

Mountain Lynx Transit Transit Development Plan Fiscal Years 2020-2030

Final Report- September 2020



Prepared for

DISTRICT THREE
GOVERNMENTAL COOPERATIVE



Prepared by



Under contract to



Virginia Department of Rail and Public Transportation



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Chapter 1

Overview of Public Transportation in the Region

INTRODUCTION

A Transit Development Plan (TDP) is a short-range plan that outlines services that a transit provider intends to implement during a specific planning horizon, estimating both the resources needed and funding opportunities likely available to implement these services. The Virginia Department of Rail and Public Transportation (DRPT) requires that any public transit (bus, rail, ferry) operator receiving state funding prepare, adopt, and submit a TDP at least every six years. DRPT provides a set of TDP requirements that form the basis of the planning effort. The most recent DRPT guidelines for the preparation of a TDP were published in February 2017 and call for the plan to encompass a ten-year planning horizon. The most recent TDP for Mountain Lynx Transit (then known as District Three Public Transit) was completed in 2013 and covered a six-year planning horizon.

This current TDP for Mountain Lynx Transit provides DRPT with an up-to-date record of related transit capital and operating budgets and provide the system with a basis for including capital and operating programs in the Six Year Improvement Program (SYIP), the Statewide Transportation Improvement Program (STIP), and the Long Range Transportation Plan (LRTP).

Chapter 1 of the plan provides an overview of the transit program and background information and data that was used for subsequent data collection, analysis, and eventual recommendations for the ten-year plan.

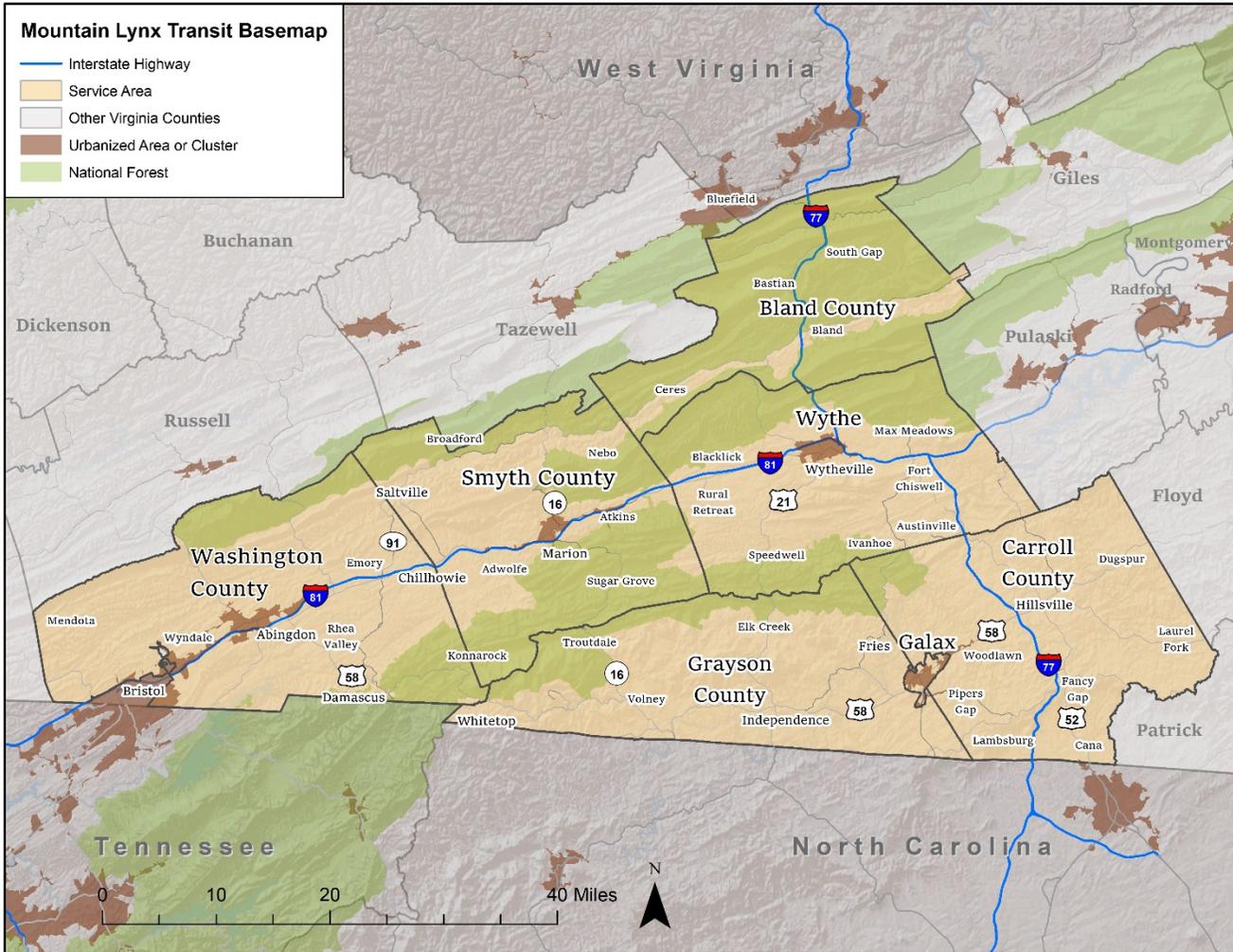
BACKGROUND

District Three Governmental Cooperative, based in Marion Virginia, is an agency owned and operated by its member local governments for the benefit of the citizens of Bland, Carroll, Grayson, Smyth, Washington, and Wythe counties; the towns of Abingdon, Marion, and Wytheville; and the city of Galax. The agency is dedicated to improving the quality of life for citizens of the region, especially those who are elderly and those who need assistance with transportation.

District Three Governmental Cooperative operates Mountain Lynx Transit, which provides public transportation in the District Three Governmental Cooperative region. Located in southwest Virginia, the area is largely characterized as a rural, mountainous region, and much

of the area’s 2,777 square miles lie within the Blue Ridge and Allegheny Mountain ranges. The southern portion of the region borders both Tennessee and North Carolina, with a small portion of the area (Bristol) included as a part of the Johnson City-Kingsport-Bristol Combined Statistical Area. A map of the service area is provided in Figure I-1.

Figure I-1: Mountain Lynx Transit Service Area



Population

During the 2018 American Community Survey (ACS) 5-year estimate, the United States Census Bureau reported that Mountain Lynx Transit’s overall service area had a population of 166,592. This was a -1.4 percent decrease from 2010. Since 2010, all counties experienced slight decreases in population except for Grayson County. A full population analysis is presented in Chapter 3.

HISTORY

District Three Governmental Cooperative was chartered in 1975 as a public agency under the Virginia Joint Exercise of Powers Act that allowed local governments to join together to cooperatively provide citizen services. The agency was originally designated as an Area Agency on Aging (District Three Senior Services), and added public transportation services in 1985 through District Three Public Transit. Since the last TDP the transit system was rebranded as Mountain Lynx Transit.

GOVERNANCE

The Cooperative is directed by a Board of Commissioners comprised of elected officials appointed by the member jurisdictions. The District Three Governmental Cooperative sets forth the details with regard to the functioning of the Cooperative, its purposes, the duties and administrative authority of the Board, and contributions and payments. The last change to the Charter was made in 1984, authorizing the Cooperative to administer a public transportation program.

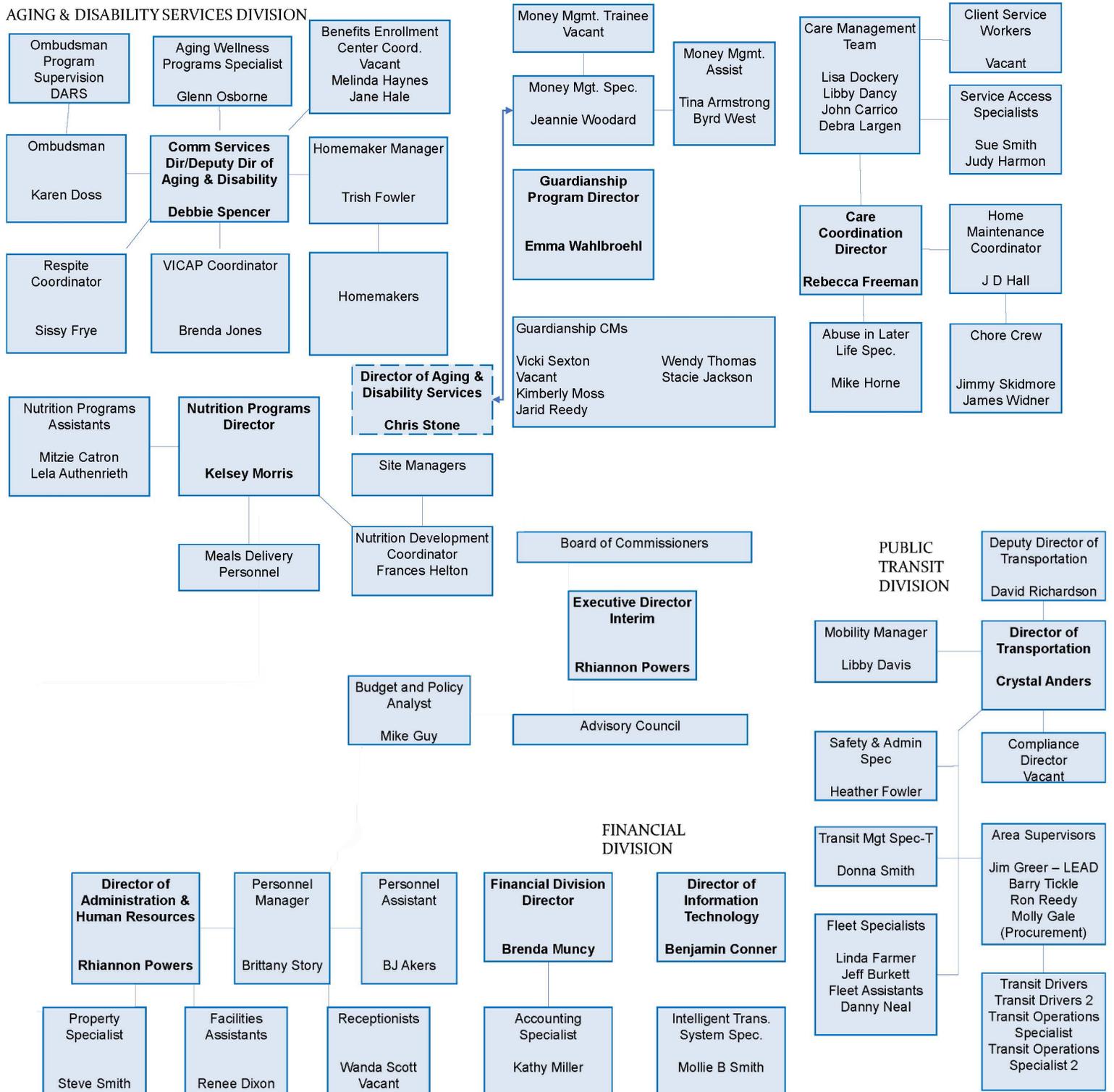
Appendix A provides a current list of the District Three Governmental Cooperative Board of Commissioners.

