transit stops.

TRANSIT RIDERSHIP

Ridership and ridership trends are an important part of improving transit networks. Understanding the routes, locations, and times of day where ridership is strongest helps indicate where services are working well, where they are needed, and where they might be improved.

Ridership Trends

StarMetro's ridership was relatively consistent between 2016 and 2019, carrying approximately 3.6 million trips across all services, with most riders using weekday routes. Transit ridership varies by month (see figure below) with peak ridership occurring in the spring and fall. Fluctuations in ridership reflect Tallahassee's position as Florida's state capital and as home to three major universities and colleges (FSU, FAMU, and TCC). The state legislature is in session for three months in the spring, bringing both elected officials and staff across the state to Tallahassee. Tallahassee's population also changes with the academic calendar, with more students in town during the fall and spring semesters as compared with the summer term.

With the COVID-19 pandemic, StarMetro's ridership declined sharply, starting in March 2020 and continuing through the summer. Ridership declines reflect public health concerns, as riders stopped taking non-essential trips and some people transitioned to working from home. In early 2021, businesses and institutions are beginning to reopen, and early signs suggest people are taking transit again. The following sections include an analysis of ridership patterns by route for data collected in September 2021.





Average Ridership by Route (Sept 2021)

Ridership by Route

StarMetro's ridership varies by route. In Fall 2021, StarMetro's highest ridership weekday route was Big Bend, followed by Azalea and Moss. San Luis and Hartsfield had the lowest ridership. On Saturdays, Azalea's ridership was the highest, followed by Big Bend. San Luis had the lowest ridership. Among the FSU Campus routes, Garnet had the highest average daily ridership and Night Nole had the least. On Sundays, Route 1 had the highest ridership, but ridership is overall much lower than other days. The charts at right show ridership by route.

FSU Avg Daily Ridership by Route (Sept 2021)









StarMetro's ridership also varies by time of day. This variation reflects both a combination of service frequency and quality and the times when people are most likely to travel. Some StarMetro routes operate at higher frequencies during traditional peak commute hours as compared with times generally considered off-peak during the middle of the day. For some routes, like Azalea, Evergreen, and Big Bend, ridership follows the peak and off-peak periods, though this may be due to more frequent service being provided at peak than at off-peak on these routes.

However, as shown in the chart at right, much of StarMetro's ridership is not oriented around morning and afternoon peaks. These trends may reflect high numbers of students and workers who do not commute to school or work during traditional peak periods. In addition, even among routes that do have peaks, there are many riders during the midday period.



AM peak

PM peak

Ridership by Stop

Ridership also varies by location. As shown in the weekday ridership by stop map at right, the location with the highest number of passenger boardings is C.K. Steele Plaza, which is also the system's hub and is served by the majority of all routes. Other high ridership locations are at regional colleges and universities, such as TCC, FAMU, and FSU, and locations west and south of downtown Tallahassee. Ridership is lowest in neighborhoods in the northeastern parts of the city.





Ridership patterns on Saturdays generally mirror weekdays, with ridership strongest on the corridors traveling north (Big Bend), east (Azalea) and south (Moss). Ridership at shopping centers like Governor's Square Mall and the Walmart Super Center along Apalachee Parkway is also relatively strong.



Riders using StarMetro's FSU service show strong demand along the on campus stops as well as the Innovation Center. Demand is also stronger in the neighborhoods north and west of campus, along High and Ocala Roads and Call Street.





On Sundays, ridership is low due to the limited level of service provided. Outside of C.K. Steele, clusters of higher ridership include along W Tennessee Street, along W Pensacola Street, near the planned South Side Transit Center, and at Governor's Square Mall.



ON-TIME PERFORMANCE

There are a variety of factors that shape and determine a transit agency's ability to attract and retain riders. These include agency budgets that dictate the amount of service available, as measured by hours of operation (span) and frequency of service. As mentioned, other factors include the underlying road network and pedestrian and bicycle facilities. StarMetro's success and performance, therefore, is wrapped up in the broader operating environment. However, within this context, it is still useful to evaluate the system's performance in terms of service quality measures, particularly on-time performance.

On-time performance is a reflection of service quality. In the context of transit service, ontime performance is measured by the time a bus arrives at bus stops as published in their schedules. This measure is also typically defined as a range: in the case of StarMetro, "on time" is defined as arriving at a bus stop between two minutes ahead of the published schedule and as much as 10 minutes after the published schedule.

