Greene County Transit, Inc.

Transit Development Plan

September 2018

Prepared by:

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INTEGRATED TRANSPORTATION PLANNING

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INTERNATIONAL

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Chapter 1

Transit System Overview: Greene County Transit, Inc.

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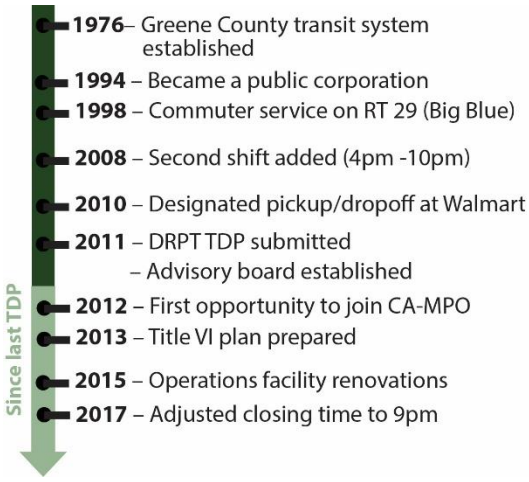
1 Overview of the Transit System

1.1 HISTORY

Greene County has a rich history as the gateway to the Swift Run Gap, a long-used and historic crossing of the Blue Ridge Mountains. The County, formed in 1838, covers 157 square miles and is one of the smallest and most rural of Virginia's counties. Greene County is centrally located along two major transportation corridors: Route 29 (a major north/south highway) and Route 33 (a major east/west highway). Greene County is approximately 18 miles north of Charlottesville. Greene County's largest concentration of population is around the town of Stanardsville and in suburban development along Route 29 in Ruckersville. The Route 29 connection to Charlottesville was completed as a 4-lane divided highway by 1972 and remains a critical link and source of new growth and development into the County today.

In 1976, Greene County Transit, Inc. (GC Transit) was established as a demand-responsive service to provide additional intra-county mobility for the elderly, workers, shoppers, handicapped, or anyone needing transportation service. The service operated as a department within the governing body of the County of Greene under Community Development. Demand for service steadily grew along with the County population which from 1980 until 2010 grew an average of 37 percent per decade. GC Transit was incorporated in 1994, affording it greater autonomy while still operating under the umbrella of the county government. In 1998, the introduction of commuter service on Route 29 North, known as Big Blue, was initiatied. The service was operated by another provider (JAUNT), but connected with GC Transit, Inc. in the first attempt to coordinate and create links between four different public transportation systems and commuters who carpool to park and ride lots. In 2008, GC Transit, Inc. added a second shift from 4:00 – 10:00 p.m., and by 2011, when the last Transportation Development Plan (TDP) was prepared, GC Transit, Inc. had grown from a one driver, one vehicle operation to an agency employing 13 drivers, ten office staff/ support personnel, and a fleet of 16 vehicles.

Figure 1-1 | Organizational Timeline



GC Transit, Inc. has historically been a demand-responsive door to door service, but has offered some scheduled services. In 2010 designated pickup and drop off times for Walmart (Ruckersville) were initiated on a limited-time trial basis. In 2011, the Stanardsville Comprehensive Plan update called for promotion of additional intra-county and external transit options between Stanardsville and other major destinations. This included plans for local transit service between Stanardsville and other parts of Greene County identified as Mixed-Use Village Centers through development of an "internal loop" bus route. For trips outside the County, GC Transit, Inc. had historically coordinated scheduled transfer service to Charlottesville with another provider, JAUNT. Today, GC Transit, Inc. directly operates

service from Stanardsville and Ruckersville into the Charlottesville area.

As the 2010 Census identified increased urbanized growth in close proximity to Greene County, the County was voluntarily solicited to join the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) in 2012. The County ultimately declined at the time, however, it recognized that it will likely be compelled to join following the 2020 census.

GC Transit, Inc. is flexible to shifts in demand. In 2017 the service span changed to 9:00 p.m. due to limited ridership in the final hour before 10:00 p.m. However, with the further development of the Route 29 Corridor north of Charlottesville, the need for service and connections to Greene County is anticipated to continue growing.

1.1.1 Current Initiatives

In response to service requests, GC Transit, Inc. applied for a funding grant to support a second extended Charlottesville evening route. Additional initiatives include a security enhancement and vehicle locator system grant. All funding requests were submitted and approved in FY16. These new resources enable GC Transit, Inc. to better respond to demand and ensure continued adoption of technology to streamline and safeguard operations.

1.2 GOVERNANCE

GC Transit, Inc. operates under the umbrella of the governing body of Greene County Virginia. The County's Board of Supervisors consists of five members elected from the various districts within the County. These include:

- **Michelle Flynn, Chair** – Term expires 12/31/19
- **Bill Martin, Vice Chair** – Term expires 12/31/21
- **Dale R. Herring**– Term expires 12/31/19
- **Marie C. Durrer** – Term expires 12/31/21
- **David L. Cox** – Term expires 12/31/19

The Board of Supervisors oversees the County Administrator's Office which serves as the management office and directs daily operations of all County departments.

A Transit Administrator oversees transit staff, grant funding, and day-to-day transportation operations. Vehicle maintenance is provided through the County's Vehicle Maintenance Department, under the Director of Fleet and Facilities Management.

1.3 ORGANIZATIONAL STRUCTURE

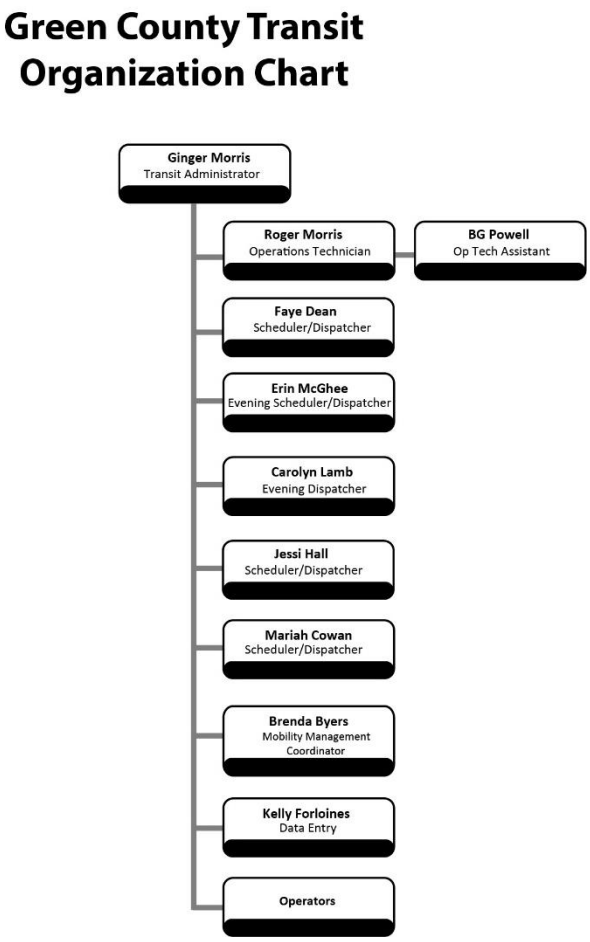
Current GC Transit, Inc. staffing consists of ten administrative and thirteen driver positions. The Transit Administrator manages all staff and is responsible for identifying and attaining grant funding, ensuring conformity to Federal Transit Administration (FTA) regulations, meeting the demands of other pertinent regulating authorities, marketing efforts and financial management. There are four primary organizational categories: Administration, Operations, Data, and Drivers. There are five positions under Operations specifically for scheduling / dispatching.

GC Transit, Inc. anticipates a future intern/apprentice position to report to the Transit Administrator. Anticipated for FY 2018, this staff position would gain exposure to all aspects of management and operations and serve as a candidate for essential cross-training and succession planning roles. All GC Transit office staff receive training on public relations, efficient scheduling, and effective client assistance.

The drivers receive annual training in wheelchair securement, passenger safety, and passenger relations. All transit drivers are regulated to start each day with a maximum of $20 in fare bags. At the end of each shift, all monies are secured in the transit

office until they are deposited at the county Treasurer's Office twice weekly.

Figure 1-2 | Organizational Chart



In 2016 GC Transit, formed an advisory board panel, with a three-year term requirement. The advisory panel includes representation from Youth Development, Health Care/Eldercare, Senior Riders, Social Services/Elder Services, Financial Institutions, and the School System.

1.4 SERVICES PROVIDED AND AREAS SERVED

GC Transit provides demand responsive services within the County Monday through Friday from 6:30 a.m. to 9:00 p.m., and on Saturday from 9:00 a.m. to 4:00 p.m. Trips are requested through telephone call-in or can be arranged in person through the GC Transit, Inc. offices. GC Transit, Inc. schedules in a true on-demand fashion, and can accommodate trip requests with as little as 1-hour advanced notice.

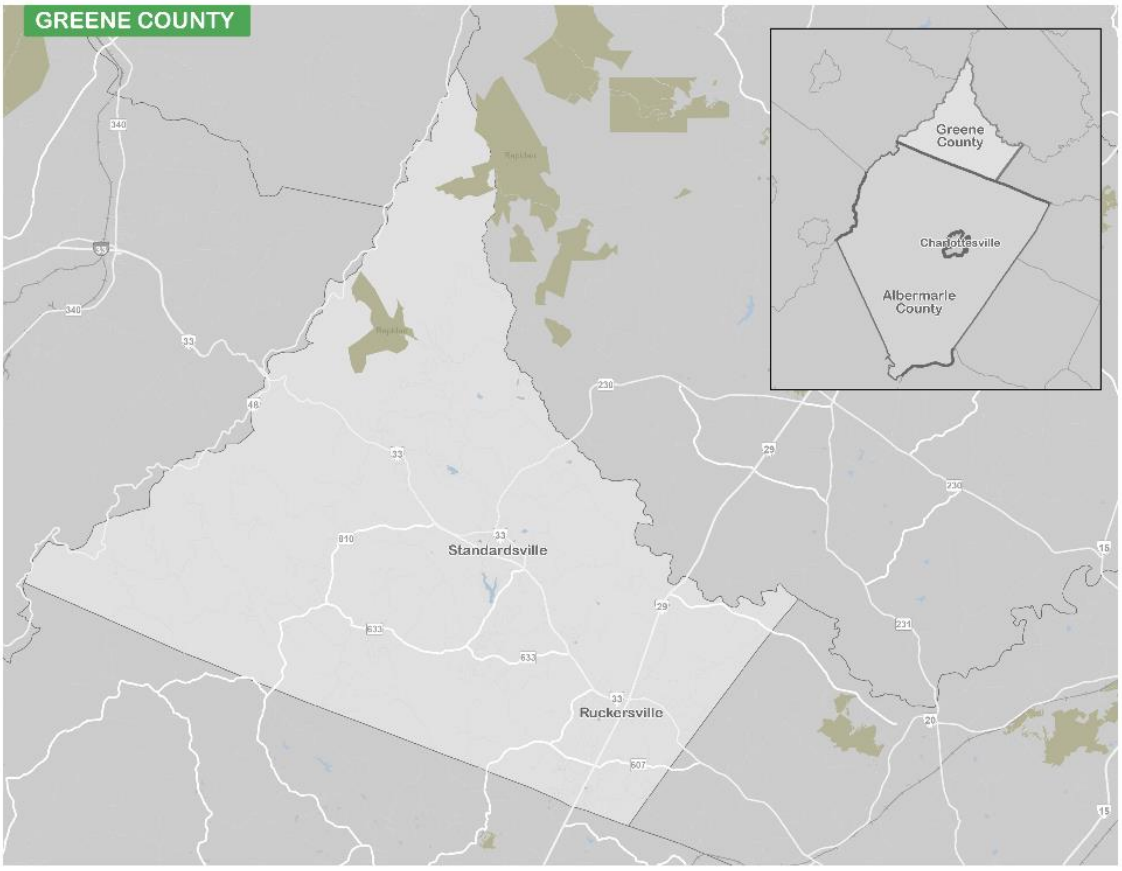
A review of May 2017 passenger manifests indicates that the top three demand response destinations are:

- William Monroe High School (Stanardsville)
- United Christian Academy (Stanardsville)
- Walmart (Ruckersville)

Figure 1-3 | Standardsville Town Center

GC Transit, Inc. also operates scheduled trip times as part of their service. The trip times are fixed, however the ultimate routing is not fixed and will deviate according to rider requests so long as schedules can be maintained. To participate in this service, clients call in and request a 6:30 a.m., 8:00 a.m., 11:00 a.m., 2:00 p.m., or 6:00 p.m. trip. The destinations for the Charlottesville trips (first three departures) may vary slightly, but they are all located in generally the same areas. The 2:00 p.m.

Figure 1-4 | Greene County Transit, Inc. Service Area



trip does not leave the County, but provides scheduled service to the Walmart on Route 29 in Ruckersville. The 6:00 p.m. trip destination is the Barracks Road retail center just outside of downtown Charlottesville. Many of the clients are daily riders, with pick up times based on the number of clients that ride each day for that particular run. GC Transit provides return trips from all destinations served via scheduled trips, with return times respectively at 8:30 a.m., 11:30 a.m., 2:00 p.m., 3:00 p.m., and 7:00 p.m. The scheduling for service to Charlottesville and Albemarle County requires a 24-hour call ahead to the transit office.

1.4.1 Transit Hubs

In the late 1990s, transfer locations between GC Transit and the Big Blue (JAUNT) commuter services into Charlottesville along Route 29 occurred at the Holiday Inn Express & Suites Charlottesville – Ruckersville (formerly Best Western) located at the Greene County and Albemarle County line south of Ruckersville on Route 29. Ultimately the timing of these connections did not meet GC Transit customer needs.

Otherwise, there are no shelters, signage or other amenities associated with GC Transit, Inc. hub/stop locations as they operate as a door to door service provider.

1.4.2 Park and Ride Facilities

Park and ride information, along with additional commuter assistance, is provided by the Rideshare Program jointly administered by the Thomas Jefferson Planning District Commission (TJPDC) and Central Shenandoah Planning District Commission (CSPDC). Two park and ride locations are identified within Greene County, with an additional four park and ride locations along Route 29 traveling into Charlottesville (see Table 1-1).

Table 1-1 | Park and Ride Locations

Park and Ride Lot	Location	Dedicated Spaces
Greene County School System	US 33 Business (Spotswood Tr) & Route 9177 (Monroe Dr)	15
Ruckersville Walmart	US 33 and Stoneridge Dr	0
Grace United Methodist Church - Paran Preschool, #86	Route 606 (Dickerson Rd) & Route 763 (Dickerson Ln)	16
East of Elkton, #16	US 33 & Route 634 (Tanyard Bridge Rd)	16
Maple Grove Christian Church	3114 Proffit Rd	5
Forest Lakes North Health Services Center	TImberwood Blvd near US 29 North and Forest Lakes	7

1.5 FARE STRUCTURE

GC Transit, Inc's fare structure is set at $2.50 per one-way trip for trips within Greene County and $3.00 per one-way trip for trips originating or ending in Charlottesville or Albemarle County. An additional $0.50 surcharge is applied to certain locations throughout the service area. The prior TDP document noted that GC Transit had previously evaluated, yet elected not to pursue, a potential zone fare structure.

Senior citizens, aged 60 and over, are offered discounted round trips each Saturday to promote transit usage as part of an ongoing initiative. Payment is expected when clients board the van unless they have an existing account or they are sponsored by an agency. Cash, check, or money order is acceptable for payment. GC Transit does not routinely track the breakdown of payment method, but they do record each payment and keep copies of the checks and money orders. Because all trips are demand-responsive, passengers are charged for scheduled trips in which they do not ride and fail to cancel.

1.6 FLEET

GC Transit, Inc's fleet consists of 16 vehicles (see Table 1-2). Passenger capacity for each vehicle ranges between seven and 14 seats and/or wheelchair positions. Eleven vehicles in the fleet are accessible to accommodate people who use wheelchairs. Transit vehicles used for services to Charlottesville and Albemarle County are equipped with bicycle racks.

Figure 1-5 | Greene County Transit, Inc. Van

Table 1-2 | Fleet Inventory

Make / Model	Manufacture Year	Type	Fuel	Seats	Quantity	Avg. Miles	Replace Year
Ford F450	2010	BOC	Gasoline		1	154,965	Past Due
Chevrolet Goshen Coach	2010	BOC	Gasoline		1	91,884	Past Due
Dodge Caravan	2010	Minivan	Gasoline	6	1	43,491	Past Due
	2011	BOC (w/c)	Gasoline	14	1	82,922	Past Due
Chevrolet Goshen Coach	2012	BOC	Gasoline		1	121,271	2017
Ford Econoline	2012	BOC (w/c)	Gasoline		1	90,893	2017
Dodge Grand Caravan	2013	Minivan	Gasoline	7	1	41,258	2017
	2014	BOC (w/c)	Gasoline	14	2	122,026	2019
	2015	BOC (w/c)	Gasoline	14	2	76,945	2020
Dodge Caravan	2015	Minivan	Gasoline	7	2	25,408	2019
Ford All Star	2015	BOC	Gasoline	14	1	72,259	2020
Chevrolet Supreme	2017	BOC	Gasoline	12	1	101,881	2022
Dodge Caravan	2017	Minivan (w/c)	Gasoline	6	1	112,256	Past Due

The replacement year is calculated based upon current Useful Life Benchmarks (ULB) benchmarks used at GC Transit, namely a ULB for cutaway (BOC) buses of 5 years / 150,000 miles and for minivans is 4 years / 100,000 miles. Several GC Transit vehicles are therefore eligible for replacement in terms of age, accumulated mileage or exceeding both criteria. Implications of even longer ULB for each GC Transit vehicle class, as based on revised FTA guidance, is detailed in Chapter 5. The average GC Transit fleet mileage is over 85,000 miles and is highly variable, especially among the minivan fleet. Limitations on vehicle size requirements or provision of wheelchair accommodations may prevent a balancing of mileage across the total fleet. Also, not all vehicles are available for second shift service as day shift drivers take their vehicles home at the end of their scheduled shift. They begin each morning with transfers or pickups and this is more time and fuel efficient. If a driver is off the following day, they will leave the vehicle and pick it up the following day.

In FY 2016, GC Transit, Inc. purchased two body on chassis vans for the replacement of two older vehicles.

GC Transit, Inc. plans for replacement in FY2017 of three vehicles, to include two minivans and one body on chassis van. The Advisory Committee has noted that due to maneuverability issues resulting from unimproved access roads leading to certain private residences, that minivans retain ultimate scheduling flexibility even if only to transfer to a larger BOC vehicle for further transportation to the client's final destination.

Currently, there are two administrative vehicles that are used for travel, route checks, and other official purposes.

1.7 EXISTING FACILITIES

The administrative and operations offices of GC Transit, Inc. are located in a leased facility within the Stanardsville Shopping Center, less than a quarter mile west of the historic town center. The current facility lease is for five years, and extends through November 2022. GC Transit, Inc. has options for lease extension and has cited that the current facility is in a favorable location for walk-in clients. The facility recently had annual maintenance performed, including painting, replacement of worn carpet, heating and air condition servicing.

Vehicles are housed in a lot to the side and in the rear of the shopping center. While the lot is fenced, it is shared by other shopping center tenants. Historically, there has been vandalism to some GC Transit, Inc. vehicles, mainly from rocks being thrown over the fence.

The maintenance of GC Transit, Inc. vehicles is provided by the Greene County Vehicle Maintenance Facility located in the Spotswood Business Park on US 33, one mile east of Stanardsville. This facility holds the Vehicle Maintenance offices, an auto parts warehouse, and a two-way, 7bay garage that can service up to 14 vehicles at the same time. The department of Vehicle Maintenance is also in charge of the fuel and computerized gas pumps that supply the gas and diesel for all County vehicles. GC Transit receives a monthly fuel breakout per vehicle from the maintenance facility and is tracked monthly via spreadsheet for each vehicle. A monthly bill for the total fuel cost is submitted to GC Transit to reimburse the County.

