Transit Development Plan

Greater Lynchburg Transit Company

FISCAL YEARS 2019-2028

AUGUST 2018 DRAFT

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CTG Connetics Transportation Group

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

LIST OF FIGURES

LIST OF FIGURES (CONT.)

LIST OF TABLES

LIST OF TABLES (CONT.)

1. OVERVIEW OF GREATER LYNCHBURG TRANSIT COMPANY

1.1. History

Greater Lynchburg Transit Company (GLTC) is the nonprofit, public transit service that operates in the City of Lynchburg. It provides 40 buses for 16 designated routes and 11 cut-away buses for paratransit. GLTC was formed in 1974 when the City of Lynchburg bought the Lynchburg Transit Company and reorganized the organization from privately to publicly owned. By 1991, the City replaced the taxi service contract for the elderly and disabled with a more efficient paratransit service that is available today. In 2014, GLTC opened a new transfer station on 800 Kemper Street, replacing the previous transfer station location at the Plaza Shopping Center. The new location provides better connectivity between pedestrians, bicyclist, drivers, and rail users. In 2017, GLTC relocated to a new Operations and Maintenance Facility at 419 Bradley Drive.

1.2. Governance

GLTC is governed by a Board of Directors appointed by the Lynchburg City Council. The board handles general policy and management of the company. The board is composed of nine members:

Officers*	Title
Christian DePaul	*President*
Glenn McGrath	*Vice President*
Joel Morgan	*Secretary/Treasurer*
Other Directors	
John "Jack" Hellewell	Mary-Winston Deacon
Margaret "Peggy" Whitaker	Christos Carroll
Antonio "Tony" Davis, Sr.	Bonnie Svrcek

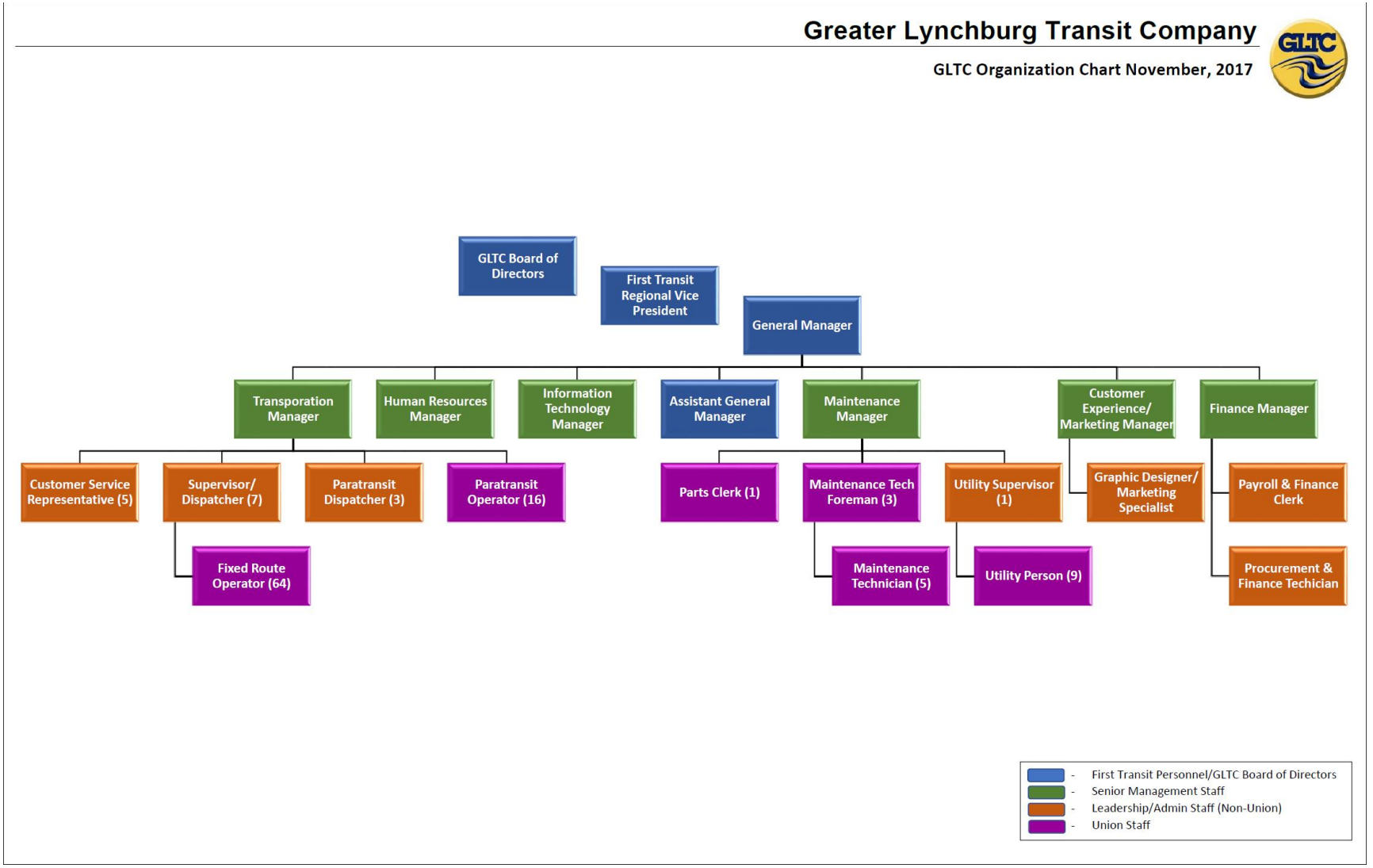
*terms expire October 2018

Additionally, GLTC has two advisory committees. The Customer Advisory Committee (CAC) helps GLTC customers communicate their concerns or comments regarding public transportation to GLTC. They also aid in planning and developing GLTC fixed route services. CAC meetings are the second Monday of January, March, May, July, September, and November. The Americans with Disability Act (ADA) Committee helps advise GLTC on how to best serve customers with disabilities as well as help plan and develop ADA paratransit routes. The ADA Committee meets every second Wednesday of the month.

1.3. Organization Structure

The Board of Directors oversee the operation of GLTC. The organization is currently managed by a General Manager, Assistant General Manager, and six senior management staff. An organization chart of GLTC is shown in **Figure 1-1**. The General Manager (Brian Booth) and Assistant General Manager (Amanda Richardson) are employees of First Transit Management Services. The General Manager reports to both the GLTC Board of Directors and the First Transit Regional Vice President. The management contract between GLTC and First Transit is a 5-year contract with five 1-year options. The base 5-year contract ended December 31, 2017, and GLTC has exercised the first-year extension option for 2018. Bus operators and maintenance technicians are represented by Amalgamated Transit Union Local 1493 for collective bargaining, as indicated in purple in the organization chart.

Figure 1-1: GLTC Organization Structure



1.4. Transit Services Provided and Areas Served

GLTC provides fixed route transit service and paratransit services within the City of Lynchburg and portions of neighboring jurisdictions outside the city limits. It has routes in Lynchburg, Madison Heights, and Liberty University. In the National Transit Database 2016 Annual Agency Profile, GLTC noted that it served 72 square miles and a population of 80,846 residents. For comparison, Lynchburg has a total of 89 square miles and 116,636 total residents.[1]

1.4.1. Fixed Route Transit

GLTC has fixed routes within the City of Lynchburg and some that connect to parts of Madison Heights in Amherst County. Portions of existing routes enter into Bedford and Campbell Counties as well. GLTC operates 16 fixed routes Monday through Friday between 5:00 AM to 10:15 PM, and 12 fixed routes on Saturday between 5:30 AM and 9:45 PM. The route frequency varies by route and timeframe – operating from 30-minute intervals to 2-hour intervals. The peak vehicle requirement for GLTC fixed route transit service is 15 vehicles (**Table 1-1**). **Table 1-2** summarizes the fixed route services provided by GLTC by day of the week, frequency, and service span. **Figure 1-2** shows GLTC's fixed route service.

GLTC provides contracted on-campus shuttle service for Liberty University. The desired service levels and routes are determined by Liberty University. Route operation varies by time and day of the week, depending on the student demands. For the 2017/2018 school year, there were nine bus routes that made up the Liberty University service. **Table 1-3** summarizes the routes circulating the university.

Table 1-1: Peak Vehicle Requirements

Transit Service	Peak Vehicle Requirement
Fixed Route	**15**
Liberty University Service*	**16** (8/2016 – 5/2017) **11** (8/2017 – 12/2017) **9** (Beyond 1/2018)
Paratransit	**9**

*Fluctuates from year-to-year

[1] Source: 2016 National Transit Database

Table 1-2: Fixed Route Transit Summary

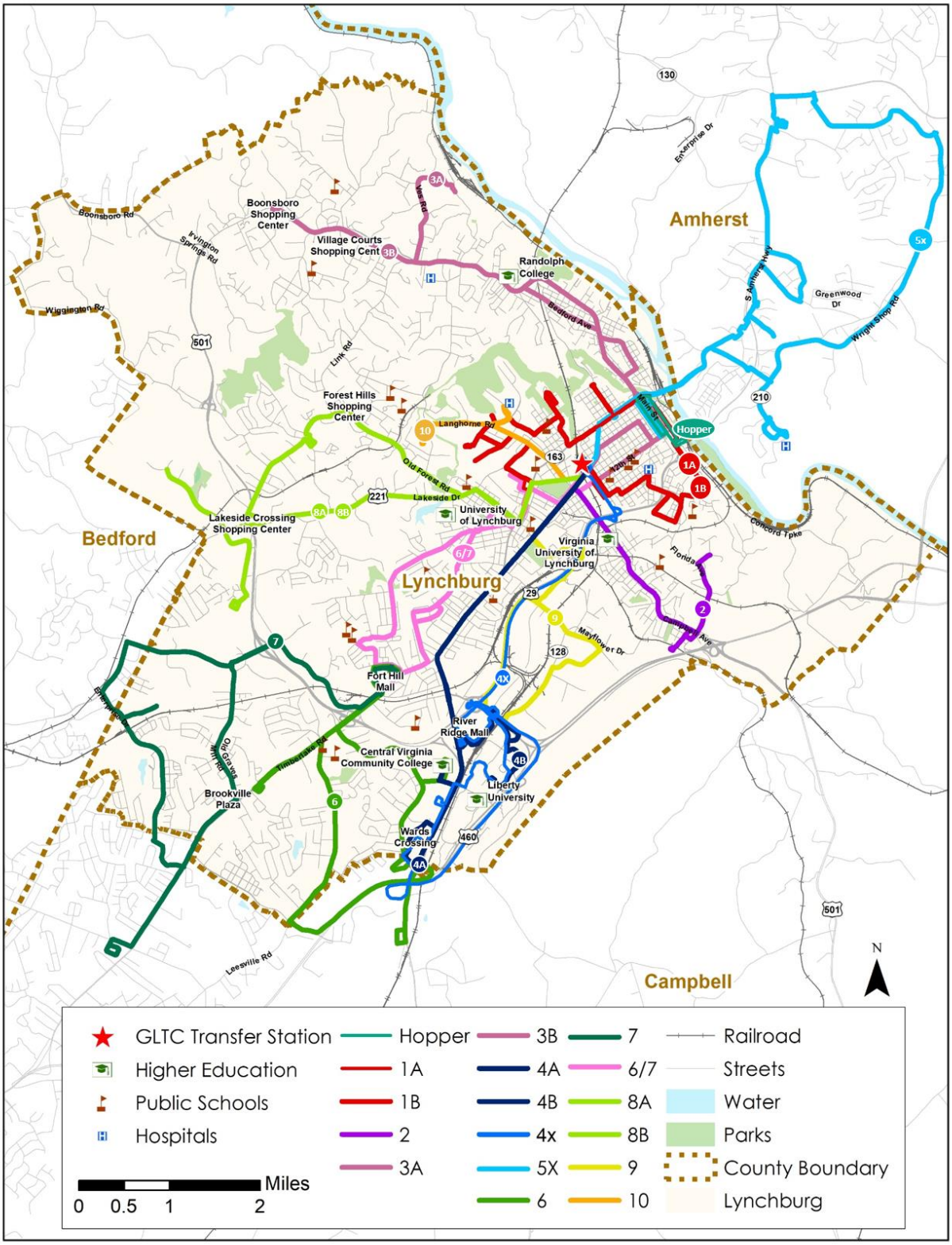
Route	WEEKDAY			SATURDAY		
	FREQUENCY	SERVICE START	SERVICE END	FREQUENCY	SERVICE START	SERVICE END
1A	60 min	5:20 AM	10:10 PM	60 min	6:23 AM	9:10 PM
1B	60 min	4:52 AM	6:40 PM	-	-	-
2	30 min (Until 6:30 PM, 60 min after)	5:13 AM	8:55 PM	60 min	6:30 AM	8:55 PM
3A	60 min	5:50 AM	10:10 PM	60 min	6:15 AM	9:10 PM
3B	60 min	5:55 AM	9:40 PM	60 min	6:45 AM	9:40 PM
4A	60 min	6:00 AM	9:10 PM	60 min	7:00 AM	9:10 PM
4B	60 min	5:45 AM	9:40 PM	60 min	7:10 AM	9:40 PM
4X	120 min	7:00 AM	5:55 PM	-	-	-
5X	120 min	6:00 AM	4:55 PM	-	-	-
6	60 min	5:45 AM	7:40 PM	120 min	6:45 AM	5:40 PM
7	60 min	5:45 AM	7:40 PM	120 min	5:45 AM	6:40 PM
7E*	60 min	8:15 PM	10:10 PM	60 min	7:15 PM	10:10 PM
8A	60 min	5:35 AM	10:10 PM	60 min	7:15 AM	10:10 PM
8B	60 min	6: 45 AM	8:40 PM	-	-	-
9	60 min	5:30 AM	5:55 PM	-	-	-
10	60 min	5:10 AM	8:25 PM	60 min	7:00 AM	8:25 PM
6/7	60 min	5:30 AM	7:10 PM	60 min	5:30 AM	6:10 PM
The Hopper	10 min	6:00 PM	9:00/11:00 PM**	10 min	6:00 PM	11:00 PM

*The 7E runs an express service along Timberlake Road and Fort Avenue from Startek to the Transfer Station on Kemper Street.

** Ends at 9:00 PM on Monday, Tuesday, & Wednesday. Ends at 11:00 PM on Thursday and Friday.

Source: Data obtained from GLTC.

Figure 1-2: GLTC Bus Routes



Source: GLTC, 2017.

Table 1-3: Liberty University Bus Routes (2017/2018 Year)

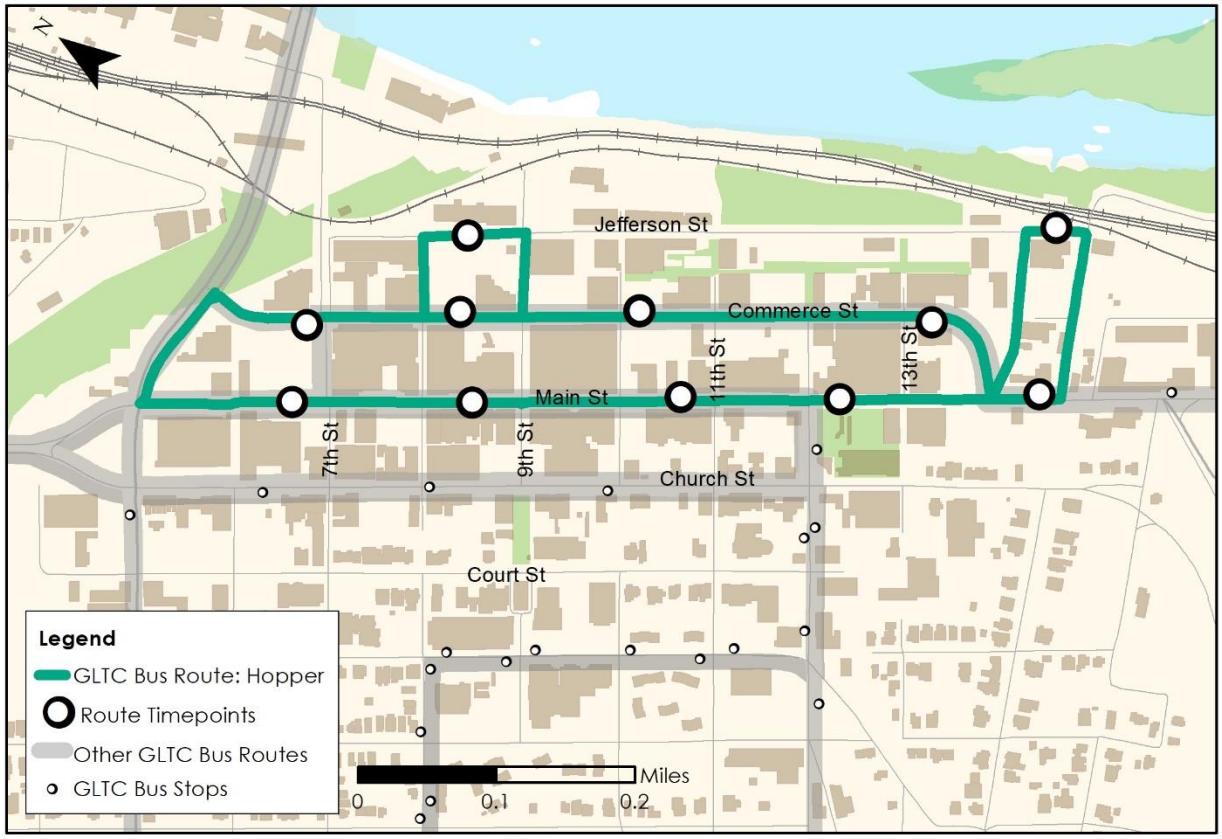
Route	WEEKDAY			WEEKEND			UNIVERSITY BREAK		
	FREQUENCY	SERVICE START	SERVICE END	FREQUENCY	SERVICE START	SERVICE END	FREQUENCY	SERVICE START	SERVICE END
70 – Express	5	7:00 AM	7:00 PM	-	-	-	-	-	-
71 – Main Campus	7 - 20 min	7:00 AM	12:00 AM	20 min	8:00 AM	12:30 AM	-	-	-
72 – East Campus	7 - 20 min	7:00 AM	12:00 AM	20 min	8:00 AM	2:30 AM	30 min	7:00 AM	7:00 PM
74 – Indoor Track	20 min	6:00 AM	10:00 PM	-	-	-	-	-	-
75 – Liberty Mountain	15 - 30 min	7:00 AM	9:45 PM	-	-	-	-	-	-
76 – Aviation	Each Period	Each Period	Each Period	-	-	-	-	-	-
84 – Freshman Parking/ Fort Hill/Annex 1	40 min	7:00 AM	12:00 AM	40 min	8:00 AM	12:00 AM	-	-	-
90 – Cornerstone	20 - 40 min	7:00 AM	9:25 PM	-	-	-	-	-	-
91 – Apartments	70 min	7:00 AM	9:50 PM	-	-	-	-	-	-

*Route does not have preplanned/set scheduled and frequency varies depending on time of day; therefore, frequency range is provided.
Source: Data obtained from GLTC.

1.4.1.1. Downtown Hopper

The Hopper operates in downtown Lynchburg and connects major destinations such as The Riverfront, Wells Fargo, Lynchburg City Hall, and the Central Virginia Criminal Justice Academy. This bus route was introduced on August 24, 2017. Due to a change in demand for service the route and hours of operation were adjusted to the evening on January 22, 2018. **Figure 1-3** shows the alignment of the Hopper route.

Figure 1-3: Downtown Hopper Alignment

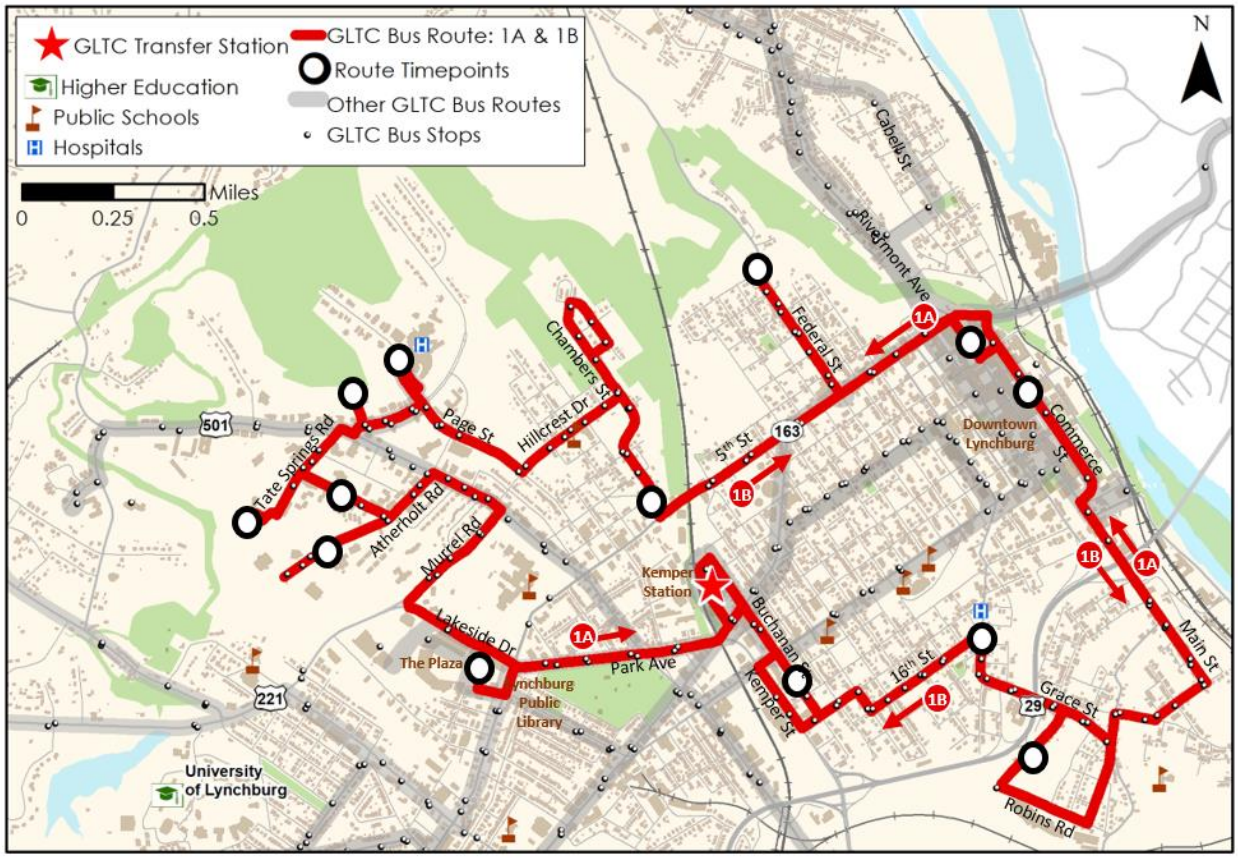


Source: GLTC, 2017.

1.4.1.2. Routes 1A/1B

Routes 1A and 1B operate on counterclockwise and clockwise loops, respectively, through Lynchburg and connects with major destinations including Kemper Transfer Station, the Plaza, McGurk House, downtown, and Lynchburg General Hospital. **Figure 1-4** shows the alignment of Routes 1A/1B.

Figure 1-4: Routes 1A/1B Alignment

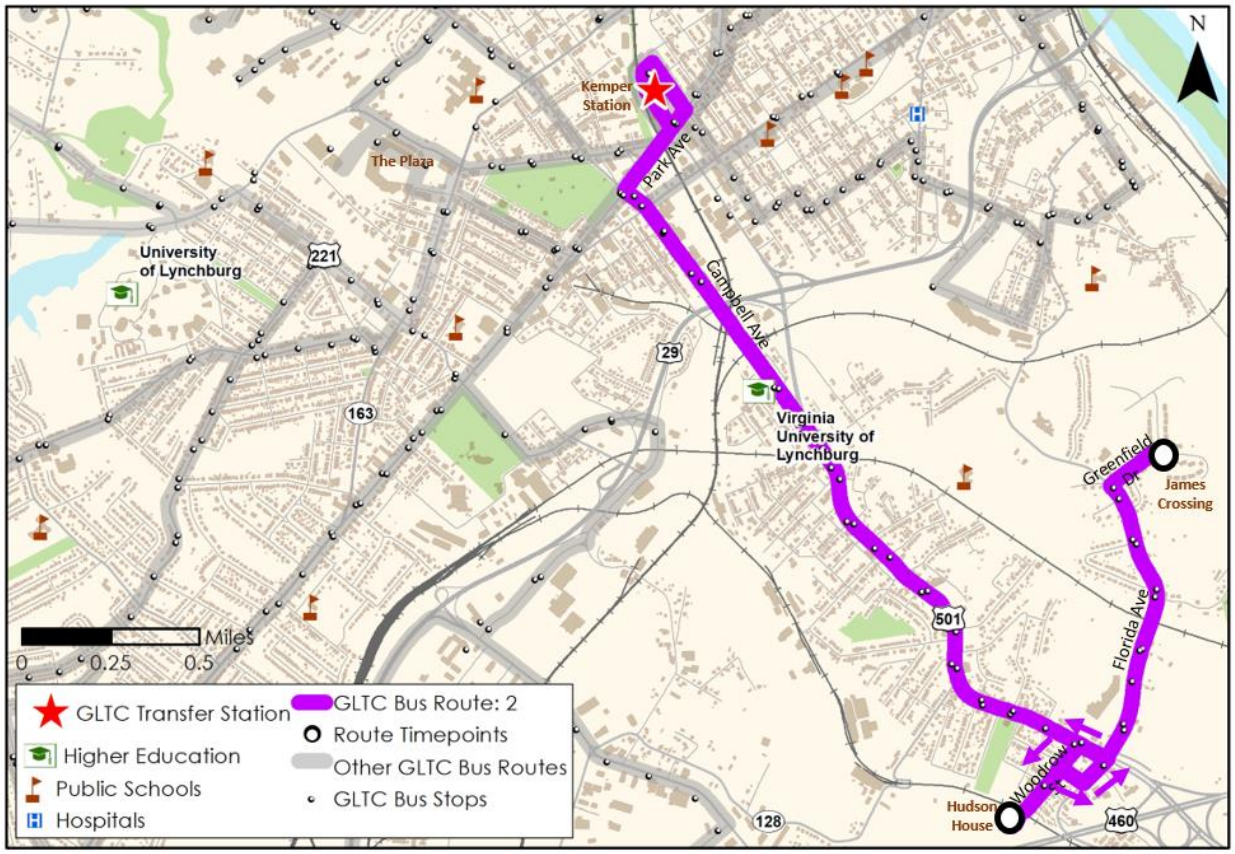


Source: GLTC, 2017.

1.4.1.3. Route 2

Route 2 runs along Campbell Avenue and provides access to the Kemper Street Transfer Station as well as James Crossing and Hudson House. **Figure 1-5** shows the alignment of Route 2.

Figure 1-5: Route 2 Alignment

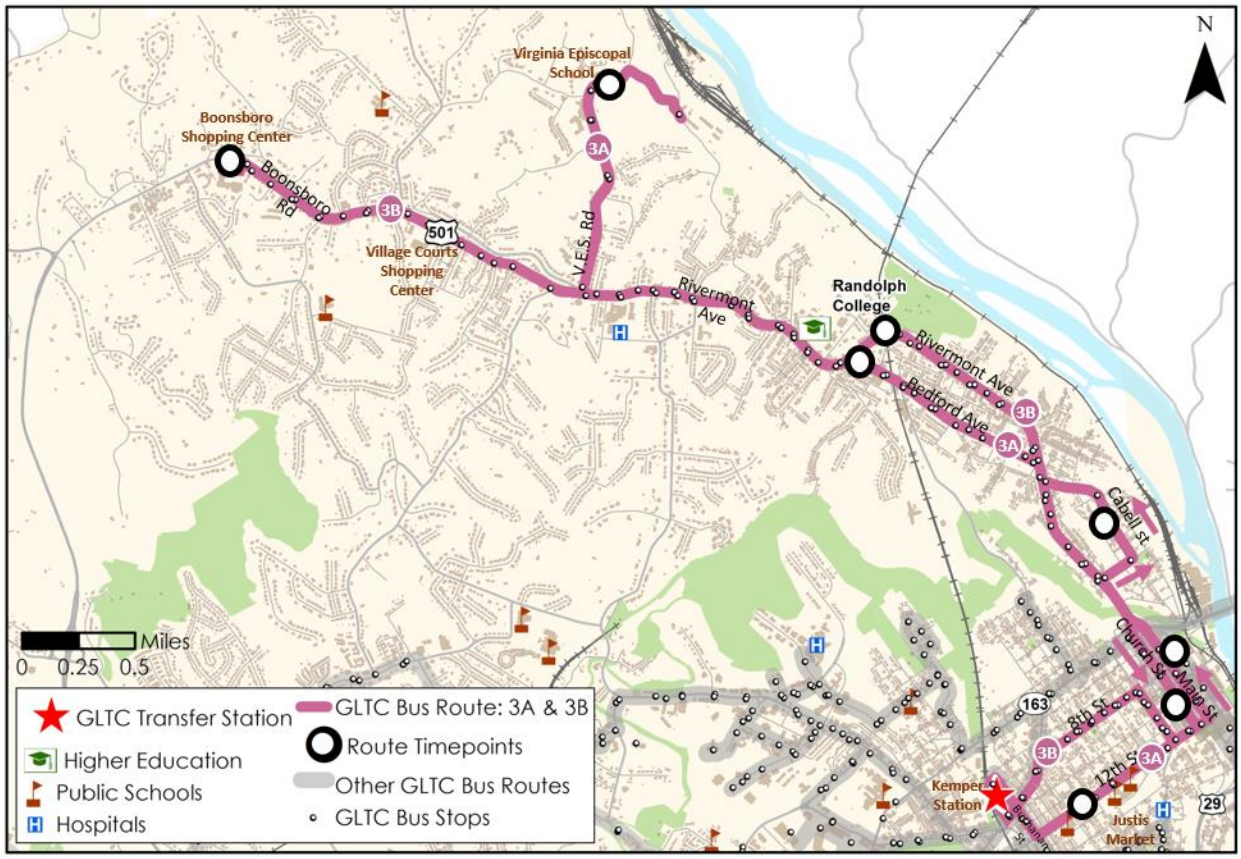


Source: GLTC, 2017.

1.4.1.4. Routes 3A/3B

Routes 3A and 3B share many route segments or run parallel to each other. Both routes provide access to downtown Lynchburg, the Kemper Street Transfer Station, and Randolph College. Aside from those, Route 3A provides access to the Virginia Episcopal School and the Justis Market. Route 3B runs further west and provides access to the Boonsboro Shopping Center. **Figure 1-6** shows the alignment of both Route 3A and 3B.

Figure 1-6: Routes 3A/3B Alignment



Source: GLTC, 2017.

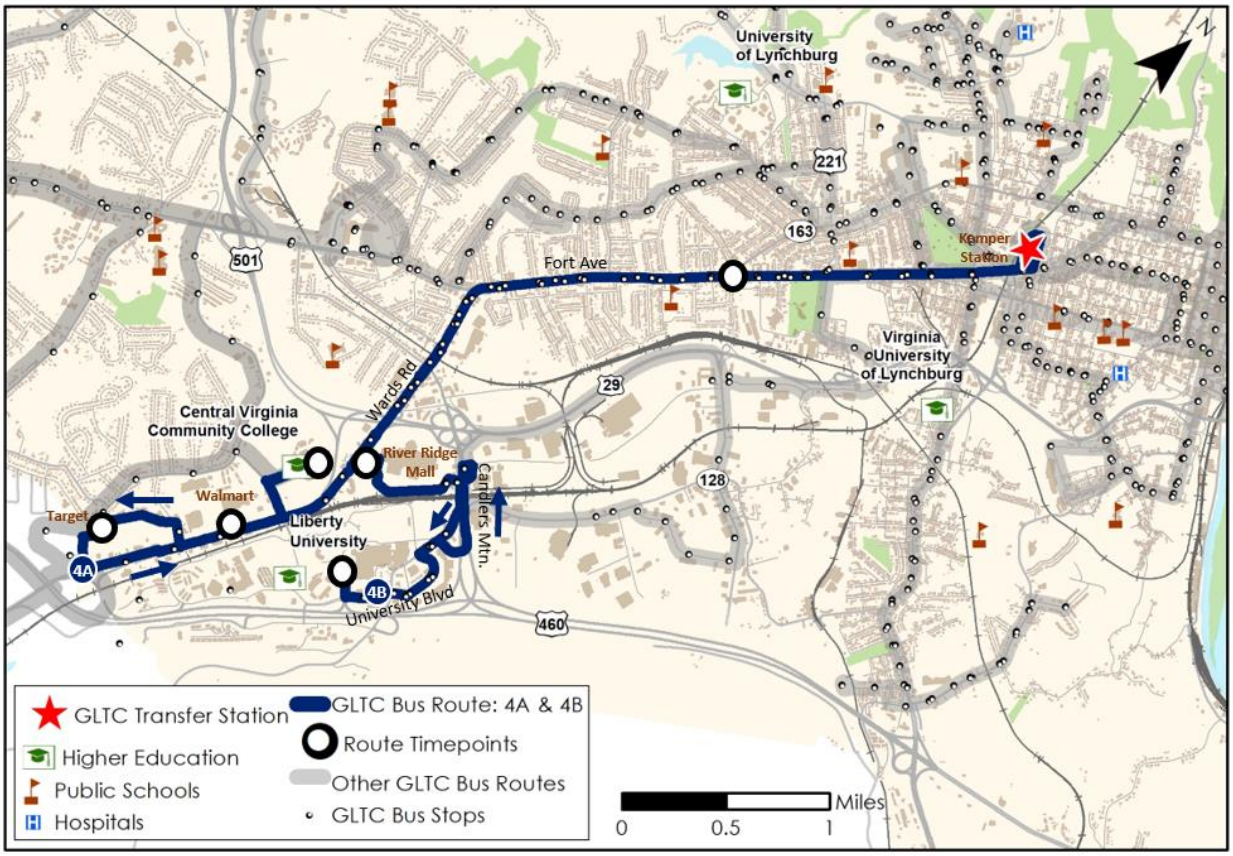
1.4.1.5. Routes 4A/4B/4X

Routes 4A and 4B provide connections to the Kemper Street Transfer Station and the River Ridge Mall. They both run along Fort Avenue and diverge near the River Ridge Mall. Route 4A provides access further westwards along Wards Road to Walmart and Target while Route 4B provides access to Liberty University. **Figure 1-7** shows the alignments of both Routes 4A and 4B.

Route 4 Express (4X) provides the majority of the same stops as Routes 4A and 4B combined. It connects the Kemper Street Transfer Station to the River Ridge Mall, Walmart, Target, and Liberty University. The difference between Routes 4X from 4A and 4B is that Route 4X runs along U.S. Route 29 and U.S. Route 460 while Routes 4A and 4B do not. This route was introduced on January 9, 2017.

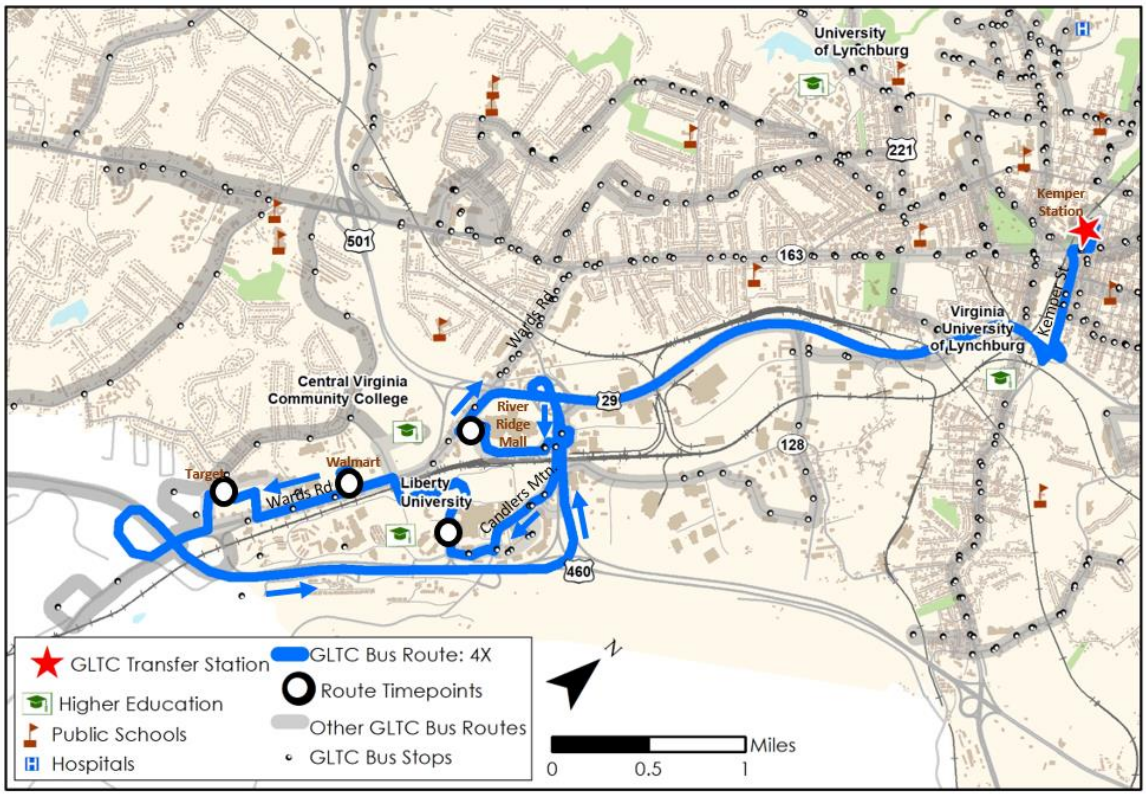
Figure 1-8 shows the alignment of Route 4X.

Figure 1-7: Routes 4A/4B Alignment



Source: GLTC, 2017.

Figure 1-8: Route 4X Alignment

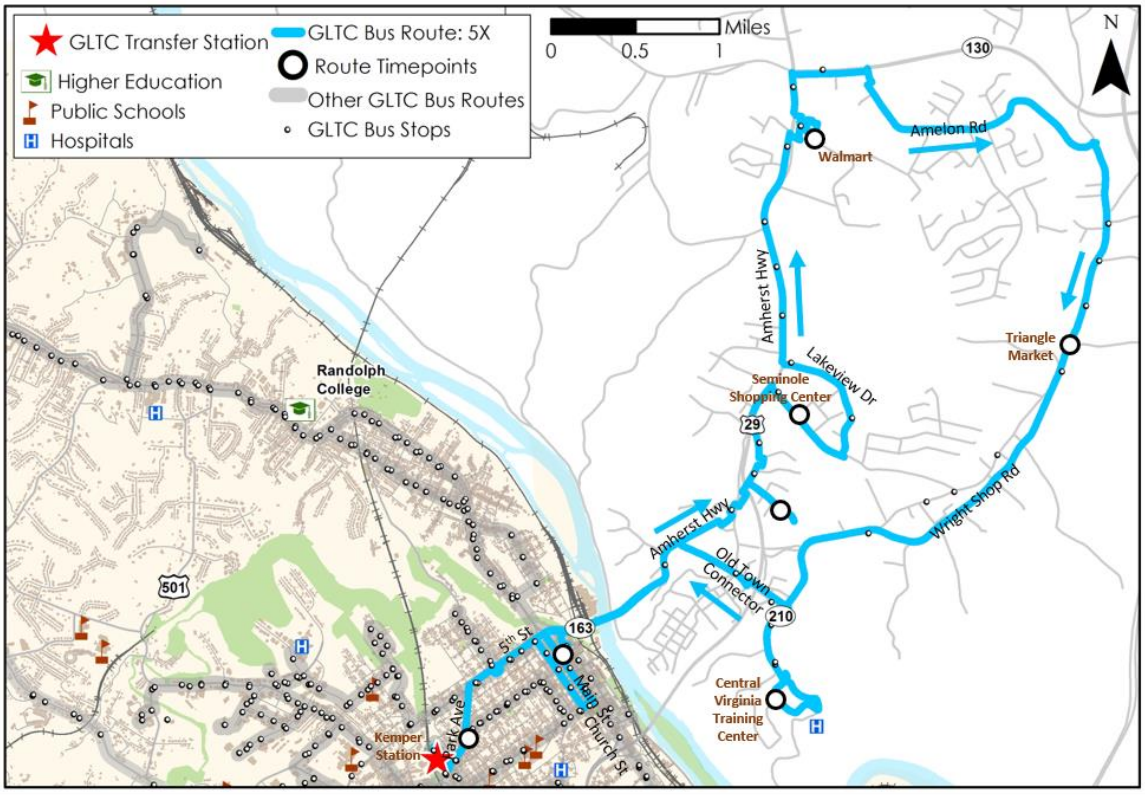


Source: GLTC, 2017.

1.4.1.6. Route 5X

Route 5X provides access to Madison Heights. There was a change in service on January 9, 2017 where the previous MHX/5X, MHA/5A, and MHB/5B routes were combined to Route 5X. Route 5X provides connections from the Kemper Street Transfer Station to downtown Lynchburg and into Amherst County. In Amherst County, the route provides access to the Central Virginia Training Center, Triangle Market, Walmart, and the Seminole Shopping Center. **Figure 1-9** shows the alignment of Route 5X.