In 2021, StarMetro's service struggled with on-time performance. With the relatively relaxed standard set by the agency that allows buses to be as much as 10 minutes behind the published schedule, most routes meet the on-time standard between 85%- 95% of the time. San Luis has the lowest on-time performance. There are several factors that impact the reliability of a bus route, including road congestion, ridership levels, how schedules are built, and driver breaks.



On Time Performance (Sept 2021) On-Time = 2 min early to 10 min late)

Institutions and Partnerships

StarMetro has partnerships with organizations and agencies within and outside of Tallahassee and Leon Counties; these entities support StarMetro and its services. Several partnerships are with other city departments, including the Tallahassee Downtown Improvement Authority (TDIA), which focuses on strengthening the vibrancy of downtown Tallahassee. The TDIA helped initiate StarMetro's Trolley service, which supports local businesses and services in both downtown and abutting neighborhoods. StarMetro also has a close working relationship with the Tallahassee Community Redevelopment Agency's (CRA) and Blueprint, the intergovernmental agency (IA) within the city-county joint Department of Planning, Land Management and Community Enhancement (PLACE).

Partnerships with Schools

Among the most important partnerships for StarMetro are the relationship and contracts with local and regional educational institutions, including Florida State University (FSU), Florida Agricultural and Mechanical University (FAMU), Tallahassee Community College, and Leon County Schools. StarMetro partnership with each entity is unique:

StarMetro operates eight dedicated fixed-route services on the FSU campus. There are no fareboxes on these FSU fixed-route buses, and any customer may ride for free. FSU contracts with StarMetro for this service, paying a flat fee for annual operation of the eight Seminole Express and Night Nole Routes plus a fee per student ride on the city services. FSU students, faculty, or staff may present their FSU ID to ride StarMetro's fixed-route city buses for free. In 2019, FSU signed a 10-year contract with StarMetro, committing to the replacement of their 15 diesel buses to an all-electric bus fleet.

Historically, StarMetro operated shuttle routes on the FAMU campus (the Venom Express). The contract was ended in 2016 when the university opted for smaller shuttle vehicles operated by a private company. However, FAMU students can ride StarMetro buses free, as students pay into a UPASS program via FAMU's transportation access fee. FAMU pays StarMetro a fee per student ride.

Like FAMU, TCC has had several partnership models with StarMetro over the years. TCC used to offer students free access to all StarMetro buses; but a variety of factors led to TCC suspending their agreement with StarMetro. In 2019, StarMetro negotiated a new partnership that offers TCC students a discounted fare pass.

StarMetro also has a contract with Leon County School that permits students to ride any fixed route StarMetro bus for free. This program expands opportunities for students, as this added transportation option may allow them to participate in afternoon or evening programming, enroll in additional classes, or seek employment after school. Since the program's start, student ridership on StarMetro's routes has increased by 80%.









Transit in Tallahassee

Public transportation is most effective when it serves the densest parts of a city (both residential and employment density), matches with underlying travel patterns, and connects areas with high concentrations of socioeconomic groups that have a higher likelihood of transit use, such as individuals with low-incomes and households without access to a vehicle. As part of understanding the underlying markets, demand, and need for transit service, the State of the System considered StarMetro's service area in terms of density, socioeconomic characteristics, and concentrations of employment and other activity centers, like schools, medical facilities, and shopping centers.

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LOCAL TRANSIT DEMAND

Population and employment density are the most important factors that determine the underlying local transit demand, for the following reasons:

- Transit is generally accessible to those within a five-minute walk, or 0.25 miles, of a bus stop, so the market is directly related to the density of people in the immediate vicinity of transit service.
- Transit, especially fixed route, aims to get the most people to the most popular destinations in a fast and reliable manner. In order to serve the greatest number of people, transit service levels must be matched with demand.

As shown in the graphic at right, different levels of residential and employment density are supportive of different levels of transit. It is important to recognize that areas without some level of population and employment density may not provide an environment where fixed-route transit can have enough riders to succeed. FLEX service, microtransit, or other shared mobility solutions may work best in these areas.