1.8 TRANSIT SECURITY PROGRAM

GC Transit, Inc. has adopted a comprehensive hazard and security preparedness plan for the safety and security of its employees and transit riders. A Hazard and Security Plan is reviewed annually by managers and employees.

Security upgrades to the transit offices have included enclosing the employee work area apart from the customer waiting area and the installation of a key pad entrance door into the work area that requires visitors to be allowed in before entering the employee office area. Additionally, an interior emergency light over the security door for power outages, an exterior roof covering the security door and an exterior night light have been installed. Transit vehicles are equipped with anti-theft devices to prevent intruders from operating vehicles.

1.9 INTELLIGENT TRANSPORTATION SYSTEM (ITS) PROGRAM

GC Transit, Inc. has initiated a GPS tracking project. In support of this system, GC Transit has purchased 21 GPS antennas that are window mounted, one Street Trek location and text software solution to enable connection of radios to GPS tracking systems solutions and provide for text messaging to radios , one 42-inch wall mount monitor, one Dell computer, one enhanced GPS system software for repeater and additional equipment for transit vehicles. This 2015 project allowed for vehicles to be tracked for location, trips to be monitored, routes to be evaluated and reviewed and trips to be scheduled in a more efficient manner. For example, the technology now allows more efficient pick-ups by optimizing and scheduling clients traveling at similar times and locations. This information is also uploaded quicker, before the start of the day, and enables dispatchers to view each

driver's schedule to add pickups into the appropriate areas.

1.10 DATA COLLECTION, RIDERSHIP AND REPORTING METHODOLOGY

GC Transit, Inc. has outlined the following data collection procedure that includes assurances for accuracy and data integrity:

- Each driver is given a driver trip sheet each day. The dispatcher for that driver has the same information. As the driver is given additional clients, it is recorded on both trip sheets. These sheets are turned in daily. The beginning mileage and ending odometer mileage are recorded each day and entered into a database along with the passenger counts for that driver. The vehicles are also checked daily by the Operations Technician Assistant.
- Drivers trip sheets (manifests) are checked daily and cross referenced with the dispatcher log. The revenues are counted and recorded by the driver, turned into a lock box, and then counted by two staff members the next morning. The revenue deposit worksheet is cross referenced with the driver trip sheet. Beginning and ending mileage is cross referenced between daily driver logs and maintenance checklists.

To ensure that Title VI reporting requirements are met, GC Transit, Inc. maintains a log and database of Title VI complaints received. The investigation of and response to each complaint is tracked within the database. Also, a log is maintained of the public outreach and involvement activities undertaken to ensure that minority and low-income individuals had meaningful access to these activities. The agency maintains the following records related to public outreach and involvement:

- Paper files with copies of materials published or distributed for each planning project and service/fare change, as well as all news releases, public service announcements, surveys, and written summaries of in-person outreach events.
- A log/database of public outreach and involvement activities, including dates, planning project or service/fare change supported (if applicable), type of activity, Limited English Proficiency (LEP) assistance requested/provided, target audience, number of participants, and location of documentation within paper files.

Integrity of reporting data and records is the responsibility of the Operations Technician. GC Transit, Inc. has further safeguarded data and reporting files by duplicating its electronic data on external devices to prevent the loss of information in the event of computer failures.

1.11 COORDINATION WITH OTHER TRANSPORTATION SERVICE PROVIDERS

GC Transit, Inc. provides service to Charlottesville and Albemarle County through interaction with other transit systems to provide connectivity to destinations they serve.

GC Transit, Inc. provides service to other local fixed route service providers' bus stops to facilitate transfer rides. This includes drop-offs at University of Virginia University Transit Service (UTS), Charlottesville Area Transit (CAT), and Jefferson Area United Transportation (JAUNT) stops. GC Transit, Inc. has also conducted outreach as well for potential service coordination in adjacent Madison and Orange County.

LogistiCare arranges and manages comprehensive transportation networks to provide transportation for eligible Medicaid members in Greene County. Other services without a direct connection to GC Transit services, but which traverse the County, include:

- **The Foothills Express Bus Service -** a service of the Foothill Area Mobility System (FAMS) administered by the Rappahannock-Rapidan Regional Commission and operated by JAUNT, provides transportation between Culpeper, Madison, and Charlottesville. While this service operates along US 29 through Greene County, there are no scheduled stops in the County.
- **Intercity Bus** - The closest inter-city bus and train stations for Greene County are in Charlottesville. Greyhound offers two daily trips between Charlottesville and Washington, D.C. along Route 29, but with no current stops in Greene County.

1.12 PUBLIC OUTREACH

The overall goal of GC Transit, Inc's public outreach and involvement efforts is to secure early and continuous public notification about, and participation in, major actions and decisions by Greene County Transit, Inc. Public outreach policy is contained within the GC Transit Title VI Plan and Procedures, most recently adopted in 2013.

GC Transit, Inc. conducts a variety of outreach efforts to help ensure the community is aware of their services. The Operations Technician attends various county agency meetings to provide information on the services and opportunities for use of GC Transit, Inc. These agencies include the Jefferson Area Board for the Aging, Department of Social Services, and Greene County Library.

Local television and radio stations, along with various newspaper agencies, have been utilized to market GC Transit, Inc. This includes public notices within The Greene County Record, advertising in The Advertiser, and placing information on the GC Transit, Inc. website. Public notices are also placed in all vehicles, along with the distribution of flyers to inform the public of service opportunities. GC Transit, Inc. also conducts annual customer satisfaction surveys which are distributed to passengers on vehicles.

GC Transit, Inc. has ADA and Title VI notification policies available, which covers outreach services the agency will undertake to assure GC Transit, Inc. utilizes a broad range of public outreach information and involvement opportunities. Included in this policy is a process for written comments, public meetings after effective notice, settings for open discussion, information services, and consideration of and response to public comments. The Title VI Plan was last prepared in 2013.

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Chapter 2

Goals, Objectives, and Service Design Standards: Greene County Transit, Inc.

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2 Goals, Objectives and Service Design Standards

To facilitate review and assure sufficient coverage, the goals and objectives in this section have been categorized into six (6) areas of activity for public transit operators. These categories summarize the wide variety of goal/objective statements present in the relevant agency, municipal, and regional planning documents. Areas with limited coverage were targeted for enhanced goal/objective development during this TDP process. These categories are:

GROWTH / NEW OPPORTUNITIES (GO): Objectives related to the expansion of service geographically or in terms of frequency, develops new ridership markets, new connections with other service providers or envisions expanded facilities/fleet.

OPERATIONAL EXCELLENCE (OE): Objectives that enhance the training and effectiveness of the workforce, address the monitoring and continual improvement of service delivery, and seeks studies or resources to support streamlined operations or project implementation.

COMMUNITY INTEGRATION (CI): Objectives that further coordinate transit with economic development, local land use preferences, and represent participation in studies or locally-based planning initiatives.

FINANCIAL ACCOUNTABILITY (FA): Objectives that address efficiency of operations, cost recovery, and the pursuit of expanded or new revenue sources.

REGULATORY COMPLIANCE (RC): Objectives that support meeting the agency's regulatory requirements, aligns with guidance/reporting, and establishing/exceeding any applicable performance metrics.

ENVIRONMENTAL STEWARDSHIP (ES): Objectives that seek to reduce emissions via technology, promote travel alternatives other than driving alone, and reduce energy consumption at facilities.

The results of a review of relevant and recent planning documents that addressed transit goals, objectives and service standards for the region are presented in the following sections.

2.1 PREVIOUS GOALS AND OBJECTIVES

The previous TDP (2011) identified two primary goals. as follows:

- GOAL #1 - Provide a safe, reliable, efficient, and effective transportation service to all citizens of Greene County and for anyone wishing to use public transportation.
- GOAL #2 - Be an integral component of economic development in Greene County by providing access to jobs, health care, shopping, education, and other community locations, and enhancing economic development by improving access to local businesses.

A total of 17 objectives were identified in the last TDP. These objectives are presented in Table 2-1. In addition to categorizing these previous goals/objectives they were also identified as one time or continuous activities. A status, if known, was provided for any one time objectives proposed in the previous TDP major update.

Table 2-1 | Previous Major TDP Update GC Transit Objectives

Objective	Category(ies)	Status
GOAL #1		
Offering transit services that provide mobility in the Greene County Transit service area, especially for older adults and people with disabilities.	GO	Ongoing
Providing excellent customer service through timely service, well-trained drivers, and comfortable accommodations.	OE	Ongoing
Providing reliable services that benefit local businesses, human and social service agencies, medical facilities, and other service providers in the County.	OE, CI	Ongoing
Maintaining efficient scheduling and routing practices to ensure a short wait time for customers as possible.	OE	Ongoing
Responding to customer needs through appropriate service changes.	OE	Ongoing
Ensuring safe and secure services through appropriate driver training, security measures (i.e. anti-theft devices on vehicles, customer waiting area).	OE	Ongoing
Performing proper vehicle maintenance and appropriate cleaning of buses.	OE	Ongoing
Coordinating with human service and other agencies to connect the people these organizations serve to available transit services.	CI	Ongoing
Working with DRPT on capital and operational funding applications and on compliance with state and federal regulations.	FA, RC	Ongoing
GOAL #2		
Providing employment opportunities at Greene County Transit.	CI	Ongoing
Purchasing goods and services in the local community.	CI, FA	Ongoing
Contracting with local vendors for fuel, maintenance, and other support functions.	CI, FA	Ongoing
Allowing older adults to remain in their homes in the community by providing access to health care providers, social services, and recreational opportunities.	CI	Ongoing
Linking employers with potential employees and a broader workforce.	CI, GO	Ongoing
Enabling unemployed and underemployed workers with access to jobs and employment training opportunities to assist them in achieving economic self-sufficiency and reducing the possible need to rely on social programs.	CI	Ongoing
Ensuring the success of welfare-to-work initiatives by providing access to jobs for welfare recipients.	CI	Ongoing
Permitting students to continue their education by providing access to educational opportunities.	CI	Ongoing

There do not appear to be any changes or amendments to these goals since 2011.

2.2 ALIGNMENT WITH REGIONAL GOALS/REGULATIONS (STATE, FEDERAL)

This section reviews the alignment of the previous goals and objectives developed for GC Transit with relevant transit/transportation goals for the region and by localities within the service area. This TDP update will afford the opportunity to further incorporate and/or strengthen GC Transit goals, objectives, and service standards to align with the strategic planning elements of these adopted plans, especially those adopted since the last major TDP update.

Ruckersville Area Plan (2017-Ongoing): This study in coopreation with the Thomas Jefferson Planning District Commission was initiatied in August 2017, during the time of this TDP update. The Ruckersville Area Planning project seeks to address the planning and development needs in the Ruckersville Area. The Ruckersville Area is the fastest growing part of Greene County and is also the primary location for shopping, retail and employment related activities. A need for the area plan was identified in the County Comprehensive plan and is in keeping with the County's desire to promote economic development and encourage appropriate development along the Route 29 Corridor. The Plan will review current and future land use, economic activity, housing, transportation, natural resources and agricultural activities within the study area. The plan is expected to be complete in the Spring of 2018.

Greene County Comprehensive Plan (2016): This study identified transportation needs and makes recommendations on how to meet these needs. Several recommendations were incorporated from the 2009 Multimodal Corridor Study for the US 29 and US 33 Development Areas in Greene County. The majority of the Transportation Chapter focused on the road network, however the plan identified the following transit goal to ppromote additional intra-county and external transit options. The following objectives were associated with this goal:

Objective	Category	Status
Plan for local transit service between the Mixed Use Village and Town Centers through development of an "internal loop" route.	GO	Ongoing
Consider the feasibility of providing additional commuter transit to key employment destinations.	GO, CI	Ongoing

VTrans2040 (2016) - Under Virginia law, a multimodal long-range transportation plan must be developed and regularly updated to assess needs and assign priorities on a statewide basis. The latest update of this plan , the VTrans2040 Update, was adopted by the Commonwealth Transportation Board in December 2016. VTrans is a policy document that frames the overall future vision for multimodal transportation in the Commonwealth. While specific goals/objectives relate to the entire transportation system and may not be directly related to GC Transit, the following guidelines are identified as contributing to several of the VTrans 2040 Update goals, including:

- Optimize Return on Investment
- Ensure Safety, Security, and Resiliency
- Efficiently Deliver Programs
- Consider Operational Improvements and Demand Management First
- Ensure Transparency and Accountability, and Promote Performance Management

- Improve Coordination Between Transportation and Land Use
- Ensure Efficient Intermodal Connections

Federal Transit Administration Rulemaking (2016) – In August, 2016, FTA published a final rule for the Public Transportation Safety Program, which provides the overall framework for FTA to monitor, oversee, and enforce safety in the public transportation industry. This builds upon implementing a Safety Program that is both scalable and flexible through the application of Safety Management System (SMS) principles. SMS builds on existing transit safety practices by using data to proactively identify, avoid, and mitigate risks to safety.

In July 2016, the FTA published a Final Rule for Transit Asset Management. The rule requires FTA grantees to develop asset management plans for their public transportation assets, including vehicles, facilities, equipment, and other infrastructure. FTA's national Transit Asset Management System Rule:

- Defines "state of good repair"
- Requires grantees to develop a TAM plan
- Establishes performance measures
- Establishes annual reporting requirements to the National Transit Database
- Requires FTA to provide technical assistance

These federal rules also inform DRPT updates of TDP guidance and performanced-based monitoring of transit grantees throughout the Commonwealth.

Standardsville Comprehensive Plan (2011): This plan identified the same transit goal and objectives carried forward into the Greene County comprehensive plan.

GC Transit has also been invited to be a non-voting member of the Regional Transit Partnership (2017), an official advisory board, created by the City of Charlottesville, Albemarle County and JAUNT, in Partnership with the DRPT to provide recommendations to decision-makers on transit-related matters. The RTP will allow local officials and transit staff to work together with other stakeholders to craft regional transit goals. No regional goals/objectives directly affecting GC Transit have been identified at the time of this TDP update. GC Transit should continue to participate and provide valuable input to help assure that coordination with rural providers would receive increased consideration in regional planning efforts.

2.3 RATIONALE FOR CHANGES

Upon review of additional plans and studies, it was determined that GC Transit may benefit from additional diversity in its goals/objectives. GC Transit focuses extensively on Community Integration, but some areas with less emphasis in GC Transit's established objectives include Environmental Stewardship, Financial Accountability and Regulatory Compliance. Specific Organizational Excellence goals/objectives related to system safety/security and customer service are also missing direct emphasis in the objectives established for GC Transit. Considering the changes to the regulatory environment since the last major TDP update there is an opportunity to include more performance-based state/national requirements. The GCT goals/objectives and standards could address the principles of maintaining their Transit Asset Management (TAM) standards to demonstrate compliance as GC Transit has a TAM in place.

This TDP update effort seeks to consolidate and repackage goals/objectives to allow for targeted measures, strategies and timelines to show continued success or progress toward desired results. In this reorganization, service standards are now directly associated with an objective to provide the measurable target that is proposed. These goals and objectives were developed with input from GC Transit and in consideration of the results of the agency-led

stakeholder outreach as part of the TDP update process.

Certain elements are outside GC Transit's ability to control or influence. The goals and objectives to be developed in this major TDP update are intended to be accomplished by GC Transit without completely depending on outside actors. This is important so that the agency is not held to unrealistic targets. Any goals or objectives that may require assistance, approval, or coordination will be noted. Many historic GC Transit goals/objectives focused extensively on economic development, and social service equity. While GC Transit will ultimately accomplish many of these items in providing quality transit options, no specific nor measurable objectives were recommended to be included in the New Goals and Objectives developed in this major TDP update.

2.3 NEW GOALS AND OBJECTIVES

New goals and objectives were developed incorporating agency, regional, and state priorities. Examples of potential measures, desired targets, and strategies for reaching/maintaining targets in a timely fashion are provided. Additional detail is provided on potential sources of data or technology necessary to facilitate the measurements. Measures have been selected that best reflect GC Transit's unique operating environment. For example, due to the emphasis on providing mobility for the transportation disadvantaged, operating efficiency would be emphasized more than financial efficiency due to the nature and role of providing a vital social service in a rural area. Many measures presented relate directly to the service design standards found in the next section.

GOAL #1 - Evaluate system performance for potential service and capital improvements that enhance the safety, reliability, and responsiveness to all citizens of Greene County. and for anyone wishing to use public transportation.

Objective 1.1: Use internal performance monitoring to maintain service productivity and adjusting any services as needed. (OE, FA)		
MEASURE	**TARGET**	**STRATEGY**
System metrics compiled for passengers per hour, passengers per mile, operating expense per passenger trip, and operating expense per capita.	Conduct service adjustments for the system should metrics drop below 95% of rolling historic average to include the last three years.	Segregate performance monitoring for service within and outside the county (i.e. Charlottesville service).
Data collection sources: *Operations logs, financial data.*		

Objective 1.2: Provide efficient scheduling and routing practices to promote service efficiency. (OE, FA)		
MEASURE	**TARGET**	**STRATEGY**
On-time pick-up/drop off.	95% on-time (within pick-up window)	Real-time monitoring and logging via AVL technology.

Length of trip.	Limit ride lengths for customers to no more than 2.5 times the comparable trip via automobile.	Random comparison of trip times (via manifests) with Google drive estimates at same day/time.
Vehicle dwell time.	Reduce and maintain average dwell time for vehicles during the pick-up window.	Real-time monitoring and logging via AVL technology.
Data collection sources: *Operations logs, AVL system data, Google trip planning.*		

Objective 1.3: Ensure safe and secure services through appropriate driver training and security measures or devices/technology. (OE)		
MEASURE	**TARGET**	**STRATEGY**
Participation in driver training opportunities.	100% of all drivers receive refresher training a minimum of every 2 years.	Provide a good driver recognition/ rewards program.
Passenger and employee injury rates.	Employees - Less than 3 per 100 FTE per year.	Physical improvements, changes in workplace policy/procedures.
"Reportable incidents" per 100,000 miles	0.10 or fewer (as defined by the NTD)	Provide recurring Safety Meetings.
Data collection sources: *Manual counting, NTD reporting, staff files.*		

Objective 1.4: Work with DRPT on capital and operational funding applications and on compliance with state and federal regulations (RC).		
MEASURE	**TARGET**	**STRATEGY**
Number of grant applications.	Maintain or increase number of new grant applications on an annual basis.	Increased grant research.
Findings from compliance reviews.	No more than 1 finding per year. No consecutive findings.	Establish recommended processes, timely close-out of any identified issues.
Data collection sources: *Financial reporting, manual counting, compliance audit results*		

GOAL #2 – Provide excellent customer service that values customer's time and contributions toward service delivery improvements.

Objective 2.1: Limit customer wait-times in scheduling trips and demonstrate responsiveness for any issues identified (OE, CI).		
MEASURE	**TARGET**	**STRATEGY**
Average phone hold time (minutes) to make a reservation.	30 seconds or less.	Track and monitor call logs and reporting of metrics.
Customer complaints per 1,000 trips.	Less than 20 complaints.	Conduct complaint tracking and time taken to resolve issues.
Number of unaddressed issues.	Response provided to all customer issues or survey/phone/ written requests for new services within 48 hours.	Tracking of calls, issue identification, prepared responses for common items.
Data collection sources: *Information from telephone system, internal forms/logs*		

Objective 2.2: Perform proper vehicle maintenance and appropriate cleaning of vehicles (OE).		
MEASURE	**TARGET**	**STRATEGY**
Miles Between Service Road Calls.	6,500 miles	Maintain PM schedules.
Vehicle availability.	No more than one missed trip per month.	Maintain proper spare ratio, vehicle servicing and adherence to vehicle replacement schedule for vehicles beyond useful life.
Data collection sources: *Maintenance and operation logs*		

GOAL #3 – Contribute to advancing Greene County's mobility and economic opportunities both internally and across the region.