Figure 1-9: Route 5X Alignment

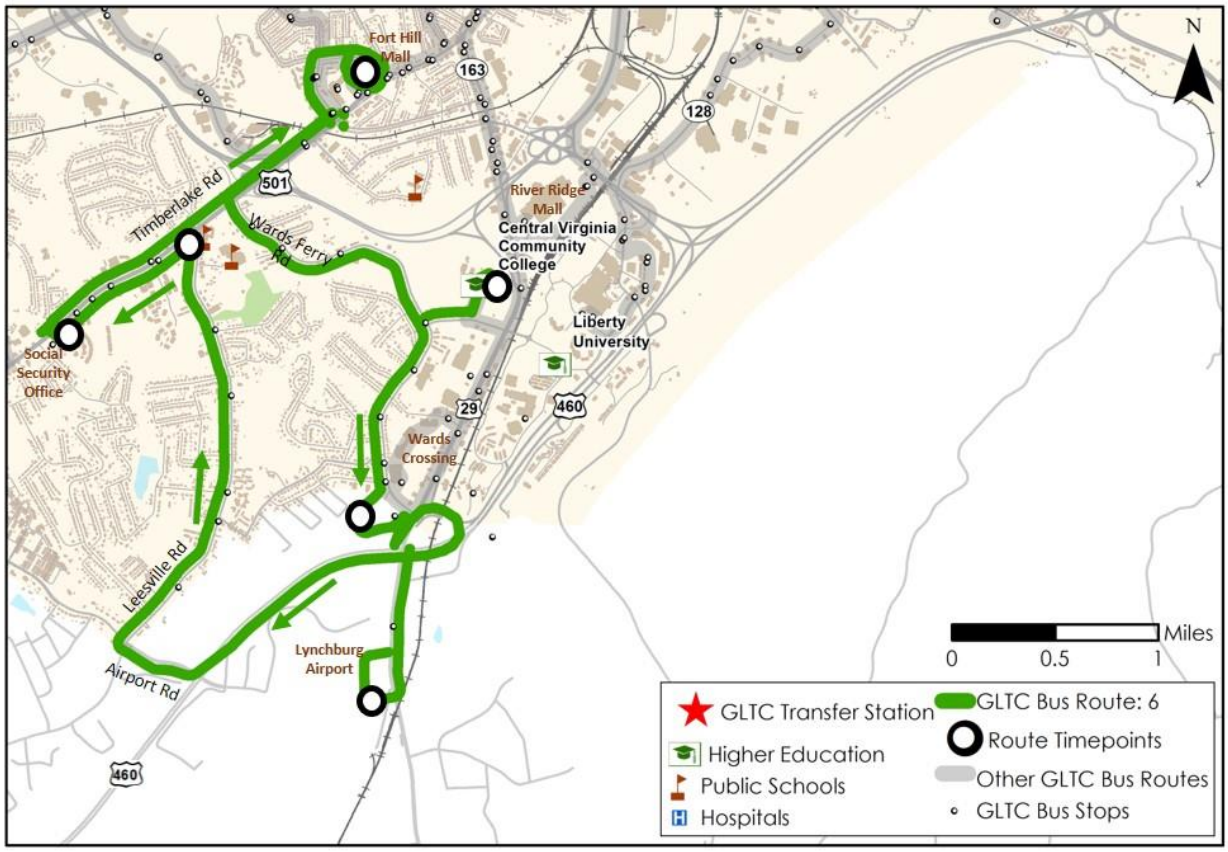


Source: GLTC, 2017.

1.4.1.7. Route 6

Route 6 provides connections in the southern part of Lynchburg. The route provides connections to the Lynchburg Airport, Fort Hill Village/Mall, Central Virginia Community College, the Social Security Office, and Wards Crossing. **Figure 1-10** shows the alignment of Route 6.

Figure 1-10: Route 6 Alignment

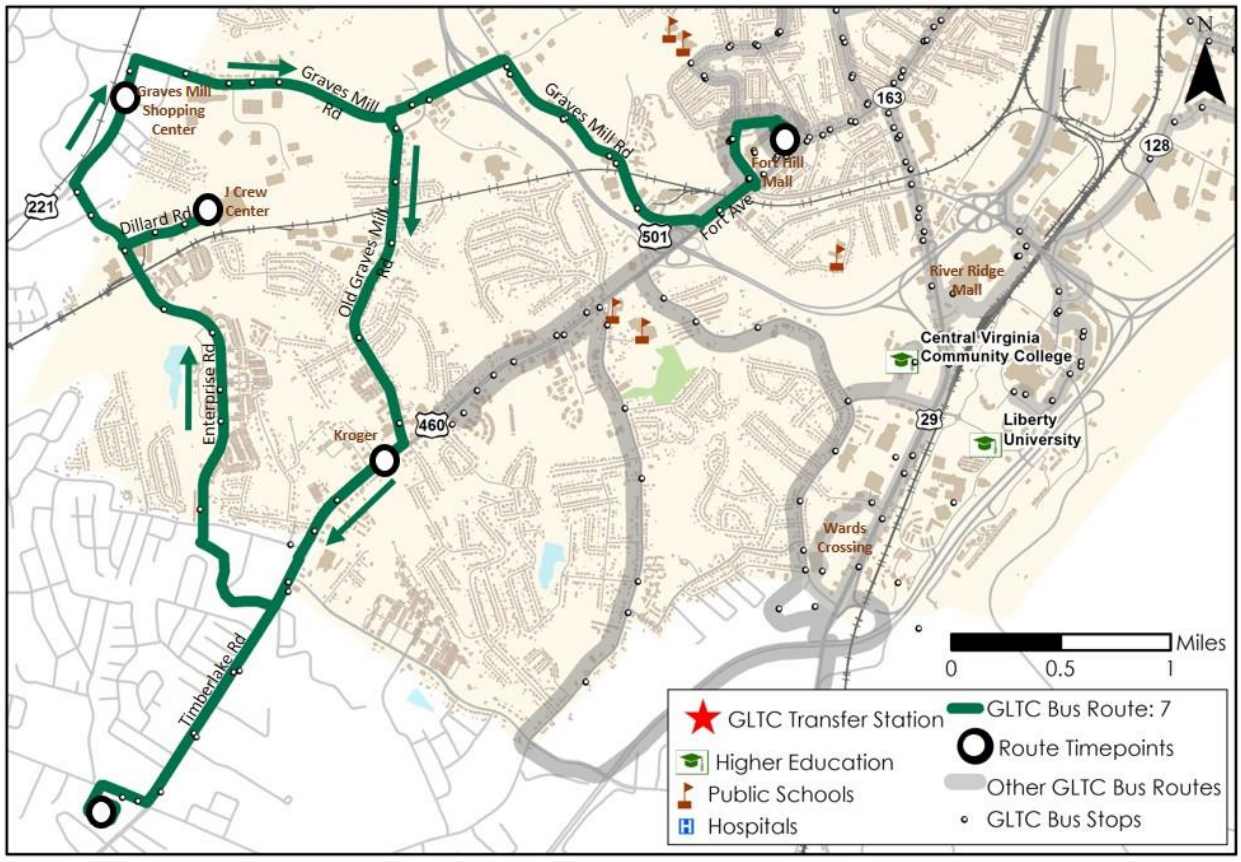


Source: GLTC, 2017.

1.4.1.8. Route 7

Route 7 provides connections in the southwest part of Lynchburg and into Campbell County. The route provides access to Fort Hill Village/Mall, Graves Mill Shopping Center, the J Crew Center, Startek and Kroger. **Figure 1-11** shows the alignment of Route 7.

Figure 1-11: Route 7 Alignment

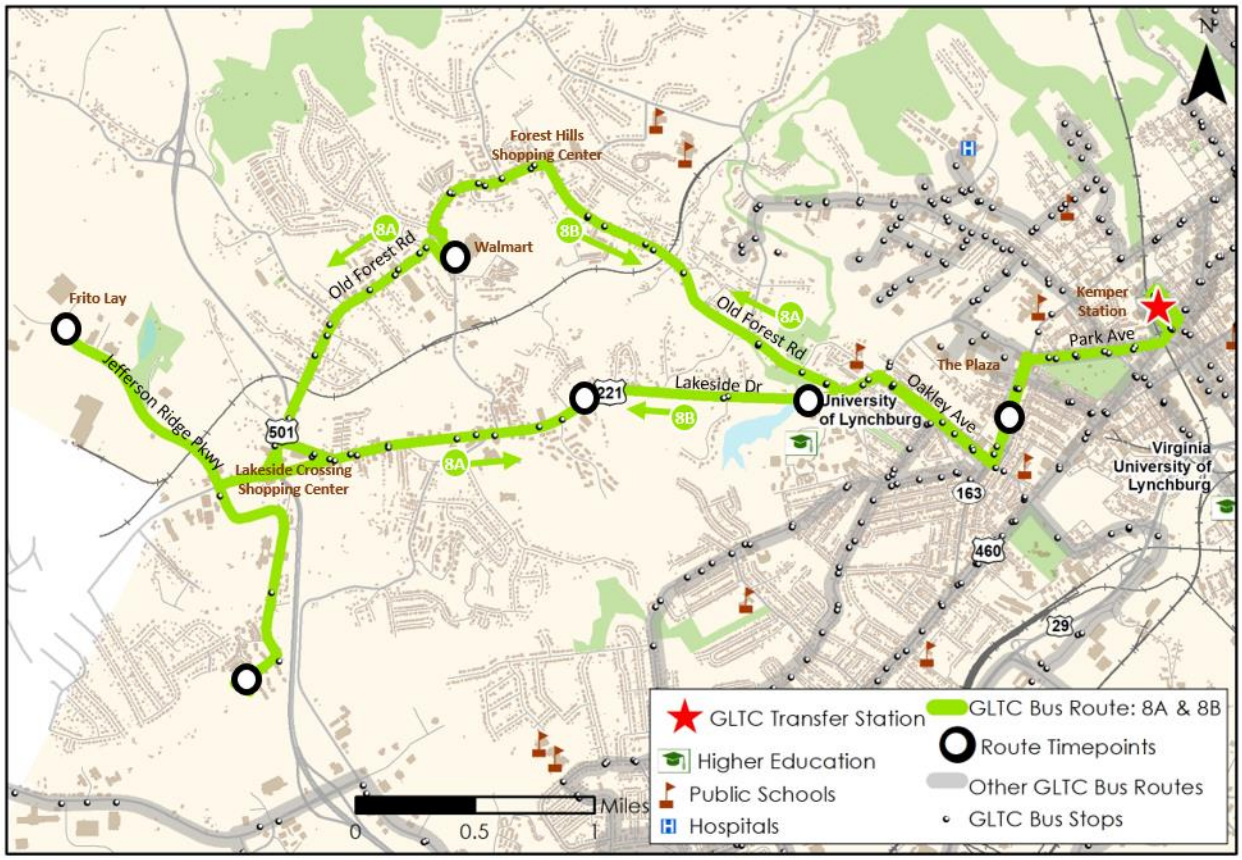


Source: GLTC, 2017.

1.4.1.9. Routes 8A/8B

Routes 8A and 8B operate on counterclockwise and clockwise loops, respectively, through Lynchburg and connect with major destinations including the Kemper Street Transfer Station, Walmart, University of Lynchburg, and Frito Lay. **Figure 1-12** shows the alignment of Routes 8A and 8B.

Figure 1-12: Route 8A/8B Alignment

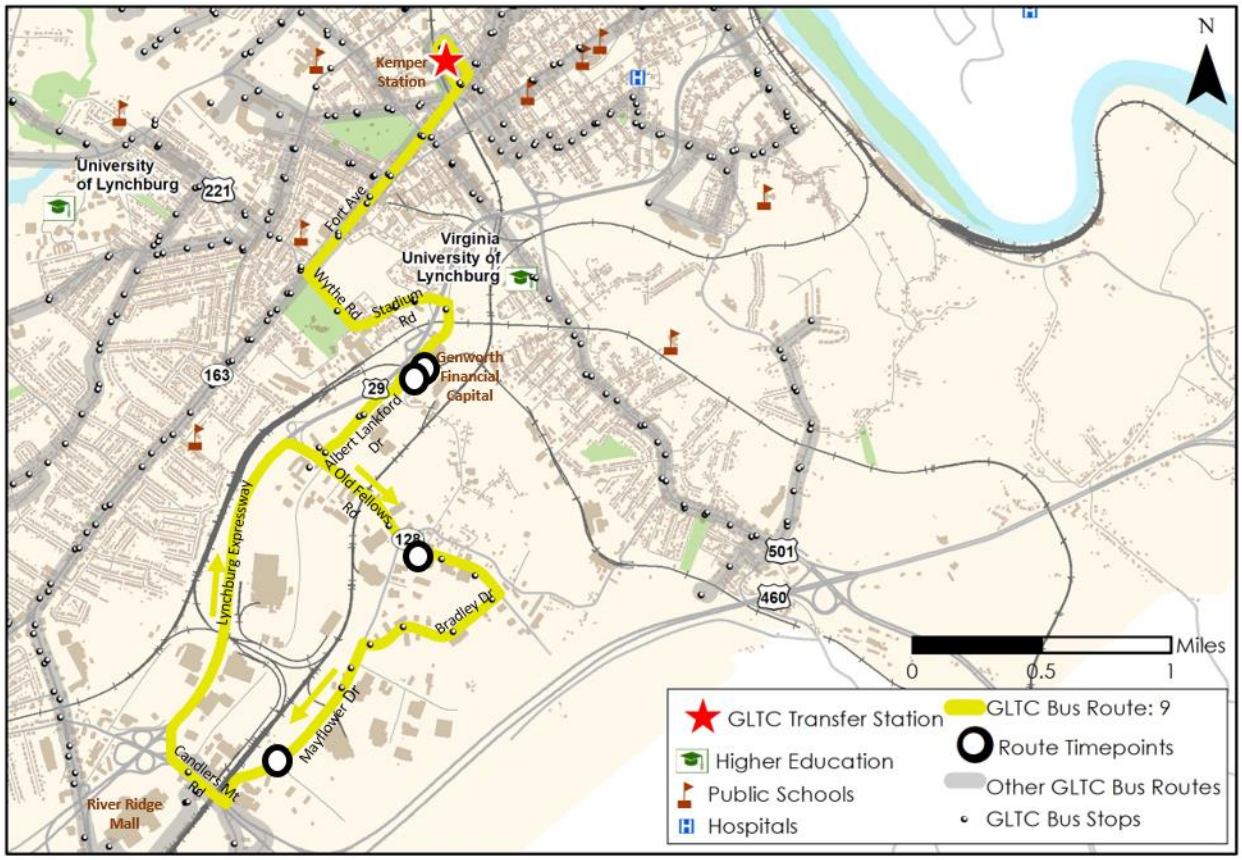


Source: GLTC, 2017.

1.4.1.10. Route 9

Route 9 connects the Kemper Street Transfer Station with the Genworth Financial Capital area, the Department of Motor Vehicles, the GLTC Administrative and Maintenance Facility, and several residential areas. **Figure 1-13** shows the alignment of Route 9.

Figure 1-13: Route 9 Alignment



Source: GLTC, 2017.

1.4.1.11. Route 10

Route 10 provides connections to the Lynchburg General Hospital on Thomson Drive and the Kemper Street Transfer Station. **Figure 1-14** shows the alignment of Route 10.

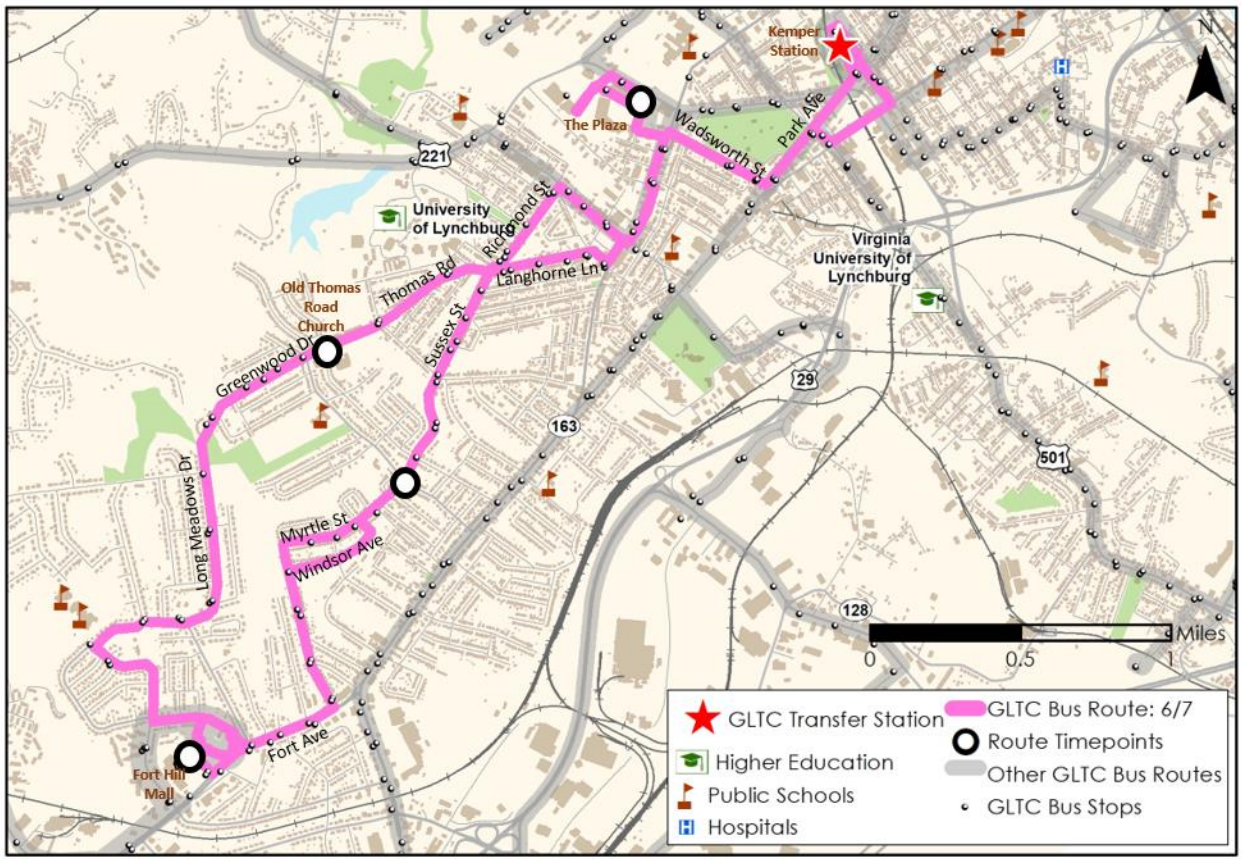
Figure 1-14: Route 10 Alignment

Source: GLTC, 2017.

1.4.1.12. Route 6/7

Route 6/7 provides access to the Kemper Street Transfer Station, Fort Hill Village/Mall, Plaza Shopping Center, and Old Thomas Road Church. Route 6/7 connects with Route 6 and Route 7 at Fort Hill, providing access from the Kemper Street Transfer Station to these routes in the southern part of Lynchburg. **Figure 1-15** shows the alignment of Route 6/7.

Figure 1-15: Route 6/7 Alignment



Source: GLTC, 2017.

1.4.2. Paratransit Service

GLTC offers paratransit services for qualifying individuals who are unable to ride regular GLTC buses due to a disability. Following ADA requirements, GLTC uses smaller vehicles to provide origin to destination services for those who request service. Paratransit is available anywhere in the City of Lynchburg and 0.75 mile around the bus routes that are outside the city. Individuals must apply to be eligible to use paratransit. The application requires a medical professional to verify the qualifications for eligibility. Once eligible, users can request roundtrip pickup services during the same hours of fixed route service by making a reservation Monday through Saturday between 5:30 AM and 5:00 PM. Requests can be done up to 14 days in advance, but if the individual requires a service the following day, he/she must call before 5:00 PM the day before. GLTC makes every effort to accommodate all the trips within an hour timeframe of the requested time. The peak vehicle requirement for GLTC paratransit service is nine vehicles.

1.4.3. Holidays

GLTC does not operate on New Year's Day, Easter Sunday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Services at Liberty University differ based on University breaks.

1.4.4. Service Partnerships

In addition to Liberty University, partnerships exist with other organizations to provide fare-free rides. These include:

- *University of Lynchburg:* This partnership allows all students, faculty, and staff to use the GLTC fixed route bus system for free with a valid University ID
- *Central Virginia Community College*: This partnership allows all students, faculty, and staff to use the GLTC fixed route bus system for free with a valid University ID
- *Liberty University*: In addition to the service provided on the Liberty University Campus, a partnership exists to allow all students, faculty, and staff to use the GLTC fixed route bus system for free with a valid University ID
- *The Grocery Bus:* Every Saturday, GLTC provides free service from James Crossing to Food Lion between 10 AM to 6 PM. This partnership was established to encourage a healthy lifestyle for the community members. This service is made possible through Virginia Department of Health, Lynchburg Area Food Council, Centra Health, and Amazing Grace Outreach Church

1.4.5. Connectivity

The transfer station is adjacent to the Kemper Street Station for Amtrak and Greyhound services, providing access to and from intercity passenger rail and bus services. Amtrak service provides direct connections to Roanoke, VA, and Washington, D.C. Route 6 provides a connection to the Lynchburg Regional Airport.

1.5. **Fares**

GLTC buses accept cash and prepaid farecards (magnetic strip paper farecards). Farecards can be purchased at the Main Office (419 Bradley Drive) or the Transfer Station (800 Kemper Street) using check, debit, credit, and cash. The fare for paratransit is $4 per person per one-way trip and must be paid in the exact amount by cash or a prepaid fare card. The fares have increased since the last transit

development plan due to the increase in cost of living and maintenance/operations cost. The fare structure changed in 2016 to eliminate free transfers and instead offer a $4-day pass, which effectively allows riders to make roundtrip transfer trips at the same total fare as before the fare restructure. Day passes expire at midnight on the day purchased. The fares in **Table 1-4** have been effective since July 2016.

Table 1-4: Route Fares

Fixed Route Fares	
One ride	$2 (full) / $1 (reduced)
Children under 45" *	Free
Day Pass – Unlimited	$4 (full) / $2 (reduced)
14-Day Pass – Unlimited	$25
31-Day Pass – Unlimited	$50 (full) / $25 (reduced)
$40 Debit Card – Stored value card	$40
One Year Pass – Unlimited	$500
Paratransit Fares	
Paratransit per ride	$4
$40 Debit Card – Stored value card	$40

* When traveling with a paying adult.
NOTE: Data from GLTC website. Reduced fare is available to riders who possess and present a GLTC half fare ID card – disabled and senior customers

Students, faculty, and staff of Liberty University, University of Lynchburg, and Central Virginia Community College can ride fixed route services for free with a valid University ID.

1.6. Fleet

GLTC owns a total of 40 vehicles for fixed route service and 18 vehicles for paratransit services. Five of the 18 paratransit vehicles are being prepared for disposal in 2018. The buses use diesel for fuel with about two-thirds being hybrid-electric diesel buses. All buses have fareboxes, destination signs, bike racks, and security cameras. GLTC also has 13 support vehicles such as trucks, vans, and sport-utility cars. **Table 1-5** through **Table 1-7** provide summaries of the fleet roster. GLTC uses the state transit asset management plan to manage their assets and determine fleet replacements.

Table 1-5: Fixed Route Bus Inventory

Quantity	Type	Year	Make	Low Floor	Seating Capacity
40	**Transit (Fixed Route)**				
1	30-foot bus (Diesel)	2000	Optima-Chance	N	24
6	35-foot bus(Diesel)	2008	Gillig	Y	28
4	35-foot bus (Diesel)	2009	Gillig	Y	28
1	35-foot bus (Diesel)	2017	New Flyer	Y	32
8	35-foot bus (Hybrid)	2007	Gillig	Y	32
6	35-foot bus (Hybrid)	2008	Gillig	Y	32
3	40-foot bus (Hybrid)	2010	Gillig	Y	37
7	29-foot bus (Hybrid)	2010	Gillig	Y	26
4	35-foot bus (Hybrid)	2012	Gillig	Y	32

Source: GLTC, 2018.

Table 1-6: Paratransit Bus Inventory

Quantity	Type	Year	Make	Low Floor	Seating Capacity
18	**Paratransit**				
2*	19-foot bus (gasoline)	2011	Ford	N	14
1*	19-foot bus (gasoline)	2012	Chevy	N	19
1*	22-foot bus (gasoline)	2012	Chevy	N	19
1*	22-foot bus (gasoline)	2012	Chevy	N	14
6	23-foot bus (gasoline)	2016	Ford	N	16
6	23-foot bus (gasoline)	2018	Ford	Y	10
1	23-foot bus (gasoline)	2018	Ford	N	12

*These vehicles will be disposed of once the replacements purchased in 2018 are put into service.

Source: GLTC, 2018.

Table 1-7: Support Vehicle Bus Inventory

Quantity	Type	Year	Make	Seating Capacity
13	**Support Vehicles**			
5	Explorer AWD	2017	Ford	5
2	Expedition	2017	Ford	8
2	F-250 EXT CAB 4X4	2017	Ford	4
1	F-250 SUPER CAB 4X4	2017	Ford	4
1	F-350 4X4	2005	Ford	3
2	Express Van	2017	Chevy	10

Source: GLTC, 2018.

1.7. Existing Facilities

GLTC has two major facilities where administration, operation, dispatch, and maintenance are housed. The facilities are the GLTC Operations and Maintenance Facility and the Kemper Street Transfer Station.

1.7.1. Operations and Maintenance Facility

The Operations and Maintenance Facility relocated from 1301 Kemper Street to 419 Bradley Drive in 2017, shown in **Figure 1-16**. The new 52,000-square-foot facility is located on a roughly 12-acre lot. The facility houses the entire administrative, operations, and maintenance departments of GLTC. The building has eight maintenance bays, a wash bay, and secure parking for the entire fleet. The facility was designed with a parking capacity of 46 transit buses and 16 smaller paratransit buses, but additional space is available to add additional parking if needed in the future.

Figure 1-16: GLTC Operations and Maintenance Facility

1.7.2. The Kemper Street Transfer Station

In 2014, a new transfer station located at 800 Kemper Street was opened, shown in **Figure 1-17**. The facility provides indoor and outdoor waiting areas for GLTC bus routes and connections. The station provides customer service, vending and kiosks for tickets and maps, and conference rooms for employees. The transfer station is adjacent to the Amtrak and Greyhound service stations located on Kemper Street. Access also is provided for bicyclists and pedestrians to the Kemper Station Trail.

Figure 1-17: GLTC Transfer Station

1.7.3. Bus Stops

GLTC serves approximately 700 bus stops. Stops are marked with identifying signs, shown in **Figure 1-18**. GLTC's service standard suggests benches be installed at stops with at least 25 boardings per day and shelters be installed at stops with at least 50 boardings per day. Region 2000 Local Government Council

is assisting GLTC to look at bus stops for ADA accessibility measures; this effort will provide a list of recommended infrastructure changes for the City to implement.

Figure 1-18: Bus Stop Signs

GLTC does not have formal agreements or requirements with the City of Lynchburg or the counties for transit design, such as shelters or pull-offs. New bus stop locations are constructed to ADA standards by the city, and bus stops installed to reduce on-site parking requirements for developments require a bench, shelter, and sidewalk connection from the development site to the bus stop.

1.8. Transit Security Program

GLTC has a strong and long-standing commitment to maintain the highest standards of public and employee safety. GLTC has a System Safety Program Plan (SSP) for onsite safety preparedness and awareness. It provides guidance to GLTC on how to make decisions for operations, riders, communities, and employees concerning emergency and security programs. GLTC's Bus Operator Manual also contains a set of guidelines and procedures to identify and respond to security and safety concerns.

GLTC has on-board video surveillance cameras and silent security system installed on all fixed route buses and paratransit vehicles. Transit facility security measures include cameras and card-access control at the Operations and Maintenance Facility and Transfer Station. Buses at the Operations and Maintenance Facility are secured in a fenced-in area with a gate.

The fare collection program has several measures in place to ensure security of the collected revenues. Bus operators have the responsibility of fare inspection, which includes inspection of IDs that allow for free or reduced trips. Cash and farecards are registered by the farebox. Individual farebox vaults are emptied into a single vault by utility workers daily when buses return to the yard through a secure process that ensures the cash is never accessible.

1.9. Intelligent Transportation Systems Program

GLTC has an intelligent transportation systems (ITS) program to improve efficiency of operations and provide information to customers. ITS applications used by GLTC include:

- *Automatic Vehicle Location System*: Vehicle tracking of all GLTC fixed route and Liberty University bus routes via Ride Systems. Ride Systems allows GLTC and the public to see bus locations in real-time on a map but it does not have dispatch functionalities.
- *Automatic Passenger Counters (APCs)*: APCs are installed on all of the fixed route bus fleet and GLTC is working to collect and decipher the data collected. APCs are side-fire infrared units provided by Urban Transportation Associates.
- *Electronic Registering Fareboxes (ERFs)*: ERFs are installed on all fixed route and paratransit buses. The farebox and data probing system are provided by Genfare (formerly GFI).
- *On-board Cameras*: GLTC has an on-board camera system installed on the entire fixed route and paratransit fleet. These systems are provided by Apollo Video Technology and AngelTrax.
- *Automated Vehicle Annunciation (AVA)*: GLTC has AVA installed on the entire fixed route fleet that makes audible announcements of the approaching bus stop. This system is provided by Clever Devices.
- *Fixed Route Scheduling Software*: GLTC uses the Remix software for fixed route scheduling, blocking, and run cutting.
- *Paratransit Scheduling Software and Mobile Data System*: GLTC uses RouteMatch paratransit scheduling software with in-vehicle mobile data terminals (MDTs) for each of its paratransit vehicles. This system assists with paratransit ride scheduling, dispatch, and data collection. Paper manifests generated by the system also are used.
- *Maintenance Management System*: GLTC uses RTA Fleet Management Software to track fleet maintenance activities. Zonar, a pre- and post-trip vehicle inspection system also is used that allows operators to use electronic devices to log data at predefined inspection zones of a bus.
- *Trip Planner*: GLTC uses Google Maps Transit trip planner. General Transit Feed Specification schedule data is provided to Google to allow customers to get transit directions on Google Maps applications.
- *Real-Time Bus Tracking*: Real-time bus tracking maps for GLTC and Liberty University services are available via mobile-friendly websites (http://mybus.gltconline.com and http://liberty.prod.ridesystems.net/). The maps provide real-time arrival information for route timepoints. Mobile applications for Android and iOS also are available from Ride Systems, which show the real-time map and next bus arrival times at time points.

1.10. Data Collection, Ridership, and Revenue Reporting Methodology

Data collection, processing, verification, and reporting processes are employed by GLTC for performance data reporting to its stakeholders and funding partners.

1.10.1. Fixed Route Bus Data Collection

Ridership data is collected from the farebox. Drivers classify riders by fare type on the farebox as they board unless they are scanning a farecard. Riders can either pay by cash, farecard, or visual display of ID for free or reduced fare customers. Liberity University, Unviersity of Lynchburg, and Central Virginia Community College riders are counted using farebox buttons. Fareboxes are manually probed at the yard daily to transfer data to a vendor database. Ridership reports are generated from the database several times a month and processed/formatted in a spreadsheet. System level ridership is compared month-to-month, and collected revenues are verified against ridership daily. Revenue miles and revenue

hours data are collected from scheduling software, and is occasionally verified against manual drivers' logs.

1.10.2. Paratransit Data Collection

All data is collected using MDTs by the driver, but manual methods are recorded for back up. Manifests are obtained from the RouteMatch scheduling software and provided to drivers to record completed trips and revenue miles and hours for each trip. Manifests are submitted at the end of the shift and data is reviewed and entered into RouteMatch. Reports are generated from RouteMatch and summarized in a reporting spreadsheet.

1.10.3. Data Reporting

At the end of each month, the assistant general manager compiles the final reporting spreadsheet. Data is submitted to the Virginia Department of Rail and Public Transportation monthly and annually through data entries to the On-Line Grant Administration system. GLTC reports annually to the National Transit Database by October 31st.

1.10.4. Accounting/Payroll

GLTC uses the accrual method for accounting and all procedures are overseen in-house by the Finance Manager. The certified public accountant firm, Brown Edwards, conducts an audit annually on GLTC's financials and has a contract to conduct audit services through 2021. Payroll is submitted to First Transit for review and is processed through an external vendor, Automatic Data Processing, Inc.

1.11. Coordination with Other Transportation Service Providers

The following other transportation service providers also serve the greater Lynchburg area; however, GLTC does not currently have partnerships to coordinate with these services:

- **Taxicab Services** – Multiple taxicab companies serve Lynchburg
- **Transportation Network Companies** – Uber and Lyft provide service in and around Lynchburg
- **Car Sharing** – Zipcar is located at Liberty University at Residential Commons One and East Campus Clubhouse
- **University Shuttle Services** – Liberty University offers a reservation-based shuttle service for students to access locations such as Lynchburg Regional Airport, Roanoke Regional Airport, and Kemper Street Station. Randolph College has a shuttle service that runs on Friday and Saturday to retail locations on Wards Road
- **Human Services Shuttles** – Centra operates its own medical service shuttles known as PACE and the Central Virginia Alliance for Community Living is the local Agency on Aging and provides Human Service Transportation.

1.12. Public Outreach

GLTC uses public feedback to improve their services. In 2004, GLTC implemented the Public Comment Process for Fare and Service Changes that met the Federal Transit Administration's Office of Civil Rights, which under the Civil Rights Act of 1964 (Title VI), required equity in service and fare changes. GLTC updates the Title VI program frequently, with the most recent year being 2016. The Title VI program can be found in the **Appendix A**.

In 2006, GLTC implemented a public comment process for the Annual Operating Budget and Capital Improvement Plan (Program of Projects), which allows the public to be involved during the budgeting process.

GLTC has two advisory committees where public community members also can get involved: ADA (Paratransit) Advisory Committee and Customer (Bus) Advisory Committee. The committee representatives are appointed by the GLTC Board of Directors. The committees meet every other month at GLTC and are open to the public.

The public also can attend Board meetings. Meeting times, dates, and minutes are provided on the GLTC website and at the GLTC office. The Director of Human Resources-EEO also is available to answer any questions by phone.

2. GOALS, OBJECTIVES, AND SERVICE STANDARDS

GLTC's mission is to provide safe, dependable, affordable, accessible, and high-quality public transportation to the Central Virginia community.

The Transit Development Plan's (TDP) goals, objectives, and performance measures reflect Greater Lynchburg Transit Company's (GLTC's) core mission and are summarized in this section.

Establishing agreed upon goals, objectives, and service design standards creates a framework for transit agencies to establish managerial direction and outline how to pursue and measure progress. During the preparation of this TDP, the City of Lynchburg's comprehensive plan was read to further ensure that any overarching strategic goals were incorporated in the TDP.

While goals generally define a longer-term purpose toward which an effort is directed, objectives provide additional details or targets for how the goal will be achieved and in what intermediate timeframe. The goals and objectives presented reflect discussions with GLTC and should be assessed on an annual basis.

2.1. Goals and Objectives

Four primary goals identified that support GLTC's mission are:

1. Provide a safe, reliable, efficient, and effective transportation service
2. Be an integral component of economic development in the City of Lynchburg and surrounding areas by providing access to jobs, health care, shopping, education, and other community locations, and enhance economic development by improving access to local businesses
3. Continue to strengthen organizational processes to ensure continuity of services and best practices
4. Build partnerships with employers, colleges and universities, and other private and public stakeholders

The City of Lynchburg's 2030 Comprehensive Plan, prepared following the last major TDP update, emphasized the continued desire to strengthen neighborhood connections and access to work, shopping, parks, schools, and public service through multimodal connections with transit service being a viable option. As the City supports the expansion of different modal choices for residents with different needs and preferences, there is ongoing coordination of the GLTC route planning and the City's land use planning to provide for the successful growth and development of the City.

Goal #1 - Provide a safe, reliable, efficient, and effective transportation service.

Objective 1.1 – Provide excellent customer service through timely service, well-trained drivers, and comfortable accommodations.

MEASURE	TARGET	STRATEGY
Complaint investigation time	Less than one-week follow-up time for customer complaints	Conduct customer service training for staff
Percent change in annual citizen participation and overall satisfaction	Achieve an above average overall rider satisfaction rating	Conduct annual rider satisfaction surveys; establish a baseline for rider satisfaction and monitor annually

Objective 1.2 – Maintain efficient scheduling and routing practices to ensure as short a wait time for customers as possible.

MEASURE	TARGET	STRATEGY
On-time performance	95% on time	Real-time monitoring and logging via automatic vehicle location technology
Length of trip	Limit ride lengths for customers to no more than two times the comparable trip via automobile	Random comparison of trip times with Google drive estimates at same day/time

Objective 1.3 – Increase visibility of GLTC and provide public with most relevant and easily accessible information.

MEASURE	TARGET	STRATEGY
Dissemination of information for systemwide changes	Establish robust marketing campaign 30 days prior to systemwide changes via all media streams	Develop a GLTC branding/marketing campaign
Timeliness of content updates to GLTC website	Update transit service changes on website at least 14 days priors to new service implementation	Maintain transit information on the GLTC website and those of other partners in the area

Objective 1.4 – Maintain a transportation system that promotes the safety of all users.

MEASURE	TARGET	STRATEGY
Accident frequency rate	Less than one accident per 100,000 miles.	Monitor fleet maintenance reports monthly.
Mean distance between in-service breakdowns	15,000 miles or more between in-service breakdowns.	Monitor fleet maintenance reports monthly.

Goal #2 - Be an integral component of economic development in the City of Lynchburg and surrounding areas by providing access to jobs, health care, shopping, education, and other community locations, and enhancing economic development by improving access to local businesses.

Objective 2.1 – Provide reliable services that benefit local businesses, human and social service agencies, medical facilities, and other service providers in the City.

MEASURE	TARGET	STRATEGY
Ridership to identified agencies or medical facilities	Increase the number of riders at specific areas	Coordinate with businesses and agencies to understand need; increase awareness of availability of vouchers through human and social service; target marketing efforts to social service agencies and medical facilities

Goal #3 - Continue to strengthen organizational processes to ensure continuity of services and best practices.

Objective 3.1 – Coordinate with the Virginia Department of Rail and Public Transportation on capital and operational funding applications and on compliance with state and federal regulations.

MEASURE	TARGET	STRATEGY
Number of grant applications submitted	Maintain or increase the number of new grant applications on an annual basis	Increase grant research
Findings from compliance reviews	No more than five findings per year; no consecutive findings	Establish recommended processes and timely close-out of any identified issues

Objective 3.2 – Establish an annual process for reviewing and adjusting goals and objectives.

MEASURE	TARGET	STRATEGY
Annual progress/update reporting completed	Submit annually any changes to goals/objectives and rationale	Complete goal review with annual TDP reporting
Alignment with relevant City/Regional goals	GLTC input provided in transportation study's goal development	Assess new City or regional studies with transit/transportation goals pertaining to City of Lynchburg

Goal #4 - Build partnerships with employers, colleges and universities, and other private and public stakeholders.

Objective 4.1 – Support local and regional economic development initiatives to explore potential demand to expand cost-effective transit service to areas outside of those presently being serviced.

MEASURE	TARGET	STRATEGY
Number of new partnerships with employment, economic development, colleges/universities, and agencies	Seek to establish one partnership annually	Participate in discussions with regional chamber or economic development; provide partners with transit ridership, programs, and services information

2.2. Service Guidelines

In March 1996, the GLTC Board adopted the GLTC Suggested Service Guidelines. Service guidelines are intended to provide assistance to management in making service decisions and in planning remedial actions. As such, they are part of the decision-making process and subject to ongoing review. Service guidelines should be seen as an "ideal" to which to strive, but may be unable to obtain because of economic or political constraints, thus the reason they are "suggested" versus mandated.

Service Area:

- Within ¼ mile of 50 percent of area residents
- Residential dwelling areas with densities equal to or greater than 4,000 persons/square-mile
- Employers with 200+ employees (individual employers and clusters)
- Secondary schools and colleges with enrollments of 500+ students
- Shopping centers with at least 50,000 square feet of retail space
- Social service agencies, government agencies, and medical facilities with at least 100 daily users

Hours:

- Weekdays: Early enough for workers and students to make day shift and late enough to return home at end of day shift; reduced span for weekends
- Service Headways: 30 minutes during peak periods and 60 minutes during other periods; headways for regularly scheduled service should conform to regularly recurring clock intervals

Route Characteristics:

- Length should not exceed 25 miles round-trip or 2 hours
- Only one route per arterial on approaches to central business district or major transit terminal, with the exception of express route service

Financial Performance:

- Subsidy/passenger should not exceed operating cost/passenger
- Twenty percent of operating costs from farebox and partnership contracts

Fare Structure:

- Exact fare
- Customer "friendly" — in readily available denominations
- Easy to administer

Ridership Performance:

- Passengers per revenue hour should exceed 15
- Individual route "trips" should have 2+ passengers

Quality/Loading Standards:

- Peak 30 minute: 125 percent of seating capacity
- Peak Hour: 100 percent of seating capacity
- Base: No standees
- Night: No standees
- Weekends: No standees

Quality/Schedule Adherence:

- Peak 30 minute: 85 percent on time (0-3 minutes late)
- All other times: 95 percent on time (0-3 minutes late)
- Average route speeds should not exceed 20 miles per hour

Quality/Bus Stops:

- Spacing: No closer than 700 feet
- Request stops in low-density areas at operator discretion
- "Near-side" stops unless safety warrants "far-side" stops at intersections
- Length: Enough to pull bus with both doors parallel to curb
- Shelters: Stops with at least 50 boardings/day
- Benches: Stops with at least 25 boardings/day
- Financial resources to maintain shelters and benches including periodic cleaning

Quality/Maintenance:

- Available spares should not exceed 15 percent of peak fleet; overall spare ratio should not exceed 30 percent
- One hundred percent of preventative maintenance performed at vehicle manufacturer recommended intervals
- Buses washed daily
- One hundred percent operational heating, ventilation, and air conditioning on in-service buses
- One hundred percent operational wheelchair lifts on in-service buses
- Miles between road calls should be greater than preventative maintenance mileage interval

Quality/Customer Service:

- Telephone information service for period that system operates
- Ninety-five percent of information calls answered within 2 minutes
- Provide dated route maps and timetable annually
- Complaints investigated with follow-up to complainant within one week of report

3. SERVICE AND SYSTEM EVALUATION

This section evaluates existing service using quantitative and qualitative measures. Demographic trends and forecasts were used to provide context on the service in which GLTC operates. Historical service data such as ridership, revenue, operating cost, revenue miles, and revenue hours were used to evaluate the system. Each route and service type were compared with systemwide measures using fiscal year 2017 data. A three-year (FY 2015 to FY 2017) retrospective performance analysis was conducted that shows steady performance.