A draft version of this TDP was presented to the District Three Governmental Cooperative Board of Commissioners on September 23, 2020. At that time the Board approved and adopted this plan. The minutes from this meeting are provided in Appendix B.

ORGANIZATIONAL STRUCTURE

As a multi-service agency, District Three Governmental Cooperative is a relatively large organization with about 160 employees. The full organizational chart for the agency is shown in Exhibit I-1 and shows the Public Transit Division that operates Mountain Lynx Transit. The Public Transit Division receives support from other agency divisions and staff, including the Financial Division and the Personnel Manager.

Exhibit I-1: District Three Governmental Cooperative Staff Organizational Chart

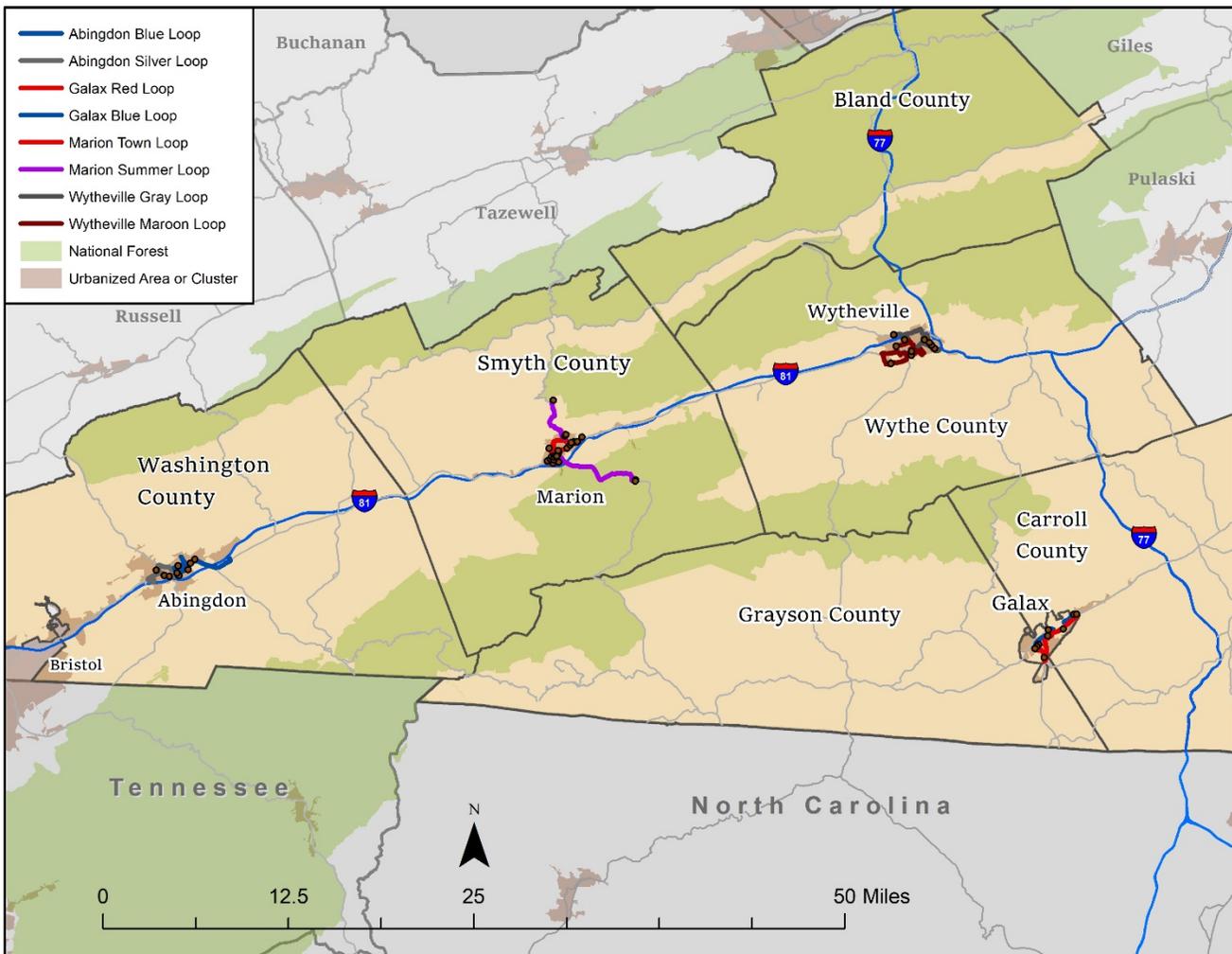


TRANSIT SERVICES PROVIDED AND AREAS SERVED

Mountain Lynx Transit operates public transit services through Loop routes in the four major cities and towns, and through services in each of the six counties in the region.

Figure 1-2 provides an overall system map that shows the Loop routes in relation to the four jurisdictions and the region, followed by a description of each route. These routes are further profiled in Chapter 3.

Figure 1-2: Mountain Lynx Transit System Map



City/Town Routes

Town of Abingdon

- Two routes – the Silver Loop and the Blue Loop - operate Monday through Friday from 8:00 a.m. to 5:00 p.m. each on a one-hour headway. Customers may board the bus anywhere along the two loops, and can call Mountain Lynx Transit to make arrangements for the bus to deviate a few blocks off the route for a drop-off or pick-up.
- Request-based service is also available for areas within the town limits that are outside the loop deviation zone. Mountain Lynx Transit operates an “X-Bus” (for extra bus) that is available to pick up these passengers, along with requests for route deviations that exceed the Abingdon Loop’s ability to flex off the scheduled route and stay on schedule.
- Customers are encouraged to make arrangements at least 24 hours in advance for route deviations or for request-based service, but same day requests are considered.

City of Galax

- Two routes - the Blue Loop and the Red Loop - operate Monday through Friday from 8:00 a.m. to 4:00 p.m., and on Saturday from 10:00 a.m. to 4:00 p.m. Each run on a one-hour headway with scheduled stops and two transfer points. Customers may board the bus anywhere along the route and can call Mountain Lynx Transit to make arrangements for the bus to deviate a few blocks off the route for a drop-off or pick-up.
- Request-based service is available Monday through Friday, and on a limited, advanced registration basis for Saturday, linking areas within the city limits to the two Loop routes. Mountain Lynx Transit operates an “X-Bus” that is available to pick up these passengers, along with requests for route deviations that exceed the ability for the Blue and Red Loops to flex off the scheduled route and stay on schedule.
- Customers are encouraged to make arrangements at least 24 hours in advance for route deviations or for request-based service, but same day requests are considered.

Town of Marion

- The Marion Loop operates Monday through Friday from 8:00 a.m. to 4:00 p.m. on a one-hour headway, and on Saturday from 10:00 a.m. to 4:00 p.m. There are twenty scheduled stops along the Marion Loop, though customers may board the bus anywhere along the route and can call Mountain Lynx Transit to make arrangements for the bus to deviate a few blocks off the route for a drop-off or pick-up.

- Request-based service is available for areas within the town limits not serviced by the Marion Loop, Monday through Friday only. Mountain Lynx Transit operates an “X-Bus” that is available to pick up these passengers, along with requests for route deviations that exceed the Marion Loop’s ability to flex off the scheduled route and stay on schedule.
- Customers are encouraged to make arrangements at least 24 hours in advance for route deviations or for request-based service, but same day requests are considered.
- The Atkins Loop serves the Marion-Atkins-Groseclose Highway II corridor Monday through Friday, though only if they receive a request. Mountain Lynx Transit currently serves the area through on-demand service three times a day, at 7:45a.m., 9:30a.m., and 2:30 p.m.
- The Mt. Rogers Loop serves Highway 16 corridor between I-81 and the Mt. Rogers National Recreation Area Monday through Friday by customer demand only. This route does not operate unless customers have called in advance for a pickup, though Mountain Lynx Transit will serve Mt. Rogers if a single customer calls. Mountain Lynx Transit serves the area through on-demand service three times a day, at 8:30a.m., 11:00a.m., and 2:00 p.m., if requested
- The Summer Express Loop operates seasonally following Memorial Day and until mid-August, connecting Marion with the Mt. Rogers National Recreation Area Headquarters, with access to the Hungry Mother State Park. Services runs Monday through Friday from 8:00 a.m. to 4:00 p.m., and on Saturday from 10:00 a.m. to 4:00 p.m.

Town of Wytheville

- Two routes - the Gray Loop and the Maroon Loop - operate Monday through Friday from 8:00 a.m. to 5:00 p.m., with Summer Saturday service provided from 8:00 a.m. to 2:00 p.m. with alternating runs. Each loop runs on a one-hour headway with scheduled stops and a transfer point between the two routes. Customers may board the bus anywhere along the route and can call Mountain Lynx Transit to make arrangements for the bus to deviate a few blocks off the route for a drop-off or pick-up.
- Request-based service is available for areas within the town limits not serviced by a loop. Mountain Lynx Transit operates an “X-Bus” that is available to pick up these passengers, along with requests for route deviations that exceed the ability of the Gray and Maroon Loops to flex off the scheduled route and stay on schedule.
- Customers are encouraged to make arrangements at least 24 hours in advance for route deviations or for request-based service, but same day requests are considered.

