Farmville Area Bus Transit Development Plan

Final Report – January 2023

KFH GROUP

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Chapter 1:
Overview of Public Transportation in the Region

Introduction

A Transit Development Plan (TDP) is a multi-year planning document that is intended to provide direction for a transit system and its community partners. The planning process identifies transit needs, develops potential improvements to meet the needs, prioritizes these potential improvements, and identifies the resources needed to implement the chosen improvements.

The planning process for a TDP is typically guided by transit program staff, with input from an advisory committee made up of transit program stakeholders and community partners. Public and rider input is also sought during the process to ensure the plan reflects the needs of the community.

In Virginia, the Virginia Department of Rail and Public Transportation (DRPT) requires that each transit agency complete a TDP once every six years. DRPT uses the information compiled within the TDPs for programming, planning, and budget activities. Once completed, the Farmville Area Bus (FAB) TDP will provide a basis for inclusion of FAB operating and capital program in the commonwealth's Six Year Improvement Plan (SYIP) and Statewide Transportation Improvement Program (STIP). The TDP planning process follows a set of requirements and a report format outlined by DRPT. The current planning horizon for TDPs in Virginia is 10 years.

This FAB TDP is being prepared for the Town of Farmville as well as portions of Prince Edward County outside of Farmville.

The previous TDP for FAB was completed in 2016. The current TDP planning process was initiated in February 2022 at the February 11th kickoff meeting.

This first chapter of the TDP provides an overview of the transit program and provides background information and data that will be used for the subsequent data collection, analysis, and eventual recommendations for the ten-year plan.

History

The development of the Farmville Area Bus (FAB) system began in 1990 when fixed-route service started on a trial basis. The first route, called the Blue Line and serving the Town of Farmville, eventually became permanent. Service was expanded with the introduction of the Red Line which connected Farmville to Hampden-Sydney College. Service to Hampden-Sydney was discontinued in 1992 and the route was rebranded as the Express Line that parallels part of the Blue Line but operates a faster trip to the Walmart in the south end of town with fewer stops. Today, FAB operates five fixed routes and demand response paratransit service that provides door-to-door pickups within ¾ miles of fixed-route service in the Town of Farmville. Three of the routes operate entirely inside Farmville: the Blue Line, Express Line ("The Summer Shuffle" during the summer), and Campus Line. The Blue Line and Express Line operate throughout the town, whereas the Campus Line, which began in 2005, caters to Longwood University students. Along with local, state, and federal funding, the university provides a significant annual contribution. Two additional routes, the Green and Orange Lines, connect rural parts of Prince Edward County with Farmville. These routes are deviated fixed routes and are operated by FAB, funded by the county, and branded as Prince Edward Regional Transit (PERT) service. All routes are listed below and discussed in greater detail.

Governance

FAB operates under the jurisdiction of the Town Council of Farmville (the Council), which operates as a council-manager system. The Council consists of seven members, who are elected every four years. Five of the members are elected through the town's ward system with an additional two members voted at-large. The Council then appoints a town manager to implement the policies and ordinances and supervise all town departments, including FAB. The current Council was inaugurated in November 2022 and consists of the following members detailed below. In regard to funding, capital expenditures for FAB and all FAB-operated routes are provided through federal funding (80 percent) and a blend of state and local funding (20 percent). Operating expenditures are provided through Federal Transit Administration (FTA) 5311 funding (50 percent) and a blend of state and local sources (50 percent). Local funding comes from a variety of municipalities and organizations, depending on the route.

Current members of the FAB Governance are as follows:

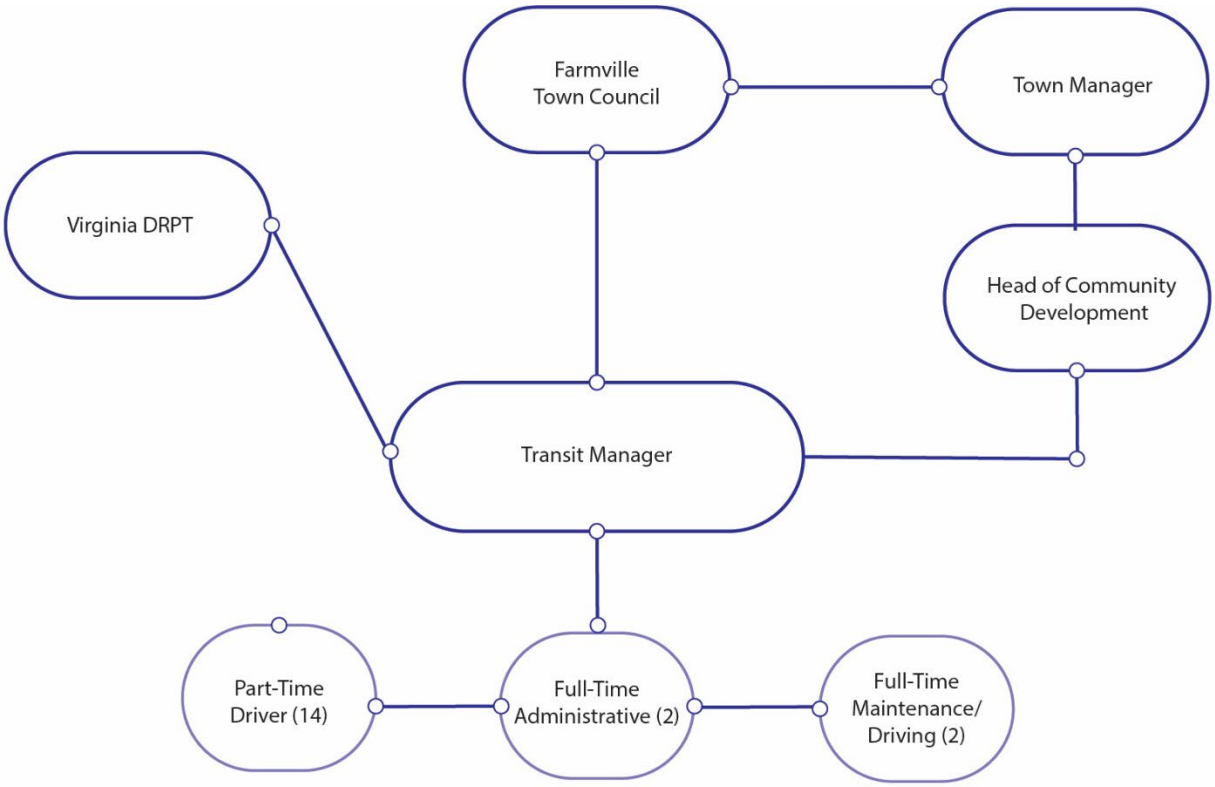
- C. Scott Davis, Town Manager
- Brian Vincent, Mayor
- A.D. "Chuckie" Reid, Vice Mayor
- John Hardy, Ward A
- Adams Yoelin, Ward B
- Donald L. Hunter, Ward D
- Sallie O. Amos, Ward E
- Daniel E. Dwyer, At-Large
- Thomas M. Pairet, At-Large

Organizational Structure

The hierarchical relationship between FAB and the Town of Farmville is detailed in Figure 1-1. FAB staff currently consists of 17-18 employees, 3-4 of whom are full-time staff and 14 are part-time. Two of the full-time staff are administrative (including the Transit Manager) and the other two perform light maintenance, janitorial and driving duties. Staff are considered employees of the Town of Farmville and are nonunionized. Bus maintenance is performed by the municipal mechanics at the town maintenance facility, which is separate from the FAB bus facility. Julie Adams, Transit Manager, oversees the daily operations of FAB. The Transit Manager reports to the Head of Community Development, Mr. Leander Pambid, who reports to the Town Manager, who then reports to the Council as needed. In addition, the Transit Manager liaisons with a staff member from the State Department of Rail and Public Transportation (DRPT) to assist FAB in coordinating with surrounding transit agencies and to ensure that bus service is meeting state and federal requirements.

Today, FAB operates five fixed routes and demand response paratransit service that provides door-to-door service within ¾ miles of fixed route service in the Town of Farmville.

Figure 1-1: FAB Reporting Hierarchy



Transit Service Area Background

FAB operates a total of five routes that serve the Town of Farmville and Prince Edward County as displayed in Figure 1-2. Three of the routes serve Farmville: the Blue Line, the Express Line, and the Campus Line. Two additional routes, the Orange and Green lines, operate in Prince Edward County outside of Farmville. These routes serve rural areas in the county and operate on a deviated fixed-route system that requires a call 24 hours in advance to schedule a pick-up along certain segments of the route. The system also offers an ADA-Paratransit service in the Town of Farmville in order to satisfy requirements pertaining to ADA and Title VI of the 1964 Civil Rights Act, which prohibits the denial of service based on discrimination. Passengers must call 24 hours in advance to schedule a pick-up.

Table 1-1 displays a sample of ridership over a two-week period for FAB routes.

Figure 1-2: FAB Service Area and System Map

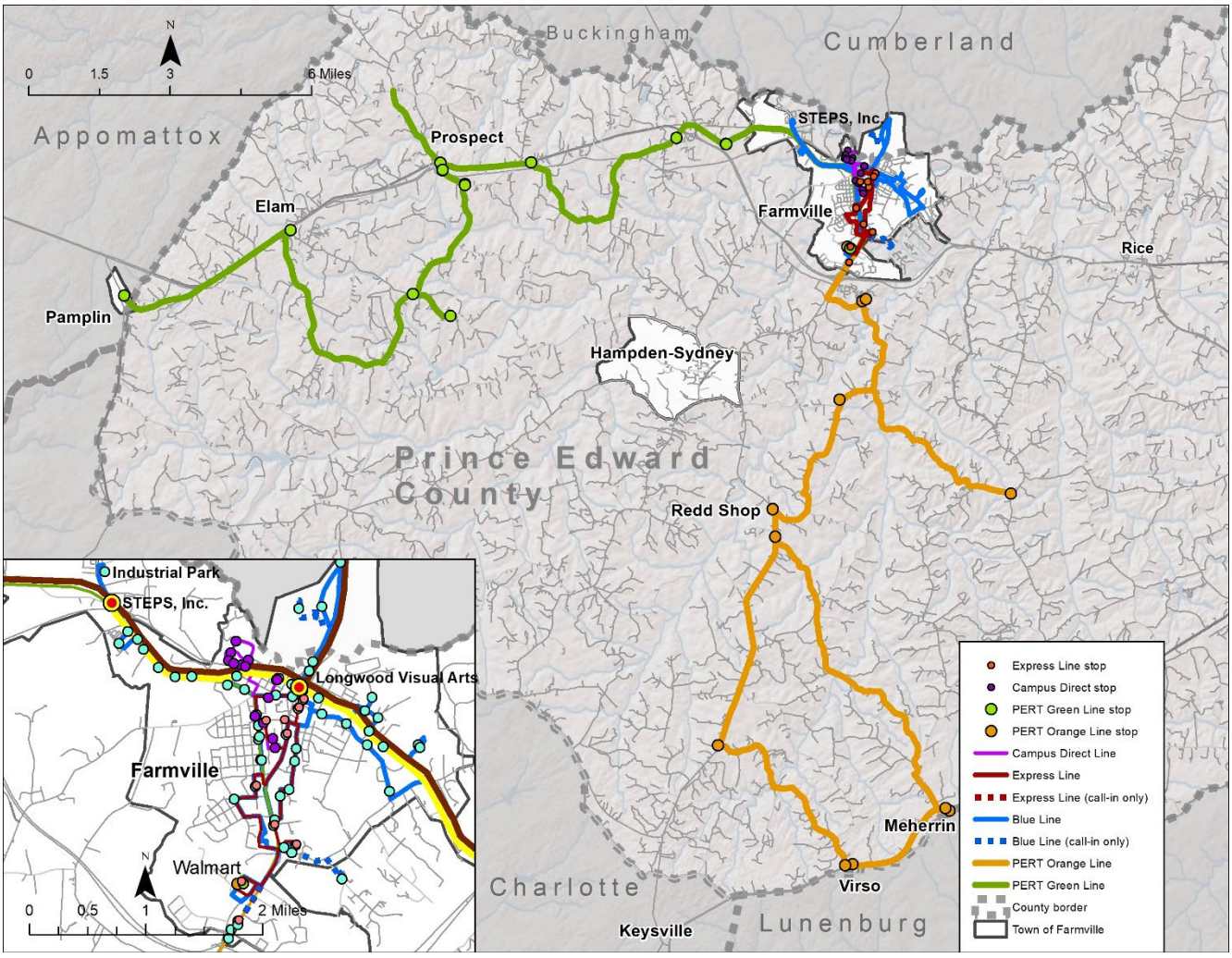


Table 1-1: FAB Routes Ridership

Route	2019	2021	2019-2021 % Change
Blue Line	310	200	-55%
Campus Line	1683	993	-70%
Express Line	814	694	17%
County Line (PERT)	70	67	-4%
Paratransit Van	194	242	25%

SOURCE: FAB FROM OCTOBER 18-31, 2019, AND 2021

Due to the ongoing pandemic and the rise in virtual learning, ridership for the Campus Line which serves Longwood University decreased significantly since 2019. Meanwhile, Blue Line ridership (most of whom are residents and not students) decreased by about half. The Express Line ridership decreased slightly by about 17%. However, ridership for the PERT stayed about the same, while paratransit ridership actually increased by 25%.

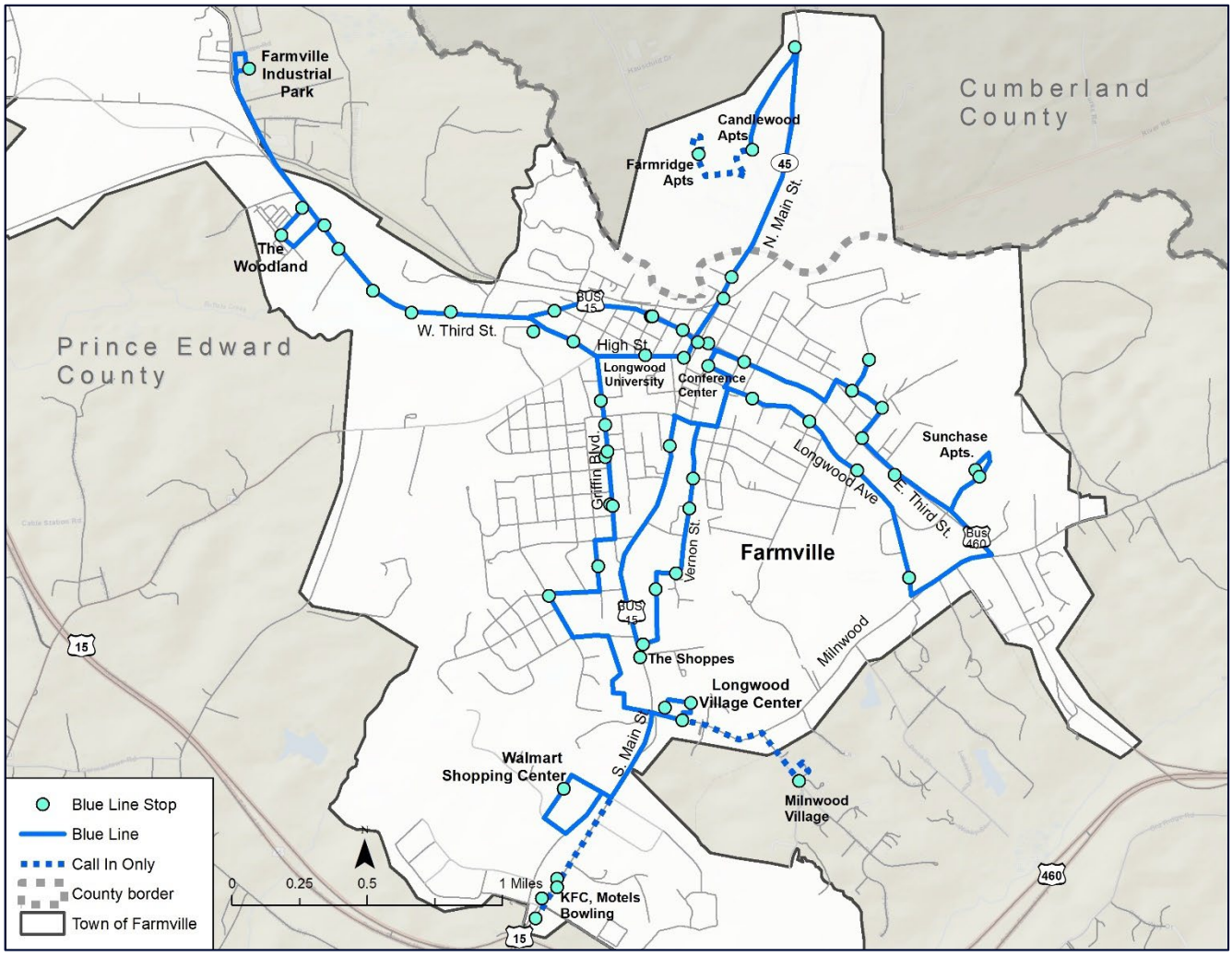
Blue Line

The Blue Line operates in a one-way directional loop through the Town of Farmville starting at Candlewood Apartments and connects town residents and multi-family apartments with major destinations, particularly Walmart and Food Lion (in the south part of town), and Southside Community Hospital. The Walmart Shopping Center serves as a major transfer point for the Orange or Green County Line and Express Line. One round trip takes about an hour. Figure 1-3 shows the alignment of the Blue Line while Table 1-2 shows Blue Line operating characteristics. Some residential locations are served on alternate trips and only on a call-in basis. The south end of town including the motels and a bowling alley are also served on a call-in basis. Most stops in downtown Farmville and around Longwood University have shelters and signage, while major stops such as Farmville Conference Center and Walmart display route maps. Shelters are also present at multi-family residential areas such as Sunchase Apartments. While sidewalks are found along the route, sidewalks and pedestrian access can vary along residential areas beyond downtown. In FY2022, operations funding was provided by Federal 5311 funds (50 percent), a blend of state and local funds of $269,642, and funding from both the CARES Act ($139,045) and American Rescue Plan Act ($31,233). This funded both the Blue Line and Express Line (50 percent). The Blue Line route is displayed in Figure 1-3.

Table 1-2: Blue Line Operating Characteristics

Operating Days	Operating Hours	Trips	Peak Buses
Monday - Friday	7:04 a.m. – 6:15 p.m.	11	1
Saturday	8:04 a.m. – 6:15 p.m.	10	1

Figure 1-3: Blue Line



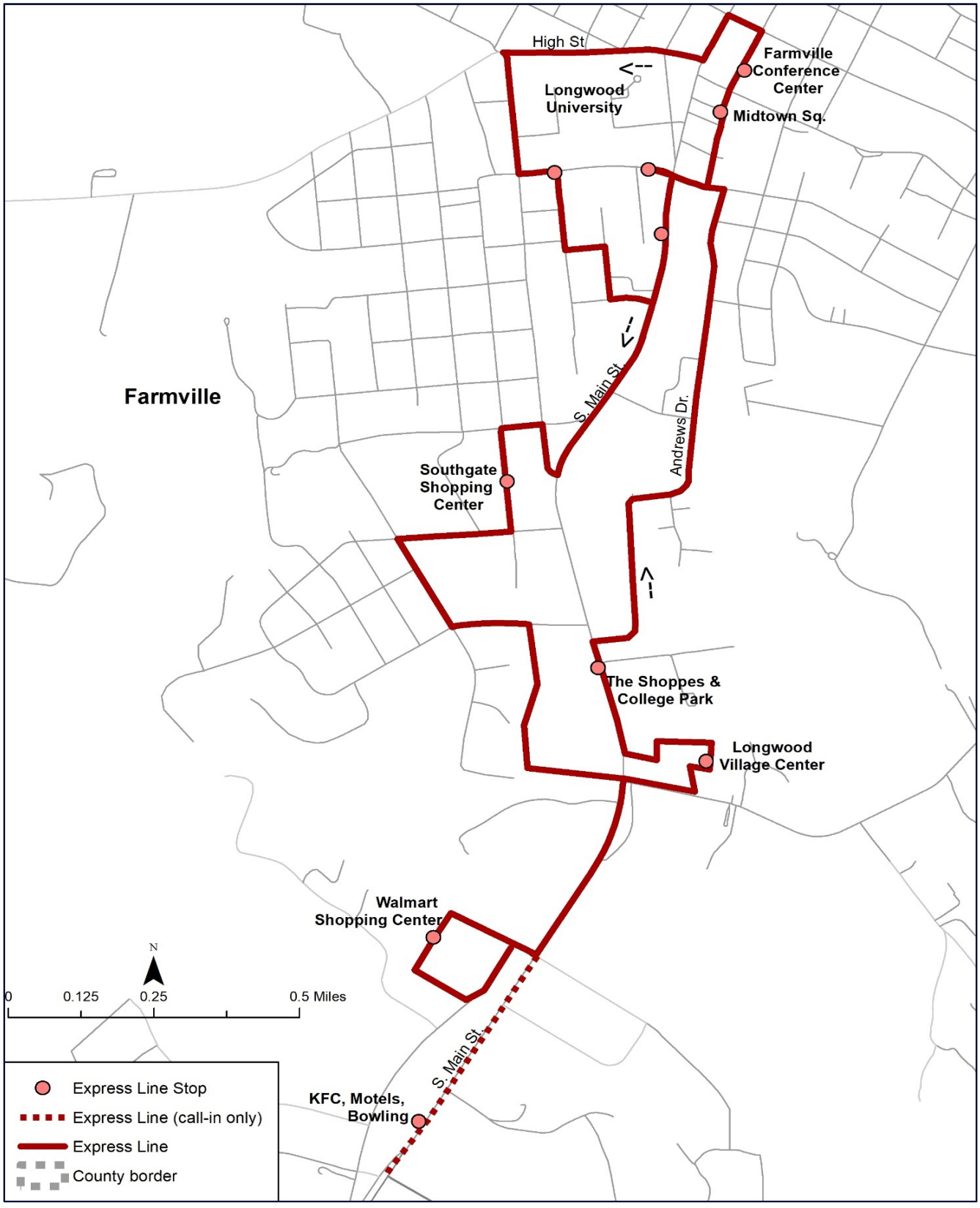
Express Line

The Express Line serves north and south Farmville in a counterclockwise pattern, shown in Figure 1-4. Table 1-3 shows the Express Line operating characteristics. The route starts at Farmville Conference Center and stops at major destinations including Longwood University and the shopping centers anchored on South Main Street, which includes Walmart, Food Lion, and CVS. The south end of Farmville including motels, a bowling alley and some fast-food restaurants are served on a call-in basis only. A round trip takes about half an hour. Service is reduced during the summer semester (from 1:00 p.m. until 5:00 p.m.) and is rebranded as "The Summer Shuffle." Stops along the route have signage but benches and shelters are generally limited to Longwood University, downtown Farmville and Walmart. While pedestrian access is adequate as the route deviates into shopping centers, sidewalks on both sides of the street become intermittent south of Longwood University. In FY2022, operations funding was provided by Federal 5311 funds (50 percent), a blend of state and local funds of $269,642, and funding from both the CARES Act ($139,045) and American Rescue Plan Act ($31,233). This funded both the Blue Line and Express Line (50 percent). The Express Line is displayed in Figure 1-4.

Table 1-3: Express Line Operating Characteristics

Operating Days	Operating Hours	Trips	Peak Buses
Monday – Thursday	12:00 p.m. – 8:00 p.m.	16	1
Friday – Saturday	12:00 p.m. – 11:00 p.m.	22	1
Sunday	12:30 p.m. – 8:00 p.m.	15	1

Figure 1-4: Express Line Route Map



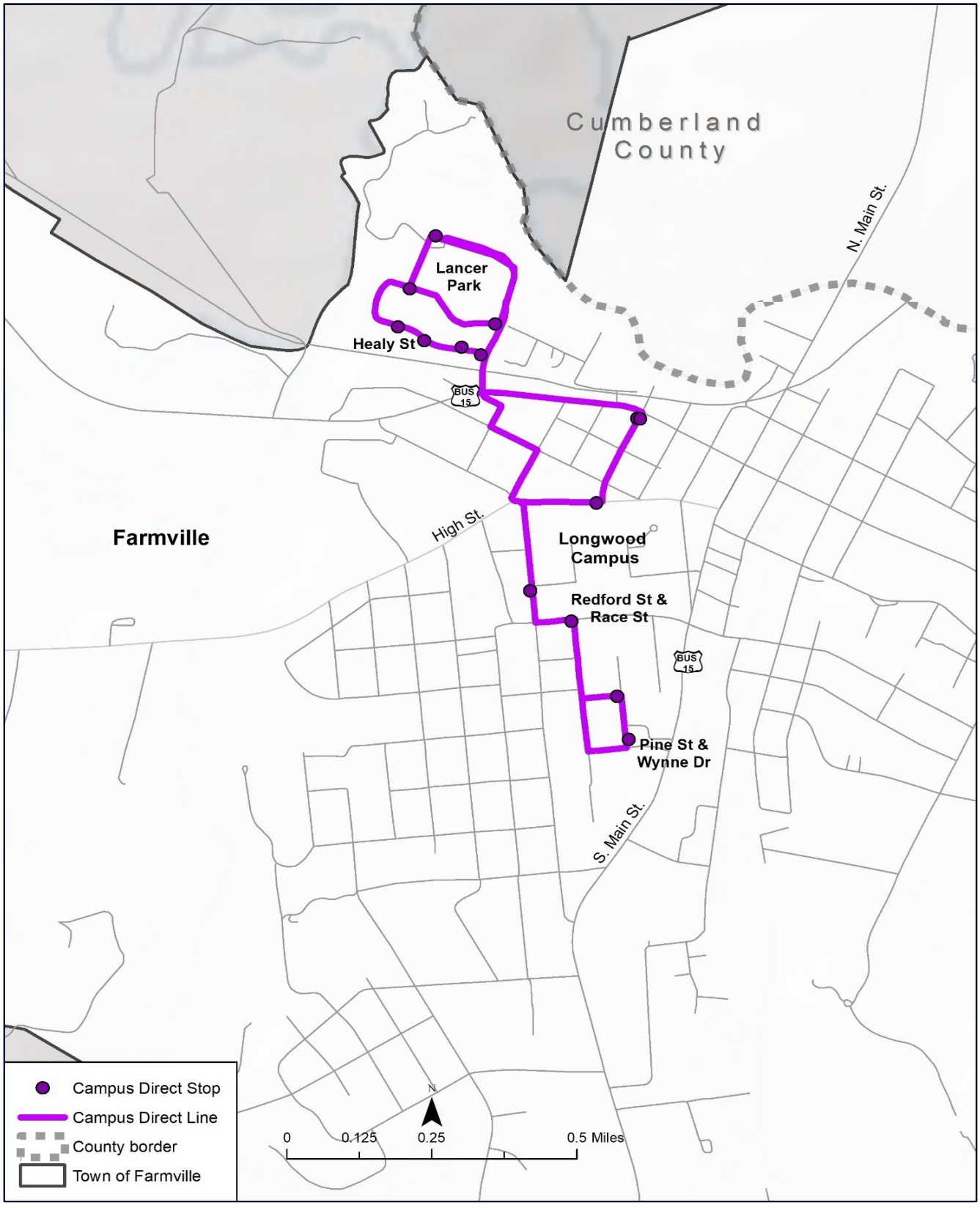
Campus Line

The Campus Line, shown in Figure 1-5, connects the Longwood University Lancer Park Apartments with the main campus seven days a week. The route starts at Lancer Park, which is served at 30-minute frequencies. At Lancer Park the bus travels through the Freshman parking lot, and then makes several stops at the campus. Table 1-4 shows the Campus Line operating characteristics. The route stops have signage and include bus shelters in Lancer Park, on Griffin Blvd., and on the Longwood campus. Sidewalk and pedestrian infrastructure are found along the route, as it services the Longwood campus and the student housing community. The route's local match is entirely funded by Longwood University with a $143,050 contribution as of FY2021. Previously, Longwood University's contribution was higher, but the route was condensed, and bus frequency was reduced after Longwood ceased apartment rentals in a complex that was served by the Campus Line.

Table 1-4: Campus Line Operating Characteristics

Operating Days	Operating Hours	Trips	Peak Buses
Monday – Friday	7:15 a.m. – 12:45 a.m.	19	1
Saturday – Sunday	10:30 a.m. – 12:45 a.m.	25	1

Figure 1-5: Campus Line Route Map



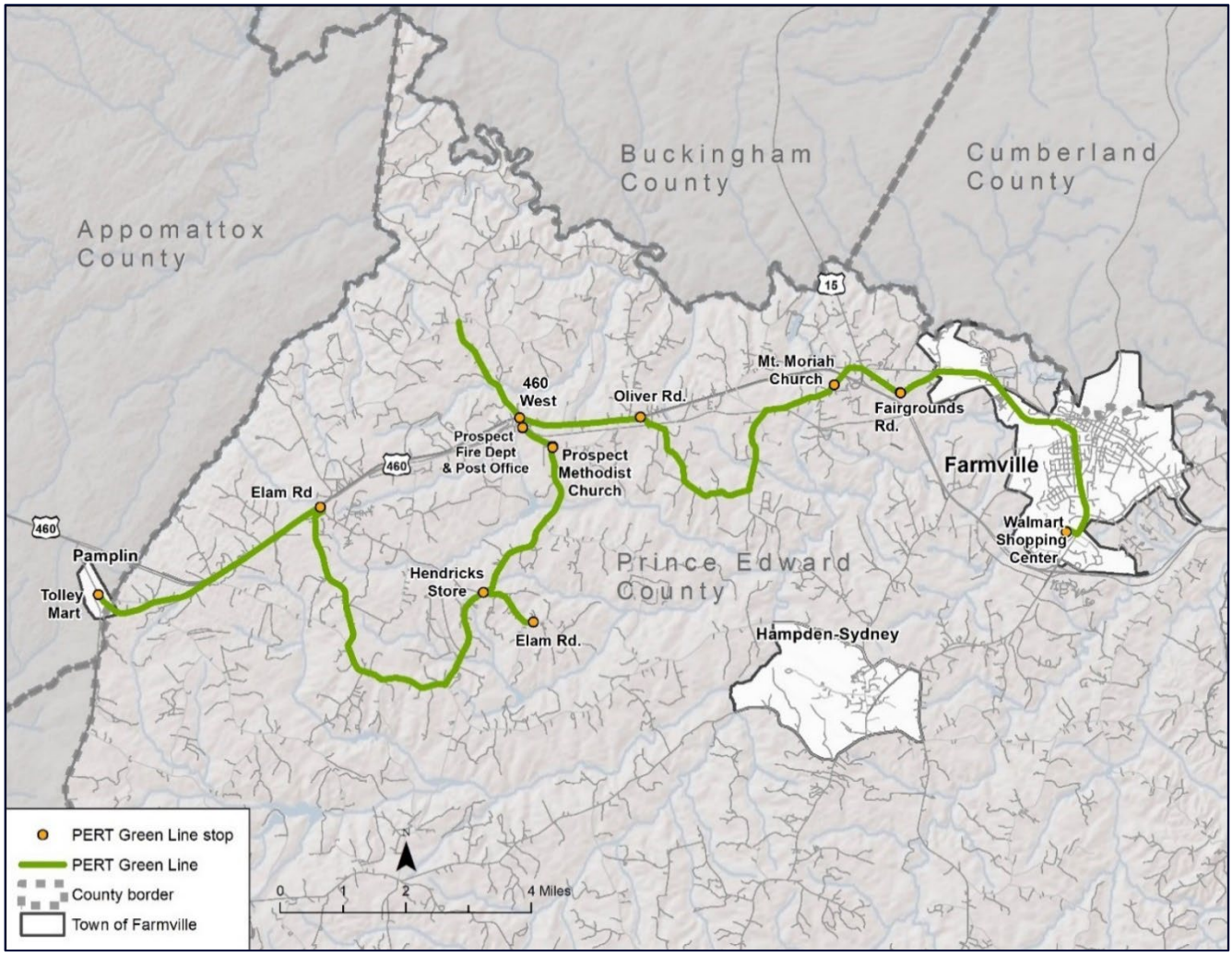
PERT Green Line

The Green Line, shown in Figure 1-6, is a PERT route that operates on Mondays and Thursdays, connecting Pamplin and outer residential areas in western Prince Edward County with Farmville. The first outbound trip and last inbound trip travel solely on US 460 unless a call is placed beforehand to arrange a pickup along the base route. Table 1-5 shows the Green Line operating characteristics. Pedestrian access is significantly limited outside of Farmville, but all buses are ADA accessible. Stop infrastructure is nonexistent outside of Farmville, with the route relying on landmarks such as churches or mini-marts to serve as time points. Operations funding is provided by FTA 5311 funds (50 percent) and a blend of state and local funds (50 percent), including a $25,000 contribution from Prince Edward County, which is shared by both PERT routes.