Stakeholder input was an important part of evaluating existing service. The findings from an online and in-person public survey and stakeholder interviews are included in this section. The survey gathered information from current customers as well as individuals that do not currently use the service. Input also was gathered from key stakeholders in local governments, higher education institutions, economic development organizations, and customer groups through interviews.

The findings from the various analyses were compiled to identify deficiencies or gaps in the existing service. Potential solutions were identified that would alter existing services to effectively and efficiently meet the needs of Lynchburg in the future. These gaps and solutions form the basis of the service and capital improvement plan included in **Section 4**.

3.1. Demographic and Land Use

Table 3-1 shows population estimates and projections for Lynchburg and the surrounding counties. The City of Lynchburg is projected to experience population growth, along with many of the surrounding counties. Appomattox, Bedford, and Campbell Counties are projected to grow at slightly lower rates than the City, while Amherst County is projected to experience a slight population decline.

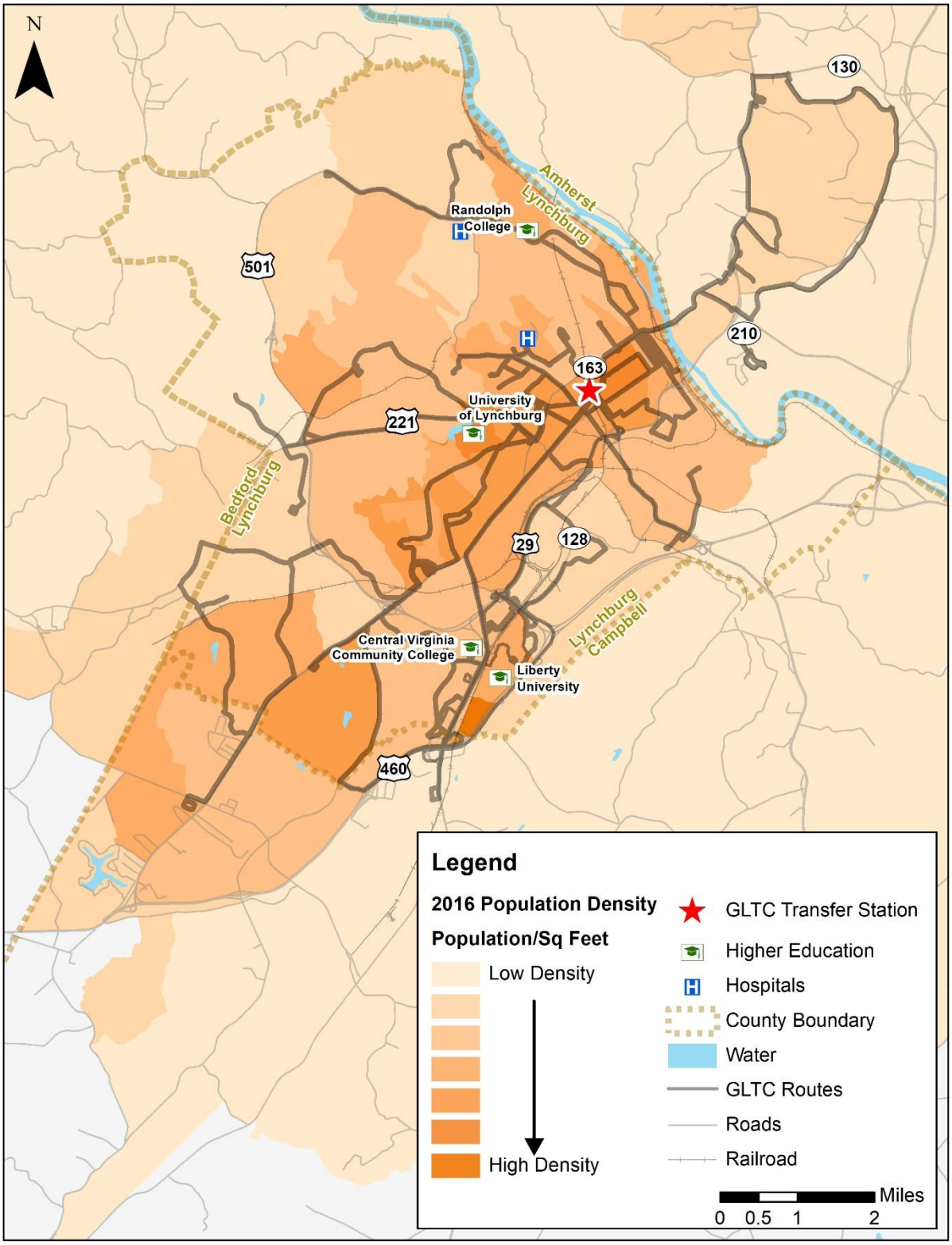
Table 3-1: Total Population Projections

Locality	2016 Estimate	2025 (2016-2025 Change)	2035 (2016-2035 Change)	2045 (2016-2045 Change)
City of Lynchburg	78,755	85,599 (8.7%)	93,202 (18.3%)	100,102 (27.1%)
Amherst County	31,999	31,612 (-1.2%)	31,264 (-2.3%)	30,700 (-4.1%)
Appomattox County	15,314	16,399 (7.1%)	17,320 (13.1%)	18,113 (18.3%)
Bedford County	76,933	83,262 (8.2%)	89,260 (16.0%)	94,591 (23.0%)
Campbell County	55,061	58,772 (6.7%)	61,296 (11.3%)	63,375 (15.1%)

Source: Weldon Cooper Center, University of Virginia.

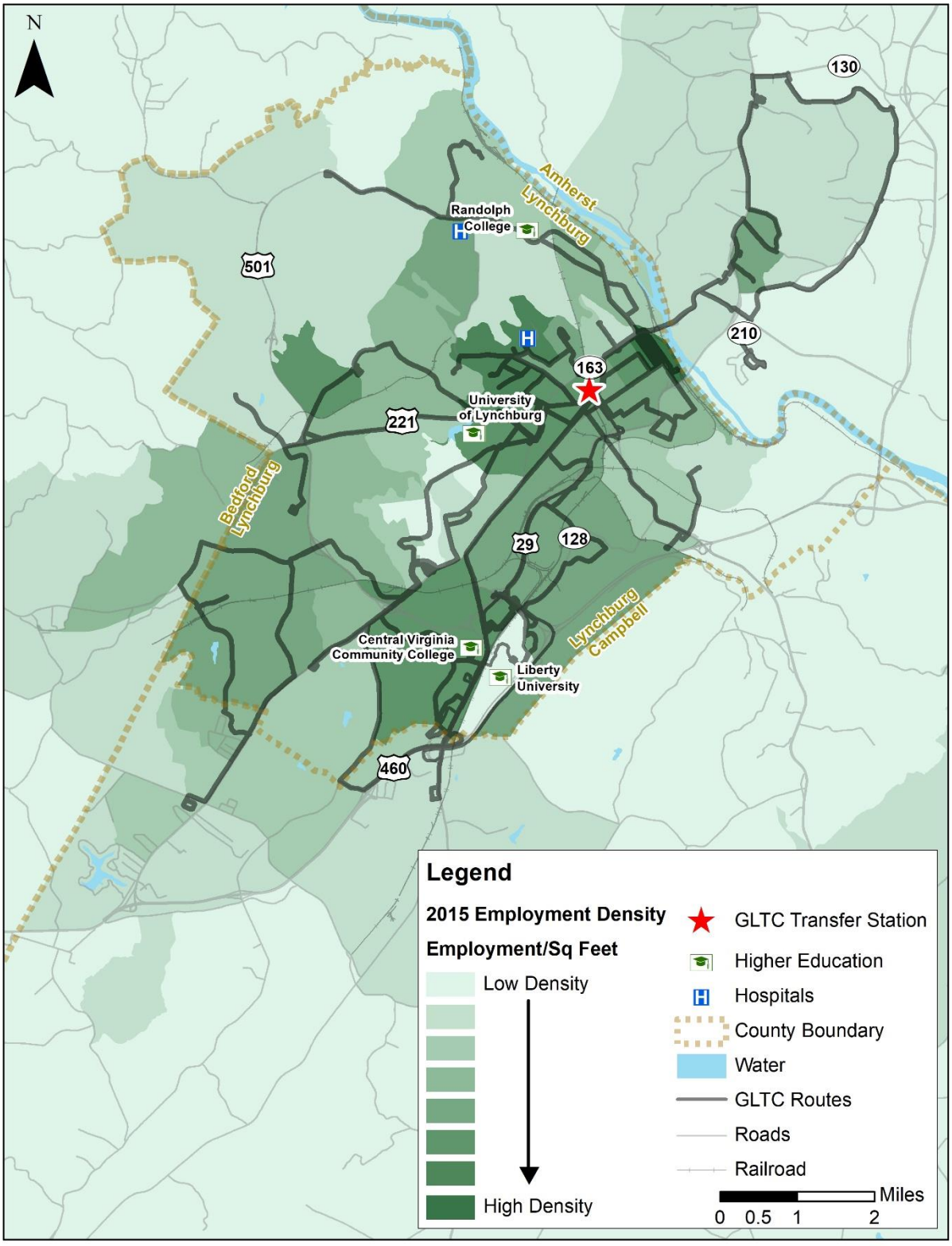
Maps of existing population and employment densities are shown in **Figure 3-1** and **Figure 3-2**, respectively. GLTC currently provides route coverage to much of the higher density areas. A map of future land use designations for the City of Lynchburg is provided in **Figure 3-3** to provide context on how the City is expected to develop in the future.

Figure 3-1: 2016 Population Density



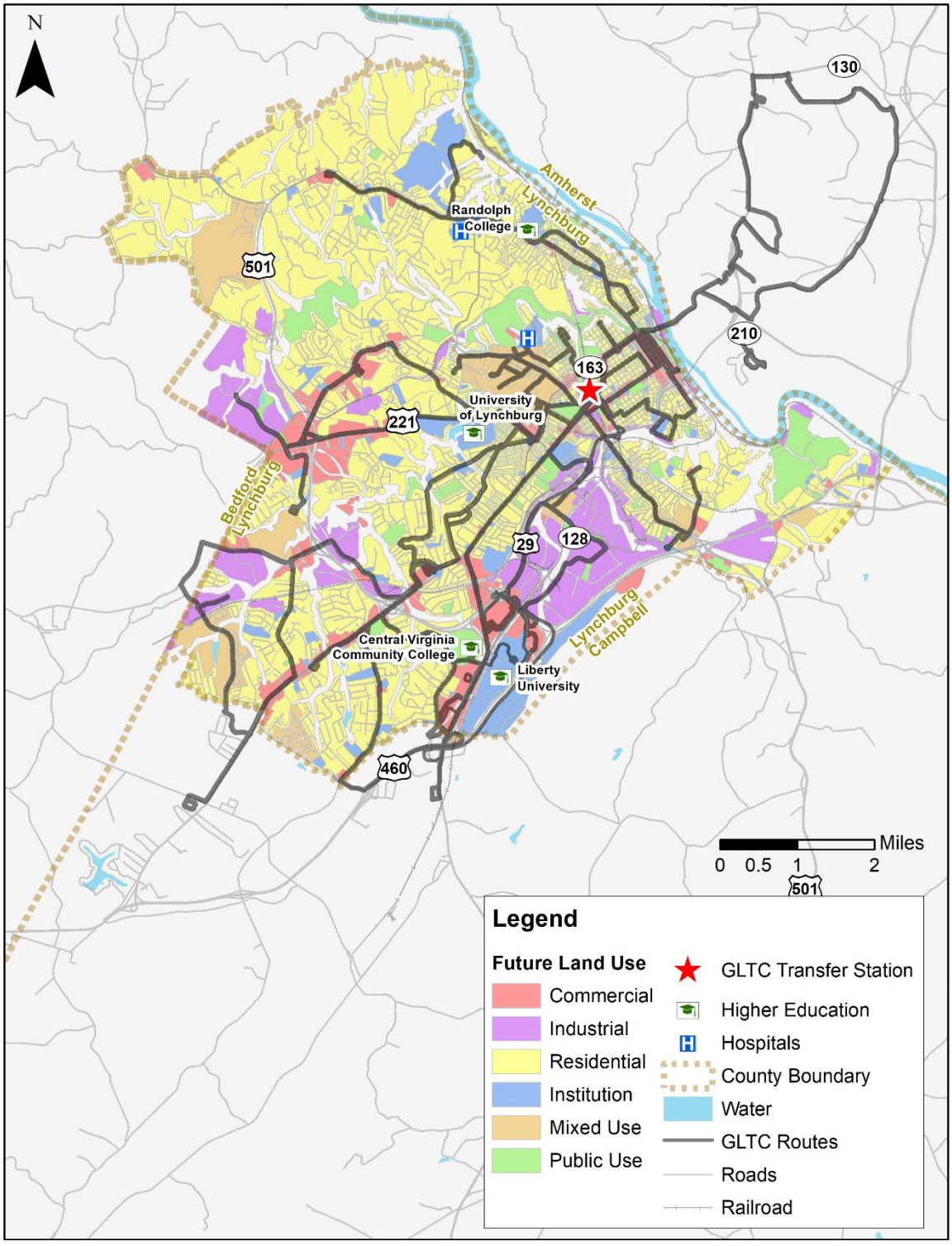
Source: U.S. Census Bureau, 2016.

Figure 3-2: 2015 Employment Density



Source: U.S. Census Bureau, 2015.

Figure 3-3: City of Lynchburg Future Land Use Designations



Source: City of Lynchburg, 2017.

3.2. Existing Service Analyses

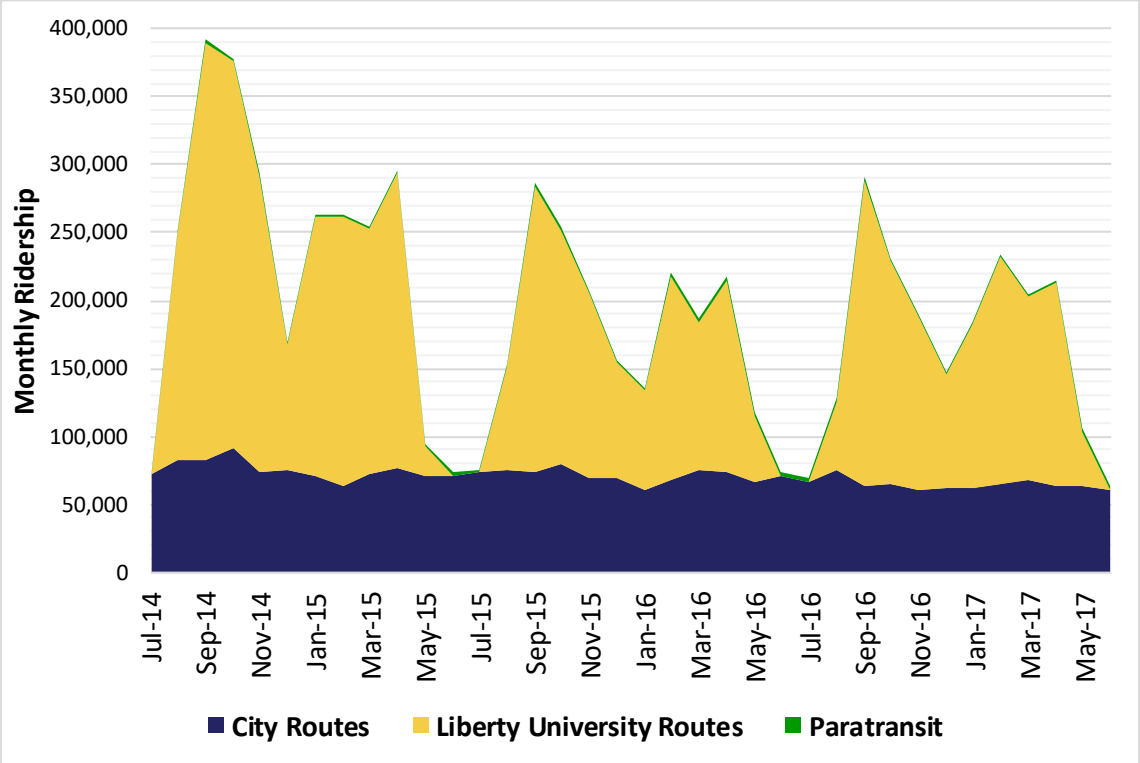
This section provides a summary of GLTC's service in fiscal year 2017 and 3-year historical trends for fiscal years 2015 through 2017.

3.2.1. Overall System and Route Performance

Figure 3-4 shows monthly ridership by service types – City routes, Liberty University routes (operated by GLTC), and paratransit. The extent to which Liberty University affects ridership is clear in the figure, and the fluctuations in this ridership corresponds to semester schedules. Liberty University has made service reductions from year to year, which also corresponds to the decrease from fall 2014/spring 2015.

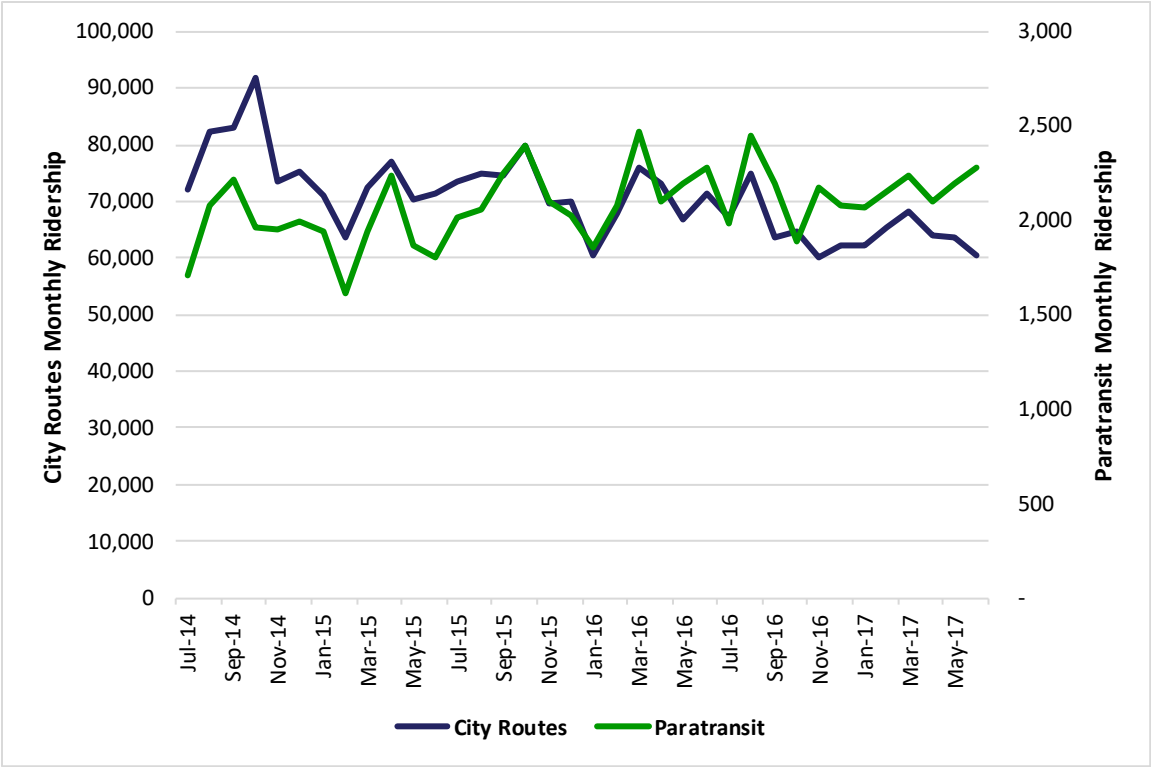
Monthly ridership for City routes and paratransit also are displayed in a separate chart, **Figure 3-5.** Seasonal variations exist in ridership, with generally lower ridership in the winter, and there is an overall trend of decreasing ridership for City fixed routes and increasing ridership for paratransit. **Section 3.3** contains additional details on historical trends.

Figure 3-4: Monthly Ridership



Source: GLTC, 2017.

Figure 3-5: City Routes and Paratransit Monthly Ridership



Source: GLTC, 2017.

Performance measures of passengers per revenue hour, passengers per revenue mile, and passengers per trip were compiled for each route, service type, and systemwide. This information is summarized in **Table 3-2** along with ridership, revenue hours, and revenue miles.

Table 3-2 - FY 2017 Service Operating Statistics

Key: ▲ Route measure better than overall measure for City routes
▼ Route measure worse than overall measure for City routes

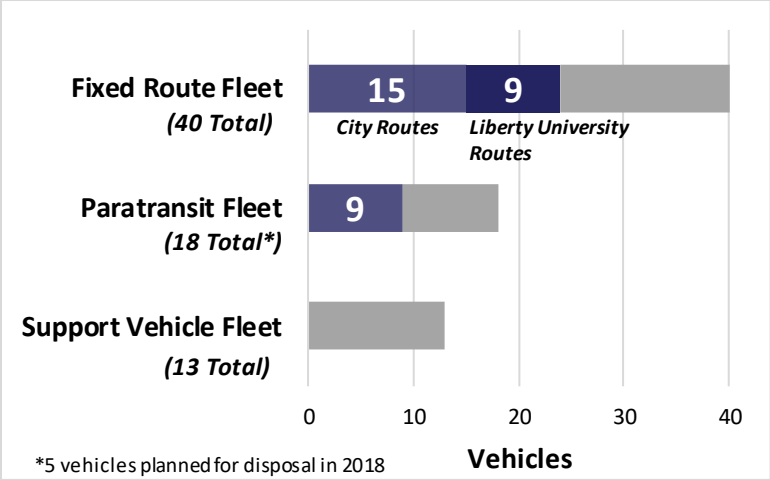
Route	Ridership	Revenue Hours	Revenue Miles	Passenger/ Hour	Passenger/ Mile	Passenger / Trip
1A	75,989	5,122	69,128	14.8 ▲	1.1 ▲	16 ▲
1B	47,147	3,575	40,222	13.2 ▲	1.2 ▲	14 ▲
2	58,764	4,225	65,400	13.9 ▲	0.9 ▼	7 ▼
3A	83,758	5,070	67,431	16.5 ▲	1.2 ▲	17 ▲
3B	78,191	4,940	69,209	15.8 ▲	1.1 ▲	16 ▲
4A	98,289	4,706	60,754	20.9 ▲	1.6 ▲	21 ▲
4B	71,457	4,914	59,607	14.5 ▲	1.2 ▲	15 ▲
4X[1]	Not Available	780	12,386		Not Available	
5X[1]	4,565	780	14,703	5.9 ▼	0.3 ▼	6 ▼
6	20,199	3,952	52,917	5.1 ▼	0.4 ▼	5 ▼
7	44,703	4,680	78,376	9.6 ▼	0.6 ▼	10 ▼
6/7	47,389	4,316	56,842	11.0 ▼	0.8 ▼	11 ▼
8A	54,597	5,070	76,506	10.8 ▼	0.7 ▼	11 ▼
8B	44,151	3,640	55,474	12.1 ▼	0.8 ▼	12 ▲
9	11,555	1,690	31,975	6.8 ▼	0.4 ▼	3 ▼
10	24,980	2,444	27,471	10.2 ▼	0.9 ▼	5 ▼
City Routes[2]	775,717	59,904	838,401	12.9	0.9	11
LU Routes[3]	1,262,393	30,291	306,123	41.7	4.1	21
Paratransit	25,786	17,604	173,395	1.5	0.1	1
Systemwide[2]	2,063,896	107,799	1,317,919	19.1	1.6	16

[1] 4X and 5X began January 9, 2017. Route 5X replaced Routes 5, 5A, and 5B in serving Madison Heights.
[2] City Route totals also include Routes 5, 5A, and 5B, which are not included as routes in the table because they are no longer in service.
[3] Only LU routes operated by GLTC are included.

3.2.2. Vehicle Requirements

GLTC's peak vehicle requirements are shown in **Figure 3-6**. The number of vehicles in peak service are highlighted compared to the total number of vehicles available.

Figure 3-6: Peak Vehicle Requirements



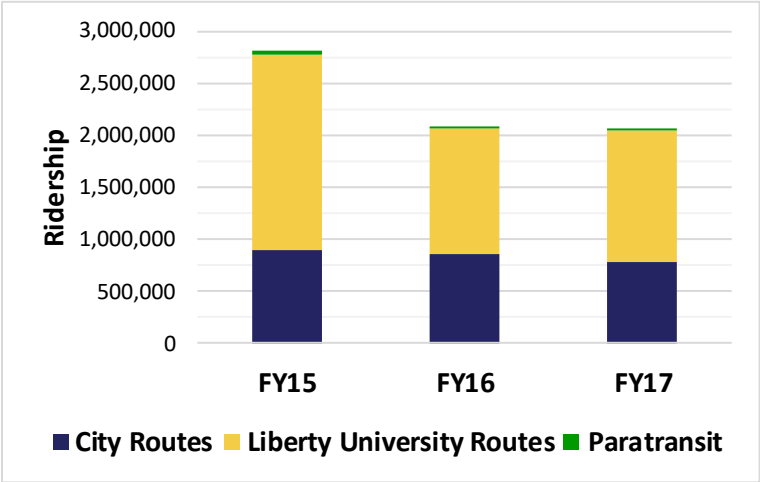
Source: GLTC, 2017.

3.3. Retrospective Performance Evaluation

A 3-year performance trend was evaluated for fiscal years 2015 to 2017. This evaluation includes:

- Ridership trend (**Figure 3-7** and **Table 3-3**)
- Net cost per passenger trend (**Figure 3-8)**
- Fare box recovery ratio trend (**Figure 3-9**)
- Passengers per revenue hour trend (**Figure 3-10**)
- Passengers per revenue mile trend (**Figure 3-11**)

Figure 3-7: Ridership Trend Analysis



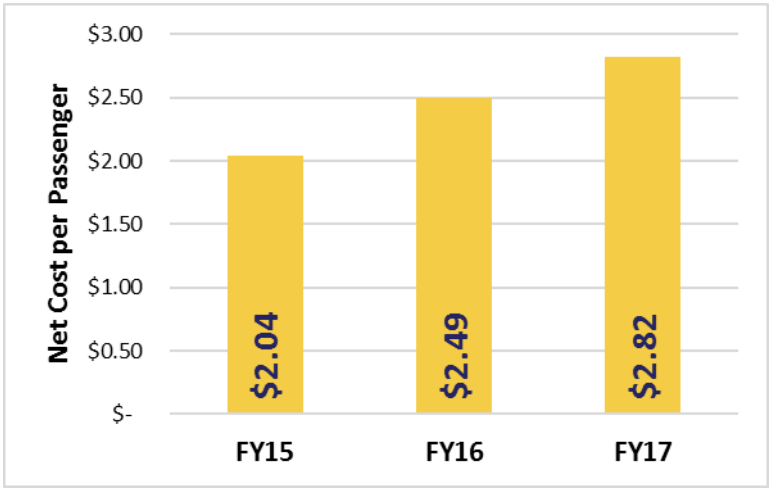
Source: GLTC, 2017.

Table 3-3: Ridership Trend Analysis

Service	FY 2015	FY 2016	FY 2017	Percent Change (2015-2017)
City Routes	903,711	857,032	775,717	-14%
LU Routes	1,877,628	1,201,679	1,262,393	-33%
Paratransit	23,309	25,803	25,786	11%
Systemwide	2,804,648	2,084,514	2,063,896	-26%

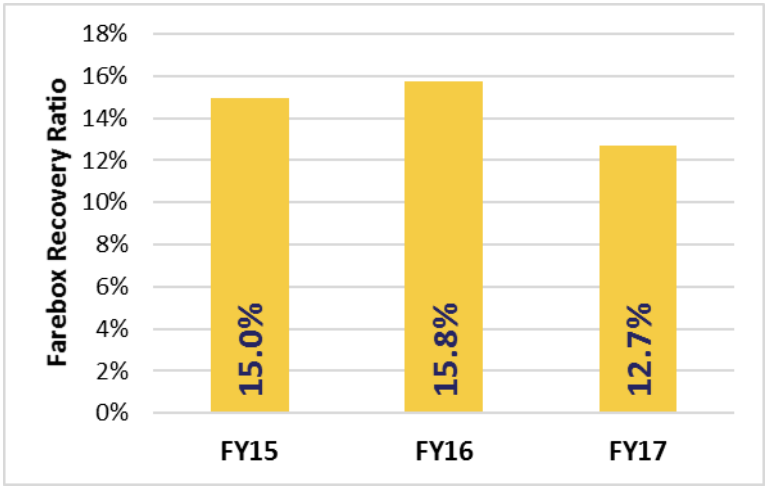
Source: GLTC, 2017.

Figure 3-8: Net Cost Per Passenger Trend Analysis



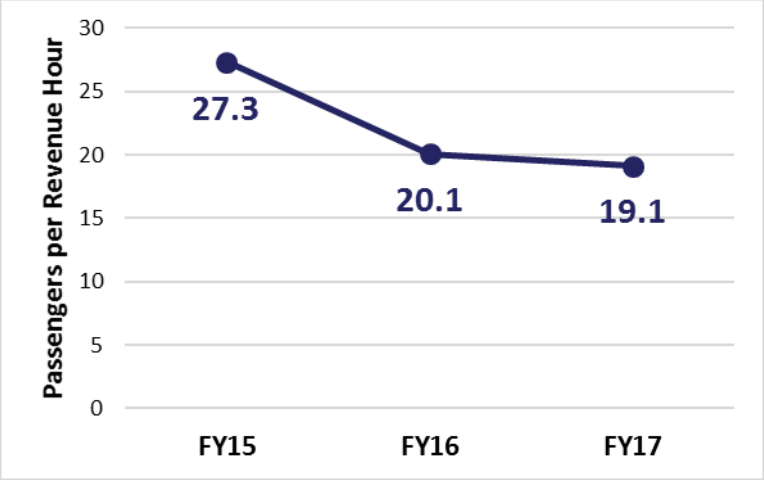
Source: GLTC, 2017.

Figure 3-9: Fare Box Recovery Ratio Trend Analysis



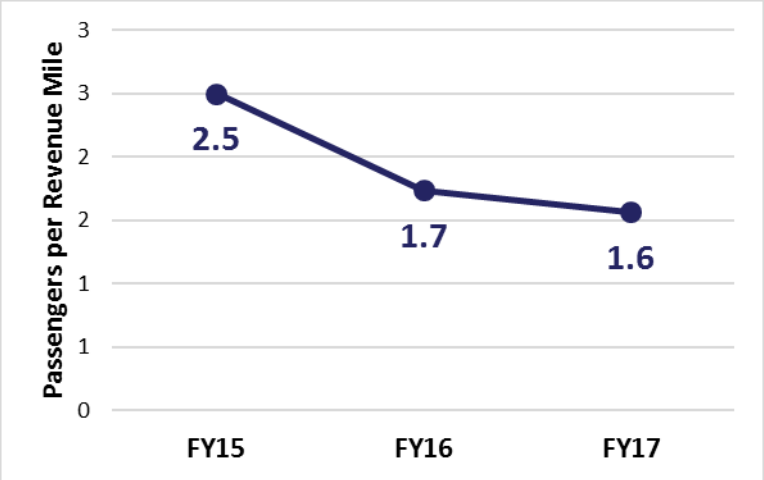
Source: GLTC, 2017.

Figure 3-10: Passengers Per Revenue Hour Trend Analysis



Source: GLTC, 2017.

Figure 3-11: Passengers Per Revenue Mile Trend Analysis



Source: GLTC, 2017.

3.4. Public Outreach – Survey Findings

3.4.1. Methodology

A survey was developed to gather feedback from the community on the existing service and desired improvements. The intent of the survey was to gather information on desired improvements, existing travel patterns, impressions on the service, and demographic data from both current customers and non-users of the service. MetroQuest, a web-based public engagement tool, was primarily used to gather feedback with a paper version of the survey also available. The survey period was from October 4, 2017, to November 10, 2017. Surveys also were administered to customers in person via tablets at the Kemper Street Transfer Station on October 4, 2017.

A total of 973 people participated in the survey including 427 via web, 388 via mobile, 58 via in person at the Transfer Station, and 100 via paper. Approximately 75 percent of the respondents indicated they ride the bus regularly while 25 percent said they do not use the service. The survey also gathered responses from students at each of the higher education institutions in Lynchburg.

A copy of the paper survey and detailed results tables can be found in **Appendix B**.

3.4.2. Survey Results

3.4.2.1. Frequent Rider Experience

Survey respondents identified as frequent riders were asked to provide the route or service they most frequently take. Each fixed route and paratransit service had respondents to this question. The number of responses by route showed similar proportions to the ridership statistics presented in **Section 3.2**, providing a high-level indication that the survey reached a representative sample of route users.

FREQUENCY: Most survey respondents use the bus regularly. Of those identifying themselves as frequent riders, 82 percent ride the bus at least two days per week. This amount is slightly greater among Liberty University routes – 89 percent compared to 76 percent for City routes.

REASON FOR RIDING: The top reasons for using the bus for riders on City routes are not having a car (40 percent), to save money (18 percent), and to save or better use time (10 percent). The top reasons for riders on the Liberty University routes are to save or better use time (30 percent), not having a car (26 percent), and it being difficult or expensive to park (16 percent). Percentages reflect the portion of all responses received to this multi-selection question.

ORIGIN-DESTINATION: Home represented the highest share of origins for City routes, while the University represented the highest share for Liberty University routes. The top destination responses for City routes included work, college/university, and shopping. Given that most of the Liberty University routes circulate on campus, the University also was the most common destination among these riders. Travel patterns are further analyzed in **Section 3.4.2.4**.

SOCIOECONOMIC DATA: Frequent riders of City routes are disproportionately lower income (80 percent with a total household income below $30,000), female (60 percent), or without access to a vehicle (57 percent). Frequent riders of the Liberty University routes have somewhat similar characteristics (50 percent with a total household income below $30,000 and 73 percent female), but with greater access to vehicles (12 percent without a vehicle in their household).

3.4.2.2. Less Frequent Rider Experience

GLTC has experienced a declining ridership trend. Part of the survey identified why customers may be riding the bus less frequently than they used to ride. A summary of the responses is shown in **Table 3-4**. A reduction in weekend service and the availability and attractiveness of other travel options are the top reasons for riding less often. An erosion of time competitiveness of transit compared to other modes also has likely contributed to ridership decline, with many respondents desiring more direct service that is easy to use. The transfer center relocation and recent fare changes were cited less frequently; 24 responses were recorded for each of these reasons.

Respondents were asked "what could GLTC do to encourage you to ride the bus more often?". Free-form responses were used to generate the word cloud shown in **Figure 3-12**; larger words appeared more frequently in responses.

Table 3-4: Reported Reasons for Riding the Bus Less Frequently Than Before

Reasons for Riding the Bus Less Frequently	Response Frequency
Weekend service reduced	17%
I use other travel modes (walking, biking, Uber/Lyft, taxi)	17%
I get a ride from a friend	15%
Other	14%
I prefer to drive	14%
Evening service reduced	11%
Transfer center was relocated	5%
Fare changes	5%
Gas has become cheaper	3%

Source: GLTC Public Outreach Survey Results, 2017.

Figure 3-12: Words Cloud —What could GLTC do to encourage you to ride the bus more often?

3.4.2.3. Non-Rider Experience

Approximately 25 percent of survey respondents indicated they do not ride the bus in Lynchburg. Understanding their impressions of GLTC and transit will help identify what improvements may be needed to attract new customers to the service. **Table 3-5** shows a summary of reasons for not riding the bus. Nonriders think it takes too long to use the bus to get where they need to go, or the existing routes do not service the locations they are going. Many prefer the experience of driving over using transit or need the flexibility of having a car. A total of 42 respondents said they do not know how to use the service.

Respondents were asked "what could GLTC do to encourage you attract you to use public transit?". Free-form responses were used to generate the word cloud shown in **Figure 3-13**; larger words appeared more frequently in responses. Providing more frequent and direct service was the most common response.

Table 3-5: Reported Reasons for Not Riding the Bus

Reasons for Not Riding the Bus	Response Frequency
It takes too long or isn't frequent enough	27%
I prefer to drive	16%
It doesn't go where I need it to	15%
I need a car because my schedule varies a lot	13%
I don't know how to use the service	8%
I prefer to use other travel modes	7%
Cost	6%
Other	5%
I didn't know the service existed	3%

Source: GLTC Public Outreach Survey Results, 2017.

Figure 3-13: What could GLTC do to attract you to use public transit?

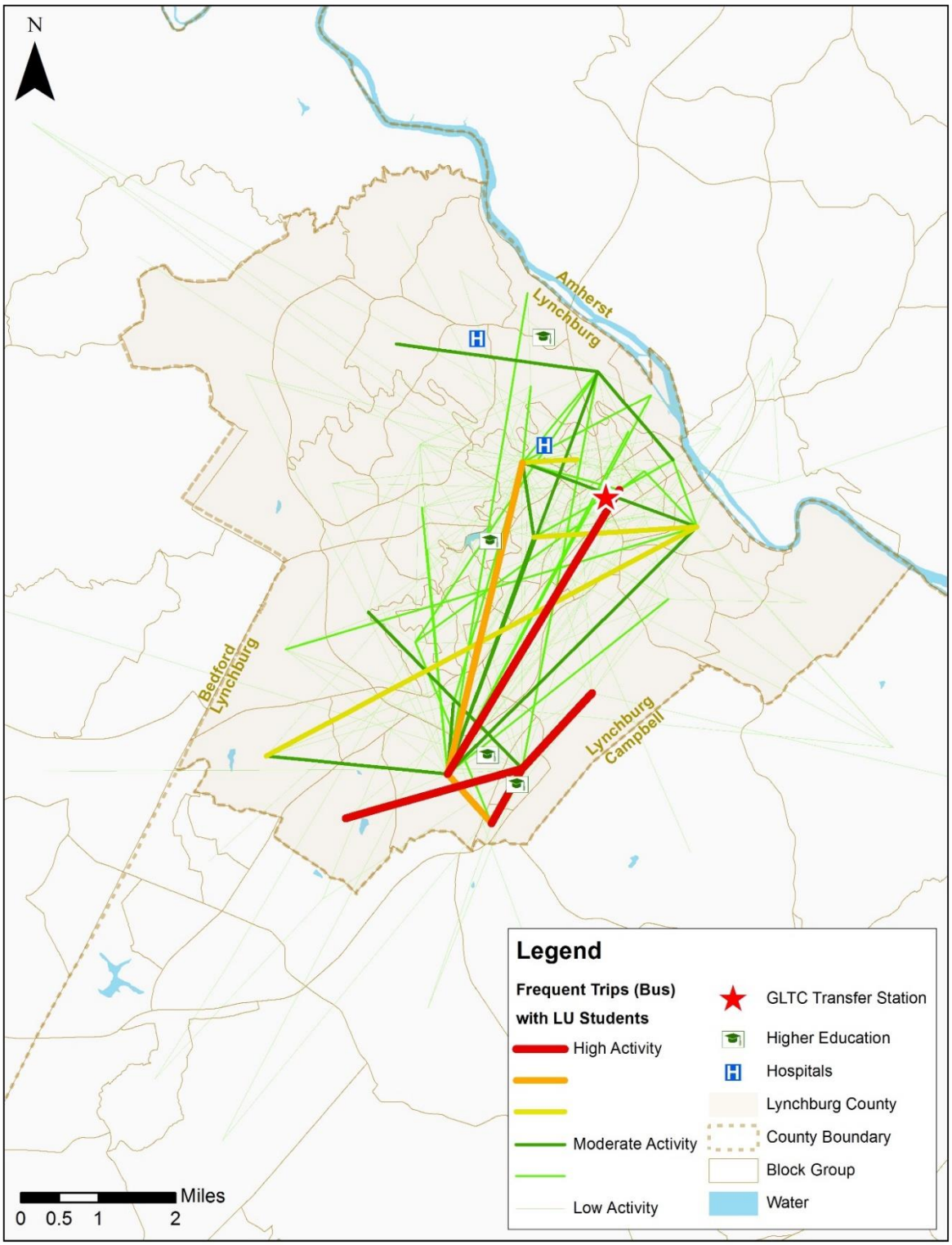
3.4.2.4. Travel Patterns

The survey identified respondents' travel patterns including home and frequent destination locations. This also included information on the purpose and mode of the trip. For trips that are frequently made on modes other than bus, respondents were asked if they would consider taking the bus for that trip if service was improved to that area.