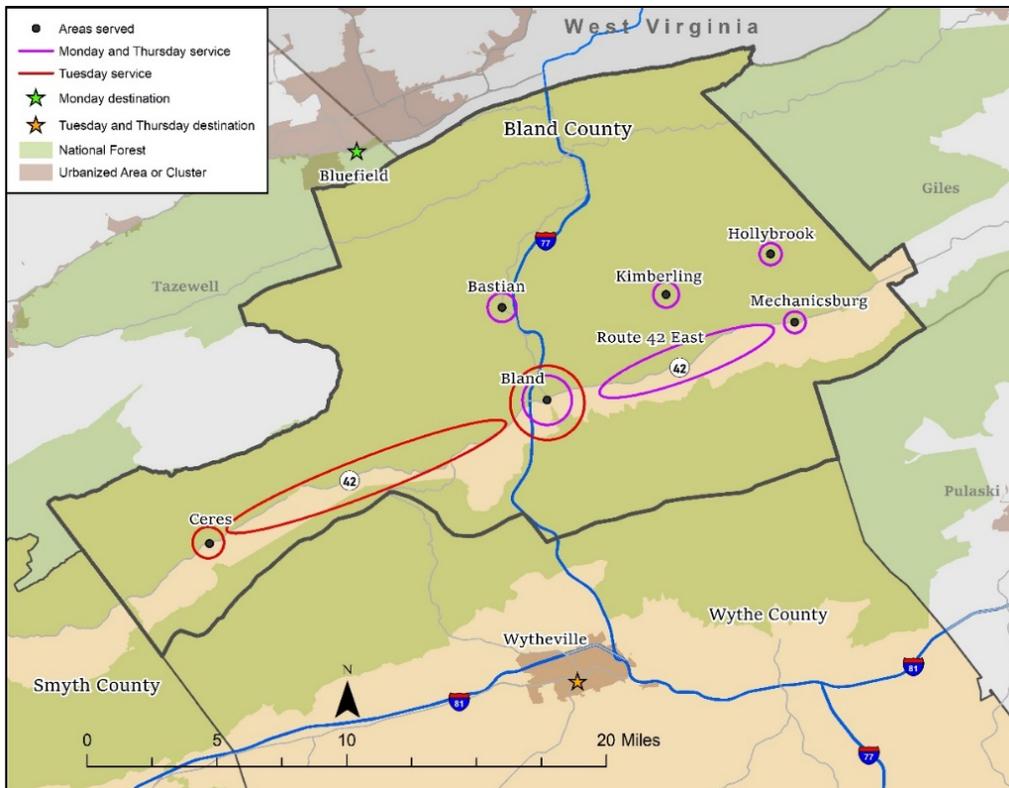
County Routes

Mountain Lynx Transit operates demand response service in the six counties, connecting outlying areas with major locations on specific days of the week. The following section provides a description of each county service, along with a map that depicts areas served, days of service, and destinations on those days.

Bland County

- Mountain Lynx Transit operates services between various parts of Bland County on specific days of the week. Outlying areas are connected to Bluefield on Monday and to Wytheville on Tuesday and Thursday. Customers are picked up at or near their homes, then transported to a designated commercial center and then to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Bland County riders.
- Figure 1-3 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Bland County.

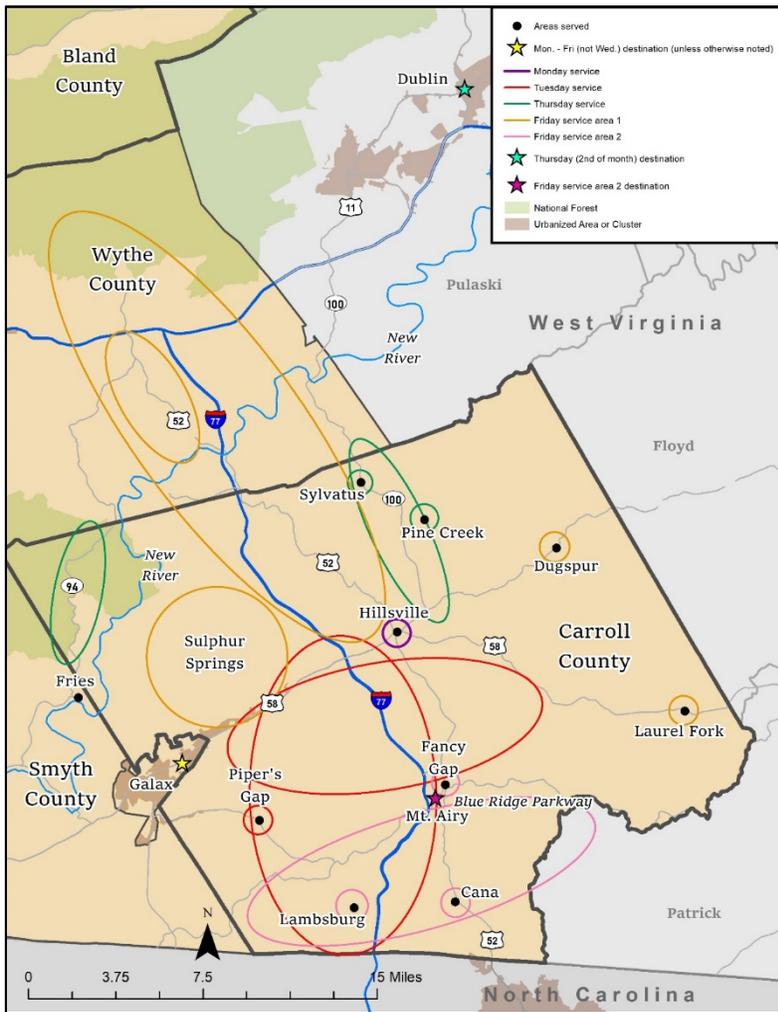
Figure 1-3: Mountain Lynx Transit – Bland County Service



Carroll County

- Mountain Lynx Transit operates services between various parts of Carroll County on specific days of the week. Outlying areas are connected to Dublin, Galax, and Mt. Airy. Customers are picked up at or near their homes, then transported to a designated commercial center and then to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Carroll County riders.
- Figure 1-4 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Carroll County.

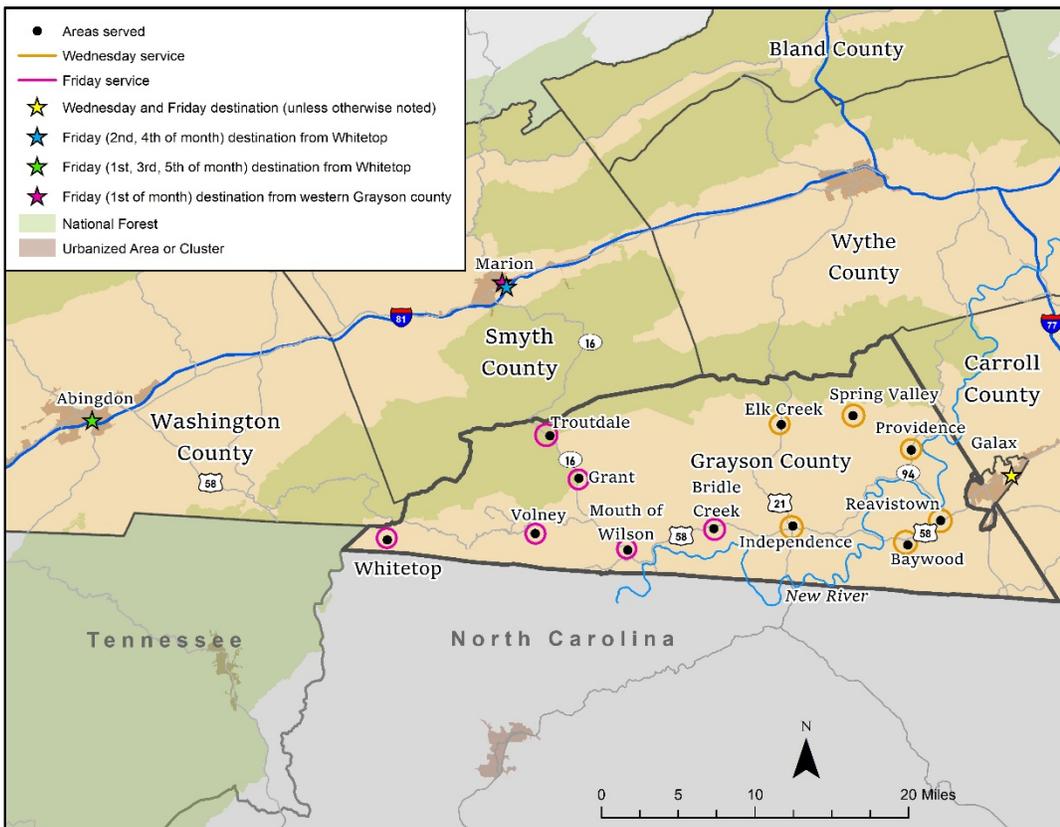
Figure 1-4: Mountain Lynx Transit – Carroll County Service



Grayson County

- Mountain Lynx Transit operates services between various parts of Grayson County on specific days of the week between Tuesday and Friday. Outlying areas are connected to Abingdon, Galax, and Marion. Customers are picked up at or near their homes, then transported to a designated commercial center and then to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Grayson County riders.
- Figure 1-5 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Grayson County.

Figure 1-5: Mountain Lynx Transit – Grayson County Service



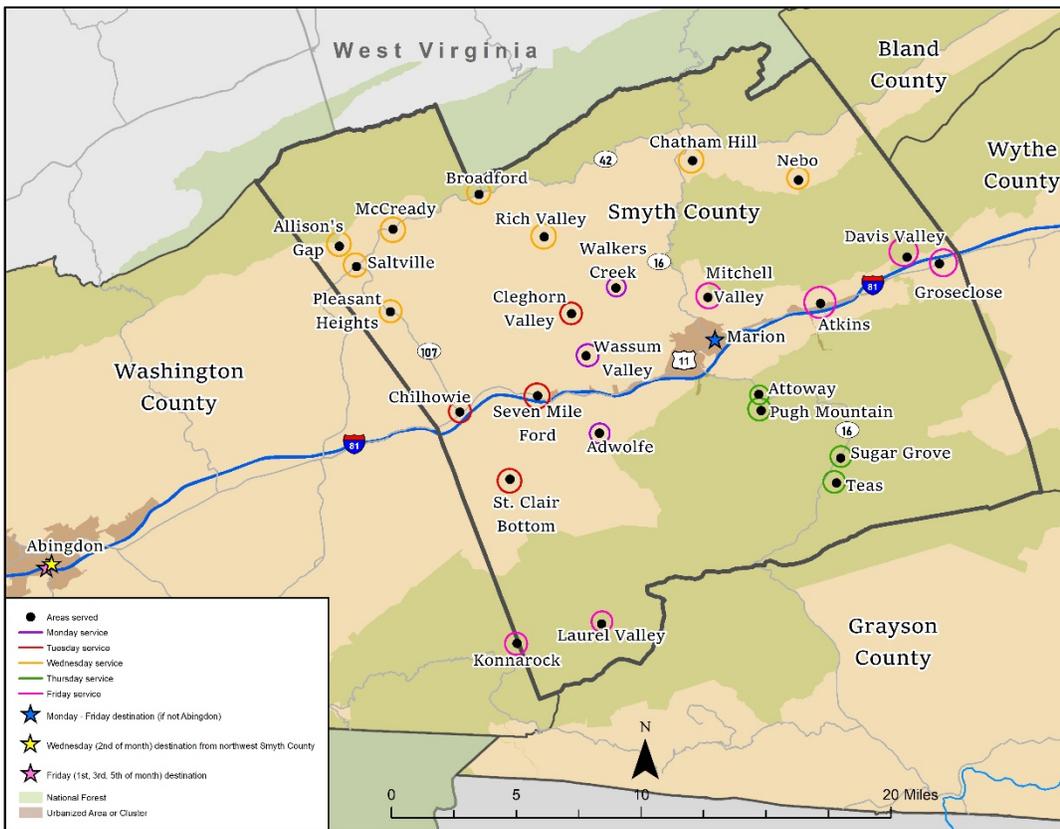
Smyth County

- Mountain Lynx Transit operates services between various parts of Smyth County on specific days of the week. Outlying areas are connected to Abingdon and Marion. Customers are picked up at or near their homes, then transported to a designated