Objective 3.1: Purchasing goods and services in the local community (CI).		
MEASURE	**TARGET**	**STRATEGY**
Percent local purchases out of overall procurement budget.	20% or more local purchases.	Continued sourcing of local/regional vendors.
Data collection sources: *Financial data/reporting of procurement activity*		

Objective 3.2: Coordinate with human service and other agencies to connect the people these organizations serve to available transit services (CI).		
MEASURE	**TARGET**	**STRATEGY**
Connections with other systems.	No duplication of services for the same client types.	Continued outreach to organizations.
Participation in coordination studies.	Identify one coordination pilot project per year.	Develop new/more efficient service delivery options collaboratively.
Participation and re-alignment with relevant County/ Regional goals.	Demonstration of GC Transit input into RTP goal development.	Assess new County or regional studies with transit/transportation goals pertaining to Greene County.
Data collection sources: *Manual counting, in-house data*		

2.4 SERVICE DESIGN STANDARDS

Service design standards are critical planning tools to evaluate the effectiveness of existing service and to assure impartiality in service modification decisions. Service standards are typically developed in several categories of service, such as service coverage, passenger convenience, fiscal condition, and passenger comfort. The most effective service standards are straightforward and relatively easy to calculate and understand. Service standards reinforce the performance measurement necessary to meet many of GC Transit's objectives.

A comprehensive set of service standards were established during the 2011 TDP. Service standards that were advisory in nature (no measure attached) and that reflected service design philosophy have been pulled out as introductory material to this section. For the remaining service standards, these have been identified with a status of either maintained, modified, or new for the purposes of this TDP update. Modifications are underlined to identify any newly proposed changes. Each measurable service standard is also associated with the most relevant objective (if applicable) in Table 2-2.

Overall fixed route design and organization philosophy from the 2011 TDP included the following principles:

- Timetable, maps, and website kept current and accurate
- Revenue equipment kept clean and in good condition

Routes should be predominantly bi-directional in nature. Large one-way loops, with over 30 minutes running time, should be avoided if possible.

Table 2-2 | Proposed GC Transit Service Standards

SERVICE STANDARD	Status	Objective
Hours of Operation		
6:30 a.m. to 9:00 p.m. on weekdays 9:00 a.m. to 6:00 p.m. on weekends.	Modified	N/A
Dependability		
95% on-time service (0 to 5 minutes late) -- No trips leaving early.	Modified	1.2
Maintain fewer than 6,500 miles between service road calls.	New	2.2
Less than 5 percent missed trips due to operational failures.	Modified	2.2
No more than 20 percent of fleet exceeding the FTA ULB for its vehicle classification.	New	2.2
Farebox Recovery		
▪ Review and modify, if possible, services that exhibit less than 60% of average. ▪ Review and modify, if warranted, services between 60% and 80% of average.	Maintained	1.1
Productivity		
▪ Review and modify, if possible, services that exhibit less than 60% of average ▪ Review and modify, if warranted, services between 60% and 80% of average.	Maintained	1.1
Cost Effectiveness		
Review and modify, if possible, services that exhibit less than 60% of average.	Maintained	1.1
Safety		
0.10 or fewer "reportable incidents" per 100,000 miles, as defined by the National Transit Database.	Maintained	1.3
Service Availability		
▪ Residential areas: o Areas with concentrations of transit dependent people o Multi-Family housing complexes with over 25 units ▪ Major activity centers: o Employers or employment concentrations of 200+ o Health centers o Middle and high schools o Colleges/universities o Shopping centers of over 10 stores or 100,000 sf o Social service/government centers	Maintained	N/A
Customer Service		
Less than 20 customer complaints per 100,000 trips.	New	2.1
Maximum reservation wait time less than 2 minutes.	New	2.1

2.5 MEASURING PERFORMANCE

This section provides additional details on the definition and measurement approaches for some of the service standards presented in Table 2-2. These approaches should be monitored on a recurring basis with adjustments made to avoid any excessively cumbersome data collection and/or measurement practices. Where possible, the agency will leverage technology (operations, maintenance, or financial systems) to streamline measurements. The measurement methodology should be documented in policy/procedures and the results should be reported as part of recurring (no less than quarterly) reporting unless otherwise noted.

Dependability

The system should be resilient to impacts caused by accidents, breakdowns, traffic delays, driver/vehicle availability and other factors that could cause a scheduled trip to be missed. Service should also not be curtailed due to the unavailability of either driver or vehicle upon initial pull out from the garage/home location for a scheduled pick up. A final component to system reliability is the average distance in service miles between when all vehicles in revenue service incur a component failures which causes it to not start or finish its assigned run.

Measurement Approach

- Logs shall be maintained and updated daily to accurately reflect vehicle status at the start of the trip. Vehicles unable to begin their assigned trip or that require an additional vehicle to be dispatched due to operability shall be reported as a missed trip.
- An operations/maintenance logs shall be maintained to record all service failures of a vehicle in revenue service. This measurement can be calculated each month by dividing the number of revenue miles operated by the number of road calls.

Service Availability

Service availability should be directly related to both the size of the ridership market and travel patterns (all day vs. peak only), and is most appropriate during the establishment of a defined/scheduled route. GC Transit may wish to consider approaching this measurement separately for both intra-county demand responsive service coverage and any commuter-oriented out of county services that operate at regular schedules.

Measurement Approach

- Work in conjunction with county or regional planners to provide demographic conditions (population/employment density, activity centers, etc.) for the service area. Use the established service thresholds in conjunction with a graphical depiction of the trips provided to identify any potential gaps in coverage.

Passengers Per Revenue Hour

The minimum level of ridership a category of service should attract, expressed as the average number of passengers for each hour of revenue service provided. This measure is an industry wide standard to assess overall performance and route efficiency. While GCT has established percentages of the system average, it may advisable to establish specific targets of passenger per hour. These targets can be based upon the Commonwealth average for demand responsive service and then adjusted to account for the unique conditions in Greene County. GC Transit also may wish to establish a higher threshold for the scheduled out of county commuter trips.

Measurement Approach

- Look at both historic GC Transit system trends and work with DRPT to ascertain Commonwealth averages for rural demand responsive services. Use the most rigorous

target, either 80% of the historic average or 80% of the Commonwealth average to identify the need for potential service adjustments.

Safety

As defined from the National Transit Database in terms of reportable incidents. A reportable incident is one in which one or more of the following conditions apply: 1) A fatality 2) Injuries requiring medical attention away from the scene for one or more persons 3) Property damage equal to or exceeding $25,000. Adoption of the NTD criteria should be considered a best practice regardless of whether the agency actually reports such information currently.

Measurement Approach

Greene County should maintain safety logs of all incidents which can then be reviewed no less than a quarterly basis for determination of meeting the NTD reporting criteria. Additional incident forms may be required to record if the incident was preventable or was caused by another driver or outside influence. For preventable incidents, the measurement should also identify operators who may need additional training following one or more occurrences.

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Chapter 3

Service and System Evaluation

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3 Service and System Evaluation

3.1 SERVICE OVERVIEW

3.1.1 Service Area

Greene County Transit provides demand response service throughout Greene County, Virginia, as well as limited service to Charlottesville and Albemarle County. Greene County covers an area of 157 square miles. The U.S. Census estimated the 2016 population of the County to be 19,085, with an average density of 127 residents per square mile. Key population centers in the County include the communities of Stanardsville and Ruckersville, which are also the primary commercial and retail hubs of the County.

3.1.2 Service Span

Demand response service within Greene County is generally available between 7:00 AM to 9:00 PM on weekdays, and between 9:00 AM to 4:00 PM on Saturdays. However, since GCT drivers park vehicles at their homes overnight, pickups are sometimes made before 7:00 AM as driver traveling from their homes to begin their shift. **Table 3-1** summarizes scheduled trips to the Charlottesville and Albemarle County region, which operate from Monday through Friday only. Although inbound and return trip pickup times are pre-set, destination locations depend on customer needs. The first three inbound trips of the day travel to businesses, medical facilities, shopping centers, and other locations in Charlottesville and Albemarle County. The 2:00 PM and 6:00 PM trips transport passengers as far as the Walmart on Seminole Trail and Barracks Road Shopping Center, respectively. Outbound pickup times indicate return trips to Greene County.

Table 3-1 | Greene County Transit Pickup Times

Pickup Number	Time	Description
Inbound		
1	6:30 AM	Greene to Charlottesville
2	8:00 AM	
3	11:00 AM	
4	2:00 PM	Greene to Walmart
5	6:00 PM	Greene to Barracks Road
Outbound		
1	8:30 AM	Charlottesville to Greene
2	12:00 PM	
3	2:00 PM	
4	2:30 PM	Walmart to Greene
5	7:00 PM	Barracks Road to Greene

3.1.3 Operating Statistics

Revenue Service

A vehicle is considered in revenue service when it is available for use by passengers. To save valuable funds and provide efficient service, agencies generally try to maximize time and miles spent in revenue service. During FY2016, Greene County Transit vehicles spent 21,592 hours and 378,585 miles in revenue service. The agency does not currently track hours or miles vehicles spend in non-revenue service, but given that GCT drivers begin and end service at their homes, the difference between revenue and total hours and miles is likely minimal.

Operating Costs

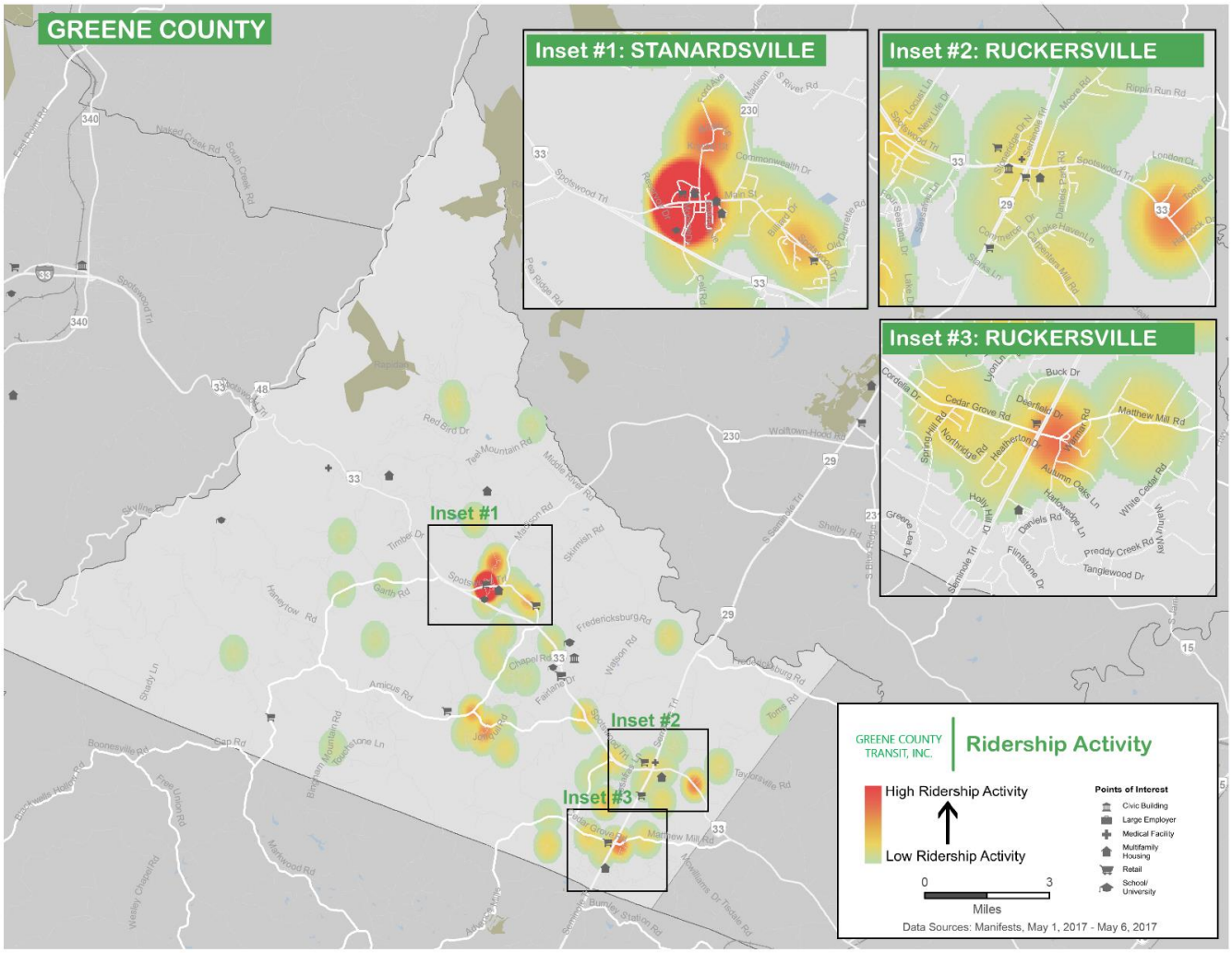
During FY2016, Greene County Transit spent a total of $765,866 in operating costs, averaging $35.47 per revenue hour; $1.95 per revenue mile; and $12.07 per passenger trip.

3.2 SYSTEM ANALYSIS

3.2.1 Ridership

During FY2016, Greene County Transit provided trips to 63,448 total riders. **Figure 3-1** show how ridership activity is distrusted throughout the county based on driver manifest data for the first week of May, 2017. Given that GCT provides demand response service, ridership is distributed through much of the county, with the exception of the Rapidan Wildlife Management Area. Ridership is highest in Stanardsville along the Spotswood Trail/Main Street corridor, and south Ruckersville near the intersection of Cedar Grove Road and Seminole Trail (close to Food Lion and Family Dollar). It should be noted that the Walmart Supercenter in Ruckersville does not register as a ridership "hotspot" on this map, as would be expected. This is likely due to the misinterpretation of driver manifest entries which used "Walmart" to refer to the location in Ruckersville, as well as the location in Albemarle County.

Figure 3-1 | Distribution of Ridership Activity



3.2.2 Service Effectiveness

Service effectiveness is measured in terms of passengers per revenue hour and revenue mile. In FY2016, Greene County Transit transported 2.94 passengers per hour and 0.17 passengers per mile.

3.2.3 Cost Efficiency

As shown in **Table 3-2**, during FY2016, Greene County Transit earned $49,938 in farebox revenue. While all transit agencies seek to earn as much fare revenue as possible, the cost recovery ratio statistic measures the percentage of operating expenses recovered by passenger fare revenue, determining a service's cost efficiency. In FY2016, the Greene County Transit cost recovery ratio was 6.5 percent.

The net cost per passenger is an additional efficiency measure that examines operating costs minus fare revenue, divided by passenger trip. In FY2016, Greene County Transit's net cost per passenger was $11.28, nearly $1 lower than its gross operating cost per passenger ($12.07).

Table 3-2 | FY2016 Cost Efficiency Metrics

Metric	Value
Farebox Revenue	$49,938
Farebox Recovery Ratio	6.5%
Net Cost per Passenger	$11.28

3.2.4 Service Quality

On-Time Performance

While Greene County Transit aims to achieve a rate of 95 percent on-time performance, the agency does not track actual vehicle pickup times against scheduled time windows. However, customer satisfaction with on-time performance can be inferred through Greene County Transit's June 2017 telephone and on-board surveys. Via the telephone survey, 67 percent of respondents reported that vehicles pick up within 15 minutes of the scheduled time. Via the on-board survey, 97 percent of respondents indicated that they were either "very satisfied" or "satisfied" with Greene County Transit's on-time performance.

3.3 TREND ANALYSIS

This section provides a three-year (Fiscal Year 2014 through Fiscal Year 2016) retrospective analysis of system-wide Greene County Transit service based on the following metrics:

- Annual ridership;
- Passengers per revenue hour;
- Passengers per revenue mile;
- Annual Operating Cost;
- Passenger Revenue; and
- Net Cost per Passenger.

From an efficiency and productivity standpoint, this assessment sheds light on how Greene County Transit has performed over this timeframe.

3.3.1 Service Productivity

Annual Ridership

Annual ridership figures provide a baseline through which to track the overall usage of a system. **Table 3-3** shows annual ridership on Greene County Transit from FY2014 to FY2016. Over the three-year period, ridership steadily increased, rising overall by two percent.

Table 3-3 | Annual Ridership, FY14-FY16

Fiscal Year	Annual Ridership
2014	62,127
2015	63,411
2016	63,448
% Change	**2%**

Passengers per Revenue Hour

Calculated by dividing annual unlinked trips by annual vehicle revenue hours, passengers per revenue hour measures how productively vehicles spend their time in service. **Table 3-4** summarizes passengers per revenue hour on Greene County Transit service from

FY2014 to FY2016. This metric dropped steadily over the analysis period (from 3.82 to 2.94), and by 23 percent overall. While total ridership rose by two percent from FY2014 to FY2016, revenue hours rose at a much faster relative rate (33 percent) over this timeframe.

Table 3-4 | Passengers per Revenue Hour, FY14-FY16

Fiscal Year	Passengers per Revenue Hour
2014	3.82
2015	3.47
2016	2.94
% Change	**-23%**

Passengers per Revenue Mile

Table 3-5 summarizes passengers per revenue mile FY2014 to FY2016. This metric, calculated by dividing annual unlinked trips by annual vehicle revenue miles, measures how productively transit vehicles spend their distance (rather than their time) in service. Passengers per revenue mile decreased marginally – technically by 11 percent, from 0.19 to 0.17 – over the analysis period. During the three-year timeframe, like revenue hours, total revenue miles rose by 15 percent, by a relatively higher rate than that of total ridership.

Table 3-5 | Passengers per Revenue Mile, FY14-FY16

Fiscal Year	Passengers per Revenue Mile
2014	0.19
2015	0.17
2016	0.17
% Change	**-11%**

3.3.2 Cost Efficiency

Annual Operating Cost

From FY2014 to FY2016, Greene County Transit's operating expenses rose overall by 13 percent (over $86,000). **Table** 3-6 summarizes this trend over the three-year period.

Table 3-6 | Annual Operating Costs, FY14-FY16

Fiscal Year	Annual Operating Costs
2014	$679,586
2015	$738,889
2016	$765,866
% Change	**13%**

Passenger Revenue

From FY2014 to FY2016, passenger fare revenues on Greene County Transit service decreased by just $788, or two percent (**Table 3-7**).

Table 3-7 | Passenger Fare Revenue, FY14-FY16

Fiscal Year	Passengers Fare Revenue
2014	$50,726
2015	$49,962
2016	$49,938
% Change	**-2%**

Net Cost per Passenger

Also known as subsidy per passenger and reported as a dollar value, net cost per passenger is calculated by subtracting annual fare revenue from annual operating costs, and subsequently dividing that total by the number of unlinked passenger trips. Assessing the average subsidy per each passenger provides an indication of the cost effectiveness of a service in relation to the local, state, federal, or dedicated operating funding devoted per passenger. **Table 3-8** reports on system-wide net cost per passenger metrics from FY2014 through FY2016.

Over the three-year timeframe, net cost per passenger rose by 11 percent, from $10.12 to $11.28. This trend is perhaps explained by the fact that over this same period, operating costs rose by 13 percent, while ridership rose by just two percent. In addition, total fare revenue over this period decreased by two percent.

Table 3-8 | Net Cost per Passenger, FY14-FY16

Fiscal Year	Net Cost per Passenger
2014	$10.12
2015	$10.86
2016	$11.28
% Change	**11%**

3.3.3 Trend Analysis Conclusion

From FY2014 to FY2016, Greene County Transit increased its ridership by two percent. However, the agency also increased its revenue miles and hours by disproportionate rates, leading to significant overall drops in passengers per revenue mile and hour.

In addition, operating expenses increased by 13 percent, while fare revenue decreased by two percent. This set of factors led to a steadily lower farebox recovery ratio and a greater net cost per passenger.

3.4 TRANSIT PROPENSITY ANALYSIS

To begin assessing service redesign and expansion, this transit propensity analysis groups a series of demographic factors – from 2010-2015 five-year American Community Survey and Longitudinal Employer-Household Dynamics data – into four indices. The results of this model estimate geographic areas at the Census block group level that exhibit a high demand and need for transit service. Transit propensity is a helpful resource when examined alongside actual ridership data, geographic conditions, and service planning constraints. However, it should be noted that Census block groups tend to be quite large in rural areas, and the determining factors that define propensity may not be evenly distributed throughout a block group.