Home and destination locations were clustered to block groups, and frequent origin-destination pairs were identified. For analysis, it was assumed that all trips were home-based trips. **Figure 3-14** shows frequent transit trips. Major origin-destination pairs include:

- Kemper Street Transfer Station – Wards Road
- Cornerstone – Liberty University
- Liberty University Central Campus – South Campus
- Liberty University Central Campus – North Campus
- Liberty University South Campus – Wards Road
- Centra Lynchburg General Hospital/Neighboring Apartments – Wards Road
- White Rock Hill – Enterprise Drive
- White Rock Hill – Westend

Figure 3-14: Frequent Trips by Bus



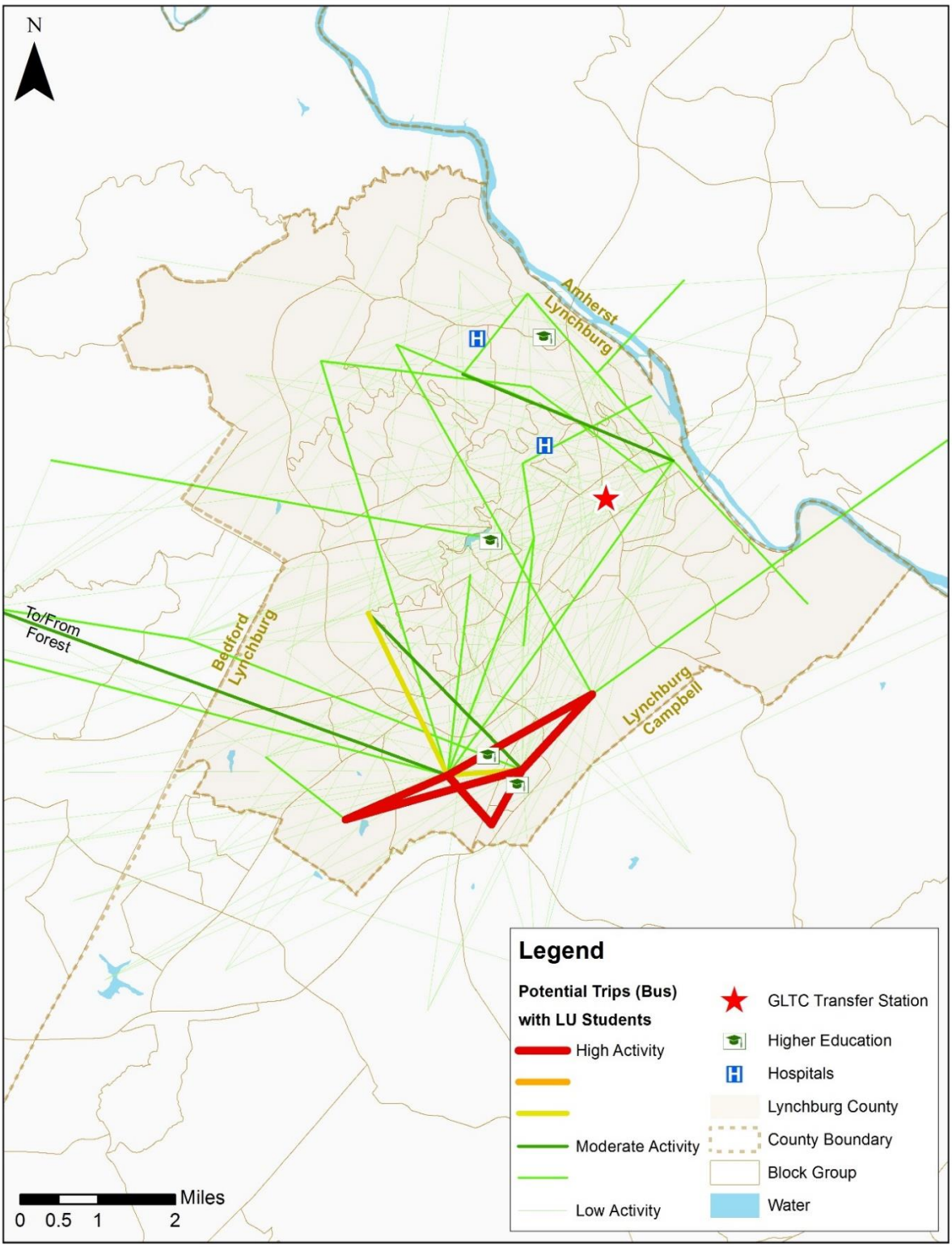
Source: GLTC Public Outreach Survey Results, 2017.

Figure 3-15 shows frequent trips by other modes, but also where respondents indicated they would consider using transit if service was improved. Major origin-destination pairs include:

- Cornerstone – Liberty University
- Liberty University Central Campus – South Campus
- Liberty University Central Campus – North Campus
- Liberty University South Campus – Wards Road
- Wards Road – Forest Road Shopping/Lakeside Drive Apartments
- Liberty University – Forest Road Shopping/Lakeside Drive Apartments
- Forest – Wards Road
- Downtown – The Village Courts Shopping Center/Rivermont Avenue

This analysis with and without Liberty University students yielded similar results with the exception of a few origin-destination pairs near campus. Additional maps are included in the **Appendix B.**

Figure 3-15: Frequent Trips by Other Modes that Could Potentially be Served by Bus



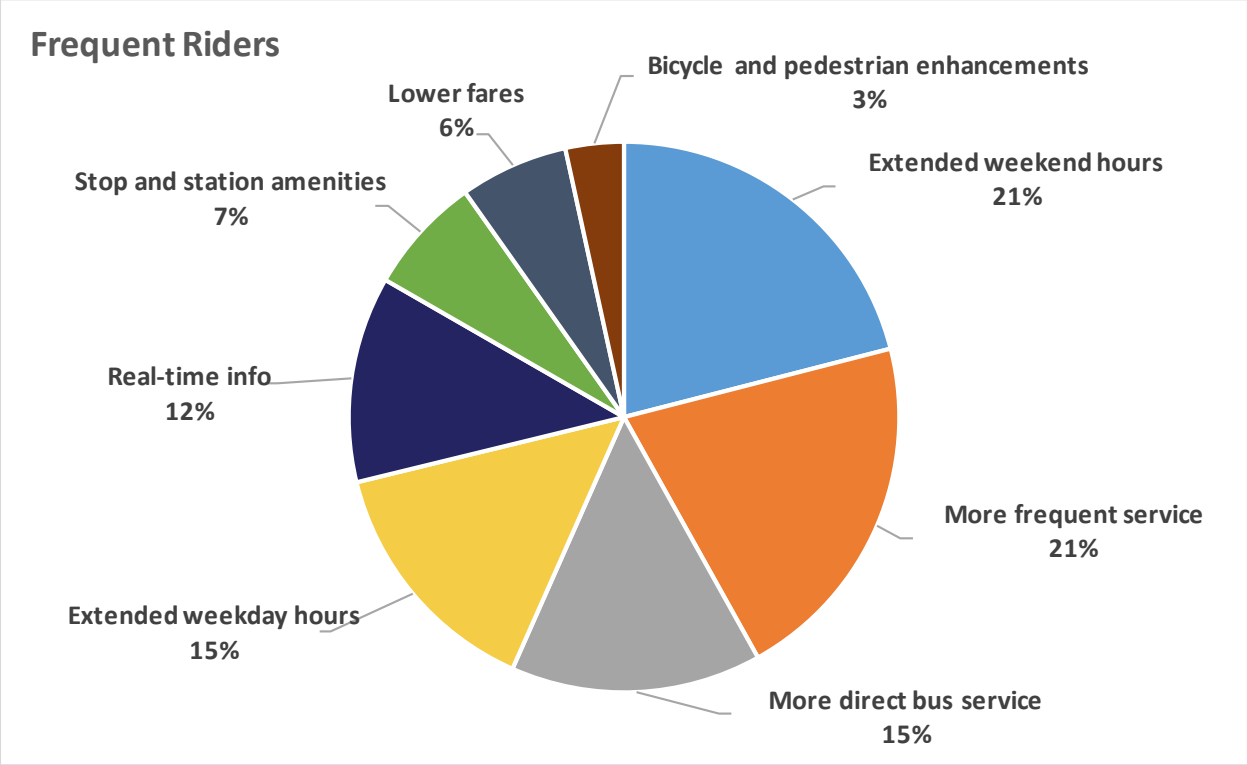
Source: GLTC Public Outreach Survey Results, 2017.

3.4.2.5. Improvements

One section of the survey identified priorities for improvement. Survey participants were instructed to allocate a $100 budget into eight different spending categories for making improvements to the service. This question recognized that GLTC works with a limited budget and collected feedback on the priorities of the respondent. Allocated budgets were totaled for each category to generate the charts shown in **Figure 3-16** and **Figure 3-17**. for frequent riders and non-riders, respectively, which show the percentage allocated to each category. Data from other rider categories including students and transit dependent (i.e., without access to a vehicle) are included in **Appendix B**.

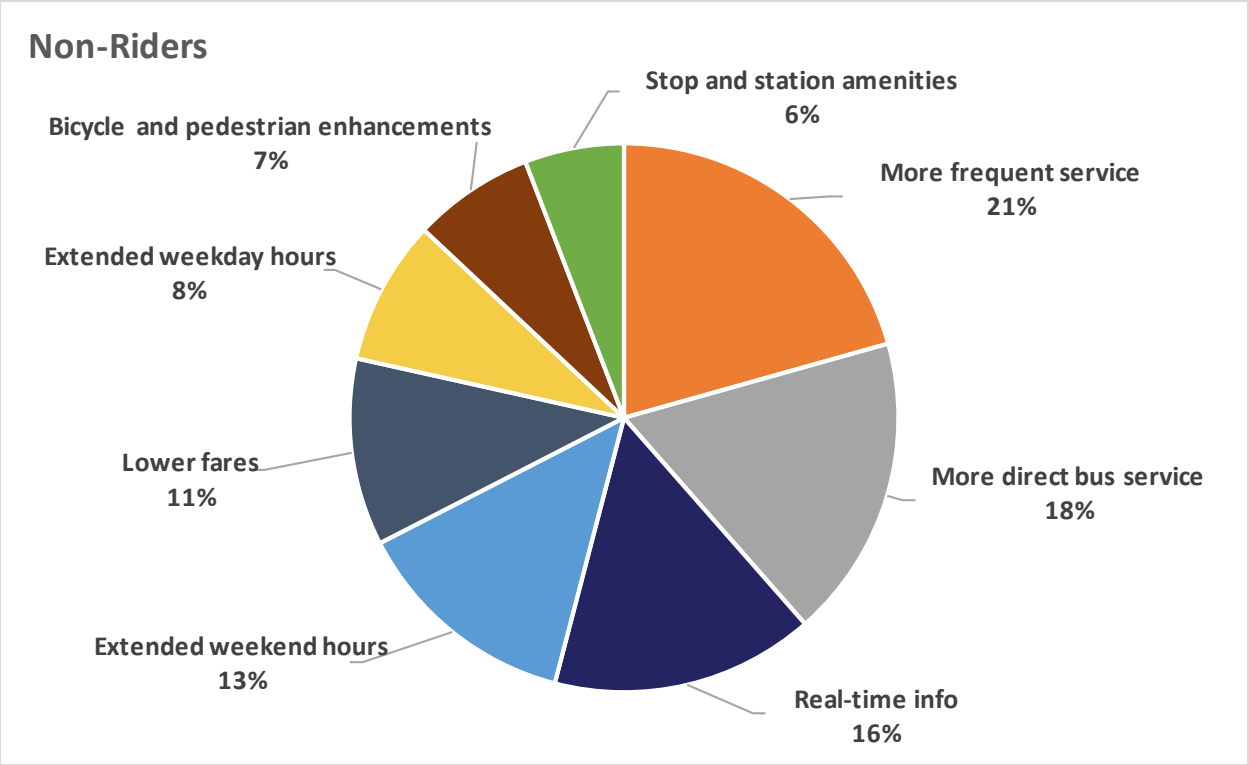
Extended weekend hours, more frequent service, and more direct service are top priorities for every category of respondents, with similar priorities for users of City routes and Liberty University routes. Non-riders also desire user-friendly, real-time information on bus arrivals to make the service easier to use. Respondents without a vehicle in their household prioritized extended weekend and weekday hours.

Figure 3-16: Priorities for Frequent Riders



Source: GLTC Public Outreach Survey Results, 2017.

Figure 3-17: Priorities for Non-Riders



Source: GLTC Public Outreach Survey Results, 2017.

3.5. Public Outreach – Stakeholder Interviews

Stakeholder interviews were conducted in October and November 2017, with key individuals from local governments, higher education institutions, economic development organizations, and customer input groups. Outreach also included a work session at the GLTC Board Meeting on October 4, 2017. The purpose of the outreach was to understand priorities from existing and potential riders. A list of questions used during the interviews and summary from each interview can be found in **Appendix C.**

3.5.1. Local Governments

Outreach was made to the City of Lynchburg, and the counties of Amherst, Bedford, and Campbell. Both Campbell and Bedford Counties were not seeking additional public transit service or greater involvement with GLTC at the time of interview. The City of Lynchburg is proposing improvements to pedestrian facilities that would improve safety and accessibility to bus stops. The City also sees frequent service to downtown being critical to the growth and expansion of the area. Amherst County indicated that users of the existing service in the county are generally those that have no other transportation options. There also is a desire to increase the awareness and visibility of GLTC services offered to Amherst County.

3.5.2. Higher Education Institutions

Outreach was made to Liberty University, University of Lynchburg, Central Virginia Community College, and Randolph College. The institutions with UPASS agreements with GLTC, which allow students and

staff to ride GLTC buses for free with a valid University ID, see a benefit to this partnership but desire more robustness in ridership data being collected. More direct service to major activity centers are desired by students, and most of the institutions feel that more targeted marketing is needed to message that the bus is a travel option for *everyone* in Lynchburg. The use of technology to make the service easier to use and provide user-friendly information also is seen as an opportunity for improvement.

Liberty University, which is a major partner with GLTC, has a long-term vision to reduce or eliminate most on-campus bus routes while creating a safe and walkable core to the campus. Off-campus routes, a route circulating the exterior of campus, and service to parking areas will likely continue to be needed in the future. Travel between off-campus housing locations and campus is not expected to increase significantly unless the current enrollment cap is lifted in the future.

3.5.3. Economic Development Organizations

Outreach was made to the Lynchburg Regional Business Alliance, the Downtown Lynchburg Association, and the Economic Development Authority. Having GLTC service in Lynchburg is an asset to recruiting new businesses to the area. Businesses with multiple shifts have reported difficulty having employees that rely on transit work late shifts given the current service hours of GLTC. There also is a need for nighttime transportation options to get to and around downtown. Overall, the organizations indicated that more collaboration between GTLC and the business community is an opportunity for improvement. These relationships could foster future partnerships between businesses and GLTC to support new or extended service.

3.6. Deficiencies and Gaps

The service and system evaluation findings were consolidated into the following list gaps and service deficiencies:

1. There is a need for more direct service between major activity centers (e.g., downtown, shopping areas, colleges/universities, train station, airport)
2. There is a desire from current and potential customers for more frequent service and extended weekend and weekday service hours
3. There is a need for a targeted marketing campaign to increase awareness of the service
4. There is a need for more user-friendly information on how to use the service and when the bus will arrive
5. There is a need for increased communication and partnership between GLTC and the business community
6. Service improvements should be identified for currently underserved areas based on demographics

POTENTIAL SOLUTIONS

Potential service solutions that may be evaluated to address the deficiencies and gaps identified include:

1. Evaluate maximizing the use of Wards Road/River Ridge Mall area as a transfer location for buses
2. Explore opportunities to provide more frequent and direct service to Wards Road
3. Explore use of Route 501 to create connection to Rivermont Avenue area
4. Explore a marketing campaign to increase awareness of GTLC service

4. SERVICE AND CAPITAL IMPROVEMENT PLAN

Section 4 in this transit development plan (TDP) focuses on improvements to the Greater Lynchburg Transit Company (GLTC) system. This section begins with service improvements for the identified needs, which are divided into short- (1 to 3 years), mid- (4 to 10 years), and long-term (beyond 10 years) time frames. Each project includes a description summarizing the proposed service as well as the identified needs the project fulfills. Project prioritization and estimates of associated service and capital costs also are included to help GLTC program the improvements over time.

4.1. Service Improvements and Needs Identification

Since the last TDP in 2010, GLTC has adjusted nearly all of the routes in the system to coordinate the change in the transfer station location from The Plaza to Kemper Station. Aside from these changes, there have been few modifications to adapt to the changing development patterns in Lynchburg. As Lynchburg continues to change and population and employment shifts, the increases will place additional stress on the transportation network. The transit system will need to adjust to the new landscape.

4.1.1. Demographic Assessment

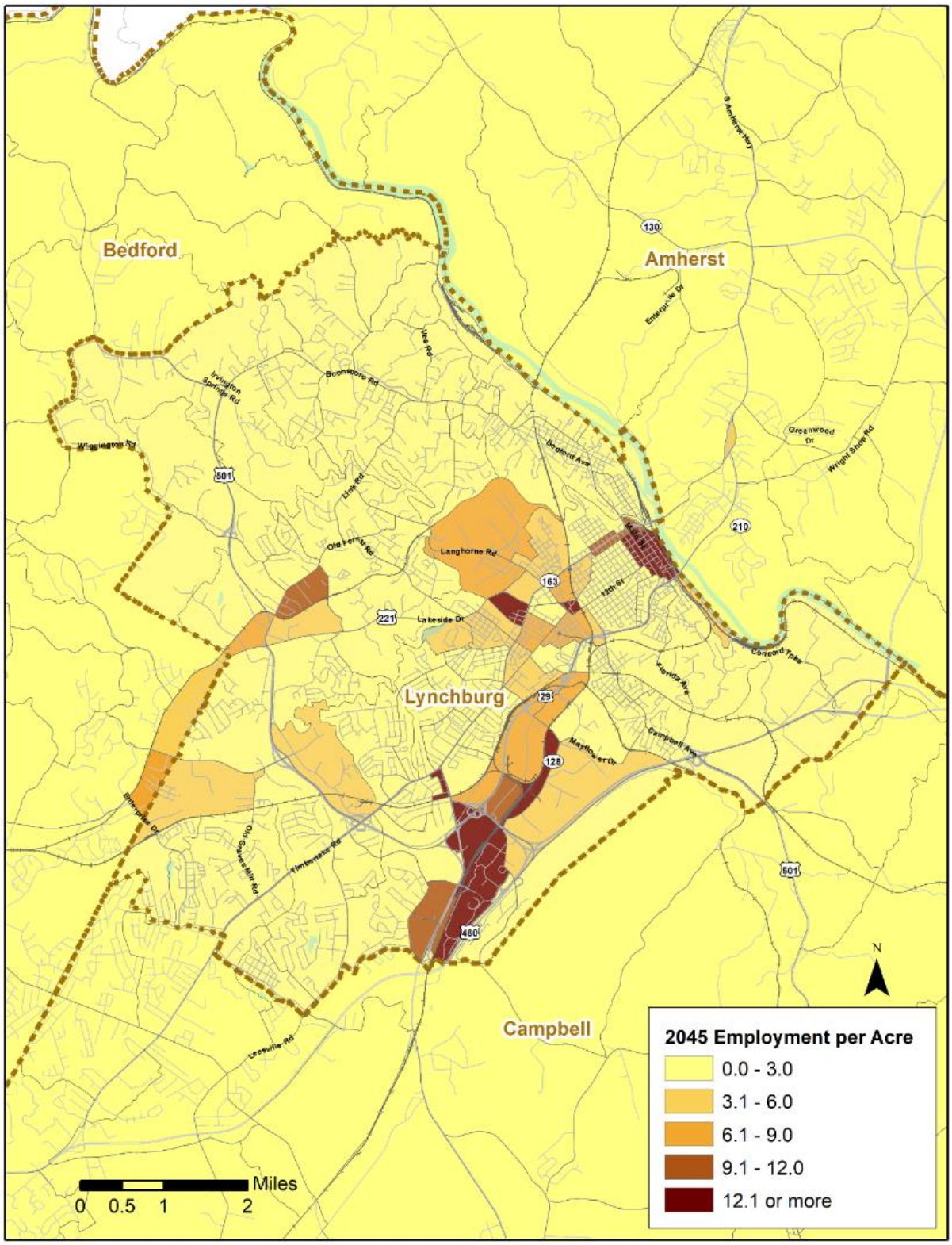
Expected population and employment levels in 2045 are shown in **Figure 4-1** and **Figure 4-2**. Major employment activity is expected to continue to concentrate along Wards Road and downtown Lynchburg.

Population density in Lynchburg is concentrated in similar areas as employment, as shown in **Figure 4-2**. Downtown is expected to continue to be one of the most densely populated areas in the city. In addition, the eastern side of Wards Road in the southeastern portion of the City is expected to have relatively high population densities due to proximity to Liberty University. The area near the Lakeside Drive and Old Forest Road intersection also is expected to have relatively high population density by the year 2045.

Population change, calculated by taking the difference between 2016 and 2045 population levels, is shown in **Figure 4-3**. Population growth within the Lynchburg service area is expected along Lakeside Drive, western Lynchburg near Enterprise Drive, Liberty University South, the Doral Acres/Windsor Hills areas, and others. Some loss of population is expected in the Perkins Park and much of Amherst County.

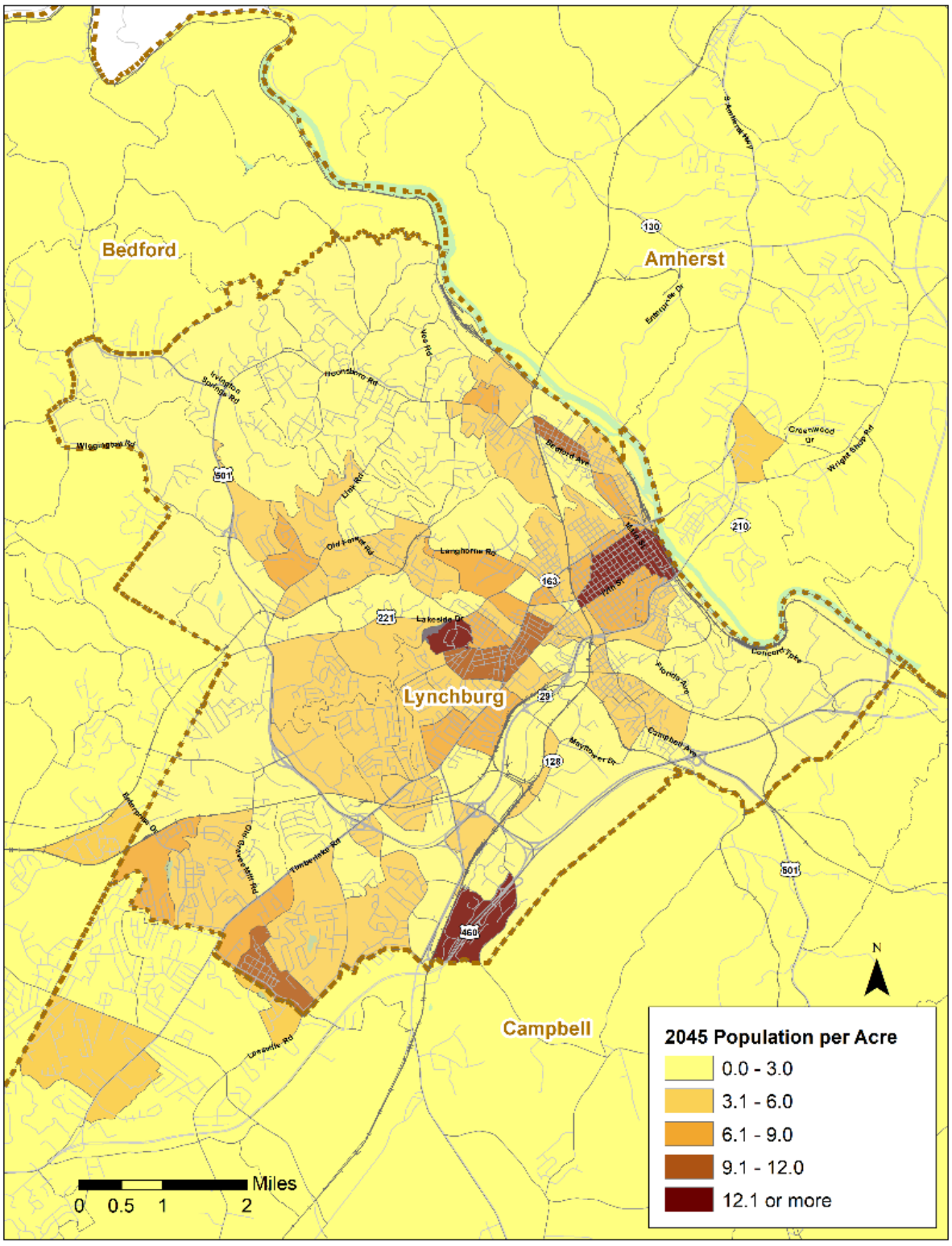
The senior citizen population has a lot of potential as a transit market, which is why it is mapped here. **Figure 4-4** shows the percentage of population 65 years of age and older in Lynchburg, which appears to be most concentrated in northern Lynchburg, north and south of Rivermont Avenue. Additionally, the elderly population is concentrated at Lynchburg Expressway and Timberlake Road.

Figure 4-1: Year 2045 Employment



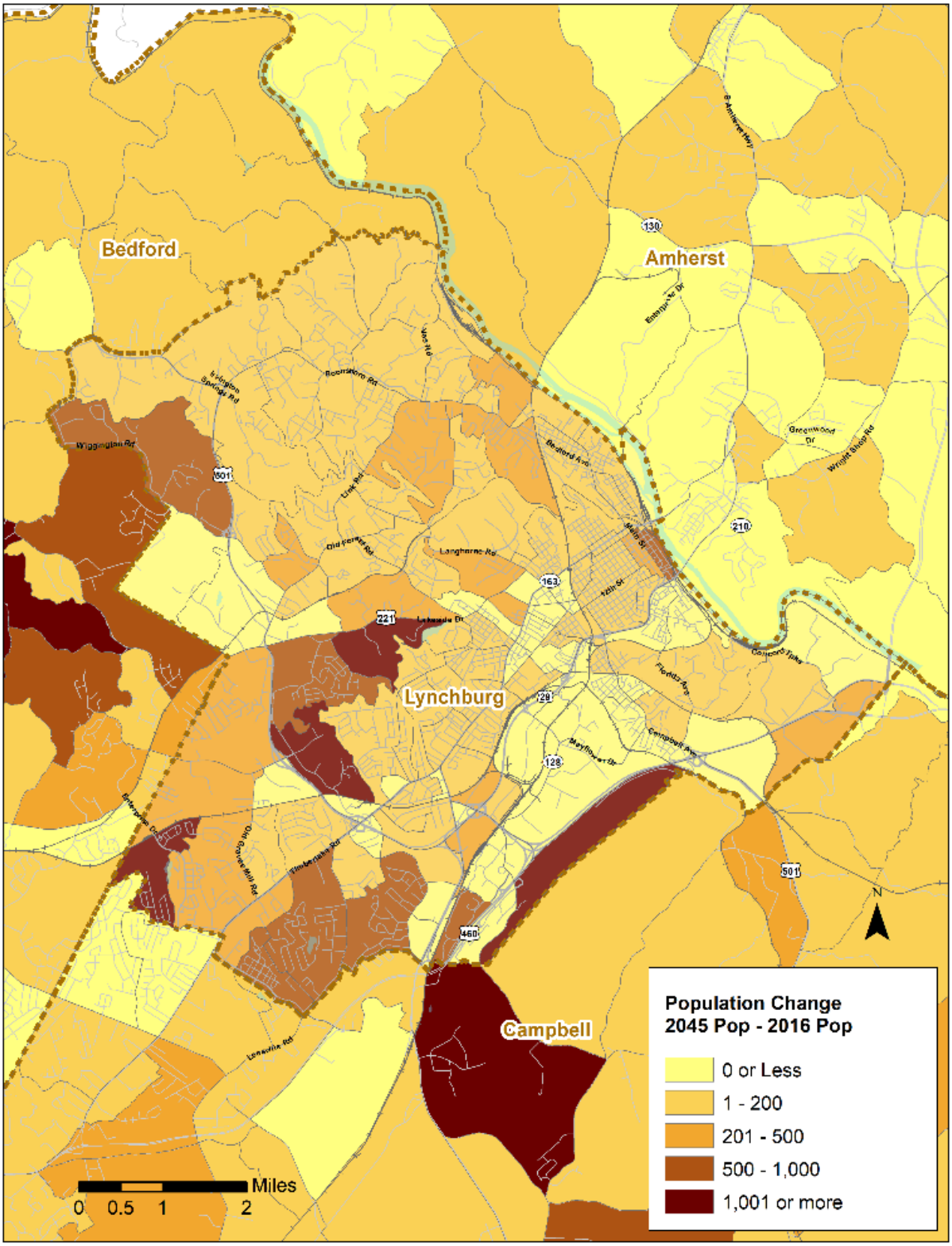
Source: Region 2000, 2018.

Figure 4-2: Year 2045 Population



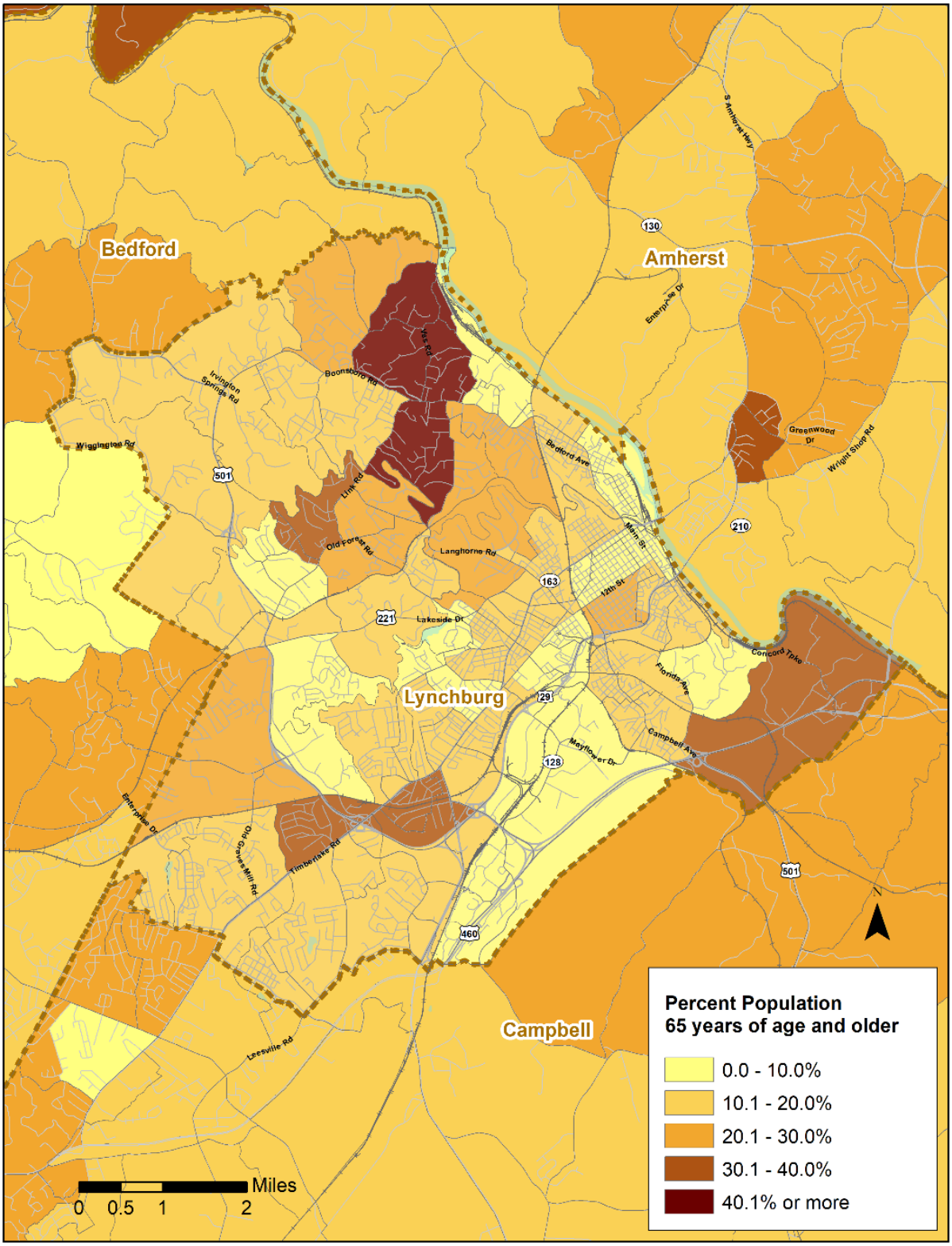
Source: Region 2000, 2018.

Figure 4-3: Year 2045 Population Growth



Source: Region 2000, 2018.

Figure 4-4: 2012-2016 American Community Survey Population 65 Years and Older



Source: Region 2000, 2018.

4.1.2. Needs Assessment

To accommodate the changing needs of the community it serves, GLTC will need to modify the service of many of its routes. The following sections are organized into short- (1 to 3 years), mid- (3 to 10), and long-term (beyond 10 years) transit needs.

4.1.2.1 Short-Term Plan (1-3 Years)

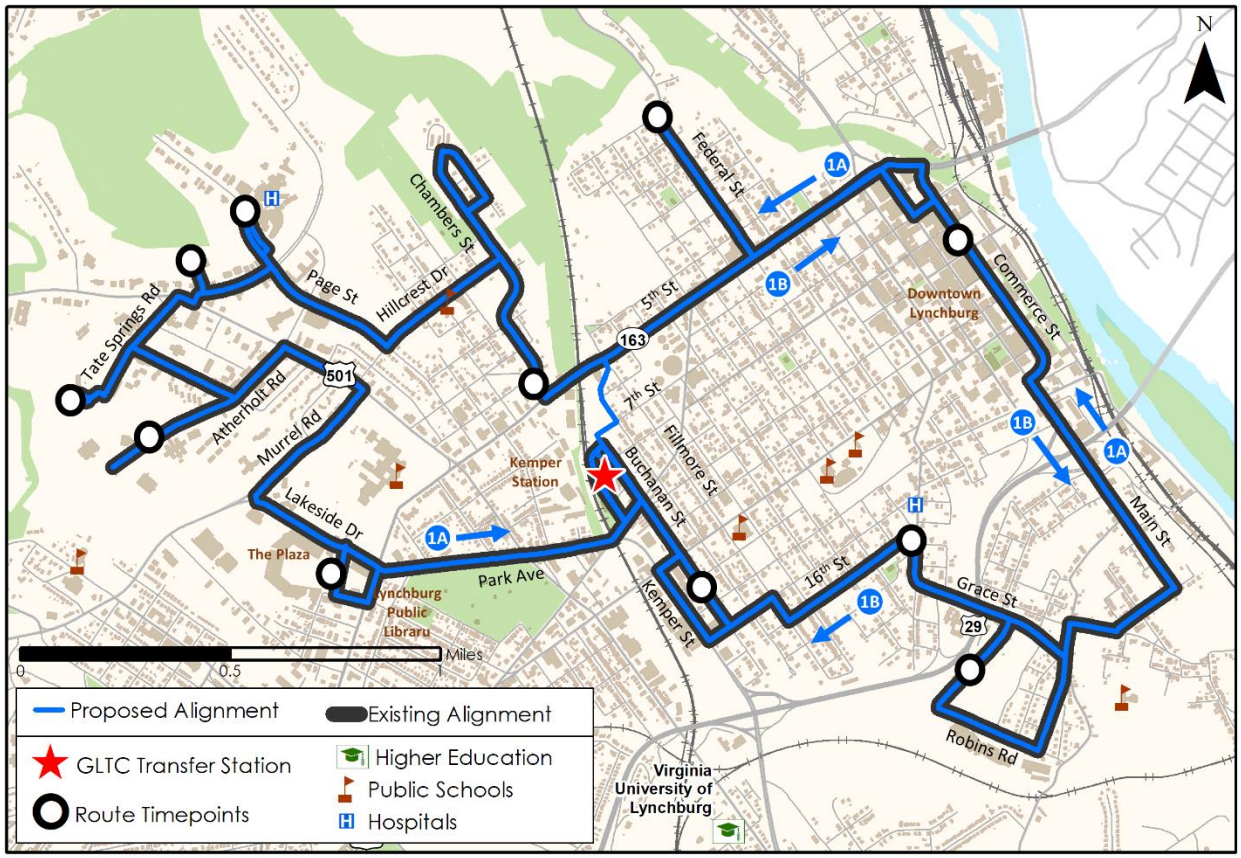
The short-term transit service plans are developed to meet the immediate transit needs. The following plans are recommended because they are achievable in the next 1 to 3 years. Each short-term plan was developed under the assumption that no new operating or capital funds are available. In cases where services are altered, they are done so within the existing number of peak buses and service hours. The existing route operating statistics are from 2017, which were used to calculate estimates of proposed route operating statistics. Because the proposed routes are created based on existing resources, revenue hours for each change remains the same. Operating costs are calculated using the 2016 National Transit Database cost per revenue hour of $77.23, which is then adjusted to an average rate of 2.3 percent to $80.80 in 2018 dollars to account for inflation (all costs presented henceforth are in 2018 dollars). It is important to note that using revenue hours to determine operating costs does not capture the impact that revenue miles has on operating costs. Changes in revenue miles may impact operating costs associated with fuel and wear and tear of vehicles and other equipment.

Where changes to the alignment of the route occurs, revenue miles for proposed routes are calculated by multiplying the percent increase of route length by the annual revenue miles. This method creates revenue miles that are proportional to the increase in route length. Ridership is estimated using the same method, where the percent increase in service miles is applied to existing ridership to obtain ridership on proposed routes. Therefore, an increase in route length with corresponding service miles is estimated to yield a proportional increase in ridership.

Route 1A and Route 1B

Service Changes: The short-term proposal for Route 1A and Route 1B include an additional trip to Kemper Station from 5th Street, using Pierce Street to and from the transfer center. The remainder of each of the routes conform to the existing alignments. Each route requires a single bus to operate the 60-minute scheduled headways. A visual of the recommended changes is shown below in **Figure 4-5**.

Figure 4-5: Alignment of Existing Routes 1A and 1B and Proposed Routes 1A and 1B



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The proposal for Route 1A and Route 1B mirror the existing routes in terms of schedule, service hours, and span of service and, therefore, would not have significant impact on operating costs (shown in **Table 4-1**). The additional service miles, also shown in **Table 4-1**, will likely increase ridership.

Table 4-1: Annual Operating Statistics for Existing Routes 1A and 1B and Proposed Routes 1A and 1B

	Existing 1A	Existing 1B	Proposed 1A	Proposed 1B	Total Change
Revenue Hours	6,530	4,067	6,530	4,067	0
Revenue Miles	81,824	49,078	86,151	51,923	7,173
Peak Vehicles	1	1	1	1	0
Operating Cost	$527,600	$328,600	$527,600	$328,600	$0
Ridership	76,000	47,100	80,000	49,900	6,800

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

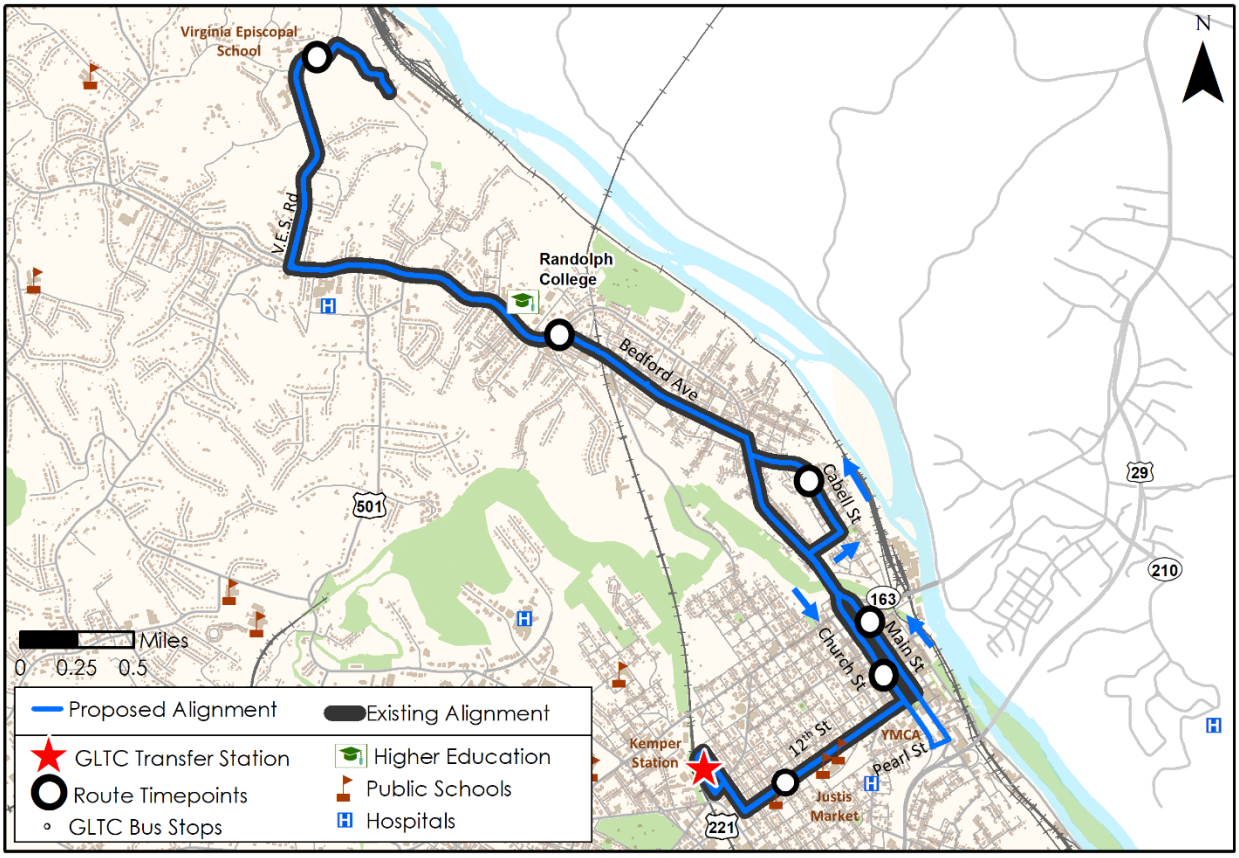
Justification and Needs Fulfillment:

- Route 1A and Route 1B have unconventional alignments. However, because of the circulation around downtown, and the bi-directional service when combined, the service performs relatively well. Only minor adjustments are recommended to maintain the strong performance of these routes.
- The second stop at Kemper Station will reduce the time it takes for many passengers to connect to other routes in the system. Additionally, the extra time needed to divert from the existing alignment to serve Kemper Station a second time is minimal.