commercial center and the to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Smyth County riders.

- Figure 1-6 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Smyth County.

Figure 1-6: Mountain Lynx Transit – Smyth County Service

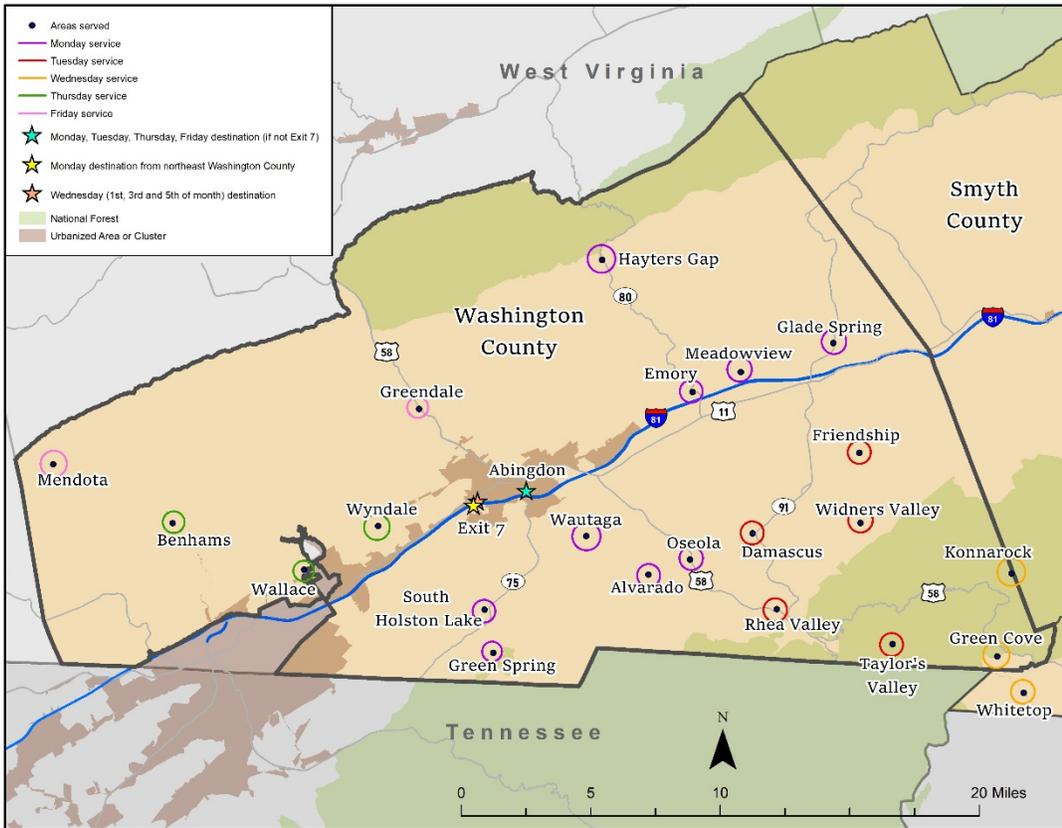


Washington County

- Mountain Lynx Transit operates services between various parts of Washington County on specific days of the week. Outlying areas are connected to Abingdon and the I-81 Exit 7 area. Customers are picked up at or near their homes, then transported to a designated commercial center and then to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Washington County riders.

- Figure 1-7 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Washington County.

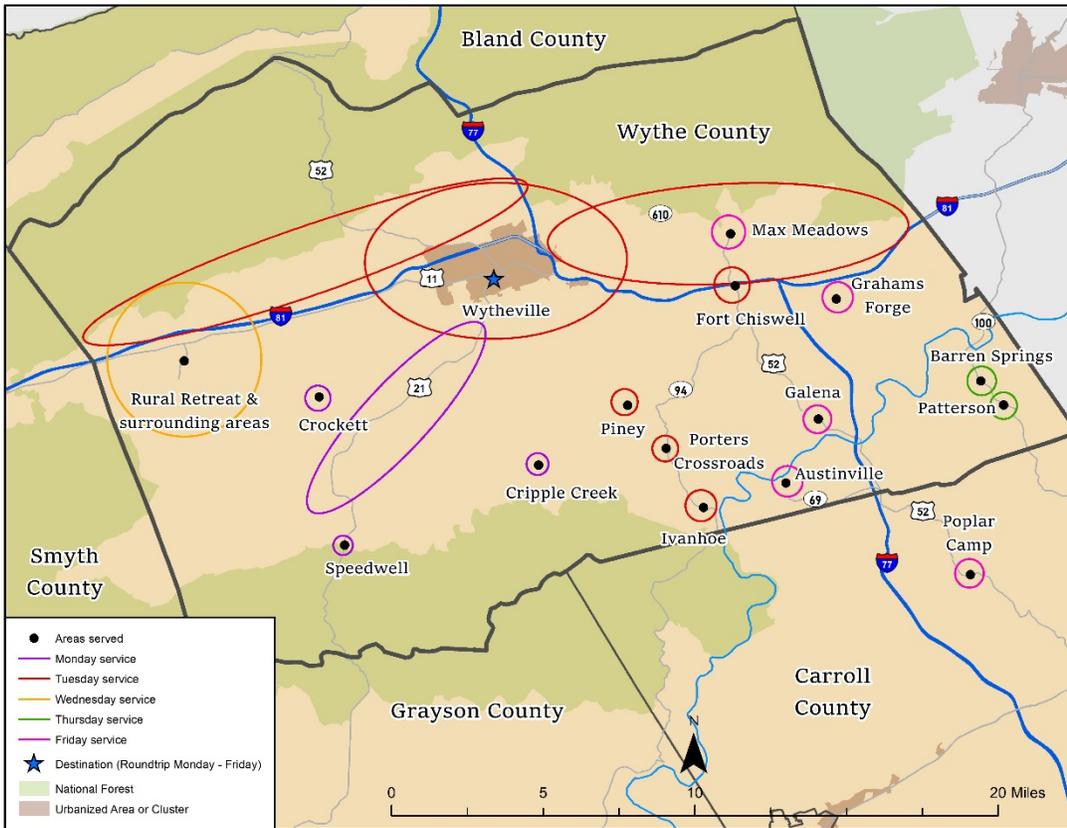
Figure 1-7: Mountain Lynx Transit – Washington County Service



Wythe County

- Mountain Lynx Transit operates services between various parts of Wythe County on specific days of the week, with outlying areas connected to Wytheville. Customers are picked up at or near their homes, then transported to a designated commercial center and then to their destination. Multiple destinations are accommodated as needed and within time constraints. In-town customers may use the route, but destinations and stops are determined by the driver based on the convenience of Wythe County riders.
- Figure 1-8 shows the areas served, days of service, and destinations served by Mountain Lynx Transit in Wythe County.

Figure I-8: Mountain Lynx Transit – Wythe County Service



Regional Services

Mountain Lynx Transit operated the College Express service during the Virginia Highlands Community College (VHCC) fall and spring semesters. The local matching funding for this service was provided entirely by VHCC, so while open to the public the route was designed to primarily serve student needs. The College Express service ended when VHCC closed due to the COVID-19 pandemic.

When operating, the College Express connected Abingdon/VHCC and Bristol Monday through Thursday. Typically buses departed Abingdon/ VHCC at 6:00 a.m., 2:00 p.m., and 4:00 p.m., and Bristol (from the Bristol Transit transfer center on State Street) at 7:00 a.m., 2:30 p.m., and 4:30 p.m., though all customers needed to contact Mountain Lynx Transit to arrange for a ride and therefore the schedule was subject to change without notice. Mountain Lynx Transit noted that when they launched the new route they were unsure of the demand, and were hoping a pattern would emerge. However, the ridership demand was erratic as students utilizing the service would come and go, and then the route was discontinued when the college closed in response to COVID 19. Mountain Lynx Transit also noted that VHCC has not secured the matching funding for the 2020-2021 school year.

Medical and Senior Nutrition Site Transportation

- Mountain Lynx Transit provides demand-response medical transportation for seniors, and transportation to Friendship Cafes (senior nutrition) sites in conjunction with current routes. The county routes and Friendship Cafe routes (both considered public routes) typically serve a particular zone of the county depending on the day of the week.
- Mountain Lynx Transit previously provided Non-Emergency Medical Transportation (NEMT) through the statewide brokerage, but no longer operates NEMT service.

FARE STRUCTURE

The Mountain Lynx Transit fare is \$0.50 per one-way trip for all services, and transfers are free. The fare has not changed since the inception of the public transportation program. There is no discount for seniors or persons with disabilities. Mountain Lynx Transit uses numbered tickets that customers can purchase from the driver or from the central office.

EXISTING FLEET

Mountain Lynx Transit's current fleet, showing mileage as of June 20, 2020 and projected replacement years, is provided in Table I-1.