The indices used in this analysis, which consist of equally weighted demographic factors, approximate the following:

- Where transit-oriented population trips originate (Transit-Oriented Populations Index);
- Where commuter trips originate (Commuter Populations Index);
- Where workplace destinations are located (Work Destinations Index); and
- Where non-work destinations are located (Non-Work Destinations Index).

Individual index scores estimate the collective tendencies of residents to use transit throughout the service area.

3.4.1 Transit Oriented Populations Index

The transit oriented population index considers six categories: population, age, households, income, vehicle ownership, and disability status. The model runs on the assumption that areas with higher populations or household densities, as well as higher concentrations of seniors, youth, persons living in poverty, households with reduced vehicle access, and disabled persons, will have a greater propensity toward transit ridership. This index utilizes the following inputs:

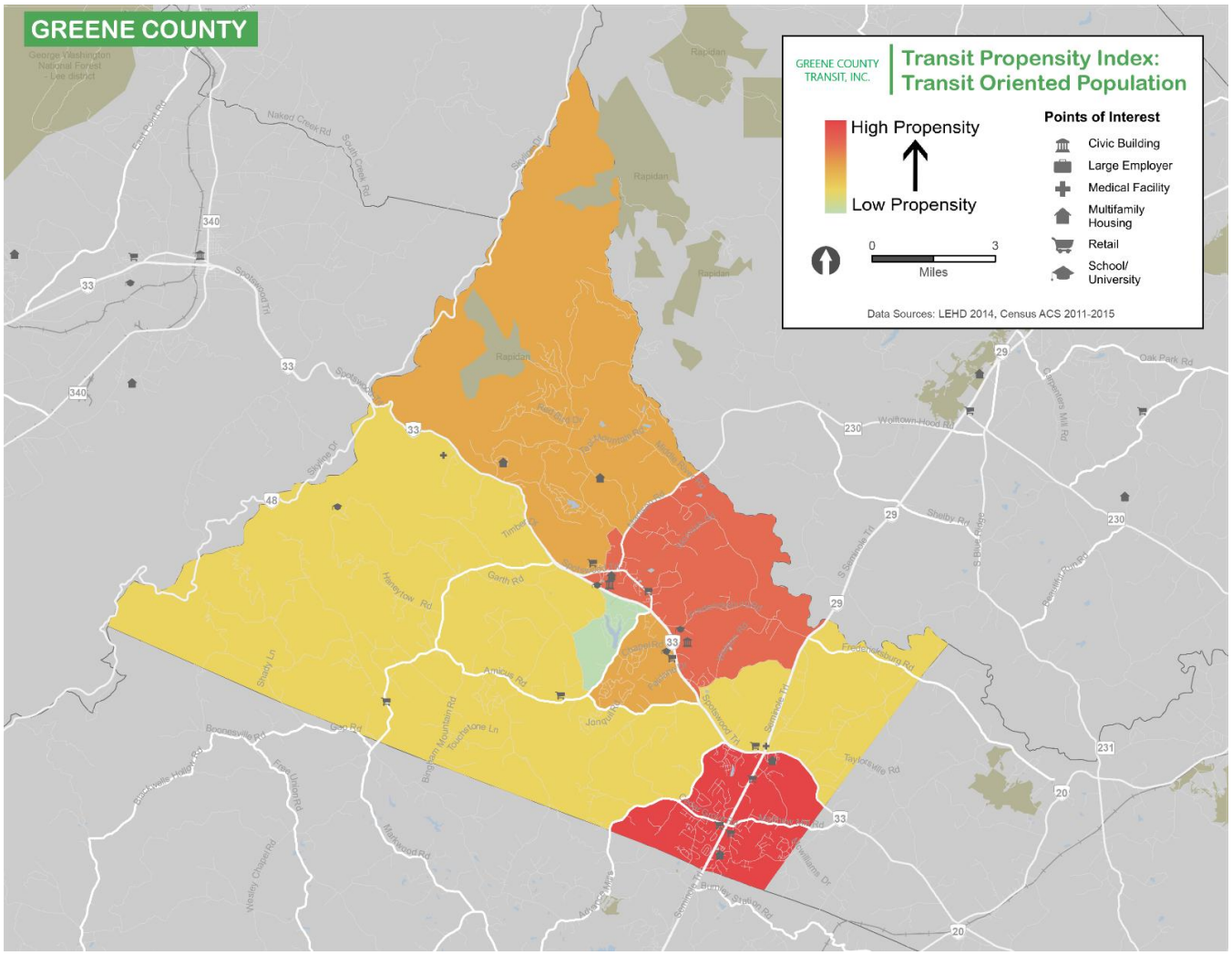
- Population (where all residents live and where minority residents live);
- Age (where youth and senior populations live);
- Number of households;
- Income (number of residents living in poverty);
- Vehicle ownership (number of zero- or one-car households); and
- Number of disabled residents.

Figure 3-2 shows the transit-oriented population propensity across Greene County. Higher propensity areas include:

- Ruckersville, south of Spotswood Trail and east of Advance Mills Road to the Greene County border; and
- Stanardsville, bounded by Madison Road, Spotswood Trail, Dairy Road, and the Greene County border.

Areas with a lower transit propensity based on this index include the majority of western Greene County; and the area northeast of Spotswood Trail and south of Fredericksburg Road.

Figure 3-2 | Transit Oriented Populations Index



3.4.2 Commuter Populations Index

The commuter index consists of two categories: labor force and non-single occupant vehicle (SOV) commute mode. Employed persons, commuters, and transit commuters all contribute to this index, which is indicative of where traditional peak hour commuters live, and where those that currently use non-automobile modes to commute live.

Figure 3-3 shows the commuter populations index propensity across Greene County. Areas with a high commuter index within the service area tend to have both a higher employed population as well as a

higher percentage of residents commuting by transit. These regions include:

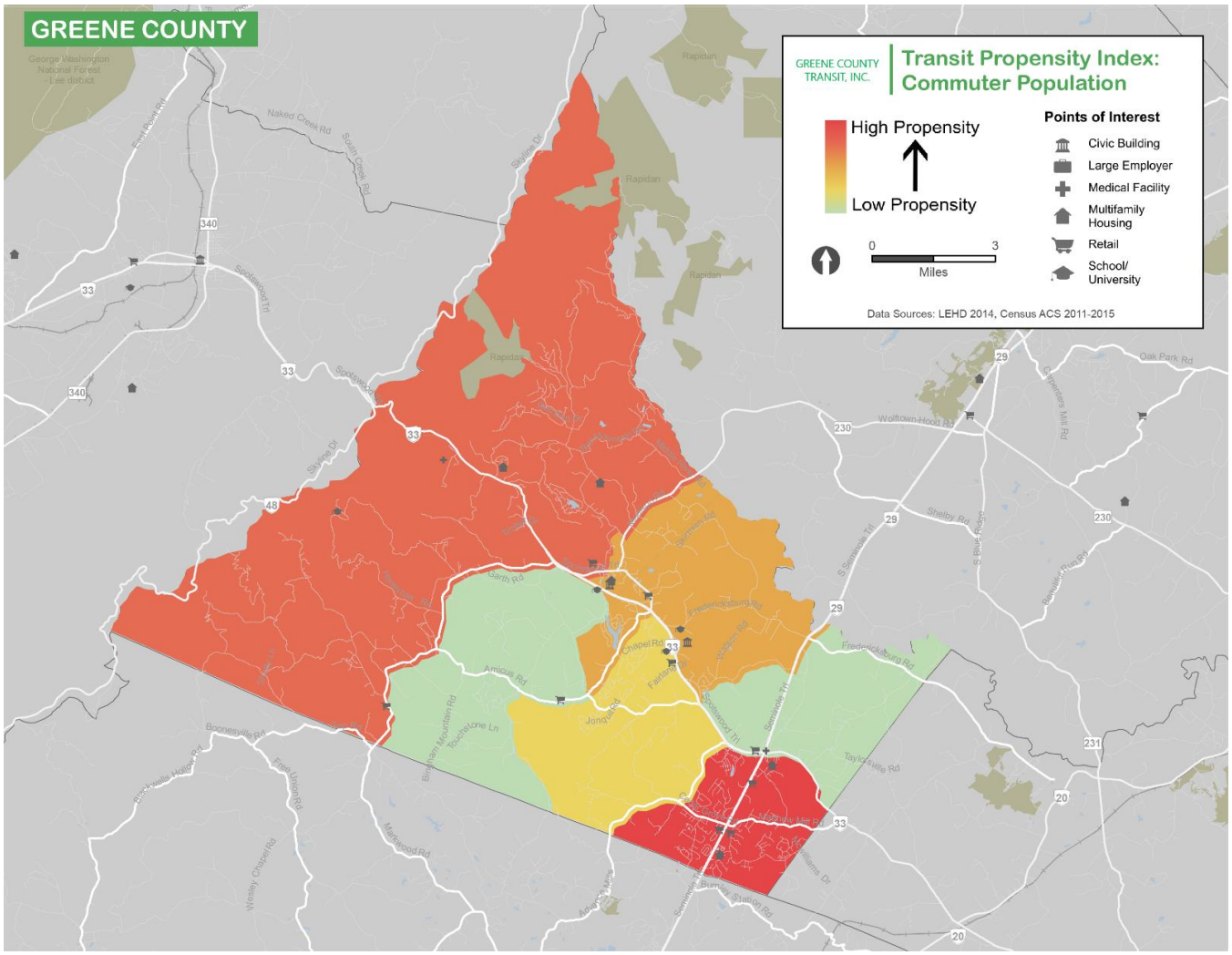
- Ruckersville, south of Spotswood Trail and east of Advance Mills Road to the Greene County border; and
- Much of the northwest portion of Greene County, including the area northwest of Dyke and Madison Roads.

Areas with a lower transit propensity based on this index include:

- The region bounded by Dyke Road, Amicus Road, Celt Road, and Spotswood Trail;
- South of Amicus Road to the Greene County border; and

The area northeast of Spotswood Trail and south of Fredericksburg Road.

Figure 3-3 | Commuter Populations Index



3.4.3 Work Destinations Index

The workplace index identifies areas with high levels of employment activity. As this index is used as an indicator of the density of job locations, its only input is total employment.

Figure 3-4 depicts the results of this index – which are quite similar to those of the commuter

populations index – across Greene County. Regions with a larger workplace index value generally have a high employment density. These areas include:

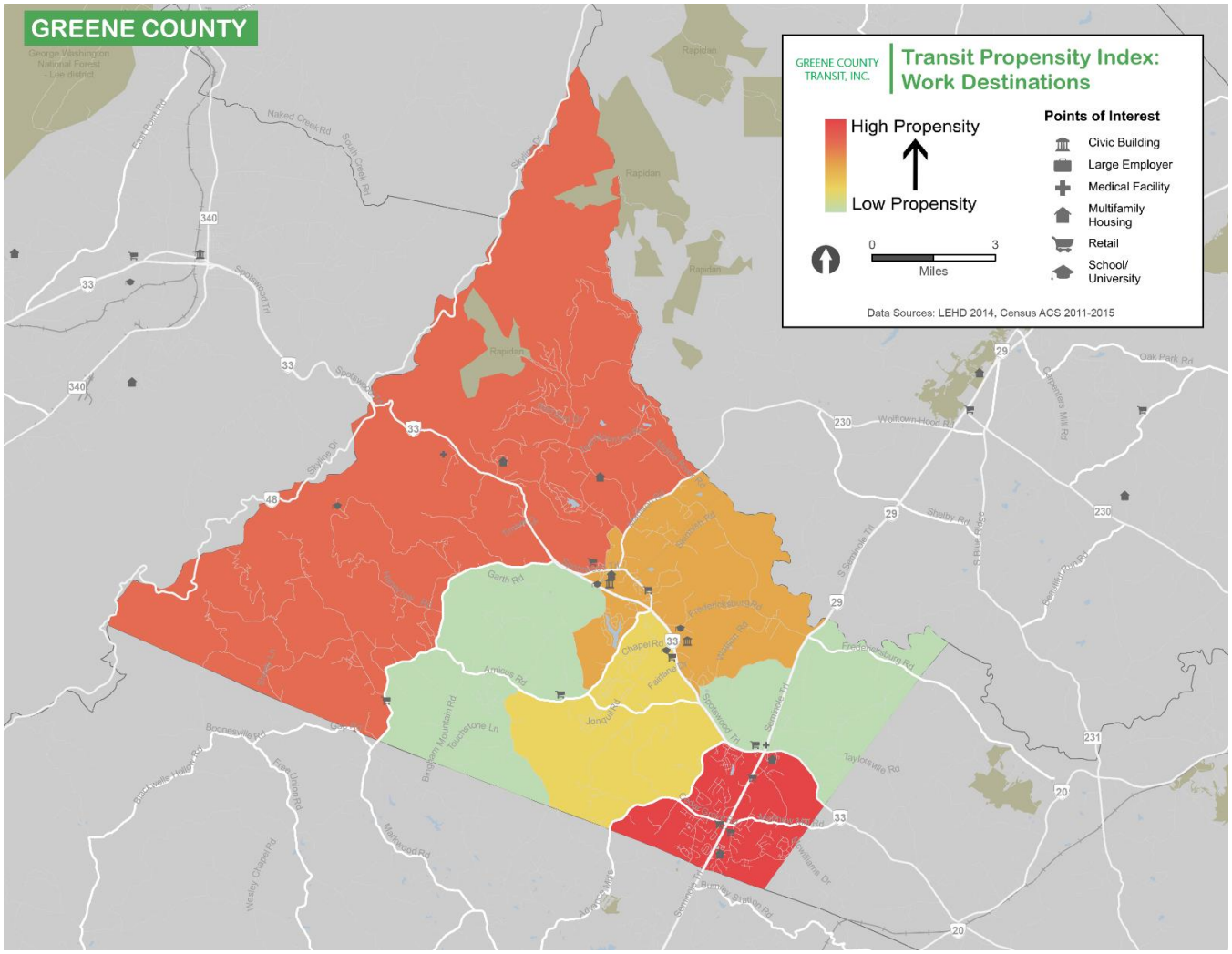
- Ruckersville, south of Spotswood Trail and east of Advance Mills Road to the Greene County border; and
- Much of the northwest portion of Greene County, including the area northwest of Dyke and Madison Roads.

Areas with a lower transit propensity based on this index include:

- The region bounded by Dyke Road, Amicus Road, Celt Road, and Spotswood Trail;
- South of Amicus Road to the Greene County border; and

The area northeast of Spotswood Trail and south of Fredericksburg Road.

Figure 3-4 | Work Destinations Index

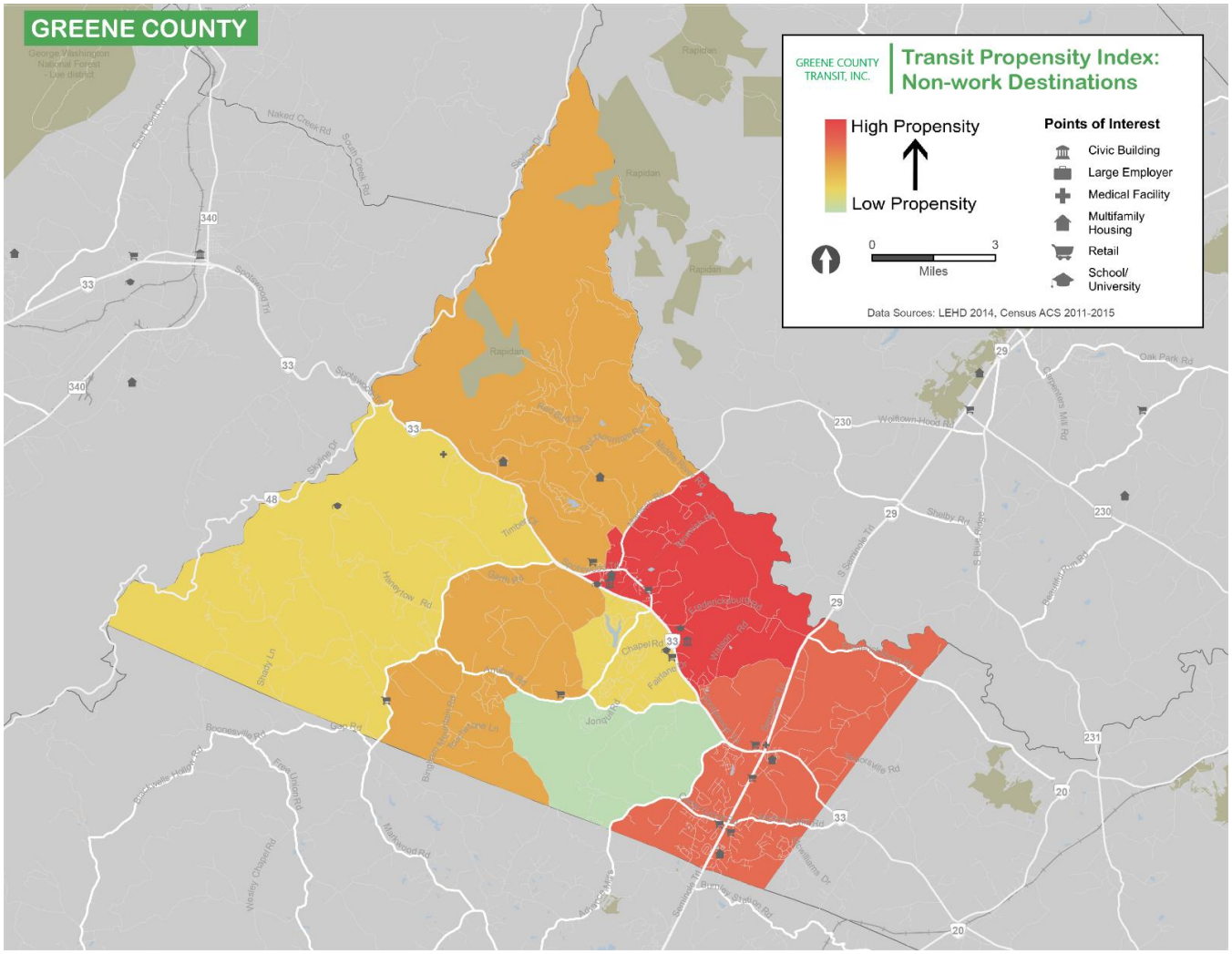


3.4.1 Non-Work Destinations Index

The non-work destination index evaluates destination types that indicate where residents might travel if going somewhere other than work. The index is based on the number of retail/restaurant, recreation, healthcare/social assistance, education, and government jobs in each block group.

Figure 3-5 depicts the results of this index across Greene County. According to this index, the southeastern part of the County including Ruckersville and Stanardsville bounded by the County border, Advance Mills Road/Spotswood Trail, and Madison Road has the transit propensity for non-work trips. The lowest transit propensity values for non-work trips are found in the area south of Amicus Road to the Greene County border.