LAND USE			TRANSIT	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Downtowns & High Density Corridors	>45	>25	Light BRT Rapid Local Rail Bus Bus	10 mins or better
Urban Mixed-Use	30-45	15-25	BRT Rapid Local Bus Bus	10-15 minutes
Neighborhood & Surburban Mixed-Use	15-30	10-15	Local Bus	15-30 minutes
Mixed Neighborhoods	10-15	5-10	Local Micro- Bus transit	30-60 minutes
Low Density	2-10	2-5	Micro- transit Rideshare Volunteer Driver Pgm	60 mins or less or On Demand
Rural	<2	<2	Rideshare Volunteer Driver Pgm	On Demand


In this population density map for Tallahassee, areas with higher concentrations of people are shown in darker shades of green; these areas also are the strongest markets for transit. Areas with lighter shades will generally support lower levels of service.

Based on population density alone, neighborhoods west of downtown Tallahassee, including near Florida State University, in the Griffin Heights and Chapel Ridge neighborhoods are strong markets for transit services.





Socioeconomic Transit Propensity Factors

As part of understanding the size and location of Tallahassee's strongest transit markets, our analysis compares the socioeconomic characteristics of Tallahassee's overall population with those of people who commute by transit in the city. The analysis highlights populations that are more likely to rely on transit so that investments can be made to improve travel conditions within these communities. The data is based on commutes to work, so this analysis represents work trips only.

Race and Ethnicity



More than half of residents in Tallahassee are white, yet only one quarter of transit commuters are white. The inverse is true for people who are Black or African American: this group makes up approximately 30% of the city's population but represents 58% of the transit commuters. Hispanic and Latino residents are also more likely to commute by transit. A critical part of aligning transit services with demand, therefore, will be to ensure transit services are available to neighborhoods with higher concentrations of people of color.



White Black or African American Hispanic or Latino Asian American Indian and Alaska Native Other Races
Source: US Census Bureau, ACS 2015-19

Poverty Status

Approximately 22% of the Tallahassee region has incomes below 150% of the federal poverty threshold. However, 46% of transit commuters (more than twice the rate of the general population) have incomes less than 150% of the poverty level. This shows that transit usage and income are related, and transit services should be planned in a way that connects people with lower incomes to jobs and other activities.

Access to Vehicles

One of the strongest predictors of a Tallahassee resident using transit is access to a vehicle. While roughly 3.6% of residents in Tallahassee do not have access to a vehicle, 39% of transit commuters do not have access to any vehicles. This is a rate of more than 10 times the general population. For a city like Tallahassee where the lack of vehicle ownership can reduce one's access to opportunities and significantly limit the destinations that can be accessed within a reasonable walk, reliance on StarMetro is critical to maintaining a job, accessing services, receiving health care, and maintaining ties to family and friends.

Nativity Status

Residents of Tallahassee who were born outside the United States are more than twice as likely to use transit relative to the overall population.



Source: US Census Bureau, ACS 2015-19





Source: US Census Bureau, ACS 2015-19



Transit Propensity Adjustment Factor

The preceding comparisons highlight demographic characteristics that have a strong correlation with transit use in Tallahassee. Nelson\ Nygaard translated this information into a transit propensity adjustment factor for each group (see table). This number is the ratio of residents who use transit for commuting, relative to the overall population. Values greater than 1.0 indicate groups that use transit more than the overall population, and values less than 1.0 indicate groups that use transit less than the overall population. The demographic groups with the highest factors are the ones that are most likely to generate transit trips.

Socioeconomic Group	Transit Propensity Adjustment Factor
Race and Ethnicity	
White	0.45
Black or African American	1.91
Hispanic or Latino	1.44
Asian	1.05
American Indian and Alaska Native	5.00
Other Races	1.03
Poverty Status	
Below 100 percent of the poverty threshold	2.16
100 to 149 percent of the poverty threshold	1.97
At or above 150 percent of the poverty threshold	0.70
Vehicles Available	
No Vehicles Available	10.81
1 Vehicle Available 0.92	
2 or More Vehicles Available	0.52
Nativity	
Native Born	0.90
Foreign Born	2.02

Transit Propensity Adjustment Factor

This map shows the adjustment factor calculated at the block group level based on the demographic groups that reside in each area. This map shows that the parts of Tallahassee with the greatest demand for transit (based solely on demographic groups) is primarily west of Meridian Road, with the strongest demand in Griffin Heights, Frenchtown, near Tallahassee Community College, in Greater Bond, South City and Oak Ridge.



Adjusted Population Density

The adjusted population density reflects a combination of overall population density combined with the transit propensity adjustment factor (see map). The modified density analysis intensifies the transit demand in some areas, particularly in Griffin Heights, Frenchtown, South City, Greater Bond, and Providence. Only a few areas in east and northeast Tallahassee see a reduction in transit demand, including Indianhead-Lehigh (between Magnolia Drive and Blair Stone Road) and the Betton Oaks/Miccosukee Hills Area (northeast of Tallahassee Memorial HealthCare).