Route 3A

Service Changes: The existing alignment of Route 3A is proposed to remain as is, with the exception of extending the route in downtown Lynchburg from 12th Street to Pearl Street, shown below in **Figure 4-6**. Route 3A requires one bus for operation with 60-minute headways.

Figure 4-6: Alignment of Existing Route 3A and Proposed Route 3A



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The proposed alignment for 3A retains the existing schedule, service hours, and span of service. The change in operating cost is expected to be zero, as shown in **Table 4-2**. The additional service on the southeastern end of the route would increase the revenue miles, leading to an anticipated boost in ridership.

Table 4-2: Annual Statistics for Existing Route 3A and Proposed Route 3A

	Existing 3A	Proposed 3A	Total Change
Revenue Hours	5,258	5,258	0
Revenue Miles	69,352	77,252	7,899
Peak Vehicles	1	1	0
Operating Cost	$424,800	$424,800	$0
Ridership	83,800	87,200	3,400

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

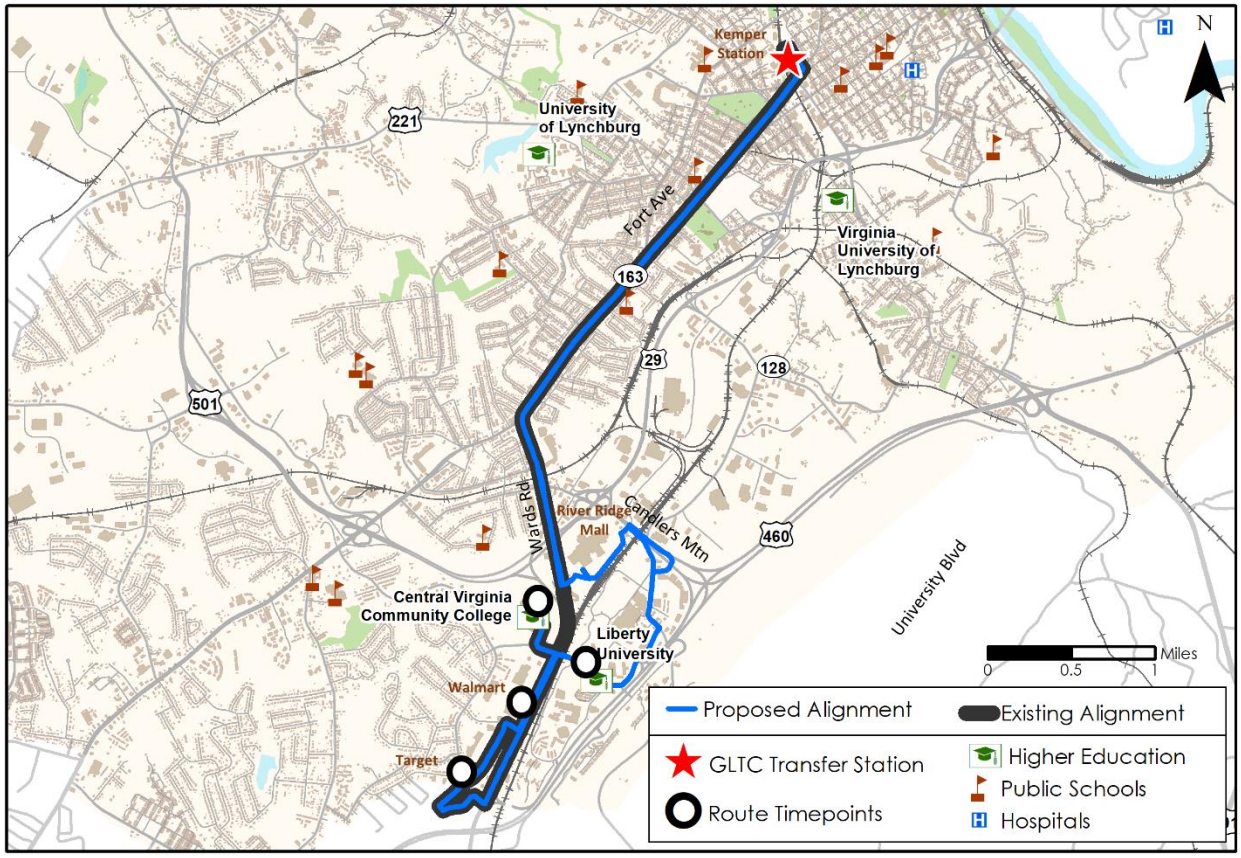
Justification and Needs Fulfillment:

- Route 3A has strong ridership and this is expected to continue since the route fundamentally stays the same.
- Although the extension to Pearl Street creates out of direction travel for passengers, it would fulfill the passenger requests to serve the YMCA.
- Service to Daniels Hill creates a deviation from Rivermont Avenue in the outbound direction, creating a loop mid-route, typically not recommended. However, the removal of this service would be unpopular with residents in this area and it is recommended to maintain the deviation.

Route 4A

Service Changes: It is recommended that Route 4A maintain nearly all its existing alignment. The only recommended change is to serve Liberty University in between serving River Ridge Mall and Central Virginia Community College, shown below in **Figure 4-7**.

Figure 4-7: Alignment of Existing Route 4A and Proposed Route 4A



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The additional service operated by the proposed Route 4A to Liberty University requires about 14,000 additional revenue miles per year. The operating cost, however, is equal to the existing Route 4A, shown below in **Table 4-3**. No additional vehicles would be needed to operate the modified service. Ridership is estimated to increase with the service to Liberty University, from roughly 98,000 to 120,000 riders per year.

Table 4-3: Annual Statistics for Existing Route 4A and Proposed Route 4A

	Existing 4A	Proposed 4A	Total Change
Revenue Hours	63,322	63,322	0
Revenue Miles	63,322	77,252	13,930
Peak Vehicles	1	1	0
Operating Cost	$5,116,400	$5,116,400	$0
Ridership	98,300	119,900	21,600

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

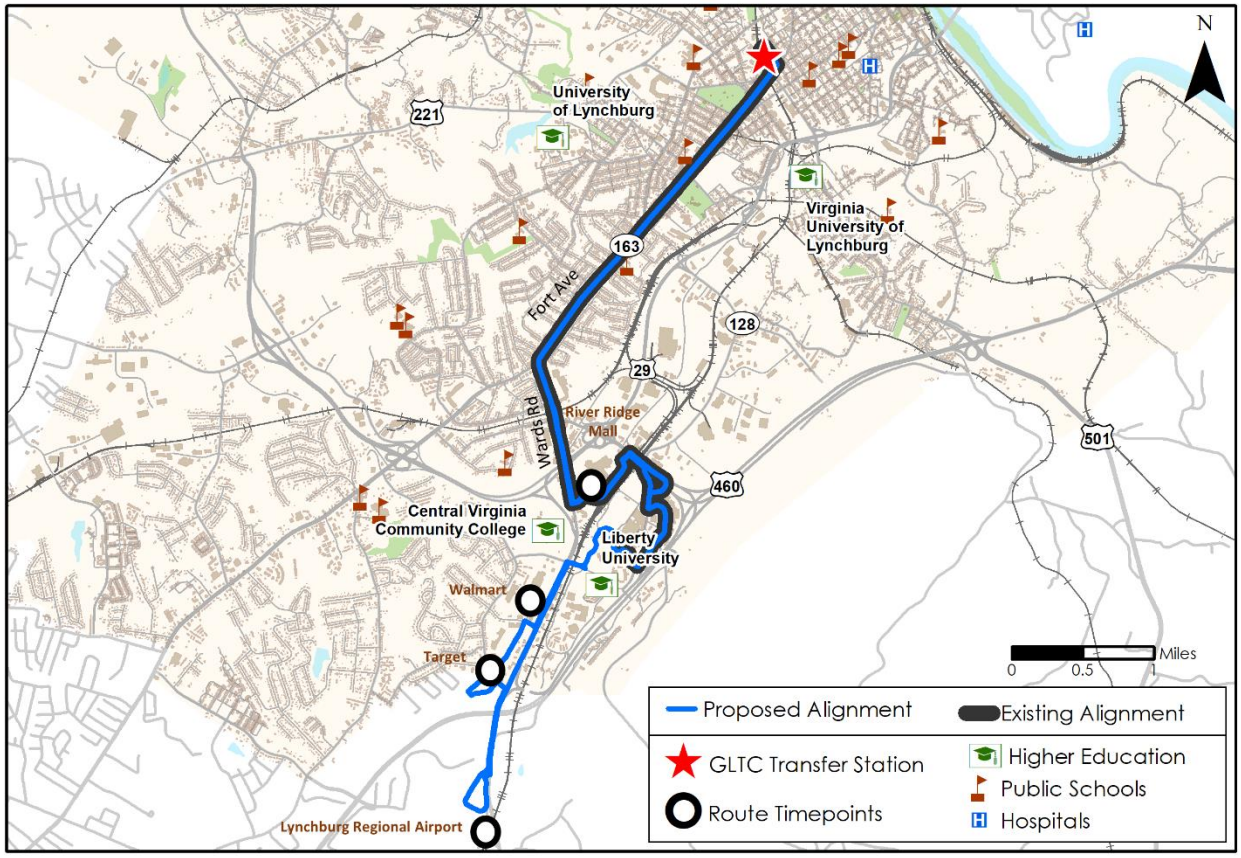
Justification and Needs Fulfillment:

- Additional connections from Liberty University to Wards Road and Wards Crossing is desirable and moving the alignment of Route 4A to service Liberty University provides this connection.
- Serving Liberty University may increase the runtime and cause Route 4A to run behind schedule; therefore, the Route 4A improvement should only be implemented if changes to Route 4B also occur (see next section).

Route 4B

Service Changes: Route 4B is recommended to extend past Liberty University to provide additional service to Wards Road, Wards Crossing, and the Lynchburg Regional Airport, shown in **Figure 4-8**. This change is in response to the additional run time required for adding Liberty University to Route 4A. The Lynchburg Regional Airport has been added to this route to reallocate resources from Route 4X to run the Route 7E all day during the week.

Figure 4-8: Alignment of Existing Route 4B and Proposed Route 4B



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The southern extension to Lynchburg Regional Airport will add considerable annual revenue miles to Route 4B. **Table 4-4** shows that there is an expected 28,500 additional revenue miles moving to the proposed alignment. Ridership should increase as a result, by approximately 31,000 riders a year. The revenue hours, however, are expected to maintain the existing hours, leading to the same operating cost.

Table 4-4: Annual Statistics for Existing Route 4B and Proposed Route 4B

	Existing 4B	Proposed 4B	Total Change
Revenue Hours	5,203	5,203	0
Revenue Miles	65,787	94,320	28,533
Peak Vehicles	1	1	0
Operating Cost	$420,400	$420,400	$0
Ridership	71,500	102,500	31,000

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

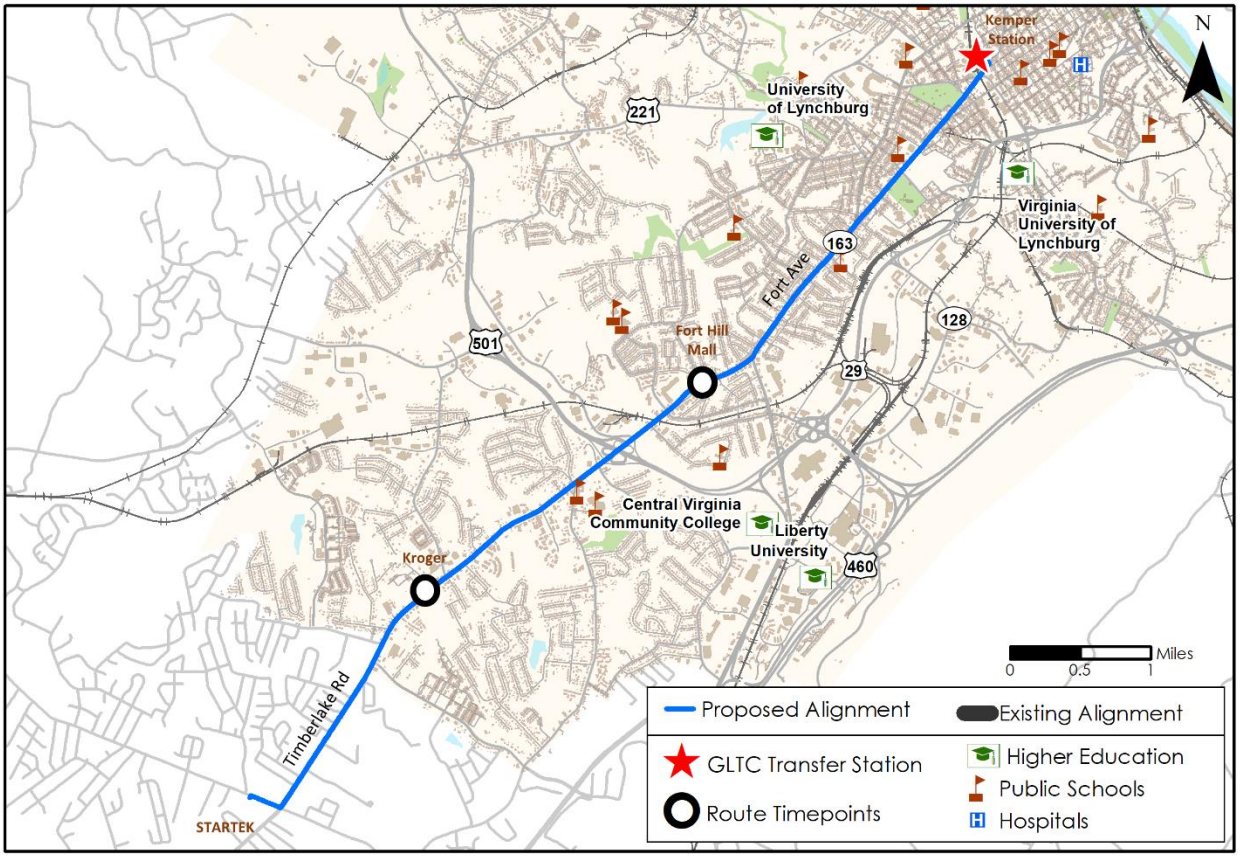
Justification and Needs Fulfillment:

- Route 4B is a strong performer and fits well into the short-term plans, with connections at River Ridge Mall and Liberty University.
- Additional connections from Liberty University to Wards Road and Wards Crossing is desirable and moving the alignment of Route 4B to service Wards Road provides this connection.
- The existing Route 6 serves the Airport; however, Route 6 (existing and proposed) operates primarily as a local connector to other routes, with segments operating through low-density neighborhoods. Serving the Airport is better suited for a route that makes connections with major destinations rather than small neighborhoods. Route 4B is a better candidate as it connects to Kemper Station, River Ridge Mall, Liberty University, and Central Virginia Community College. Connecting these major destinations with the airport is a natural fit.

Existing Route 4X, Existing Route 7E, and Proposed Route 11

Service Changes: Route 4X is recommended to be eliminated, with hours reallocated to Route 7E, which in turn would operate all day as proposed Route 11, shown below in **Figure 4-9**. Route 11 would provide all day service directly from Kemper Station to Timberlake Road/STARTEK. The existing Route 4X operates on 120-minute headways, which would be maintained with proposed Route 11, and it would be interlined with Route 5X, which also operates on 120-minute headways. A requirement of one bus is sufficient to operate both routes.

Figure 4-9: Alignment of Proposed Route 11



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Replacing Routes 4X and 7E with Route 11 will not require any additional revenue hours and, therefore, no additional operating costs. **Table 4-5** below shows estimated summary statistics because the actual values are not currently available for Routes 4X and 7E. Ridership data also is not available for Routes 4X and 7E, so ridership for the proposed Route 11 was estimated using average riders per revenue mile for Routes 6 and 6/7, which cover similar service areas.

Table 4-5: Annual Statistics for Existing Routes 4X and 7E, and Proposed Route 11

	Existing 4X	Existing 7E	Proposed 11	Total Change
Revenue Hours	1,543	510	2,053	0
Revenue Miles	24,117	8,109	32,436	210
Peak Vehicles	0.5	0	0.5	0
Operating Cost	$124,700	$41,200	$165,900	$0
Ridership	N/A	N/A	16,600	N/A

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

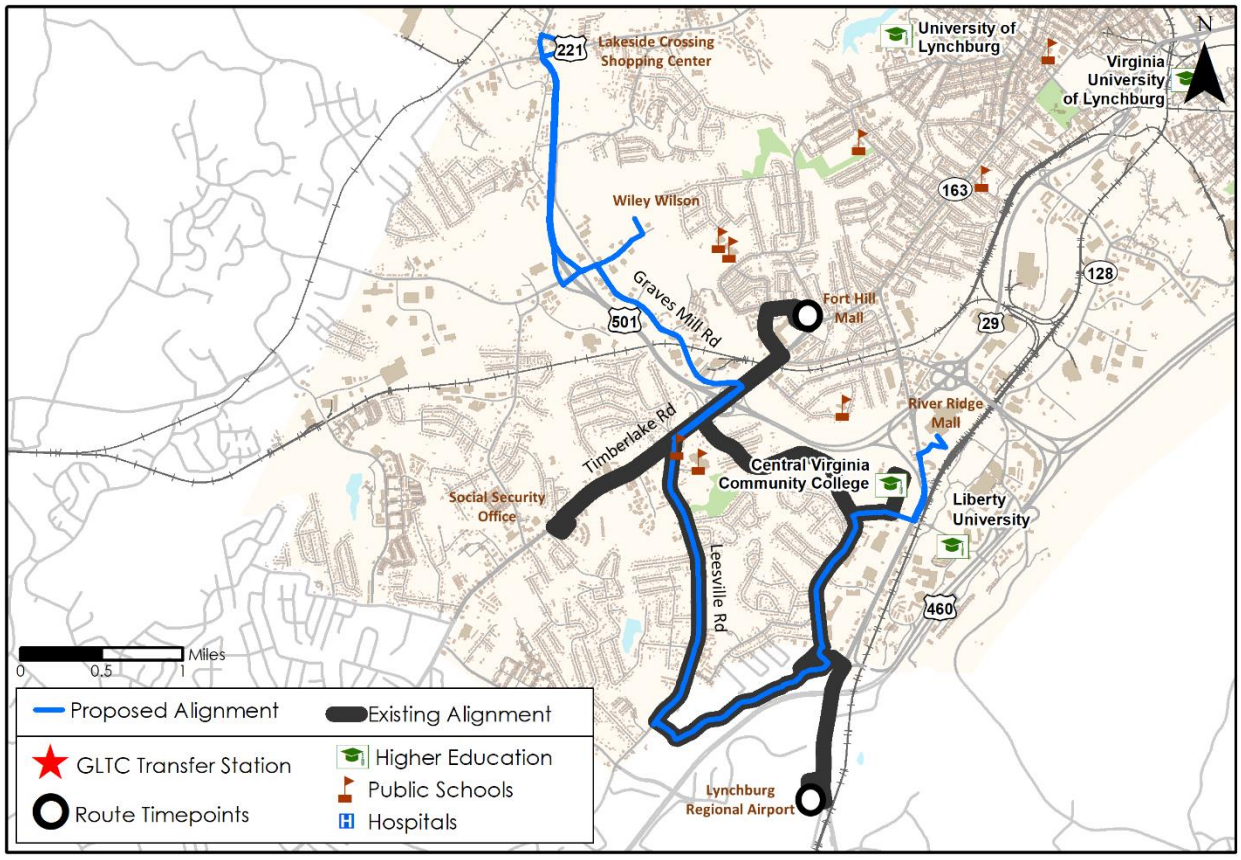
Justification and Needs Fulfillment:

- The alignment of proposed Route 11 gives passengers a direct connection from STARTEK to Kemper Station, all along Fort Avenue.

Route 6

Service Changes: The recommended alignment for Route 6 includes several changes to the existing alignment. The western terminus is relocated to Lakeside Crossing Shopping Center, which includes connections to the proposed Routes 8A and 8B. Route 6 would travel south on the Lynchburg Expressway before serving Graves Mill Road east of the freeway, and then serve the neighborhoods along Leesville Road. Service to Wards Crossing as well as a large section of Wards Ferry is maintained before traveling to the new transfer location at River Ridge Mall. The proposed Route 6, shown below in **Figure 4-10**, will continue to run 60-minute headways, requiring one bus for operation.

Figure 4-10: Alignment of Existing Route 6 and Proposed Route 6



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The existing Route 6 is reported to have too much excess time in the schedule. The proposed alignment for Route 6 is considerably longer than the existing Route 6, but is still expected to be able to maintain 60-minute headways throughout the day. The revenue hours will remain consistent with the existing Route 6, leading to no additional peak buses or operating costs. Ridership is expected to increase with the additional revenue miles and service coverage, shown below in **Table 4-6**.

Table 4-6: Annual Statistics for Existing Route 6 and Proposed Route 6

	Existing 6	Proposed 6	Total Change
Revenue Hours	4,190	4,190	0
Revenue Miles	55,628	75,527	19,900
Peak Vehicles	1	1	0
Operating Cost	$338,600	$338,600	$0
Ridership	20,200	27,400	7,200

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

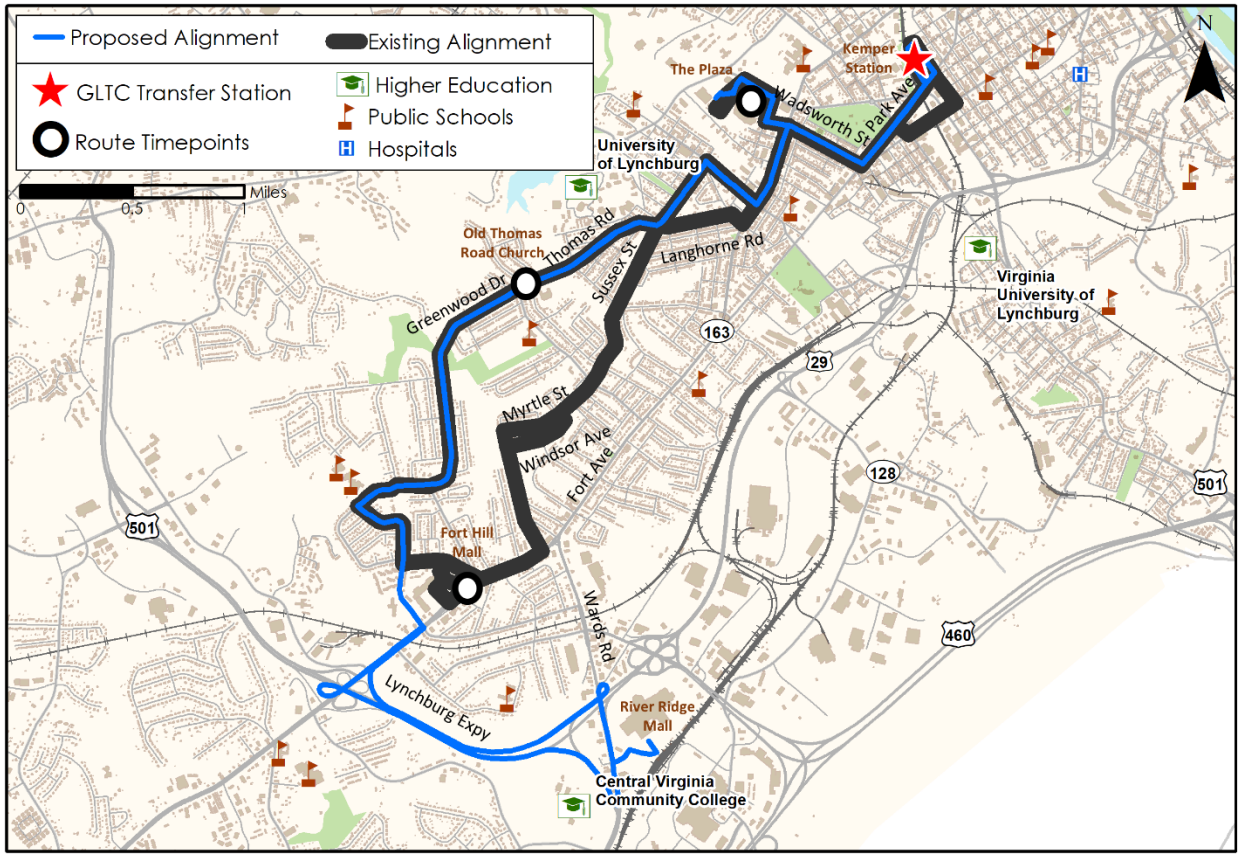
Justification and Needs Fulfillment:

- To reduce out of direction travel and reduce travel times to major destinations, the connection to the airport is removed (proposed to be served by Route 4B) as well as the Social Security office (proposed to be served by Route 7).
- The overall alignment of the route is a northwest/southeast direction; however, out of direction travel is still experienced on Wards Ferry Road and Leesville Road. While the out of direction travel may be an inconvenience for some passengers travelling end to end, it is ultimately necessary to maintain coverage through these neighborhoods without increasing costs (or adding new routes). Overall, out of direction travel is significantly reduced from the existing alignment.
- In the existing system, Route 6 connects to four other routes. Under the proposed short-term system Route 6 connects to eight routes.

Route 6/7 (proposed Route 10)

Service Changes: The recommended alignment for Route 6/7 continues the existing service from Kemper Station to the Plaza and Richmond Street. The current alignment operates one-way loops through the neighborhoods between Lakeside Drive and Fort Avenue. The proposed alignment operates bi-directional service on the northern side of the loop made up of Thomas Road, Sandusky Drive, and Long Meadows Drive as shown in **Figure 4-11**. The existing service on Sussex Street, Myrtle Street, and Westview Drive is removed. The proposed Route 10 then turns onto Fort Avenue before accessing the Lynchburg Expressway to terminate at River Ridge Mall.

Figure 4-11: Alignment of Existing Route 6/7 and Proposed Route 10



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

There are no additional revenue hours or peak vehicles required to replace the existing Route 6/7 with the proposed Route 10, shown in **Table 4-7**. Stretching the southern terminus of the route to River Ridge Mall will require about 23,500 additional revenue miles per year. Ridership is expected to increase by about 11,100 riders per year.

Table 4-7: Annual Statistics for Existing Route 6/7 and Proposed Route 10

	Existing 6/7	Proposed 10	Total Change
Revenue Hours	7,764	7,764	0
Revenue Miles	100,647	124,183	23,536
Peak Vehicles	1	1	0
Operating Cost	$627,300	$627,300	$0
Ridership	47,400	58,500	11,100

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

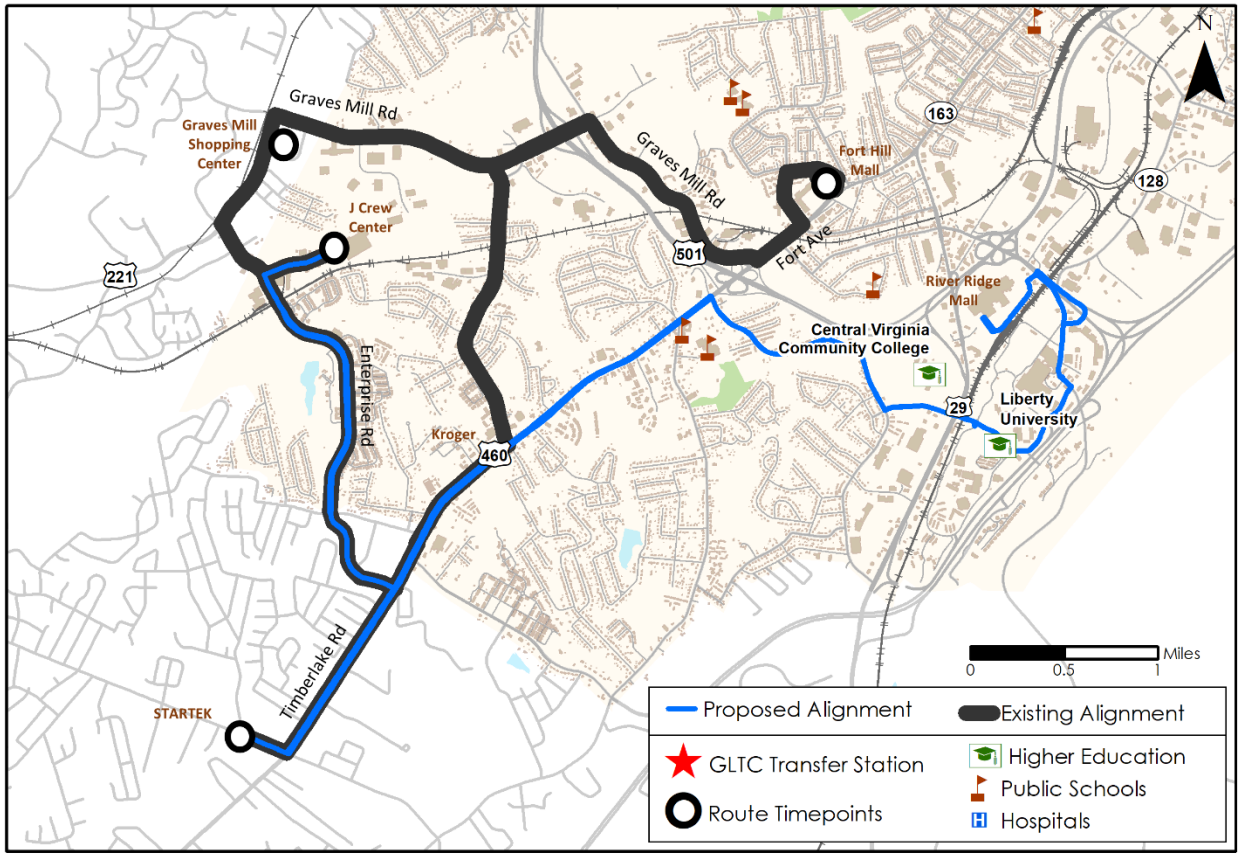
Justification and Needs Fulfillment:

- The proposed alignment removes the large one-way loop, operating in a more bi-directional service.
- Route 6/7 currently operates multiple patterns that require passengers to learn a complicated schedule. This is in contrast to other routes in the system that use an A/B system for distinguishing direction of travel. Removing the one-way loop and simplifying the schedule will make Route 6/7 more approachable for new riders.
- Removal of the service on the south/east section of the existing 6/7 may cause an issue for some riders. However, a large portion of this area will still have service within 0.25 mile of the route, and nearly all of this area will have service within 0.5 mile of the route. If removal of service along Sussex Street and Myrtle Street becomes a major issue, then service could be restored by routing either the inbound or outbound direction of the proposed Route 10 along the existing Route 6/7 in these neighborhoods. An alternate solution to this issue would be to realign one of the routes that are planned to travel on Fort Avenue (proposed Routes 11, 4A, or 4B) to Sussex Street and Myrtle Street. Moving a route off Fort Avenue to Sussex Street and Myrtle Street would, however, increase the travel time for passengers on other portions of the route, and would need to be carefully timed to make sure the route does not require more than one bus to operate 60-minute headways.

Route 7

Service Changes: Route 7 is proposed to start service at River Ridge Mall, serving Liberty University before traveling along Liberty University Drive and Harvard Street to serve Central Virginia Community College, shown in **Figure 4-12**. Route 7 then travels along Wards Ferry Road to Timberlake Road, where it runs south to the Social Security office. Two patterns for Route 7 are recommended—Pattern A serving STARTEK on Waterlick Road, and Pattern B serving J Crew Distribution and Contact Center on Dillard Drive. Route 7 is expected to continue to operate 60-minute headways, requiring one bus for operation. Each pattern will operate every 120 minutes.

Figure 4-12: Alignment of Existing Route 7 and Proposed Route 7



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The change in alignment from the existing Route 7 to the proposed Route 7 results in a minor increase in annual revenue miles (about 4,000), as shown in **Table 4-8**. Like other plans in the short-term, this alteration stays cost neutral as the revenue hours and peak vehicles requirement remains the same. Ridership is expected to increase a small amount based on the additional revenue miles and may also see ridership gains from increased connectivity to other routes and operating as bi-directional service.

Table 4-8: Annual Statistics for Existing Route 7 and Proposed Route 7

	Existing 7	Proposed 7	Total Change
Revenue Hours	4,392	4,392	0
Revenue Miles	67,265	71,390	4,125
Peak Vehicles	1	1	0
Operating Cost	$354,900	$354,900	$0
Ridership	44,700	47,400	2,800

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

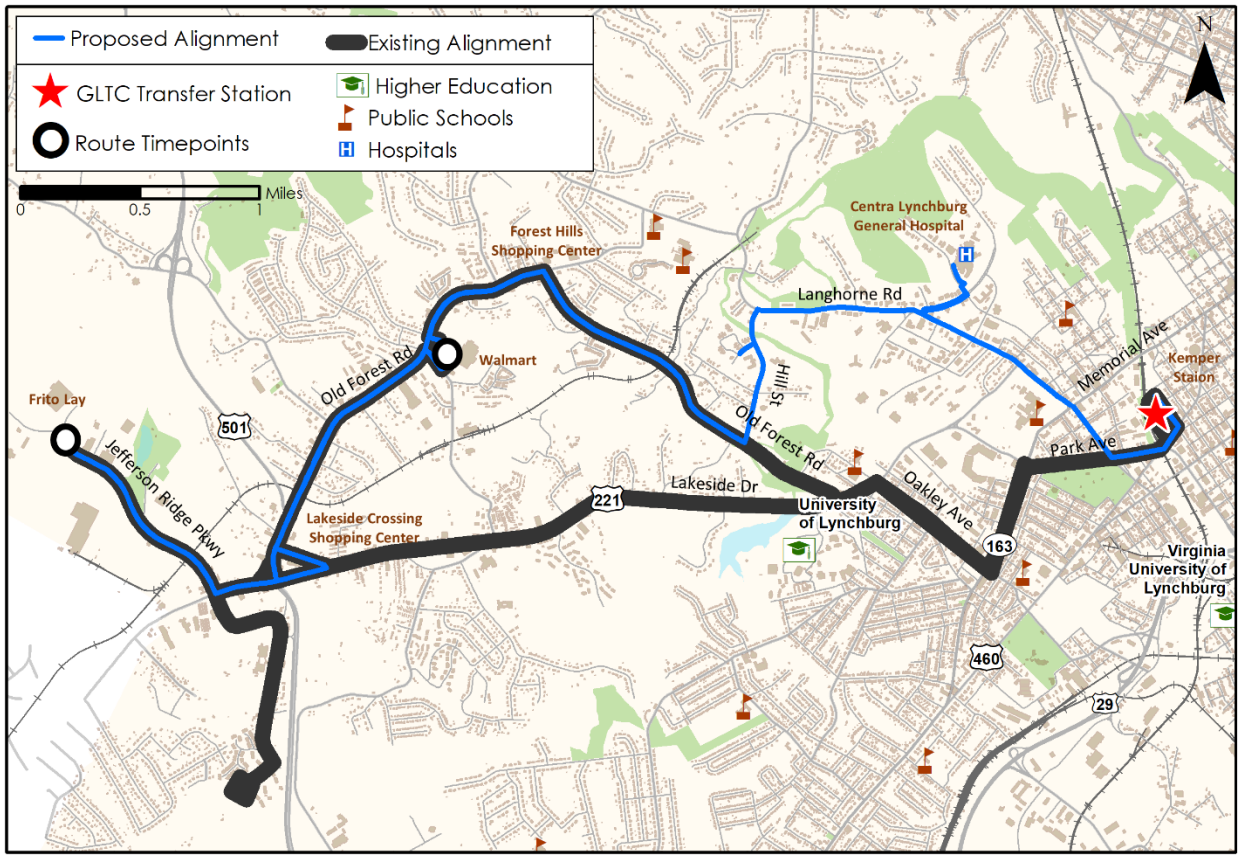
Justification and Needs Fulfillment:

- The proposed alignment for Route 7 reduces the out of direction travel by removing the large one-way loop in the center of the route.
- Bi-directional alignment along Timberlake Road provides more direct access to the new transfer location (River Ridge Mall), where passengers can connect to seven other routes to access the rest of the transit system.
- The northeastern section of the route provides a key connection from Central Virginia Community College to Liberty University, which is not currently connected.
- Splitting the route into an A and B pattern does reduce the number of times this route serves STARTEK and J Crew Distribution and Contact Center throughout the day. However, the combination of bi-directional service, direct alignment, and improved access to other routes offer a compelling package as a tradeoff. In addition, STARTEK still receives hourly service via of the combination of the proposed Route 7 and proposed Route 11. When the Route 7 operates service to the J Crew Distribution and Contact Center, the bus operating the proposed Route 11/Route 5 interline would operate the Route 11 service, thereby providing STARTEK with bus access every 60 minutes.
- Service on Graves Mill Road from Forest Road to Lynchburg Freeway is removed. This stretch is recommended to be covered by proposed Route 12(see below).
- Service on Old Graves Mill Road is removed. This area is primarily low density with low transit potential. Kendall Square Apartments complex is located on the stretch of Old Graves Mills Road with proposed removal of transit; however, this complex is only 0.2 mile from transit access on Timberlake Road.
- It may be possible to divert Route 7 to Cornerstone during months where Liberty University does not serve this development.
- Dialogue with STARTEK and J Crew Distribution and Contact Center is advisable to make sure that the service changes are not overly burdensome on their employees.
- In the existing system, Route 7 connects to two routes. In the proposed system, Route 6 connects to seven routes.

Existing Route 8A and Proposed Route 8

Service Changes: The existing Route 8A and Route 8B one-way pairs are recommended to be modified to operate bi-directional service. Instead of Route 8A reaching Old Forest Road via the current alignment along Memorial Avenue and Oakley Avenue, the proposed Route 8A assumes the alignment of Route 10 on Memorial Avenue, Langhorne Road, and Hill Street, shown below in **Figure 4-13**. The route would then operate along Old Forest Road as the current alignment before serving the Lakeside Crossing Shopping Center. Route 8A would then continue to Jefferson Ridge Parkway and Frito-Lay, Inc. Route 8A is expected to operate with one bus with 60-minute headways.

Figure 4-13: Alignment of Existing Route 8A and Proposed Route 8



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The implementation of the proposed Route 8 is critical to add resources to the proposed Route 9, shown in **Table 4-9**. By operating the proposed Route 8 on the alignment of the existing Route 10, Route 10 can be eliminated, which in turn frees resources for use on the proposed Route 9. Peak vehicles and revenue hours remain consistent from the existing plan to the proposed plan with this group of routes. An additional 3,500 riders are expected from the cumulative change in route miles with this three-route reconfiguration.