Figure 3-5| Non-Work Destinations Index



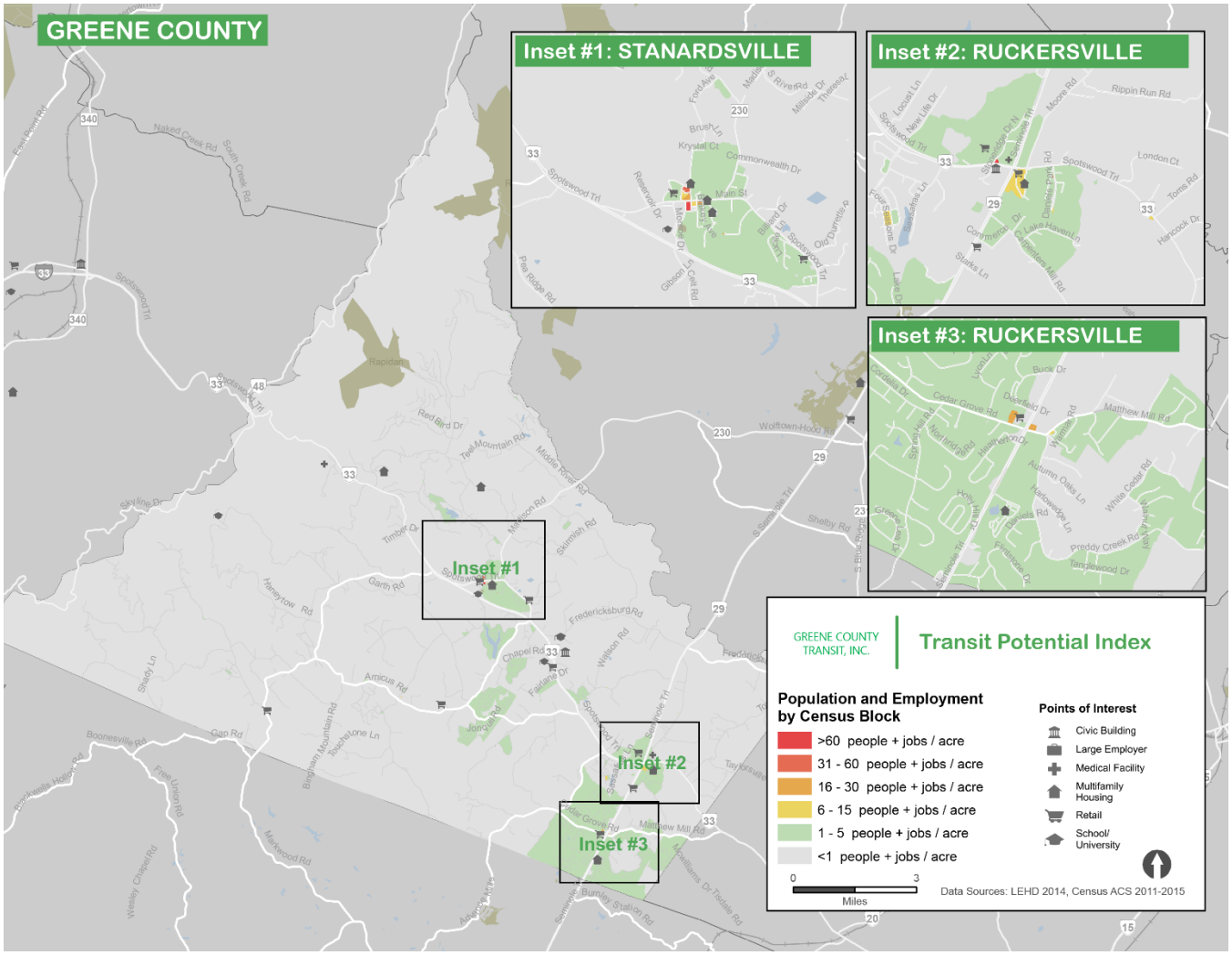
3.5 TRANSIT POTENTIAL AND COMMUTER TRENDS ANALYSES

3.5.1 Transit Potential Analysis

The Transit Potential Index helps determine the type of transit service that an area may be able to support. Generally, fixed-route service requires greater than five people and/or jobs per acre to be viable. Areas with lower densities are more suitable for demand response service. The Transit Potential Index analysis is done at the Census block level.

As shown in **Figure 3-6**, there are a few isolated blocks in Stanardsville and Ruckersville with densities meeting the threshold for fixed-route service, but overall, Greene County is a low-density environment with a low potential to support fixed-route service.

Figure 3-6| Greene County Transit Potential



3.5.2 Commuter Trends Analysis

The potential for commuter services are less defined by local densities and demographics because these services tend to have a much larger capture area and rely on collection points such as park-and-rides where riders access the service. To be successful, commuter services must facilitate the most prevalent travel patterns in a region, regardless of mode.

Figure 3-7 shows the most prevalent commuter travel patterns for Greene County based on 2015 U.S. Census Longitudinal Employer-Household Dynamics data. The map uses jobs as a proxy for travel flows, showing, by county, the number of jobs to which Greene County residents travel. 1,325 County residents travel from Greene County to Charlottesville, while 2,275 commuters travel between Greene County and Albemarle County. In addition, just over, 1,200 work commutes occur within Greene County.

GCT's out-of-county trips serve both of the highest out-of-county commuter travel patterns, but travel times do not coincide with typical commuting times, especially in the northbound direction. A late afternoon return trip to Greene County could help GCT attract work commuters.

Figure 3-7 | Most Prevalent Travel Flows to and From Greene County

3.6 RIDER SURVEYS

In June 2017, Greene County Transit completed telephone and on-board surveys of current and potential riders. The results of these surveys are summarized in this section; full results are summarized in **Appendix A**.[1]

3.6.1 Telephone Survey

Greene County Transit's telephone survey yielded 100 total responses. Of all respondents, 48 reported having ridden with Greene County Transit in the past; 52 reported never having used the service. Of current riders, 46 percent reported riding daily, and 25 percent reported riding weekly. 63 percent of riders reported having ridden Greene County Transit for at least one year.

All riders rated Greene County Transit vehicles as usually clean and comfortable. 67 percent reported that the service generally arrives within 15 minutes of the scheduled time. In addition, 30 of 48 current rider respondents stated that Greene County Transit gets them where they need to go usually or all of the time.

[1] In addition to these two surveys, Greene County Transit also initiated an online survey to coincide with the development of the TDP. However, this survey did not elicit a sufficient number of responses for analysis.

In addition to locations currently served, passengers indicated a preference for new service to Earlysville, Madison, and Orange.

3.6.2 On-Board Survey

Greene County Transit's on-board survey also yielded 100 total responses. Respondents, who mainly hailed from Ruckersville, Stanardsville, and Barboursville, reported most often using the service to travel to and from work. 78 percent of surveyed riders reported using the service at least two to three times per week. Over half of respondents reported using Greene County Transit for more than two years.

Riders were also surveyed on demographic characteristics. 34 percent of respondents reported having at least one vehicle available; 22 percent reported no access to a vehicle. Additionally, 75 percent of surveyed riders reported not having a car available specifically for the trip on which they were surveyed. 60 percent of riders indicated that they did not have a driver's license, and 70 percent reported having internet access.

Finally, passengers were asked to rate their satisfaction with Greene County Transit on a variety of metrics using the "Very Satisfied"-"Satisfied"-"Very Unsatisfied" scale. In general, passengers were most impressed with the agency's cost of service, cleanliness of vehicles, driver courtesy, and safety and security. Passengers showed relatively less satisfaction with the agency's trip scheduling process, on-time performance, hours of service, and overall usefulness.

3.7 GAP ANALYSIS

This gap analysis identifies unmet needs or gaps in the Greene County Transit network. While coverage gaps include missing connections between geographic areas, service level gaps include inadequate frequencies or spans. By outlining where new service is needed, the gap analysis will assist in determining the overall vision for Greene County Transit's service and capital improvement plans.

3.7.1 Coverage Gaps

Greene County Transit's service area includes the entire County. Trips are provided, on request, to any destination in the County. Outside of the County, GCT provides weekday service to Charlottesville and Albemarle County, the destinations identified as the most prevalent commuter travel patterns. Based on customer survey responses, there is some desire for connections to other destinations including Madison County and Orange County, but these are outside GCT's operational jurisdiction, and are not supported by more statistically robust data sources such as the U.S. Census Longitudinal Employer-Household Dynamics data. Thus, there does not appear to be a significant gap between Greene County Transit's current coverage and the geographic demand for service.

3.7.2 Service Level Gaps

From Monday through Friday, Greene County Transit schedules five inbound runs to Charlottesville and Albemarle County and five outbound runs that return to Greene County. Via the aforementioned telephone survey, nearly 70 percent of respondents supported extended runs to Charlottesville. Via the on-board survey, nearly three quarters of respondents reported being very satisfied with both the agency's days and hours of service. Considering customer preferences, Greene County Transit should weigh the possibility of extending the service hours of scheduled runs to Charlottesville. Additional pickup times, especially in the northbound direction, would also make the service more appealing to commuters.

Chapter 4

Service and Capital Improvement Plan

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4 Service & Capital Improvement Plan

As described in Chapter 3, total Greene County Transit ridership is growing modestly and proportionately to population growth. As the population of Greene County continues to grow, ridership demand will likely increase as well. **Table 4-1** shows the projected population of Greene County through 2040.

Table 4-1 | Projected Population Growth (Source: University of Virginia)

Jurisdiction	Population Projection		
	2020	*2030*	*2040*
Greene County	21,197	24,092	26,596

4.1 SERVICE IMPROVEMENTS AND NEEDS IDENTIFICATION

Based on the transit potential analysis in Chapter 3, demand response service is currently the most appropriate service model for Greene County (although opportunities to expand commuter service were also identified).

The recommendations presented in this chapter are aimed at preparing Greene County Transit for anticipated future demand for mobility services. The recommendations are classified into three phases:

- **Short-term recommendations** (1-3 years) focus on addressing capacity demands of the existing system and improving productivity.
- **Mid-term recommendations** (3-10 years) incorporate new services that would be beneficial within the Greene County existing service area.
- **Long-term recommendations** (10+ years) are focused on improving accessibility for Greene County residents throughout the region.

4.1.1 Short-Term Recommendations

Scheduling Software

In the current system, GCT's dispatcher records trip requests by writing the origin and destination on message forms and then transferring this information to a driver pickup log. GCT's scheduling process is based largely on its dispatchers' and office staff's inherent knowledge of the system. This approach is not considered an industry best practice because if staff turnover occurs, the efficiency of the scheduling process could be impacted. Instead, most transit systems now use scheduling software to help optimize scheduling and operations.

A basic scheduling software program would allow customer information and previously requested trips to be maintained in a database. This not only will increase efficiencies in scheduling but will also make record keeping and tracking of system metrics easier.

Adjust Existing Charlottesville Trips

In Ruckersville, Greene County residences have access all day to the Walmart Supercenter. As summarized in

Table 4-2, it is recommended that the scheduled 2:00 PM Charlottesville service to Walmart on US 29 be shifted to the Barracks Road Shopping Center to provide connections to new retail destinations and to provide better connections to the Charlottesville Area Transit (CAT) and UVA's University Transit Service (UTS). The return trip to Greene County should also be shifted from 2:30 PM to 3:30 PM.

Table 4-2 | Adjusted Charlottesville Trip: Service Statistics

Metric	Unit
To Barracks Road	2:00 PM
To Greene County	3:30 PM
Additional Revenue Hours	1
Additional Vehicles	0

4.1.2 Mid-Term Recommendations

Additional Trips to Charlottesville

During the Greene County 2017 onboard survey, additional trips to Charlottesville were identified as a need by current riders. To accommodate this request, a new trip from Greene County to Barracks Road at 4:00 PM, with a return trip to Greene County at 5:30 PM, is recommended (**Table 4-3**).

This round trip will not only provide an additional connection to retail at the Barracks Road Shopping Center, but also will provide another connection opportunity to the CAT and UTS systems.

Table 4-3 | Additional Service to Charlottesville: Service Statistics

Metric	Unit
To Barracks Road	4:00 PM
To Greene County	5:30 PM
Revenue Hours	3.5
Additional Vehicles	0

Scheduled Service

Greene County is generally a low-density environment, which makes demand response service an appropriate service model. However, based on ridership data, there is a clear concentration of trip destinations along the Spotswood Trail and US 29 corridors. Providing regularly scheduled service along these corridors between Stanardsville and Ruckersville (**Table 4-4**) could make service more predictable for riders and improve service efficiency for Greene County Transit. Buses serving this corridor would continue to provide door-to-door service, but passengers would be encouraged to schedule trips during pre-scheduled time windows, as they are today with service to Charlottesville and Albemarle County.

Table 4-4 | Scheduled Service: Service Statistics

Metric	Unit
Service Span	7:00 AM – 5:00 PM
Revenue Hours	8
Vehicles	1

4.1.3 Long-Term Recommendations

New Intercounty Service

During the Greene County 2017 onboard survey, new services to Madison and Orange County were identified as a service needs by current riders.

Madison County

The proposed service to Madison County (**Table 4-5**) would make two scheduled round trips from Greene County, Monday through Friday. One trip will leave Greene County at 7:00 AM and return at 8:30 AM, and another trip will leave Greene County at 3:30 PM and return at 5:00 PM.

Table 4-5 | Adjusted Charlottesville Trip: Service Statistics

Metric	Unit
To Madison County	7:00 AM; 3:30 PM
To Greene County	8:30 AM; 5:00 PM
Additional Revenue Hours	7
Additional Vehicles	1

Orange County

The proposed service to Orange County (**Table 4-6**) would make two scheduled round trips, Monday through Friday. One trip would leave Greene County

at 7:00 AM and return at 8:30 AM, and another trip would leave Greene County at 3:30 PM and return at 5:00 PM. Vehicles would drop passengers off in Orange County at scheduled locations.

The designated locations could include:

- Piedmont Regional Dental Clinic & Orange Family Physicians;
- Central Virginia Regional Jail;
- Orange Town Center; and
- Gordonsville Food Lion.

Table 4-6 | New Intercounty Service: Service Statistics

Metric	Unit
To Orange County	7:00 AM; 3:30 PM
To Greene County	8:30 AM; 5:00 PM
Additional Revenue Hours	7
Additional Vehicles	1

4.1.4 Ridership and Operating Cost Estimates

Taken in their entirety, all of the service recommendations described above would result in 26.5 additional weekday revenue hours. GCT currently carries an average of 2.94 passengers per revenue hour, with some periods of the day (especially when service is provided to Charlottesville) experiencing productivity as high as 5 passengers per revenue hour. Thus, a conservative estimate for the ridership impact of the proposed recommendations is a 10 percent increase in ridership (i.e. 69,800 annual passenger trips) once all recommendations are implemented.

Assuming a cost per revenue hour of approximately $37 (based on the 2016 figure of $35.47), the operating cost for the system including all of the proposed recommendations would be projected to increase from the $765,866 to approximately $772,500 (based on 26.5 additional weekday revenue hours and 250 weekdays of service per year).

4.2 CAPITAL PROJECT NEEDS

Greene County Transit's capital needs are largely composed of vehicle replacements. To ensure its fleet is maintains a maximum age of seven years, the agency will have to procure 25 new vehicles. As the planning horizon (10-years) is greater than the useful life of the fleet (7-years), many vehicles in the existing fleet will require replacement twice.

The agency's fleet consists of seven-passenger minivans, 14 to 20 passenger body-on-chassis cutaway vans.

The recommendations in this chapter will require Greene County Transit to procure one expansion vehicle in the mid-term (3-10 years). The TDP's long-term recommendations will require an additional two-vehicles to implement, however these needs are outside the 10-year planning time-frame.

Finally, the last capital need is for the procurement of a scheduling software. Currently all scheduling is done manually by agency staff.

See

Table 4-7 for a list of capital projects by year.

Table 4-7: Capital Needs by Year ($1000s)

Name	Description	Total
Replacement 14-Passenger Van	Two 14-Passenger wheelchair accessible vans	$112
Scheduling Software	Procure software to automate scheduling process	$61
2019 Sub-Total		**$173**
Replacement 14-Passenger Van	Two 14-Passenger body-on-chassis wheelchair accessible vehicles	$114
Replace 7-Passenger Van	One 7-Passenger wheelchair accessible van	$31
2020-Subtotal		**$145**
Replacement 20-Passenger Van	Two 20-Passenger body-on-chassis wheelchair accessible vehicles	$127
2021 Sub-Total		**$127**
Replacement 14-Passenger Van	Two 14-Passenger body-on-chassis wheelchair accessible vehicles	$118
2022 Sub-Total		**$118**
Replacement 14-Passenger Van	Two 14-Passenger body-on-chassis wheelchair accessible vehicles	$120
Replacement Support Van		$28
Expansion 14-Passenger Van	New vehicle to expand service	$59
2023 Sub-Total		**$208**
Replacement 14-Passenger Van	One 14-Passenger body-on-chassis wheelchair accessible vehicles	$61
Replace 7-Passenger Van	One 7-Passenger wheelchair accessible van	$33
2024 Sub-Total		**$95**
Replace 14-Passenger Vehicles	Two 14-Passenger body-on-chassis wheelchair accessible vehicles	$125
2025 Sub-Total		**$125**
Replacement 14-Passenger Van	Two 14-Passenger wheelchair accessible vans	$127
2026 Sub-Total		**$127**
Replacement 14-Passenger Van	Two 14-Passenger body-on-chassis wheelchair accessible vehicles	$129
Replace 7-Passenger Van	One 7-Passenger wheelchair accessible van	$35
2027 Sub-Total		**$164**
Replacement 20-Passenger Van	Two 20-Passenger body-on-chassis wheelchair accessible vehicles	$143
2028 Sub-Total		**$143**
Total		**$1,425**

Chapter 5

Implementation Plan

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5 Implementation Plan

This chapter of the Greene County TDP illustrates the difference between providing the baseline service requirements and implementing the expanded service recommendations described in Chapter 4. All elements of this chapter reinforce the timing of the Greene County capital improvement program (CIP) throughout a ten-year planning horizon. Primary capital components include the fleet and facilities. Essential maintenance, rehabilitation, and state of good repair projects are identified to inform Greene County's ongoing transit asset management program and to assure no service degradation results from the timing of improvements. This chapter will inform the project funding costs and revenue sources detailed in Chapter 6. Where applicable, this chapter will also distinguish those projects in the CIP which Greene County reasonably anticipates local funding to be available, and those with no current funding allocated.

5.1 ROLLING STOCK UTILIZATION

This section presents the vehicle replacement and expansion needs to provide envisioned services throughout this TDP period. Included in this section are the implications of the fleet/spare ratio, vehicle life-cycle maintenance, technological retrofit, and any impacts to the overall utilization of the fleet during the implementation of new services outlined in Chapter 4.

5.1.1 Fleet Inventory

Greene County has a fleet of 16 vehicles for revenue service. The following adjustments were made to previous replacement calculations based upon updated Federal Transit Administration Useful Life Benchmark (ULB) figures. A ULB of 10 years for body on chassis buses and a ULB of 8 years for minivans was utilized. Current Greene County replacement cycles were 8 years and 5 years for these respective vehicle categories. All future ULB adjustments in subsequent years should be informed by a qualitative condition assessment Greene County maintains as part of their Asset Management program.

All vehicle information for Greene County's revenue fleet is provided in **Table 5-1**. Vehicle replacement and retirement analysis in the subsequent sections will begin starting with FY2019.

5.1.2 Vehicle Replacement

From FY2019-2029, Greene County's baseline fleet requirements would entail retiring a total of 17 vehicles and procuring an equivalent replacement. Greene County's vehicles operated in maximum service (VOMS) while variable, is calculated at 12 throughout this planning period, and represents a spare ratio of 25.0 percent by FY2029.

The baseline vehicle replacement schedule and analysis are presented in **Table 5-2**. This estimate differs from the current Greene County fleet reporting, reflecting a slightly longer ULB for all vehicles. Total replacement costs were calculated using base vehicle costs for two vehicle types. All costs were inflated to FY2019 dollars. Vehicle cost estimates used in these calculations include:

- Body on Chassis Bus $66,000
- Minivan $54,000

Future vehicle replacement costs are projected to increase at 4 percent per year beginning with FY2020. The results of the baseline vehicle replacement program, identifying the vehicle type by replacement year and subsequent overall cost is presented in **Table 5-3**.