Table I-1: Current Vehicle Inventory

Vehicle #	Make/Model	Mileage (as of 6/20/2020)	Projected Replacement Year
112	2001 GMC 2500 Sierra PU	124,932	2020
141	2005 Chevrolet Tahoe	143,262	2020
159	2007 Dodge Mini Van	183,549	2020
161	2007 Chevrolet 3500 expr-Diesel 6.6	156,502	Surplus
165	2007 Chevrolet 3500 expr-Diesel 6.6	168,804	2020
166	2007 Chevrolet 3500 expr-Diesel 6.6	143,453	Surplus
168	2007 Chevrolet 3500 expr-Diesel 6.6	150,330	2020
170	2007 FORD E-450-Gas 6.8L	144,957	Surplus
171	2007 FORD E-450-Gas 6.8L	134,572	2020
172	2007 FORD E-450-Gas 6.8L	137,988	2020
174	2008 Ford E-450 - Gas 6.8L	80,794	2020
178	2009 Chevrolet 3500 Express- Gas-6.0L	148,414	2021
183	2011 FORD E450 - GAS	102,395	2021

Vehicle #	Make/Model	Mileage (as of 6/20/2020)	Projected Replacement Year
184	2011 FORD E450 - GAS	102,932	2021
186	2011 FORD E450 - GAS	99,704	2021
188	2011 Jeep Liberty	93,020	2022
190	2012 Chevrolet 3500 Express-Gas-6.0L	110,038	2022
191	2012 Chevrolet 3500 Express-Gas-6.0L	123,500	2022
192	2012 Chevrolet 3500 Express-Gas-6.0L	114,608	2022
193	2012 Chevrolet 3500 Express-Gas-6.0L	119,067	2022
196	2013 Braun Entervan (Dodge Caravan)	74,524	2022
197	2013 Braun Entervan (Dodge Caravan)	72,901	2023
198	2013 Braun Entervan (Dodge Caravan)	64,656	2023
199	2013 Braun Entervan (Dodge Caravan)	103,553	2023
200	2013 Braun Entervan (Dodge Caravan)	87,170	2023
201	2013 Braun Entervan (Dodge Caravan)	65,391	2024
204	2014 Chevrolet Supreme Bus	84,416	2024
205	2014 Chevrolet Supreme Bus	56,133	2024
206	2014 Chevrolet Supreme Bus	87,807	2024
209	2014 Chevrolet Supreme Bus	83,272	2025
210	2014 Chevrolet Supreme Bus	73,596	2025
211	2015 Ford F-250	15,504	2025
215	2017 Starcraft Allstar	60,413	2026
216	2017 Starcraft Allstar	56,027	2026
217	2017 Starcraft Allstar	75,398	2026
218	2017 Starcraft Allstar	73,522	2026
219	2017 Starcraft Allstar	66,880	2027
220	2017 Starcraft Allstar	83,422	2027
221	2017 Arboc Spirit of Mobility	43,035	2027
230	2018 Starcraft Allstar	37,376	2028
231	2018 Starcraft Allstar	32,217	2028
232	2018 Starcraft Allstar	40,038	2028
233	2018 Starcraft Allstar	30,361	2028
238	2019 Ford Transit Van	12,987	2029
239	2019 Chevy Starcraft Allstar	15,314	2029
240	2019 Chevy Starcraft Allstar	23,429	2029
241	2019 Chevy Starcraft Allstar	24,020	2029
242	2019 Chevy Starcraft Allstar	16,222	2029
243	2020 Ford E-450	822	2030
244	2020 Ford E-450	993	2030
245	2020 Ford E-450	1,086	2030

Every agency that owns, operates, or manages capital assets used to provide public transportation and receives federal financial assistance is required to develop a Transit Asset Management (TAM) plan. The TAM plan:

- Outlines how people, processes, and tools come together to address asset management policy and goals.
- Provides accountability and visibility for furthering understanding of leveraging asset management practices.
- Supports planning, budgeting, and communications to internal and external stakeholders.

As a subrecipient of Federal Transit Administration (FTA) Section 5311 Program funds Mountain Lynx Transit is considered a Tier II provider. Tier II providers may develop their own plans or participate in a Group Plan. Mountain Lynx Transit participates in the DRPT-sponsored group TAM Plan that also includes other rural transit providers from across the Commonwealth.

EXISTING FACILITIES

The Marion dispatch office, located in District Three Governmental Cooperative's main headquarters, handles all services other than those operated through the Galax office. Pictured to the right, this location is currently staffed by four Transportation Operations Specialists who manage specific services. For instance, the staff person shown below is overseeing the town of Wytheville routes. Vehicle maintenance is also conducted through this location.



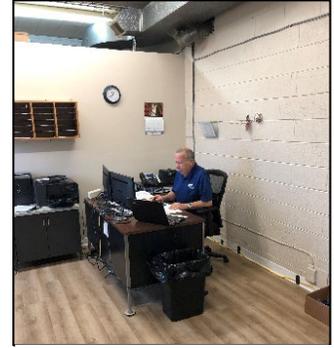
Marion Dispatch Office



Staff Person That Oversees the Town of Wytheville Routes

While the majority of operations are dispatched from the Marion office, drivers report to various locations within the region. These locations are not staffed by a dispatcher, schedule information is transmitted to the drivers via fax machine.

Mountain Lynx Transit’s Galax location is housed in the District Three Governmental Cooperative’s Senior Services offices. Pictured to the right, this site basically operates as a separate location. Customers call a phone line separate from the Marion office, and no records/files are connected with the Marion office. Information between the Marion and Galax location is transmitted via phone calls, emails, and fax. Vehicles are also housed at satellite locations in Abingdon and Wytheville.



Mountain Lynx Transit – Galax Location

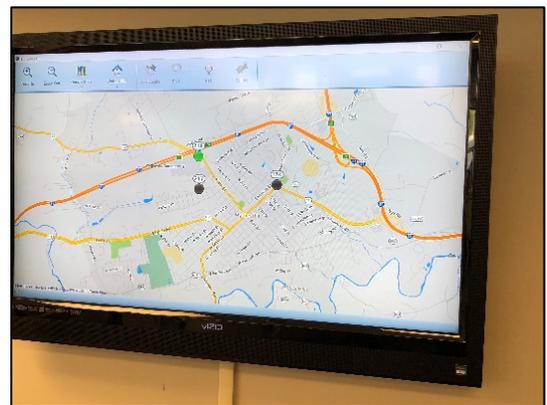
TRANSIT SECURITY PROGRAM

Mountain Lynx Transit buses at the main office in Marion are maintained in a fenced in/lighted area. Drivers use a two-way radio system that can send a covert emergency signal if needed.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PROGRAM

Mountain Lynx Transit has been using a Microsoft Access database as their primary technology component. Originally this database was developed to assist with fleet maintenance, and then expanded to include scheduling, dispatching, and reporting functions. As a result, Mountain Lynx Transit staff noted that the database “crashes” on a regular basis, and therefore they are now primarily using Microsoft Excel spreadsheets for these functions.

Mountain Lynx Transit has a Global Positioning System (GPS) to track vehicle locations through their radio system. Dispatchers monitor screens specific to their location. For example, the town of Wytheville routes are shown in the picture to the right. However, there can be lapses in the transmissions so that location is not always “real-time.” Green dots on the maps display a current location, while black dots indicate that the location has not updated since the previous transmission.



Mountain Lynx Transit staff noted that while the current GPS system is helpful, it does not allow for a “bread crumb” trail of a vehicle’s location.

In September 2019, District Three Governmental Cooperative issued a Request for Proposal (RFP) from qualified companies to provide and implement software that will allow for more efficient and effective transit services and to assist in a variety of scheduling and dispatching

functions. The objectives for this software upgrade included the following areas of high importance:

- **Reduce paperwork overload and duplicative work** – Numerous forms are currently used, and as a result there is a significant amount of duplicative work as customer information, scheduling information, numbers of boardings, and other key data is entered multiple times. Any new technology will need to reduce the need to enter information several times.
- **Provide accurate and reliable data for reporting and recordkeeping** – There should be a strong emphasis on this function, and the software must capture data from the scheduled routes (and associated deviations), the request-based services, and the medical/nutrition site transportation operated by Mountain Lynx Transit.

Accurate data is needed for planning activities and efforts to assess performance and productivity of current services, as well as to produce accurate reports to provide to a wide range of funders that support services they provide in the region. The software must also generate all required reports.

- **Full coordination between the Marion and Galax locations** – As noted earlier, these locations operate fairly independent of each other, resulting in duplicative functions and poor data management. A web-based system or other appropriate approach would be acceptable.
- **One-time data entry – Reduce the multi-step scheduling process and improve the reservation process** - For a trip to be scheduled and communicated to drivers, it is often documented several times and on different forms. New technology should allow for a one-time data entry function, must provide the ability to easily enter pickup information on route deviations and request-based trips, and then communicate this information to satellite locations and drivers along their routes.
- **Provide an improved AVL system** – A reliable AVL system is needed to provide a “history” trail of a vehicle’s location for both dispatching and safety reasons. The technology should also assist drivers by providing electronic maps and voice directions. The AVL data must be available to management for at least 60 days after the day of service.
- **Continue fleet maintenance capabilities** – The original MS Access database was developed to track vehicle maintenance, and ideally the new technology would have similar or greater capabilities. This function can be integrated into the transit scheduling software or it can be separate stand-alone one.

- **Provide greater customer convenience and service** – The new technology should allow for a more rapid reservation process and provide dispatchers with the ability to monitor service in real time.
- **Improve productivity** – New software should help the agency in making more effective use of vehicles and services and help to reduce wait time and no-shows.

Through a procurement process Mountain Lynx Transit selected CTS Software to provide the scheduling and dispatching software. Implementation was underway as the TDP process concluded.

DATA / FARE COLLECTION PROCESS

Data Collection

Implementation of the new software discussed in the previous section will allow Mountain Lynx Transit to collect and report data in a more efficient manner, and support efforts to assess performance and productivity of current services. Previously, Mountain Lynx Transit's process for collecting operational data has been through a manual process that primarily involves spreadsheets. Data from these spreadsheets are used to report passenger trips, service miles, and service hours to DRPT's Online Grant Administration (OLGA) site monthly. The monthly data are then compiled to develop Mountain Lynx Transit's annual National Transit Database (NTD) reports.