Table 1-5: Green Line Operating Characteristics

Operating Days	Operating Hours	Trips	Peak Buses
Monday, Thursday	8:25 a.m. – 4:30 p.m.	3	1

Figure 1-6: PERT Green Line Route Map



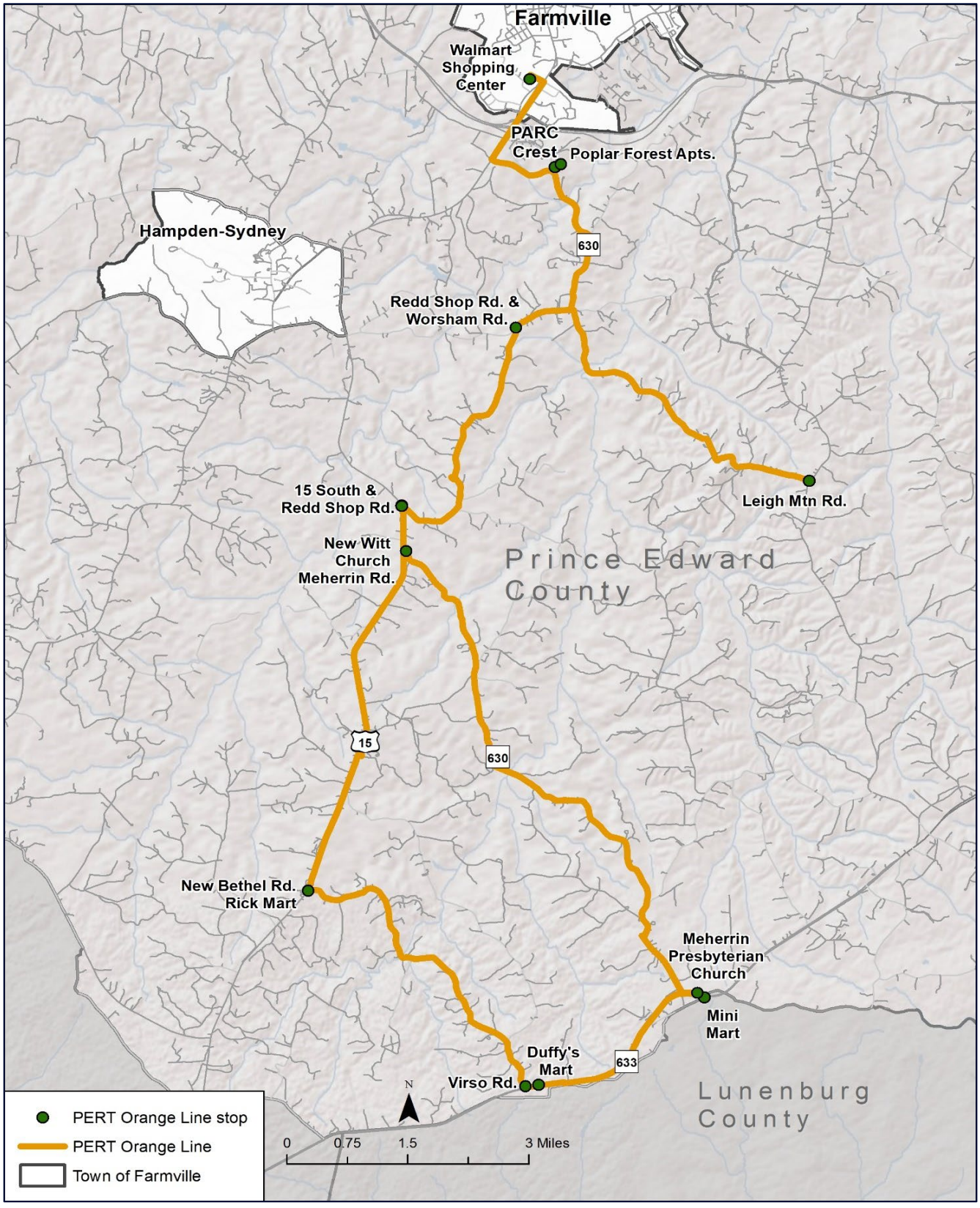
PERT Orange Line

The Orange Line, shown in Figure 1-7, is a PERT route that operates on Tuesdays, Wednesdays, and Fridays, connecting the Meherrin and Green Bay areas in southern Prince Edward County with Farmville. Table 1-6 shows the Orange Line operating characteristics. The first outbound trip and last inbound trip travel solely on US Highways 15 and 360 unless a call is placed beforehand to arrange a pickup along the base route. Pedestrian access is significantly limited outside of Farmville, but all buses are ADA accessible. Stop infrastructure is nonexistent outside of Farmville, with the route relying on landmarks such as mini-marts or the Valero gas station to serve as time points. Operations funding is provided by FTA 5311 funds (50 percent) and a blend of state and local funds (50 percent), including a $25,000 contribution from Prince Edward County which is shared by both PERT routes.

Table 1-6: Orange Line Operating Characteristics

Operating Days	Operating Hours	Trips	Peak Buses
Tuesday, Wednesday, Friday	8:20 a.m. – 4:30 p.m.	3	1

Figure 1-7: PERT Orange Line Route Map



Fare Structure

FAB's fare structure is outlined in Table 1-7, which have remained the same.

Table 1-7: FAB Services and Fares

Service	Base Fare
Blue Line	$0.25
Campus Direct Line	$0.25
Express Line	$0.25
PERT Green Line	$1.00
PERT Orange Line	$1.00
ADA-Paratransit	$0.50

As shown in Table 1-7, fares for routes that stay within Farmville are $0.25 while both PERT county routes are $1.00 per trip. Longwood University students with a student I.D., senior citizens (age 60 and over) and children under six are eligible to ride the Blue or Express lines for free. The Campus Line is open to the general public and is free for students with I.D., which is largely funded through a student activity fee. ADA-Paratransit charges $0.50 per passenger but an assistant to a handicapped passenger may ride free of charge. Additional assistants must pay the full fare. There are no free rides or discounts for PERT routes. Systemwide, fare payment is only accepted in cash and only with exact change. Riders must pay the fare for each one-way trip on a bus, and transfers count as separate trips.

Fleet

FAB currently operates 15 vehicles, 14 of which are used in revenue service. This is an increase of one revenue vehicle from the fleet described in FAB's 2010 Transit Development Plan (TDP) and is consistent with fleet data reported in the 2013 National Transit Database (NTD). Eight of the revenue vehicles are 18-ft "cutaway" BOC vehicles that seat 19 passengers, while two cutaway BOC vehicles seat 14 passengers. The other four revenue vehicles are minivans while the non-revenue vehicle is a sedan. The passenger minivans are typically used for the ADA-Paratransit service, whereas the cutaways are used for fixed route services. The vehicle roster is presented in Table 1-8. All revenue vehicles are ADA accessible.

To supplement regular service, shift drivers are tasked with assessing vehicle fluids. All subsequent shift drivers are tasked with completing a pre-trip inspection to assess the general condition and operability of the bus. In the event of a mechanical failure mid-route, an available staff member at the bus depot will drive a spare bus to the driver, as FAB does not employ a bus driver on-call. The spare ratio of vehicles is defined as the number of spare vehicles divided by the vehicles required for maximum service.

The current FAB spare ratio is 100 percent (or five spares for five vehicles in maximum fixed-route operation). This leaves five vehicles available in the event that a cutaway is unable to service a route. The Federal Transit Administration (FTA) defines the service life of a cutaway revenue vehicle as 100,000 miles or four years of service, whichever comes first. FAB cutaways in the existing fleet have an average age of three years, while FAB vans have an average age of nearly five years. None of the vehicles currently have more than 100,000 miles, whereas there was one in the 2016 TDP. The number of vehicles exceeding useful life is expected to remain low. The agency is currently replacing two 14-passenger BOCs and one of the 19-passenger BOCs.

Table 1-8: FAB Vehicle Inventory, Including Service Vehicles

Vehicle No.	Type	Vehicle Type	VIN	Year	Description	Total Mileage
814	Minivan	Light Duty	2C7WDGBG4HR853474	2017	Braun Minivan with Ramp	23,959
811	Minivan	Light Duty	2D4RN4DE7AR350046	2010	Dodge Entervan Grand Caravan	60,171
802	Cutaway	Light Duty Medium	1GB6GUBGH1244549	2017	Chevy Starcraft Allstar Bus Express 4500	86,811
806	Cutaway	Light Duty Medium	1GB6GUBG6H1249727	2017	Starcraft Allstar Bus Express 4500	83,449
801	Cutaway	Light Duty Small	1HA3GRBG3HN005730	2018	Starcraft Allstar Bus 3500	84,732
800	Cutaway	Light Duty Small	1HA3GRBG3HN005713	2018	Chevy Starcraft Allstar Bus 3500	85,219
813	Cutaway	Light Duty Medium	1GB6GUBG1H1249473	2017	Chevy Starcraft Allstar 4500 Express Bus	81,554
816	Minivan	Light Duty	2C7WDGBG5HR855086	2017	Braun Minivan with Ramp	34,708
825	Cutaway	Light Duty Medium	1HA6GUBG8JN009374	2019	Allstar BOC with Lift	64,841
826	Cutaway	Light Duty Medium	1HA6GUBG6JN009213	2019	Allstar BOC with Lift	49,101
823	Cutaway	Light Duty Medium	1HA6GUBG1JN009295	2019	Allstar BOC with Lift	50,688
824	Cutaway	Light Duty Medium	1HA6GUBG5JN009462	2019	Allstar BOC with Lift	58,734
804	Minivan	Light Duty	2C7WDGBG2JR362908	2018	Braun Handicap Minivan with ramp	17,473
805	Cutaway	Light Duty Medium	1FDFE4FS7KDC15071	2019	Starcraft Allstar 19 Passenger w/ Lift	48,789
818	SUV	Supervisory Vehicle	2GKFLTE50C6194505	2012	GMC Terrain	56,937

Existing Facilities

Operations Facility

FAB is headquartered at their bus depot, located at 502 Doswell Street, Farmville, Virginia 23901. Constructed in August 2001, the facility includes five bays and houses FAB's operational and administrative equipment. The facility's low ceiling height prevents the installation of a hydraulic lift, therefore, all significant maintenance work is conducted off-site at the town's maintenance yard by town mechanics. Since 2010 FAB has discussed the construction of a shared maintenance facility that would be used by both FAB vehicles and the Town of Farmville's municipal vehicles. According to the 2014 TDP update, the facility was anticipating completion in FY2019. However, plans for the facility have been permanently tabled due to the inability of the town to provide their share of the funding.

There are 69 designated stops with signage in the FAB system, down from 75 stops in 2016, all located in the Town of Farmville. There are 14 shelters, which is no change from the 2016 TDP. These shelters are only located in Farmville. Most shelters include route maps and scheduling information placards that are more weather resistant compared to previous placards since the last TDP, which were removed due to a lack of durability. Routes that operate beyond Farmville, such as the two PERT routes, operate on a flag stop system, where passengers wait along a fixed portion of the route and flag the driver to stop. Passengers also can call ahead to arrange a pick-up on the first outbound and last inbound trip of both PERT routes. FAB has had no issues with the Virginia Department of Transportation (VDOT) for approval of signage and stop infrastructure within state right-of-way. With regards to bicycle facilities, FAB vehicles are not equipped with front-end bicycle racks.

Transit Security Program

In addition to the surveillance cameras at the facility, FAB has enhanced its security measures since 2010 by adding surveillance equipment to most revenue vehicles, which consists of four audio and visual in-vehicle cameras which have five different camera angles. Paratransit vans have one camera that covers the inside and one that is front facing, covering the road. In addition to the cameras, drivers are trained in safety protocols at point of hire. Moreover, all buses are equipped with public works radios for the drivers to communicate with Farmville Police.

Intelligent Transportation Systems (ITS) Program

Apart from the recent addition of on-board surveillance cameras, FAB has not employed or expressed an interest in acquiring certain ITS technologies like traffic signal priority (TSP) or route scheduling software. There is not a significant need for these technologies based on the rural nature of the service area.

FAB would be interested in installing automatic vehicle locators (AVL) in the medium-term. However, implementing AVL would be contingent on increased staffing and funding. While FAB previously considered applying to DRPT for a study to see if a mobile app that could track vehicles with AVL would be feasible for the system, they decided not to proceed due to a lack of staff.

Should AVL be implemented, riders could also track the estimated arrival time of buses. The demand for a mobile app will likely increase in the FAB service area as smart-phone ownership increases among the American adult rural population, which now stands at roughly 80 percent according to a 2021 Pew Poll, up from 52 percent in 2015. Smartphone ownership is likely higher in Farmville due to the presence of Longwood University. A 2015 poll cited that 25 percent of all smartphone owners use their phone "at least occasionally to get public transit information", a behavior "especially prevalent among younger smartphone users". Thus, AVLs installed in FAB vehicles could be used to track when the next vehicle arrives via smartphone. Providing real time information could also help FAB attract new riders.

Data Collection and Ridership/Revenue Reporting

Data collection at FAB consists of manual entries into a manual passenger counter. This information is then entered into a paper spreadsheet by a member of the administrative staff. Other data, particularly financial, are handled exclusively by the administrative staff.

Ridership

Because buses are not equipped with automatic passenger counters (APCs), ridership data is collected manually by each bus driver. The driver counts passengers as either an adult, child, student, senior, or an adult with disability. At the conclusion of the route, the completed form is delivered to FAB administrative staff for entry into a paper spreadsheet. Ridership data is not entered electronically. Stop-level activity of passengers is not collected on a regular basis, although some of this information can be gleaned from the survey that accompanies the TDP.

Operations

Fares are collected in a locked farebox. Costs, such as wages, salaries, fuel, and maintenance, among other operating expenses are detailed in an operating invoice that represents the entire system. As stated in the previous section, scheduling software is not used. Weekly schedules are manually created in an excel spreadsheet, assigning bus drivers to a specific route and duration of service. Drivers typically work the same routes. Data is not collected on how many times the route deviates to pick up a passenger.

Public Outreach

Public outreach is conducted through advertising in the local paper and reaching out to social service organizations in the service area, such as STEPS, a work force development program, and educational institutions such as Longwood University. Bus route information is available at the facility, online, or a part of orientation packets for incoming Longwood University freshman. Route maps had been available at various stores in the past but have since been removed due to complaints from business owners about customer behavior.

Coordination with Other Transportation Service Providers

Blackstone Area Bus System (BABS)

BABS serves an eight-county region including Prince Edward, Nottoway, Amelia, Buckingham, Cumberland and Dinwiddie Counties. A bus stops in Farmville at the Longwood Visual Arts building and STEPS via two routes under the Piedmont Area Transfer (PAT) brand. These routes serve towns in the region such as Blackstone, Burkeville, Amelia Courthouse, Dillwyn and Cumberland. The BABS Dinwiddie Express provides transfers to the Petersburg station that connects riders to Petersburg and Richmond.

The first route is the Amelia - Prince Edward Route which runs Monday – Thursday with one trip stopping in Farmville in the early morning and another trip in the afternoon. The second route is the Buckingham-Cumberland Line which also runs Monday – Thursday with one trip in the early morning and three trips in the afternoon.

Riders can transfer to the BABS routes on Main Street at the Longwood Visual Arts building stop. For the Amelia - Prince Edward Route, after stopping in Farmville, the bus heads east serving stops along state highway 460 and 360 including in Amelia Courthouse and Burkeville. The bus returns to Farmville before ending its last trip in Blackstone. For the Buckingham-Cumberland Line, after stopping in Farmville, the bus heads north to Buckingham and Dillwyn or to Cumberland, before returning to Farmville and ending in Blackstone. The two BABS routes are displayed in Figure 1-8.

Virginia Breeze Bus Lines

Virginia Breeze Bus Lines is an intercity bus service that launched in December 2017 and is managed by DRPT. The service connects rural populations to urban areas and the national intercity bus network through four routes, which include stops at major cities and Union Station in Washington, D.C. The bus serves Farmville via the "Capital Connector" route, with the northbound bus arriving at Walmart at 9:15 a.m. daily and the southbound bus arriving at 4:40 p.m. daily. The northbound route originates in Martinsville and also stops in Danville, South Boston, and Richmond before arriving in Washington D.C. at 1:00 p.m. Passengers may book tickets on the Virginia Breeze or Megabus website. Buses include a restroom, baggage storage, free Wi-Fi and in-seat power outlets.

Taxis

Taxis are available for Farmville residents with the following providers: Relax & Ride Transportation and Paladin Medical Transport (medical only).

Figure 1-8: Amelia – Prince Edward Route and Buckingham – Cumberland Line Map

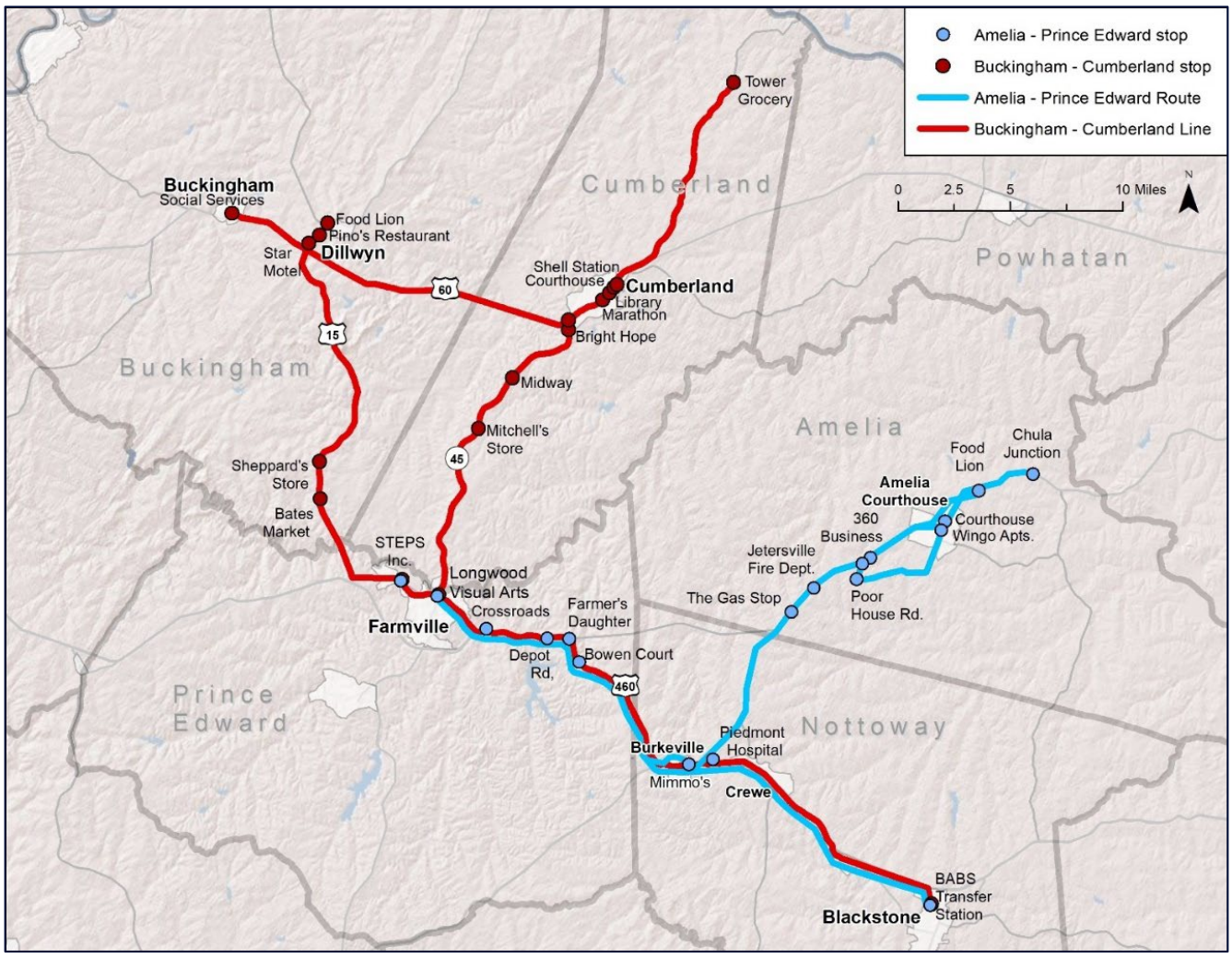


Figure 1-9: Virginia Breeze Bus Lines

SOURCE: HTTPS://US.MEGABUS.COM/VIRGINIA-BREEZE

Chapter 2:
Goals, Objectives, and Standards

Introduction

This chapter of the TDP presents the goals for Farmville Area Bus (FAB); documents current issues for FAB, as discussed by FAB staff; and updates service standards for the system.

Farmville Area Bus Goals and Objectives

Transit Program Goals and Objectives

The following goals and objectives that are currently in place were developed during the 2016 TDP Update. They were reviewed with FAB and DRPT to determine if they are still consistent with the current needs of the system. This current TDP process gives the agency and its community partners an opportunity to refresh and update these metrics. As the FAB service area continues to develop and transform, their goals and objectives are expected to change to meet these transit needs. Below are the modified and new goals and objectives.

Goal 1: Provide reliable fixed-route public transportation service that meets the transportation needs of the Town of Farmville and Prince Edward County residents

Objective 1.1: Provide transit service connections between residential areas and commercial areas with jobs, education, and medical services

- Document and record customer service requests.
- Work, as needed, with the Town of Farmville and Prince Edward County staff to identify planned new developments that may warrant transit service. This should also include establishing criteria for funding and ridership potential when considering service expansion.
- Survey transit riders at least once every six years to determine rider service needs.

Objective 1.2 Bus stop improvements

- Establish safe bus stop locations when modifying an existing bus route alignment or when implementing new service.
- Work with the Town of Farmville, DRPT, and VDOT staff in expanding sidewalks, adding benches, and map information at stops with high ridership demands to make more accessible. Work with Prince Edward County to transition from flag stop model to signed public transportation stops.
- Identify stops that require lighting for safety.

Goal 2: Market existing transit services

Objective 2.1: Market transit services as a travel option within the Town of Farmville and Prince Edward County

- Maintain and update a "Farmville Area Bus - Route and Schedule Guide" for users of the transit system, including information for intercity buses and transfers to Blackstone Area Bus System and other systems.
- Maintain accurate and up-to-date transit information on the FAB web site, https://farmvilleva.com/departments/farmville-area-bus.
- Participate in community and school events to promote public transportation.

Objective 2.2: Explore potential demand to expand cost-effective transit service to areas outside of the town limits in Prince Edward County if local conditions change

- FAB will explore service expansion if a request is made and will determine if there is sufficient demand for the requested service.

Goal 3: Deliver fixed-route bus services in a cost-effective manner

Objective 3.1: Maintain a system-wide farebox recovery ratio (farebox revenues/total operating expenses) that meets or exceed established standards

- Record and monitor monthly trends in passenger trips by route and compare with figures from the previous year.
- Record and monitor monthly transit operations expenses and farebox revenues.

Objective 3.2: Administrative costs are not to exceed 20 percent of the total operating budget

- Record and monitor monthly transit administration expenses and farebox revenues.

Objective 3.3: Achieve system-wide fixed-route ridership levels that meet or exceed established standards

- Maintain and monitor monthly ridership reports for fixed-route service, with ridership reported on a route segment basis for all fixed-route operations.
- Implement corrective measures if ridership falls below established standards for specific routes for more than 12 months in a row. Such corrective measures may include: route re-alignment, service frequency changes, and span of service and/or fare adjustments.

Goal 4: Deliver fixed-route bus services in a safe manner

Objective 4.1: Ensure that transit service operators maintain an accident rate and vehicle failure rate of less than the established standard

- Maintain a training program for new employees.
- Review established operating policies and procedures at least once a year and update as necessary.
- Review those policies and procedures with existing staff at least once every two years.

Objective 4.2: Ensure that an adequate fleet of vehicles is maintained for the fixed-route services

- Identify the potential need for replacement vehicles based on FTA standards for the defined service-life of vehicles. For most buses operated by FAB, the defined service-life is four years or 100,000 revenue miles of service, whichever comes first.
- Maintain a spare ratio of at least two buses at all times for FAB fixed-route transit services and at least one vehicle for the demand-responsive services.

Goal 5: Provide transit services that are accessible to all citizens

Objective 5.1: Provide transit services that are accessible to all population groups within the Town of Farmville and Prince Edward County

- Comply with the applicable requirements of ADA.
- Provide the ADA-eligible population with paratransit service that is comparable to service provided by the fixed-route system.

Objective 5.2: Ensure that all future revenue vehicles are ADA accessible

Goal 6: Explore technology opportunities for the delivery of transit

Objective 6.1: Mobile App for the bus

- Conduct feasibility study for the viability and use of a rider/student mobile app.

Current Issues for Farmville Area Bus

There are a number of issues currently facing the system that are noteworthy, and essential to report for the onset of this plan. These are outlined below.

Driver Availability

Similar to many transit agencies in Virginia and across the country, FAB is having a tough time hiring and retaining drivers, which will make it difficult to expand transit services to meet future demand. This driver shortage affects all aspects of service planning decisions for both current and future services.

Transit Demand – Fixed Route versus Paratransit Van

FAB has seen a significant decrease in its fixed route ridership while experiencing growth in demand-response ridership, largely due to the ongoing pandemic.

Reduction in Longwood University Service

For many years FAB has operated three routes that served Longwood University. Previously, FAB operated three buses on the Campus Line, however currently only one bus is utilized. Many factors have played a role in this decline:

- Decreased admissions
- Free parking on campus
- Reduction in off campus apartment complexes

Service and Performance Standards

Service standards are benchmarks by which service performance is evaluated. Service standards are typically developed in several categories, such as service coverage, passenger convenience, safety, fiscal condition, productivity, and passenger comfort. The most effective service standards are straightforward and relatively easy to calculate and understand.

Service standards are also used as a measure of compliance with Title VI of the Civil Rights Act of 1964, to ensure that services are provided equitably to all persons in the service area, regardless of race, color, or national origin. FAB's Title VI Plan details the system-wide service standards meant to ensure this equity, including standards on vehicle load, vehicle headways, on-time performance, and service availability.

The following standards are included in the agency's Title VI Plan:

- **Vehicle load** – Vehicle load is expressed as the ratio of passengers to the total number of seats on a vehicle at its maximum load point. The standard for maximum vehicle load is 38:19.

- **Vehicle headway** – Vehicle headway is the amount of time between two vehicles traveling in the same direction on a given route. A shorter headway corresponds to more frequent service. FAB's service in the Town of Blackstone ranges from 30 to 60 minutes.

- **On-time performance** – On-time performance is a measure of runs completed as scheduled. This criterion first must define what is considered to be "on time." The standard for on-time performance is 5 to 10 minutes after scheduled stop time, all of Farmville Area Bus's services meet this standard.

- **Service availability** – Service availability is a general measure of the distribution of routes within a transit provider's service area or the span of service. The standard for service availability is equally available in all populated geographic areas of Farmville. All of Farmville Area Bus's services meet this standard.

DRPT Performance-Based Allocation Metrics

In FY2020, DRPT implemented a new performance-based methodology for allocating operating assistance funding pursuant to the Code of Virginia and Commonwealth Transportation Board (CTB) policy. The methodology was developed through coordination with Virginia's Transit Service Delivery Advisory Committee (TSDAC) and the CTB, which resulted from a 2018 legislative mandate to base grant amounts on agency performance.[1] The methodology developed considers sizing and performance metrics.

[1] DRPT, Development of Performance-Based Operating Assistance Methodology, Fiscal Year 2020.

The sizing metrics are intended to base allocations on the size of the agency so that grant funding is proportionate to the level of service operated. The sizing metrics and weights for FY2021 and beyond are:

Operating cost	50%
Ridership	30%
Revenue vehicle hours	10%
Revenue vehicle miles	10%

The five performance metrics and weights are:

1. Passengers per revenue vehicle hour (20%)
2. Passengers per revenue vehicle mile (20%)
3. Operating cost per revenue vehicle hour (20%)
4. Operating cost per revenue vehicle mile (20%)
5. Operating cost per passenger trip (20%)

Farmville Area Bus Performance Metrics

Table 2-1 provides the FAB overall operating data and the values for the performance metrics for fiscal years 2018 through 2022. The effect of the Covid-19 pandemic can be seen starting with the FY2020 metrics, as the pandemic disrupted ridership starting in March of 2020.

Table 2-1: Farmville Area Bus Data and Performance Metrics, FY2018 – FY2022

Metric	FY2018	FY2019	FY2020 (1)	FY2021 (2)	FY2022
Passenger Trips	157,818	172,051	122,171	89,042	77,681
Revenue Hours	13,212	13,008	11,722	12,477	8,526
Revenue Miles	195,942	195,978	172,909	167,981	150,570
Total Operating Costs	$683,410	$668,530	$643,269	$613,133	$562,568
Passenger Trips per Revenue Hour	11.9	13.2	10.4	7.1	9.1
Passenger Trips per Revenue Mile	0.81	0.88	0.71	0.53	0.52
Operating Cost per Revenue Hour	$51.73	$51.39	$54.88	$49.14	$65.98
Operating Cost per Revenue Mile	$3.49	$3.41	$3.72	$3.65	$3.74
Operating Cost per Passenger Trip	$4.33	$3.89	$5.27	$6.89	$7.24

(1) COVID-19 EFFECTS FOR THE LAST QUARTER OF THE YEAR
(2) COVID-19 EFFECTS FOR THE ENTIRE YEAR

Given that these five metrics are being used by DRPT to allocate funding, it is recommended that FAB adopt these metrics internally when reviewing performance.

Process for Updating Goals, Objectives, and Standards

It is recommended that an annual review of goals, objectives, and service standards take place as part of the grant preparation cycle. If additional goals are envisioned, or if specific goals, objectives, or standards are no longer appropriate, represent under-achievement, or cannot reasonably be attained, FAB can update the measures to reflect current circumstances. Any changes for these measurement tools can be included in the annual TDP update letter.

Since the 2016 TDP, DRPT has also implemented performance-based operating funding, using the five metrics previously described. It is important that FAB track these to see how the services perform as measured by these metrics. If performance goes down, FAB should look to see if there are ways to improve efficiency and/or boost ridership.

Chapter 3:
Service and System Evaluation

Introduction

This chapter of the TDP focuses on two primary analyses. The first focus is a description and assessment of the recent performance of Farmville Area Bus (FAB), including analyses of trends, peers, recent ridership, a passenger survey, and a community survey. The second area of focus provides an examination of transit needs, including a demographic and land use analysis and a review of relevant studies and plans.

Overall, this chapter includes nine major components that are presented in the following order:

1. System Evaluation
2. Financial Information
3. Peer Analysis
4. Public Survey Results
5. Population Profile
6. Title VI Demographic Analysis
7. Land Use Profile
8. Travel Patterns
9. Review of Previous Plans and Studies

System Evaluation

Systemwide Trend Data

FAB's ridership trend data as a whole look similar to other transit agencies in Virginia and across the country, with ridership increasing steadily after FY2018 but then dropping precipitously with the Covid-19 pandemic. For comparison, FAB's total ridership in FY2018 was 157,818. The last full year prior to the pandemic (FY2019), FAB's total ridership was 172,015, before dropping 30% to 122,171 riders in FY2020. FY2022 ridership continued to trend lower, decreasing by 13% since FY2021, and by 36% since FY2020 to 77,681 riders. The five-year transit program data is displayed in Table 3-1, while the five-year trend for total ridership is displayed in Figure 3-1.