Table 5-1 | Greene County Revenue Fleet Inventory

Year	Make/Model	Length (Feet)	Capacity	FTA ULB (Years)	Number of Vehicles	Asset Tag
2010	Dodge Caravan	<30	7	8	1	9790
2010	Ford F450 BOC	<30	12	10	1	9600
2010	Chevrolet Goshen Coach	<30	14	10	1	9791
2011	14-passenger BOC	<30	14	10	1	10123
2012	Chevrolet Goshen Coach	<30	14	10	1	10465
2012	Ford Econoline BOC	<30	12	10	1	10597
2013	Dodge Grand Caravan	<30	7	8	1	11590
2014	14-passenger BOC	<30	14	10	2	12014, 12015
2015	Dodge Caravan	<30	7	8	2	12498, 12499
2015	14-passenger BOC	<30	14	10	2	12447, 12448
2015	Ford Allstar	<30	12	10	1	12688
2017	Dodge Caravan	<30	7	8	1	9789
2017	Chevrolet Supreme	<30	12	10	1	10818
Total Fleet (In Service)					**16**	

Table 5-2 | Greene County Baseline Vehicle Replacement Schedule

	Fiscal Year										
	FY2019	**FY2020**	**FY2021**	**FY2022**	**FY2023**	**FY2024**	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**
Carryover	16	16	16	16	16	16	16	16	16	16	16
Retire	0	2	2	2	2	2	3	2	1	0	1
New	0	2	2	2	2	2	3	2	1	0	1
Total Fleet	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**
VOMS	12	12	12	12	12	12	12	12	12	12	12
Spare Ratio	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Exceeding ULB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%

Table 5-3 | Greene County Transit Baseline Vehicle Replacement by Vehicle and Annual Cost

	Fiscal Year										
	FY2019	**FY2020**	**FY2021**	**FY2022**	**FY2023**	**FY2024**	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**
Vehicle Type											
BOC Bus		2	1	2	0	2	3	1	1	0	0
Minivan		0	1	0	2	0	0	1	0	0	1
Total Vehicles	0	2	2	2	2	2	3	2	1	0	1
Annual Cost (000s)	**$-**	**$150**	**$140**	**$160**	**$130**	**$170**	**$260**	**$160**	**$90**	**$-**	**$80**

5.1.3 Vehicle Expansion

From FY2019-FY2029 Greene County's revenue fleet expansion would require one additional vehicles over baseline. VOMs will increase from a baseline of 12 to 13 by FY 2022. No additional spare vehicles are anticipated at this time, and the resultant spare vehicle ratio drops to 23.5 percent with this expansion.

The timing and implementation of Chapter 4 recommendations that increase VOMS are as follows:

FY2022 – Additional trips to Charlottesville (1 additional vehicle)

The vehicle needed for this new service is envisioned to be a 14 to 20 passenger body-on-chassis cutaway bus, consistent with Greene County's larger fleet vehicles. The results of the expansion vehicle acquisitions and baseline replacement program for the existing fleet is presented in **Table 5-5**.

Table 5-4 | Greene County Revenue Fleet Expansion Vehicle Replacement Schedule

	Fiscal Year										
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Carryover	16	16	16	16	16	16	16	16	16	16	16
Retire	0	2	2	2	2	2	3	2	1	0	1
New	0	2	2	3	2	2	3	2	1	0	1
Total Fleet	**16**	**16**	**16**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**
VOMS	12	12	12	13	13	13	13	13	13	13	13
Spare Ratio	25.0%	25.0%	25.0%	23.5%	23.5%	23.5%	23.5%	23.5%	23.5%	23.5%	23.5%
Exceeding ULB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%

Table 5-5 | Greene County Fleet Expansion Vehicle Acquisition and Baseline Replacement by Vehicle and Annual Cost

	Fiscal Year										
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Vehicle Type											
BOC Bus		2	1	3	0	2	3	1	1	0	0
Minivan		0	1	0	2	0	0	1	0	0	1
Total Vehicles	0	2	2	2	2	2	3	2	1	0	1
Annual Cost (000s)	**$-**	**$150**	**$140**	**$230**	**$130**	**$170**	**$260**	**$160**	**$90**	**$-**	**$80**

5.1.4 Baseline and Expansion Comparison

This section contrasts baseline and expansion implementation requirements. **Figure 5-1** represents the total annual vehicle replacements required for the TDP period from FY2019-FY2029 for both baseline and expansion plans. **Figure 5-2** represents the net effect on the total Greene County fleet size over the same period because of the baseline and expansion vehicle acquisition and replacement programs. **Figure 5-3** represents the cumulative expenditure over the entire duration between the baseline and expansion programs.

Figure 5-1 | Annual Vehicle Procurements FY2019-FY2029

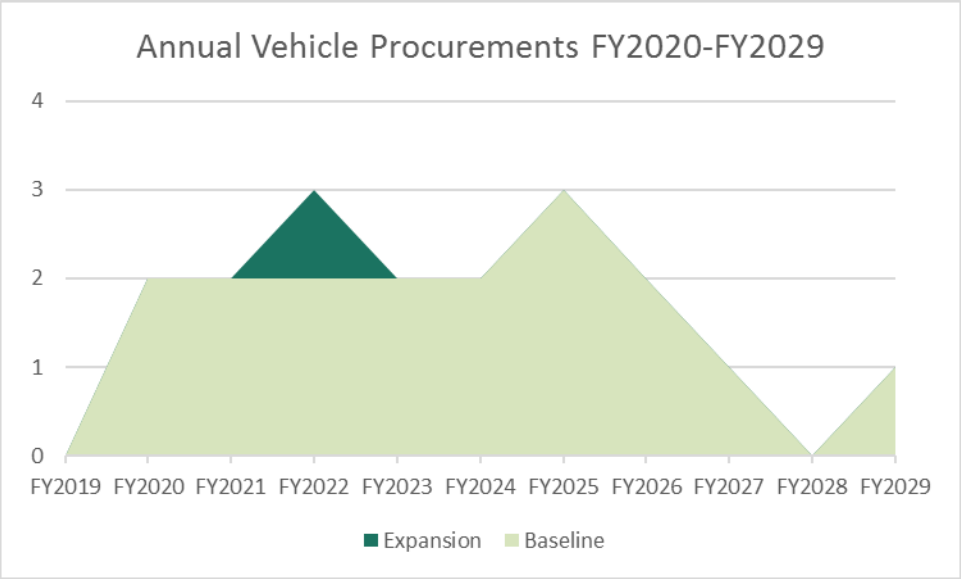


Figure 5-2 | Total Fleet Size FY2019-FY2029

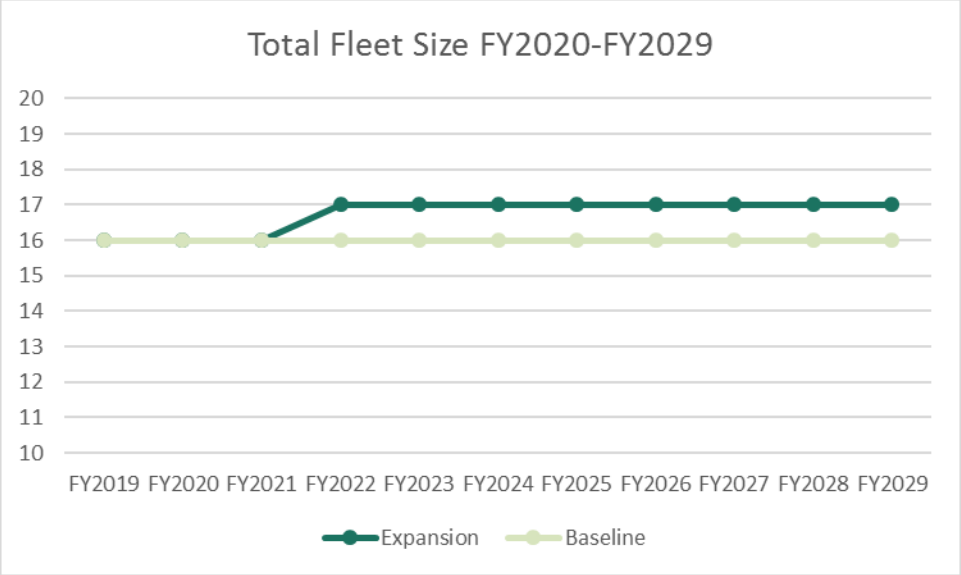
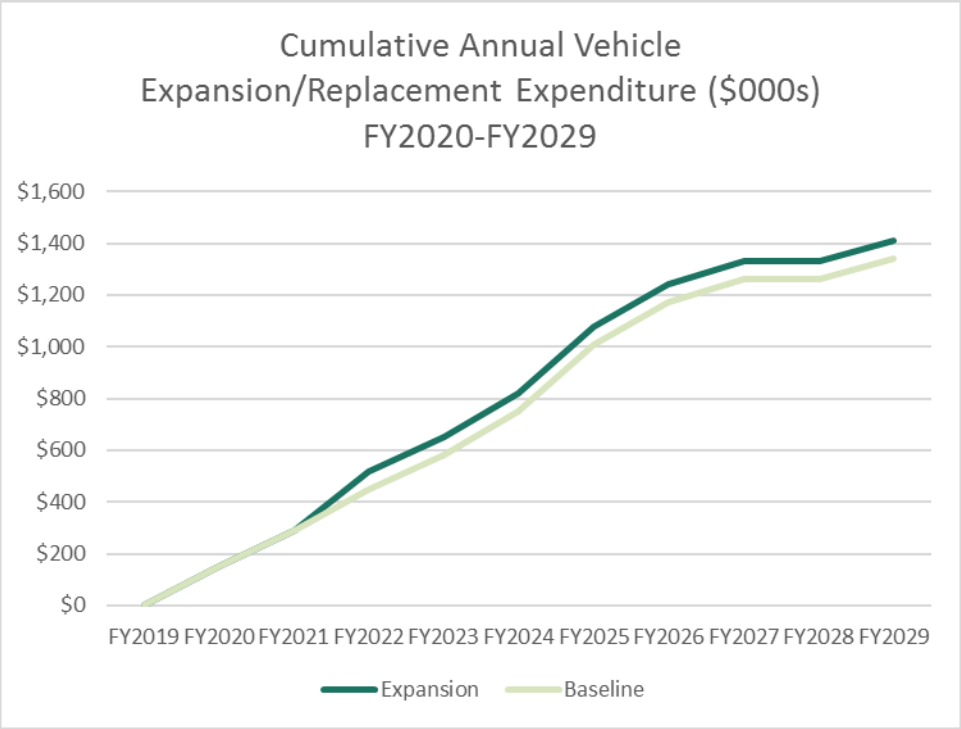


Figure 5-3 | Cumulative Annual Vehicle Expansion/Replacement Expenditure FY2019-FY2029



Results for both the six-year and full TDP timeframe are depicted in **Table 5-6**.

Table 5-6 | Greene County Baseline and Expansion Cost Comparisons by Timeframe

	Fiscal Years			
	FY2019-FY2024		FY2019-FY2029	
	Baseline	Expansion	Baseline	Expansion
Total New/Replacement Vehicles	13	14	17	18
Total Cost (000s)	$1,010	$1,080	$1,340	$1,410

5.2 MAJOR SYSTEM MAINTENANCE AND OPERATIONS FACILITIES

There are no recommendations for new or renovated facilities within the TDP timeframe, although needs may change in future years.

5.3 PASSENGER AMMENTITIES

There are no major recommended investments for passenger amenities during this TDP time period. This includes no new bus stop signage or shelters beyond what is presently provided.

5.4 NEW TECHNOLOGY SYSTEMS OR UPGRADES

A recommendation from this TDP is for Greene County to procure and maintain a basic scheduling software program. This technology would allow customer information and previously requested trips to be maintained in a database. This not only will increase efficiencies in scheduling but will also make record keeping and tracking of system metrics easier. Currently all scheduling is done manually by agency staff. This investment is anticipated in the short-term, FY2019-FY2020 timeframe. Industry estimates would place the cost as $60,000 - $80,000 (2018 dollars) for such a system for an operation the size of Greene County. Annual maintenance, support, and hosting costs thereafter could range from $6,000-$8,000 dependent upon the support agreement sought.

Chapter 6

Financial Plan

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6 Financial Plan

The purpose of the Financial Plan is to provide a planning-level forecast of Greene County Transit's (GCT) costs and revenue over the 10-year TDP time-frame. The Financial Plan is composed of both an operating and capital component.

The operating budget is associated with regularly reoccurring costs such as labor, maintenance, insurance, and administration. These costs are stable over time and tend to be closely tied to the amount of service provided. The operating budget is broken further down by the cost of operating existing service and the cost associated with implementing the TDP recommendations. The additional cost associated with the TDP recommendations would require local, state, or federal funds above GCT's existing projected funding allocation.

Capital costs reflect one-off investments in procurement of replacement or expansion assets such as vehicles, buildings, and IT systems. These figures fluctuate considerably year over year.

6.1 DATA ASSUMPTIONS AND SOURCES

To develop this financial plan, a range of assumptions were made. Long-range budgets are a projection based on a snapshot in time, and as such should be updated regularly to ensure accuracy. Generally, certainty over costs and revenue decrease further into the future.

6.1.1 Operating Budget Assumptions

Fare Revenue

Fares are the only source of direct operating revenue at GCT. Fare revenue is based on revenue estimates for FY2019 reported in DRPT's FY19 Six-Year Improvement Plan (SYIP).

As GCT has no planned fare increase at this time, the financial plan assumes a 0% growth in fare revenue per rider.

Fare revenue for new service is based off the estimated change in ridership developed in Chapter 4, with the average fare new riders assumed to be in line with the existing ridership.

Operating Grant Revenue

The Federal government, Commonwealth of Virginia, and local jurisdictions provide operating assistance to GCT in the form of grants. The base year allocation for federal and state funding is derived from DRPT's FY19 Six-Year Improvement Plan (SYIP). Local funding is constrained to half of operating revenue minus state operating assistance.

GCT's federal funding comes from Section 5311 Area formula funds. This funding is expected to grow year-over-year by 2.1%, the nationwide average growth of the Federal Formula fund program.

State funding is escalated off the FY19 base year according to changes DRPT's projected statewide transit operating assistance budget from FY20 to FY24 as reported by the FY19 SYIP. After FY24, state operating assistance is assumed to grow by 3%.

Operating Costs

Operating costs are assumed to grow by 3% per revenue hour year-over-year. The operating budget assumes that the TDP short-term recommendations are implemented in FY20, with the long-term recommendations introduced in FY24.

6.1.2 Capital Budget Assumptions

Capital Revenue

GCT relies of Federal formula funding for most of its capital needs. The capital budget assumes federal funds will continue to support 80% of capital needs,

with 16% coming from state matching funds, and 4% from local matching funds.

Capital Costs

GCT capital costs are derived from the CIP outlined in Chapter 4. Costs are escalated from FY18 values by 2% a year to account for inflation

6.2 OPERATING BUDGET

Table 6-1 presents the 10-year operating budget forecast for GCT. The TDP's short-term recommendations will be cost neutral. GCT will still see a small operating shortfall that will need to be filled if local funding remains constrained to 50% of operating revenue minus state funds, as is currently the practice.

In FY2024, GCT's mid-term recommendations would be implemented. These improvements will require a more substantial increase in operating assistance and currently these recommendations remain unfunded.

6.3 CAPITAL BUDGET

Table 6-2 presents the 10-year capital budget forecast for GCT. The organization's capital needs are expected to average $142,000 per year over the 10-year TDP planning timeframe.

6.4 CONCLUSION

GCT, like most transit providers in the state, faces a restrictive revenue environment that limits its ability to expand service with existing resources. While the short-term service recommendations are revenue neutral, mid-term and long-term recommendations will require additional funding to implement.

Table 6-1 | Operating Budget Forecast (Figures in 1000s)

Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Operating Revenue										
Fare Revenue	$52	$52	$52	$52	$52	$52	$52	$52	$52	$52
Ops Revenue Subtotal	$52	$52	$52	$52	$52	$52	$52	$52	$52	$52
Grants										
Federal	$531	$542	$553	$565	$577	$589	$601	$614	$627	$640
State	$151	$151	$151	$154	$156	$158	$163	$168	$173	$178
Local	$376	$420	$425	$446	$468	$492	$514	$536	$559	$583
Grant Revenue Subtotal	$1,058	$1,114	$1,130	$1,165	$1,202	$1,239	$1,278	$1,318	$1,359	$1,401
Revenue Total	**$1,110**	**$1,143**	**$1,178**	**$1,213**	**$1,249**	**$1,287**	**$1,325**	**$1,365**	**$1,406**	**$1,448**
Operating Cost										
Existing Service	$1,114	$1,147	$1,182	$1,217	$1,254	$1,291	$1,330	$1,370	$1,411	$1,453
Operating Cost of TDP Recommendations										
Net Cost of TDP Recommendations	$0	$9	$9	$10	$10	$126	$130	$134	$138	$142
Total Operating Costs	**$1,114**	**$1,156**	**$1,191**	**$1,227**	**$1,264**	**$1,417**	**$1,460**	**$1,504**	**$1,549**	**$1,596**
Additional Funding Need to Implement TDP Recommendations	**$4**	**$13**	**$13**	**$14**	**$14**	**$131**	**$135**	**$139**	**$143**	**$148**

Table 6-2 | Capital Budget Forecast (Figures in 1000s)

Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Capital Revenue										
Federal	$138	$116	$101	$142	$119	$76	$100	$101	$132	$115
State	$28	$23	$20	$28	$24	$15	$20	$20	$26	$23
Local	$7	$6	$5	$7	$6	$4	$5	$5	$7	$6
Revenue Subtotal	**$173**	**$145**	**$127**	**$177**	**$149**	**$95**	**$125**	**$127**	**$164**	**$143**
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Costs	**$173**	**$145**	**$127**	**$177**	**$149**	**$95**	**$125**	**$127**	**$164**	**$143**

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Chapter 7

Regional Coordination

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7 Regional Coordination

In 2017, the City of Charlottesville, Albemarle County and JAUNT, partnered with the Virginia Department of Rail and Public Transportation to establish The Regional Transit Partnership (RTP). The RTP is an advisory board meant to provide recommendations to decision-makers on transit-related matters. The RTP has four main goals:

- **Establishing Strong Communication**: The Partnership provides a long-needed venue to exchange information and resolve transit-related matters.
- **Ensuring Coordination between Transit Providers**: The Partnership gives transit providers a venue to coordinate services, initiatives and administrative duties of their systems.
- **Set the Region's Transit Goals and Vision**: The Partnership allows local officials and transit staff to work together with other stakeholders to craft regional transit goals. The RTP also provides, through MPO staff and updates of the Transit Development Plans (TDPs), opportunities for regional transit planning.
- **Identify Opportunities**: The Partnership will assemble decision-makers and stakeholders to identify opportunities for improved transit services and administration, including evaluation of a Regional Transit Authority (RTA).

Greene County Transit and UTS have also been invited to attend RTP meetings. By participating in these meetings, Greene County Transit can ensure that its interests are represented in regional transit matters.

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Appendices

Appendix A: Rider Survey Results

Appendix B: Greene County Transit Profile

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8 Appendix A: Rider Survey Results

Grouped by question or prompt category, this appendix contains the full results of Greene County Transit's telephone and on-board rider surveys conducted during June 2017.

8.1 TELEPHONE SURVEY

8.1.1 Respondent Profile

Current Rider Status

QUESTION: Have you ever ridden with Greene County Transit?

Table 8-1 | Previous Riding Experience with GCT (n=100)

Response	Number of Responses
Yes	48 (48%)
No	52 (52%)

Disability Status

QUESTION: Do you have a disability?

Table 8-2 | Disability Status (n=48)

Response	Number of Responses
Yes	18 (38%)
No	30 (63%)

QUESTION: Do you use a wheelchair?