Table 4-9: Annual Statistics for Existing Routes 8A, 9, and 10, and Proposed Routes 8 and 9

	Existing 8A	Existing 9	Existing 10	Proposed 8	Proposed 9	Total Change
Revenue Hours	5,258	1,580	2,282	5,258	3,862	0
Revenue Miles	67,333	31,361	28,585	86,318	62,689	21,728
Peak Vehicles	1	0.5	0.5	1	1	0
Operating Cost	$424,800	$127,700	$184,400	$424,800	$312,100	$0
Ridership	54,600	11,600	25,000	71,600	23,100	3,600

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

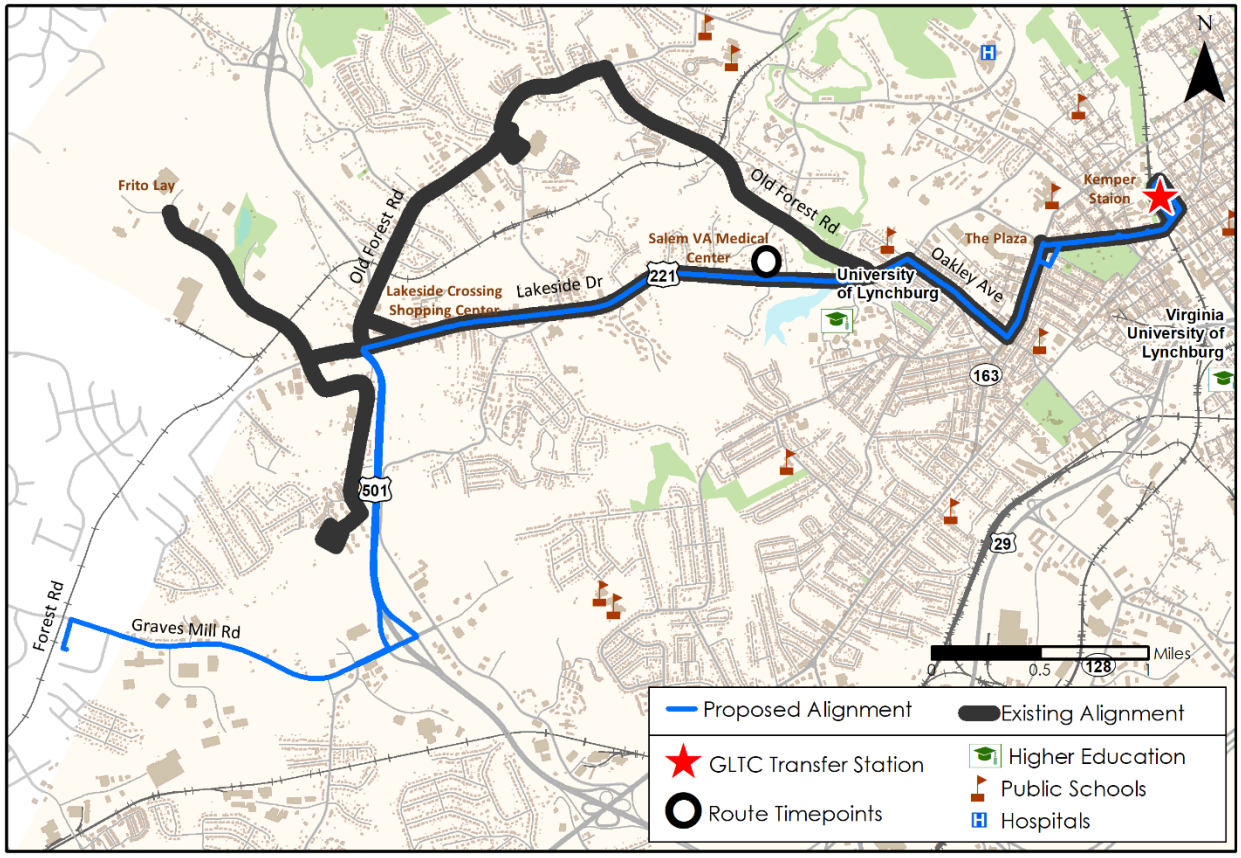
Justification and Needs Fulfillment:

- Proposed Route 8 changes the pattern out of Kemper Station to remove duplicative service with Route 8B and instead operates along the Route 10 alignment. This change enables the removal of Route 10 and the additional service on Route 9 (previously interlined with Route 10).
- The removal of the large one-way loops simplifies travel for passengers, which would help encourage new riders to try the transit system.
- Connecting at the Lakeside Crossing Shopping center gives passengers the opportunity to transfer to the proposed Route 6 that serves Wards Crossing, Central Virginia Community College, and River Ridge Mall.

Existing Route 8B to Proposed Route 12

Service Changes: Like Route 8A, Route 8B will cease the one-way loop orientation used in the existing system. Instead, Route 8B will serve the Lakeside Drive corridor until connecting at the Lakeside Crossing Shopping Center, shown in **Figure 4-14**. Route 8B will no longer serve Breezewood Drive, instead accessing the Lynchburg Expressway to serve Graves Mill Road to the Food Lion Shopping Center on Forest Road. Route 8B would continue to operate with a vehicle requirement of one bus with 60-minute headways.

Figure 4-14: Alignment of Existing Route 8B and Proposed Route 12



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The proposed Route 12 uses the resources from the existing Route 8B with no need for additional funding. The proposed Route 12 would operate a longer alignment than the existing Route 8B, enabling greater service area and projected ridership growth. Nearly 25,000 additional passengers are expected to ride the proposed Route 12 than the existing Route 8B, as shown in **Table 4-10**.

Table 4-10: Annual Statistics for Existing Route 8B and Proposed Route 12

	Existing 8B	Proposed 12	Total Change
Revenue Hours	3,857	3,857	0
Revenue Miles	50,004	77,854	27,849
Peak Vehicles	1	1	0
Operating Cost	$311,600	$311,600	$0
Ridership	44,200	68,800	24,600

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

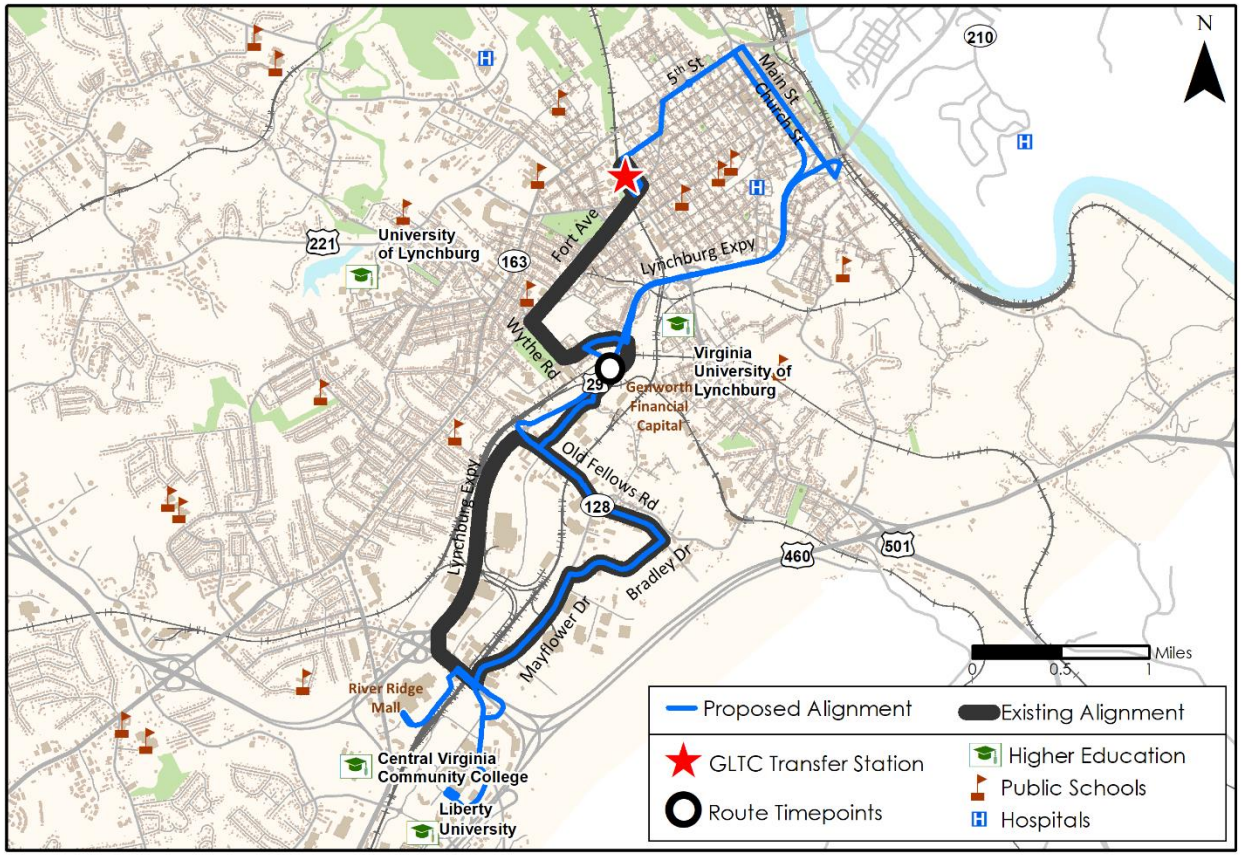
Justification and Needs Fulfillment:

- Changing service along Lakeside Drive to dedicated routes with bi-directional service simplifies travel for passengers, which will help encourage new riders to use the GLTC network.
- The recommended removal of Route 7 on Graves Mill Road and the Food Lion Shopping Center would be restored with Route 8B changes.
- The Lakeside Crossing Shopping Center connection gives passengers along Lakeside Drive better access to Wards Crossing, Central Virginia Community College, and River Ridge Mall.

Route 9

Service Changes: The short-term recommendation for Route 9 is to extend the alignment at both ends to serve River Ridge Mall and Liberty University at the southern end and downtown on the northern end, as shown in **Figure 4-15**. Service along Odd Fellows Road and Mayflower Drive changes from one-way service to bi-directional service. Service along Fort Avenue and Wythe Road is removed, with Route 9 using the Lynchburg Expressway. The existing Route 9 needs 30 minutes for each roundtrip, which interlines with the 30-minute Route 10, creating a 60-minute cycle time. In the proposed route structure, the removal of Route 10 enables a dedicated bus for Route 9. Refer to **Table 4-9** for operating statistics for Route 9.

Figure 4-15: Alignment of Existing Route 9 and Proposed Route 9



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- The removal of the large loop on Odd Fellow Road and Mayflower Drive enables bi-directional service, thereby shortening travel times.
- Using more of the Lynchburg Expressway reduces delay from congestion on Fort Avenue.
- Route 9 creates a desirable connection between Liberty University and downtown Lynchburg.

4.1.2.2 Mid-Term Plan (3 to 10 Years)

Unlike the previous section where the short-term plan was designed to be implemented within GLTC's existing funding and resources, the mid-term plan includes options that require additional operating and capital costs. This plan builds on the short-term plan and assumes that changes discussed in the short-term plan are completed. With this mid-term plan, new routes, increases in span of service, and increases in route frequency are proposed.

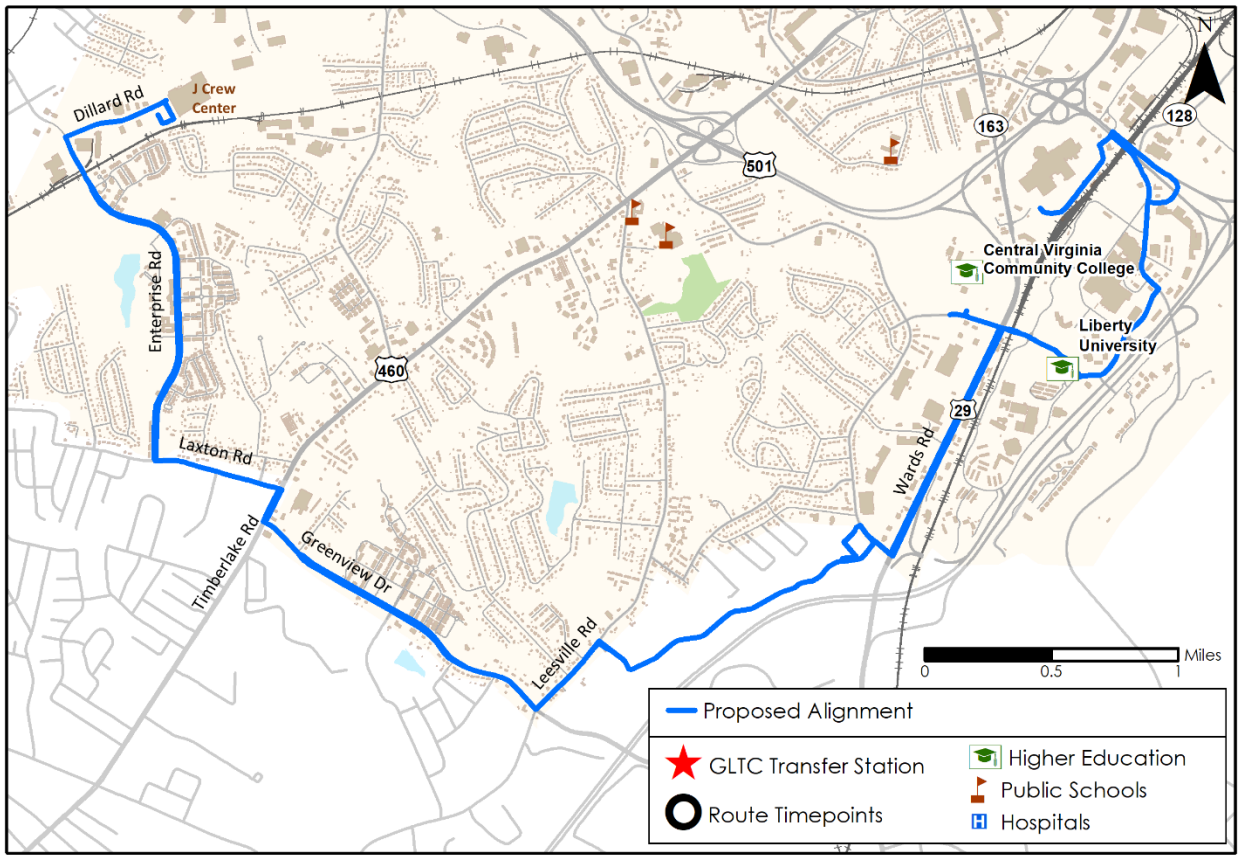
Proposed Enterprise Drive/Greenview Drive/Wards Road Route

Service Changes: This route would operate from J Crew Distribution and Contact Center along Enterprise Drive, briefly operating on Timberlake Road before serving Greenview Drive. This route would then use Simons Run and Wards Ferry Road to access and serve Wards Road. This route would divert to Central Virginia Community College before serving Liberty University and River Ridge Mall. **Figure 4-16** shows the proposed alignment of this route. The requirement for this route would be one bus operating at a 60-minute headway.

Justification and Needs Fulfillment:

- This route would offer additional service along Wards Road by connecting passengers from other routes at River Ridge Mall to other shopping and major destinations.
- The connection from Cornerstone to Wards Road and Liberty University would give residents in this development year-round access to major destinations.
- Serving the J Crew Distribution and Contact Center all day with this route would enable Route 7 to serve STARTEK all day instead of operating an A and B pattern with alternating trips serving each location.

Figure 4-16: Alignment of Proposed Enterprise Drive/Greenview Drive/Wards Road Route



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Operating statistics for the proposed Enterprise Drive/Greenview Drive/Wards Road Route are shown in **Table 4-11**. This new route is assumed to operate a similar schedule as the existing Route 6, with 15.13 revenue hours a day. It will require one bus operating nearly 4,000 revenue hours and just over 73,000 revenue miles annually. By using an average fixed route cost per revenue hour of $80.80, it is projected to cost approximately $320,000 in annual operating costs. Ridership also is based on average riders per revenue mile for the existing Route 6, yielding approximately 28,000 riders annually.

Table 4-11: Annual Statistics for Enterprise Drive/Greenview Drive/Wards Road Route

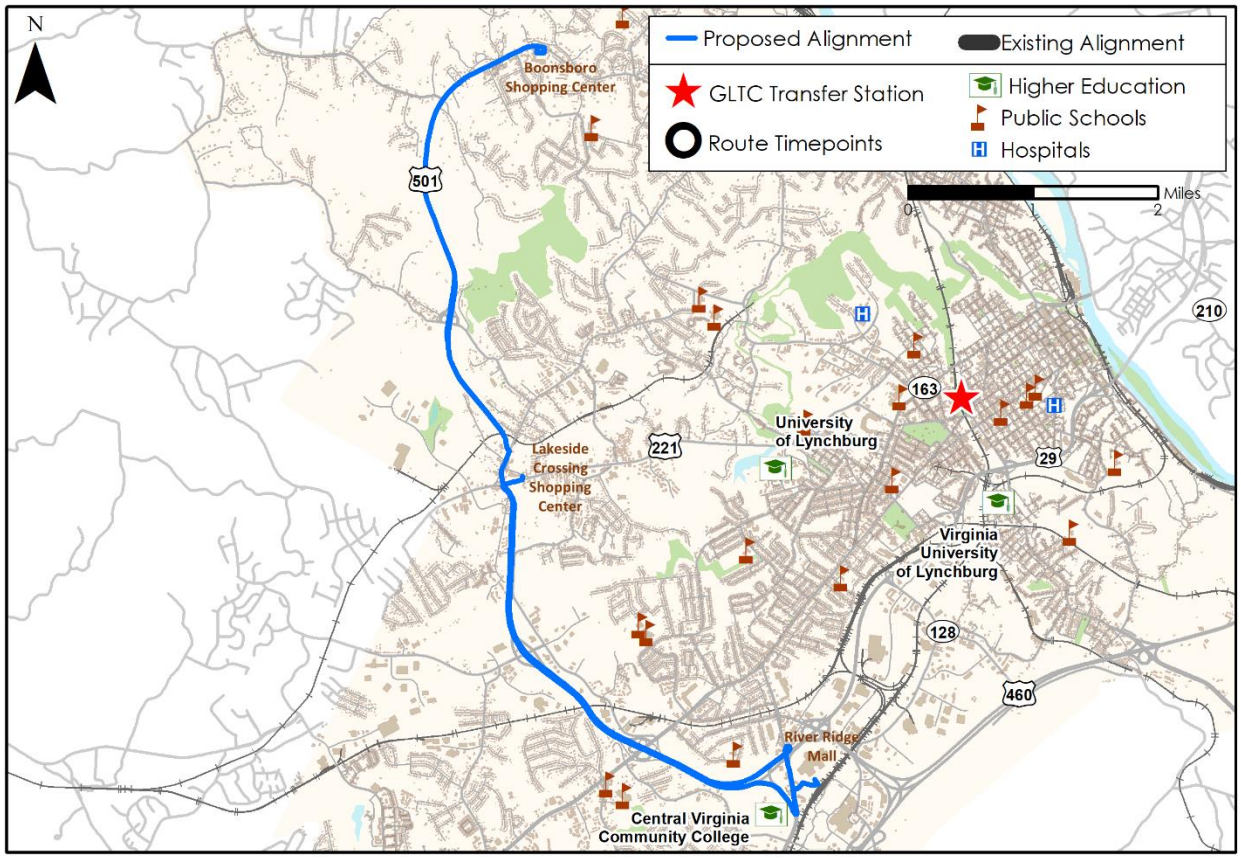
	Proposed Route
Revenue Hours	3,952
Revenue Miles	73,270
Peak Vehicles	1
Operating Cost	$319,300
Ridership	28,000

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Lynchburg Expressway Route

Service Changes: This route would operate from Boonsboro Road at the terminus of Route 3B and use the Lynchburg Expressway to River Ridge Mall, shown in **Figure 4-17**. A mid-route stop is recommended at Lakeside Crossing Shopping Center. This route would require a single bus operating at a 60-minute headway.

Figure 4-17: Alignment Proposed for Lynchburg Expressway Route



Source: GLTC TDP Service and Capital Improvement Plan, 2018.

The proposed Lynchburg Expressway Route will operate the same schedule as the existing Route 6, which serves 15.13 hours a day. The annual ridership is estimated to be approximately 28,000 using the Route 6 riders per revenue mile estimation. Additional statistics for the proposed Lynchburg Expressway Route are shown in **Table 4-12**. It should cost approximately $320,000 to operate this route per year.

Table 4-12: Annual Statistics for Proposed Lynchburg Expressway Route

	Proposed Route
Revenue Hours	3,952
Revenue Miles	74,060
Peak Vehicles	1
Operating Cost	$319,300
Ridership	28,300

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- The Lynchburg Expressway Route would offer fast service from Route 3B to route connections at River Ridge Mall. Additional connections with proposed Routes 6, 8, and 12 (existing Routes 8A and 8B) also would enhance mobility for residents in these areas. This includes students, faculty, and staff at Randolph College, who could connect to the Lynchburg Expressway Route for shopping destinations.

Weekday Span of Service Increase for Routes 1B, 2, 4A, and 4B

Service Changes: This service proposal would increase the span of service for the four routes shown in **Table 4-13**, thus bringing service on each route to 10 PM. Route 1B currently has 14 trips running 14 revenue hours each day. This proposed service increases the service hours by three to match the service of Route 1A. The existing Route 2 operates at 30-minute service for about 15 hours, creating 30 trips each weekday. The proposed service would operate an additional hour each weekday for two more trips. Routes 4A and 4B operate at 16 and 17 hours on weekdays, respectively. This service span increase accounts for two additional hours for Route 4A and one additional hour for 4B, bringing each route to a total of 18 hours every weekday.

Using an average fixed route bus cost per hour of $80.80, the total operating cost of this recommendation is approximately $144,200 annually. Adding service at the very beginning and end of service periods typically does not increase ridership at the same rate of riders per revenue hour for the rest of the route. In **Table 4-13**, ridership of additional service hours is estimated to be 50 percent of the average riders per revenue hour for each route.

Table 4-13: Operating Statistics for Extended Span of Service on Routes 1B, 2, 4A, and 4B

Proposed Route	Existing Daily Revenue Hours	Proposed Span of Service	Additional Operating Cost	Additional Capital Cost	Additional Annual Ridership
1B	13.80	16.80	$61,800	$0	4,400
2	14.85	15.85	$20,600	$0	1,800
4A	16.13	18.13	$41,200	$0	4,000
4B	17.14	18.14	$20,600	$0	1,800
Total	61.92	68.92	$144,200	$0	12,000

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- Routes 1A and 1B operate complimentary patterns, providing passengers bi-directional service for making return trips as fast as the initial trip. Increasing the service on Route 1B to match the span of Route 1A creates bi-directional service all day.
- Route 2 is a strong performing route, with frequent service and relatively high ridership. Increasing the span of service enables riders to use the service later in the day, providing a transit option for workers with later shifts.
- Routes 4A and 4B both have high ridership and should offer service later in the day to give riders an option for evening return trips.
- Increasing the span of service on routes gives GLTC the opportunity to provide additional service without the large capital costs that other service increases would incur.

Weekday Span of Service Increase for Routes 5, 11, and 9

Service Changes: This plan proposes additional service span for Routes 5, 11, and 9. Proposed Routes 5 and 11, which are interlined, each operate six trips per weekday. Each route takes 60 minutes to complete; therefore, each route has 120-minute headways. An additional two revenue hours is recommended for these routes that should be implemented at the same time to keep the interline. Route 5 would operate until 7 PM, and Route 11 would operate until 8 PM. The proposed Route 9 also is planned to increase the span of service by an additional two hours, bringing the total span of service to 8.2 hours, shown **Table 4-14**. Route 9 would run until 8 PM.

The additional service span for these routes amounts to six additional daily revenue hours, which results in a projected annual operating cost of almost $124,000. The average passenger per revenue mile from existing Route 6 was used as a proxy for proposed Routes 5 and 11 because existing ridership data are not available. With the addition of two hours for each of these routes, an additional 1,229 riders annually are expected with this recommendation. It is important to note that, like in the previous plan for an increase in span of service, ridership should not be expected to maintain average levels in the final hours of operation. Because of this common relationship, a factor of 0.5 was applied to the ridership estimate. The proposed Route 9 also is planned for an expansion of revenue hours, going from 6.2 daily hours to 8.2.

Table 4-14: Operating Statistics for Extended Span of Service on Routes 1B, 2, 4A, and 4B

Proposed Route	Existing Daily Revenue Hours	Proposed Span of Service	Additional Operating Cost	Additional Capital Cost	Additional Annual Ridership
5	6.05	8.05	$41,200	$0	1,200
11	8.05	10.05	$41,200	$0	1,200
9	6.20	8.20	$41,200	$0	1,900
Total	20.30	26.30	$123,600	$0	4,300

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- Route 5 is the only route in Amherst County and runs for about 6 hours a day. Increasing the hours of operation would give residents of Amherst greater opportunity to commute to work via transit. This recommendation is contingent on Amherst County's funding contribution to GLTC to operate the service.
- Proposed Route 11 is an all-day version of the existing Route 7E, which operates a clean linear alignment along Timberlake Road and Fort Avenue. Extending the service hours into the evening would enable employees at STARTEK to make the return trip home later in the day. The proposed Route 11 also includes the resources from Route 7E, which operates evenings. The Route 7E portion of the proposed Route 11 would shift two hours later to accommodate the extended span of service.
- Increasing the span of service is a cost-effective strategy to increase service without the significant expense of capital costs associated with purchasing and maintaining more vehicles.

Headway Improvement for Proposed Routes 3A, 3B, 4A, and 4B

Service Changes: This recommendation would upgrade Routes 3A, 3B, 4A, and 4B from the current 60-minute headways to 30-minute headways. An additional bus would be required on each route to operate the improvement.

Table 4-15 shows the existing and proposed revenue hours for the additional service associated with increasing the frequencies for Routes 3A, 3B, 4A, and 4B. The additional operating costs is based on a $80.80 average cost per revenue hour for fixed route services. Capital costs are estimated using GLTC's previous cost for a Gillig Hybrid vehicle with 32-person seating capacity from 2012, inflated to 2018 dollars with an inflation rate of 2.3 percent per year. Capital costs would be $2,632,000 to purchase four vehicles. For operations, improving the four routes would total about $1,371,000 in annual operating cost for the four route improvements. Additional ridership is estimated to be about 60 percent of the existing annual ridership because increasing frequency typically does not have a linear relationship with service.

Table 4-15: Operating Statistics for Additional Bus on Routes 3A, 3B, 4A, and 4B

Proposed Route	Existing Daily Revenue Hours	Proposed Daily Revenue Hours	Additional Operating Cost	Additional Capital Cost	Additional Annual Ridership
3A	17.14	34.28	$353,200	$658,000	41,800
3B	16.13	32.26	$332,300	$658,000	38,600
4A	16.13	32.26	$332,300	$658,000	39,300
4B	17.14	34.28	$353,200	$658,000	41,000
Total	66.54	133.08	$1,371,000	$2,632,000	160,700

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- Routes 3A, 3B, and 4A provide the strongest ridership per revenue hour numbers in the system in 2017. Bolstering the service on these routes provides the greatest opportunity to increase ridership and provide service where it is needed the most.
- The significant operating and capital costs of these projects make the improvements a significant investment. Other less costly improvements are recommended to be made first before committing to additional operating and capital dollars required for this improvement.

Saturday Service Improvements

Service Changes: This recommendation would upgrade the Saturday service for select routes (existing Routes 6, 7, 1B, and 8B). The existing system runs interlined service for Routes 6 and 7 with one bus, yielding 120-minute headways for each route. Routes 1B and 8B do not operate on Saturdays. In the proposed system, Routes 6 and 7 will each have a dedicated vehicle so that headways will be improved to 60 minutes. Service in the proposed system also will be improved for Routes 1B and 8B, where Saturday service will run to match the revenue hours of Routes 1A and 8A, respectively.

Table 4-16 shows the existing and proposed daily revenue hours of service and the associated operating costs. Proposed daily revenue hours for Route 1B were obtained from the existing Route 1A revenue hours. For Routes 6 and 7, the existing route revenue hours were doubled to account for two buses instead of the existing single bus. For Route 12, the existing Route 8a were used to estimate the proposed daily revenue hours. Operating costs for all Saturday routes were calculated using an average of 50 operating days a year, with an operating cost of $80.80 a revenue hour. Since there are no additional buses needed for the increased service on Saturdays, there should not be an increase in capital costs. Ridership, also shown in **Table 4-16**, is estimated to be about 60 percent of the existing ridership, to account for decreasing riders per hour during weekend service.

Table 4-16: Operating Statistics for Improved Saturday Service

Proposed Route	Existing Daily Revenue Hours	Proposed Daily Revenue Hours	Additional Operating Cost	Additional Capital Cost	Additional Annual Ridership
1B	0.00	13.95	$56,400	$0	4,900
6	5.50	12.53	$28,400	$0	1,000
7	6.53	12.53	$24,200	$0	1,800
12	0.00	14.66	$59,200	$0	5,000
Total	12.03	53.67	$168,200	$0	12,700

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- Routes 1A and 1B together operate bi-directional service, and without operating Route 1B on Saturdays, riders only have service in the counterclockwise direction. This leads to much longer travel times for many travel movements in the downtown area. This also impacts the time it takes riders to get to and from Kemper Street Station, thereby increasing the overall travel time for more complex travel patterns that involve the downtown area.
- Routes 6 and 7 are interlined in the existing system on Saturdays, which produces headways of 120 minutes. This same configuration could occur in the proposed system because of common end points; however, the improved service in the mid-term plan calls for dedicated vehicles on each route. The extra bus requirement doubles the operating costs, but also would double the opportunities for passengers along these routes to connect to the system.
- Operating the proposed Route 12 on Saturdays to match the existing Route 8A service hours would provide bi-directional service for passengers along Lakeside Drive to Graves Mill Shopping Center on the west end of the route and downtown on the east end of the route. Connecting passengers in these areas to the rest of the system on Saturdays would provide additional work and shopping

opportunities. Connections at Lakeside Crossing Shopping Center are more effective with the proposed Route 12 in operation as well.

4.1.2.3 Long-Term Plan (Beyond 10 Years)

The long-term plan accounts for upgrades to the system that are desirable but less feasible than the service changes in the short and mid-term plans. The changes described in this section are not expected to be implemented in the 10-year lifespan of the TDP. Here, Sunday service is described and examined as a possible expansion of service in the long term.

Sunday Service

Service Changes: The existing GLTC system does not currently operate service on Sundays, although it did until 2011. A long-term recommendation is to reinstate Sunday service. While specific details of Sunday service would need to be worked out closer to service implementation, figures are shown here to provide a high-level estimate of reasonable operations.

Table 4-17 shows the service requirements to implement Sunday service. Values are calculated based on existing Saturday service to avoid complicating this plan with service alternative combinations. Moreover, because of the history of Sunday service in Lynchburg, it is prudent to offer conservative estimates, even for the long-term plan. The existing Saturday service requires about 14,100 revenue hours annually, which equates to about $1,140,000 in annual operating costs. No additional major capital costs would be incurred because the existing fleet could handle an additional day of service without the need for more equipment. Ridership is estimated based on systemwide ridership per revenue mile of 0.81 and diminished by 50 percent to account for the history of low Sunday ridership. A total of just under 90,000 riders are expected for Sunday service.

Table 4-17: Operating Statistics for Sunday Service

	Proposed Sunday Service
Revenue Hours	14,116
Revenue Miles	221,559
Peak Vehicles	12
Operating Cost	$1,140,600
Capital Cost	$0
Ridership	89,700

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Justification and Needs Fulfillment:

- When Sunday service was previously offered, the high operating costs were weighed against the poor ridership, which resulted in GLTC cancelling the service. An analysis conducted at the time indicated low productivities and GLTC ultimately decided resources would be better spent on other days of operation. Because of previous experience, we recommend Sunday service to be considered only after the short-term and mid-term plans are implemented.

4.2. Service Development

Each of the projects detailed in the preceding section addresses identified needs of the transit system. Programming the projects for a 10-year timeframe will help GLTC plan for the capital and operating expenses that come with an increase in service levels. **Table 4-18** shows the year-by-year progression of the short-, mid-, and long-term plans throughout the lifespan of this TDP. By the year 2020, the short-term plan is expected to be implemented, where a larger increase in service miles will occur. The service hours, however, will remain the same, enabling GLTC to retain the same number of peak vehicles and avoid additional capital costs. Each of the route changes in the short-term plan are considered a high-priority service for implementation.

The result of the short-term plan is a focus of the transit service on the core of the system. In areas where excessive layovers were observed by GLTC, routes were extended to offer service to new areas. Despite the overall addition of route miles in the system, there are some areas that would lose service. The existing Route 7 serves southwest Lynchburg. With the realignment of Route 7, service would be removed from Old Graves Mill Road and Forest Road. The removal is justified by the fact that Old Graves Mill Road is not productive in terms of producing transit ridership. Old Graves Mill Road is primarily made up of low-density residential development, except for one apartment complex near the intersection with Timberlake Road. Residents here are still within 0.2 mile of Timberlake Road, where they can access Routes 7 and 11. The small section of Forest Road that loses service from the changes made to Route 7 also has low ridership potential. In addition, this section of the road is in Bedford County, outside of the GLTC service area. One more small reduction in service is on Breezewood Drive, where Routes 8A and 8B currently operate. This segment of Routes 8A/8B is reported to have poor ridership, and removal is expected to have little to no impact on existing ridership. The last section of service removal is along Myrtle Street, Sussex Street, and Westview Drive, where the existing Route 6/7 is recommended to operate bi-directional service along Thomas Road and Long Meadows Drive as the proposed Route 10. The areas where service is removed consists of low-density residential development, and does not produce significant ridership. Moreover, much of the area is within 0.25 mile of the new alignment or Fort Avenue, which is proposed to be served by three routes (Routes 11, 4A, and 4B).

By the year 2022, the Lynchburg Expressway Route and Enterprise Drive/Wards Road route should be implemented. This will require approximately 8,000 additional revenue hours and two additional vehicles to operate the service.

Saturday service for Routes 1B, 6, 7, and 12 should be implemented in 2023. The additional revenue hours required for this service would be about 10,618 a year. Because the peak vehicle requirement would still not exceed weekday service, there would not be an additional vehicle requirement or increase in capital costs. The annual service miles for the system would increase approximately 31,293.

In 2024, GLTC would start extending service span for strong performing Routes 1B, 2, 4A, and 4B. Additionally, Routes 5, 11, and 9 also would see an increase in span of service, as the existing span of service for these routes is lower than the rest of the system. The span of service increase is a low-cost option to increase transit access without additional capital costs. Span of service increase is strategically programmed in the planned service implementation to spread out large capital costs over time. After the increase of span of service, the next improvement is to operate 30-minute headways on the most

productive routes in the system, including Routes 3A, 3B, 4A, and 4B. The purchase of additional vehicles would be required for this improvement. This improvement is expected in 2025 or later, depending on the availability of additional capital and operating funds.

Beyond the lifespan of the TDP, the long-term plan includes the addition of Sunday service. Operating on Sundays would cause significant increases in revenue hours and miles, resulting in a large increase in operating cost for GLTC. The reimplementation of Sunday service should be approached carefully because of the recent experience of poor performing service.

The projects in this section, summarized in **Table 4-18**, are not currently included in the Statewide Transportation Improvement Plan or Six-Year Improvement Plan. All plans presented here are expected to be included in the next update to each document.

Table 4-18: Planned Service Implementation over Life of TDP

Fiscal Year	Project	Priority Level	Annual Revenue Hours Change	Annual Revenue Miles Change
2019		-	-	-
2020	Routes 1A and 1B connection to Kemper Station	High	0	7,173
	Route 3A extension	High	0	7,899
	Route 4A extension	High	0	13,930
	Route 4B extension	High	0	28,533
	Eliminate existing Route 4X and Route 7E and implement proposed Route 11	High	0	210
	Route 6 realignment	High	0	19,900
	Route 6/7 realignment (change name to Route 10)	High	0	23,536
	Route 7 realignment	High	0	4,125
	Route 8A realignment (change name to Route 8); Route 9 realignment; removal of Route 10	High	0	21,728
	Route 8B realignment (change name to Route 12)	High	0	27,849
2021		-	-	-
2022	Addition of a new route (Enterprise Drive/Greenview Drive/Wards Road)	Medium	3,952	73,270
	Addition of a new route (Lynchburg Expressway)	Medium	3,952	74,060
2023	Add Saturday service for Routes 1B, 2, 4A, 4B	Medium	10,618	31,293
2024	Extended hours for Routes 1B, 2, 4A, 4B	Medium	1,785	25,013
	Extended hours for Routes 5, 11, and 9	Medium	1,530	25,429
2025	Operate 30-minute headways on Routes 3A, 3B, 4A, and 4B	Medium	16,968	246,537
2026		-	-	-
2027		-	-	-
2028		-	-	-
Beyond 2028	Add Sunday Service	Low	14,116	221,559

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

4.2.1. Travel Time Comparisons

An important consideration in the reallocation of services is the travel time observed to and from key locations in the service area. As part of the rider and non-rider surveys, origin and destination pairs were collected and aggregated. Several origin-destination pairs were identified as important connections, and these were confirmed by GLTC staff. As part of this analysis, six key travel patterns were chosen to compare. These origin-destination pairs are as follows:

- Timberlake Road to Wards Road
- Liberty University South/Central Campus to Wards Road
- Centra Lynchburg General Hospital/Neighboring Apartments to Wards Road
- White Rock Hill to Timberlake Road
- Downtown to Liberty University/Mall
- Old Forest Road to Wards Road

For each origin-destination pair, the travel time for the existing system is compared with the short-term proposed plan. Distances were measured using road network lengths, and times were calculated using an average transit travel speed of 15 miles per hour. In the case of walk times, an average of 3 miles per hour was used. Transfer times were estimated by dividing the headway in half to calculate average wait times regardless of schedule. For instance, if a passenger needs to make a connection at a location that is served by two buses an hour for a combined headway of 30 minutes an hour, then the average wait time is 15 minutes (half of the scheduled headway). When multiple bus routes could be used to get to the destination, then all buses regardless of its route are added into the headway calculation. Total times are calculated by summing all travel segments, and a comparison is made between the existing system and proposed system.

Timberlake Road to Wards Road Travel Time Comparison

Timberlake Road is flanked by several commercial developments, beyond which there are neighborhoods consisting of multi-family and single-family residential housing. Connecting this area to the Wards Road area would provide shopping and work trips for residents of these neighborhoods. To travel from this area of Lynchburg to the Wards Road shopping area on the current transit system, passengers must take Route 7 to Fort Hill Mall, where they would connect with Route 6. A wait time of 30 minutes is estimated because Route 6 operates at one bus per hour. The total travel time is about 76 minutes, which is 29 minutes slower than the proposed system, that consists of the realigned Route 7, and a wait time of only 10 minutes at River Ridge Mall because of multiple route options for the connection to Wards Road. A comparison of travel times is shown in **Table 4-19**.

Table 4-19: Timberlake Road to Wards Road Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	46	1	30	76
Proposed System	37	1	10	47
Difference	9	0	20	**29**

**Travel times are calculated using the point locations of Timberlake Road at Greenview Drive to Wards Road at Wards Ferry Road*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Liberty University South to Wards Road Travel Time Comparison

Liberty University South consists of several Liberty University academic and common buildings, which are close in proximity to Wards Road, but are separated by railroad tracks. Transit access from this area to Wards Road would effectively circulate students, staff, and faculty to major shopping and other commercial development in Lynchburg. In the existing system, this travel movement would require taking Route 4B from Liberty University to River Ridge Mall, where the passenger would connect to Route 4A. The hourly service of each of these routes leads to a transfer time of about 30 minutes, leading to a total travel time of 45 minutes, as shown in **Table 4-20**. Alternatively, passengers have the option of walking for about 13 minutes from Liberty University to Wards Road. The time spent riding on Route 4A would be about 9 minutes, bringing the total time to about 22 minutes. In the proposed system, the passenger could connect to Route 4A directly to get to the Wards Road and Wards Ferry Road shopping area, which would take about 9 minutes total, without the need to transfer. The total travel time savings is about 36 minutes for this travel movement.

Table 4-20: Liberty University to Wards Road Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	15	1	30	45
Proposed System	9	0	0	9
Difference	6	1	30	**36**

**Travel times are calculated using the point locations of University Boulevard at Evans Boulevard to Wards Road at Wards Ferry Road*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Centra Lynchburg General Hospital to Wards Road Travel Time Comparison

Centra Lynchburg General Hospital is located a little over a mile northwest of Kemper Station. Access from Centra Lynchburg General Hospital to the major commercial activity along Wards Road requires boarding Route 10 and transferring at Kemper Station. From the transfer center, passengers must connect to Route 4A to get to Wards Road, for a total travel time of about 62 minutes. In the proposed system transit network, passengers will board the modified Route 8, using the same alignment as the existing Route 10. Connecting at Kemper Station, however, is estimated to be less than half as long as in the existing network because riders will have the option of taking Routes 4A or 4B to get to Wards Road. Travel time comparisons of the existing system and the proposed system for this travel movement are shown in **Table 4-21**.

Table 4-21: Centra Lynchburg Hospital to Wards Road Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	32	1	30	62
Proposed System	37	1	15	52
Difference	-5	0	15	**10**

**Travel times are calculated using the point locations of Centra Lynchburg General Hospital to Wards Road at Wards Ferry Road*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

White Rock Hill to Timberlake Road Travel Time Comparison

The White Rock Hill area of Lynchburg is located southeast of downtown and is composed of mostly single-family homes. The travel time from White Rock Hill to Timberlake Road is lengthy in the existing system. First, passengers must board Route 1B to access Kemper Station, where they have an average wait time of 30 minutes to catch Route 6/7. From Route 6/7, passengers will need to make an additional transfer at Fort Hill Mall to connect to Route 7. The total travel time for this path is approximately 110 minutes, as shown in **Table 4-22**. The proposed transit system has a reduced total travel time of 92 minutes. This is achieved through the reallocation of services, making the existing Route 7E and all-day route named Route 11. Despite the 120-minute headway of Route 11, yielding an average of 60-minute wait time (without passenger awareness of schedule information), the proposed system is still nearly 20 minutes quicker than the existing system.

Table 4-22: White Rock Hill to Timberlake Road Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	50	2	60	110
Proposed System	32	1	60	92
Difference	18	1	0	**18**

**Travel times are calculated using the point locations of Grace Street at Florida Avenue and Timberlake Road at Greenview Drive*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Downtown Lynchburg to River Ridge Mall/Liberty University Travel Time Comparison

Downtown Lynchburg to River Ridge Mall and Liberty University is a heavily requested trip pattern. In the existing system this trip takes about 66 minutes. Passengers access the transit system by boarding on Route 1B and alighting at Kemper Station to make a transfer to Route 4B. The transfer is estimated to take about 30 minutes due to the hourly schedule of Route 4B. In the proposed system, the total travel time is estimated to be reduced by 36 minutes. The improved travel time in the proposed system, as shown in **Table 4-23**, is possible because of the direct connection between downtown and Liberty University with Route 9.