Employment Density

Population density identifies where people live and where most trips start. Employment density is also an indicator of transit demand as these employment areas typically represent destinations where people travel for work; they also serve as a proxy for other activity like educational facilities, medical services, and shopping.

Employment density is shown below, with darker shades of pink and purple indicating higher densities of employment and the areas where employment density is more likely to support transit service. Light shades of pink indicate areas with lower employment densities and less likelihood to support transit.

Employment density is concentrated in downtown Tallahassee and around Florida State University, and along several major corridors, including Apalachee Parkway, Monroe Street, and Capital Circle.





Composite Transit Demand

This map combines the adjusted population density and the employment density to create a composite transit demand. Areas with a darker shade of gold indicates areas that can support high levels of transit service. These areas are generally consistent with the adjusted population density but includes many areas that also have higher density of employment, such as along Capital Circle and Apalachee Parkway.



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Central Tallahassee Composite Transit Demand

The composite transit demand in central Tallahassee and the city's Multimodal Transportation District is shown in this map. Downtown Tallahassee and areas surrounding FSU have the strongest market for transit services. There is also a contiguous area of high transit demand, covering much of the western half of the core of Tallahassee, stretching from Capital Circle and TCC on the west side to downtown, generally between the railroad tracks south of Jackson Bluff Road to Tharpe Street.



Think Transit

ACTIVITY CENTERS

In addition to population and employment density, transit demand is driven by specific destinations. These are places where people go for shopping and errands, medical appointments, education, and to conduct business. The map below shows many of the large activity generators throughout Tallahassee. Some of the largest grocery stores and shopping centers are located on major thoroughfares, including West Tennessee Street, Apalachee Parkway, Capitol Circle, and Thomasville Road.



COMMUTE PATTERNS

Commutes represent a fraction of the overall trips that people take on a regular basis; however, they are the most predictable, consistent, and often the longest trips people make regularly. As a result, transit services have tended to focus service around work and commute travel. This section reviews data from the US Census Bureau on commuter travel patterns in Tallahassee, including origindestination flows between zones, percent of workers who commute by transit, and travel patterns used by workers commuting during non-peak hours.

All Commuter Trips

The map at right shows the travel patterns for commuters (all modes) between zones throughout the Tallahassee area. Thicker and darker lines show pairs between zones where a greater number of people travel. Darker and larger circles show zones that have greater number of commutes within the zones.

The largest commute flows are between downtown Tallahassee and the surrounding zones, with some moderately sized flows to many of the areas to the northeast.





Low Wage Commuter Trips

A subset of the overall flows is shown below as the travel patterns of workers in low-wage jobs (monthly incomes of \$1,250 or less). Lower-income workers are more likely to use StarMetro to commute, making these travel patterns important for transit services. The largest flows are concentrated in central Tallahassee, generally between the area around Florida State University, downtown Tallahassee, and the surrounding zones. The map suggests high travel demand between central Tallahassee and areas in the northeast; however, the absolute number of trips between these areas are relatively small.



Transit Commuter Mode Share

The map below shows the areas with the greatest share of people who commute to work using transit. These areas generally align with the areas of the city that have the highest propensity for transit use, primarily west of Meridian Road. Additional isolated areas are between Meridian Road and Thomasville Road on the north side of Interstate 10, and between Tram Road and Orange Avenue within Capital Circle.

The neighborhoods of Providence and Greater Bond have the highest level of transit commutes in the region.





Non-Peak Hour Commuters

This map shows the percent of workers who leave home to travel to work outside of the traditional morning commute time. The darker shades of pink indicate where workers who use transit are more likely to depend upon midday service, or service at the start or end of the day. The neighborhoods surrounding Florida State University and Florida A&M University have the highest concentration of these non-peak hour commuters. These are areas where all-day reliable service and longer spans may be more important to giving residents access to employment opportunities.









Transit Opportunities

The objective of the State of the System analysis is to inventory and document StarMetro's transit services and the underlying demand and need for transit services in Tallahassee. This section evaluates the existing network in the context of demand and needs and identifies opportunities for systemwide improvements.