In terms of productivity, the trend is similar, with systemwide productivity declining from 13 trips per revenue hour in FY2019 to a low of 7.1 trips per revenue hour in FY2021, before rebounding slightly in FY2022 at 9.1 trips per hour as total passenger trips, revenue hours, miles and total operating costs have all decreased concurrently. Total operating costs for FY2022 are about the same as the costs in FY2018. The five-year trend for total operating costs is displayed in Figure 3-2.

Table 3-1: Transit Program Trend Data

Metric	FY2018	FY2019	FY2020 (1)	FY2021 (2)	FY2022
Passenger Trips	157,818	172,051	122,171	89,042	77,681
Revenue Hours	13,212	13,008	11,722	12,477	8,526
Revenue Miles	195,942	195,978	172,909	167,981	150,570
Total Operating Costs	$681,892	$674,783	$760,861	$613,133	$680,737
Passenger Trips per Revenue Hour	11.9	13.2	10.4	7.1	9.1
Passenger Trips per Revenue Mile	0.81	0.88	0.71	0.53	0.52
Operating Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Operating Cost per Revenue Mile	$3.48	$3.44	$4.40	$3.65	$4.52
Operating Cost per Passenger Trip	$4.32	$3.92	$6.23	$6.89	$8.76

(1) PANDEMIC EFFECTS BEGIN DURING THE END OF THE THIRD QUARTER (MARCH 2020)

(2) ONGOING PANDEMIC EFFECTS FOR THE ENTIRE YEAR

Figure 3-1: Passenger Trips, FY2018 – FY2022

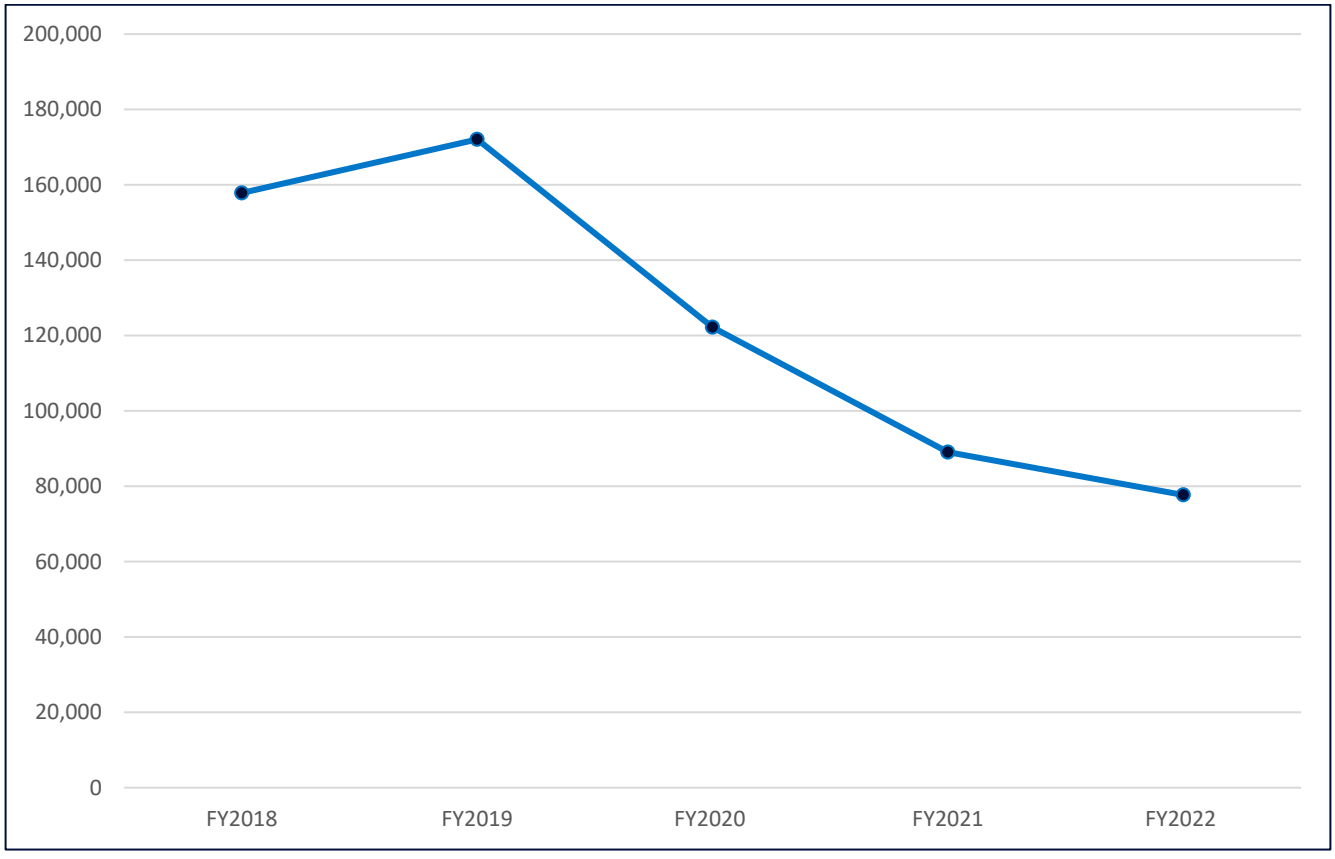
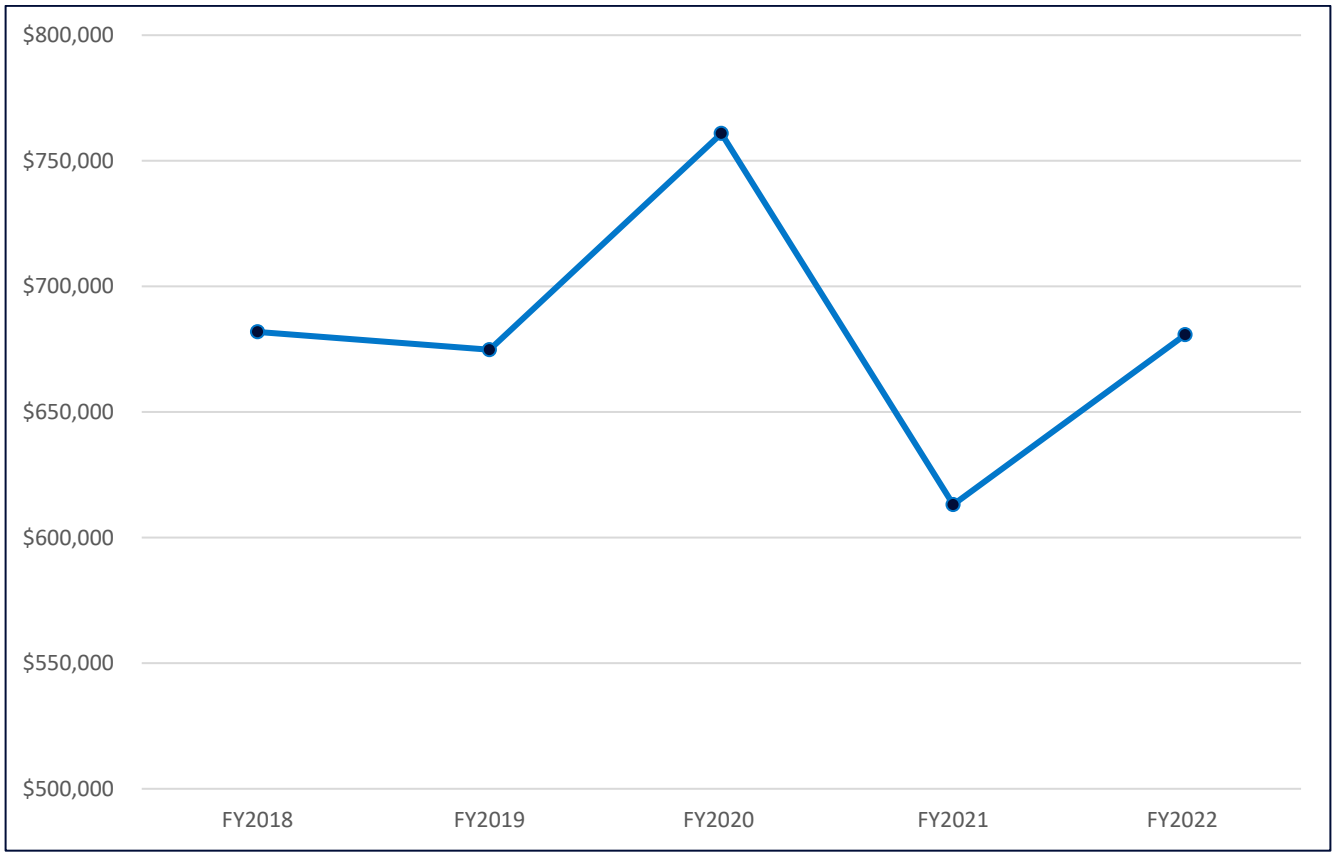


Figure 3-2: Total Operating Costs, FY2018 – FY2022



Route and Service Level Trend Data

FAB provides both fixed route and paratransit services and tracks data for both services. Annual operating expenses by route was not available from FAB, so this data was estimated with the following formula:

Annual Operating Expenses = A route's annual *Revenue Hours* multiplied by the annual *Operating Costs per Revenue Hour* (of all routes combined).

This amount provides an estimated percentage of the Total Operating Costs (of all routes) based on an individual route's revenue hours, which is used to provide the estimated "Total Operating Costs" of each individual route.

The trend data for each of these services is analyzed in the following section.

Fixed Routes

FAB uses fourteen vehicles to operate five fixed routes within FAB service area. Three routes serve only Farmville (Blue Line, Express Line and Campus Direct Line) while two serve other stops in Prince Edward County. Farmville-only routes operate Monday – Saturday while the two Prince Edward County Transit (PERT) routes (Green and Orange) operate 2-3 times a week on alternate days.

The performance and cost data between 2018 and 2022 for each route are analyzed in separate tables.

Blue Line

The Blue Line connects Farmville residential areas and apartments and the Walmart Shopping Center, which is a transfer point for the Orange and Green lines. Other major stops include the Food Lion and Southside Community Hospital.

The five-year trend data shown in Table 3-2 shows that ridership had been increasing prior to the pandemic and that FY2022 ridership was 40% lower than the FY2019 pre-pandemic level. Meanwhile, overall revenue miles and hours have remained about the same. Estimated operating costs have increased incrementally over the five-year period, with the largest annual increase seen between FY2021 and FY2022. Productivity on the route was the highest in 2019, at 9.5 passenger trips per revenue hour. In FY2022, productivity was an estimated 6.5 trips per revenue hour, about the same as FY2021. Estimated operating costs in FY2022 suggest that the cost per trip has increased substantially from about $8 per trip in FY2020 to $12.32 in FY2022.

Table 3-2: Five Year Trend Data for the Blue Line

Metric	FY2018	FY2019	FY2020	FY2021	FY2022
Passenger Trips	27,786	29,999	26,900	21,160	21,635
Revenue Hours	3,326	3,166	3,391	3,328	3,338
Revenue Miles	57,115	57,259	58,960	58,088	57,401
Total Operating Costs	$171,660	$164,235	$220,106	$163,541	$266,514
Passenger Trips per Revenue Hour	8.35	9.48	7.93	6.36	6.48
Passenger Trips per Revenue Mile	0.49	0.52	0.46	0.36	0.38
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$3.01	$2.87	$3.73	$2.82	$4.64
Cost per Passenger Trip	$6.18	$5.47	$8.18	$7.73	$12.32
Miles per Hour	17.2	18.1	17.4	17.5	17.2

Express Line

The Express Line serves limited stops between the Farmville Conference Center, Longwood University and the Walmart Shopping Center.

The five-year trend data in Table 3-3 shows that ridership had been decreasing in the year prior to the pandemic and that FY2022 ridership was 43% lower than the 2019 pre-pandemic level. Meanwhile, overall revenue miles and hours have remained about the same. Estimated operating costs have increased incrementally over the five-year period, with the largest annual increase seen between FY2021 and FY2022. Productivity on the route was the highest in 2018, at about 13 passenger trips per revenue hour. In FY2022, productivity was an estimated 6.6 trips per revenue hour, about the same as FY2021. Estimated operating costs in FY2022 suggest that the cost per trip has increased substantially from about $7.50 per trip in FY2020 to $12 per trip in FY2022.

Table 3-3: Five Year Trend Data for the Express Line

Metric	2018	2019	2020	2021	2022
Passenger Trips	24,620	21,890	13,698	13,724	12,547
Revenue Hours	1,903	1,809	1,595	2,003	1,893
Revenue Miles	24,515	24,338	20,595	25,870	25,704
Total Operating Costs	$98,217	$93,841	$103,530	$98,430	$151,142
Passenger Trips per Revenue Hour	12.94	12.10	8.59	6.85	6.63
Passenger Trips per Revenue Mile	1.00	0.90	0.67	0.53	0.49
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$4.01	$3.86	$5.03	$3.80	$5.88
Cost per Passenger Trip	$3.99	$4.29	$7.56	$7.17	$12.05
Miles per Hour	12.9	13.5	12.9	12.9	13.6

Summer Shuffle

The Summer Shuffle route is the same route as the Express Line, except it runs when the summer session for Longwood University students begins.

The five-year trend data shown in Table 3-4 shows that ridership had been increasing prior to the pandemic and that FY2022 ridership was about 17% lower than the 2019 pre-pandemic level. However, since FY2022, ridership has rebounded by 40% to 927 riders. Meanwhile, overall revenue miles and hours have remained about the same. Estimated operating costs were decreasing incrementally between FY2018 – FY2021, but expenses are estimated to have nearly tripled in the last fiscal year. Productivity on the route was the highest in FY2020, at about 4.3 passenger trips per revenue hour. In FY2022, productivity was about three trips per revenue hour, about the same as FY2021. Estimated operating costs in FY2022 suggest that the cost per trip has increased substantially from about $15 per trip in FY2020 to $25.50 per trip in FY2022.

Table 3-4: Five Year Trend Data for the Summer Shuffle

Metric	2018	2019	2020	2021	2022
Passenger Trips	956	1,113	658	458	927
Revenue Hours	272	272	152	152	296
Revenue Miles	3,898	3,887	2,186	2,170	3,813
Total Operating Costs	$14,038	$14,110	$9,866	$7,469	$23,633
Passenger Trips per Revenue Hour	3.51	4.09	4.33	3.01	3.13
Passenger Trips per Revenue Mile	0.25	0.29	0.30	0.21	0.24
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$3.60	$3.63	$4.51	$3.44	$6.20
Cost per Passenger Trip	$14.68	$12.68	$14.99	$16.31	$25.49
Miles per Hour	14.3	14.3	14.4	14.3	12.9

Campus Line

The Campus Line connects the Longwood University Lancer Park Apartments with the main campus.

The five-year trend data presented in Table 3-5 shows that ridership had been increasing prior to the pandemic and that FY2022 ridership was about 68% lower than the 2019 pre-pandemic level. Ridership continues to decrease in FY2022. Meanwhile, overall revenue miles and hours have both decreased significantly as well. Estimated operating costs were increasing incrementally between FY2018 – FY2020, but expenses have decreased since then by about 16%. Productivity on the route was the highest in FY2019, at about 17 passenger trips per revenue hour. In FY2022, productivity was about 10 trips per revenue hour, slightly more than FY2021 which had 8.3 trips per hour. Estimated operating costs suggest that the cost per trip has more than doubled from $3 per trip in FY2019 to more than $8 per trip in FY2022.

Table 3-5: Five Year Trend Data for the Campus Line

Metric	2018	2019	2020	2021	2022
Passenger Trips	97,085	112,070	74,562	47,654	35,214
Revenue Hours	6,453	6,513	5,298	5,729	3,607
Revenue Miles	70,822	70,883	54,959	45,184	27,302
Total Operating Costs	$333,049	$337,858	$343,887	$281,529	$287,992
Passenger Trips per Revenue Hour	15.04	17.21	14.07	8.32	9.76
Passenger Trips per Revenue Mile	1.37	1.58	1.36	1.05	1.29
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$4.70	$4.77	$6.26	$6.23	$10.55
Cost per Passenger Trip	$3.43	$3.01	$4.61	$5.91	$8.18
Miles per Hour	11.0	10.9	10.4	7.9	7.6

PERT Green Line and Orange Line

The Prince Edward County Transit (PERT) Green Line connects Farmville with western Prince Edward County and Pamplin. The PERT Orange Line connects Farmville with southern Prince Edward County including Meherrin and Green Bay. Performance data for the two routes is combined and is summarized below.

The five-year trend data displayed in Table 3-6 shows that ridership had been increasing prior to the pandemic and that FY2022 ridership was about 28% lower than the 2019 pre-pandemic level. Ridership has remained about the same since FY2021. Meanwhile, overall revenue miles and hours have both remained about the same. Estimated operating costs were stable in the two years prior to FY2020 but expenses have increased since then by about 20%. Productivity on the route was the highest in FY2019, at about 1.8 passenger trips per revenue hour. In FY2022, productivity was about the same as FY2021 at 1.3 trips per hour. Estimated operating costs suggest that the cost per trip has increased by more than 50% to $62.66 per trip in FY2022.

Table 3-6: Five Year Trend Data for the PERT Green and Orange Lines

Metric	2018	2019	2020	2021	2022
Passenger Trips	2,076	2,248	2,060	1,603	1,612
Revenue Hours	1,260	1,250	1,290	1,265	1,265
Revenue Miles	39,592	39,611	39,725	37,576	36,960
Total Operating Costs	$65,031	$64,843	$83,732	$62,163	$101,001
Passenger Trips per Revenue Hour	1.65	1.80	1.60	1.27	1.27
Passenger Trips per Revenue Mile	0.05	0.06	0.05	0.04	0.04
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$1.64	$1.64	$2.11	$1.65	$2.73
Cost per Passenger Trip	$31.32	$28.84	$40.65	$38.78	$62.66
Miles per Hour	31.4	31.7	30.8	29.7	29.2

ADA Paratransit

FAB's paratransit service provides door-to-door service within ¾ miles of fixed route service in the Town of Farmville. The service satisfies requirements pertaining to ADA and Title VI of the 1964 Civil Rights Act, which prohibits the denial of service based on discrimination. Passengers must call 24 hours in advance to schedule a pickup.

The five-year trend data presented in Table 3-7 shows that ridership had been decreasing slightly prior to the pandemic and that FY2022 ridership was about 34% higher than the 2019 pre-pandemic level. Ridership has been steadily increasing since FY2020, and is at its highest levels in the past five years. Meanwhile, overall revenue miles and hours have both increased slightly as well. Estimated operating costs peaked at about $70,000 per year in FY2020, and since then have increased to $114,813, a 65% increase. Productivity of paratransit services has remained extremely stable at 4 trips per revenue hour in the past five years. Estimated operating costs suggest that the cost per trip has increased by more 23% to $20 per trip in FY2022.

Table 3-7: Five Year Trend Data for FAB Paratransit Service

Metric	2018	2019	2020	2021	2022
Passenger Trips	5,295	4,731	4,293	4,443	5,746
Revenue Hours	1,323	1,184	1,073	1,113	1,438
Revenue Miles	23,895	20,842	18,104	20,198	22,879
Total Operating Costs	$68,282	$61,419	$69,647	$54,694	$114,813
Passenger Trips per Revenue Hour	4.00	4.00	4.00	3.99	4.00
Passenger Trips per Revenue Mile	0.22	0.23	0.24	0.22	0.25
Cost per Revenue Hour	$51.61	$51.87	$64.91	$49.14	$79.84
Cost per Revenue Mile	$2.86	$2.95	$3.85	$2.71	$5.02
Cost per Passenger Trip	$12.90	$12.98	$16.22	$12.31	$19.98
Miles per Hour	18.1	17.6	16.9	18.1	15.9

Fixed Route Summary – 2022 Data

The FY2022 route statistics for each of the fixed routes that operate full-day service are provided in Table 3-8. These data show that the Campus Direct Line is the most productive, providing about 10 passenger trips per revenue hour, with a cost per passenger trip of $8.18, which is the lowest cost/trip of all routes. The second highest performing route is the Express Line providing 6.6 trips per hour, with a cost per trip of $12. Overall productivity and cost/trip is very similar for the Blue Line. During the summer, productivity of the Express Line drops by about half (as indicted by data from The Summer Shuffle), while cost/trip has tripled. The lowest performing routes are the PERT County Lines (Green and Orange) which together provided 1.3 trips per hour at an estimated $62.66 per hour.

Table 3-8: Fixed Route Data Summary – FY2022

Route	Passenger Trips	Revenue Hours	Revenue Miles	Operating Costs	Trips/ Hour	Cost/ Trip
Blue Line	21,635	3,338	57,401	$266,514	6.48	$12.32
Campus Direct Line	35,214	3,607	27,302	$287,992	9.76	$8.18
Express Line	12,547	1,893	25,704	$151,142	6.63	$12.05
PERT Green and Orange Lines	1,612	1,265	36,960	$101,001	1.27	$62.66
Summer Shuffle	927	296	3,813	$23,633	3.13	$25.49
Totals (Estimated)	71,935	10,399	151,180	$830,282[1]	**5.5***	**$24.1***

*Averages

[1] FY2022 operating costs were reported by FAB to be $680,737. This figure totals the "calculated operating costs" by route when applying a constant $79.84 operating cost per hour (FY2022 operating cost per revenue hour for all services) to each routes revenue hours.

Ridership Trends, 2018 through 2022

Ridership trends (displayed in Table 3-9) show that every route, except the Summer Shuffle, still has lower levels of ridership compared to FY2020 during the onset of the pandemic. The Express Line has the lowest decrease overall (-8%) among routes while the Campus Direct Line has the highest decrease overall (-53%). However, ADA paratransit service increased by 34%. Since FY2021, the Blue Line, and County Lines (Green and Orange) have slightly higher to flat rates of ridership while other routes continue to have less riders. Ridership for FAB routes is displayed in Figure 3-3 (for the Campus Direct Line only) and in Figure 3-4 (for all other routes including paratransit service).

Table 3-9: Ridership by FAB Route/Service 2018-2022

Route	2018	2019	2020	2021	2022	Percent Difference 2020 - 2022
Blue Line	27,786	29,999	26,900	21,160	21,635	-19.57%
Campus Direct Line	97,085	112,070	74,562	47,654	35,214	-52.77%
Express Line	24,620	21,890	13,698	13,724	12,547	-8.40%
Summer Shuffle	956	1,113	658	458	927	40.88%
PERT Green Line and Orange Line	2,076	2,248	2,060	1,603	1,612	-21.75%
ADA Paratransit	5,295	4,731	4,293	4,443	5,746	33.85%
Total	156,862	170,938	121,513	88,584	76,754	-36.8%

Figure 3-3: Ridership for Campus Direct Line 2018-2022

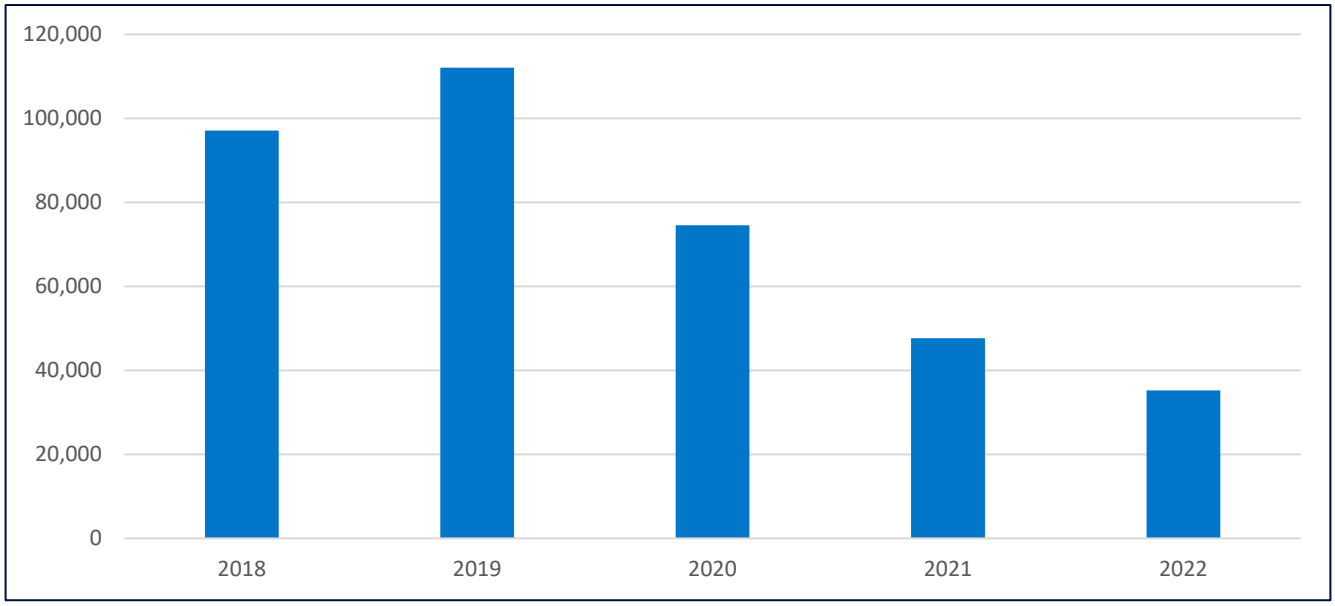
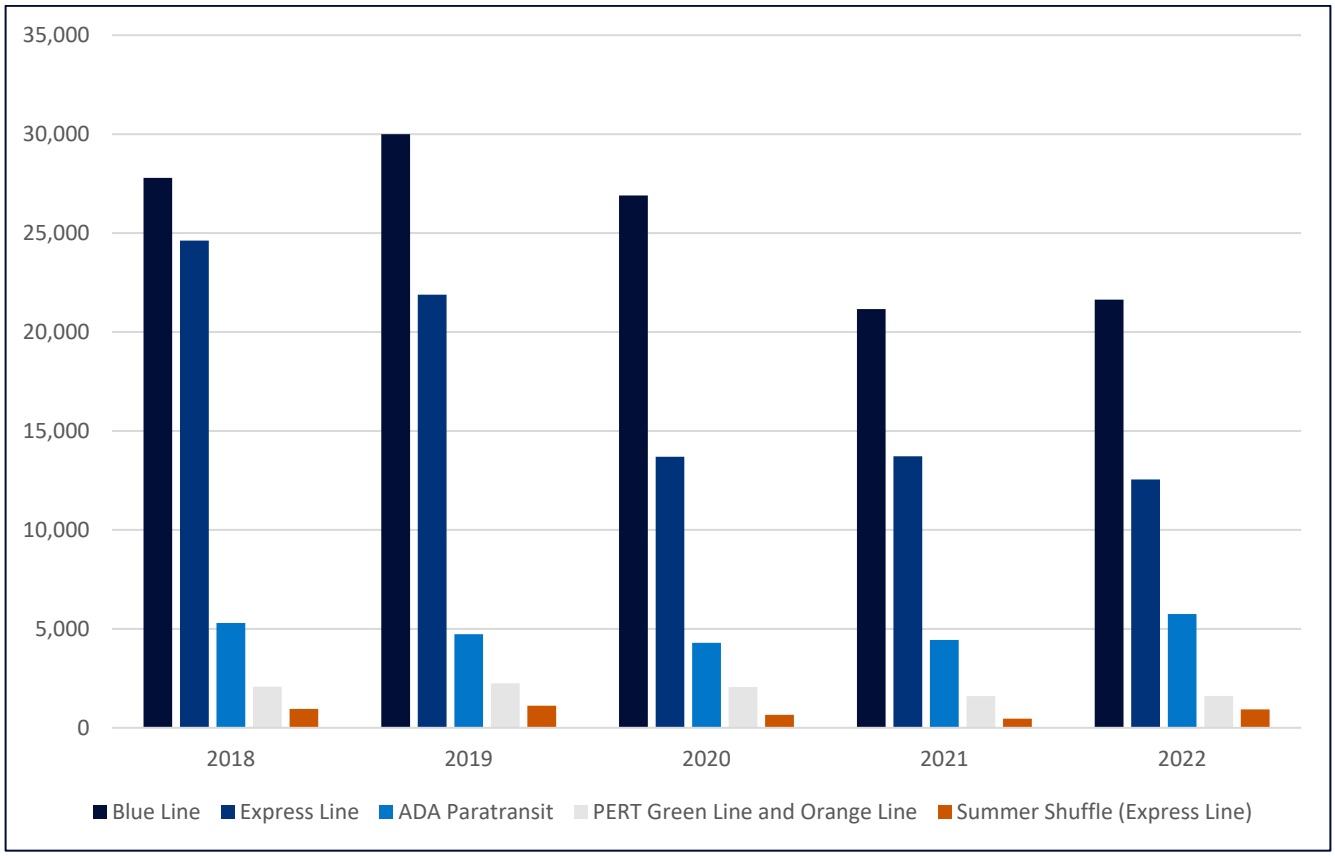


Figure 3-4: Ridership for FAB Routes (except Campus Direct) 2018-2022



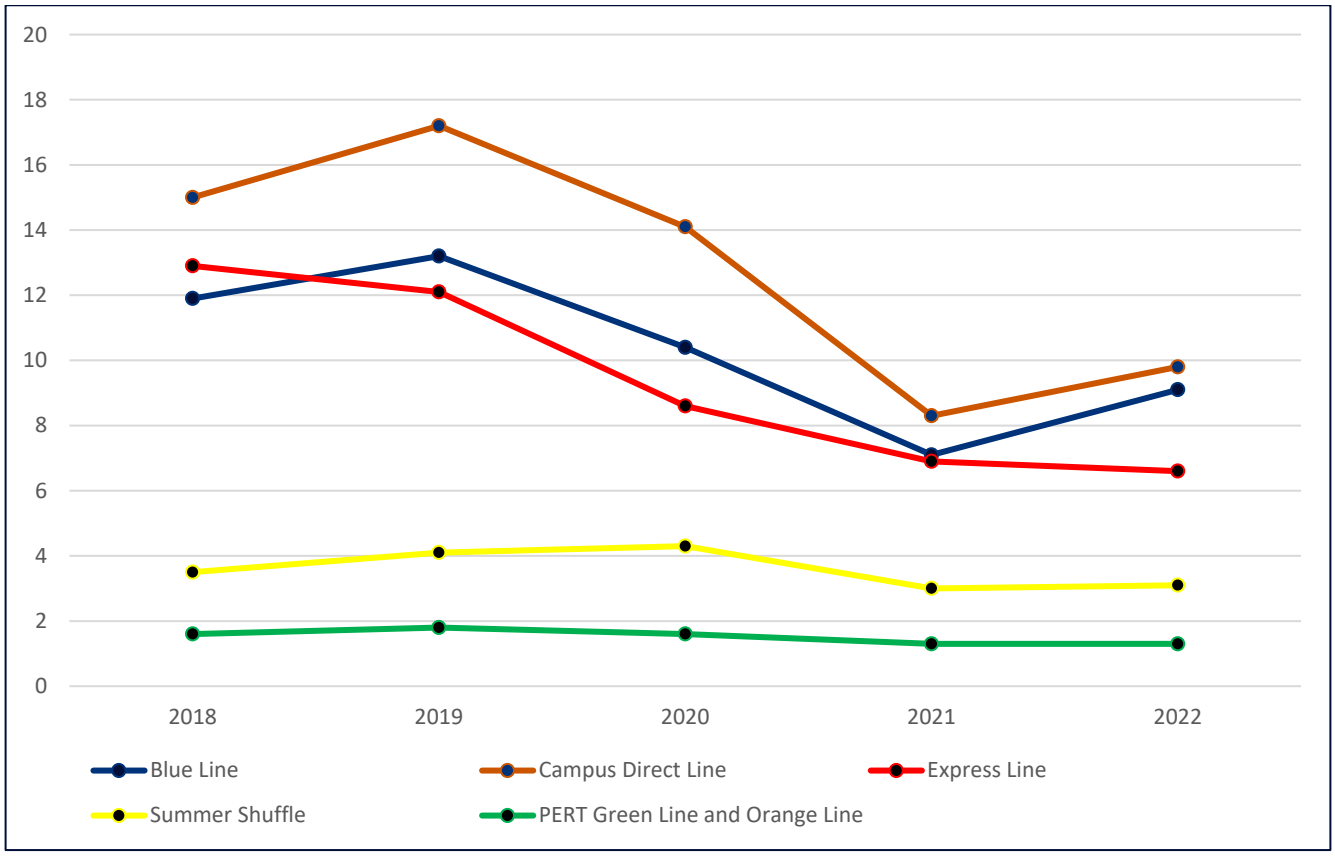
Productivity Trends, 2018 - 2022

Overall productivity (passenger trips per revenue hour) for each FAB route in the past five years is displayed in Figure 3-5. Table 3-10 displays FY2022 productivity data and the percent change since FY2020 at the onset of the pandemic. None of the routes' current ridership or productivity has recovered to levels during FY2020 at the onset of the COVID-19 pandemic, however ADA paratransit service has remained stable. The route with the slowest decrease in overall productivity is the Blue Line, whose productivity is just 12% lower than FY2020, while the route with the largest increase in productivity is the Campus Direct Line which has rebounded slightly from FY2021. Currently, the most productive route is the Campus Direct Line which serves about 10 trips per hour. On average, all routes (including paratransit service) have a productivity of 5.6 trips per hour in FY2022 and a 19% lower productivity since FY2020. Overall the Summer Shuffle, PERT County Lines and paratransit service have below-average productivity. The Blue Line, Campus Direct Line, and Express Line have above-average productivity.