Fare Collection

Mountain Lynx Transit's vehicles are equipped with locked fareboxes. The boxes are turned in each day with the driver's paperwork for counting, reconciliation, and deposit. Overall, fare procedures involve the following as documented in the agency's farebox procedures:

- Fares are collected in locked fare boxes. Fare boxes are stored at each of the transit offices. In occupied dispatch offices, the fare boxes are kept on an open shelf under the direct observation of the dispatcher. In the unoccupied transit office, the fare boxes are stored in a locked cabinet. Fare boxes are assigned a unique ID number. All fare box keys are maintained at the District Three Governmental Cooperative finance office.
- On routes that are sponsored by the congregate nutrition program, Mountain Lynx Public Transit provides customers with the opportunity to make anonymous contributions as required by the program regulations. These contributions are collected via a divided compartment fare box labelled "Café Donations Only" on one side.

- Each driver signs out a locked fare box at the start of each route and records it on the route manifest. Fare boxes are assigned per transit area and are tracked according to which route they have been assigned.
- Fare boxes are transported weekly via an agency courier to the main office. Uncounted fare boxes will be kept in a secure location by the Finance Department until counted. Emptied fare boxes are relocked and stored in the empty fare box storage area to await transport back to the assigned area.
- The Accounting Specialist, in the presence of one other employee, counts the fares and includes the total fares and total passes redeemed on the fare box accountability form and generates a bank deposit slip. Deposits are made twice a week. Undeposited funds are kept in a secure location by the Finance Department. Fare box accountability forms are forwarded to the Operations Manager or designee for reconciliation.
- The Operations Manager or designee periodically selects a single fare box from each transit office for a more detailed reconciliation. The Finance Department Accounting Specialist counts the fares and passes separately for the selected boxes before including the total count with the remaining boxes.
- The Operations Manager or designee reconciles total counts to total boardings for each area looking for reasonableness in fares collected. The Operations Manager or designee will also reconcile individual box counts to the related manifests and investigate any variances for reasonableness.

PUBLIC OUTREACH

The homepage of the District Three Governmental Cooperative website offers a link to Mountain Lynx Transit, where route and service information is available by specific jurisdiction. Other Mountain Lynx Transit outreach methods include:

- Participating in job fairs and providing information on employment transportation options.
- Conducting a variety of community promotions.
- Marketing services to people with limited transportation options in the region who without public transit would not be able to participate in community activities.

OTHER AREA TRANSPORTATION PROVIDERS/SERVICES

Public Transit Providers

The Bristol Transit System operates six bus routes that serve key destinations in the greater Bristol area, in both the Virginia and Tennessee sides of the service area. Routes operate primarily from 6:15 a.m. to 5:15 p.m., Monday through Friday. As noted earlier Mountain Lynx Transit's College Express, when operating, provided access to these routes at Bristol Transit's State Street transfer center. There is no formal transfer between services, customers pay separate fares for each service.

Taxi and Private Transportation Providers

- City Cab of Wytheville
- Eller Taxi Service LLC, Marion

Human Service Transportation

Mount Rogers Industrial and Development Center (IDC), a program of the Mount Rogers Community Services Board, serves adults with disabilities and provides transportation for employment, appointments, and community integration activities.

Medicaid Transportation

Medicaid transportation is arranged by LogistiCare for this region of Virginia.

Intercity Bus

Greyhound provides service to the region through their Wytheville Bus Station, actually located at 926 Max Meadows Road in Fort Chiswell approximately seven miles from downtown Wytheville, and therefore not located along the Maroon or Gray Loops.

Amtrak

There is no Amtrak service within the service area.

Chapter 2

Goals, Objectives, and Standards

INTRODUCTION

This chapter discusses unmet needs and gaps in transit services identified at the outset of the project, presents goals for Mountain Lynx Transit, and presents performance metrics and service standards. Identifying unmet needs and gaps was an important first step in the development of the Mountain Lynx Transit TDP, as it will pinpointed issues to be explored within the planning process. The unmet needs and gaps in service are further explored in Chapter 3 through input from a customer survey and results of the demographic analysis.

CURRENT UNMET NEEDS AND POTENTIAL IMPROVEMENTS

An important first step in the development of the TDP was to learn from Mountain Lynx Transit staff about community transportation issues and unmet needs that they are aware of through their contact with customers. During an initial meeting with Mountain Lynx Transit and DRPT staff, the following goals and issues were discussed for consideration during the planning process.

Service Improvements or Expansions

- There have been requests to examine expanded service in Washington County, particularly the colleges in Abingdon.
- Regular service connecting Abingdon and Bristol has been requested.
- Some customers have requested premium service, similar to service provided by transportation network companies (TNCs) like Uber and Lyft.

Funding

- Mountain Lynx Transit would like to operate additional services but does not currently have funding to do so. They noted the importance of local match, and the town of Abingdon recently began providing local match to support the services in that area.
- More bi-directional service on current town routes could be considered, but current funding and staffing levels would need to be increased.

Examination of Current Fare Structure

- The fare for Mountain Lynx Transit services has not changed since 1985. Even at \$0.50, some customers have a difficult time paying the fare. A reduction or elimination of the fare could be considered as the current farebox recovery is low. This review would need to take into account specific services that might be better candidates, and the possible effects on ridership, transient usage, and the reduction of effort on the part of Mountain Lynx Transit in regard to tracking and safeguarding cash collections.

Marketing

- Greater marketing is needed to ensure people are aware of current services, especially the county routes.
- There is a need to constantly educate current and potential customers who are unfamiliar with how shared ride demand response services work, who instead anticipate direct trips similar to taxis or TNCs.

Regional Coordination

1. Mountain Lynx Transit noted that they work with the city of Bristol to secure bus stops, and with the Bristol Tennessee-Virginia Urban Area Metropolitan Planning Organization (MPO) on the use of Section 5307 funding for the region. If possible, Mountain Lynx Transit would like to explore the current allocation of these funds to see if a greater percentage of Section 5307 funds were available.

Infrastructure Improvements

2. Transitioning to more fixed route services where buses would not deviate has been considered, but there is a lack of shelters at locations where customers would need to wait.

TRANSIT PROGRAM MISSION AND GOALS

As documented in the 2013 TDP, the overall mission of Mountain Lynx Transit is to provide high-quality, safe, and friendly public transit services. During the current TDP process the following goals for the program were reconfirmed with Mountain Lynx Transit, and updated to make them more measurable:

1. Treat customers with courtesy, dignity, and respect, without discrimination or partiality. This goal can be monitored through conducting regular customer surveys and reviewing and responding to any customer complaints.

2. Ensure that vehicles are clean, well-maintained, and safely operated. This goal can be assessed through daily monitoring of the fleet and continuing to maintain the fleet in accordance with the manufacturer’s recommended maintenance schedules.
3. Ensure that the reservations, scheduling, and dispatch functions result in timely service within a reasonable pick-up window. This goal can be assessed through daily monitoring of daily operations and on-time percentage.
4. Offer access to medical facilities, employment areas, shopping centers, schools, and community agencies. Mountain Lynx Transit can respond to this goal by monitoring current services, responding to customer requests for any locations not currently served, and working to implement service improvements included in this TDP.
5. Provide public transportation services in a cost-effective manner. This goal can be assessed by monitoring costs on a monthly basis to ensure they are in keeping with the annual operating budget, and monitoring productivity on a monthly basis to ensure that Mountain Lynx Transit is maintaining or improving upon the number of trips per revenue hour provided, and making adjustments as needed to maintain a cost-effective service.
6. Provide adequate mobility options to enable area residents to “age in place.” Mountain Lynx Transit can meet this goal by continuing to provide accessible, flexible services so that older adults with mobility limitations have access to key community destinations. In addition, Mountain Lynx Transit can continue to monitor areas in the region where there are concentrations of older adults, and continue to ensure that information on available services is readily available within the community for older adults.
7. Promote mobility options that enable area residents to maintain personal independence and be engaged in civic and social life. Similar to the previous goal, Mountain Lynx Transit can continue to provide accessible, flexible services so that older adults with mobility limitations have access to key community destinations, and continue to ensure that information on available services is readily available within the community.
8. Manage, maintain, and enhance the existing public transportation system. To meet this goal Mountain Lynx Transit can continue to maintain the fleet in accordance with the manufacturer’s recommended maintenance schedules, replace vehicles and equipment as recommended by DRPT’s useful life criteria, and monitor system safety and take corrective actions as necessary.
9. Create a more diverse workforce regarding ethnicity, race, and gender. Actively seek ways to attract and hire future employees to achieve this goal. To respond to this goal Mountain Lynx Transit can follow tips and recommendations for developing a more diverse and inclusive workforce, such as fostering an organization culture where employees feel they are included and respected and there is a culture of inclusion.

Looking broader at the region, the Southwest Region section of DRPT’s 2019 Coordinated Human Service Mobility Plan includes the counties served by Mountain Lynx Transit. This section of the plan outlined a variety of actions for improving mobility in the region that Mountain Lynx Transit can take into account when assessing the program’s mission and goals. Short term actions involved:

- Educating the public on what services are available and who is eligible to use those services.
- Continuing work with local and regional government officials to increase the available funds for capital purchases, operating, and maintenance.
- Exploring local funding to support trips for seniors, individuals with disabilities, and other vulnerable or special populations.

PERFORMANCE, SAFETY AND SERVICE STANDARDS

The 2013 TDP developed a set of several service standards, which included safety and performance standards. Given the growing importance of five specific performance metrics used by DRPT for funding allocation purposes, the performance standards have been separated from the service and safety standards. Both sets of standards are outlined below.

DRPT’s Performance-Based Allocation Metrics

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

The sizing metrics are intended to base allocations on the size of the agency so that grant funding is proportionate to the level of service operated.

The sizing metrics and weights for FY2020 are:

Operating cost	60%
Ridership	20%
Revenue vehicle hours	10%
Revenue vehicle miles	10%

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

The sizing metrics and weights for FY2021 and beyond will be:

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

The five performance metrics and weights are:

Passengers per revenue vehicle hour (20%)
Passengers per revenue vehicle mile (20%)
Operating cost per revenue vehicle hour (20%)
Operating cost per revenue vehicle mile (20%)
Operating cost per passenger trip (20%)

Mountain Lynx Transit Performance Metrics – FY2019

Table 2-1 provides the Mountain Lynx Transit values for these metrics for FY2019.