Table 4-23: Downtown to River Ridge Mall/Liberty University Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	36	1	30	66
Proposed System	30	0	0	30
Difference	6	1	30	**36**

**Travel times are calculated using the point locations of Commerce Street at 12th Street to Liberty University*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

Old Forest Road to Wards Road Travel Time Comparison

Old Forest Road is west of downtown Lynchburg and has various commercial developments as well as nearby neighborhoods. Connecting riders from this area to the development of Wards Road requires approximately 72 minutes in the existing plan. This consists of 18 minutes on Route 8B, a 30-minute wait time at Kemper Station, and another 24 minutes on Route 4A. The proposed system compares favorably to the existing system travel times with the addition of a small transfer location at Lakeside Crossing Shopping Center. Instead of the need to travel toward downtown to transfer at Kemper Station, passengers have the option to travel west on Route 8 to transfer at Lakeside Crossing Shopping Center, where passengers can take the realigned Route 6. The total time taken to travel from Old Forest Road to Wards Road requires about 63 minutes in the proposed system, as shown in **Table 4-24**.

Table 4-24: Old Forest Road to Wards Road Travel Time Comparison (Minutes)*

	In-Vehicle Time	Number of Transfers	Total Transfer Time	Total Travel Time
Existing System	42	1	30	72
Proposed System	33	1	30	63
Difference	9	0	0	**9**

**Travel times are calculated using the point locations of Walmart on Old Forest Road to Wards Road at Wards Ferry Road*

Source: GLTC TDP Service and Capital Improvement Plan, 2018.

4.2.2. Title VI and Triennial Review

The most recent completed GLTC Triennial Review (2015) was reviewed and there were not any deficiencies that require corrective action via service planning efforts. Therefore, the service and capital improvement plans made in this section have not been in response to Triennial Review deficiencies. It should be noted that at the time of this writing, GLTC was in the process of completing the 2018 Triennial Review.

5. IMPLEMENTATION PLAN

The implementation plan outlines the steps and improvements needed to support the service enhancements of the transit development plan (TDP). Capital investments in rolling stock, facilities, passenger amenities, and technology will be needed as both lifecycle replacement of existing assets and implementation of new assets. Improvements to the service also will need to be communicated to the community through new branding and marketing.

5.1. Rolling Stock Utilization

An overview of Greater Lynchburg Transit Company's (GLTC's) existing fleet is in **Section 1.6**. GLTC owns a total of 40 vehicles for fixed route service, 13 vehicles for paratransit services, and 13 support vehicles. A portion of GLTC's fixed route bus fleet is dedicated to Liberty University transit service. GLTC uses the state transit asset management plan. Over the 10-year horizon of the TDP, existing vehicles will need to be replaced to maintain a state of good repair and current service levels. Additionally, capital investments will be needed for expansion buses to support service in the mid- and long-term years.

Table 5-1 summarizes the capital actions needed for rolling stock. A detailed table can be found in **Appendix D**.

Table 5-1: Rolling Stock Capital Needs

Action	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Replace										
Bus Fleet	8	12	11	3		4				5
Paratransit Fleet			6			7			6	
Support Vehicle Fleet	1				9	4		1		
Expand										
Bus Fleet				2			4			
Paratransit Fleet										
Support Vehicle Fleet										
Total Vehicles	9	12	17	5	9	15	4	1	6	5
Total Cost ($1000s)	$4,437	$6,864	$7,484	$3,093	$390	$4,092	$2,784	$49	$1,191	$3,914
Bus Fleet	$4,400	$6,864	$6,543	$3,093		$2,677	$2,784			$3,914
Paratransit Fleet			$941			$1,235			$1,191	
Support Vehicle Fleet	$37				$390	$180		$49		

Source: GLTC TDP Implementation Plan, 2018.

5.1.1. Fixed Route Bus Fleet

Over the course of the TDP, GLTC will replace a total of 43 buses and purchase six expansion buses. Capital investment in replacement buses is anticipated primarily in the first six years as most of the fleet was put into service in the late 2000s. GLTC intends to sell and replace retired vehicles with vehicles of a similar size. Expansion bus purchases are anticipated in fiscal year 2022 to support two new routes and in fiscal year 2025 to support headway improvements. Expansion and replacement buses are anticipated to have the following characteristics for compatibility with the existing fleet and maintenance facilities:

- **Type:** Standard bus
- **Length:** 35 feet
- **Wheelchair Capacity:** 2
- **Seating Capacity:** 32
- **Mode of Power:** Diesel
- **Useful Life**: 12 years/500,000 miles

The main mode of power will be diesel, but GLTC will explore electric power in the future. Replacement and expansion bus purchases are assumed to have a unit cost of $550,000 ($ FY 2019) with a 4 percent annual escalation rate.

5.1.2. Paratransit Bus Fleet

Capital investment in replacement vehicles for the paratransit fleet is anticipated in fiscal years 2021, 2024 and 2027. Seven new vehicles were placed into service in 2018 (five replacements and two expansion vehicles). GLTC intends to sell and replace retired vehicles with vehicles of a similar size. Replacement paratransit vehicles are anticipated to have the following characteristics for compatibility with the existing fleet and maintenance facilities:

- **Type:** Medium-duty shuttle bus
- **Length:** 25 feet
- **Wheelchair Capacity:** 2
- **Seating Capacity:** 16
- **Mode of Power:** Gasoline
- **Useful Life**: 5 years/150,000 miles

Replacement paratransit purchases are assumed to have a unit cost of $150,000 ($ FY 2019) with a 4 percent annual escalation rate.

5.1.3. Support Vehicle Fleet

GLTC owns a fleet of support vehicles for operations and maintenance personnel duties. These vehicles will be sold and replaced with similar vehicles at the end of their useful life throughout the TDP years. Replacement support vehicle purchases are assumed to have a unit cost of $37,000 ($ FY 2019) with a 4 percent annual escalation rate.

5.2. Major System Maintenance and Operations Facilities

GLTC opened two major facilities for administration, operation, dispatch, and maintenance in recent years. The Kemper Street Transfer Station was opened in 2014 and the GLTC Operations and Maintenance Facility was opened in 2017. Major improvements are not anticipated for the maintenance facility in the TDP. Additional bus bays at the transfer station may be needed in the long term to support headway improvements since the existing facility is well-used with the existing service plan. Capital investment for two additional bus bays and accompanying passenger amenities (shelter, benches, lighting, etc.) are planned for fiscal year 2025.

Additionally, infrastructure improvements are needed at a new transfer location at or near the River Ridge Mall. GLTC will be considering a partnership with an existing landowner to accommodate this improvement to avoid the resource requirements for land acquisition. Infrastructure improvements

include bus pull-offs, sidewalks, curb ramps, passenger waiting areas, and shelters. This project is planned for fiscal year 2020 to coincide with the short-term service improvements.

Facility capital needs are summarized in **Table 5-2**. Funds have not been secured for either facility improvement project. Cost estimates assume a 3 percent annual escalation rate and 25 percent for professional engineering and construction contingency.

Table 5-2: Facility Capital Needs ($1000s)

Project	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Wards Road Transfer Location Improvements		$148								
Kemper Station Bus Bay Expansion							$223			

Assumptions: Concrete work, two shelters, and six benches at both Wards Road and Kemper Station locations; 3 percent annual escalation.

Source: GLTC TDP Implementation Plan, 2018.

5.3. Passenger Amenities

In addition to the passenger facility improvements at transfer locations described in **Section 5.2**, GLTC is planning to implement passenger amenities to maintain and improve bus stops. GLTC has acquired new bus stop signs, as shown in **Figure 5-1**, to be installed at all bus stops. Installation of these signs will coincide with service improvements and route rebranding recommended in the TDP. Vinyl stickers will be needed to identify routes serving each bus stop. Purchase and implementation is planned for fiscal year 2020.

Figure 5-1: Bus Stop Signs

Region 2000 completed an Americans with Disabilities Act (ADA) bus stop accessibility study that identified ADA compliance rates for bus stop features, such as sidewalk connectivity, curb ramps, crosswalks, and boarding/alighting areas. The following were recommended in the study:

1. Make all GLTC bus stop shelters ADA accessible (12 shelters need upgrade)
2. Make all GLTC bus stop landing pads ADA accessible (250 stops need upgrade)
3. Make all GLTC buses accessible by an ADA accessible sidewalk (286 stops need upgrade)

GLTC plans to work with the City to implement needed upgrades to current bus shelters and stops to improve ADA compliance.

Bus stop shelters are planned for installation at heavily used stop locations throughout the service area, and reconstruction of non-ADA compliant shelters identified in Region 2000's ADA bus stop accessibility study. Twelve bus shelters are planned for fiscal year 2020, 10 are planned for fiscal year 2021, and five are planned for fiscal years 2022, 2025, and 2028 (see **Table 5-3**). Unit costs for bus shelter purchases and installation are estimated at $10,000 each with a 3 percent annual escalation rate.

Table 5-3: Passenger Amenities Capital Needs ($1000s)

Project	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Bus Stop Sign Stickers		$3								
Bus Stop Shelters		$127	$109	$56			$61			$67

Assumptions: Twelve shelters in fiscal year 2020, 10 shelters in 2021, and 5 shelters in 2022, 2025, and 2028 at a 3 percent annual escalation.
Source: GLTC TDP Implementation Plan, 2018.

5.4. New Technology Systems or Upgrades

GLTC has several current and proposed technology system upgrade projects that will enhance operations, expand data collection, and improve the customer experience. Technology capital needs are summarized in **Table 5-4**. Given that technology in the transit industry is evolving, GLTC will continue to evaluate its needs in future updates of the TDP.

Table 5-4: Technology System Capital Needs ($1000s)

Project	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Farebox Upgrade	$1,500									
Real-Time Passenger Information Signs	$384									
CAD/AVL System		$504								

Assumptions: Computer-aided dispatch/automatic vehicle location (CAD/AVL) systems consists of 42 units of on-board hardware, installation costs, fixed route software, passenger information software, 10 percent project management and development, and 10 percent contingency with a 3 percent annual escalation.
Source: GLTC TDP Implementation Plan, 2018.

5.4.1. Fare Collection Improvements

GLTC has a project to replace all electronic fareboxes in the fleet and has already secured Virginia Department of Rail and Public Transportation and Federal Transit Administration grant funding. This project is expected to be implemented in 2019 and will modernize GLTC's fare collection equipment.

5.4.2. Traveler Information Improvements

GLTC has a project to implement digital signage displays to provide bus arrival times to waiting passengers and already has secured Virginia Department of Rail and Public Transportation grant funding. This project is expected to be implemented in 2019. Digital signage displays will be placed at high-priority locations such as the Kemper Street Transfer Station. Additional real-time passenger information

will be implemented with computer-aided dispatch/automatic vehicle location (CAD/AVL) system improvements.

5.4.3. CAD/AVL System

GLTC plans to implement CAD/AVL to better manage dispatch of fixed route service. Currently, vehicle location is available through an existing system, but the system does not have dispatch functionalities. Public outreach conducted during the TDP process found that customers desire more user-friendly information on how to use the service and when the bus will arrive. Implementation of a CAD/AVL system would improve the efficiency of GLTC operations and provide more effective information to customers on bus arrivals.

The CAD/AVL improvements include in-vehicle hardware, fixed route CAD/AVL software, real-time passenger information software, and a smartphone application. Implementation is planned for fiscal year 2020. The cost estimate was derived from similar project cost estimates of other transit systems in Virginia and includes hardware and software costs, installation costs, and 20 percent for project management, development, and contingency with a 3 percent annual escalation rate.

5.5. Marketing and Branding

GLTC plans to rebrand its route numbers as part of the implementation of the service improvements in the TDP. Rebranding the routes will give the system a new feel and make service changes easier to understand for customers, especially for routes with significant alignment changes. Changes to website, route maps, and brochures will be needed in fiscal year 2020. Additional schedule brochure updates will be needed in fiscal year 2022 with the addition of two new routes. A summary of needs for marketing and branding is provided in **Table 5-5**.

Table 5-5: Marketing and Branding Capital Needs ($1000s)

Project	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Website Upgrade		$11								
System Map and Schedule Brochures		$13		$2						

Source: GLTC TDP Implementation Plan, 2018.

While not included in the capital improvement needs, GLTC will need additional marketing efforts to publicize and educate the community on service improvements. The community outreach conducted during the TDP process found that marketing campaigns are needed to increase awareness of the service. These marketing messages should be targeted towards specific customer groups such as students, business patrons, and regular system users. Marketing should emphasize the alternative travel options and connections provided by GLTC and aim to improve the perception of the service.

Table 5-6 provides a summary of all anticipated capital need by fiscal year.

Table 5-6: Summary of Anticipated Capital Needs ($1000s)

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Vehicle Costs										
Bus Fleet	$4,400	$6,864	$6,543	$3,093	$0	$2,677	$2,784	$0	$0	$3,914
Paratransit Fleet	$0	$0	$941	$0	$0	$1,235	$0	$0	$1,191	$0
Support Vehicle Fleet	$37	$0	$0	$0	$390	$180	$0	$49	$0	$0
Total Vehicle Costs	**$4,437**	**$6,864**	**$7,484**	**$3,093**	**$390**	**$4,092**	**$2,784**	**$49**	**$1,191**	**$3,914**
Other Capital Costs										
Facilities										
Wards Road Transfer Location Improvements	-	$148	-	-	-	-	-	-	-	-
Kemper Station Bus Bay Expansion	-	-	-	-	-	-	$223	-	-	-
Passenger Amenities	-	-	-	-	-	-	-	-	-	-
Bus Stop Sign Stickers	-	$3	-	-	-	-	-	-	-	-
Bus Stop Shelters	-	$127	$109	$56	-	-	$61	-	-	$67
Technology	-	-	-	-	-	-	-	-	-	-
Farebox Upgrade	$1,500	-	-	-	-	-	-	-	-	-
Real-Time Passenger Information Signs	$384	-	-	-	-	-	-	-	-	-
CAD/AVL System	-	$504	-	-	-	-	-	-	-	-
Marketing		-	-	-	-	-	-	-	-	-
Website Upgrade	-	$11	-	-	-	-	-	-	-	-
System Map and Schedule Brochures	-	$13	-	$2	-	-	-	-	-	-
Total Other Capital Costs	**$1,884**	**$805**	**$109**	**$58**	**$0**	**$0**	**$285**	**$0**	**$0**	**$67**
Total Vehicle and Other Capital Costs	**$6,321**	**$ 7,669**	**$7,593**	**$3,151**	**$390**	**$4,092**	**$3,069**	**$49**	**$1,191**	**$3,981**

Notes: CAD/AVL = Computer-aided dispatch/automatic vehicle location.

1. All costs are in year of expenditure dollars.

Source: GLTC TDP Implementation Plan, 2018.

6. FINANCIAL PLAN

The purpose of the financial plan portion of the transit development plan (TDP) is to construct a reasonable projection of Greater Lynchburg Transit Company's (GLTC's) operating and capital funding sources over the next 10 fiscal years. Financial figures are estimated based on the most up to date available data provided by GLTC and the Virginia Department of Rail and Public Transportation, with projections that use standard escalation rates and figures from the six-year improvement plan (SYIP). It is important to note that, as with any projection, the degree of uncertainty increases for every additional year into the future. The financial plan section of this TDP is divided into three sections: operating and maintenance costs and funding sources; bus purchases and funding sources; and facility improvement costs and funding sources. While this section focuses on the future, a 3-year retrospective of operating and capitals expenses and revenues is contained in **Appendix E**, along with the most recent GLTC financial audit.

6.1. Operating and Maintenance Costs and Funding Sources

The fiscal year 2018 budget is used here as a baseline for creating revenue and expense projections over a 10-year period of the TDP. From 2018 to 2028, annual operating expenses are anticipated to increase from $9,114,000 to $12,249,000 (an increase of about $3,135,000) due to inflation alone. Optional service expansion detailed in **Section 4** would increase the fiscal year 2028 annual operating costs from $12,249,000 to about $15,536,000, an increase of $3,287,000 (all in fiscal year 2028 dollars).

Transit operating revenues are categorized into the following:

- Federal
- State
- Local
- Farebox
- Advertising
- Other Income

The three most recent financial reports completed by independent auditors show that, on average, the federal operating revenues account for about 24 percent of the total operating expenses. Therefore, while the base year value is from the 2017 SYIP, each of the future years is anticipated to make up 24 percent of the total operating expenses throughout the life span of the TDP.

State operating assistance funds for all transit systems in Virginia were obtained for fiscal year 2018 through 2023 from the 2017 SYIP. Changes in total operating assistance funds were calculated on a year-by-year basis and shown in **Table 6-1**. For fiscal years 2019-2023, the annual change in total state operating assistance was applied to the previous fiscal year to approximate the available operating revenues to GLTC from the state. For fiscal years 2024-2028, the average rate change from fiscal years 2018-2023 was used to estimate operating revenues.

Table 6-1: State Operating Assistance Rate Change

Year	Annual Increase/Decrease
FY18 to FY19	-1.23%
FY19 to FY20	0.02%
FY20 to FY21	1.50%
FY21 to FY22	2.43%
FY22 to FY23	1.58%

Note: FY = Fiscal year.
Source: GLTC TDP Financial Plan, 2018.

It is important to note that these figures could vary in the future, as the exact amount of funding will depend on several factors, including a performance evaluation. Since the completion of the previous TDP, the state operating assistance formula has changed via Senate Bill 1140 that separates funding allocation into two categories: traditional and performance-based. The traditional category uses the method that has been in place since 1987, where each system receives an allocation based on ratio of their operating costs to the total operating costs for all transit providers that receive state assistance. The traditional method is used for the first $160 million in state funding, after which, the newer performance-based method goes into effect. The performance-based state funding formula uses net cost per passenger (50 percent), customers per revenue hour (25 percent), and customers per revenue mile (25 percent). Beginning fiscal year 2020, state funding will be 100 percent performance-based.

Federal, state, and other anticipated funding sources for operating and maintenance costs are summarized in **Table 6-2** and **Table 6-3**. **Table 6-2** shows revenues based on the assumption of no changes to the existing system, evidenced by revenue hours held constant through fiscal year 2028. The total operating costs, however, increase with the assumed inflation rate of 3 percent each year. Farebox revenues are expected to remain constant with no plans for additional services and no increase in fares. Contract service is projected to remain the same without concrete information on future changes. Advertising and other income are projected to increase modestly with the assumed inflation rate of 3 percent. Overall, the anticipated local funding need will grow from $2,028,000 to $4,244,000 over 10 years in year of expenditure dollars, a net increase of $2,216,000.

Alternatively, **Table 6-3** shows the requirements given the service changes from **Section 4** take place. The annual revenue hours increase from 108,000 to 147,000 over the 10-year span of the TDP, incurring a rise in total operating costs from $9,114,000 to $15,536,000. The additional funding is projected to come from a variety of sources, also shown in **Table 6-3**. Farebox revenues increase with the additional revenue miles estimated in the **Section 4** service plans. By fiscal year 2028, farebox revenues are expected to increase to about $1,299,000 annually because of the service expansion projects. This equates to an additional $399,000 in fares over the baseline scenario with no service changes in **Table 6-2**. However, the additional projects also increase the estimated local contribution necessary. In 2018, the local requirement for operating and maintenance is approximately $2,028,000, but in fiscal year 2028, the local requirement increases to $6,343,000, assuming GLTC proceeds with all of the projects in the service expansion plans.

Table 6-4 shows operating and maintenance expenses for both the existing system as well as the service plans changes in **Section 4**. Changes that require additional revenue hours (and as a result additional operating costs) first appear in fiscal year 2022; previous year changes do not require any additional revenue hours. By year 2028, the proposed system requires 146,604 revenue hours, an increase of 38,805 revenue hours per year over the existing system requirements. The associated costs with the service additions are about $3,287,000 in year of expenditure dollars.

Table 6-2: Operating and Maintenance Revenues No Service Changes ($1000s)

Fiscal Year	FY18 (Base Year)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Revenue Hours	108,000	108,000	108,000	108,000	108,000	108,000	108,000	108,000	108,000	108,000	108,000
Total Operating Cost (YOE$)	$9,114	$9,388	$9,669	$9,959	$10,258	$10,566	$10,883	$11,209	$11,546	$11,892	$12,249
Required Additional Local Dollars (YOE$)	-	$175	$324	$452	$570	$705	$858	$1,015	$1,178	$1,346	$1,519
Expected Revenue Sources											
Farebox	$900	$900	$900	$900	$900	$900	$900	$900	$900	$900	$900
Contract Service	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232
Advertising	$65	$67	$69	$71	$73	$75	$78	$80	$82	$85	$87
Federal	$2,197	$2,253	$2,321	$2,390	$2,462	$2,536	$2,612	$2,690	$2,771	$2,854	$2,940
State	$1,682	$1,661	$1,662	$1,687	$1,728	$1,755	$1,770	$1,785	$1,801	$1,816	$1,832
Other Income	$11	$11	$11	$12	$12	$12	$13	$13	$14	$14	$14
Local	$2,028	$2,264	$2,475	$2,668	$2,852	$3,056	$3,279	$3,509	$3,747	$3,992	$4,244

Note: YOE = Year of expenditure.

1. Revenue hours remain constant under no service changes scenario.
2. Fiscal year 2018 operation and maintenance (O&M) costs based on 2017 SYIP. Fiscal years 2019-2028 O&M costs based on 3 percent inflation rate.
3. State funding levels for fiscal year 2018 are from 2017 SYIP, after which growth is assumed consistent with DRPT's SYIP (2019 = -1.23 percent, 2020 = 0.02percent, 2021 = 1.5 percent, 2022 = 2.43 percent, 2023 = 1.58 percent); fiscal years 2024-2028 are assumed to be the average of annual growth from fiscal years 2019-2023).
4. State funding identified in this table are projections and subject to change.
5. Federal funding reflects 24 percent of total operating expenses.
6. Fare box revenues assumed to remain constant.
7. Advertising and other income assumed to increase at the rate of inflation (3 percent).
8. Local funding captures remaining amount of funds required.

Source: GLTC TDP Financial Plan, 2018.

Table 6-3: Operating and Maintenance Revenues Service Plans ($1000s)

Fiscal Year	FY18 (Base Year)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Revenue Hours	108,000	108,000	108,000	108,000	116,000	126,000	130,000	147,000	147,000	147,000	147,000
Total	$9,114	$9,388	$9,669	$9,959	$10,977	$11,501	$12,166	$14,217	$14,644	$15,083	$15,536
Required Additional Local Dollars (YOE$)	-	$175	$178	$307	$913	$1,201	$1,596	$2,902	$3,133	$3,372	$3,618
Expected Revenue Sources											
Farebox	$900	$900	$1,045	$1,045	$1,102	$1,115	$1,136	$1,299	$1,299	$1,299	$1,299
Contract Service	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232	$2,232
Advertising	$65	$67	$69	$71	$73	$75	$78	$80	$82	$85	$87
Federal	$2,197	$2,253	$2,321	$2,390	$2,634	$2,760	$2,920	$3,412	$3,515	$3,620	$3,729
State	$1,682	$1,661	$1,662	$1,687	$1,728	$1,755	$1,770	$1,785	$1,801	$1,816	$1,832
Other Income	$11	$11	$11	$12	$12	$12	$13	$13	$14	$14	$14
Local (Required)	$2,028	$2,264	$2,329	$2,523	$3,195	$3,551	$4,018	$5,396	$5,702	$6,018	$6,343

Note: YOE = Year of expenditure.

1. Revenue hours increase based on service plans described in Section 4.
2. Fiscal year 2018 operation and maintenance (O&M) costs based on 2017 SYIP. Fiscal years 2019-2028 O&M costs based on 3 percent inflation rate.
3. State funding levels for FY 2018 are from 2017 SYIP, after which growth is assumed consistent with DRPT's SYIP (2019 = -1.23 percent, 2020 = 0.02 percent 2021 = 1.5 percent 2022 = 2.43 percent 2023 = 1.58 percent); fiscal years 2024-2028 are assumed to be the average of annual growth from fiscal years 2019-2023).
4. State funding identified in this table are projections and subject to change.
5. Federal funding reflects 24 percent of total operating expenses.
6. Fare box revenues assumed to increase based on increasing revenue miles outlined in Section 4.
7. Advertising and Other Income assumed to increase at the rate of inflation (3 percent).
8. Local funding captures remaining amount of funds required.

Source: GLTC TDP Financial Plan, 2018.

Table 6-4: Operating and Maintenance Revenues Service Plans ($1000s)

Fiscal Year	FY18 (Base Year)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing System											
Fixed Route Revenue Hours	90,195	90,195	90,195	90,195	90,195	90,195	90,195	90,195	90,195	90,195	90,195
Paratransit Revenue Hours	17,604	17,604	17,604	17,604	17,604	17,604	17,604	17,604	17,604	17,604	17,604
Existing Operating Costs (in YOE$)	$9,114	$9,388	$9,669	$9,959	$10,258	$10,566	$10,883	$11,209	$11,546	$11,892	$12,249
Service Additions											
Additional Revenue Hours (yearly improvement)					7,904	10,618	3,315	16,968			
Additional Operating Cost (yearly improvement by YOE$)					$719	$195	$320	$1,686			
Cumulative Fixed Route Operating Costs (in YOE$)					$719	$935	$1,283	$3,008	$3,098	$3,191	$3,287
Totals											
Total Revenue Hours	107,799	107,799	107,799	107,799	115,703	126,321	129,636	146,604	146,604	146,604	146,604
Total Operating Costs (YOE$)	$9,114	$9,388	$9,669	$9,959	$10,977	$11,501	$12,166	$14,217	$14,644	$15,083	$15,536

Note: YOE = Year of expenditure.

1. Costs are stated in year of expenditure dollars, with the assumed escalation factor of 3 percent per year.
2. Annual revenue hours include city routes, Liberty University routes, and paratransit routes.
3. Operational changes include only the changes that incur additional operational costs.

Source: GLTC TDP Financial Plan, 2018.

6.2. Bus Purchase Costs and Funding Sources

The **Section 5** implementation plan includes the vehicle replacement and expansion program, which in turn is used here to create the financial plan for funding bus purchases, as shown in **Table 6-5**. The replacement schedule calls for new vehicles every year, with anywhere between 1 and 17 vehicles in any given year. The greatest number of vehicles is expected in fiscal year 2021, where there is a need for 11 buses and 6 paratransit vehicles, yielding an estimated $7,484,000 in capital costs. On average, capital costs from vehicle acquisition are about $3.4 million annually.

Funding vehicle purchase costs is expected to come from three sources: federal, state, and local. The composition of funding sources, in terms of percentages, is based on the distribution in the 2018 SYIP with 80 percent coming from federal, 16 percent coming from state, and the remaining 4 percent coming from local funds. As such, funding amounts by source increase and decrease based on the anticipated need for vehicle replacement in **Section 5**. It is important to note that the state capital funding method is transitioning to a prioritization process based on three tiers: state of good repair, minor enhancement, and major expansion. The specific language for this process is still being configured however, and therefore cannot be fully incorporated into the current TDP.

Table 6-5: Financial Plan for Funding Bus Purchases ($1000s)

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Vehicle Costs										
Bus Fleet	$4,400	$6,864	$6,543	$3,093	$0	$2,677	$2,784	$0	$0	$3,914
Paratransit Fleet	$0	$0	$941	$0	$0	$1,235	$0	$0	$1,191	$0
Support Vehicle Fleet	$37	$0	$0	$0	$390	$180	$0	$49	$0	$0
Total Vehicle Costs	$4,437	$6,864	$7,484	$3,093	$390	$4,092	$2,784	$49	$1,191	$3,914
Anticipated Funding Sources										
Federal	$3,550	$5,491	$5,988	$2,475	$312	$3,273	$2,227	$39	$953	$3,131
State	$710	$1,098	$1,198	$495	$62	$655	$445	$8	$191	$626
Local	$177	$275	$299	$124	$16	$164	$111	$2	$48	$157

1. Facility improvement costs identified in Section 5 of TDP.
2. Buses purchases assume 80 percent funding through Federal Transit Administration (Section 5339 program and/or flexible state transportation plan), 16 percent funding from state, and the remaining 4 percent funding from local government.
3. All costs are in year of expenditure dollars.

Source: GLTC TDP Financial Plan, 2018.

6.3. Facility Improvement and Other Capital Costs and Funding Sources

In addition to vehicle procurement, GLTC will have a variety of other costs related to capital expenses such as facilities, passenger amenities, technology, and marketing. **Table 6-6** shows a year-by-year breakdown of the anticipated costs detailed in **Section 5** paired with funding amounts and sources. Most of the funding requirements occur within the first two years of the TDP life cycle. In fiscal year 2018, $1,500,000 in farebox upgrades drives the total costs to approximately $1,884,000. In fiscal year 2019, the Wards Road transfer location improvement, bus stop shelters, and computer-aided dispatch/automatic vehicle location (CAD/AVL) technology improvements make up the majority of about $805,000 of total annual costs. After fiscal year 2019, however, five of the remaining eight years do not have any major anticipated capital costs in these categories.

Like vehicle costs, the facility improvements and other capital costs are covered by a combination of federal, state, and local sources. Also, like vehicle costs, the funding is expected to remain at the current split of 80 percent federal, 16 percent state, and the remaining 4 percent from local sources.

Table 6-6: Financial Plan for Funding Facility Improvement and Other Capital Costs ($1000s)

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Anticipated Costs										
Facilities										
Wards Road Transfer Location Improvements	-	$148	-	-	-	-	-	-	-	-
Kemper Station Bus Bay Expansion	-	-	-	-	-	-	$223	-	-	-
Passenger Amenities	-	-	-	-	-	-	-	-	-	-
Bus Stop Sign Stickers	-	$3	-	-	-	-	-	-	-	-
Bus Stop Shelters	-	$127	$109	$56	-	-	$61	-	-	$67
Technology	-	-	-	-	-	-	-	-	-	-
Farebox Upgrade	$1,500	-	-	-	-	-	-	-	-	-
Real-Time Passenger Information Signs	$384	-	-	-	-	-	-	-	-	-
CAD/AVL System	-	$504	-	-	-	-	-	-	-	-
Marketing		-	-	-	-	-	-	-	-	-
Website Upgrade	-	$11	-	-	-	-	-	-	-	-
System Map and Schedule Brochures	-	$13	-	$2	-	-	-	-	-	-
Total Costs	$1,884	$805	$109	$58	$0	$0	$285	$0	$0	$67
Anticipated Funding Sources										
Federal	$1,507	$644	$0	$46	$0	$0	$228	$0	$0	$54
State	$301	$129	$0	$9	$0	$0	$46	$0	$0	$11
Local	$75	$32	$0	$2	$0	$0	$11	$0	$0	$3

Notes: CAD/AVL = Computer-aided dispatch/automatic vehicle location.

1. Facility improvement costs identified in Section 5 of TDP.
2. Bus purchases assume 80 percent funding through Federal Transit Administration (Section 5339 program and/or flexible state transportation plan), 16 percent funding from state, and the remaining 4 percent funding from local government.
3. All costs are in year of expenditure dollars.

Source: GLTC TDP Financial Plan, 2018.

Appendix A. Title VI Program

Greater Lynchburg Transit Company (GLTC)

TITLE VI

NOTICE TO THE PUBLIC

The Greater Lynchburg Transit Company (GLTC) hereby gives public notice that it is GLTC's policy to assure full compliance with the Title VI of the Civil Rights Act of 1964, FTA Circular 4702.1A, and related statues and regulations in all programs and activities. Title VI requires that no person shall, on the grounds of race, color, sex, or national origin be excluded from the participation in, be denied the benefits of, or be denied the benefits of, or be otherwise subjected to discrimination under any Federal Transit Administration (FTA) program or other activity for which GLTC receives Federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with FTA. Any such complaint must be in writing and filed with the FTA Civil Rights Office within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. Title VI Discrimination Complaint Forms may be obtained from GLTC's Civil Rights Officer at 434-455-5082. Anyone wishing to learn more about Title VI and other Civil Rights Act protections can contact GLTC at the above phone number.

For more information on the GLTC's civil rights program, and the procedures to file a complaint, contact 434-455-5082, or visit our administrative office at 419 Bradley Drive, Lynchburg VA 24506.

A complainant may file a complaint directly with the Federal Transit Administration by filing a complaint with the Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590

If Information is needed in another language, contact 434-455-5082.

Appendix B. Public Outreach Survey

GLTC Transit Development Plan

Help Us Plan Better Public Transit in Lynchburg

Greater Lynchburg Transit Company (GLTC) is creating a transit development plan for enhancing services over the next 10 years. We want your input whether you are a current rider, past rider, and even if you haven't ridden the bus yet!

- GLTC provides bus and paratransit service in Lynchburg, Madison Heights, and Liberty University
- Transit development plans help transit operators improve their efficiency and effectiveness
- All public transit agencies in Virginia prepare and adopt a transit development plan
- The results of this survey will influence changes made by GLTC

Please submit your survey by October 31, 2017. See page 5 for submission options.

After completing the survey, you may enter a raffle for a chance to win a $5 Walmart or Starbucks gift card.

PRIORITIES *Tell Us What You Value*

While there are many great ideas to improve the service, GLTC operates on a limited budget. If you had $100 to invest in transit in Lynchburg, how would you do it?

Add tally marks to invest in the categories you prefer.
One tally mark equals $10 (please limit your responses to a maximum of 10 tally marks).

More frequent service

More frequent service Running more buses per hour on existing routes

Tally:

Extended weekday hours

Extended weekday hours Bus service earlier or later in the day during the week than what currently exists

Tally:

Extended weekend hours

Extended weekend hours Bus service earlier or later in the day during the weekends than what currently exists

Tally:

More direct bus service

More direct bus service Bus service that allows you to access local or regional destinations using a shorter route or route with fewer stops

Tally:

Stop and station amenities

Stop and station amenities Bus stop or station amenities, such as shelters, benches, trash cans, and route information

Tally:

Real-time info on bus arrival

Real-time info on bus arrival Real-time information on when your bus will arrive via mobile apps, mobile web page, or information displays at stops/stations.

Tally:

Bicycle and pedestrian enhancements

Bicycle and pedestrian enhancements Improvements to make accessing the bus via walking or biking more safe and comfortable (bike racks at stops, bike racks on buses, crosswalks near stops)

Tally:

Lower fares

Lower fares More subsidized fares to reduce the cost to the users

Tally:

Survey continues on next page.

TYPICAL TRAVEL

Tell Us About Your Trips

Please tell us about the trips you make most frequently. Fill in the address, nearest intersection, or name of a business in the boxes that apply to you, and leave a check mark next to the answers of the additional questions.

Home

List the address below

Work

List the address or business below

What is your primary travel mode?

- ☐ Bus
- ☐ Bike
- ☐ Drive
- ☐ Taxi
- ☐ I Get Dropped Off
- ☐ Uber/Lyft
- ☐ Walk

If GLTC improved service here:

- ☐ I would make this trip by bus
- ☐ I would ***not*** make this trip by bus

School

List the address or school below

What is your primary travel mode?

- ☐ Bus
- ☐ Bike
- ☐ Drive
- ☐ Taxi
- ☐ I Get Dropped Off
- ☐ Uber/Lyft
- ☐ Walk

If GLTC improved service here:

- ☐ I would make this trip by bus
- ☐ I would ***not*** make this trip by bus

Medical

List the address or business below

What is your primary travel mode?

- ☐ Bus
- ☐ Bike
- ☐ Drive
- ☐ Taxi
- ☐ I Get Dropped Off
- ☐ Uber/Lyft
- ☐ Walk

If GLTC improved service here:

- ☐ I would make this trip by bus
- ☐ I would ***not*** make this trip by bus

Shopping

List the address or business below

What is your primary travel mode?

- ☐ Bus
- ☐ Bike
- ☐ Drive
- ☐ Taxi
- ☐ I Get Dropped Off
- ☐ Uber/Lyft
- ☐ Walk

If GLTC improved service here:

- ☐ I would make this trip by bus
- ☐ I would ***not*** make this trip by bus

Other

List the address or business below

What is your primary travel mode?

- ☐ Bus
- ☐ Bike
- ☐ Drive
- ☐ Taxi
- ☐ I Get Dropped Off
- ☐ Uber/Lyft
- ☐ Walk

If GLTC improved service here:

- ☐ I would make this trip by bus
- ☐ I would ***not*** make this trip by bus

Survey continues on next page.

GLTC EXPERIENCE *Tell Us About Your Experience*

Tell us about your experience with GLTC—whether you ride the bus often, ride the bus less often, or do not use the service.

Please fill in the following section(s) that you most closely identify with.

- I Ride the Bus Often – please answer the questions below
- I Ride the Bus Less Often – please skip to page 4
- I Don't Ride the Bus – please skip to page 4

Complete This Section if You Ride the Bus Often

How frequently do you ride the bus? (Choose one.)

- ☐ 4 or more days a week
- ☐ 2-3 days a week
- ☐ 1 day a week
- ☐ Once or twice a month
- ☐ Less than once a month

Why do you ride the bus? (Check all that apply.)

- ☐ To save money
- ☐ To save or better utilize time
- ☐ It's a safer way to travel
- ☐ Less stressful
- ☐ I don't have a car
- ☐ Difficult or expensive to park
- ☐ Disabled/unable to drive

Thinking about your most frequent trip using the bus, which route do you take? (Choose one.)

- ☐ 1A/1B
- ☐ 2
- ☐ 3A
- ☐ 3B
- ☐ 4A
- ☐ 4B
- ☐ 4X
- ☐ 5X
- ☐ 6
- ☐ 7
- ☐ 6/7
- ☐ 8A/8B
- ☐ 9
- ☐ 10
- ☐ The Hopper
- ☐ Paratransit Service
- ☐ Liberty Service

How do you get to the bus? (Choose one.)

- ☐ Walk
- ☐ I Get Dropped Off
- ☐ Bike
- ☐ Drive

Where do you typically begin your trip? (Choose one.)

- ☐ Home
- ☐ Work
- ☐ Shopping
- ☐ School (K-12)
- ☐ College/University
- ☐ Medical
- ☐ Service Agency
- ☐ Social/Recreation
- ☐ Other _____

Where do you typically end the trip? (Choose one.)

- ☐ Home
- ☐ Work
- ☐ Shopping
- ☐ School (K-12)
- ☐ College/University
- ☐ Medical
- ☐ Service Agency
- ☐ Social/Recreation
- ☐ Other _____

If you ride the bus less often than you used to, skip to page 4, otherwise skip to page 5 to complete the wrap-up section.

Complete This Section if You Ride the Bus Less Often Than You Used To

If you ride the bus less often than you used to, why is this? (Select all that apply.)

- ☐ Gas has become cheaper
- ☐ I prefer to drive
- ☐ I get a ride from a friend
- ☐ I use other travel modes (walking, biking, Uber/Lyft, taxi)
- ☐ Transfer Center was relocated
- ☐ Fare changes
- ☐ Weekend service reduced
- ☐ Evening service reduced
- ☐ Other _____
- ☐ Not applicable

What could GLTC do to encourage you to ride the bus more often?

Please skip to page 5 to complete the wrap-up section.

Complete This Section if You Do Not Ride the Bus

Why do you currently not ride the bus? (Select all that apply.)

- ☐ It doesn't go where I need it to
- ☐ It takes too long or isn't frequent enough
- ☐ I didn't know the service existed
- ☐ I don't know how to use the service
- ☐ I need a car because my schedule varies a lot
- ☐ I prefer to drive
- ☐ I prefer to use other travel modes (walking, biking, Uber/Lyft, taxi)
- ☐ Cost
- ☐ Other _____
- ☐ Not applicable

What could GLTC do to attract you to use public transit?

Survey continues on next page.

WRAP UP *Tell Us About Yourself*

Thank you for your input! Please answer a few optional questions below to help us understand your input better. Your private information will be kept private, and you will automatically enter you into our drawing for a $5 Walmart or Starbucks gift card.

Are you a student?

- ☐ No
- ☐ Yes - Liberty University
- ☐ Yes - Lynchburg College
- ☐ Yes - Randolph College
- ☐ Yes - Central Virginia Community College
- ☐ Yes - K-12
- ☐ Yes - Other _____

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to say

What is your age?

- ☐ 19 or under
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60 or older
- ☐ Prefer not to say

What is your household's total annual income?

- ☐ Under $15,000
- ☐ $15,001-$30,000
- ☐ $30,001-$45,000
- ☐ $45,001-$60,000
- ☐ $60,001-$75,000
- ☐ Over $75,000
- ☐ Prefer not to say

How many vehicles are available in your household? (If you are a student living away from home, answer for yourself only.)

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4 or more

Please provide your email address
(to be entered into the raffle for a $5 Walmart or Starbucks gift card)

Please submit your completed survey by October 31, 2017.

Drop-Off Locations:

GLTC Transfer Station
800 Kemper Street
Lynchburg, VA 24501

Lynchburg Public Library
2315 Memorial Avenue
Lynchburg, VA 24501

By Mail:

GLTC – Marketing Department
P.O. Box 11286
Lynchburg, VA 24506

Detailed Survey Results

Rider Experience

Additional data on riders who identified as frequent users of the system are included in the tables below. Results are segmented by overall responses, those that frequently use Liberty University routes, and those that use City of Lynchburg routes.

Which route do you frequently take?

Response	Count	%
Liberty University Service	261	52.52%
1A/1B	51	10.26%
4A	28	5.63%
3B	27	5.43%
4B	24	4.83%
3A	20	4.02%
2	19	3.82%
8A/8B	19	3.82%
6/7 Loop	16	3.22%
6	7	1.41%
The Hopper	6	1.21%
7	5	1.01%
4X	4	0.80%
5X	4	0.80%
Paratransit Service	3	0.60%
10	2	0.40%
9	1	0.20%

How frequently do you ride the bus?