Table 3-10: Productivity by FAB Route 2018-2022

Route	2018	2019	2020	2021	2022	Percent Change 2020 - 2022
Blue Line	11.9	13.2	10.4	7.1	9.1	-12.5%
Campus Direct Line	15.0	17.2	14.1	8.3	9.8	-31%
Express Line	12.9	12.1	8.6	6.9	6.6	-23%
Summer Shuffle	3.5	4.1	4.3	3	3.1	-28%
PERT Green Line and Orange Line	1.6	1.8	1.6	1.3	1.3	-20%
ADA Paratransit	4	4	4	4	4	0%
Average	8.15	8.73	7.17	5.10	5.65	-19%

Figure 3-5: Productivity by FAB Route 2018 - 2022



Financial Information

The FY2023 transit budget for FAB is $730,520. The largest single line item is Salaries, at $435,000. The line item budget for FY2023 is provided in Table 3-11.

Table 3-11: FAB Operating Budget, FY2023

Expense Category	Amount
Salaries	$435,000.00
Fringe Benefits	$118,920.00
Cleaning Supplies	$1,500.00
Motor Fuels & Lubricants	$74,000.00
Advertising	$2,000.00
Tires & Tubes	$9,500.00
Parts	$9,000.00
Supplies & Materials	$4,000.00
Travel	$100.00
Communication Service	$3,500.00
Utilities	$9,000.00
Printing & reproduction	$2,000.00
Contract Repairs	$25,000.00
Insurance & Bonding	$25,000.00
Fixed Charges	$2,000.00
Professional Services	$10,000.00
Total	**$730,520.00**

The largest single source of funding assistance for the program is derived from the Federal Transit Administration's (FTA) Section 5311 (formula grants for rural public transit), which is administered through the DRPT. This program generally provides up to 50% match to fund the net deficit for rural transit programs. During the pandemic, federal funding was available to fund 100% of the net deficit for transit programs through the CARES Act. In FY2022, FAB received $139,045 in CARES funding and $31,233 in American Rescue Plan Act (ARPA) funding. For FY2023, the operating expenses will be funded through the sources listed in Table 3-12.

Table 3-12: FAB Operating Revenues and Funding Assistance, FY2023 Budget

Source	Amount
Fares	$9,000
Contract Service	$143,570
Net Deficit	**$578,470**
Federal Assistance	$360,760
State Assistance	$185,582
Local Assistance	$32,128

The FY2023 capital program will include the following:

- 2 14-passenger BOC's
- 1 support vehicle

The capital budget for FY2023 is $261,902. Funding for the FY2023 capital budget is as follows:

- Federal: $202,858
- State: $40,572
- Local: $18,472

Peer Analysis

While it is most relevant for a transit agency to examine its own performance over time, it is valuable to know the operating statistics for transit programs that could be considered "peers," either by virtue of location, service area characteristics, or size to see if local transit data is "in the ballpark" of typical peer operating data. In light of the ongoing pandemic, we have included peer data from the National Transit Database for FY2019 and FY2020. This allows a comparison of pre-pandemic as well as more current data. The FY2021 National Transit Database information is not yet available.

The following programs were used as peers:

- Blackstone Area Bus, serving the Town of Blackstone and an eight-county region in Southern Virginia including Farmville.
- Graham Transit, serving the Town of Bluefield, VA
- Radford Transit, serving the City of Radford, VA
- Pulaski Area Transit, serving the Town of Pulaski, VA
- Bristol Transit, serving the City of Bristol, VA
- Danville Transit, serving the City of Danville, VA

The peer data compiled show the following:

- FAB's productivity was the highest among peers, ahead of Danville Transit which was the second-highest in FY2019 and FY2020.
- FAB's cost per trip was much lower than the mean, both in FY2019 and FY2020.
- FAB's cost per hour was about the same as the mean in FY2019 and slightly higher than the mean in FY2020.
- The program operated less hours and less miles than the mean, while providing above-average volumes of passenger trips among peer systems. These data reflect the relatively high productivity of the program and a service area population which is below the mean among peers.
- The program's overall operating expenses were below the mean in both FY2019 and FY2020.

The complete peer data are presented in Tables 3-13 and 3-14.

Table 3-13: Selected Peer Comparison – FY2019 National Transit Database

System	UZA	Vehicles in Max. Service	Approximate Service Area Population	Annual Passenger Trips	Total Operating Expenses	Vehicle Revenue Hours	Vehicle Revenue Miles
Farmville Area Bus (FAB)	No	7	22,905	172,051	$668,530	13,008	195,978
Radford Transit	Yes	20	18,368	268,727	$1,478,035	31,215	342,655
Bristol Transit (BVT)	No	3	17,835	51,542	$389,211	7,168	73,866
Blackstone Area Bus (BABS)	No	7	135,461	38,276	$373,725	14,634	384,029
Pulaski Area Transit (PAT)	No	10	8,799	48,454	$614,097	16,642	201,414
Danville Transit	No	17	42,590	338,614	$2,625,960	35,977	539,625
Graham Transit (Bluefield, VA)	No	3	4,907	45,092	$306,544	8,115	133,672
Mean		**9.6**	**35,838**	**136,861**	**$910,840**	**18,108**	**267,320**

System	Trips Per Hour	Trips Per Mile	Cost Per Trip	Cost Per Hour	Cost Per Mile	MPH	
Farmville Area Bus (FAB)	13.2	0.88	$3.89	$51.39	$3.41	15.06	
Radford Transit	8.61	0.78	$5.50	$47.35	$4.31	10.98	
Bristol Transit (BVT)	7.19	0.7	$7.55	$54.30	$5.27	10.3	
Blackstone Area Bus (BABS)	2.62	0.1	$9.76	$25.54	$0.97	26.24	
Pulaski Area Transit (PAT)	2.91	0.24	$12.67	$36.90	$3.05	12.1	
Danville Transit	9.41	0.63	$7.76	$72.99	$4.87	15	
Graham Transit (Bluefield, VA)	5.56	0.34	$6.80	$37.77	$2.29	16.47	
Mean	**7.02**	**0.52**	**$7.65**	**$45.73**	**$3.39**	**15.17**	

Table 3-14: Selected Peer Comparison – FY2020 National Transit Database

System	UZA	Vehicles in Max. Service	Approximate Service Area Population	Annual Passenger Trips	Total Operating Expenses	Vehicle Revenue Hours	Vehicle Revenue Miles
Farmville Area Bus (FAB)	No	11	21,849	122,171	$620,930	11,722	172,909
Radford Transit	Yes	20	18,368	185,459	$1,497,428	27,797	302,634
Bristol Transit (BVT)	No	3	17,835	38,428	$407,282	5,557	66,056
Blackstone Area Bus (BABS)	No	8	132,987	28,786	$296,588	14,584	367,573
Pulaski Area Transit (PAT)	No	9	8,744	48,454	$614,097	16,642	201,414
Danville Transit	No	18	42,590	289,631	$2,576,382	33,467	482,298
Graham Transit (Bluefield, VA)	No	3	5,096	43,414	$320,705	7,813	131,091
Mean		**10.3**	**35,353**	**107,436**	**$904,773**	**16,797**	**246,282**

System	Trips Per Hour	Trips Per Mile	Cost Per Trip	Cost Per Hour	Cost Per Mile	MPH	
Farmville Area Bus (FAB)	10.06	1.47	$5.27	$52.97	$3.59	14.75	
Radford Transit	6.67	0.61	$8.07	$53.87	$4.95	10.89	
Bristol Transit (BVT)	6.92	0.58	$10.6	$73.29	$6.17	11.89	
Blackstone Area Bus (BABS)	1.97	0.08	$10.30	$20.34	$0.81	25.2	
Pulaski Area Transit (PAT)	2.91	0.24	$12.67	$36.90	$3.05	12.1	
Danville Transit	8.65	0.6	$8.90	$76.98	$5.34	14.4	
Graham Transit (Bluefield, VA)	5.56	0.33	$7.39	$41.05	$2.45	16.78	
Mean	**6.11**	**0.56**	**$9.03**	**$50.77**	**$3.77**	**15.14**	

SOURCE: 2020 NATIONAL TRANSIT DATABASE

Public Survey Results

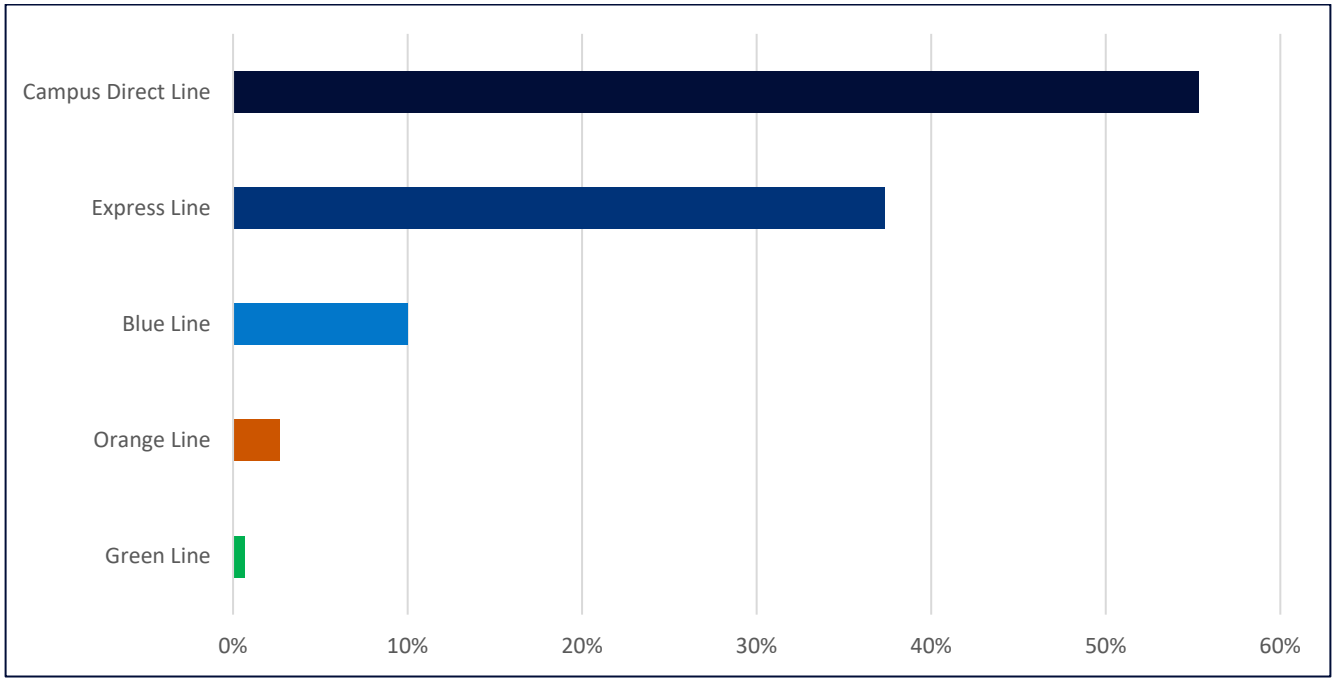
Paper surveys were distributed on buses from June 27 – June 29, 2022 and 20 surveys were returned (mostly Blue Line and Summer Shuffle riders). On September 26, 2022, an online survey link was sent out to Longwood University students, faculty and staff and 129 surveys were returned (mostly Campus Direct and Express Line riders). In total, about 150 people filled out most or all of the survey.

Route Taken

Respondents were asked which FAB route they were currently riding.

A majority (53%) of respondents were riding the Campus Direct Line, 35% were riding the Express or Summer Shuffle Line and 2% were riding the Orange Line. Results are displayed in Figure 3-6.

Figure 3-6: Which bus route are you currently riding? (All surveys)



Where Passengers Boarded the Bus

Passengers were asked where they boarded the bus upon receiving the survey, and to indicate a specific intersection or landmark. Table 3-15 displays responses from our June 2022 survey distribution, while Table 3-16 displays the top responses from our September 2022 online survey distribution to Longwood University. In the June survey, twelve passengers answered the question, with a few sharing their Apartment building stop and two noting the Courthouse stop. In the September survey, 140 people responded with Longwood University, the library (Greenwood) and Lancer Park among the top locations.

Table 3-15: Where did you board the bus? (June riders)

• Courthouse (2) • Oshorn • Sunchase Apartments • Barnes and Noble • Parkview Drive • My apartment	• Parkview Gardens Apartments • Longwood University • Walmart • Meherrin Road • Meherrin Post Office

Table 3-16: Where did you board the bus? (September riders)

• Library (26) • Longwood (24) • Lancer Park (23) • Health Fitness Center (16) • Library (13) • Greenwood Library (13) • Moss / Johns Hall (12)	• Dorms (6) • Hall (5) • Gym (5) • Lancer Park North (5) • Lancer Park South • Sharp, Lot, Lancer Park South (4 each) • Sunchase, Race Redford (3 each)

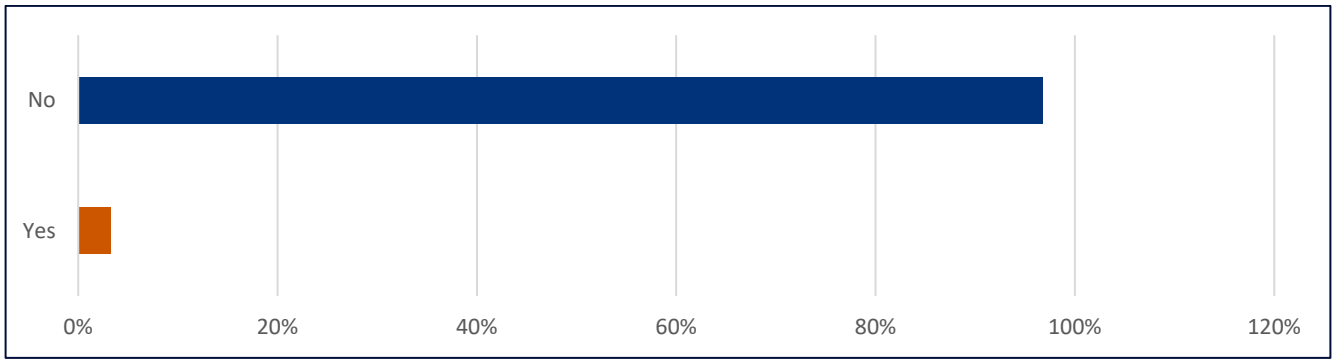
How Passengers Got to Their Bus Stop

Nearly every passenger answered the question and noted that they walked to the bus stop. Among the three people who did not walk, one person biked, one skateboarded, and one drove.

Transfers to Another Bus

Passengers were asked if they transferred or planned to transfer to another bus to complete their trip. Overall, five (about 3%) said "yes", while 140 (97%) said "no". Results are displayed in Figure 3-7.

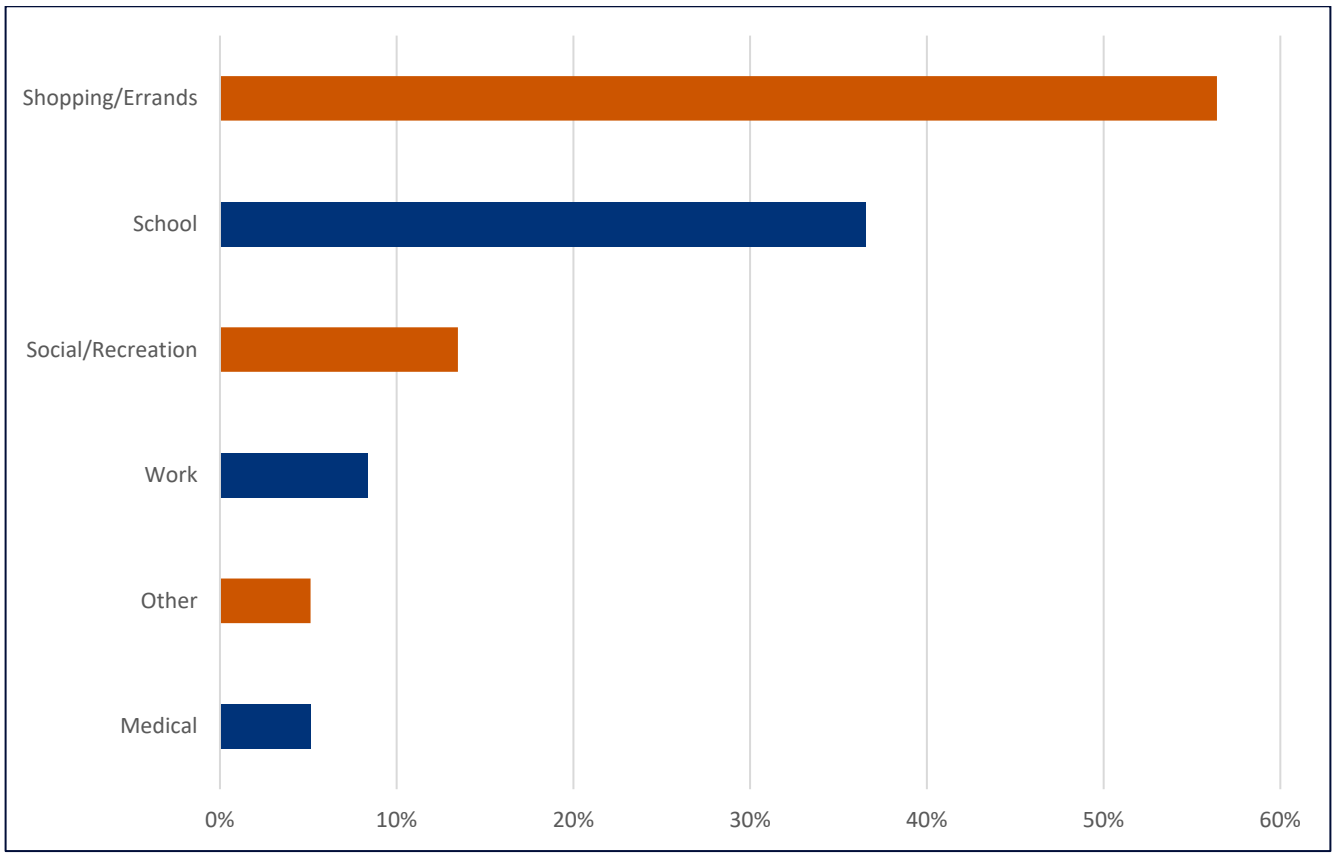
Figure 3-7: Did you or will you TRANSFER to another bus to complete this trip? (All surveys)



Purpose of Your Trip

Passengers were asked the purpose of their trip. For the June survey alone, the top two answers were "shopping/errands" (53%), and "work" (37%). When the results of both surveys are combined, the top purpose was still "shopping/errands" (56%), while "school" was the next most common purpose (37%). "Other" responses included "parking lot / getting to their car" (3), Lancer Park, and spending time with friends. Results are displayed in Figure 3-8.

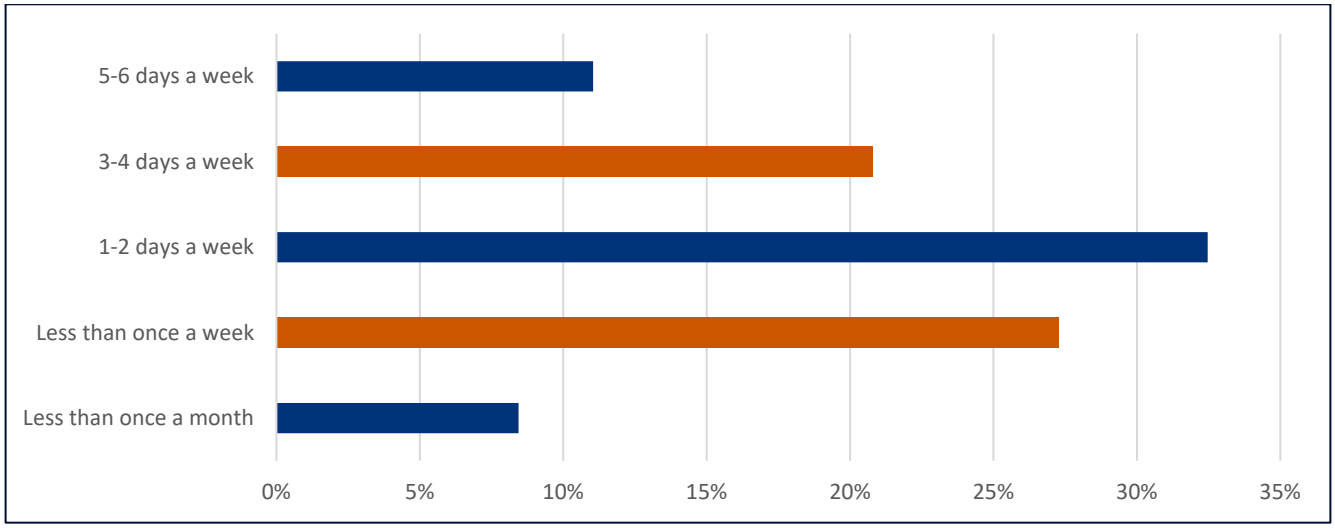
Figure 3-8: What is the purpose of your trip today? (All surveys)



Bus Trip Frequency

Passengers were asked how often they generally ride the bus. From the June 2022 survey, the top two answers were 3-4 days a week (47%) and 1-2 days a week (29%). When all the surveys were combined, the top answers were 1-2 days a week (32%), less than once a week (27%) and 3-4 days a week (21%). Results are displayed in Figure 3-9.

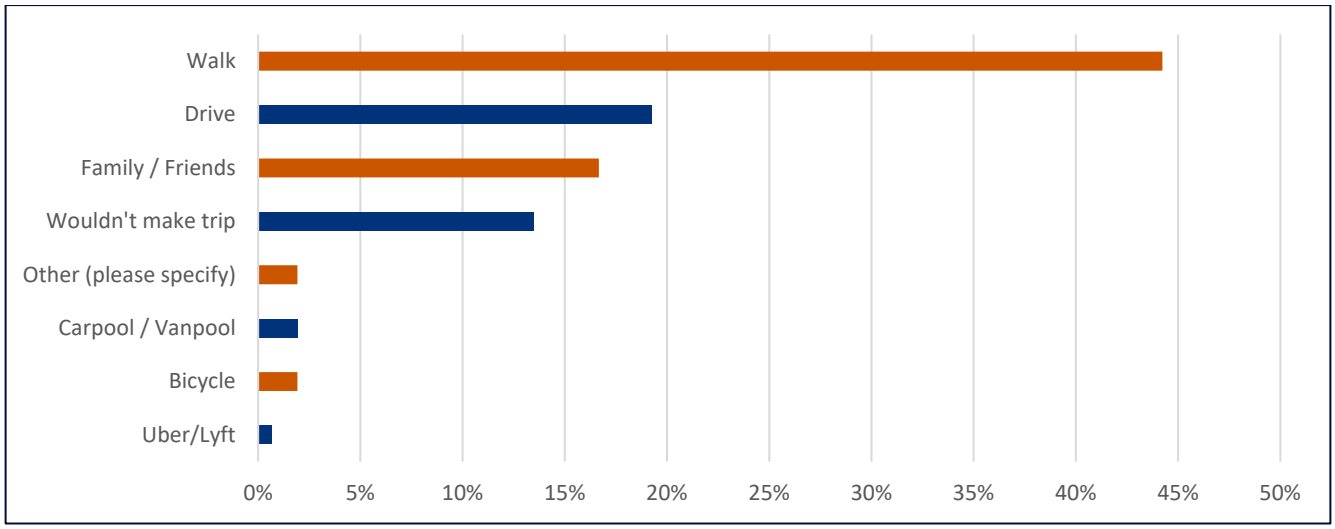
Figure 3-9: How often do you generally ride the bus? (All surveys)



Alternative Trip Modes

Passengers were asked how they would make their trip if they were not taking the bus today. From the June survey, the most common response was "family/friends" with 6 (32%) passengers choosing this option, while 4 (21%) chose "walk". When all surveys were combined, the most common response was "walk" (44%), followed by "drive" (19%) and "family/friends" (17%). Overall, 21 people (13%) noted they would not be able to make their trip at all without the bus. All other trip modes made up about 6% of the remaining responses; three people would bike, one would skateboard, three would carpool and one would take Uber/Lyft. Results are displayed in Figure 3-10.

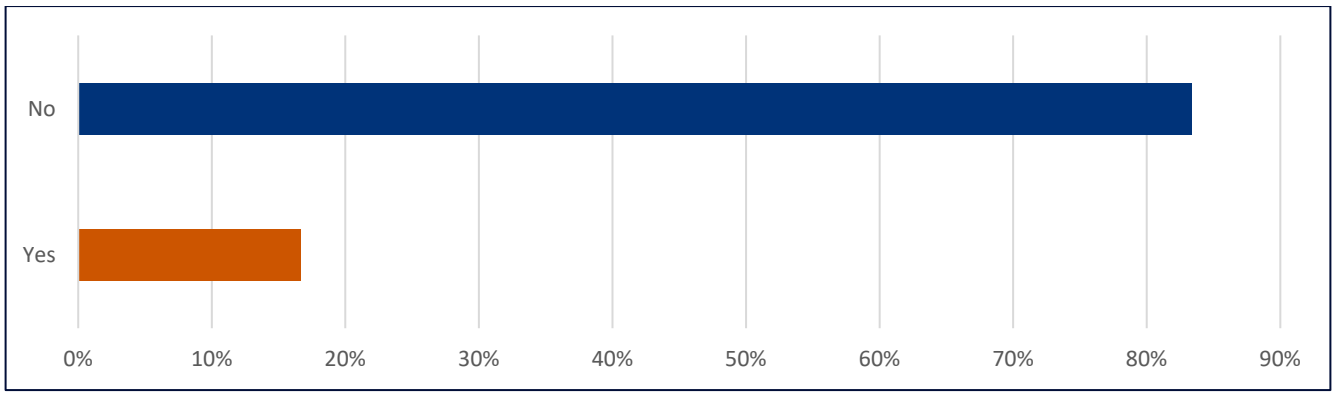
Figure 3-10: If you were not taking the bus, how would you make this trip? (All surveys)



Locations Passengers Need to Go

Passengers were asked if there were locations they needed to go to that FAB does not currently serve. Overall, 17% said "Yes". Locations that were shared included: Hampden Sidney College (3), the bank and nearby some restaurants, the movies, Farmville Flea Market, Lowes (2), YMCA, Pine View Bulk Food, Millers, their home (more days of the week), Longwood Athletic Complex, the Landings, churches, Hospital, past Walmart, some fast-food restaurants (Taco Bell, Burger King), and the bowling alley. Results are displayed in Figure 3-11.

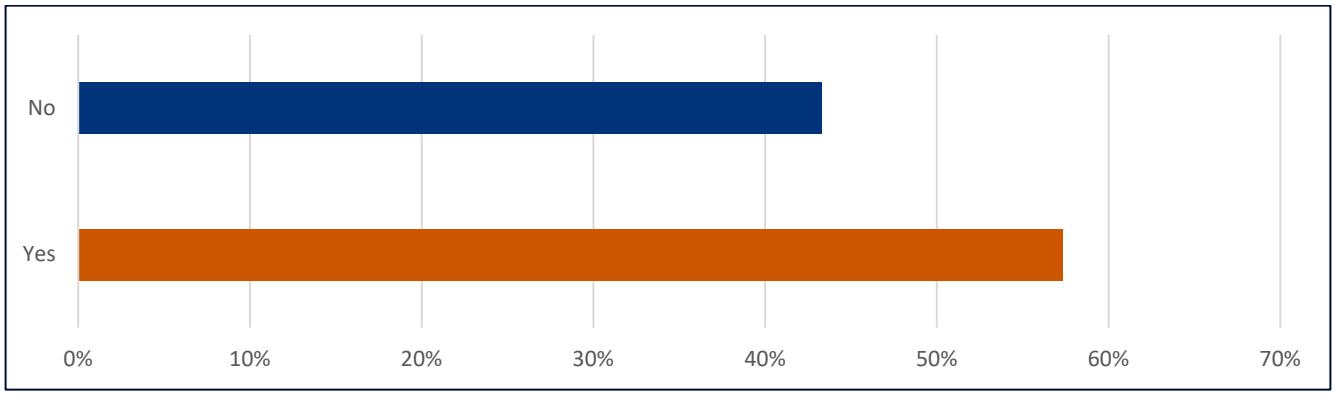
Figure 3-11: Are there locations where you need to go that FAB does not serve? (All surveys)



If the Bus Was Not Available

Passengers were asked if they would still have taken their trip if the bus system was not available. Overall, 57% said "Yes". Results are displayed in Figure 3-12.

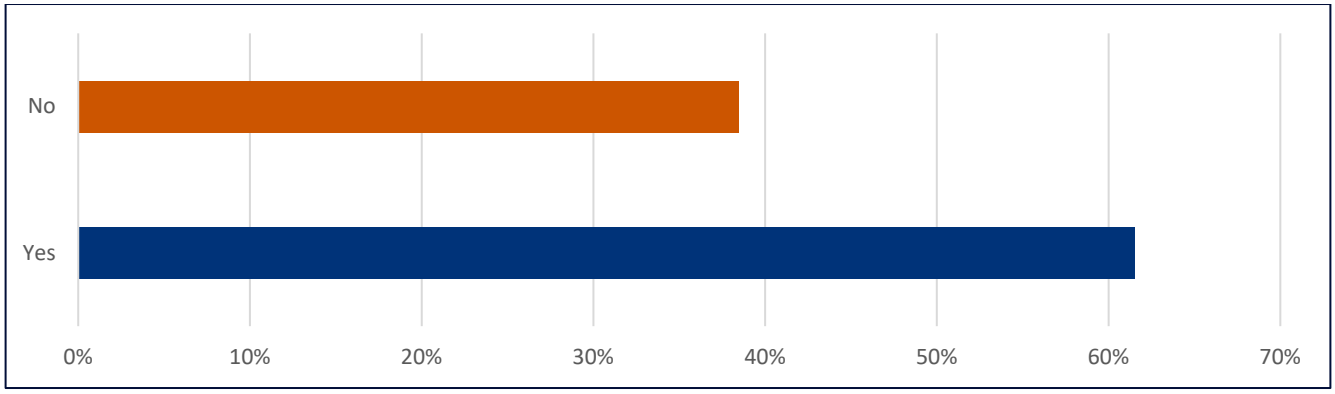
Figure 3-12: If the bus system was not available, would you still have taken this trip? (All surveys)



Ability to Live Independently

Passengers were asked whether their ability to live independently would be affected by not having the bus available. A majority of 96 respondents said "Yes" (62%). Results are displayed in Figure 3-13.