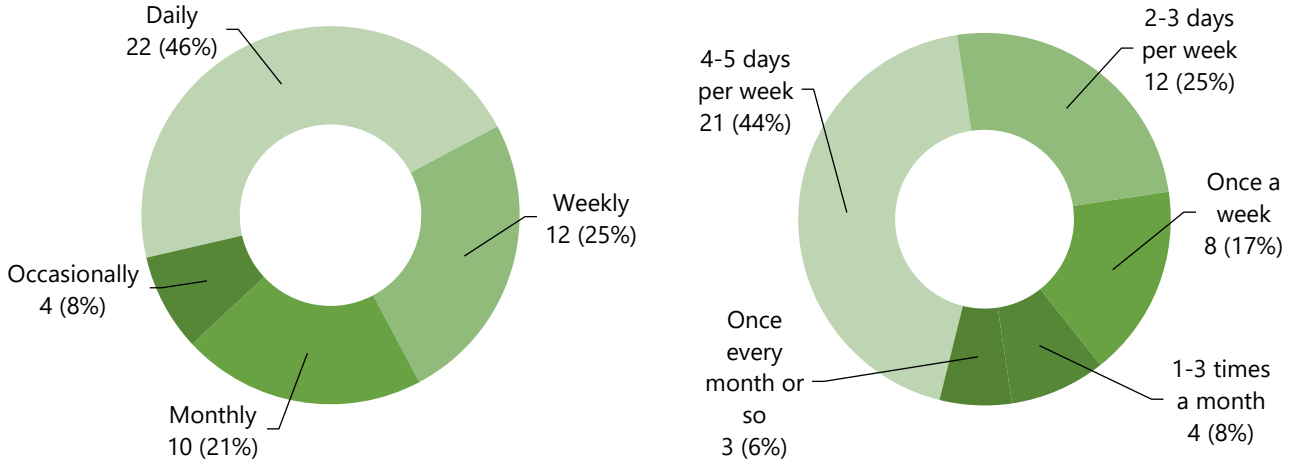
- Two respondents responded "Yes."

8.1.2 Use of System: Current Riders

Rider Frequency of Use

QUESTION: How often do you ride Greene County Transit?[2]

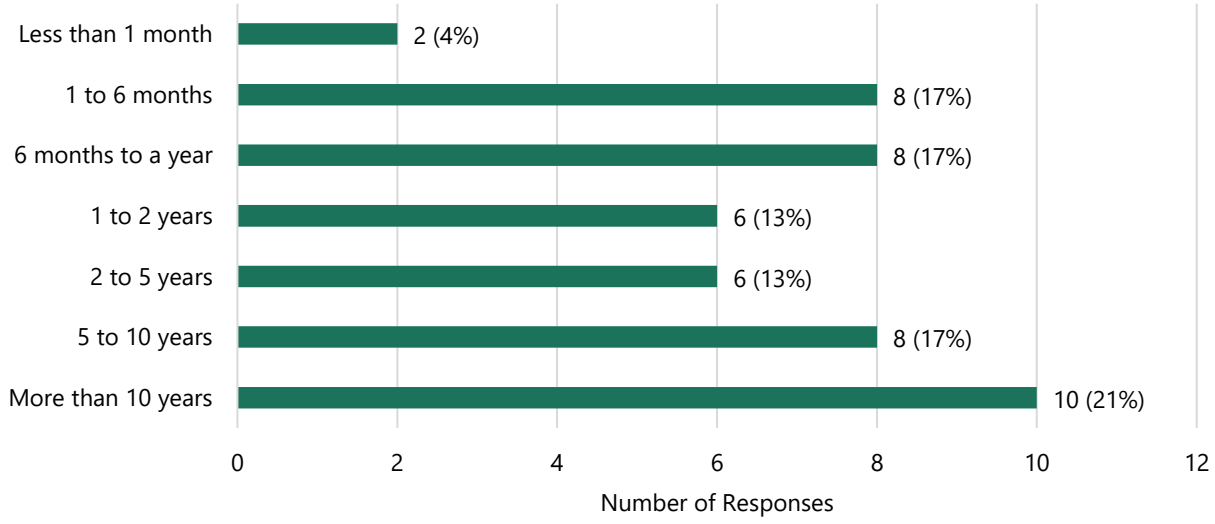
Figure 8-1 | Frequency of Use (n=48)



Rider Length of Use

QUESTION: How long have you ridden Greene County Transit?

Figure 8-2 | Length of Use (n=48)

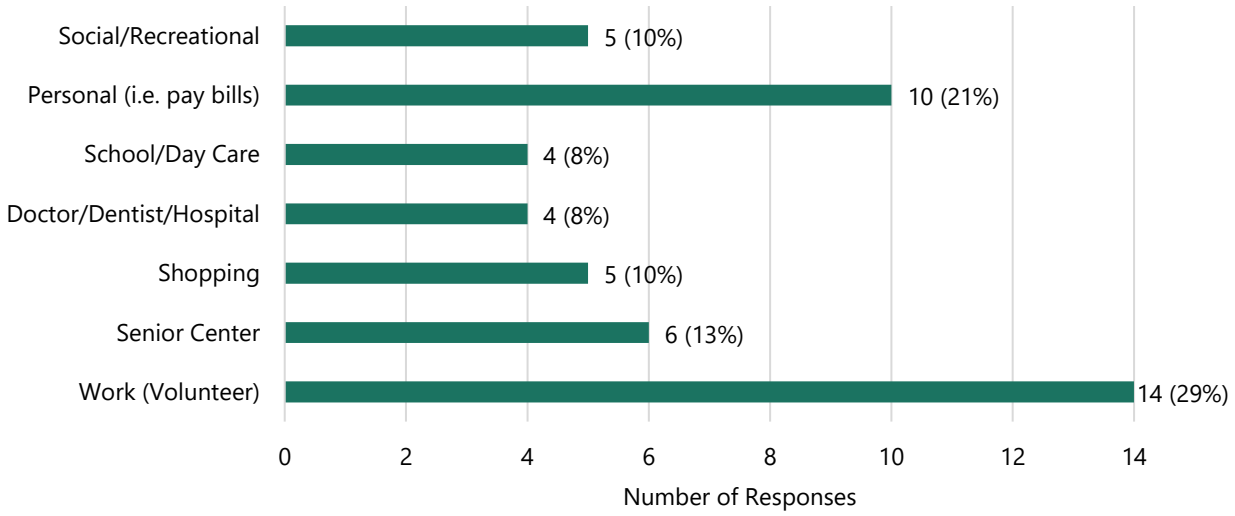


[2] Respondents were asked this question in two different fashions, as displayed here.

Trip Purpose

QUESTION: What is your main purpose for transportation?

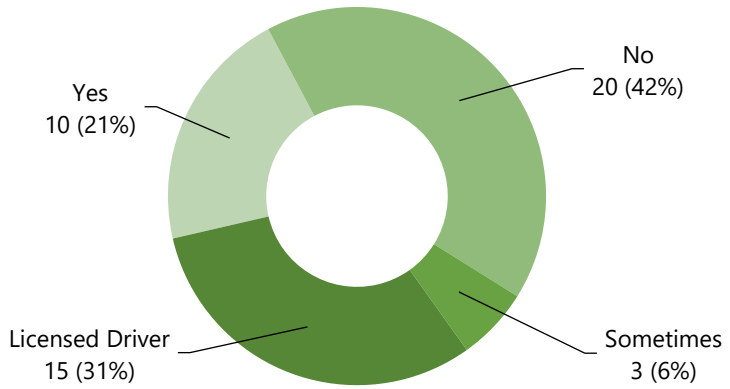
Figure 8-3 | Trip Purpose (n=48)



Alternative Transportation

QUESTION: Do you have transportation other than Greene County Transit / are you a licensed driver?

Figure 8-4 | Alternative Transportation (n=48)



QUESTION: Do you ride other transportation systems?

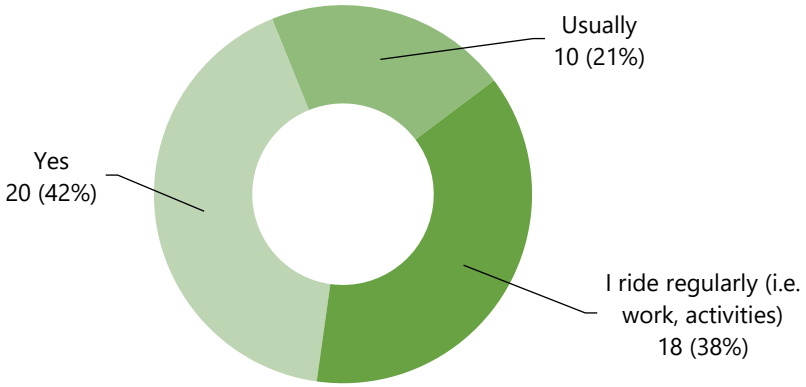
- All respondents (48) responded "No."

8.1.3 Customer Satisfaction

Ease of Access

Question: Is GCT able to get you where you need to go?

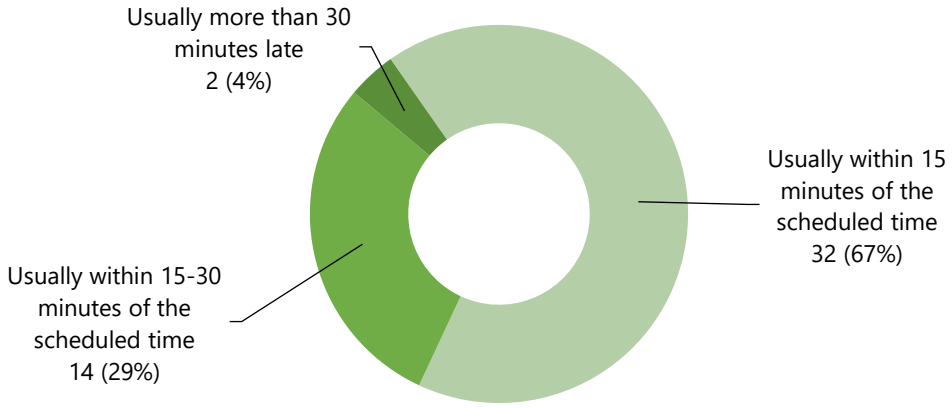
Figure 8-5 | Ease of Access to Locations (n=48)



On-Time Performance

QUESTION: Does the GCT vehicle pick you up on time?

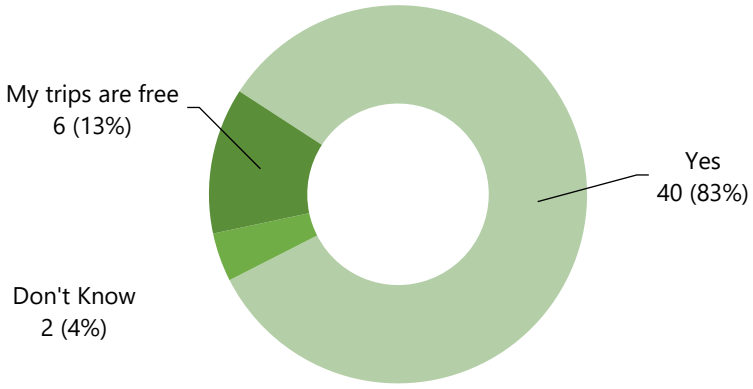
Figure 8-6 | On-Time Satisfaction (n=48)



Fares

QUESTION: Do you feel our service is reasonably priced?

Figure 8-7 | Pricing Satisfaction (n=48)



8.1.4 Safety and Comfort

Seatbelt Usage

QUESTION: Do the drivers insist that you wear your seatbelt?

Table 8-3 | Seatbelt Usage (n=56)

Response	Number of Responses
Yes	38 (68%)
Usually	18 (32%)
No	0 (0%)

Driver Assistance

QUESTION: Do the drivers help you when you need assistance on and off the bus?

- 48 respondents responded "Yes."

Vehicle Condition

QUESTION: Are the vehicles clean and comfortable?

Table 8-4 | Vehicle Condition (n=48)

Response	Number of Responses
Yes	28 (58%)
Usually	20 (42%)
No	0 (0%)

8.1.5 Questions for Non-Riders

QUESTION: How could we improve our services to better meet your transportation needs?

- Eight respondents selected "Destination Locations."

QUESTION: Are there locations that we currently do not serve but would be beneficial to you?

- Earlysville
- Madison
- Orange

QUESTION: Would the extended Charlottesville runs be of benefit to you?

Table 8-5 | Extended Charlottesville Run Interest (n=48)

Response	Number of Responses
Yes	33 (69%)
No	15 (31%)

QUESTION: Do you have any suggestions for our transit services?

- More minivans
- More locations

8.2 ON-BOARD SURVEY3

8.2.1 Respondent Profile

Residence of Respondents

QUESTION: In what city, town, or community do you live?

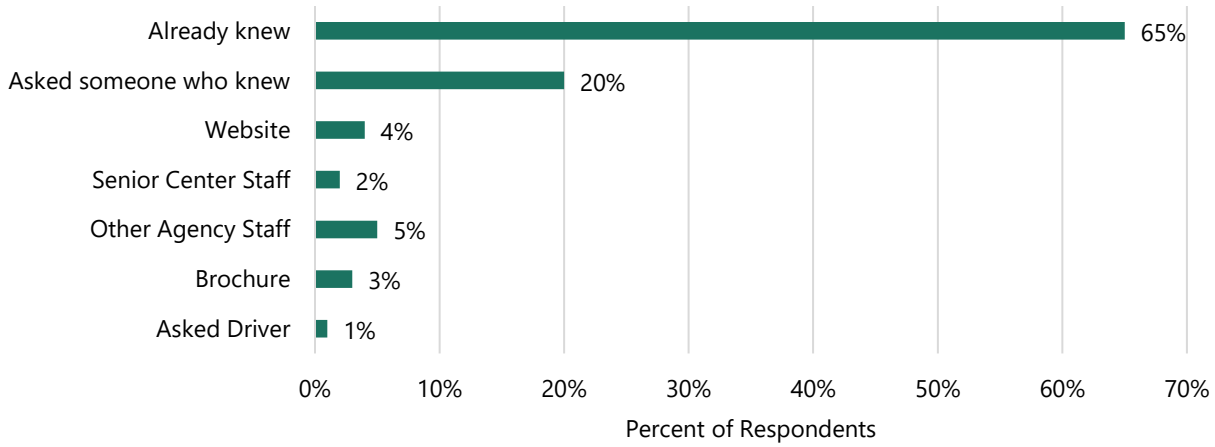
- Ruckersville
- Stanardsville
- Barboursville

[3] While the on-board survey reached 100 total participants, the number of responses specifically yielded for each question is not available. Thus, only percentages are shown in this section.

Knowledge of System

QUESTION: How did you find out about Greene County Transit services?

Figure 8-8 | Knowledge of Greene County Transit

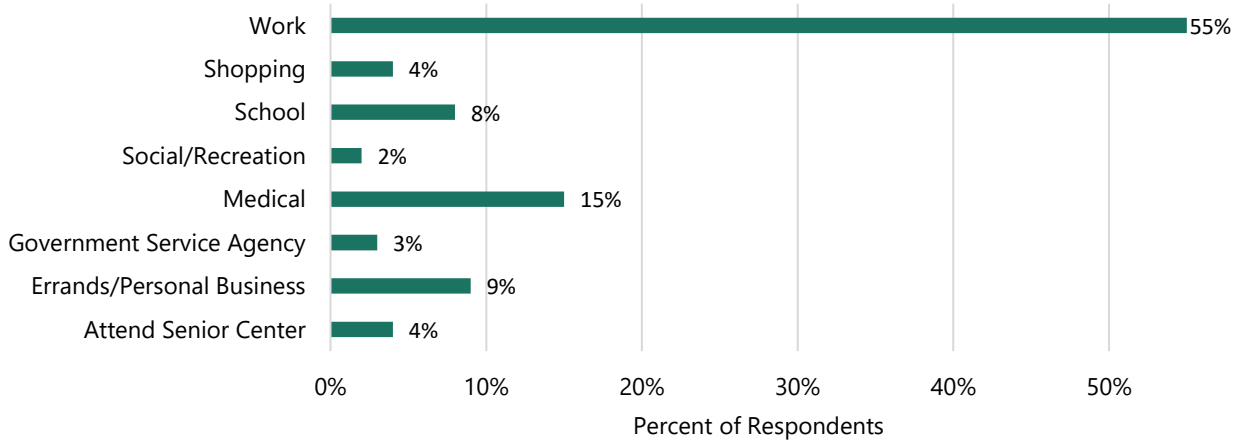


8.2.2 Use of System

Trip Purpose

QUESTION: What is the purpose of your Greene County Transit trip today?

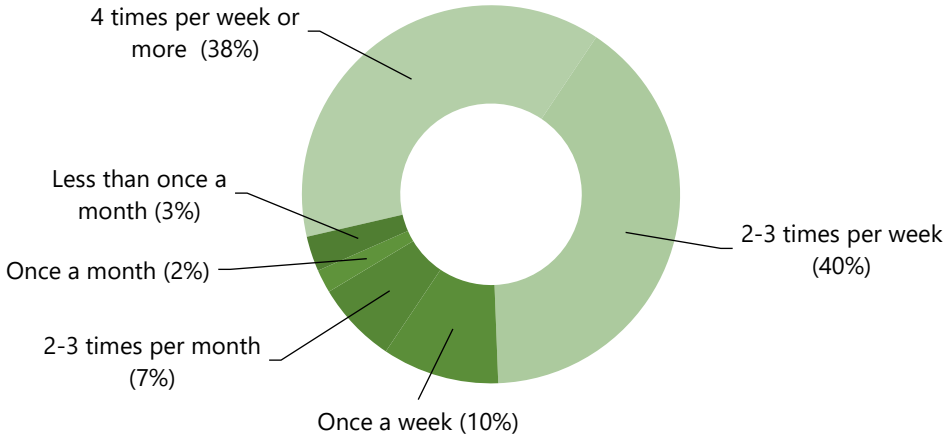
Figure 8-9 | Trip Purpose



Frequency of Use

QUESTION: How often do you use Greene County Transit services?

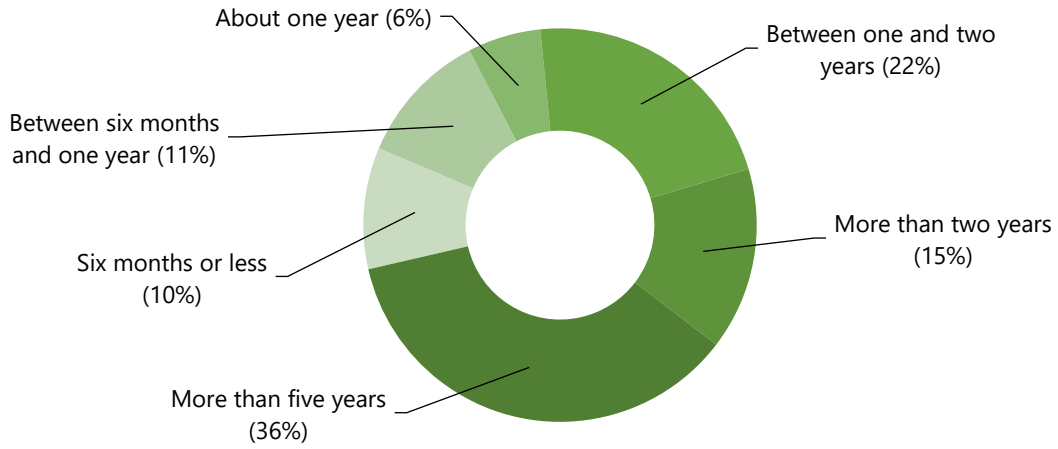
Figure 8-10 | Frequency of Use



Rider Length of Use

QUESTION: How long have you been using Greene County Transit services?

Figure 8-11 | Length of Use

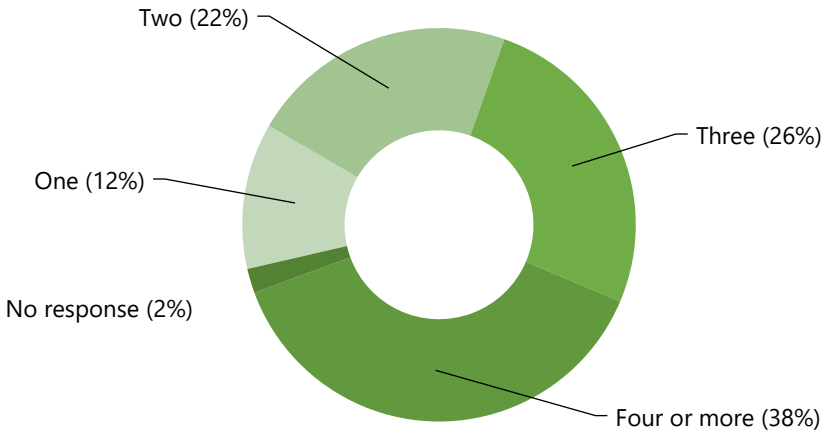


8.2.3 Demographic Information

Number of Household Residents

QUESTION: Including yourself, how many people live in your home?