Response	Overall	City Routes	LU Routes
4 or more days a week	61%	59%	64%
2-3 days a week	21%	18%	25%
Less than once a month	8%	11%	4%
1 day a week	5%	5%	5%
Once or twice a month	5%	7%	2%

Why do you ride the bus?

Response	Overall	City Routes	LU Routes
I don't have a car	33%	40%	26%
To save or better utilize time	20%	10%	30%
To save money	13%	18%	8%
It's difficult or expensive to park	11%	6%	16%
It's less stressful	10%	10%	10%
It's a safer way to travel	9%	9%	9%
I'm disabled or unable to drive	4%	7%	1%

How do you get to the bus?

Access Mode	Overall	City Routes	LU Routes
Walk	91%	94%	88%
Drive	6%	2%	11%
I Get Dropped Off	2%	3%	1%
Bike	1%	1%	0%

Typical Origin

Response	Overall	City Routes	LU Routes
Home	51%	76%	25%
College/University	41%	12%	72%
Work	3%	6%	1%
Other	2%	2%	1%
School (K-12)	1%	1%	1%
Medical	1%	1%	0%
Shopping	1%	1%	0%
Social/Recreation	0%	1%	0%
Service Agency	0%	0%	0%

Typical Destination

Response	Overall	City Routes	LU Routes
College/University	48%	18%	80%
Home	19%	28%	9%
Work	17%	30%	4%
Shopping	7%	13%	1%
Other	5%	7%	2%
Social/Recreation	2%	2%	3%
Medical	1%	2%	0%
School (K-12)	1%	1%	1%
Service Agency	0%	1%	0%

Travel Patterns

The survey identified respondents' travel patterns including home and frequent destination locations. This also included information on the purpose and mode of the trip. For trips that are frequently made on modes other than bus, respondents were asked if they would consider taking the bus for that trip if service was improved to that area.

Home and destination locations were clustered to block groups, and frequent origin-destination pairs were identified. The following maps are provided below:

- Frequent bus trips (all respondents)
- Frequent bus trips (excluding Liberty University respondents)
- Potential bus trips (all respondents) – would consider taking the bus for trip if service was improved

Figure B-1: Frequent Trips by Bus

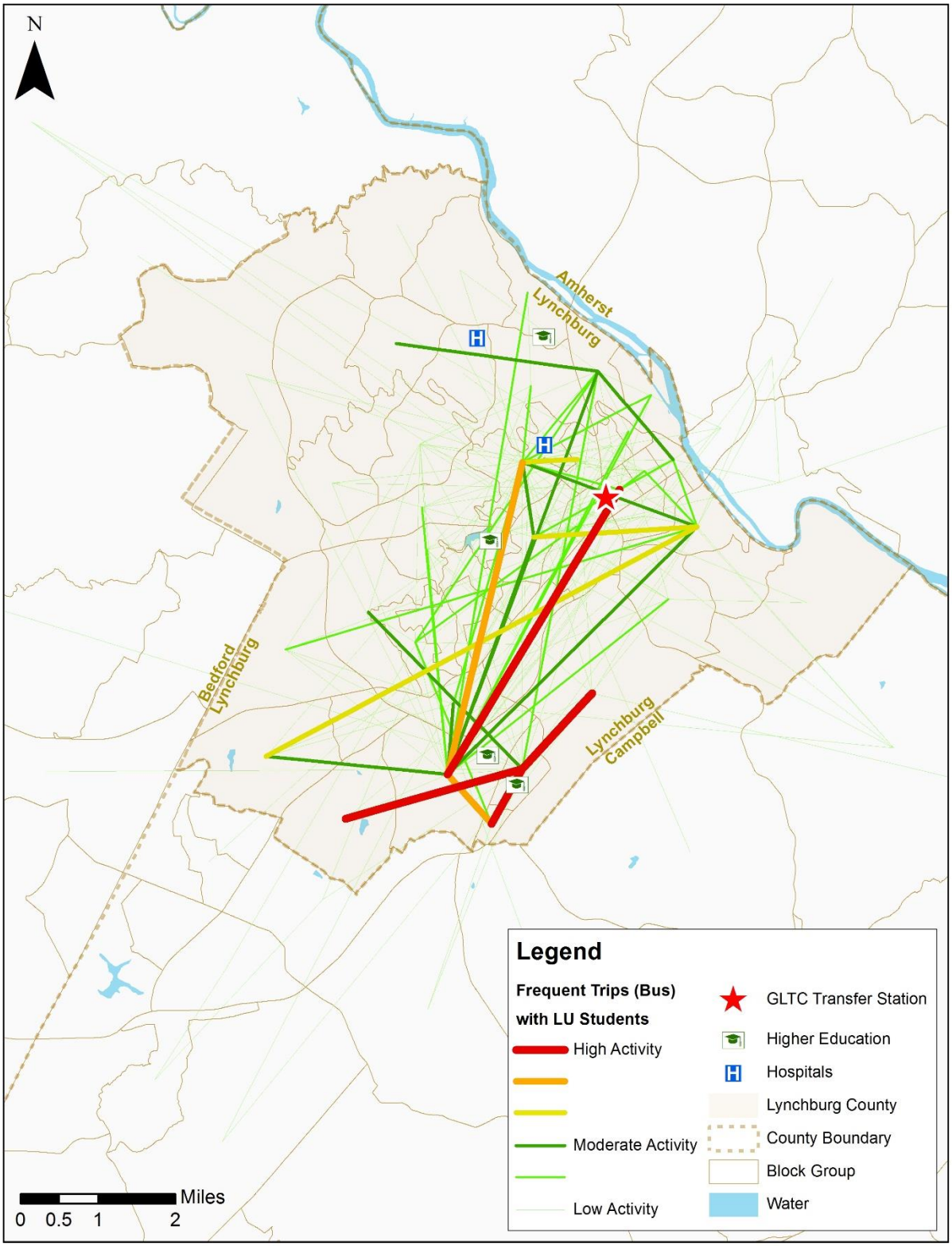


Figure B-2: Frequent Trips by Bus (Liberty University Trips Excluded)

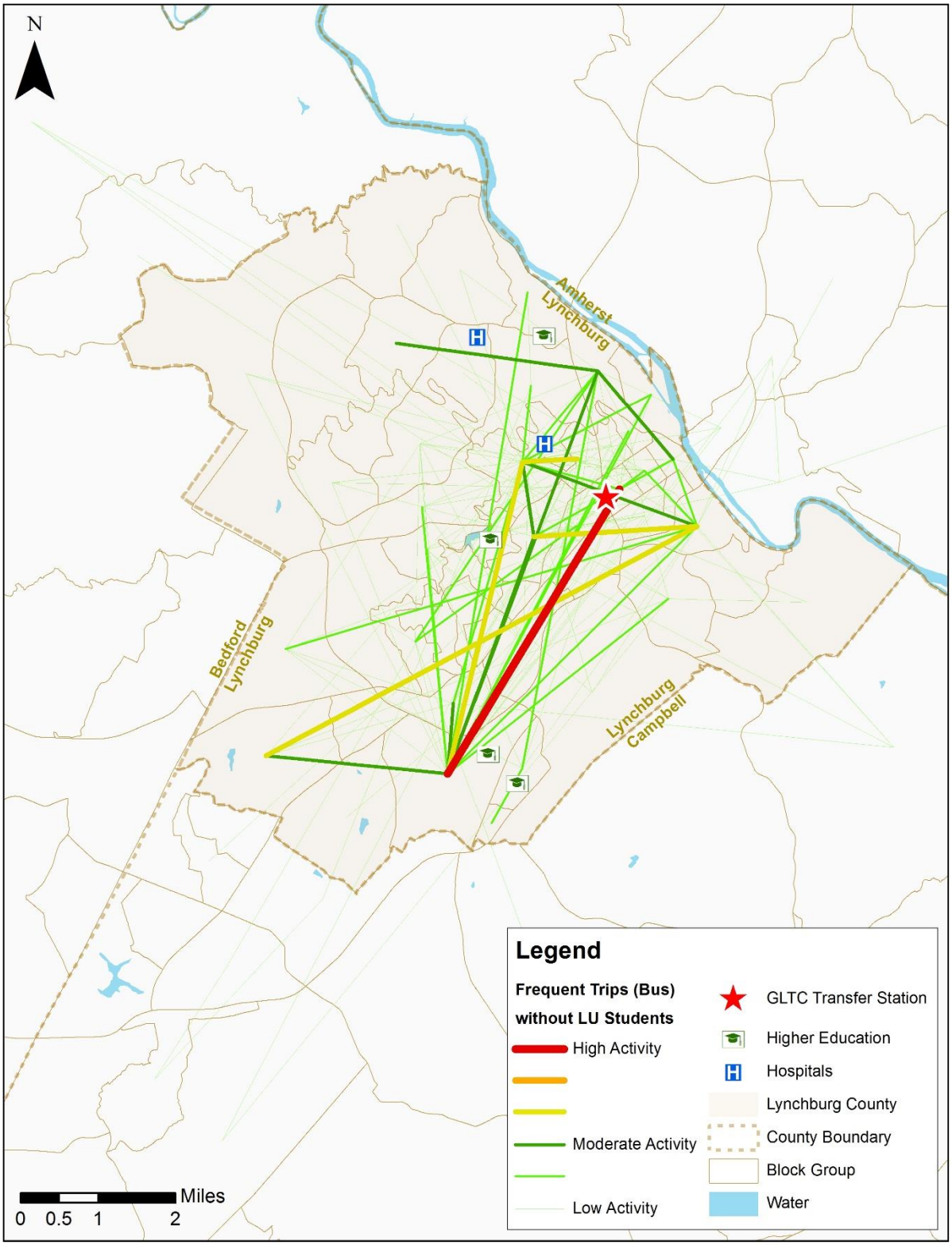
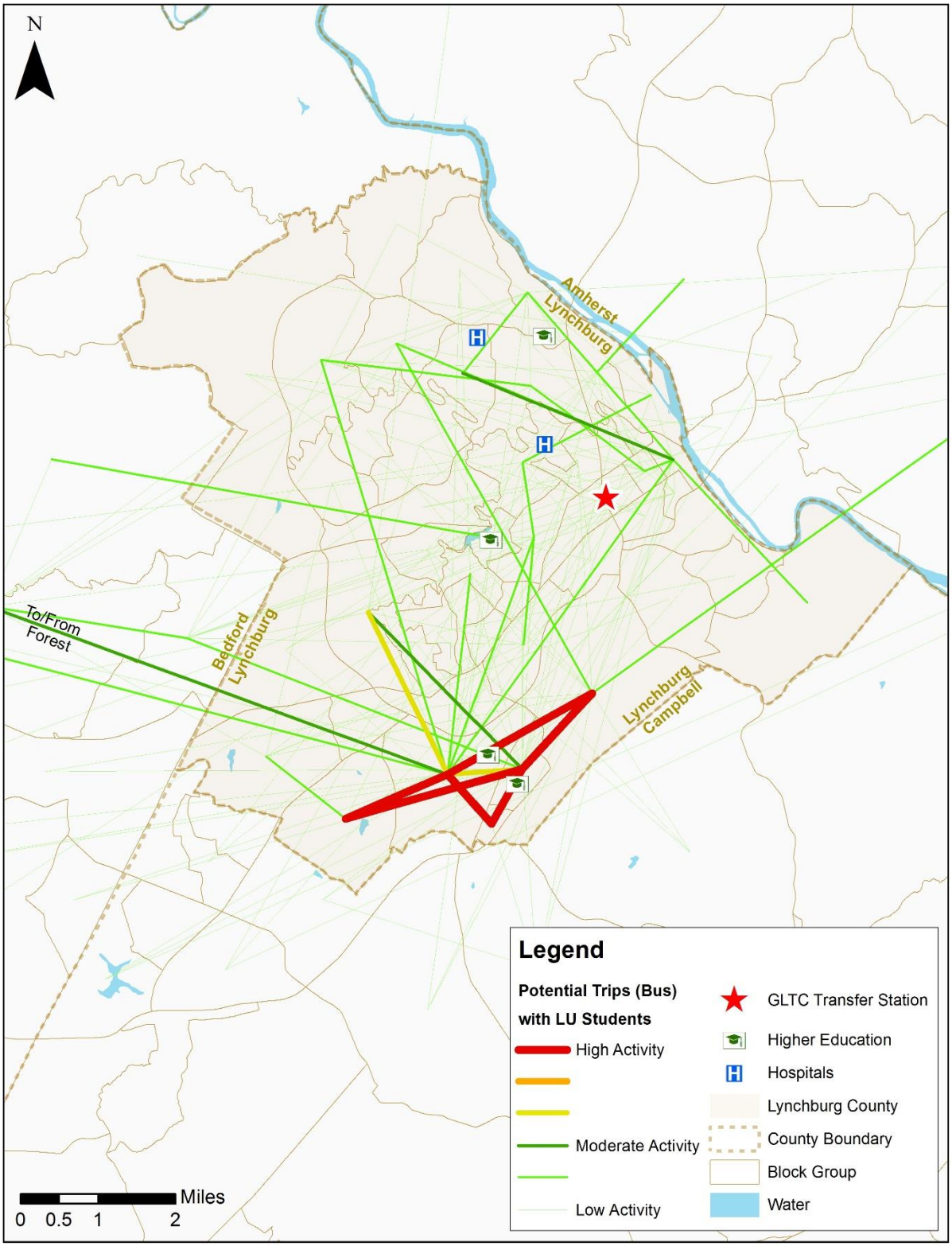


Figure B-3: Potential Bus Trips with Service Improvements



Improvements

Survey participants were instructed to allocate a $100 budget into eight different spending categories for making improvements to the service. This question recognized that GLTC works with a limited budget and collected feedback on the priorities of the respondent. Allocated budgets were totaled for each category to generate tables below. Results are segmented into different respondent types (frequency of use, student status, etc.)

All Survey Respondents

Improvement	Allocation
More frequent service	21%
Extended weekend hours	19%
More direct bus service	16%
Extended weekday hours	13%
Real-time info	13%
Stop and station amenities	7%
Lower fares	7%
Bicycle and pedestrian enhancements	4%

All Survey Respondents - Non-Liberty University

Improvement	Allocation
More frequent service	20%
Extended weekend hours	19%
More direct bus service	16%
Extended weekday hours	14%
Real-time info	12%
Lower fares	8%
Stop and station amenities	7%
Bicycle and pedestrian enhancements	5%

Frequent Riders

Improvement	Allocation
Extended weekend hours	21%
More frequent service	21%
More direct bus service	15%
Extended weekday hours	15%
Real-time info	12%
Stop and station amenities	7%
Lower fares	6%
Bicycle and pedestrian enhancements	3%

Non-Riders

Improvement	Allocation
More frequent service	21%
More direct bus service	18%
Real-time info	16%
Extended weekend hours	13%
Lower fares	11%
Extended weekday hours	9%
Bicycle and pedestrian enhancements	7%
Stop and station amenities	6%

Less Frequent Riders*

Improvement	Allocation
More frequent service	21%
Extended weekend hours	19%
More direct bus service	18%
Real-time info	13%
Extended weekday hours	11%
Stop and station amenities	8%
Lower fares	6%
Bicycle and pedestrian enhancements	4%

*Respondent who indicated they ride the bus less frequently than they used to

Transit Dependent Riders*

Improvement	Allocation
Extended weekend hours	23%
More frequent service	19%
Extended weekday hours	15%
More direct bus service	12%
Lower fares	10%
Real-time info	9%
Stop and station amenities	7%
Bicycle and pedestrian enhancements	4%

*Zero car households

Students

Improvement	Allocation
More frequent service	22%
Extended weekend hours	18%
More direct bus service	17%
Real-time info	15%
Extended weekday hours	12%
Stop and station amenities	7%
Lower fares	6%
Bicycle and pedestrian enhancements	3%

Students - Liberty University

Improvement	Allocation
More frequent service	24%
Extended weekend hours	18%
More direct bus service	18%
Real-time info	14%
Extended weekday hours	12%
Stop and station amenities	7%
Lower fares	4%
Bicycle and pedestrian enhancements	3%

Students - CVCC

Improvement	Allocation
More frequent service	21%
More direct bus service	17%
Extended weekend hours	14%
Real-time info	14%
Extended weekday hours	13%
Lower fares	9%
Stop and station amenities	8%
Bicycle and pedestrian enhancements	5%

Students – University of Lynchburg

Improvement	Allocation
Extended weekend hours	22%
Real-time info	18%
More frequent service	14%
Extended weekday hours	13%
Lower fares	11%
More direct bus service	10%
Stop and station amenities	8%
Bicycle and pedestrian enhancements	5%

Students - Randolph College

Improvement	Allocation
Real-time info	19%
Extended weekend hours	16%
Lower fares	16%
More direct bus service	15%
More frequent service	14%
Extended weekday hours	8%
Bicycle and pedestrian enhancements	7%
Stop and station amenities	5%

Demographics

Are you a student	Frequent Riders	City Routes	LU Routes	Non-Riders	All Respondents
No	32%	57%	0%	28%	31%
Yes - Liberty University	56%	22%	99%	52%	55%
Yes - Central Virginia Community College	6%	10%	0%	5%	6%
Yes - Randolph College	2%	3%	0%	8%	4%
Yes - Lynchburg	2%	4%	0%	2%	2%
Yes - Other	2%	4%	0%	5%	3%
Yes - K12	0%	0%	0%	0%	0%

How many vehicles are in your household	Frequent Riders	City Routes	LU Routes	Non-Riders	All Respondents
0	37%	57%	12%	12%	29%
1	25%	21%	29%	38%	29%
2	15%	11%	20%	24%	18%
3	12%	5%	20%	14%	13%
4 or more	11%	5%	19%	12%	11%

What is your age	Frequent Riders	City Routes	LU Routes	Non-Riders	All Respondents
19 and under	31%	14%	53%	30%	31%
20-29	38%	32%	45%	39%	38%
30-39	5%	10%	0%	10%	7%
40-49	6%	11%	1%	7%	7%
50-59	9%	15%	1%	9%	9%
60 or older	11%	19%	1%	5%	9%

What is your gender	Frequent Riders	City Routes	LU Routes	Non-Riders	All Respondents
Female	66%	60%	73%	65%	66%
Male	34%	40%	26%	34%	34%
Other	0%	0%	1%	0%	0%

What is your households total annual income	Frequent Riders	City Routes	LU Routes	Non-Riders	All Respondents
Under $15,000	49%	55%	40%	31%	43%
$15,001-$30,000	19%	25%	10%	19%	19%
$30,001-$45,000	9%	9%	10%	10%	9%
$45,001-$60,000	7%	3%	14%	9%	8%
$60,001-$75,000	7%	4%	11%	8%	7%
Over $75,000	8%	3%	17%	24%	13%

Appendix C. Summary of Stakeholder Interviews

Common Takeaways

- Need for more direct service between major activity centers (Downtown, shopping areas, colleges/universities, train station, airport)
- Need for a targeted marketing campaign to increase awareness of the service
- Need for more user-friendly information on how to use the service and when the bus will arrive
- Need for frequent and evening bus service to downtown
- Need for increased communication and partnership between GLTC and the business community
- Identify underserved areas and target service to these areas

Higher Education Organizations

Liberty University

- Long-term vision
    - Reduce or eliminate most on-campus bus routes – service reductions will begin Spring 2018
    - Off-campus routes or a route circulating the exterior of campus will likely remain
    - Enrollment has been capped for a few years, and a large increase in off-campus housing is not anticipated unless this cap if lifted
    - Freshman will continue to be able to bring a car to campus, so parking will continue to be a challenge; Liberty will be adding new parking decks in the future
- UPASS agreement
    - Liberty University desires more data on usage and will need to reevaluate this partnership if there is not significant usage
- Strengths of GLTC
    - Providing a lot of transportation capacity to the University
    - High quality of service provided by the bus operators
    - Great working relationship between GLTC managers and Liberty University
    - New operations and maintenance facility
- Important factors for student population are frequency, direct service/express routes, and longer service hours
- Major destinations for students
    - Apartments behind Walmart
    - Shopping areas
    - Restaurants
    - Downtown
- Liberty has had little success in forming funding partnership for transit to apartments
- Liberty has two Zipcars on campus and runs a demand response shuttle service for students
- Students perceive the GLTC city routes as an extension of the Liberty transit service – quality of service is important
- Opportunities for improvements

- Media campaign – share customer stories to show the benefit of the service; provide different messages for different targeted population groups
- Integrating with city bus routes
- Reevaluate the hub-and-spoke system

University of Lynchburg

- UPASS agreement
  - University of Lynchburg desires more robustness in the ridership data they receive to get a better understanding of usage (students, staff, and faculty)
  - Students are very aware that they can ride the bus for free with ID
- Most undergraduate student live on-campus
- Downtown may not be a large attractor of students because of the lack of low-cost food options and activities for the population under 21
- Overall perception of public transit (not GLTC in particular) is that it is for the low-income population
- Common destinations for students
  - Wards Road
  - Mall
  - Liberty University (for extra-curricular activities)
  - Walmart on Old Forest Road
  - Movie Theater
- Opportunities for improvements
  - Marketing and awareness that the service is an option for everyone
  - Technology to help with awareness and making the service easier to use
  - More granularity in the ridership data provided to college/universities on the UPASS usage

Central Virginia Community College

- UPASS agreement
  - CVCC sees this being a significant benefit to students
  - Students are very aware that they can ride the bus for free with ID
- Students reside throughout Lynchburg and the surrounding counties; CVCC is entirely a commuter campus
- CVCC has articulation agreements with other colleges/universities in Lynchburg, so some students need to travel between campuses for courses
- Students have a variety of transportation needs (home to school; school to work; work to school; evening classes)
- Evening classes have lower enrollment because of lack of transportation options – buses stop running before classes
- There is perception that students wait longer for the bus on Fridays
- Overall, parking is widely available in Lynchburg so driving is an attractive option; most transit users are those that absolutely need it
- Opportunities for improvements
  - Providing direct service to other colleges and universities in Lynchburg

- Identify areas with disadvantaged populations and target service to these areas
- Shorter travel times would make transit a more attractive option

Randolph College

- Trends
  - Deep passion for sustainable living on campus
  - Randolph College would like to grow enrollment from 700 to 900 but the overall college-going population is declining; a parking deck would need to be added
  - Most social life occurs on-campus but downtown activities are growing
- Perception and use of existing service
  - Student perceive it being valuable but through experience they may see it being not as convenient
  - A common student complaint is that it takes too long to get where they want to go
  - 21+ students going downtown are taking Uber – transit is not a feasible option given frequency and service hours
  - Students perceive the bus being for low-income populations or may not be fully aware of the service
- Downtown
  - Common complaint is parking availability or having to walk from parking areas
  - Movement up and down the hill with transit would be beneficial
- Existing Randolph College shuttle service
  - Friday and Saturday shuttle service to Walmart, the Mall, and Wards Crossing
  - Hourly frequency
  - 6-10 PM on Friday and 2-7 PM on Saturday
  - Randolph College would be interested in not having to run their own shuttle; if service is convenient enough for students and there would be a cost savings to the College, there may be interest in a GLTC partnership
- Opportunities for improvements
  - More direct service to other transportation hubs and major destinations (Amtrak Station, Airport)
  - Getting the routes and frequency right, then target marketing to message that the service is for everyone
  - Evening bus service to downtown
  - User-friendly trip planner and bus arrival information

Economic Development Organizations

Lynchburg Regional Business Alliance

- Business recruitment
  - Having transit is usually a “checkbox requirement”; having GLTC is an asset to business recruitment
  - Most available land is in the counties, and this is where many companies will locate
- Biggest need heard from manufacturers and companies with three shifts is that employees that rely on transit have difficultly working late shifts
- Perception of transit in Lynchburg is that it is the option for the low-income population

- GLTC provides great service to those with disabilities
- Key locations for service
    - Wyndhurst (J Crew) – need for extended hours
    - STARTEK
    - New Walmart on Timberlake Road
    - Cornerstone
    - New development at intersection of 501 and 221
- Opportunities for improvement
    - Outreach to companies in the greater Lynchburg vicinity to determine where there is enough demand to warrant extended service hours – potential partnerships
    - Hopper service during nighttime hours and feeder routes into downtown
    - Updated website that is mobile-friendly
    - Targeted marketing
    - Make is easy to use the service through fare payment and getting real-time information

Downtown Lynchburg Association

- Historically have worked with GLTC to provide shuttle service for downtown events
- The Association will be implementing wayfinding downtown
- Downtown Master Plan is in rough draft
- Top reasons for coming downtown: food, community market, trails and recreation
- The terrain is a challenge for all people
- Parking
    - City-owned parking is limited and not located in ideal locations
    - 80-90% of downtown parking is privately owned
    - On-street parking is only enforced 9 AM – 5 PM on weekdays, so residents are parking in evening and weekends when there are also more people coming to downtown
- The Hopper
    - May still be an awareness issue – there are still business downtown that are not aware of the service
    - Downtown developers want a nighttime shuttle
    - Cannot operate on cobblestone streets
- Desired connections: college/universities to downtown, and train station to downtown
- Opportunities for improvement
    - Nighttime options to get to and around downtown
    - Targeted marketing effort to specific populations and businesses

Economic Development Authority

- The City is trying to be more bicycle and pedestrian friendly, but driving is still the popular choice
- Most employees are coming into Lynchburg from the counties every day (~70% of workforce)
- Recently attracted businesses are Pacific Life and Convergys
- Two state designated enterprise zones in Lynchburg allow private entities to take advantage of real property improvement grants or job creation grants – one way of encouraging economic development

- Opportunities for improvement
    - EDA and GLTC meeting once a year to talk about the service, opportunities for improvement, and outreach to businesses

Local Governments

Amherst County

- People that ride the bus in Amherst County generally do not have another transportation option—in other words, the really need the service.
- The department of social services has not received an inquiry regarding free GLTC bus passes (of which they have an allotment to give) since 2015. This being said, DSS has money in their budget to provide bus passes to qualified individuals. It is not well known in the community that this service is available.
- Service was extended down Phelps Rd. as a requirement by the developer of a 22-unit apartment complex. This is a case where a developer contacted the Planning and Zoning Department and GLTC in order to increase public transit accessibility to the complex.
- Opportunities for improvement
    - Raise awareness and visibility of services offered through public meetings

City of Lynchburg

- The Community Development Department provides information on transit accessibility in the reports they provide to the Planning Commission regarding new developments and site plans.
    - They offer reduced parking requirements to developers that install a bus stop or shelter within 1000 ft. of the development.
- Transportation Engineering requires that bus stops be located more than 50 ft. away of any intersection. Bus stops placed within 50 ft. of an intersection (which happens quite often according to Lynchburg City Traffic Engineer) cause a loss of sight distance and increase safety concerns.
- Pedestrian improvements to Old Forest Rd. could greatly increase accessibility to bus stops along that corridor. Currently, Old Forest Rd. is one of the busiest commercial corridors in Lynchburg City, but has very spotty pedestrian accommodations.
- Pedestrian improvements to Florida Ave. have been proposed in the City's Capital Improvements plan for FY19. These improvements would include a road grade adjustment (lowering) at the overhead rail crossing on Florida Ave. which is currently the prohibitive factor for connecting Florida Ave. (Route 2, James Crossing Apartments (Greenview Drive), Campbell Ave.) to Downtown Lynchburg. Currently, buses don't have clearance under the rail crossing, therefore creating a major time constraint to customers in the aforementioned areas (James Crossing Apartments (Greenview Drive), Campbell Ave.) to get to downtown.
- Upgrades to pedestrian facilities along Campbell Ave. have been proposed to eliminate problems with ADA accessibility concerns. There are several intersections and sidewalk segments that don't have curb cuts—making it a major obstacle for the mobility impaired.
- Downtown Master Plan will call for increased frequency of bus service due to parking concerns in downtown. The continued growth and expansion of Downtown Lynchburg hinges on better transit service. This means more frequent fixed route service.

- Traffic coming in to Lynchburg has increased significantly over the years—with a major bottleneck being the Lakeside/221 intersection.
- Opportunities for improvement
    - Increased communication between GLTC Operations and Maintenance staff and the City Traffic Engineering Dept. to avoid stops having to be removed or relocated due to not following the 50 ft. rule.
    - More frequent service to downtown
    - Express routes to major employment centers (Downtown, Centra General Hospital, Lakeside/221) in Lynchburg

GLTC Board of Directors

- Board members expressed their concerns and areas they would like the plan to consider:
    - How downtown revitalization will impact GLTC
    - Desire for high frequency service between downtown and transfer center
    - EDA has difficulty getting corporations to come to Lynchburg – transit should support this
    - Need for system to be more robust in responding to demand in high density areas
    - Providing service to large employer centers like the hospital
    - Consider concentrating higher quality service on key corridors, less transfers, and more direct routes in a condensed service area
    - Focus should be on quality of service in Lynchburg before looking at intercity connections
    - In general, the City Council does not think the hub-and-spoke system works
    - Look for areas with the most ridership potential and provide direct connections
    - Cannot operate with very frequent service with existing assets (39 buses) - need creative solutions
- Strengths of GLTC
    - Excellent equipment and wonderful employees
    - Very good relationship between GLTC and the City of Lynchburg
    - Real-time map and bus stop signs
    - Transfer Center is multimodal
- Opportunities for Improvement
    - Outreach and partnership with the business community
    - Use of Region 2000 and Ride Solution tools (e.g., corporations offering discounted fares for employees, etc.)
    - Employer partnerships
    - Awareness of real-time information – many customers do not know about it
    - Resource allocation – GLTC is spread thin and would like to focus on areas that provide the "biggest bang for the buck"
    - Marketing awareness – how to use the system, benefits of the service, how to purchase a bus pass, need for a comprehensive and targeted marketing plan
    - Headways are a barrier, travel time is too long, and many people don't have time to ride the bus
    - Capturing riders of choice, especially as parking downtown becomes more challenging

Appendix D. Rolling Stock

Table D-1: Bus Fleet

Number	Manufacturer/Model	Year	Seating Capacity	Length (feet)	Low Floor	Fuel Type	VIN	In Service Date	Useful Service Life		Mileage[1]	Replace
									Years	Miles		
Bus Fleet												
T-120	Optima	2000	24	30	No	Diesel	1C9S2HFS7YW535212	1/1/2000	10	350,000	98,906	N/A
701	Gillig	2007	32	35	Yes	Hybrid	15GGB301571077821	12/2/2008	12	500,000	334,607	FY19
702	Gillig	2007	32	35	Yes	Hybrid	15GGB301771077822	1/29/2008	12	500,000	333,222	FY19
703	Gillig	2007	32	35	Yes	Hybrid	15GGB301971077823	1/25/2008	12	500,000	393,555	FY19
704	Gillig	2007	32	35	Yes	Hybrid	15GGB301071077824	2/5/2008	12	500,000	352,645	FY19
705	Gillig	2007	32	35	Yes	Hybrid	15GGB301271077825	2/5/2008	12	500,000	442,622	FY19
706	Gillig	2007	32	35	Yes	Hybrid	15GGB301471077826	2/5/2008	12	500,000	335,916	FY19
707	Gillig	2007	32	35	Yes	Hybrid	15GGB301671077827	2/5/2008	12	500,000	366,573	FY19
708	Gillig	2007	32	35	Yes	Hybrid	15GGB301681077828	2/5/2008	12	500,000	370,384	FY19
801	Gillig	2008	32	35	Yes	Hybrid	15GGB301981079945	1/13/2009	12	500,000	286,833	FY20
802	Gillig	2008	32	35	Yes	Hybrid	15GGB301081079946	2/5/2009	12	500,000	298,554	FY20
803	Gillig	2008	32	35	Yes	Hybrid	15GGB301281079947	2/5/2009	12	500,000	327,693	FY20
804	Gillig	2008	32	35	Yes	Hybrid	15GGB301481079948	2/5/2009	12	500,000	307,280	FY20
805	Gillig	2008	32	35	Yes	Hybrid	15GGB301681079949	1/9/2009	12	500,000	337,448	FY20
806	Gillig	2008	32	35	Yes	Hybrid	15GGB301281079950	1/13/2009	12	500,000	366,727	FY20
807	Gillig	2008	28	35	Yes	Diesel	15GGB271381079939	1/5/2009	12	500,000	228,274	FY20
808	Gillig	2008	28	35	Yes	Diesel	15GGB271X81079940	2/5/2009	12	500,000	182,559	FY20
809	Gillig	2008	28	35	Yes	Diesel	15GGB271181079941	1/12/2009	12	500,000	204,915	FY20
810	Gillig	2008	28	35	Yes	Diesel	15GGB271381079942	2/5/2009	12	500,000	212,620	FY20
811	Gillig	2008	28	35	Yes	Diesel	15GGB271581079943	1/15/2009	12	500,000	198,932	FY20
812	Gillig	2008	28	35	Yes	Diesel	15GGB271781079944	2/5/2009	12	500,000	192,952	FY20
901	Gillig	2009	28	35	Yes	Diesel	15GGB271891177477	1/5/2010	12	500,000	191,831	FY21
902	Gillig	2009	28	35	Yes	Diesel	15GGB271X91177478	1/5/2010	12	500,000	160,500	FY21
903	Gillig	2009	28	35	Yes	Diesel	15GGB271191177479	1/5/2010	12	500,000	186,084	FY21
904	Gillig	2009	28	35	Yes	Diesel	15GGB271891177480	1/5/2010	12	500,000	164,812	FY21

Number	Manufacturer/Model	Year	Seating Capacity	Length (feet)	Low Floor	Fuel Type	VIN	In Service Date	Useful Service Life		Mileage[1]	Replace
									Years	Miles		
1001	Gillig	2010	37	40	Yes	Hybrid	15GGD301XA1178337	7/23/2011	12	500,000	204,340	FY22
1002	Gillig	2010	37	40	Yes	Hybrid	15GGD3011A1178338	7/28/2011	12	500,000	171,844	FY22
1003	Gillig	2010	37	40	Yes	Hybrid	15GGD3013A1178339	7/30/2011	12	500,000	168,773	FY22
1004	Gillig	2010	26	29	Yes	Hybrid	15GGE3013A1092073	7/30/2011	7	350,000	218,132	FY21
1005	Gillig	2010	26	29	Yes	Hybrid	15GGE3015A1092074	8/3/2011	7	350,000	177,820	FY21
1006	Gillig	2010	26	29	Yes	Hybrid	15GGE3017A1092075	8/5/2011	7	350,000	285,433	FY21
1007	Gillig	2010	26	29	Yes	Hybrid	15GGE3019A1092076	8/5/2011	7	350,000	242,876	FY21
1008	Gillig	2010	26	29	Yes	Hybrid	15GGE3010A1092077	8/10/2011	7	350,000	238,622	FY21
1009	Gillig	2010	26	29	Yes	Hybrid	15GGE3012A1092078	8/8/2011	7	350,000	223,269	FY21
1010	Gillig	2010	26	29	Yes	Hybrid	15GGE3014A1092079	8/8/2011	7	350,000	242,618	FY21
1201	Gillig	2012	32	35	Yes	Hybrid	15GGB3014C1178830	3/1/2012	12	500,000	215,739	FY24
1202	Gillig	2012	32	35	Yes	Hybrid	15GGB3016C1178831	3/1/2012	12	500,000	187,392	FY24
1203	Gillig	2012	32	35	Yes	Hybrid	15GGB3018C1178832	3/1/2012	12	500,000	211,537	FY24
1204	Gillig	2012	32	35	Yes	Hybrid	15GGB301XC1178833	3/1/2012	12	500,000	198,322	FY24
1701	New Flyer	2017	32	35	Yes	Diesel	5FYD8KV14HB051671	6/30/2017	12	500,000	1,280	FY29

[1]Mileage as of June 30, 2017

Table D-2: Paratransit Fleet

Number	Manufacturer/Model	Year	Seating Capacity	Length (feet)	Low Floor	Fuel Type	VIN	In Service Date	Useful Service Life		Mileage[1]	Replace
									Years	Miles		
Paratransit Fleet												
1107[2]	Ford Supreme	2011	14	19	No	Gasoline	1FDFE4FS0BDA19571	1/26/2011	4	150,000	126,098	FY18
1108[2]	Ford Supreme	2011	14	19	No	Gasoline	1FDFE4FS9BDA19570	1/26/2011	4	150,000	93,552	FY18
1301[2]	Chevy Supreme	2012	19	22	No	Gasoline	1GB6G5BG1C1185031	9/25/2012	4	150,000	123,419	FY18
1302[2]	Chevy Supreme	2012	14	22	No	Gasoline	1GB6G5BG9C1185309	9/26/2012	4	150,000	87,074	FY18
1303[2]	Chevy Supreme	2012	19	19	No	Gasoline	1GB6G5BG6C1183419	9/26/2012	4	150,000	89,785	FY18
1601	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FS6GDC27252	9/29/2016	4	150,000	19,221	FY21
1602	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FS8GDC27253	7/21/2016	4	150,000	21,809	FY21
1603	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FSXGDC27254	9/28/2016	4	150,000	15,705	FY21
1604	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FS1GDC27255	7/8/2016	4	150,000	20,039	FY21
1605	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FS3GDC27256	7/4/2016	4	150,000	16,943	FY21
1606	Ford Starcraft	2016	16	23	No	Gasoline	1FDFE4FS5GDC27257	7/9/2016	4	150,000	1,825	FY21
1801	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS7HDC62237	7/1/2018	4	150,000	0	FY24
1802	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS9HDC62238	7/1/2018	4	150,000	0	FY24
1803	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS0HDC62239	7/1/2018	4	150,000	0	FY24
1804	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS7HDC62240	7/1/2018	4	150,000	0	FY24
1805	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS9HDC62241	7/1/2018	4	150,000	0	FY24
1806	Ford Champion	2018	10	28	No	Gasoline	1FDFE4FS0HDC62242	7/1/2018	4	150,000	0	FY24
1807	Ford Starcraft	2018	12	23	No	Gasoline	1FDFE4FS9JDC01655	7/1/2018	4	150,000	0	FY24

[1]Mileage as of June 30, 2017

[2]Vehicles to be disposed of once 2018 vehicles are put into service

Table D-3: Support Vehicle Fleet

Number	Manufacturer/Model	Year	Seating Capacity	Length (feet)	Low Floor	Fuel Type	VIN	In Service Date	Useful Service Life		Mileage[1]	Replace
									Years	Miles		
Support Vehicle Fleet												
O-7	Ford Explorer AWD	2017	5			Gasoline	1FM5K8AR9HGB92903	5/8/2017	5	100,000	2,252	FY23
O-8	Ford Explorer AWD	2017	5			Gasoline	1FM5K8AR2HGB92905	5/8/2017	5	100,000	1,822	FY23
O-9	Ford Explorer AWD	2017	5			Gasoline	1FM5K8AR2HGB92904	5/8/2017	5	100,000	2,300	FY23
O-10	Ford Explorer AWD	2017	5			Gasoline	1FM5K8AR4HGB92906	5/8/2017	5	100,000	1,798	FY23
A-11	Ford Expedition	2017	8			Gasoline	1FMJU1GT1HEA50768	3/16/2017	5	100,000	1,704	FY23
A-12	Ford Expedition	2017	8			Gasoline	1FMJU1GTXHEA50767	4/11/2017	5	100,000	4,296	FY23
T-20	Chevy Express Van	2017	10			Gasoline	1GAWGEFF8H1204848	7/3/2017	5	100,000	438	FY23
T-21	Chevy Express Van	2017	10			Gasoline	1GAWGEFF2H1205266	7/3/2017	5	100,000	385	FY23
M-13	Ford F-250 Ext Cab 4X4	2017	4			Gasoline	1FD7X2B61HEC33998	3/29/2017	5	100,000	3,196	FY24
M-14	Ford F-250 Ext Cab 4X4	2017	4			Gasoline	1FT7X2B69HEC34000	3/16/2017	5	100,000	3,477	FY24
M-15	Ford F-250 Super Cab 4X4	2017	4			Gasoline	1FD7X2B63HEC33999	3/29/2017	5	100,000	2,476	FY24
S-11	Ford F-350 4X4	2005	3			Diesel	1FDWF37P65EC71437	3/1/2005	5	100,000	21,282	FY19

[1]Mileage as of June 30, 2017

Appendix E. Three-Year Retrospective of Finances

Three-Year Retrospective of Operating Revenues

Fiscal Year	Fare Box Revenue	Federal	State	Local	Other	TOTAL
FY14	$1,091,915	$1,973,720	$1,673,190	$2,294,566	$97,012	$7,130,402
FY15	$920,040	$2,039,536	$1,463,711	$1,407,828	$1,553,893	$7,385,008
FY16	$870,732	$2,019,195	$1,449,024	$1,444,773	$1,453,250	$7,236,974

Source: GLTC, 2018.

Three-Year Retrospective of Capital Revenues

Fiscal Year	Federal	State	Local	TOTAL
FY14	$2,193,025	$422,551	$125,705	$2,741,281
FY15	$826,214	$235,203	$89,961	$1,151,378
FY16	$7,100,333	$3,966,410	$1,181,941	$12,248,684

Source: GLTC, 2018.

Three-Year Retrospective of Operating and Capital Expenses

Fiscal Year	Operating	Capital
FY14	$6,769,971	$1,512,200
FY15	$9,918,683	$1,151,378
FY16	$9,735,966	$2,248,684

Source: GLTC, 2018.