Figure 3-13: If the bus system was not available, would it affect your ability to live independently? (All surveys)



Access to Driver's License or Car

Passengers were asked whether they had a driver's license. 115 people answered the question, with 77% saying "Yes". When asked if they or anyone in their household owns a car, 80% said "Yes". Results are displayed in Figures 3-14 and 3-15.

Figure 3-14: Do you have a driver's license? (All surveys)

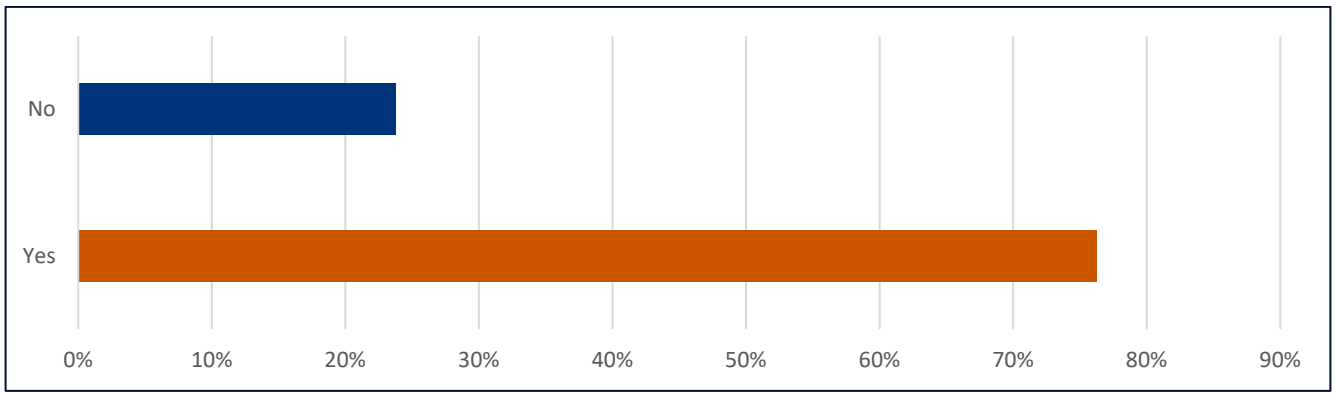
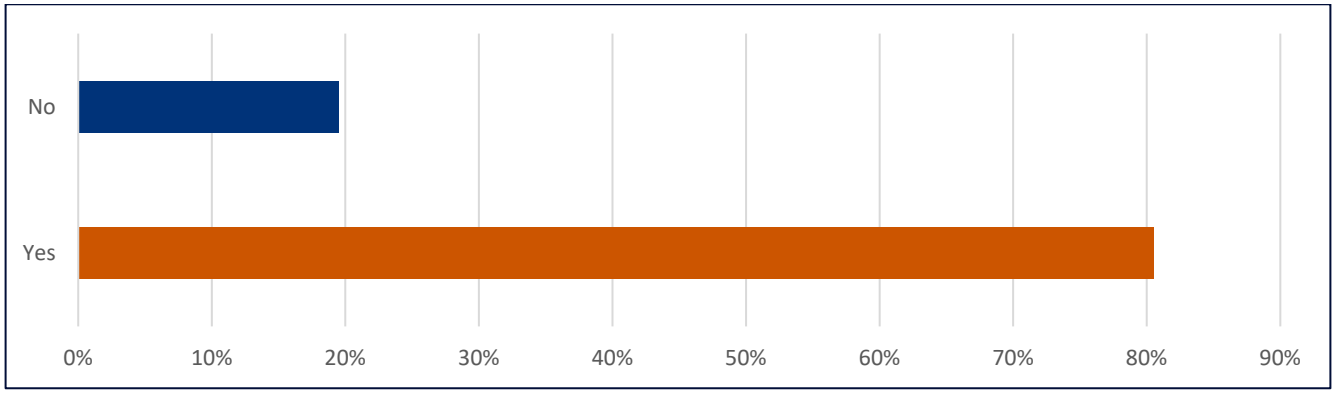


Figure 3-15: Do you, or anyone in your household, own a car? (All surveys)



FAB Improvements

Passengers were asked what were the **top two** improvements to FAB that would be the most useful to them. For those taking the survey in June (displayed in Figure 3-16), the top answers were "Service later in the evenings" and "Sunday service" (7 responses for each) which together represent 50% of respondents. However, when including the September surveys from Longwood University the top answer was "Better timeliness" (46%), followed by "On-demand service using my smartphone (36%), and "Sunday service" (30%). This was followed closely by "Service later in the evenings" (29%) and "More frequent service" (29%). Results are displayed in Figure 3-17.

Figure 3-16: If FAB made improvements, what would be most useful to you? (June Survey)

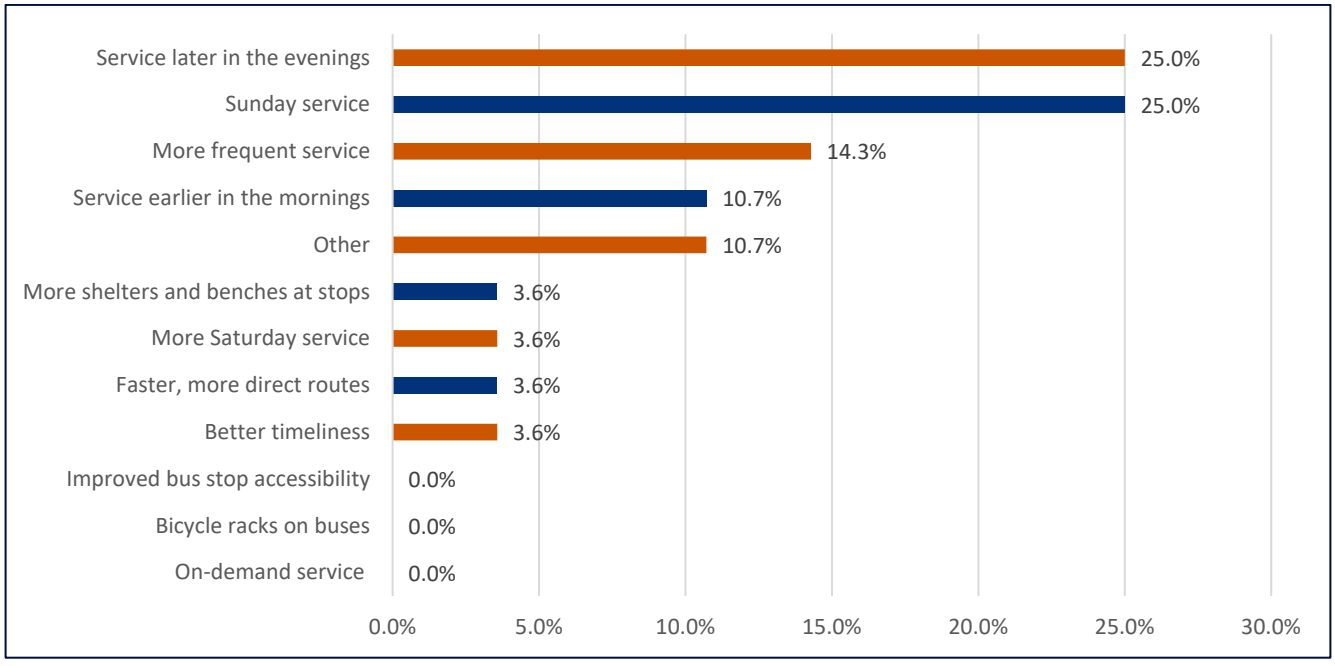
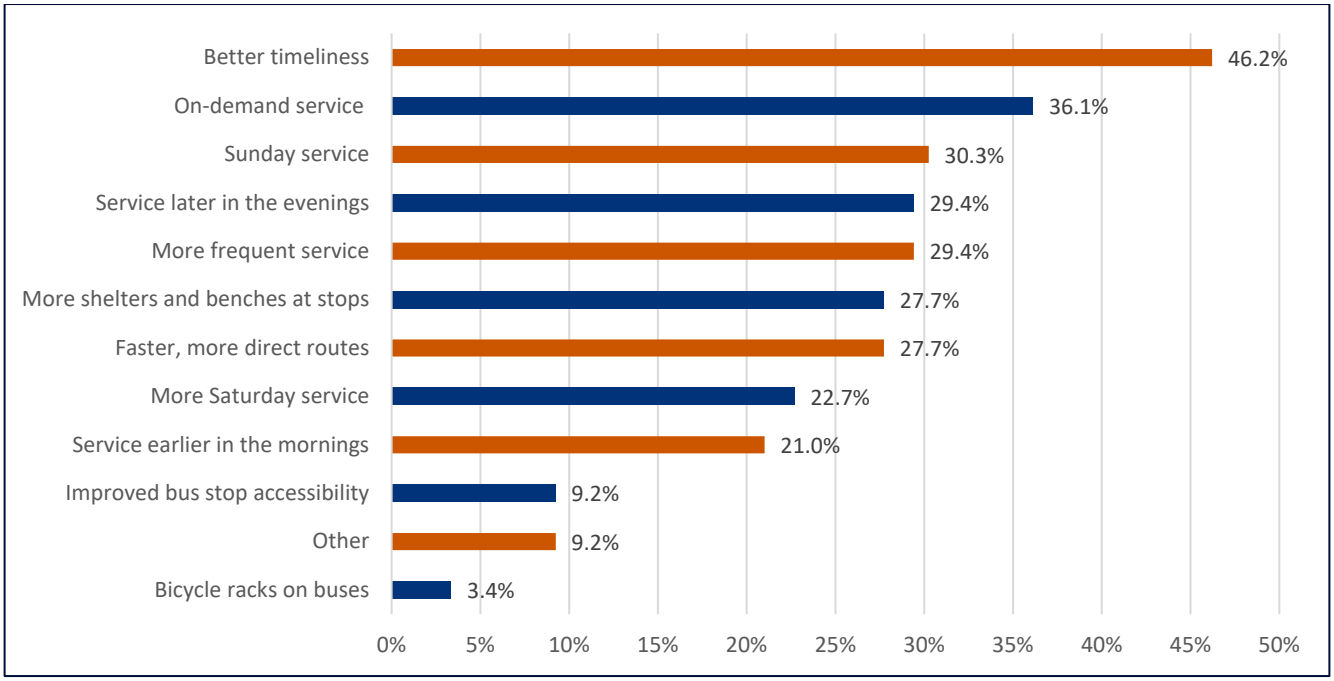


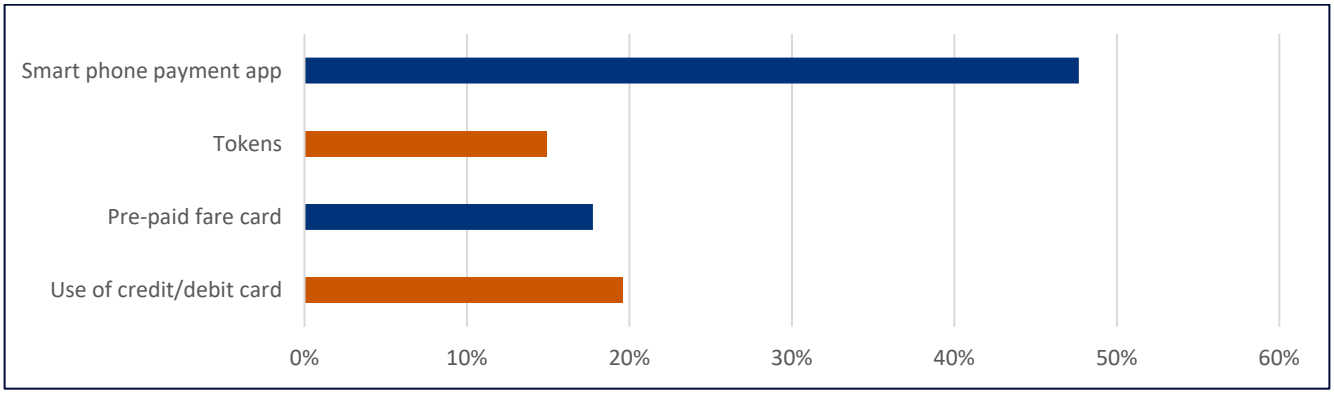
Figure 3-17: If FAB made improvements, what would be most useful to you? (September Survey)



Non-Cash Fare Payment

Passengers were asked which non-cash fare payment option was the most convenient to them. For the June survey, the most popular option was "Tokens" with five responses (35%), followed by a tie for "Use of credit/debit card" and "pre-paid fare card" at four responses (29%) and lastly "Smart phone payment app" (1 response). However, when including all surveys including the September survey responses (mostly students), the most popular option by far was "Smart phone payment app" (48%), followed by "credit/debit card" (20%) and "pre-paid fare card" (18% each).

Figure 3-18: Of the following non-cash fare payment options, which one would be the most convenient for you? (All surveys)



What Passengers Like About FAB

Passengers were asked to share what they liked the best about FAB, without any options provided in advance. Here were the fourteen responses from June survey respondents:

1. Fare low amount
2. Cash payment (2)
3. Bus pass
4. Gets me to my destination
5. Everything
6. Going to store
7. To take for shopping, doctors appointment
8. It's nice
9. It's convenient (2)
10. It's 25 cents
11. Professional, caring drivers, good bus atmosphere
12. The price
13. The ride
14. The service

Below are the eighty-three responses from September survey respondents (Longwood University). The most comments most frequently referred to the drivers (25%), while FAB's convenience (20%) was mentioned the second-most frequently. Other respondent comments included the places they could go, that it's free and clean.

- When I ride alone, I feel fairly safe onboard
- Good variety of stops near popular places in town, little communication necessary, comfortable
- That it is a way for students that need a ride to places, they have it and don't have to worry about asking someone all the time
- It is fast and gets me to where I need to go
- It really helps me get to places without my car and the drivers are lovely!
- It's convenient. I have my own car, but sometimes I don't want to drive myself. It's nice it's so close to Lancer Park
- The FAB gets me to my car
- The FAB is always clean
- That it rides smoothly
- The fact it is free transportation
- Easy and simple
- How convenient it is
- I don't have to drive myself
- Timeliness
- The cleanliness How comfortable everything was, especially the seats; felt homey
- Gets me where I'd like to go (2)
- Quick, easy clean ride
- I like how the FAB is always available
- It gets me to point A to point B
- It's helpful so that I don't have to walk
- Bus pass
- Going to store
- The service
- Convenient stops for my shopping / errands
- It takes me around campus, and I can get to Walmart using it
- The drivers (6)
- The drivers are lovely people
- The drivers are always very patient and nice
- The atmosphere, drivers are friendly and play good music
- The drivers are always nice to me (2)
- The drivers talking to the passengers.
- Professional, caring drivers, good bus atmosphere
- How sweet the drivers are
- Some of the bus drivers are nice
- The friendly and helpful drivers
- The bus drivers are nice (3)
- Not such a long ride and there's always no awkwardness because of the music
- Convenience (14)

- It is clean
- It's fast and clean
- It is free and convenient
- Free transportation as a student of the university.
- Good routes and times
- The different stops that it offers
- Accessible
- That it exists
- It's free to students
- The cheap price
- Fare low amount
- Cash (2)
- It's 25 cents
- The price
- It's very (useful) when the weather is too hot, cold, or it's raining because I can't drive and I live in LP
- How late at night it runs
- Everything

What Passengers Would Like FAB to Improve

Passengers were asked to share what they would like FAB to improve, without any options provided in advance. Here are the eight responses from the June survey:

1. Connection time from Orange Line to Blue Line
2. Everything is OK
3. Later service
4. Later pickup
5. Come to Meherrin more days of the week
6. More buses
7. None
8. Longer evening hours

Below are most of the sixty responses from the September survey:

- Buses arriving at stops closer to scheduled times
- Sunday night express service past 8pm, and weekday express service before noon (maybe starting at 10?)
- The bus is supposed to run every 15 minutes but it takes 30-45 min. for the bus to come around so improve on being on time
- Online bus tracker
- Timeliness / more frequency. Hate wasting time at a stop for 20 min.
- It needs to come on time. It doesn't need to loop around to the freshmen parking lot. Those freshmen can walk to the Lancer Park north bus stop.
- Having charges on the bus
- Where it drops you off
- Go to more areas and make the schedule less confusing
- Frequency
- Faster and more direct
- Faster, actually be on time
- Have a tracker of where bus is because I'd always miss the bus by a minute but the bus was early
- It's hot and cold
- Upkeep of some bus stops
- FAB shouldn't stop running until at least 2.
- It's never on time. We once had to wait an hour and a half and the driver was not personable toward us. Every time I've taken FAB we never use the time board provided at each station because it's not accurate.
- There should be a stop for 10 min. at the top of the hill while taking you to and from Lancer Park
- Employees can be nicer

- Stopping for student instead of almost hitting them.
- A driver saw me and my friends at the bus stop wearing headscarves and looked at us and sped away.
- Timeliness (9)
- Their timing. It doesn't make sense that if my class is at 2, I won't get to campus until 2, unless I want to get there 30 min. early. Would be nice to be able to get to campus 10-15 min. before class, even 5 so I at least have time to walk to my class.
- Being at the stop on time (2)
- Showing up
- Have FAB come on time
- Shelters for occupants
- The times
- Directions for where the routes run, as well as taking breaks during their route
- Arrival time to different stops
- Timeliness, buses are usually a few min. ahead or behind schedule which throws off students' ability to catch the bus on time at the times listed on the schedule
- Better timeliness
- Wish the schedule was more frequent and route info. was made more comprehensive. Sometimes a bus becoming so far behind schedule has required me to walk to class
- More route accuracy. There are what I assume to be new hires this semester who continuously are off schedule (by a lot, not a bit) or skips stops entirely (the second loop in Lancer Park has gotten skipped numerous times when riding the Campus Line).
- Staying on schedule
- Being able to track the bus so I am not waiting for a bus that is late or had to gas up/ switch drivers. More late night service
- It'd be cool to see the Blue Line get a stop in Lancer Park. Some students have to walk to campus to get on the Blue Line
- Potentially going later into the afternoon for Sundays

Demographics

The survey asked basic demographic questions such as a respondent's age, gender, general income bracket, and zip code. In addition, respondents were asked about their access to a car and smartphone.

The vast majority of respondents were between ages 18 and 24. These included mostly passengers for the Campus Direct and Express Line.

Table 3-17: Top Zip Codes of Survey Respondents

City/Area	Zip Code	Number of Responses
Farmville, VA	23901	22
Farmville, VA	23909	28
Meherrin, VA	23954	3
Other		38
Total Valid Responses		91

Table 3-18: Age of Survey Respondents

Age Bracket	Number of Responses	Percent of Total
Under 18	3	2.5%
18-24	99	83.2%
25-34	1	0.8%
35-54	7	5.9%
55-64	3	2.5%
65+	6	5%
Total Valid Responses	119	100%

The vast majority of survey respondents have an internet enabled smartphone. Most identify as Caucasian/White (74%), followed by African American/Black (22%). Most are full-time students (67%), while 26% are also part-time employees. Respondents were allowed to pick more than one option.

Table 3-19: Do you have an internet enabled smartphone?

Answer choices	Number of Responses	Percent of Total
Yes	111	94.1%
No	7	5.9%

Table 3-20: Which one of the following best describes your race? (More than one answer allowed)

Answer choices	Number of Responses	Percent of Total
Caucasian/White	87	73.7%
African American / Black	27	22.9%
Asian	3	2.5%
Native Hawaiian / Other Pacific Islander	1	0.9%
Hispanic / Latino	5	4.2%
Prefer not to answer	6	5.1%

Table 3-21: What is your employment status? (More than one answer allowed)

Answer choices	Number of Responses	Percent of Total*
Employed (Full-time)	8	6.7%
Employed (Part-time)	30	25.0%
Student (Full-time)	81	67.5%
Student (Part-time)	5	4.2%
Retired	5	4.2%
Homemaker	0	0.0%
Unemployed	14	11.7%
Other	4	3.3%
Total Respondents	120	

*RESPONDENTS WERE ALLOWED TO CHECK MORE THAN ONE ANSWER IF IT APPLIED. TOTAL RESPONDENTS DO NOT EQUAL TOTAL RESPONSES.

Half of survey respondents have an annual household income of less than $15,000. The second-highest income bracket of respondents (18%) have an annual household income of $75,000 or higher. Higher-income respondents included Longwood University staff or faculty who took the September survey.

Table 3-22: What is your annual household income?

Answer choices	Number of Responses	Percent of Total
$14,999 or less	53	54%
$15,000 - $29,999	1	1%
$30,000 - $44,999	11	11%
$45,000 - $59,999	5	5%
$60,000 - $74,999	10	10%
$75,000 or higher	18	18%
Total Respondents	98	100%

Comments

At the end of the survey, respondents were given an opportunity to provide additional comments they had about Farmville Area Bus. These comments are presented below.

- It's a great system for a small town, I just wish it started early on weekends.
- Stick to the schedule on the website – incorporate an app to see where various buses are at a given time. I believe the Blacksburg Transit (BT) has something like that.
- I brought my car this semester solely because I didn't want to take the bus.
- Drivers deserve a raise and I enjoy chatting on the bus.
- It's convenient to ride when you decide not to bring your car.
- The bus drivers are very friendly, which is always nice after a long day.
- Drivers deserve a raise, I enjoy chatting on the bus.
- Keep up the good work!
- We love you.
- We love you fabulous!

Population Profile

The following section provides a general population profile for the Farmville Area Bus (FAB) service area which consists of the Town of Farmville and Prince Edward County. The profile also identifies and evaluates underserved population subgroups and reviews the demographic characteristics pertinent to a Title VI analysis.

Historical and Recent Population Trends

As of the 2020 Decennial Census, the population of Prince Edward County was 21,849 persons, a 7% decline in population from 2010, but about an 11% increase since 2000. Most of this population is concentrated in Farmville, which has a population of 7,474 persons. Farmville has had a similar pattern of population, decreasing by 10% since 2010, but still increasing by about 9% since 2000. Figure 3-19 displays the urbanized areas (population greater than 50,000) and urban clusters (population between 2,500 and 50,000) in the region, including the Farmville and Crewe urban clusters.

Figure 3-19: FAB Service Area and Urbanized Areas

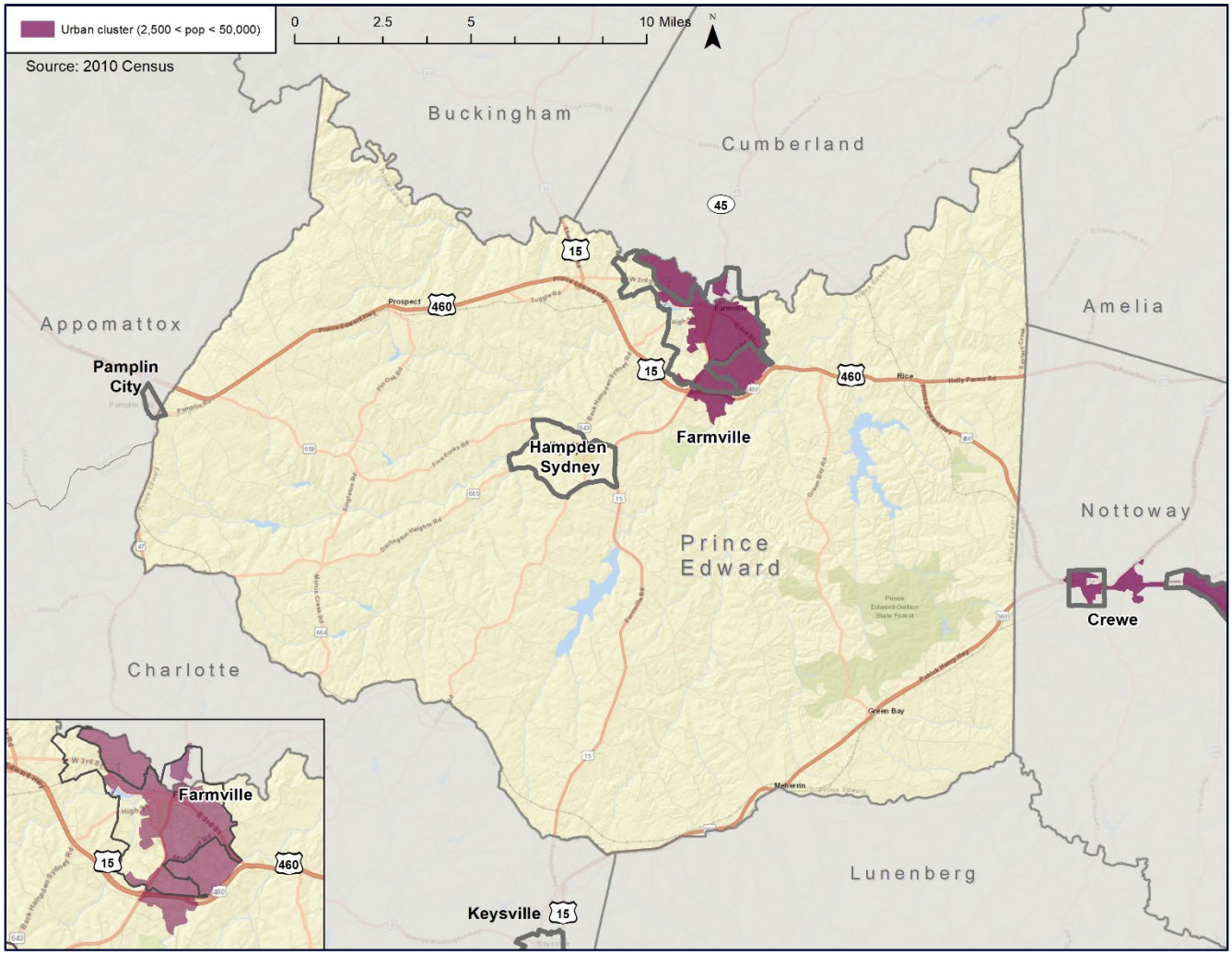


Figure 3-20: Farmville

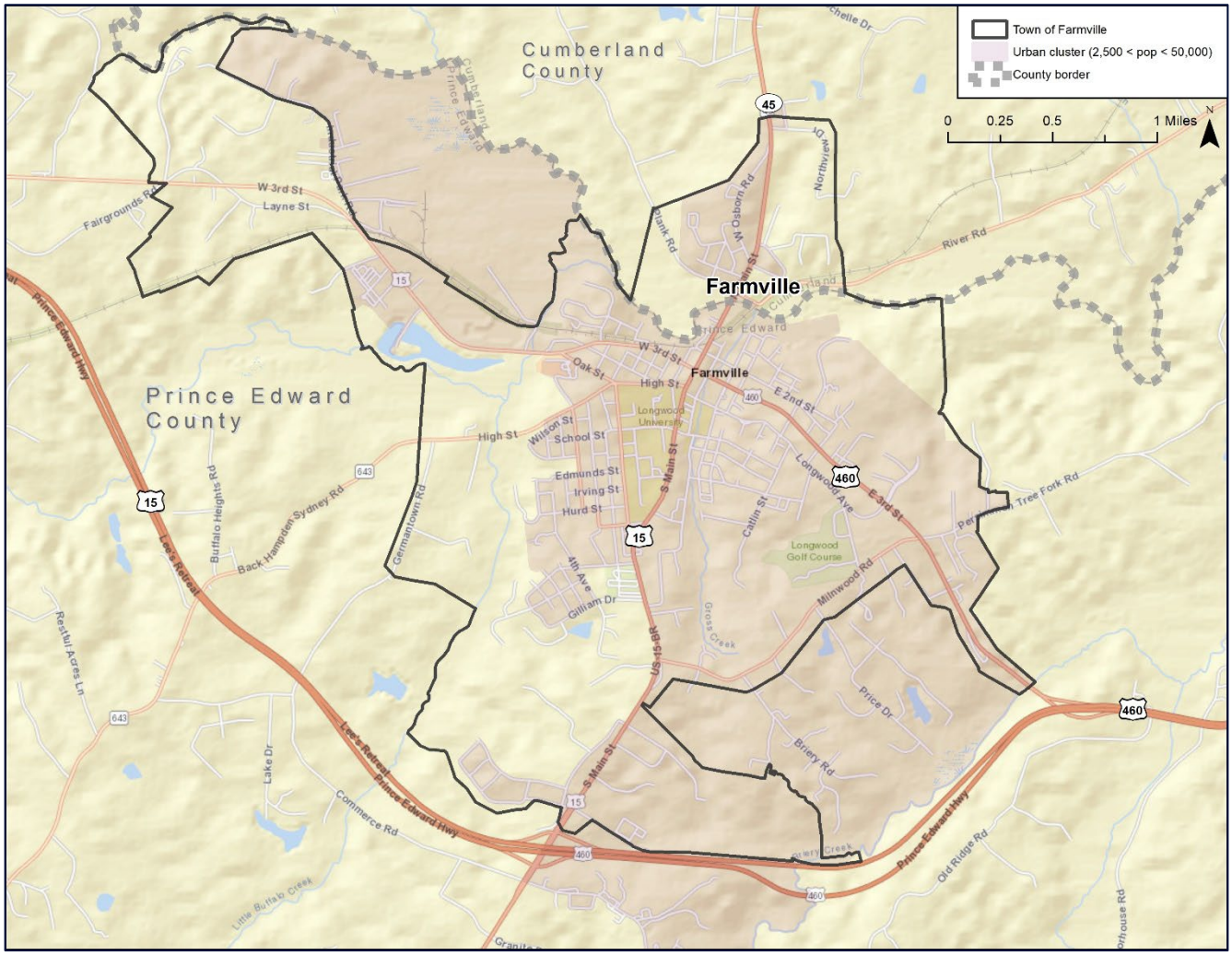


Table 3-23: Historical Populations for FAB Service Area

County / Area	2000	2010	2020	Percent Change 2010 - 2020	Percent Change 2000 - 2020
Prince Edward	19,719	23,368	21,849	-7%	10.8%
Town of Farmville	6,849	8,216	7,473	-10%	9.1%
Virginia	7,078,515	8,001,024	8,590,563	7%	21.4%

Table 3-24: Senior Citizen Share of Population for FAB Service Area

County / Area	2010	2020	Percent Change 2010 – 2020
Prince Edward	14%	17%	3%
Virginia	12%	15%	3%

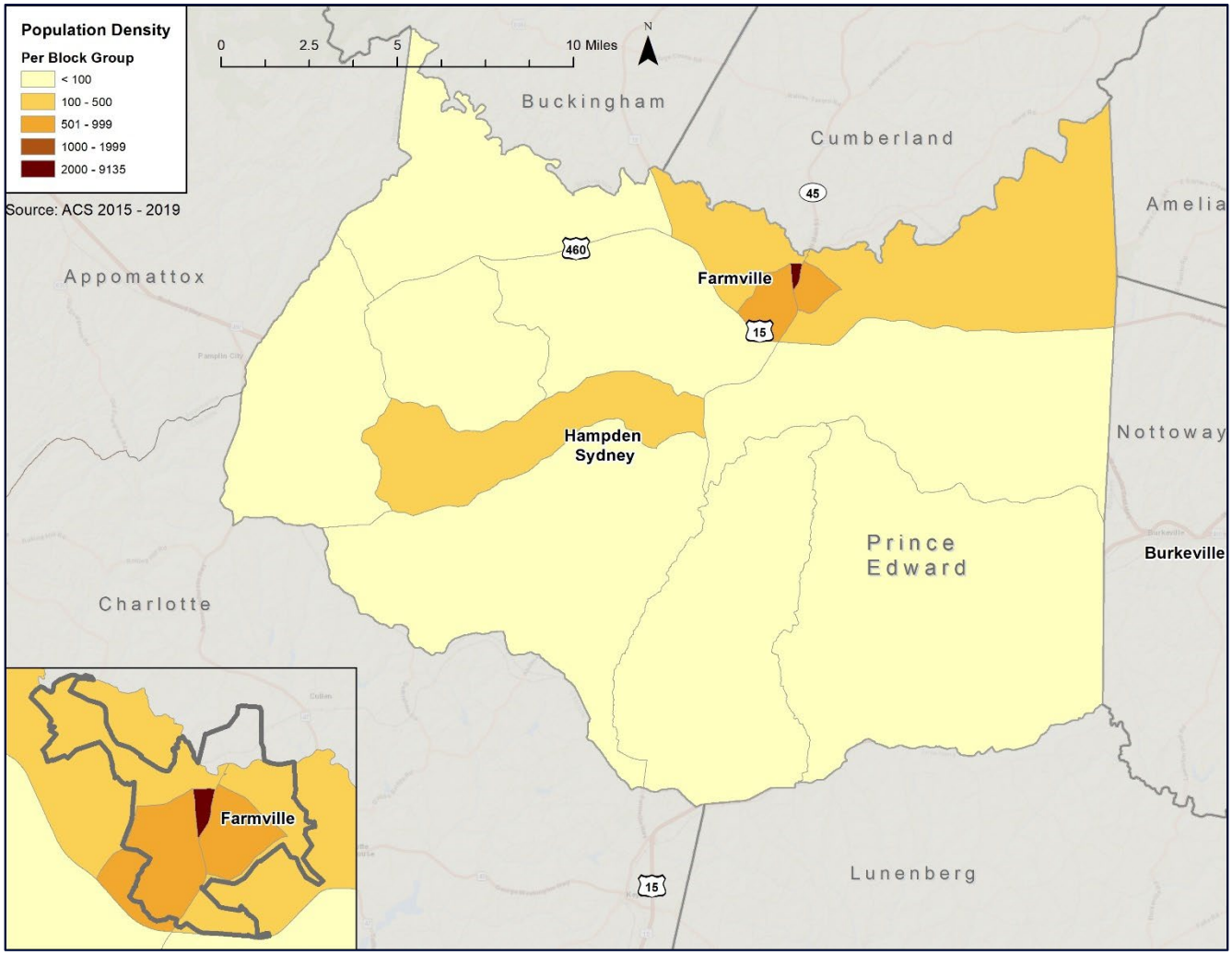
Table 3-24 shows that in Prince Edward County, the population of those ages 65 and older has increased slightly since 2010, mirroring the state's overall share of the senior population.