MEETING TRANSIT NEEDS

Aligning Transit Service with Demand

Transit services work best when they connect areas with the highest concentrations of people and jobs, especially residents and employees who are more likely to use transit service. This analysis is completed by mapping composite transit demand with StarMetro services and ridership (see map below).

In general, transit ridership is strongest in areas with the highest composite demand, especially downtown, south of downtown, near FSU, and near TCC. The Capital Circle NE corridor, in the northeastern part of the city, has a lot of jobs, suggesting a strong market for transit. Transit ridership, however, is low. The lack of riders potentially reflects a variety of factors, including a low level of pedestrian and bicycle infrastructure as well as potentially lower levels of existing service.





Strong demand for transit services throughout the city, including within Capital Circle and especially within the Multimodal Transportation District, suggests that many areas would benefit from increased service levels. StarMetro routes currently operate every 30 to 60 minutes. Our analysis of transit demand suggests central Tallahassee could support transit services that arrive every 15 or 20 minutes throughout the day, especially in neighborhoods south and west of downtown. In addition, the analysis suggests areas currently served with hourly service could support frequencies of 30 minutes or better.





As discussed, public transit supports local and regional economic growth by connecting people with jobs and employers with a reliable workforce. The map below shows the number of jobs accessible via transit within 60 minutes of travel from different areas of the city. The analysis shows that downtown Tallahassee and areas immediately surrounding downtown have the greatest access to jobs. Areas outside of downtown are significantly less accessible via transit.

Transit Access

route.



Population and Jobs Within 1/4 Mile of Transit





In an effort to understand how accessible jobs are via transit, the study team combined two measures: transit access to jobs and adjusted population density (see map). Areas in the map that are darker turguoise represent employment areas that are accessible by transit, and the areas that are darker red represent stronger transit markets transit (population density adjusted by socioeconomic characteristics tied to transit usage). Areas highlighted in yellow include places with relatively high population density but low access to jobs, which means transit access could be improved to connect people and employers. These areas include many neighborhoods on the western side of the city, including those surrounding TCC. Other areas where job access is lower include areas northwest of downtown and the area south of downtown including around the planned South City Transit Center. Neighborhoods on the outer edges of the StarMetro network in every direction are also highlighted. Some of these areas represent potential markets for StarMetro services; in some cases, however, land uses and pedestrian facilities need to be considered to ensure service models are matched with rider needs.





Non-Peak Commuters and Service Levels

StarMetro provides the highest services levels route coverage and frequency—on weekdays during the morning and afternoon peak periods. While midday periods are served, the frequency of service is lower. On Saturdays StarMetro operates fewer routes with lower frequency; weekday and Saturday evening service has less service as compared with weekdays and Sunday has the lowest level of service.

The map at right shows the proportion of workers who commute outside of the peak periods, together with the midday weekday transit network. Service levels are greatest west of downtown, which also has the greatest proportion of non-peak hour commuters. However, there are other parts of the city where at least 35% of workers commute during nonpeak times; many of these residents only have access to hourly service.

Orienting service around weekday peak periods is aligned with some travel flows, but misses other needs and demand, including students, part-time and service workers, and other residents traveling to appointments, services, and shopping. Our analysis of existing ridership, underlying demand, and travel patterns suggests there are opportunities to strengthen service by increasing service levels on weekend days and during evenings.



OPPORTUNITIES FOR SERVICE IMPROVEMENTS

The purpose of the 2021 Major Update is to leverage the strengths of the system to improve areas which are less successful. The State of the System is intended as an inventory of system strengths, challenges, and opportunities for improvement. For the next step of Think Transit, the study team will investigate StarMetro's services more deeply, including a detailed look at individual routes and a more in-depth analysis of agency investments. StarMetro's network has many strengths. As a department within the City of Tallahassee, the agency is both financially supported and well aligned with the City of Tallahassee's municipal goals. Indeed, qualitative research demonstrates that StarMetro has demonstrated a willingness to collaborate with municipal and community agencies to respond to community and partner needs. StarMetro has also invested in technology and experimented with different transit network structures. Another important and fundamental strength of the StarMetro system is that services operate in areas and along corridors that are well aligned with underlying demand, both in terms of where the routes operate but also in terms of which routes receive the most service investment in terms of service frequency. There are also opportunities for StarMetro to improve service. Subsequent steps in the Comprehensive Operations Analysis will investigate these ideas in more detail as part of recommending service improvements:



Simplify service, especially Night and Sunday routes – People are more likely to use transit if it is easy to understand. Most of the recommendations in this section are aimed at making service more intuitive, logical, and easy to understand. For example, in the transition from daytime to Night routes, StarMetro changes route names and alignments in order to expand coverage and maximize the reach of limited resources. By making routes different, StarMetro is complicating the system because riders must remember multiple routes for similar trips.