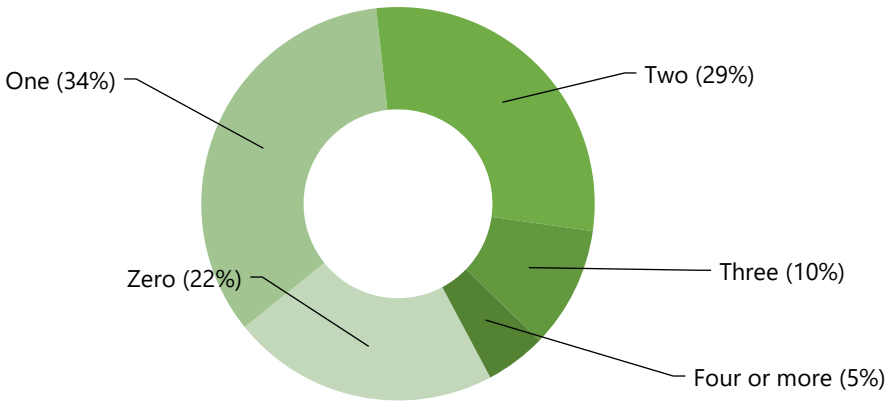
Figure 8-12 | Number of Household Residents



Vehicles Available

QUESTION: How many vehicles (cars, trucks, motorcycles) are available in the household where you live?

Figure 8-13 | Vehicles Available



QUESTION: Was a car available for this trip?

Table 8-6 | Vehicle Availability for This Trip

Response	Percent of Responses
Yes	25%
No	75%

Driver's License Status

QUESTION: Do you have a driver's license?

Table 8-7 | Driver's License Status

Response	Percent of Responses
Yes	40%
No	60%

Internet Access

QUESTION: Do you have internet access?

Table 8-8 | Internet Access Status

Response	Percent of Responses
Yes	70%
No	28%
No Response	2%

8.2.4 Customer Satisfaction

Overall Satisfaction

QUESTION: What do you like best about Greene County Transit services?

- Friendly drivers / courteous
- Convenient / dependable
- Price

QUESTION: What do you like least about Greene County Transit services?

- Waiting / slow service
- More service to Charlottesville

Ease of Access

QUESTION: Are there places in the region where you would go, but cannot get to because there is not service available for this trip?

Table 8-9 | Ease of Access

Response	Percent of Responses
No	75%
Yes*	25%

***Locations listed (if "Yes"):**

- Orange
- Madison

Satisfaction Metrics

PROMPT: Rate your satisfaction with Greene County Transit in the following areas.

Table 8-10 | Customer Satisfaction Metrics

Prompt	Very Satisfied	Satisfied	Unsatisfied	Very Unsatisfied	No Response
Trip Scheduling Process	70%	27%	3%	0%	0%
Telephone Customer Service	80%	19%	0%	0%	1%
On-Time Performance	68%	29%	2%	0%	1%
Days of Service	75%	22%	2%	0%	1%
Hours of Service	72%	26%	0%	0%	2%
Cost of Service	82%	16%	0%	0%	2%
Cleanliness of the Vehicles	85%	15%	0%	0%	0%

Prompt	Very Satisfied	Satisfied	Unsatisfied	Very Unsatisfied	No Response
Driver Courtesy	90%	10%	0%	0%	0%
Availability of Information	75%	22%	0%	0%	3%
Usefulness of Greene County Transit	70%	29%	0%	0%	1%
Safety and Security	85%	15%	0%	0%	0%

9 Appendix B: Greene County Transit Profile

The following profile details the service analysis conducted on the Greene County Transit service. For the GCT system the following service strengths and weaknesses were identified.

Strengths

- Only general public demand response service available in Greene County
- Relatively steady ridership per revenue hour throughout the service day, indicating good vehicle capacity management
- High passengers per revenue hour compared to peer services
- Low operating cost per passenger compared to peer services

Weaknesses

- Relatively low ridership and productivity on Saturdays
- Relatively low farebox recovery ratio as compared to peer agencies

9.1 OPERATING STATISTICS

Table 9-1 lists annual operating statics for Greene County Transit during FY2016. Over this timeframe, the agency provided 63,448 total trips, expending $765,866 and earning $49,938 in farebox revenue.

Table 9-1 | FY2016 Annual Operating Characteristics

Metric	Total
Passenger Trips	63,448
Operating Costs	$765,866
Farebox Revenue	$49,938

9.2 SERVICE PRODUCTIVITY

Table 9-2 shows FY2016 annual service productivity metrics for Greene County Transit. To provide context to these numbers, they are compared to several county-focused demand response services operated in neighboring or near-by counties by JAUNT during the same fiscal year.

By comparison, Greene County Transit carried more annual passengers per revenue hour (2.94) than any of the peer services and reported the lowest operating cost per passenger ($12.07). While the agency's farebox recovery ratio – 6.5 percent – was higher than JAUNT's Nelson County service, service in Fluvanna and Louisa Counties recovered a comparatively greater percentage of their operating costs through fare revenue. Demand response fares in these two jurisdictions range from $1.25 to $5.00, depending on the type of trip. The use of a higher maximum fare in Fluvanna and Louisa Counties than that of Greene County Transit allowed JAUNT to report a higher farebox recovery ratio.

Table 9-2 | FY2016 Annual Service Productivity Metrics

Metric	Greene County Transit		JAUNT Demand Response (by County)		
			Nelson	Fluvanna	Louisa
Passengers per Revenue Hour	2.94		2.64	2.62	1.74
Operating Cost per Passenger	$12.07		$16.40	$16.40	$24.88
Fare (One Way)	Within Greene County	$2.50	$2.75-$3.25	$1.25-$4.00	$4.00-$5.00
	To/From Charlottesville and Albemarle County	$3.004			
Farebox Recovery Ratio	6.5%		5.9%	8.8%	10.9%

9.3 RIDERSHIP

9.3.1 Ridership Activity

Based on driver manifest data for the first week of May 2017,[5] the heat maps below show how ridership activity is distributed throughout Greene County on weekdays (**Figure 9-1**) and Saturday (**Figure 9-2**). For both day types, ridership is concentrated in the Stanardsville area, particularly just off the intersection of Spotswood Trail main route (Route 33) and the Spotswood Trail business route. Ridership is also relatively high in Ruckersville surrounding the intersection of Route 29 and Seminole Trail, and around the intersection of Fredericksburg Road (Route 609) and Spotswood Trail.

[4] Depending on pickup and destination locations, some fares to Charlottesville may amount to $3.50, and some fares within Greene County may amount to $3.00.

[5] Approximately one quarter of pickup locations recorded in Greene County Transit operator manifest data for May 2017 specified only a general street name rather than a precise address. While these pickup locations were not plotted in **Figure 9-1** or **Figure 9-2** they are encompassed in ridership by hour calculations.

Figure 9-1 | Weekday Ridership Activity

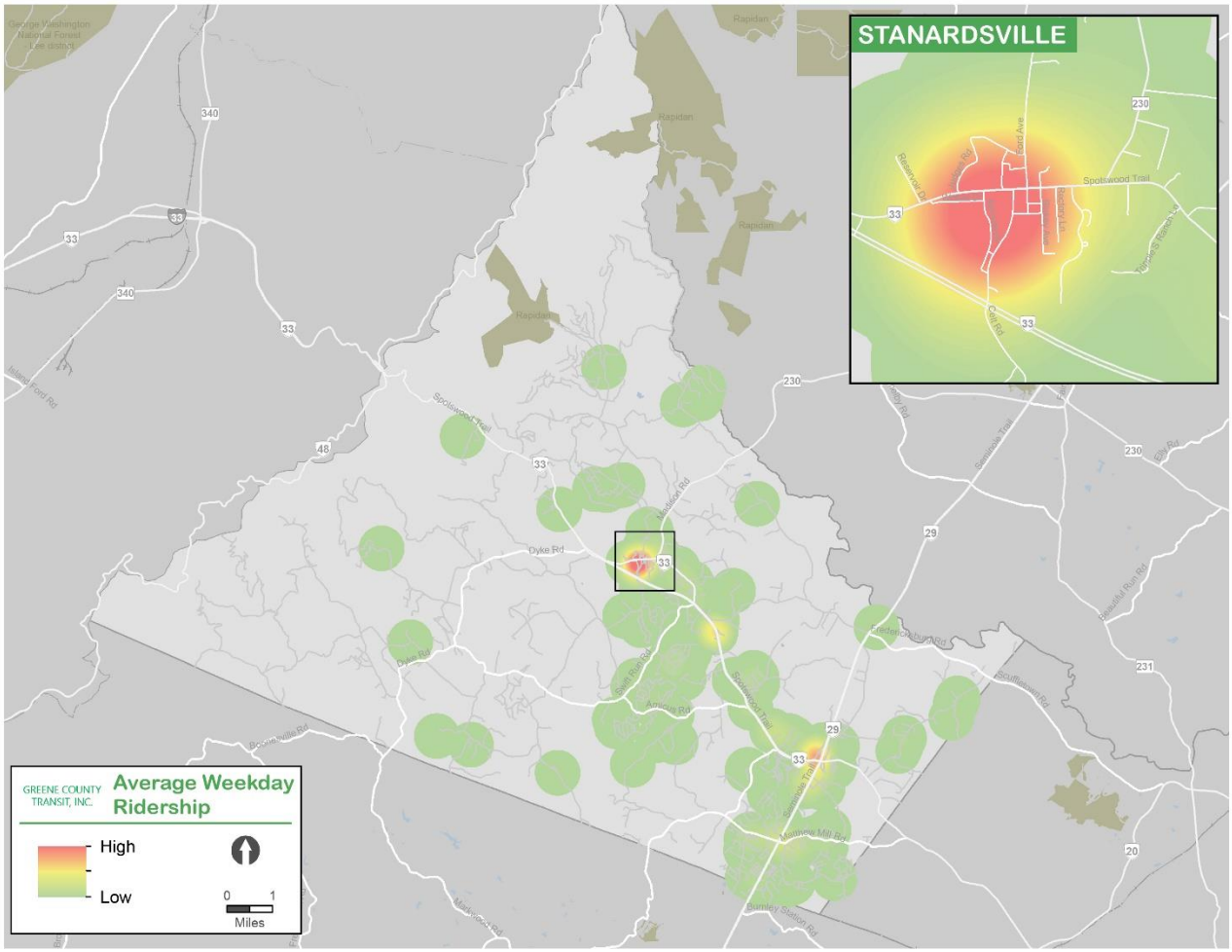
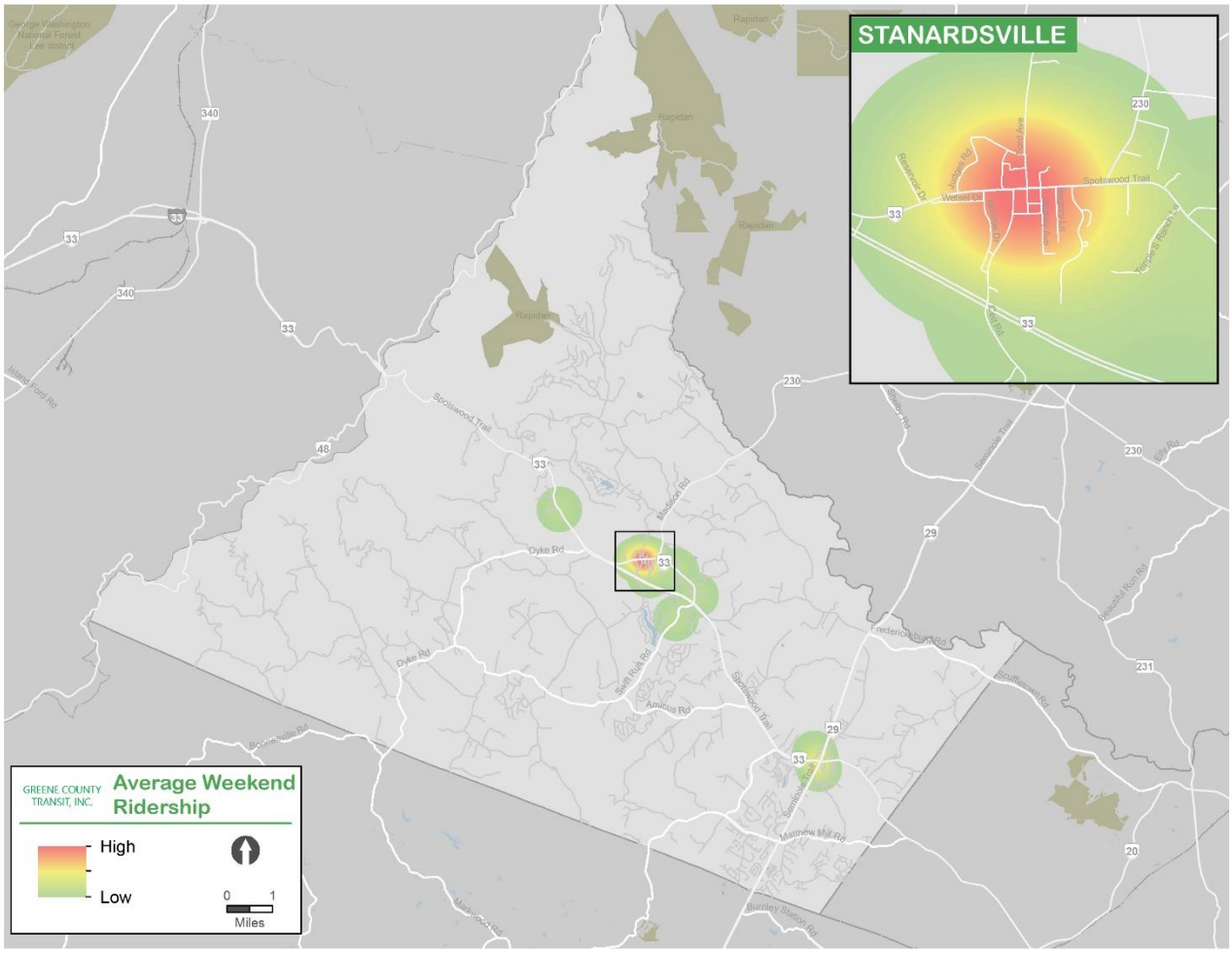


Figure 9-2 | Saturday Ridership Activity



9.3.2 Ridership per Service Hour

Figure 9-3 shows average weekday ridership per revenue hour for Greene County Transit during a typical week in May 2017. Weekday ridership peaks during the 3:00 PM hour, when there is a mix of return trips from Walmart, destinations in Charlottesville, and Greene County schools. **Figure 9-4** shows total ridership during the Saturday sampled for this assessment. Saturday ridership peaks during the 9:00 AM and 12:00 PM hours, but is significantly lower overall than weekday ridership.

Figure 9-3 | Average Weekday Ridership per Hour

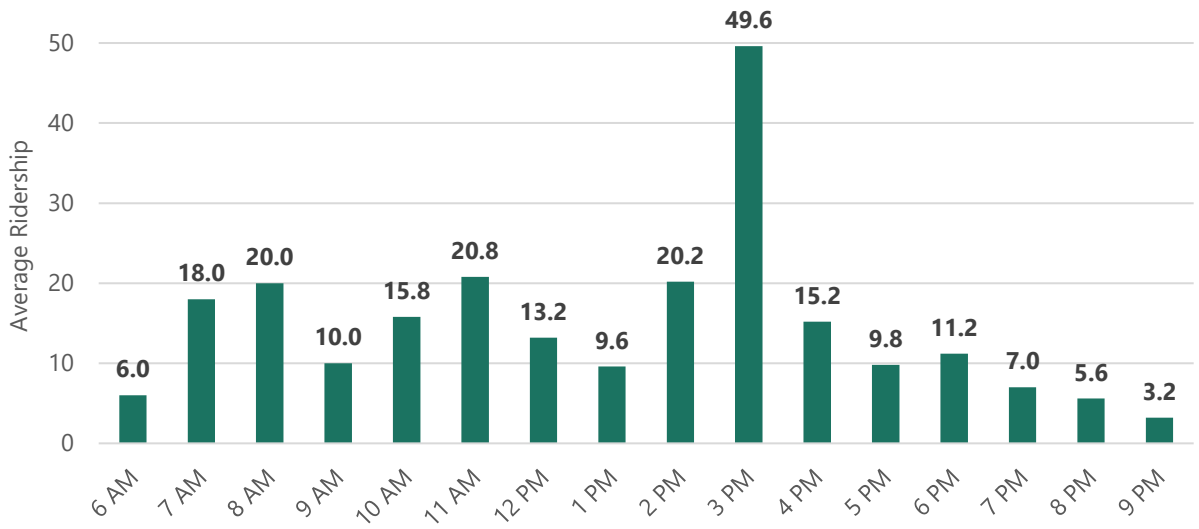
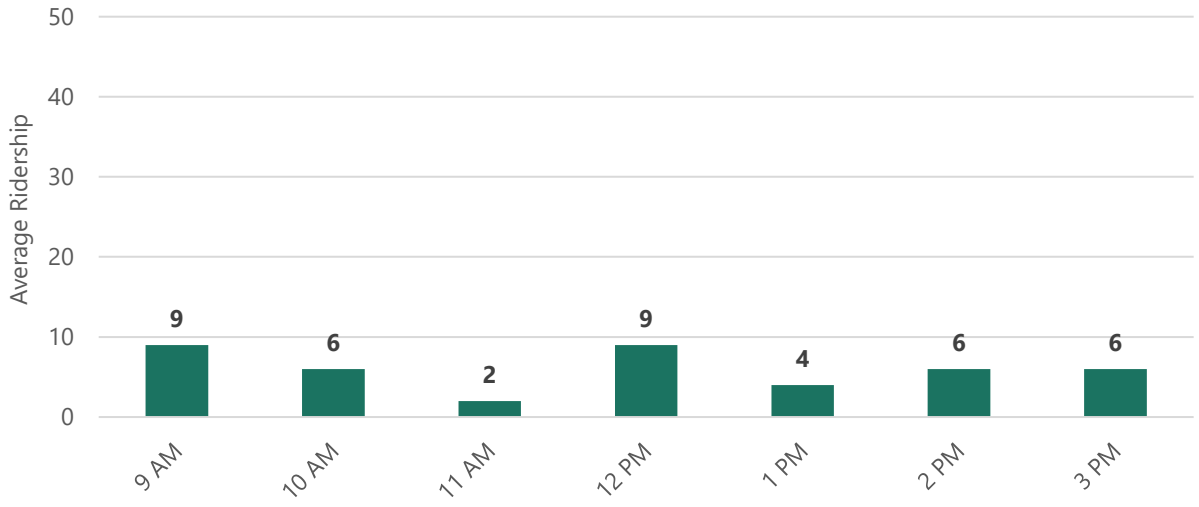


Figure 9-4 | Average Saturday Ridership per Hour



9.3.3 Ridership per Vehicle Hour

Assessing ridership per vehicle hour in comparison to ridership per service hour sheds light on the productivity of a service and how well vehicle capacity aligns with ridership demand over the course of a day. On weekdays, Greene County Transit operates six vehicles during the day shift – which runs from 6:00 AM to 4:00 PM – and staggers four vehicles during afternoon/evening shifts that begin as early as 12:30 PM and run as late as 9:00 PM. On Saturdays, three vehicles operate throughout the day. **Figure 9-5** approximates ridership per vehicle hour on weekdays and Saturdays. On weekdays, Greene County carries the greatest number of passengers (five) per vehicle hour during the 3:00 PM hour, during which overall ridership is also busiest. On Saturdays, ridership per vehicle hour peaks during the 9:00 AM and 12:00 PM hours at three passengers per vehicle hour.

Figure 9-5| Ridership per Vehicle Hour