Population Density

Population density is often an effective indicator of the types of public transit services that are most feasible within a study area. While exceptions always exist, an area with a density of 2,000 persons per square mile will generally be able to sustain frequent, daily fixed route transit service. Conversely, an area with a population density below this threshold but above 1,000 persons per square mile may be better suited for flex route or microtransit services.

Of the fourteen block groups comprising Prince Edward County, there is one block group, located in central Farmville, that has this required level of population density to support a fixed route service. The next highest levels of population density are adjacent to that block group in Farmville and have population densities of 860 and 600 persons per square mile. One of these block groups is in an area slightly outside the Town of Farmville's southwest border.

Figure 3-21: Population Density for FAB Service Area



Future Population Projections

Projections developed by the ***University of Virginia Weldon Cooper Center*** shown in Table 3-25, estimate that the population of Prince Edward County will grow by 11.4% between 2025 and 2045, which is close to the projected population growth of the state of Virginia.

Table 3-25: Future Population Projections for FAB Service Area

County / Area	2025	2035	2045	Percent Change 2025 - 2045
Prince Edward	24,088	25,548	26,833	11.4%
Virginia	8,993,343	9,604,197	10,149,260	12.8%

SOURCE: UNIVERSITY OF VIRGINIA WELDON COOPER CENTER, POPULATION PROJECTIONS FOR VIRGINIA AND ITS LOCALITIES, 2025, 2035, 2045, INTERPOLATED FROM THE 2020-2040 PROJECTIONS

Transit Dependent Populations

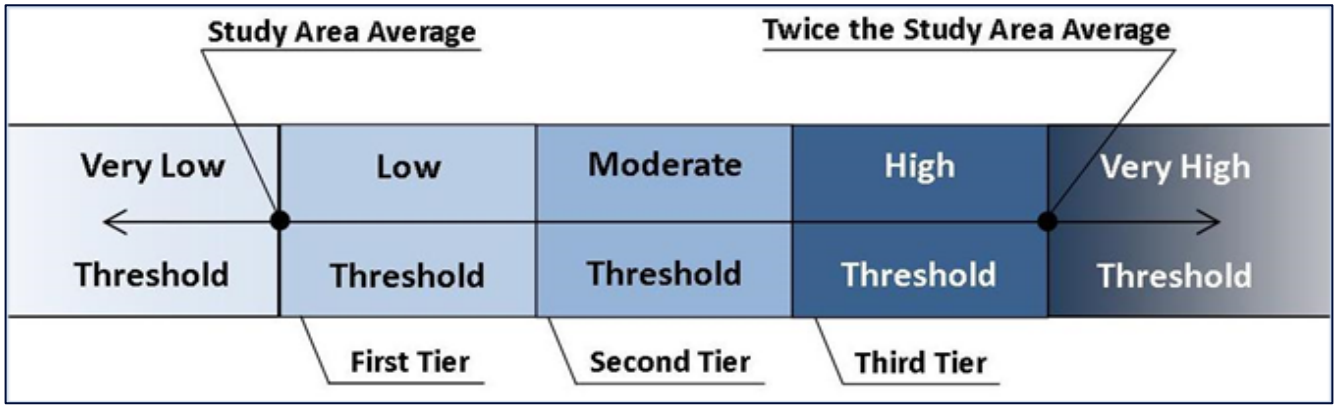
Public transportation needs are defined in part by identifying the relative size and location of those segments within the general population that are most likely to use transit services. These transit dependent populations include individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or disability. Determining the location of these populations assists in the evaluation of current transit services and the extent to which the services meet community needs.

The Transit Dependence Index (TDI) is an aggregate measure displaying relative concentrations of transit dependent populations. Five factors make up the TDI calculation: population density, autoless households, elderly populations (ages 65 and over), youth populations (ages 10-17), and below poverty populations.

The factors above represent specific socioeconomic characteristics of area residents. For each factor, individual block groups were classified according to the prevalence of the vulnerable population relative to each county's average, as well as to the regional average. The factors were then put into the TDI equation to determine the relative transit dependence of each block group.

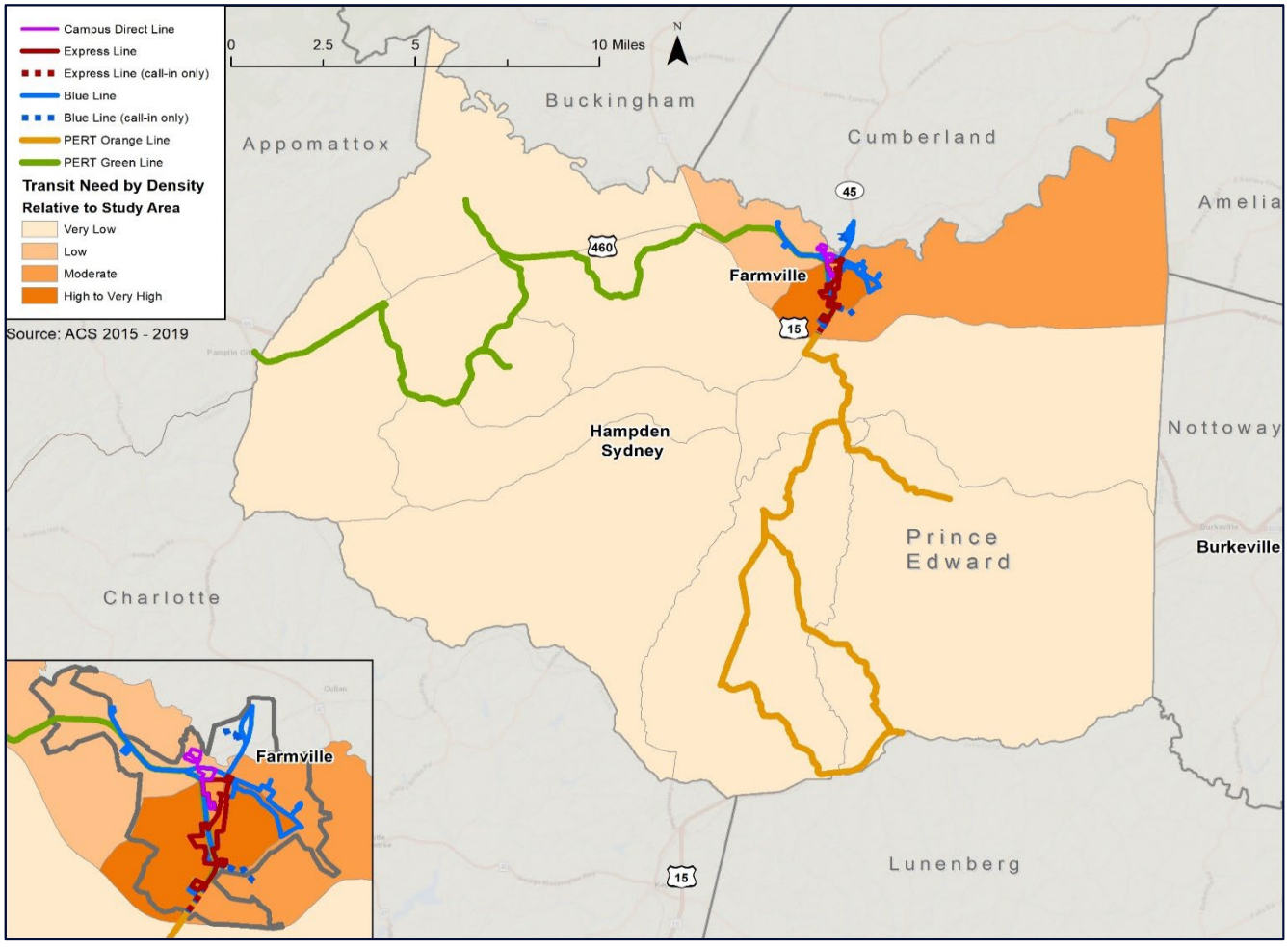
As illustrated in Figure 3-22, the relative classification system utilizes averages in ranking populations. For example, areas with less than the average transit dependent population fall into the "very low" classification, where areas that are more than twice the average will be classified as "very high." The classifications "low, moderate, and high" all fall between the average and twice the average; these classifications are divided into thirds.

Figure 3-22: Transit Dependent Populations Classification System



TDI rankings for the FAB service area, which includes Prince Edward County is represented in Figure 3-23. Block groups with a high TDI score are in Farmville and just southwest of Farmville's town borders.

Figure 3-23: Transit Dependence Index for FAB Service Area

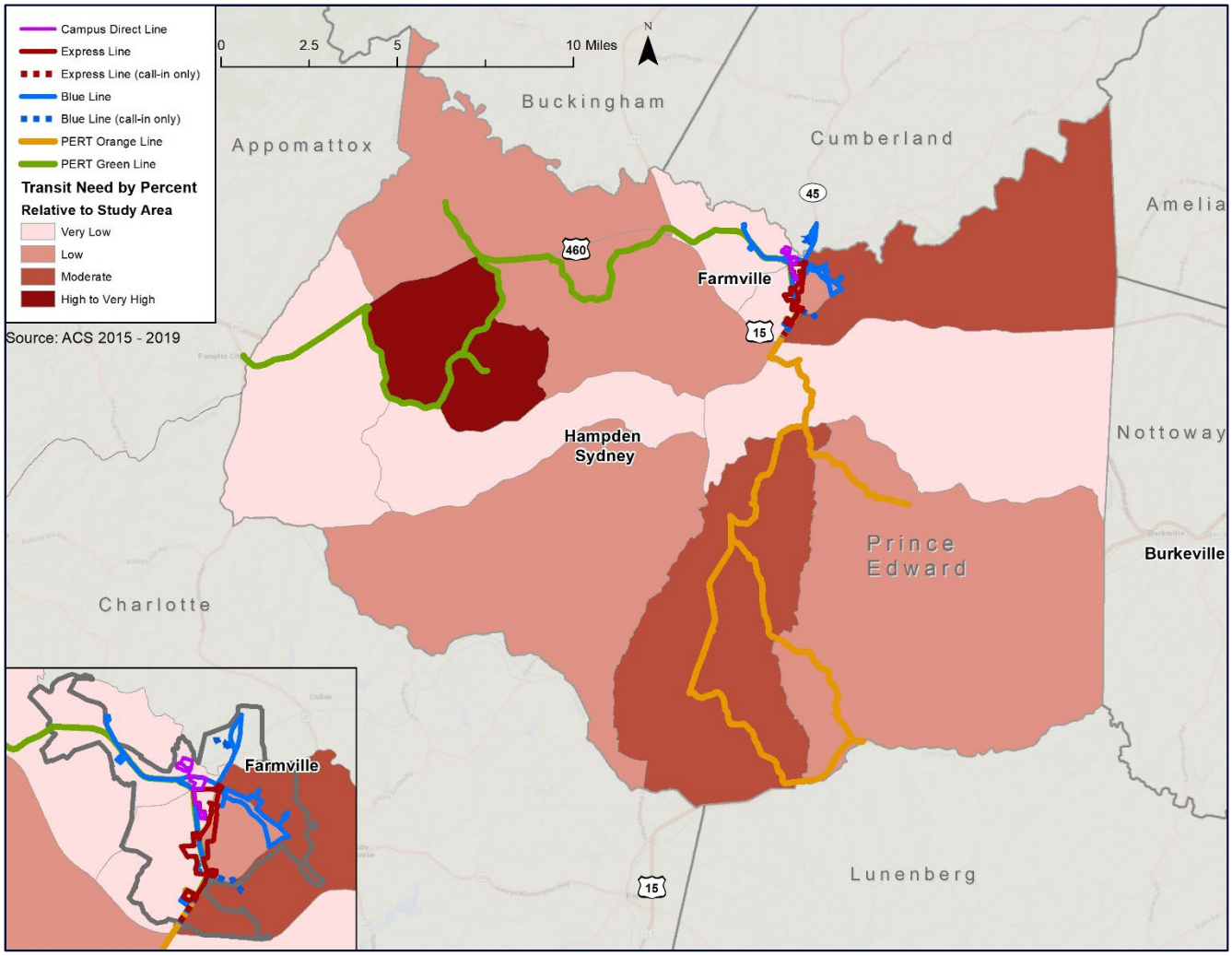


Transit Dependence Index Percentage

The Transit Dependence Index Percent (TDIP) provides a complementary analysis to the TDI measure. It is nearly identical to the TDI measure except for the exclusion of population density. The TDIP evaluates the total amount of transit dependent individuals in each block group, calculates the percentage of dependent individuals, and gives a score based on how that percentage relates to the study area average. The TDIP is useful in showing the block groups with a high degree of transit dependence, rather than a high number of transit dependent populations.

Block groups with a high TDIP score relative to the service area are found in a rural block group in the western part of the county, between Five Forks and state highway 460, which is served by the Green Line. Part of eastern and southern Farmville overlaps with a block group that has a moderate TDIP score. The center of this area includes Hendrick's store and Calvary Church. TDIP rankings for the FAB Region is represented in Figure 3-24.

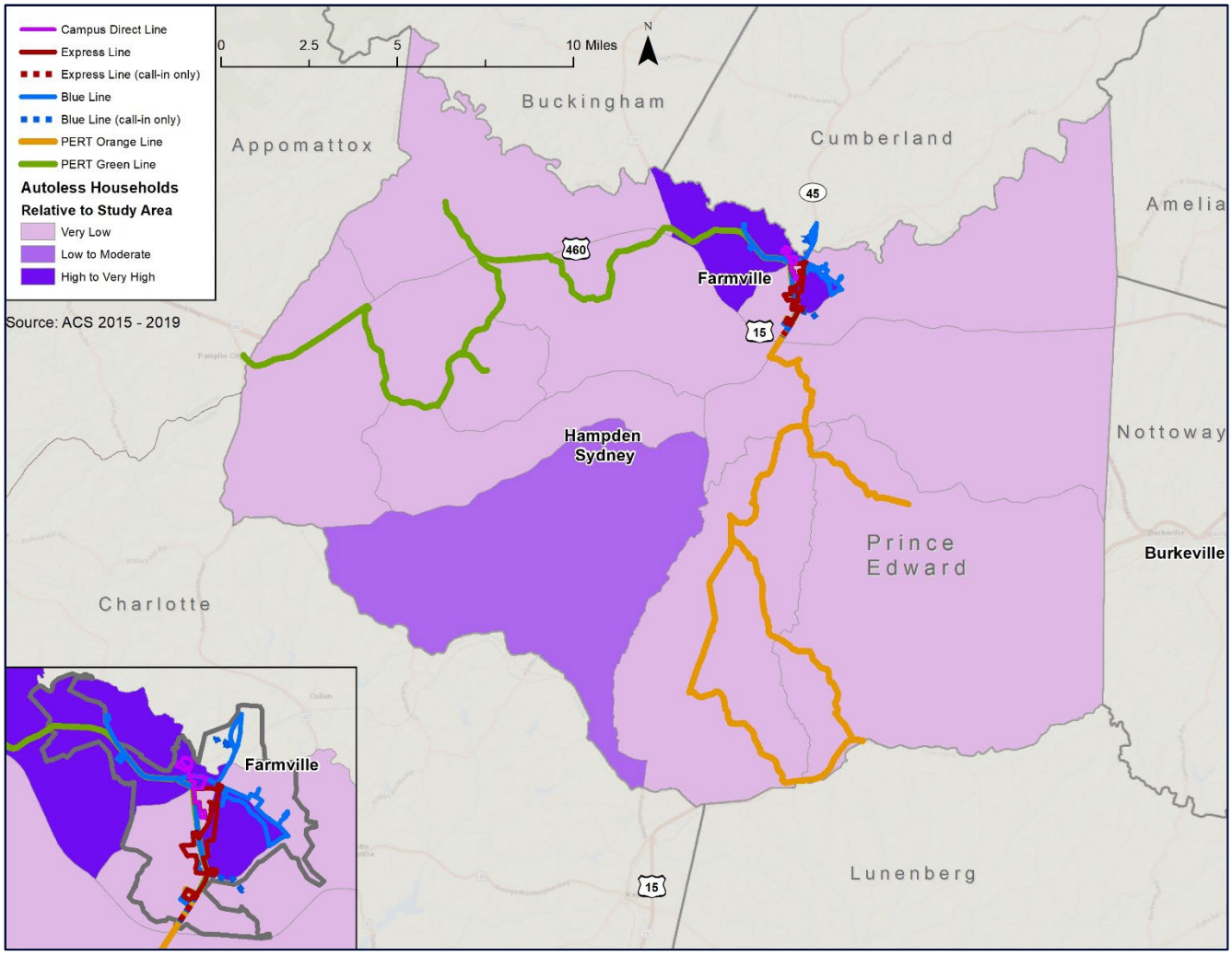
Figure 3-24: Transit Dependence Index Percentage for FAB Service Area



Autoless Households

Households without at least one personal vehicle are more likely to depend on the mobility offered by public transit than those households with access to a car. Figure 3-25 displays the relative number of autoless households for Prince Edward County. Block groups with a higher concentration of autoless households are in central and eastern Farmville (generally zoned for medium-high density residential), while another block group overlaps with northwestern Farmville (includes areas zoned for highway commercial, high-density residential and mobile homes).

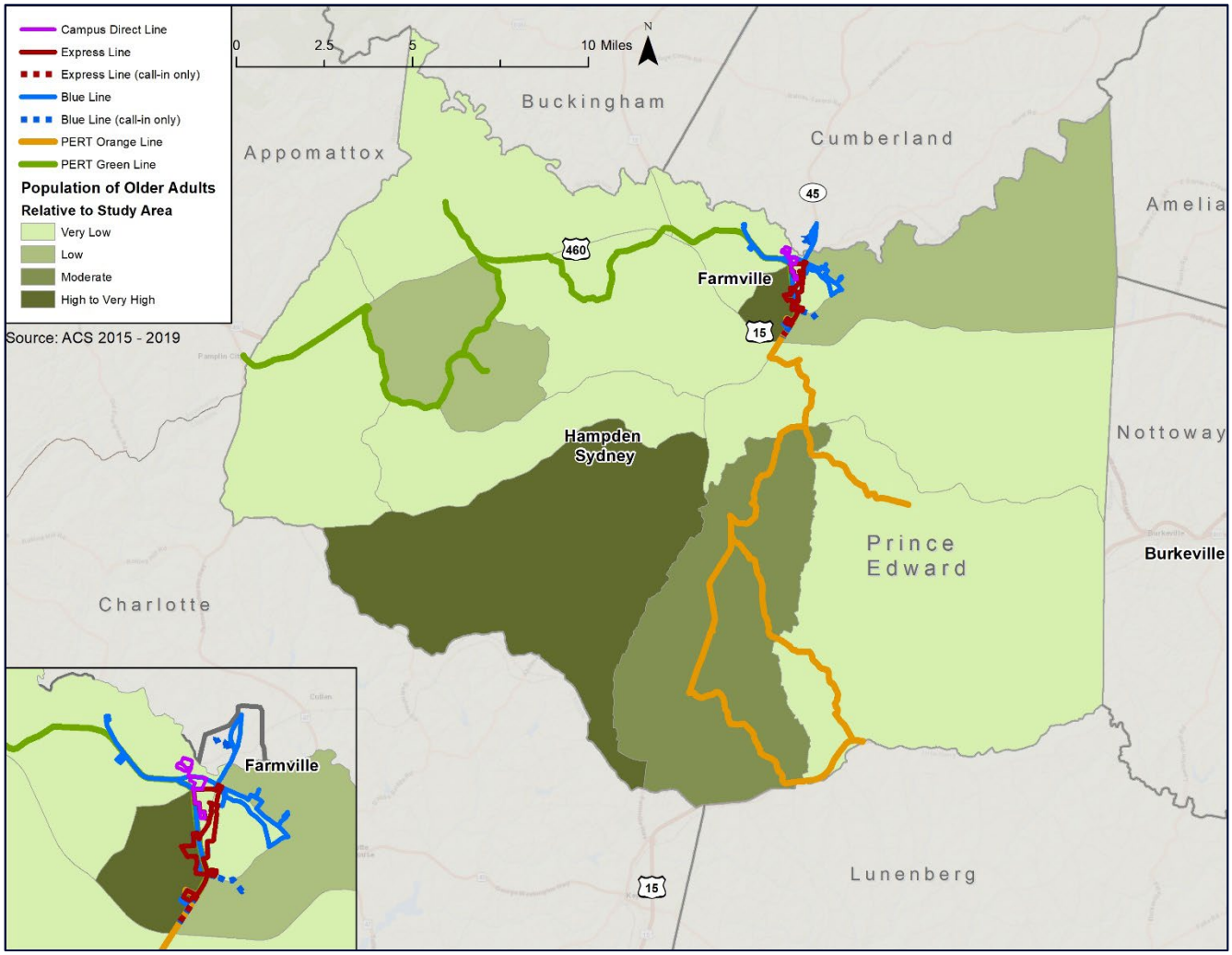
Figure 3-25: Autoless Households in FAB Service Area



Older Adult Population

Individuals ages 65 and older may scale back their use of personal vehicles as they age, leading to greater reliance on public transportation compared to those in other age brackets. A higher concentration of older adults is located in southwestern Farmville, which is zoned for low-density residential, and in another low-density block group in the southwest region of the county.

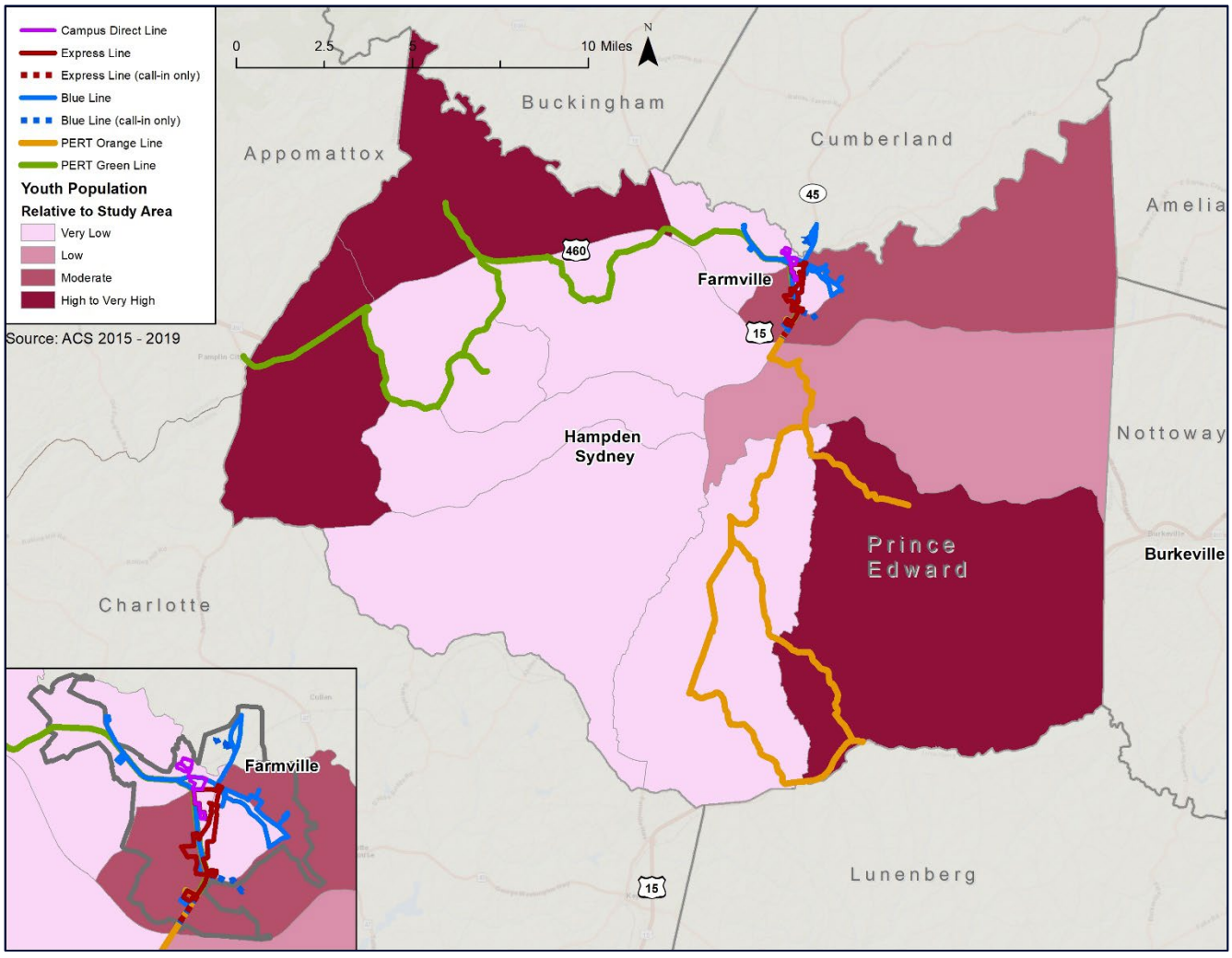
Figure 3-26: Older Adult Population in FAB Service Area



Youth Population

Youths and teenagers, ages 10 to 17 years, who cannot drive or are just beginning to drive but do not have an automobile available, appreciate the continued mobility from public transportation. Block groups with high levels of County and Buckingham County, and the southeastern region of the county. In Farmville, there are block groups with a moderate level of the youth population located in the southwest and eastern residential parts of the city.

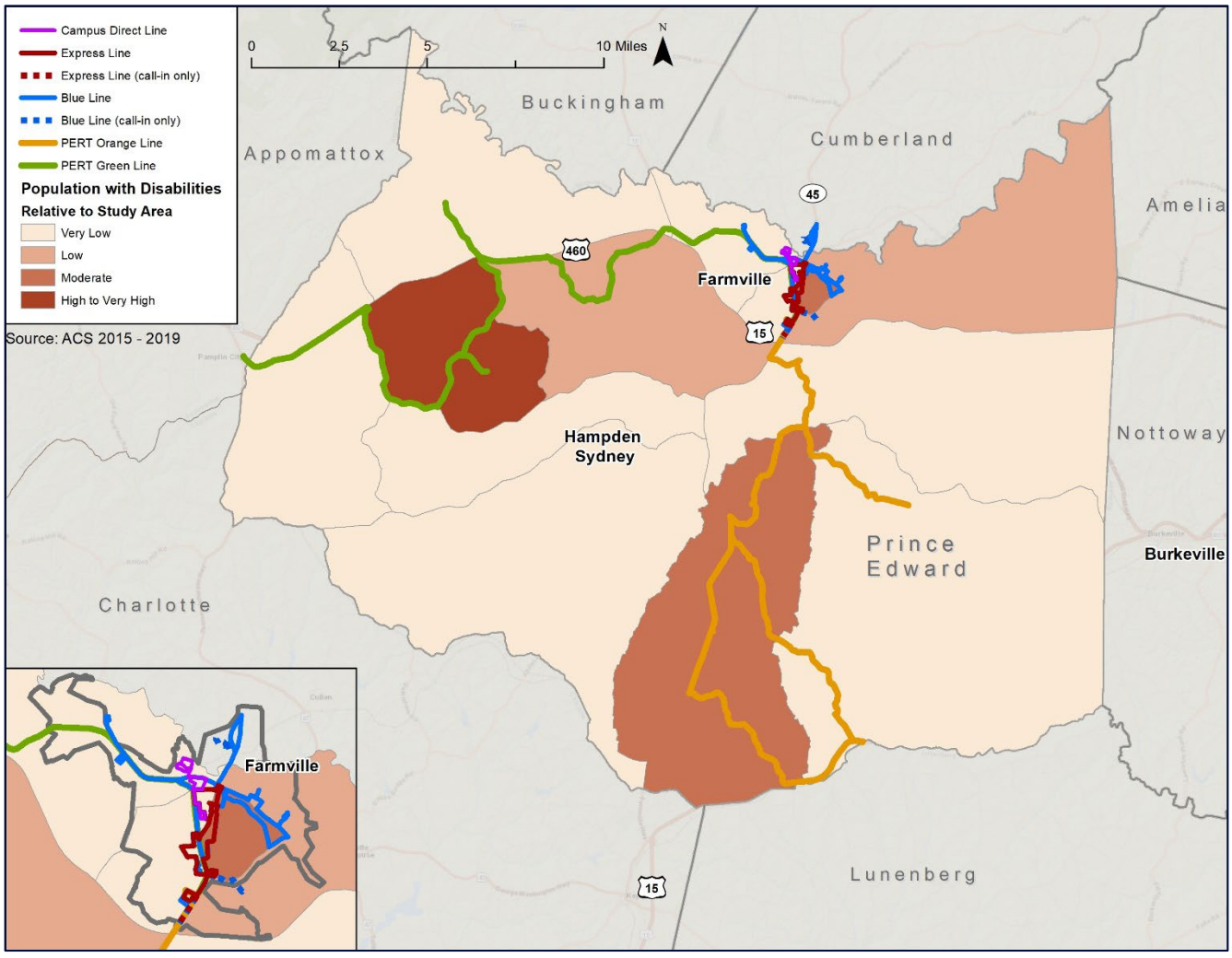
Figure 3-27: Youth Population in FAB Service Area



Individuals with Disabilities

Individuals with disabilities may be unable to operate a personal vehicle and consequently more likely to rely on public transportation. Block groups with higher concentrations of individuals with disabilities are found in a block group in the western part of the county, between Five Forks and state highway 460. As shown in Figure 3-28, this block group also has a very high TDIP score relative to the service area (Prince Edward County). There are also block groups with a moderate level of individuals with disabilities, including a residential block group in central Farmville and a large rural block group in the center of the county served by the Orange Line.

Figure 3-28: Individuals with Disabilities in FAB Service Area



Title VI Demographics Analysis

As part of the Civil Rights Act of 1964, Title VI prohibits discrimination based on race, color, or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following section examines the minority and below poverty populations of Prince Edward County. It then summarizes the prevalence of residents with Limited-English Proficiency (LEP). Farmville Area Bus System (FAB) is not required to evaluate its service and fare changes under Title VI because it does not meet the FTA thresholds regarding urbanized area (UZA) population and the number of vehicles operated in peak service. However, based on VDOT MTA guidance, it should still consider the following analysis before implementing any changes as a part of this TDP.