Table 2-1: Mountain Lynx Transit Performance Metrics – FY2019

Mountain Lynx Transit Performance Metrics - FY2019				
Passenger Trips/ Revenue Hour	Passenger Trips/ Revenue Mile	Cost/ Revenue Hour	Cost/ Revenue Mile	Cost/Trip
3.69	0.35	\$43.67	\$4.11	\$11.85

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

Service Standards

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

The standards included in the 2013 TDP were primarily focused on performance measures and operating costs, now covered by the metrics discussed in the preceding section. Therefore, updated standards are proposed for other service categories, and are included in Table 2-2.

Table 2-2: Mountain Lynx Transit Proposed Service Standards

Category	Standard
Availability Service availability is a direct reflection of the level of financial resources available for the transit program. Service coverage, frequency, and span of service are considered under the category of Availability.	Service Coverage: <ul style="list-style-type: none"> – Major Activity Centers <ul style="list-style-type: none"> ◆ Employers or employment concentrations ◆ Health centers ◆ Major shopping centers or retailers ◆ Social service/government centers Frequency: <ul style="list-style-type: none"> – Maintain current headways on existing routes and any new services. Span: <ul style="list-style-type: none"> – Maintain current span of service.
Service Quality On-time performance	<ul style="list-style-type: none"> – 95% on-time service for scheduled routes (0-5 minutes late)
Safety Safety incidents per 100,000 miles	<ul style="list-style-type: none"> – Safety incidents per 100,000 vehicle miles. This measure should be calculated and tracked by Mountain Lynx Transit as an indicator of system safety.
Customer Amenities Waiting shelters/benches	<ul style="list-style-type: none"> – Located at bus stops with highest boardings per day; incorporated into site plans for any future major developments.
Marketing and Outreach Bus stop signs Public information	<ul style="list-style-type: none"> – Bus stop signs located at scheduled stops and key destinations include system name, and contact information. – Timetable, maps, and website maintained and updated as needed to be accurate. Expanded outreach and social media campaigns.

PROCESS FOR UPDATING GOALS, OBJECTIVES, AND STANDARDS

As part of the TDP process the proposed performance and service standards were reviewed and adjusted as needed to reflect what is feasible for Mountain Lynx Transit to monitor through appropriate data collection efforts. It is recommended that Mountain Lynx Transit use these standards to gauge service performance and adjust services as warranted and feasible. It is also recommended that an annual review of service standards take place as part of the grant preparation cycle, as these measures have taken on greater importance for Mountain Lynx Transit's annual funding allocation through DRPT. Any changes for these measurement tools can be included in the annual TDP update.

Chapter 3

Service and System Evaluation

INTRODUCTION

This chapter of the TDP focuses on two primary analyses. The first focus is a description and analysis of the recent performance of Mountain Lynx Transit, including analyses of trends, peers, recent ridership, and a passenger survey. The second area of focus provides an analysis of transit needs, including a demographic and land use analysis and a review of relevant studies and plans.

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

- System Evaluation
- Peer Analysis
- Mountain Lynx Route Profiles
- Recent Compliance Review Results
- Mountain Lynx Transit Passenger Survey Results
- Population Analysis
- Transit Dependent Population Analysis
- Title VI Demographic Analysis
- Land Use Profile
- Summary of Demographic Analysis
- Review of Previous Plans and Studies
- Chapter Summary

SYSTEM EVALUATION

Operating Data

Table 3-1 provides operating statistics for Mountain Lynx Transit for FY2017 to FY2019. A review of this data reveals the following:

- Overall ridership increased by 7,339 annual passenger trips, an approximate 4.53% increase during the period.
- Passenger trips per mile grew slightly during the period, and passenger trips per hour increased from 3.39 to 3.69 during the three years.

- Cost per passenger trip dropped from \$13.22 in FY2017 to \$11.85 in FY2019.
- Operating cost per revenue hour and revenue mile also dropped during the period.
- Farebox recovery, while low based on the current fare, increased between FY2017 and FY2019.

Table 3-1: System-Wide Performance and Trend Data

Performance Category	FY2017	FY2018	FY2019
Passenger Trips	162,103	166,883	169,442
Revenue Miles	493,537	494,447	488,015
Revenue Hours	47,791	48,449	45,979
Passenger Trips per Mile	0.33	0.34	0.35
Passenger Trips per Hour	3.39	3.44	3.69
Operating Costs	\$2,142,764	\$1,994,520	\$2,008,004
Operating Cost per Trip	\$13.22	\$11.95	\$11.85
Operating Cost per Revenue Hour	\$44.84	\$41.17	\$43.67
Operating Cost per Revenue Mile	\$4.34	\$4.03	\$4.11
Farebox Revenue	\$63,313	\$64,296	\$66,677
Farebox Recovery Ratio	2.95%	3.22%	3.32%

Source: Mountain Lynx Transit

As discussed in Chapter 1, Mountain Lynx Transit operates various services in the region. Table 3-2 provides ridership by city/town/county routes as reported by the system.

A review of the ridership by route indicates the following:

- The Abingdon and Wytheville routes are the most popular of the city/town routes, and demand increased during the three-year period.
- Conversely, ridership on the Galax route has remained fairly steady over the last three years, and demand on the Marion Route has fallen during the period.
- The Carroll County route has the highest ridership of the county services, and demand increased during the period.
- All the county routes have shown some increase in ridership during the three-year period.

Table 3-2: Ridership by Route, FY2017-FY2019

Route	FY2017	FY2018	FY2019
City/Town Routes:			
Abingdon	25,781	29,287	34,999
Galax	28,754	30,993	29,418
Marion	34,542	30,123	28,531
Wytheville	29,632	32,597	36,129
County Routes:			
Bland County	2,262	1,962	3,226
Carroll County	9,416	8,992	12,945
Grayson County	4,035	3,137	4,635
Smyth County	5,972	6,221	8,410
Washington County	3,332	4,604	6,618
Wythe County	4,257	4,355	4,543
Total	147,983	152,271	169,454

Source: Mountain Lynx Transit

PEER ANALYSIS

While it is most relevant for a transit agency to examine its own performance over time, it is valuable to know the operating statistics for transit programs that could be considered “peers,” either by virtue of location, service area characteristics, or size to see if local transit data is “in the ballpark” of typical peer operating data.

The following Virginia programs were used as peers based on their proximity to the Mountain Lynx Transit system or similarity in operating data:

- MEOC Transit
- Bay Transit
- Four County Transit

The complete peer data is presented in Table 3-3. As indicated in this table, Mountain Lynx Transit is exceeding the mean for passenger trips per hour and per mile and is below the mean for cost per trip and cost per hour. Only the operating cost per mile exceeds the mean.

Table 3-3: Selected Peer Comparison

Feature	District 3	MEOC Transit	Bay Transit	Four County	Mean
Vehicles	25	47	38	40	37.5
Revenue Hours	48,453	53,717	60,971	35,428	49,642
Revenue Miles	494,447	897,659	1,408,398	751,233	887,934
Passenger Trips	166,883	100,058	138,504	150,004	138,862
Operating Costs	\$1,994,520	\$1,715,741	\$3,146,427	\$1,626,746	\$2,120,858
Passenger Trips per Hour	3.44	1.86	2.27	4.23	2.80
Passenger Trips per Mile	0.34	0.11	0.10	0.20	0.16
Operating Cost per Mile	\$4.03	\$1.91	\$2.23	\$2.17	\$2.39
Operating Cost per Trip	\$11.95	\$17.15	\$22.72	\$10.84	\$15.27
Operating Cost per Hour	\$41.16	\$31.94	\$51.61	\$45.92	\$42.72

Source: National Transit Database, 2018

MOUNTAIN LYNX ROUTE PROFILES

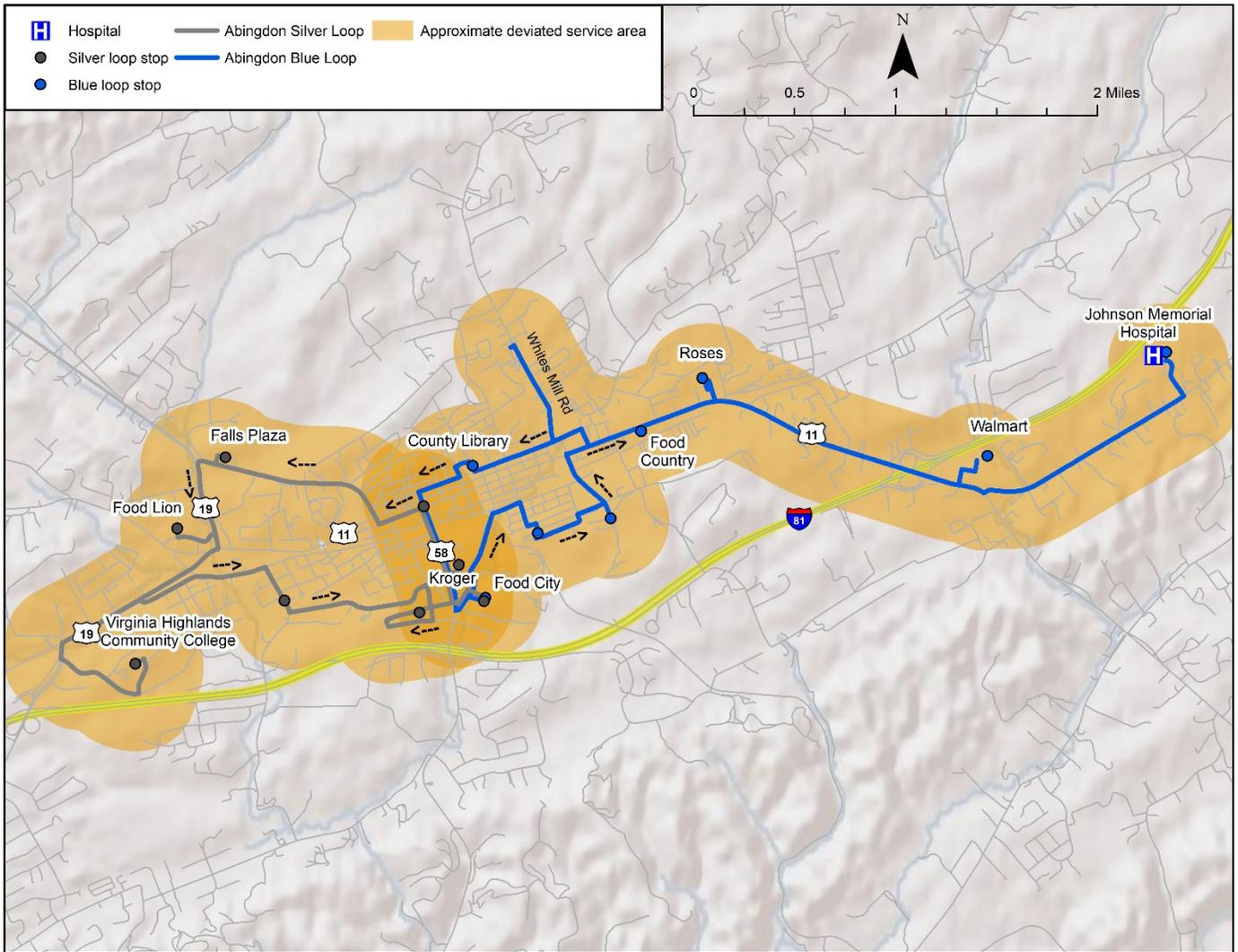
The following section contains profiles for the city/town routes operated by Mountain Lynx Transit.