Faster and more direct routing – Most,

but not all, riders prefer transit routes that operate directly between major destinations and travel along major corridors. Direct routes that stay on a single corridor are easier for riders to understand, provide shorter trips between destinations, and are easier for StarMetro to operate (see on-time performance). There are some service reasons to compromise the directness of service, especially if the goal is to provide neighborhood-oriented services. In other cases, StarMetro may be able to make service faster, reduce travel time, and improve on-time performance by straightening routes.



On-time performance – Several of StarMetro's routes do not meet the on-time performance standards set by the agency. Service reliability is fundamental to providing a high level of service quality and making service useful for people who are using it to get to work, plan events, and arrive at their appointments on time. As noted previously, there are a variety of reasons why StarMetro may have difficultly improving on-time performance, including traffic congestion, long routes, insufficient scheduling, high ridership, and ad hoc disruptions. As part of next steps, the study team will look for opportunities to improve on-time performance potentially by shortening routes, creating more direct route alignments and/or investing in infrastructure to limit the time buses spend in traffic.







Increase weekday service frequency –

The market analysis suggested a market and need for increased service levels in many parts of the city. While planned trips, like commute trips, are feasible with current service levels, shorter or unplanned trips are less convenient. For example, traveling a few miles between the FAMU and FSU campuses requires only five minutes to drive but takes nearly 30 minutes by bus. There is enough transit demand for bus service that comes every 15 or 20 minutes throughout most of the city, especially in the western and southern neighborhoods.

Increase Night and Sunday service

levels – The demand for transit service during evenings and on Sundays is generally lower as compared with weekdays and Saturdays. However, the market analysis suggests that StarMetro's service levels are low given underlying demand. Service improvements may include expanded routes on weekday evenings and a longer span of service on Sundays.

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Bus stops and rider amenities – While data is not complete at this time, StarMetro's network design depends on riders transferring between routes. StarMetro could better support transfers with protection from weather with bus stop improvements such as shelters, benches, lighting, information systems, and other amenities. Given the popularity of bicycling in Tallahassee, StarMetro could provide bike racks at major bus stops.





Evaluate on-demand or microtransit

service – StarMetro currently provides FLEX service, where riders call and schedule rides in advance of their trips in specific zones. The agency also offers dial-a-ride as their complementary ADA paratransit service. Transit agencies around the country have been experimenting with adapting diala-ride services to on-demand services that offer same-time trip requests for curb-to-curb services by booking trips through mobile phone apps, similar to ride-hailing services like Uber and Lyft. On-demand microtransit style services are not viable or advised in some markets but may be appropriate in others, such as potentially StarMetro's Night Nole service on the FSU campus and for riders who qualify for ADA service.

Partnerships with ride-hailing

companies – While StarMetro provides access to a large portion of the jobs and major employers in Tallahassee, there are some jobs that are inaccessible by transit, either because of the time of day or distance from bus stops. One strategy for increasing access to employment would be to create a ride-hailing subsidy program for workers traveling to/from jobs outside of StarMetro's normal business hours or major corridors. StarMetro could design the program as a partnership such that the trip costs are shared by the rider, StarMetro, and the employer.



Passenger information – People need to be able to understand StarMetro in order to use it. Stakeholder interviews confirmed that riders and non-riders appreciate StarMetro's investments in technology and passenger information systems, like realtime bus information (TransLoc) and phone payment methods (Token Transit). There are opportunities to improve existing information systems, especially for people who do not have access to computers or smart phones. Potential improvements include simple, clear system maps available at major stops and transfer locations and as well as make printed route schedules available in key locations, like senior and community centers. StarMetro can also install electronic signs that display real time arrival information at major bus stops.





Simplified and integrated technology -

As noted, StarMetro has invested in a variety of technologies, including technologies and systems aimed at making it easy to understand and use transit. Currently, the City of Tallahassee offers three primary smart phone apps with transit information, two of which provide realtime bus arrival information and one that offers mobile ticket payment. As StarMetro considers expanding information and services available through smart phone apps, such as trip planning capabilities and/or on-demand services, it should consider opportunities to consolidate and integrate the systems to make things as simple as possible for riders.





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