Minority Population

It is important to ensure that areas with an above average percentage of racial and/or ethnic minorities are not disproportionately impacted by any proposed alterations to existing public transportation services. Figure 3-29 depicts the approximate number of minority persons per block group in the study area. The average percentage of minority persons per block group is 39.8%. Of the 6 block groups in the county with an above average percentage of minority persons, one is in the medium-high density residential area in Farmville, another overlaps with northwestern Farmville, while the others are in the northwest and western region adjacent to Appomattox and Buckingham counties (served by the Green Line), and in the southeast of the county (partially served by the Orange Line).

Low-Income Population

The second socioeconomic group included in the Title VI analysis represents those individuals who earn less than the federal poverty level. These individuals face financial hardships that may make the ownership and maintenance of a personal vehicle difficult. In such cases, they may be more likely to depend on public transportation. The average percentage of persons living below the poverty line per block group is 13.8%. Of the 6 block groups in the county with an above average percentage of individuals living below the poverty level, one is in the eastern residential areas of Farmville, another is in the rural northeast corner of the county overlapping with eastern Farmville, while other block groups are west of Farmville (adjacent to highway 460 and areas served by the Green Line, and the southern part of the county (served by the Orange Line).

Figure 3-29: Minority Population in FAB Service Area

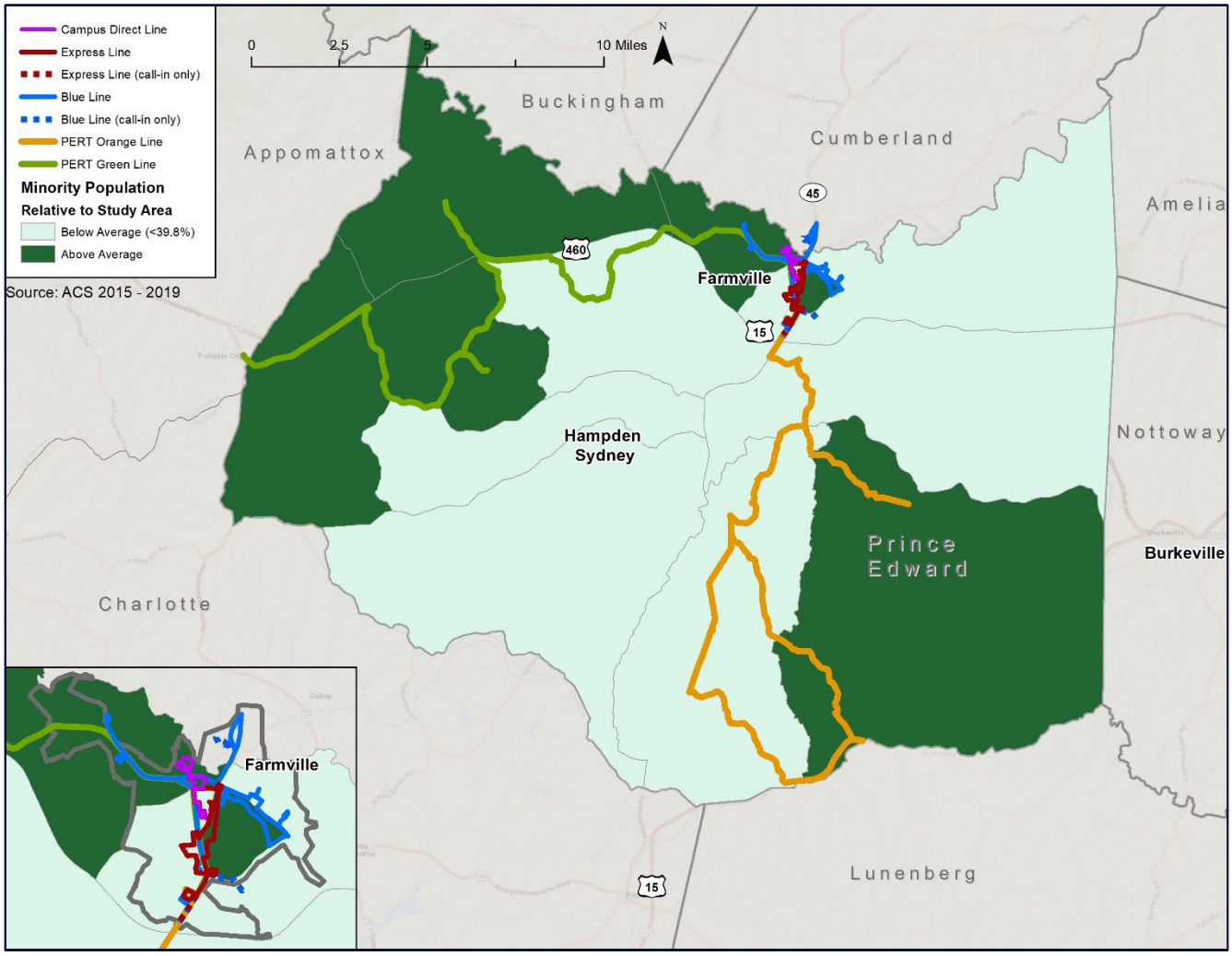
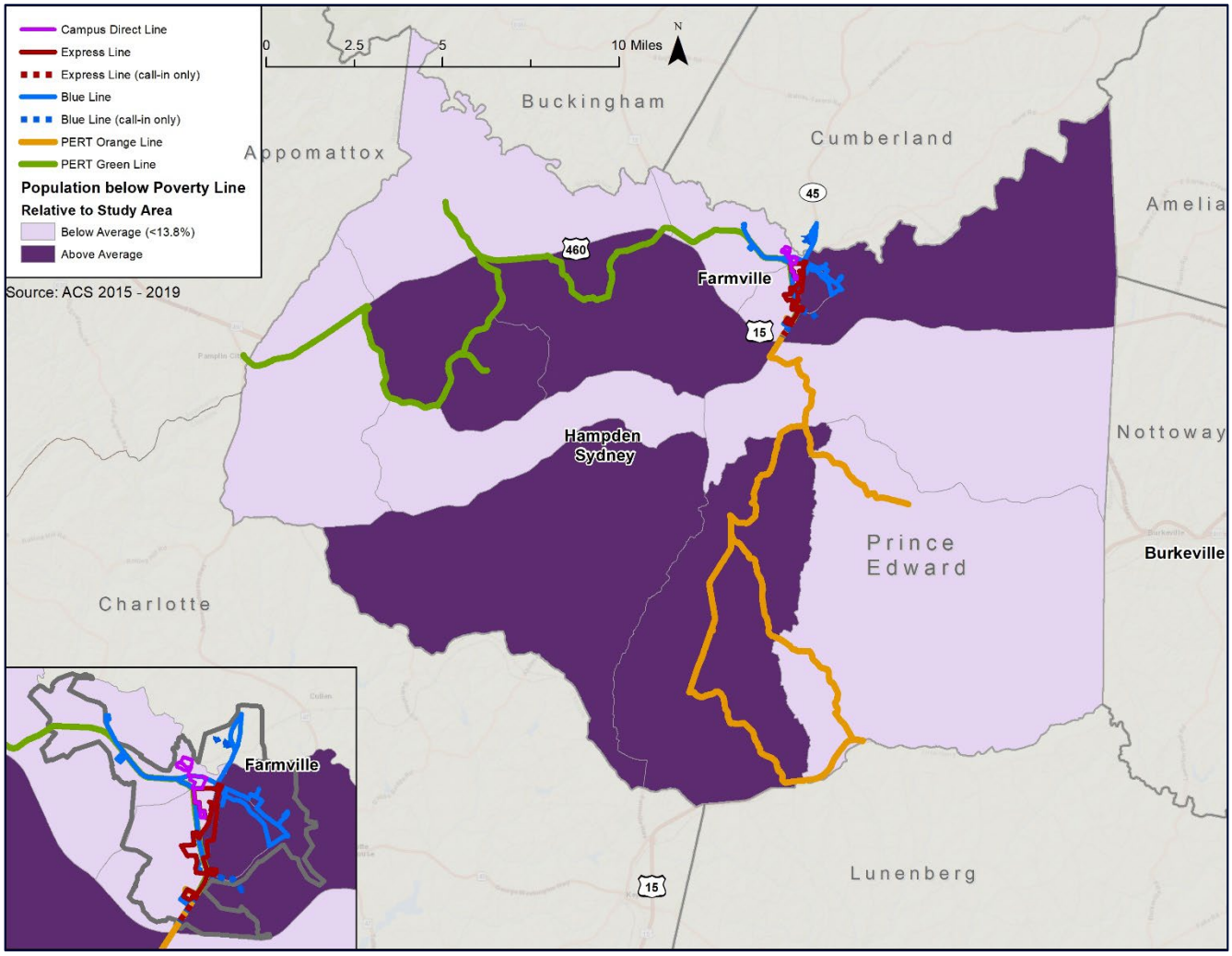


Figure 3-30: Low-Income Population in FAB Service Area



Land-Use Profile

Major land-uses are identified as origins from which a concentrated transit demand is generated and destinations to which both transit dependent persons and choice riders are attracted. This analysis will focus on the location of major employers and commuter travel patterns.

Major Employers

Providing transit services to major employment locations is advantageous to both the employee, as the individual is provided with direct access to their occupation and subsequent source of income, and the employer, as this entity will have assurance that their current or potential workforce will have diverse options of accessing the destination. Table 3-26 provides a listing of the ten largest employers in the FAB service area.

Table 3-26: Top Twenty Employers in the FAB Service Area

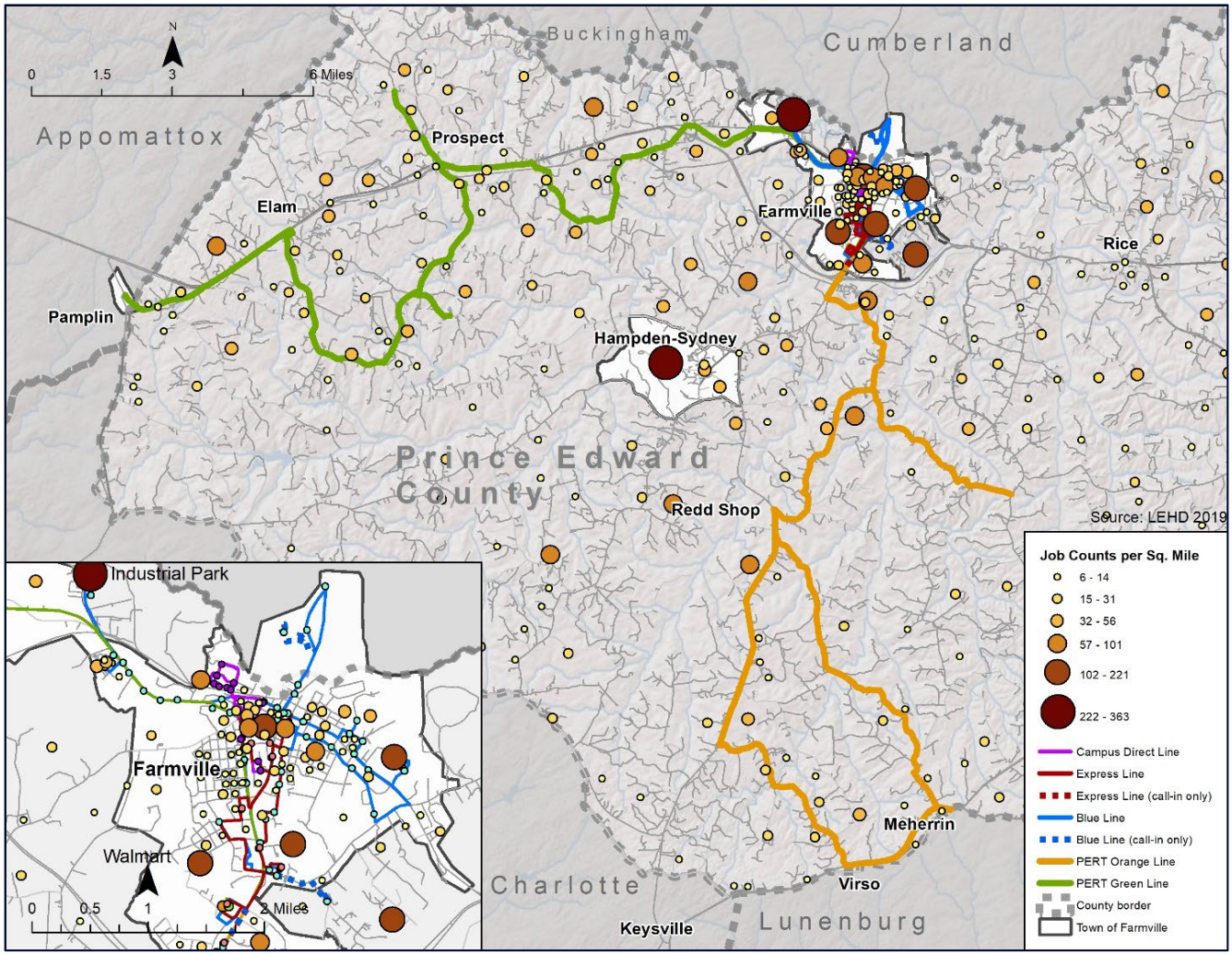
Prince Edward County	Served by FAB	Prince Edward County	Served by FAB
Longwood University	Yes	County of Prince Edward	No
Centra Health	Yes	J.R. Tharpe Truck Company	No
Prince Edward County Public Schools	Yes	Piedmont Regional Jail	No
Walmart	Yes	Green Front Furniture Store	Yes
Hampden-Sydney College	No	Helton House, Inc	No
Pike Electric	No	Town of Farmville Department of Public Works	No
The Woodland Nursing Home	Yes	Food Lion	Yes
Aramark Campus LLC (Longwood University)	Yes	Farmville Health and Rehab Center, LLC	No
Crossroads Services Board	No	The North Street Press Club	No
Lowes' Home Centers, Inc.	No	Fuqua School	Yes

SOURCE: VIRGINIA EMPLOYMENT COMMISSION, ECONOMIC INFORMATION & ANALYTICS, 1ST QUARTER 2022

Employment Density

An employment density map for the FAB service area was downloaded from the Census Bureau's OnTheMap program. It is provided as Figure 3-31. This map shows that there is a high concentration of jobs in Hampden-Sydney and Farmville, particularly at the Industrial Park, Longwood University, near the Walmart Shopping Center and at Hampden-Sydney. Outside of these areas, jobs are highly dispersed or located in other counties. The places with the most jobs per square mile are at Hampden-Sydney with 363 jobs/square mile, followed by the Industrial Park (222 jobs/sq. mile).

Figure 3-31: Employment Density in FAB Service Area



Travel Patterns

In addition to considering the city's major employers and job centers, it is also important to consider the commuting patterns of residents and workers. According to ACS five-year estimates for 2015-2019, about 35% of Prince Edward County's service area's employed residents also work in Prince Edward County. The most common workplace destination for Prince Edward County's residents is Farmville (24%), followed by Lynchburg (4.3%) and Richmond (3.6%). These data are shown in Table 3-27.

Table 3-27: Work Locations for Prince Edward County Workers

Work Locations for Residents	Count	Share
All Places (Cities, CDPs, etc.)	8,837	100%
Farmville, VA	2,116	23.9%
Lynchburg, VA	381	4.3%
Richmond, VA	319	3.6%
Hampden-Sydney, VA	248	2.8%
Norfolk, VA	75	0.8%
Danville, VA	70	0.8%
Roanoke, VA	68	0.8%
Appomattox, VA	67	0.8%
Virginia Beach, VA	65	0.7%
Crewe, VA	57	0.6%
All Other Locations	5,371	60.8%

SOURCE: US CENSUS, ONTHEMAP APPLICATION AND LEHD ORIGIN-DESTINATION EMPLOYMENT STATISTICS (2019)

Prince Edward County is a net importer of workers, meaning there are more jobs in the county than there are people in the regional workforce. Of the estimated 9,084 workers in the county, 65% are employed outside the county. The top ten home locations for people who work in the county area are shown in Table 3-28. The top three locations (Farmville, Lynchburg, Hampden-Sydney) make up about 14% of workers. Of the top ten locations, only two (Farmville and Hampden-Sydney) are located in Prince Edward County.

Table 3-28: Home Locations for Prince Edward County Workers

Home Locations for Workers	Count	Share
All Places (Cities, CDPs, etc.)	9,084	100%
Farmville, VA	938	10.3%
Lynchburg, VA	193	2.1%
Hampden-Sydney, VA	173	1.9%
Richmond, VA	98	1.1%
Crewe, VA	58	0.6%
Virginia Beach, VA	55	0.6%
Victoria, VA	45	0.5%
Danville, VA	41	0.5%
Blackstone, VA	39	0.4%
Roanoke, VA	38	0.4%
All Other Locations	7,406	81.5%

As shown in Table 3-29, the vast majority of residents drive alone to work (85%). Meanwhile 9.4% carpool to work and less than one percent use public transportation. About 4.3% of workers do not travel anywhere and work from home, a percentage which is likely higher now due to the rise of telecommuting after the COVID-19 pandemic. The mean travel time to work is 22.8 minutes, which is less than the Virginia statewide mean travel time to work of 28.6 minutes.

Table 3-29: Journey to Work Travel Patterns

Journey to Work Data	Number	Percent
Workers 16 years and over	8,233	100%
Car, truck, or van -- drove alone	7,039	85.5%
Car, truck, or van -- carpooled	774	9.4%
Public transportation (excluding taxicab)	57.6	0.7%
Walked	576	7.0%
Taxicab, motorcycle, or other means	181	2.2%
Worked from home	354	4.3%
Mean travel time to work (minutes)	22.8	

SOURCE: 2020 ACS 5-YEAR ESTIMATES, COMMUTING CHARACTERISTICS

Review of Previous Plans and Studies

This section reviews plans and studies that are relevant either to FAB or to the provision of public transportation in the region and have been completed since the 2016 TDP.

Farmville Comprehensive Plan 2020

The most recent version of the City's Comprehensive Plan was adopted in June 2020. The Plan is intended to serve as a guide for the physical development of the city through the year 2030. The goals for the city, as outlined in the Comprehensive Plan are grouped into the following categories:

- Environment
- Cultural Resources
- Population & Housing
- Economy
- Community Facilities
- Land Use
- Transportation

A few major themes for improving the community were identified during the public input process for the plan, which included a community survey drawing 484 responses. Some highlights:

- Most residents said Farmville should focus on providing amenities to attract/retain young people, while others said the town should encourage economic development and job growth.
- Most residents agreed that Farmville should welcome new growth and development that includes both residential and commercial growth.

The Plan includes specific land use recommendations for the planning areas of the city, including encouraging mixed-use in the downtown, a wider mix of residential types, reducing minimum lot sizes and allowing for higher density development in select areas.

The Transportation Section of the Plan does not mention public transportation within the overall transportation goal, but says it welcomes "pedestrians, bicycles, and automobile traffic." These modes including public transportation are mentioned within the key strategies including the following:

- **Public transportation** – Farmville plans to continually review the need for new or expanded public transportation services. The plan notes that the town should consider expansion into neighboring areas where there is a lack of service for residents who desire or need Farmville for entertainment, employment, shopping or healthcare.
- **Pedestrians and bicycles** – Farmville notes a few key strategies pertaining to pedestrians and bike safety/connectivity, including 1) Pedestrian and bicycle master plan to study and prioritize necessary non-automobile connections. 2) Assess, identify, and improve the town's busiest intersections to organize traffic and increase pedestrian safety. 3) Construct streetscape

improvements along Griffin Boulevard and South Main Street providing landscaping and high-quality pedestrian space. The plan notes that one of the major barriers is the connectivity and flow from Longwood University Campus to downtown and other portions of Farmville.

- **Parking** – Farmville notes the importance of "adequate and conveniently located parking" as part of a viable transportation network; currently providing six free public parking lots in the downtown area and limited on-street metered parking. A pre-pandemic Longwood University Master Plan identified a shortfall of 250 spaces while a 2019 University Pedestrian and Parking Study recommended correcting a parking shortfall but does not mention parking management strategies such as shared parking. Farmville notes that parking should continue to be studied and "all options for adding parking and encouraging pedestrian mobility should be explored".

Farmville 2035 Transportation Plan

The Farmville 2035 Transportation Plan was developed as a cooperative effort between the Federal Highway Administration, the Virginia Department of Transportation (VDOT) and the Town of Farmville. VDOT will use this document when considering requests from the Town for local roadway improvements, as well as when making decisions about improvements to larger thoroughfare routes. The plan recommended a set of transportation improvements to best satisfy existing and future transportation needs.

The 2035 Transportation Plan includes the following:

- Phase One (2007): Safety Enhancements at key intersections.
- Phase Two (2015): Safety Enhancements at Main Street and Milnwood Road and the intersection of Oak Street and Griffin Boulevard/High Street.
- Phase Three (2035): Construct a new north-south route across the Appomattox River to the east of Main Street including a new bridge. Second, construct the East U.S. Route 460 Interchange.

The planning process included data collection, forecasting of future traffic demands, development of recommendations to meet existing and future needs, coordination with Farmville citizens and government officials, and environmental overview and Plan documentation.

Prince Edward County 2014 Comprehensive Plan

This plan was prepared and adopted as an update to the County's previous plan adopted in 2005, under the direction of the Prince Edward County Planning Commission.

In terms of transportation, the county's goal is to "provide for the efficient, safe and economical movement of people and goods within the County." Objectives that pertain to public transportation include:

- Promote transportation system improvements that are beneficial to the economic health of the County.
- Promote a multi-modal transportation system within the County that complies with Chapter 729. Strategies include encouraging the provision of demand responsive transit services and to work with VDOT and local advocacy groups to develop and implement a bike/trail system within the County.
- Coordinate land use and transportation decisions.

In terms of land use, the county's goal is to "ensure the optimal use of land resources" within the county, and "promote and support an environmentally sound future land use pattern that provides for a variety of community needs.

A primary objective is using the Comprehensive Plan as the primary policy guide for the County's land use and community facility decisions. Strategies include ensuring that large residential, commercial and industrial development proposals locate in areas where the transportation system can accommodate the demands of the new development. Another objective is to discourage scattered development patterns which are incompatible with the County's ability to provide adequate and cost-effective public services and facilities. A strategy is to promote compact, well planned commercial areas and discourage strip commercial development patterns along the County's primary highways.

In terms of housing, the county's goal is to provide adequate, safe, and affordable housing that meets the needs of all County citizens. Objectives include:

- Ensure that adequate land is available for housing of various styles and densities.
- Promote innovative housing designs and residential communities. Strategies include amending the County's zoning and subdivision ordinances to allow for cluster housing communities and traditional neighborhood developments. In addition, evaluating the County zoning ordinance to support the construction of well-planned adult living and retirement housing.
- Promote the integrity of existing residential neighborhoods.
- Improve existing housing and neighborhood conditions within the County.
- Support affordable housing opportunities for low to moderate income citizens.

Chapter 4:
Alternatives

Introduction

The purpose of this chapter is to present a series of service and capital improvements for FAB to consider for implementation during the ten-year planning horizon covered by the TDP. These potential improvements were developed based on the data compiled and analyzed in Chapters 1-3, together with input from FAB and DRPT staff. The potential service improvements are presented first, followed by the capital projects.

Service Improvements

The following potential service improvements were developed through a review of the gaps in current services identified through input from riders and area stakeholders. Each of the service concepts is detailed in this section, and includes:

- A summary of the service concept
- Potential advantages and disadvantages
- An estimate of the operating and capital costs
- Ridership estimates

The cost information for these proposals is expressed as the fully allocated costs, which means all program costs on a per unit basis are considered when contemplating expansions. This overstates the incremental cost of minor service expansions, as there are likely to be some administrative expenses that would not be increased with the addition of a few service hours. These cost estimates were based on FY2022 operating expenses[1], thus $79.84 cost per hour is used in our projections (note: prior to the Covid-19 pandemic cost per hour was about $52.00).

The proposed service improvements include potential options for the five FAB routes. They focus on:

- Fixed Route Options
  - Sunday service for Blue Line
  - Later evening hours for Blue and Express Lines
  - More frequency for Blue, Campus and Express Lines
  - Implement Microtransit Service
- Infrastructure

[1] Pandemic effects have dramatically increased the costs of operating service, particularly the rising cost of fuel.

Operate Service Every Sunday for Blue Line

FAB currently provides service Monday – Saturday for the Blue Line. This service improvement would provide regular Sunday service for the Blue Line, which would be helpful for transit-dependent Farmville residents to run errands, shop and conduct social activities. This alternative proposes service from 10:00 a.m. to 6:00 p.m. The Campus Direct Line and Express Line already provide service on Sunday.

Table 4-1: Potential Impacts of Sunday Service for Blue Line

Advantages	Disadvantages
• Addresses the priorities expressed by current riders, especially long-term Farmville residents. • Provides mobility options for riders to use every Sunday including for employment, shopping and religious trips. • Would not require additional capital to run the service.	• Will result in additional operating expenses. • May reduce route productivity on weekdays. • Would require FAB to update its print and web materials.
Operating Hours and Cost Estimates	**Ridership Impacts**
• If the Blue Line Sunday routes each operate an hour-hour span of service (plus an hour for deadheads), the annual operating expenses are estimated to be about $36,000.	• Untested service - current Saturday service data is also unavailable so Sunday service estimates cannot be projected.

Later Evening Hours for Blue Line

FAB currently provides Blue Line service Monday – Saturday until 6:15 p.m. Meanwhile, the Express Line has service Monday – Thursday and Sundays until 8:00 p.m., and on Fridays and Saturdays until 11:00 p.m. This service improvement would provide evening service for three additional hours (until 9:15 p.m.), Monday – Saturday for Farmville residents who live along the Blue Line.

Table 4-2: Potential Impacts of Later Evening Hours for Blue Line

Advantages	Disadvantages
• Addresses a need for later evening hours from rider surveys. • More attractive to workers and students. • Increases social opportunities. • Does not require additional capital.	• Increases annual operating expenses. • Still might not be enough to capture untraditional working hour employees. • May reduce route productivity on the route during the daytime.
Operating Hours and Cost Estimates	**Ridership Impacts**
• Three additional hours of evening service from Monday – Saturday for the Blue Line will total around $74,725 annually under the current hourly frequency.	• Ridership per hour will be slightly lower since it is on the peripheral. For the Blue Line, if we predict service will be 75% as successful – 4.86 trips per hour is used totaling 3,791 trips per year (hour headways). • With the addition of Saturday evening service, there is an estimated 4,549 trips per year (hour headways).

More Frequency for Campus Direct Line

The top improvement suggested by students in our rider survey was "better timeliness." Adding an additional vehicle for the Campus Direct Line would help improve overall timeliness for buses, reducing headways from 30 minutes to 15 minutes.

Table 4-3: Potential Impacts of More Campus Direct Line Frequency

Advantages	Disadvantages
• Reduces headways in half, from 30 minutes to 15 minutes. • Provides higher service for both students and residents along key corridors. • Increased convenience for customers. • Increased ridership.	• Increasing frequencies may reduce productivity and add to annual operating costs (as service would double but ridership likely would not). • Any route and schedule adjustments would require FAB to update its print and web materials.
Operating Hours and Cost Estimates	**Ridership Impacts**
• Adding a second weekday bus (18 hours a day) will total around $273,000 annually. • Adding a second weekend bus (15 hours a day) will total around $91,000 annually.	• It is estimated that weekday ridership increases moderately (predicting service will be 75% as successful) – 7.32 trips per hour is used totaling around 25,000 trips per year. • Similarly, weekend ridership increases 7.32 trips per hour is used totaling 8,345 trips per year.

Additional Frequency for Express Line

As noted earlier, the top improvement suggested by students in our rider survey was "better timeliness." Adding an additional vehicle for the Express Line would help improve overall timeliness for buses, reducing headways 30 minutes to 15 minutes.

Table 4-4: Potential Impacts of Additional Express Line Frequency

Advantages	Disadvantages
• Reduces headways in half, from 30 minutes to 15 minutes. • Provides higher service for both students and residents along key corridors. • Increased convenience for customers. • Increased ridership.	• Increasing frequencies may reduce productivity and add to annual operating costs (as service would double but ridership likely would not). • Any route and schedule adjustments would require FAB to update its print and web materials.
Operating Hours and Cost Estimates	**Ridership Impacts**
• Adding a second bus Monday-Thursday (9 hours a day) will total around $109,200 annually. • Adding a second Friday-Saturday bus (15 hours a day) will total around $72,800 annually. • Adding a second Sunday bus (8 hours a day) will total around $25,275 annually.	• It is estimated that Monday-Thursday ridership increases moderately (predicting service will be 75% as successful) – 4.97 trips per hour is used totaling around 8,500 trips per year. • Similarly, Friday-Saturday ridership increases 4.97 trips per hour is used totaling 4,535 trips per year. • Additional Sunday ridership would be around 1,500 annual trips.

Increased Blue Line Frequency

One of the top improvements in our June survey (mostly Blue Line riders) was "more frequent service." Adding an additional vehicle for the Blue Line would help improve overall timeliness for buses, reducing headways from 60 minutes to 30 minutes.

This alternative would supplement the core FAB service by reducing headways for the Blue Line to 30 minutes all day. Since the routes currently operate on hour headways, multiple scenarios are available for implementation – adding a second bus in the same direction or adding a second bus in the reverse direction. This will require adding one additional all-day vehicle. This improvement addresses the third highest improvement from the June survey – more frequent service. The potential impacts of this proposal are outlined in Table 4-5.

Table 4-5: Potential Impacts of Increased Blue Line Frequency

Advantages	Disadvantages
• Reduces headways in half, from 60 minutes to 30 minutes. • Provides higher service along core route. • Increased convenience for customers. • Increased ridership.	• Increasing frequencies may reduce productivity and add to annual operating costs (as service would double but ridership likely would not). • Any route and schedule adjustments would require FAB to update its print and web materials.
Operating Hours and Cost Estimates	**Ridership Impacts**
• Adding a second bus Monday through Saturday (11 hours a day M-F; and 10 hours a day Sat.) will total around $289,000 annually.	• The Blue Line provides 6.48 passenger trips per hour. It is likely that overall ridership increases, but productivity drops because trips are spreading over more hours. Thus, 4.54 "new" passenger trips per hour (70% of the current trips/hr.) are achieved, the annual ridership increase would be around 14,750 trips.

Implement Microtransit Service

As on-demand ride-hailing apps like Uber have become a common mobility option over the past decade, demand has risen for public transit services that utilize mobile technology to provide on-demand transportation services. In the past few years, microtransit services have emerged across the country. Prince Edward County is a large rural county with limited transit options outside of Farmville. A microtransit pilot service could be implemented in Farmville to provide extended evening service within the Town of Farmville or serve riders to/from Hampden Sydney College which has the highest density of jobs in the county outside of Farmville. Given that Farmville already has a high density of transit dependent populations such as students, as well as an active ADA paratransit service, Farmville would be a strong candidate for a pilot microtransit service. Microtransit could be a viable option as both a peak hour commuter service or a more local service for shopping or other errands.

Microtransit Pilot Service

Options for operating public transit services have become very diverse, spanning from conventional fixed route service through semi-flexible service on-demand microtransit. The Farmville Area Bus expedition into this service option should be based on the identified parameters from above. A logical first approach is converting the existing Town of Farmville service into pilot microtransit routes. Each of the current "Line" routes display characteristics of succeeding, however, the two that boast the greatest potential for success are the Campus Direct Line and Express Line. Alternatively, a microtransit zone can be setup to include Hampden Sydney and areas of Farmville currently not served by fixed route service. Table 4-6 highlights the potential impacts for microtransit.

Table 4-6: Potential Impacts of Microtransit

Advantages	Disadvantages
• On-demand, e-hailing service for the general public. • Increases service levels (on-demand) for ADA paratransit ambulatory customers. • All vehicles are ADA (wheelchair) accessible. • Alleviates demand from traditional services. • Reduces operating cost and improves system productivity.	• Expenses for procuring and there are ongoing maintenance costs. Staff resources and time are needed to develop. • Not all riders will have devices that will allow them to use the app or real-time transit information. • Customers may be unable to pay cash while boarding the vehicle. • If demand outpaces supply, has the potential to increase the agency cost. • Requires funding from partnerships with Longwood University or Hampden-Sydney College.

Cost Estimates	Ridership Impacts
• Operational costs would be cost neutral – transitioning existing service into Pilot Microtransit route. Especially when considering combining the Blue Line, Campus Direct, and Express Line services under one zone. • Modest savings through the provision of fewer paratransit trips. • Cost efficiency/savings realized through reduced fuel consumption. • Microtransit implementation: one-time startup cost of $200,000[2], plus a monthly fee $500 per vehicle (2 vehicles proposed).	• Depending upon how the service is implemented, may complement fixed route ridership especially evening or late-night service. • Likely will reduce ADA ridership and increase "flex" (microtransit) ridership.

Capital Improvements

Additional Shelters and Benches at Stops

As detailed in Chapter 1, there are 69 designated stops with signage in the FAB system, all located in the Town of Farmville. However, there are only 14 shelters in the FAB system, all located in Farmville, with some found in downtown Farmville, Sunchase Apartments and Longwood University. Most shelters include route maps and scheduling information placards. The rider survey and staff input indicated that customers would like to have additional bus shelters and benches. New passenger shelters represent a significant investment, while the cost of additional benches should be much lower and quicker to install. Installing benches at key stops without shelters and high stop activity or where riders may need them the most (such as residential areas or locations with older adults) will generate more ridership along FAB routes, by providing more comfort and accessibility for seniors and individuals with disabilities, and making FAB bus stops more visible along key corridors.

[2] Startup cost typically includes planning and technical assistance, microtransit simulation, onsite training & installation, setup fees, customer support, software license, hardware, marketing & design, and analytics & reporting.

Table 4-7: Potential Impacts of Additional Shelters and Benches at Stops

Advantages	Disadvantages
• Responds to need expressed by 1/3 riders in the Rider survey. • Benches are quicker and cheaper to install than shelters. • Improves accessibility, safety, and comfort for transit dependent riders. • Provides visibility of riders to drivers. • Improves visibility of the transit system and offers marketing and partnership opportunities.	• Adds significant capital costs - purchasing, installing, and maintaining shelters. • Implementation issues – it can be difficult to work out agreements with property owners to site shelters.
Cost Estimates	**Ridership Impacts**
• A concrete pad with a shelter and a bench is likely to cost between $10,000 and $15,000, depending upon the site.	• Should have modest increase in ridership due to increased comfort and safety of riders.

Real-Time Transit Information/Smartphone App

Real-time transit information refers to a system whereby the actual location of a transit vehicle can be accessed by the public as it travels along its route. Customers can typically use smart phones, tablets, computers, or information kiosks to access this information. This technology has been used by urban transit programs for many years. As the technology has become more available, small urban and rural systems are increasingly making this information available for their fixed routes and deviated fixed routes.

This technology typically relies on automatic vehicle location (AVL) devices onboard the vehicles that relay the location back to an interface that displays it for either management or the public, or both. Often these systems are tied to other technology management tools used by transit programs, such as routing and scheduling software.

The next generation of this technology would be a FAB smartphone app. This would provide FAB route schedules, maps, an e-fare payment option and real-time transit information that can be

accessed by the public as buses travel along its routes. While FAB may not quite be ready to implement this technology, it is reasonable to include it as an initiative to pursue for the later years of the plan.

Table 4-8: Potential Impacts of Providing a Real-Time Transit Information/Smartphone App

Advantages	Disadvantages
• Responds to rider input for better timeliness by communicating real-time information on bus locations. • Allows possibility for an e-fare option, further improving bus timeliness and bus convenience for cashless riders. • Allows riders to know when the next bus is coming to their stop, thus alleviating the anxiety of wondering when it will come, by alerting passengers of bus statuses, route modifications and other changes. • Improves visibility of FAB and offers marketing and partnership opportunities. • Allows the operations manager to know where all of the vehicles are, which provides a way to track on-time performance.	• Expenses for procuring and there are ongoing maintenance costs. Staff resources and time is needed to develop. • Not all riders will have devices that will allow them to use the app or real-time transit information.
Cost Estimates	**Ridership Impacts**
• Real-time transit information varies in cost depending upon the system, as well as whether or not the vehicles are already equipped with AVL technology. • The cost is about $15,000 per vehicle (capital/ technology), plus a monthly fee (typically in the $1,200 range).	• Real-time transit information can improve ridership incrementally as customers feel more secure knowing when the vehicle will be arriving at their stop.

Summary of TDP Proposals

A summary of the TDP proposals is provided in Table 4-9.

Table 4-9: Summary of TDP Proposals

Service and Capital Improvement Proposals	Total Annual Costs - FY23 Dollars	Capital Costs
Operating:		
Blue Line – Sunday Service	$36,000	$0
Blue Line – Later Evening Hours Monday-Saturday	$74,725	$0
Campus Direct Line – Increased Frequency Weekdays Weekend	$273,000 $91,000	$0 $0
Express Line – Increased Frequency Monday – Thursday Friday – Saturday Sunday	$109,200 $72,800 $25,275	$0 $0 $0
Blue Line – Increased Frequency	$259,500	$0
Microtransit Service	$7,500	$200,000
Subtotal Operating	$949,000	**$200,000**
Capital/Infrastructure/Technology:	**Total Annual**	**Total Capital Cost**
Additional Shelters - 10	$0	$150,000
Real-Time Transit Information	$14,400	$225,000
Subtotal Capital/Infrastructure/Technology	**$14,400**	**$375,000**
Total Cost of All Potential TDP Proposals	**$963,400**	**$575,000**

Funding Sources

The funding scenario for operating expenses typically involves first calculating the net deficit, which is defined as the difference between the sum of all allowable expenses minus all operating revenues (fares, advertising, any others). The net deficit is then usually eligible to be funded through FTA's Section 5311 program (50% of the net deficit); DRPT's state assistance program (25%), with the remaining 25% coming from local funds. In this case the local funds are provided by the Town of Farmville and Prince Edward County.

Capital costs in Virginia are typically funded using the following formula: 80% federal; 16% state; 4% local.

It is anticipated that any new services proposed for implementation will be funded through these same programs, with the local match required being provided by the local jurisdiction based on their previously agreed-upon formula.

Chapter 5:
Implementation Plan

Introduction

The Implementation Plan provides a general outline of the steps required to implement the Service and Capital Improvement Plan described in Chapter 4. This first section includes a discussion of the major activities for each year of the plan, followed by a capital replacement plan for vehicles, passenger amenities and technology systems.

Transit Development Plan Initiatives by Year

Each planning year covered by the FAB 2022 TDP is listed below (FY2024 – FY2033), followed by the list of improvements scheduled for the year, along with some general implementation steps. Greater detail is provided for the short-term projects than for the longer-term projects. It should be noted that this schedule has been constructed using currently available information with regard to service priorities and funding constraints. Additional resources or shifting priorities may change this schedule and FAB can address these changes through the annual TDP update process.

FY2024

- Develop list with priority locations for bus stop benches at key stops without shelters.
- Conduct planning and preparations for Sunday service for Blue Line.

FY2025

- Implement Sunday service for Blue Line.
- Continue installation of bus stop benches at key stops without shelters and continue to assess other locations as appropriate.
- Conduct planning and preparations for increasing frequency for Campus Direct (weekdays) and Express Lines (Monday - Thursday).

FY2026

- Implement increased frequency for Campus Direct (weekdays) and Express Lines (Monday - Thursday).

- Conduct planning and preparations for later evening hours for Blue Line.
- Conduct planning and preparations for increasing frequency for Campus Direct (weekend) and Express Lines (Friday - Saturday).
- Contact vendors and peer agencies to gauge capital and operating costs for real-time transit information / smartphone app and work with DRPT to obtain funding if needed.
- Monitor changes implemented in FY2025 – Blue Line Sunday service.

FY2027

- Implement later evening hours for Blue Line.
- Implement increased frequency for Campus Direct (weekend) and Express Lines (Friday - Saturday).
- Conduct feasibility study for viability of transitioning to microtransit service and work with DRPT to obtain funding if needed.
- Begin adding real-time transit information/smart phone app with e-payment if feasible.
- Monitor changes implemented in FY2026 – Campus Direct and Express Lines.

FY2028

- Implement pilot microtransit service.
- Conduct planning and preparations for increasing frequency for Blue Line.
- Conduct planning and preparations for increasing frequency for Express Line (Sunday).
- Monitor changes implemented in FY2027.

FY2029

- Implement increased frequency for Blue Line.
- Increased frequency for Express Line (Sunday).
- Monitor changes implemented in FY2028 – microtransit service.
- Prepare for a full TDP Update.

FY2030

- Conduct a full TDP Update.
- Monitor changes implemented in FY2029.

FY2031 - FY2033

- Begin implementing projects recommended within the FY2030 TDP.

Capital Needs

Vehicle Replacement and Expansion Plan

This section presents the details of the vehicle replacement and expansion plan, including vehicle useful life standards and estimated costs. A vehicle replacement and expansion plan is necessary to maintain a high-quality fleet and to dispose of vehicles that have reached their useful life. The capital program for vehicles was developed by applying FTA/DRPT vehicle replacement standards to the current vehicle fleet which was presented in Chapter 1.

Useful Life Standards

The useful life standards used by the FTA were developed based on the manufacturer's designated vehicle life-cycle and the results of independent FTA testing. The standards indicate the expected lifespans for different vehicle types. If vehicles are allowed to exceed their useful life, they become much more susceptible to break-downs, which may increase operating costs and decrease the reliability of scheduled service. With some exceptions for defective vehicles, DRPT/FTA funds are not typically available to replace vehicles that have not yet met the useful life criteria. The FTA's vehicle useful life policy for a number of different vehicle types is shown in Table 5-1. DRPT's useful life policy mirrors the FTA's useful life policy.

Table 5-1: FTA's Rolling Stock Useful Life Policy

Vehicle Type	Useful Life
Light Duty Vans, Sedans, Light Duty Buses and All Bus Models Exempt from Testing Under 49 CFR, part 665	Minimum of 4 Years or 100,000 Miles
Medium, Light Duty Transit Bus	Minimum of 5 Years or 150,000 Miles
Medium, Medium Duty Bus	Minimum of 7 Years or 200,000 Miles
Small, Heavy Duty Transit Bus	Minimum of 10 Years or 350,000 Miles
Large, Heavy Duty Transit Bus, including over the road coaches	Minimum of 12 Years or 500,000 Miles

SOURCE: FTA CIRCULAR 5100.1: BUS AND BUS FACILITIES FORMULA PROGRAM GUIDANCE

Vehicle Replacement Plan – Baseline Estimate

All of FAB's revenue service vehicles are cutaway vehicles, with a minimum useful life of five to seven years. These vehicles have gasoline engines. Table 5-2 provides the existing fleet inventory with the estimated calendar year that each vehicle is eligible for replacement. The operating condition of the vehicles and the availability of funding will dictate the actual replacement year.

In addition to helping FAB and DRPT plan future fleet needs, this vehicle replacement plan will also feed DRPT's transit asset management plan (TAM), which is an FTA-required plan that must include an asset inventory; condition assessments of inventoried assets; and a prioritized list of investments to improve the state of good repair of its capital assets.[1] The TAM requirements establish state of good repair standards and four state of good repair performance measures.

Table 5-2: FAB Transit Vehicle Inventory and Replacement Schedule

Vehicle No.	Vehicle Type	Year	Vehicle Description	Current Total Mileage	Estimated Replacement Year
811	Minivan	2010	Dodge Entervan Grand Caravan	60,171	2031
818	SUV	2012	GMC Terrain	56,937	2031
814	Minivan	2017	Braun Minivan with Ramp	23,959	*
802	Cutaway	2017	Chevy Starcraft Allstar Bus Express 4500	86,811	2026
806	Cutaway	2017	Starcraft Allstar Bus Express 4500	83,449	2027
813	Cutaway	2017	Chevy Starcraft Allstar 4500 Express Bus	81,554	2027
816	Minivan	2017	Braun Minivan with Ramp	34,708	2031
801	Cutaway	2018	Starcraft Allstar Bus 3500	84,732	2024
800	Cutaway	2018	Chevy Starcraft Allstar Bus 3500	85,219	2024
804	Minivan	2018	Braun Handicap Minivan with ramp	17,473	*
825	Cutaway	2019	Allstar BOC with Lift	64,841	2026
826	Cutaway	2019	Allstar BOC with Lift	49,101	2028
823	Cutaway	2019	Allstar BOC with Lift	50,688	2027
824	Cutaway	2019	Allstar BOC with Lift	58,734	2027
805	Cutaway	2019	Starcraft Allstar 19 Passenger w/ Lift	48,789	2028

* PROJECTED MILEAGE UNDER THE USEFUL LIFE THRESHOLD SO NO REPLACEMENT DATE WAS LISTED.

[1] Federal Register, Volume 81, No. 143, Tuesday July 26, 2016, Rules and Regulations, DOT, FTA, 49 CFR Parts 625 and 630, Transit Asset Management; National Transit Database.

Vehicle Replacement Plan

The annual schedule for vehicle replacement, based on the implementation schedule provided in this chapter and the FTA's vehicle useful life standards, is shown in Table 5-3. No expansion vehicles are expected.

This vehicle replacement schedule is based on estimates; actual vehicle purchases may vary depending upon service changes, funding availability, and unexpected economic shifts. Changes to this vehicle replacement schedule can be made by Farmville Area Bus within its annual TDP update letter to DRPT, if needed.

Table 5-3: FAB Transit Vehicle Replacement Schedule

Number of Vehicles	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Replacement	2		1	2	2			2		
Expansion										
Non-Revenue								1		
Total Vehicles	**2**	**0**	**1**	**2**	**2**	**0**	**0**	**3**	**0**	**0**

Estimated Vehicle Costs

The estimated vehicle replacement costs are presented in Table 5-4. These costs are based on vehicle costs experienced by FAB in FY2019. The Town did not purchase vehicles in FY2020. For FY2021 to FY2030 a 3 percent inflationary factor was applied each year. These cost estimates were used to develop the capital budget, which is included with the Financial Plan in Chapter 6. The plan includes the replacement of 4 revenue vehicles (one of them twice), and one non-revenue vehicle. Potential funding programs for the replacement vehicles includes the Federal Appalachian Development Assistance Program; DRPT's Capital Assistance Program; and local funds. All service vehicles purchased will be lift- or ramp-equipped.

Table 5-4: Estimated Costs of New Vehicles

Fiscal Year	Light Duty Minivan	Body-On-Chassis	Support Vehicle
2024	$69,000	$95,000	$35,000
2025	$71,760	$98,800	$36,400
2026	$74,630	$102,752	$37,856
2027	$77,616	$106,862	$39,370
2028	$80,720	$111,137	$40,945
2029	$83,949	$115,582	$42,583
2030	$87,307	$120,205	$44,286
2031	$90,799	$125,014	$46,058
2032	$94,431	$130,014	$47,900
2034	$98,209	$135,215	$49,816

Passenger Amenities

Passenger Shelters

The TDP includes the addition of five shelters that are to be funded through FAB's Capital Reserve Fund and FTA 5311 grants. These are included within FAB's ten-year TDP capital budget (Chapter 6). These are the funds allocated for shelters by route:

- Blue Line (10 shelters for $150,000)

Technology and Equipment

The TDP includes the addition of technology upgrades that are to be funded through FAB's Capital Reserve Fund and FTA 5311 grants. These are included within FAB's ten-year TDP capital budget (Chapter 6). Upgrades include:

- Real-Time Transit Information (around for first year $225,000, plus annual operating cost)

Chapter 6:
Financial Plan

Introduction

This chapter provides a financial plan for funding existing and proposed FAB transit services for the TDP's ten-year planning period. The projects indicated in Years 1-3 should be considered short-term, those in Years 4-7 are considered mid-term, and those planned for years 8 through 10 should be considered long-term projects. The financial plan addresses both operations and capital budgets, focusing on the project and capital recommendations that were highlighted in Chapter 4 and the implementation schedule and capital needs highlighted in Chapter 5.

It should be noted that over the course of the ten-year period there are a number of unknown factors that could affect transit finance, including: the future economic condition of the region and the local funding partners; the availability of funding from the Federal Transit Administration; and the availability of funding from the Commonwealth Transportation Fund.

Operating Expenses and Funding Sources

Table 6-1 provides the financial plan for the operation of FAB's services under the ten-year plan. The table summarizes the annual operating expenses for the existing transit program; provides operating cost estimates for the service projects that are recommended; and identifies the funding sources associated with these service projects.

A number of assumptions were used in developing the operating cost estimates:

- The projected cost per revenue hour and the operating costs to maintain the current level of service assume a 4 percent annual inflation rate. Note that the fiscal year the proposed service improvement is planned for utilizes current dollar projections.

- For FY2024, the first year of the plan, the expenses and revenues are based on FAB FY2023 budget and then the 4 percent annual inflation increase the subsequent years.

- It is understood that none of the funding partners are committing to these funding levels, but that they are planning estimates. Specific funding amounts for each year will be determined during the annual SYIP adoption and budget cycle for the Commonwealth and the local funding partners.

Potential Operating Funding Support

Both FTA and DRPT provide a myriad of funding for operating expenses for eligible public transportation services. Currently, FAB applies FTA Section 5311: Formula Grants for Rural Areas. DRPT uses a performance-based methodology to determine the specific allocation of operating assistance funds to each operating transit agency. The program funds no more than 30 percent of all operating expenses borne by public transportation operators. Demonstration project assistance as well as technical assistance grant support are available.

Demonstration Project Assistance

DRPT's demonstration project assistance program is a competitive grant program that supports local efforts to improve transit reliability, access to housing and employment centers, and public transportation mobility options.

The projects that are eligible for the program include:

- ***New Service:*** The deployment of new traditional public transportation services in an area not currently served by public transportation or in a currently served area that will provide additional connections.

- ***Technology and Innovation:*** The deployment of projects designed to test the "proof of concept" for new technologies used in the provision of public transportation services, including deployment or testing of autonomous vehicle technology, a microtransit demand response system, and new Intelligent Transportation Systems (ITS) solutions that would augment the provision of service and/or data collections.

Technical Assistance

DRPT's technical assistance grant program supports studies, plans, research, data collection, and evaluation projects to help improve public transportation services. This includes providing technical analysis and guidance on operations, service delivery, customer service, expansions of service, and program delivery.

Table 6-1: FAB TDP Financial Plan for Operations

Projects	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Projected Operating Expenses (1)										
Current Level of Service	$759,741	$790,130	$821,736	$854,605	$888,789	$924,341	$961,314	$999,767	$1,039,758	$1,081,348
TDP Improvements (2)										
Blue Line – Sunday Service		$36,000	$37,440	$38,938	$40,495	$42,115	$43,800	$45,551	$47,374	$49,268
Campus Direct Line - Increased Frequency Weekdays			$273,600	$284,544	$295,926	$307,763	$320,073	$332,876	$346,191	$360,039
Express Line - Increased Frequency Monday-Thursday			$109,200	$113,568	$118,111	$122,835	$127,749	$132,858	$138,173	$143,700
Blue Line – Later Evening Hours Monday-Saturday				$74,725	$77,714	$80,823	$84,055	$87,418	$90,914	$94,551
Campus Direct Line - Increased Frequency Weekends				$91,000	$94,640	$98,426	$102,363	$106,457	$110,715	$115,144
Express Line - Increased Frequency Friday-Saturday				$72,800	$75,712	$78,740	$81,890	$85,166	$88,572	$92,115
Microtransit Service					$7,500	$7,800	$8,112	$8,436	$8,774	$9,125
Blue Line – Increased Frequency						$259,500	$269,880	$280,675	$291,902	$303,578
Express Line - Increased Frequency Sunday						$25,275	$26,286	$27,337	$28,431	$29,568
Total Projected Operating Expenses	**$759,741**	**$826,130**	**$1,241,976**	**$1,530,180**	**$1,598,887**	**$1,947,617**	**$2,025,522**	**$2,106,543**	**$2,190,805**	**$2,278,437**

Projects	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Percent Change Year by Year		**5%**	**11%**	**19%**	**58%**	**4%**	**4%**	**4%**	**4%**	**4%**
Anticipated Revenue and Subsidies	**FY2024**	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**	**FY2031**	**FY2032**	**FY2033**
Fares	$9,000	$9,450	$14,230	$17,210	$17,210	$20,770	$20,770	$20,770	$20,770	$20,770
Contract Service	$143,050	$143,050	$143,050	$143,050	$143,050	$143,050	$143,050	$143,050	$143,050	$143,050
Subtotal, Revenue	$152,050	$152,500	$157,280	$160,260	$160,260	$163,820	$163,820	$163,820	$163,820	$163,820
Net Deficit	$607,691	$673,630	$1,084,696	$1,369,920	$1,438,627	$1,783,797	$1,861,702	$1,942,723	$2,026,985	$2,114,617
Federal Funds	$375,370	$408,340	$613,873	$756,485	$790,838	$963,424	$1,002,376	$1,042,886	$1,085,017	$1,128,833
State Funds	$189,935	$206,533	$310,494	$382,545	$399,722	$486,904	$506,381	$526,636	$547,701	$569,609
Local Funds	$42,385	$58,758	$160,329	$230,890	$248,067	$333,469	$352,946	$373,201	$394,266	$416,174
Subtotal, Subsidies	***$607,691***	***$673,630***	***$1,084,696***	***$1,369,920***	***$1,438,627***	***$1,783,797***	***$1,861,702***	***$1,942,723***	***$2,026,985***	***$2,114,617***
Total Projected Operating Revenue and Subsidies	**$759,741**	**$826,130**	**$1,241,976**	**$1,530,180**	**$1,598,887**	**$1,947,617**	**$2,025,522**	**$2,106,543**	**$2,190,805**	**$2,278,437**

(1) BASED ON FY2023 BUDGET TIMES INFLATION RATE.

(2) PLANNED IMPROVEMENT EXPENSE USES CURRENT DOLLARS AND SUBSEQUENT YEARS TIMES INFLATION RATE.

(3) FARES INCREASED PROPORTIONALLY TO THE AMOUNT OF SERVICE ADDED.

(4) CONTRACT SERVICE REVENUE ASSUMED TO BE FLAT.

Capital Expenses and Funding Sources

DRPT has implemented a capital assistance prioritization process that allows DRPT to allocate and assign limited resources for projects that are deemed the most critical.[1] DRPT's capital program now classifies, scores, and prioritizes projects into the following categories:

- **State of Good Repair (SGR) -** Includes projects and programs that replace or rehabilitate existing assets.
- **Minor Enhancement (MIN) -** Includes projects and programs to add capacity, new technology, or a customer facility, and meet the following criteria:
  - Total project cost of less than $2 million; or
  - Vehicle expansion of not more than 5 vehicles or 5% of the existing fleet size, whichever is greater.
- **Major Expansion (MAJ) -** Includes projects or programs that add, expand, or improve service with a cost exceeding $2 million or for expansion vehicles, an increase of greater than 5 vehicles or 5 percent of fleet size, whichever is greater.

The following three types of projects are exempt from the prioritization scoring process:

- Capital projects that do not receive any state transit capital funding contribution.
- Debt service agreements approved in previous fiscal years.
- Track lease payments and capital cost of contracting requests.

The TDP for FAB includes projects in the SGR and MIN categories, as described below.

State of Good Repair

Eligible activities for funding under State of Good Repair Include[2]:

Replacement/Rehabilitation of:

- Vehicles/rolling stock (buses, vans, rail cars, support vehicles, etc.)
- Administrative/maintenance facilities
- Customer amenities (parking facilities, bus shelters, benches, signage)
- Any other specific existing pieces of equipment and/or technology that **do not** fall into the Special Asset Categories**

[1] DRPT, Making Efficient Responsible Investments in Transit (MERIT), Capital Assistance – Program Prioritization, FY 23 Technical Documentation.

[2] DRPT, Making Efficient Responsible Investments in Transit (MERIT), Capital Assistance – Program Prioritization, FY 21 Technical Documentation.

**** Special Asset Categories:**

- Tools: All tools needed to provide maintenance services (i.e., new/replacement tools, tool cabinets).
- Maintenance Equipment: All equipment needs to maintain vehicles, infrastructure, and/ or other assets (i.e., bus lift, tire mounting device, forklifts).
- Spare Vehicle/Rail Parts: All spare vehicle and rail parts that will be used to maintain assets in working order that are not part of a larger rehabilitation project (i.e., alternators, transmissions, engines, seats, windows, gas tanks).
- Building/Facility Items and Fixtures: All individual, small facility parts and fixtures that are being replaced outside of a larger rehabilitation project (i.e., concrete floors, stairs, escalators, hand dryers, fans, lighting systems).
- Grouped Assets/Programs of Projects (less than $2 million): Includes large groups of assets that cannot be broken down into subcomponents (i.e., general SGR purchase of parks or track). Does not include grouped or program of projects for vehicle rehab or replacement.
- Other Financial Tools: Includes funds for needed capital investments that cannot be scored as a replacement/rehabilitation (i.e., capital cost of contracting, track lease payments, debt service on previously approved projects).

Federal and state matching ratios for SGR projects are currently as follows: federal – 80 percent; state – 16 percent. The estimated expenses and funding sources for the SGR projects for the TDP period are provided in Table 6-2. Technical assistance grants are 50 percent state and 50 percent local.

Minor Enhancements

Eligible investments under the Minor Enhancement (MIN) category include:

- Fleet expansion (fewer than 5 vehicles or 5% of fleet)
- New customer amenities (parking facilities, bus shelters, benches, accessibility improvements, signage)
- New equipment and technology
- New small real estate acquisition
- Capital project development less than $2 million (engineering and design, construction management)
- All assets that fall in the Special Assets Categories

Additional Funding Sources

There are multiple funding options beyond what has been identified earlier in the chapter that could help bring costs down for the proposed improvements – though some might require a local match.

Virginia SMART SCALE

SMART SCALE is a process that helps Virginia meet its most critical transportation needs using limited tax dollars. It evaluates potential transportation projects based on key factors like how they improve safety, reduce congestion, increase accessibility, contribute to economic development, promote efficient land use, and affect the environment. The anticipated benefits are calculated, and the projects are scored and ranked. This information is used by the Commonwealth Transportation Board to help guide and inform their project selection decisions.

Since SMART SCALE projects are capital in nature, FAB could work with the localities to include sidewalk improvements and bus stop infrastructure if they are submitting funding for a project through an applicable corridor. Projects must meet a VTrans Need to be eligible for this funding, but some VTrans needs do exist in Farmville and Prince Edward County. This program has no local match requirement and is 100 percent funding if selected.

Virginia DOT Transportation Alternatives Program (TAP)

The program is intended to help local sponsors fund community-based projects that expand nonmotorized travel choices and enhance the transportation experience by improving the cultural, historical and environmental aspects of the transportation infrastructure. The program does not fund traditional roadway projects or provide maintenance for these facilities. Instead it focuses on providing pedestrian and bicycle facilities, community improvements and mitigating the negative impacts of the highway system. This program is 80 percent state and 20 percent local match dependent.

Table 6-2: FAB - State of Good Repair Projected Capital Expenses and Funding

	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Vehicle Replacements										
Body-on-Chassis			1	1	2					
Light Duty	2							2		
Support Vehicles								1		
Sub-Total Replacement Vehicles	**2**	**0**	**1**	**1**	**1**	**0**	**0**	**3**	**0**	**0**
Replacement Vehicles Costs	**$190,000**	**$0**	**$102,752**	**$106,862**	**$231,164**	**$0**	**$0**	**$227,656**	**$0**	**$0**
Other Replacement/ Rehabilitation										
Computer/Technology Replacements	$2,000	$2,080	$2,163	$2,250	$2,340	$2,433	$2,531	$2,632	$2,737	$2,847
Total SGR Expenses	**$192,000**	**$2,080**	**$104,915**	**$109,112**	**$233,504**	**$2,433**	**$2,531**	**$230,288**	**$2,737**	**$2,847**
Anticipated Funding Sources - Current Federal/State/Local Matching Ratios										
Federal	$153,600	$1,664	$83,932	$87,289	$186,803	$1,947	$2,025	$184,230	$2,190	$2,277
State	$30,720	$333	$16,786	$17,458	$37,361	$389	$405	$36,846	$438	$455
Local	$7,680	$83	$4,197	$4,364	$9,340	$97	$101	$9,212	$109	$114
Total Funding	**$192,000**	**$2,080**	**$104,915**	**$109,112**	**$233,504**	**$2,433**	**$2,531**	**$230,288**	**$2,737**	**$2,847**

NOTES:

- FUTURE VEHICLE REPLACEMENT PURCHASES ARE ASSUMED TO BE FUNDED AS FOLLOWS: 80% FEDERAL; 16% STATE; AND 4% LOCAL.
- VEHICLE PRICES INCLUDE INFLATION AND ARE BASED ON THE VEHICLES DESCRIBED IN CHAPTER 5.

Table 6-3: FAB - Minor Enhancements Projected Capital Expenses and Funding

Capital Need	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Passenger Shelters			$75,000	$75,000						
Real-Time Schedule Information					$224,400	$14,400	$14,976	$15,575	$16,198	$16,846
Microtransit					$212,000	$12,000	$12,480	$12,979	$13,498	$14,038
Total MIN Expenses	**$0**	**$0**	**$75,000**	**$75,000**	**$436,400**	**$26,400**	**$27,456**	**$28,554**	**$29,696**	**$30,884**
Anticipated Funding Sources - Current Federal/State/Local Matching Ratios (1)										
Federal	$0	$0	$60,000	$60,000	$349,120	$21,120	$21,965	$22,843	$23,757	$24,707
State	$0	$0	$12,000	$12,000	$69,824	$4,224	$4,393	$4,569	$4,751	$4,941
Local	$0	$0	$3,000	$3,000	$17,456	$1,056	$1,098	$1,142	$1,188	$1,235
Total Funding	**$0**	**$0**	**$75,000**	**$75,000**	**$436,400**	**$26,400**	**$27,456**	**$28,554**	**$29,696**	**$30,884**

NOTE: FUNDING SPLIT ASSUMED TO REMAIN 80% FEDERAL; 16% STATE; AND 4% LOCAL.

Total Capital Expenses over TDP Timeframe

The combined SGR and MIN budgets for the TDP period are provided in Table 6-4.

Table 6-4: FAB Capital Budget – FY2024 - FY2033

SGR	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Replacement Vehicles	$190,000	$0	$102,752	$106,862	$231,164	$0	$0	$227,656	$0	$0
Computer/Technology Replacements	$2,000	$2,080	$2,163	$2,250	$2,340	$2,433	$2,531	$2,632	$2,737	$2,847
Total SGR Expenses	**$192,000**	**$2,080**	**$104,915**	**$109,112**	**$233,504**	**$2,433**	**$2,531**	**$230,288**	**$2,737**	**$2,847**
MIN										
Passenger Shelters	$0	$0	$75,000	$75,000	$0	$0	$0	$0	$0	$0
Real-Time Schedule Information	$0	$0	$0	$0	$224,400	$14,400	$14,976	$15,575	$16,198	$16,846
Microtransit	$0	$0	$0	$0	$212,000	$12,000	$12,480	$12,979	$13,498	$14,038
Total MIN Expenses	**$0**	**$0**	**$75,000**	**$75,000**	**$436,400**	**$26,400**	**$27,456**	**$28,554**	**$29,696**	**$30,884**
TOTAL CAPITAL EXPENSES	**$192,000**	**$2,080**	**$179,915**	**$184,112**	**$669,904**	**$28,833**	**$29,987**	**$258,842**	**$32,434**	**$33,731**
Anticipated Funding Sources - Current Federal/State/Local Matching Ratios (1)										
Federal	$153,600	$1,664	$143,932	$147,289	$535,923	$23,067	$23,989	$207,074	$25,947	$26,985
State	$30,720	$333	$28,786	$29,458	$107,185	$4,613	$4,798	$41,415	$5,189	$5,397
Local	$7,680	$83	$7,197	$7,364	$26,796	$1,153	$1,199	$10,354	$1,297	$1,349
Total Funding	**$192,000**	**$2,080**	**$179,915**	**$184,112**	**$669,904**	**$28,833**	**$29,987**	**$258,842**	**$32,434**	**$33,731**

NOTE: FUNDING SPLIT ASSUMED TO REMAIN 80% FEDERAL; 16% STATE; AND 4% LOCAL.