Abingdon Loops: Silver and Blue

Figure 3-1 illustrates the Abingdon Silver and Blue Loops. These loops operate Monday through Friday from 8:00 a.m. to 4:00 p.m., along a flexible route, primarily along State Highway 11 and 19. The loops take about one hour from start to finish with one-hour headways:

- The Silver Loop serves major grocery stores such as a new Food City and Kroger, in addition to the Virginia Highlands Community College and a few multifamily housing developments.
- The Blue Loop serves major grocery stores such as Food City and Walmart, in addition to the Johnson Memorial Hospital, a couple multifamily housing developments and the County Library. The Blue Loop doesn't have an official stop along Whites Mills Road where there is an apartment complex, or on the Exit 19 Corridor, but will stop if requested.

Figure 3-1: Abingdon Town Loops

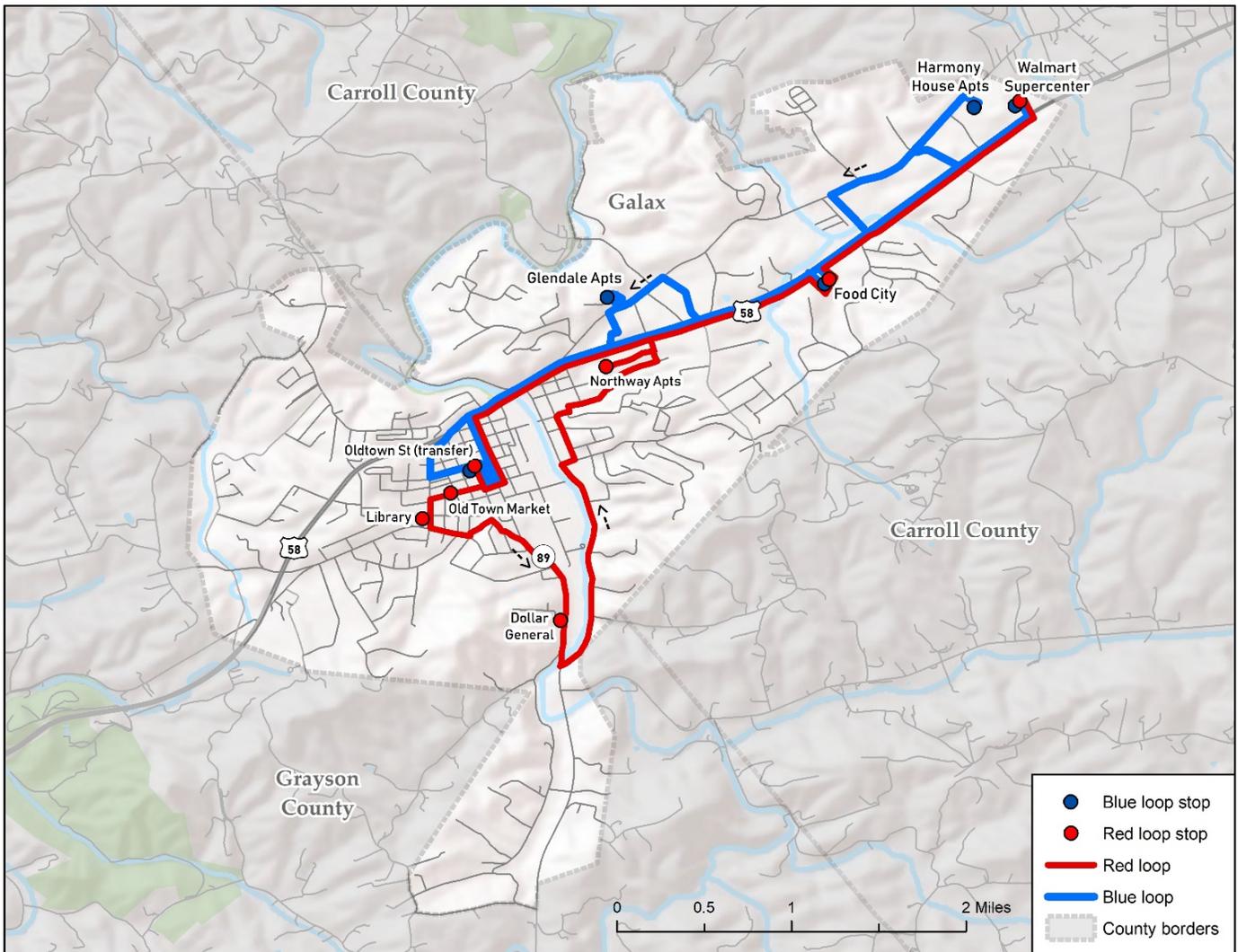


Galax Loops: Blue and Red

Figure 3-2 illustrates the Galax Town Blue and Red Loop. Both loops run Monday through Friday from 8:00 a.m. to 4:00 p.m., and on Saturdays from 10:00 a.m. to 4:00 p.m. The buses operate along a flexible route, primarily along Highway 58. The loops take about an hour from start to finish with one-hour headways.

- The Blue Loop serves major grocery stores such as Food City, Walmart, and a couple multifamily housing developments north of Highway 58.
- The Red Loop also serves the major grocery stores but also serves the town library, Dollar General and Northway Apartments which is south of Highway 58.

Figure 3-2: Galax Town Loop



Marion Town and Summer Express Loop

Figure 3-3 illustrates the Marion Town loop. This loop runs Monday through Friday from 8:00 a.m. to 6:00 p.m. and Saturday from 10:00 a.m. to 4:00 p.m. The bus operates along a flexible route, along Highway 11 and local roads. The loop takes about one hour from start to finish with one-hour headways, beginning and ending at Walmart. The loop serves a few major grocery stores and shopping destinations, Smyth County Community Hospital (if requested), a wellness center, multi-family housing developments, and downtown Main Street.

Figure 3-3: Marion Town Loop

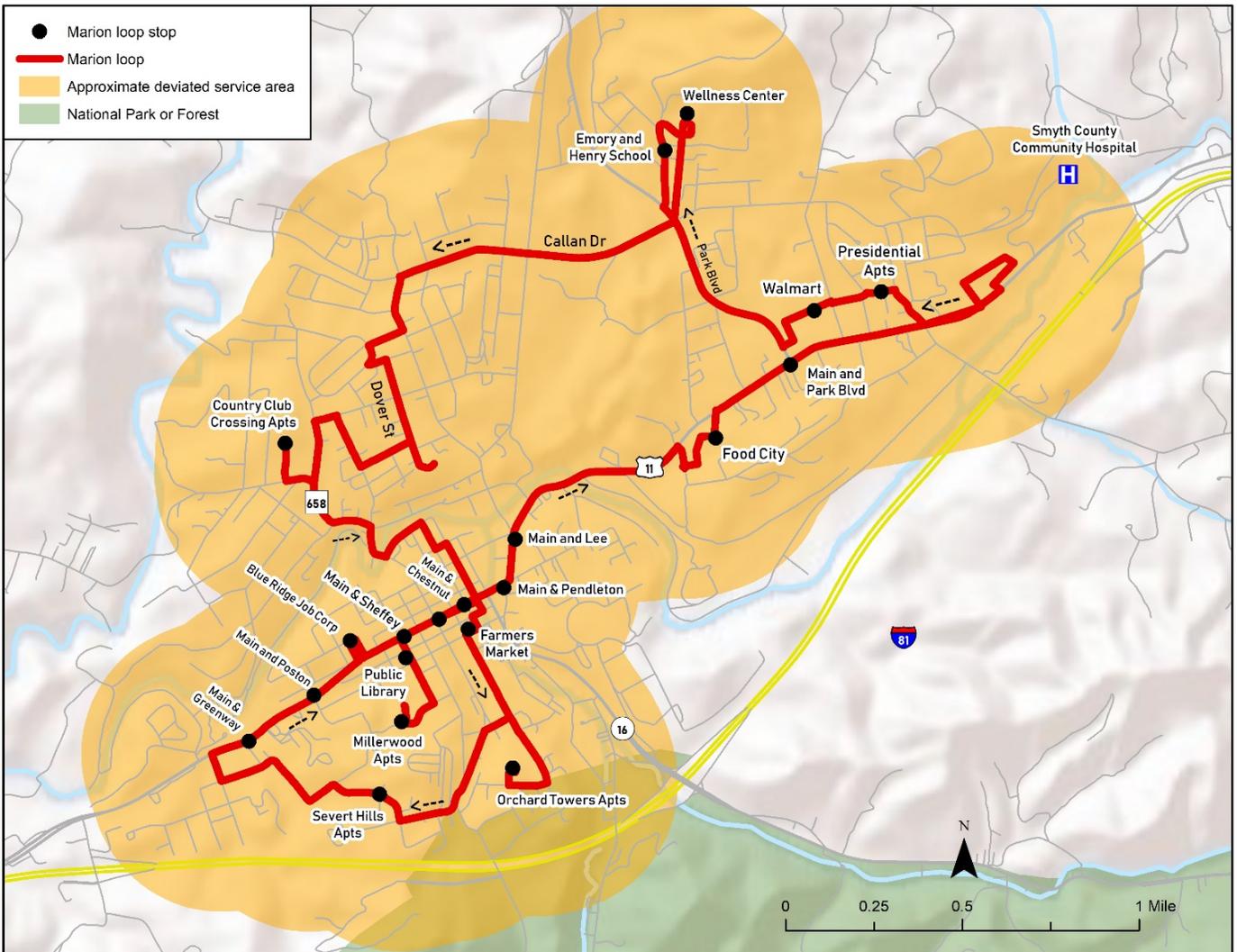
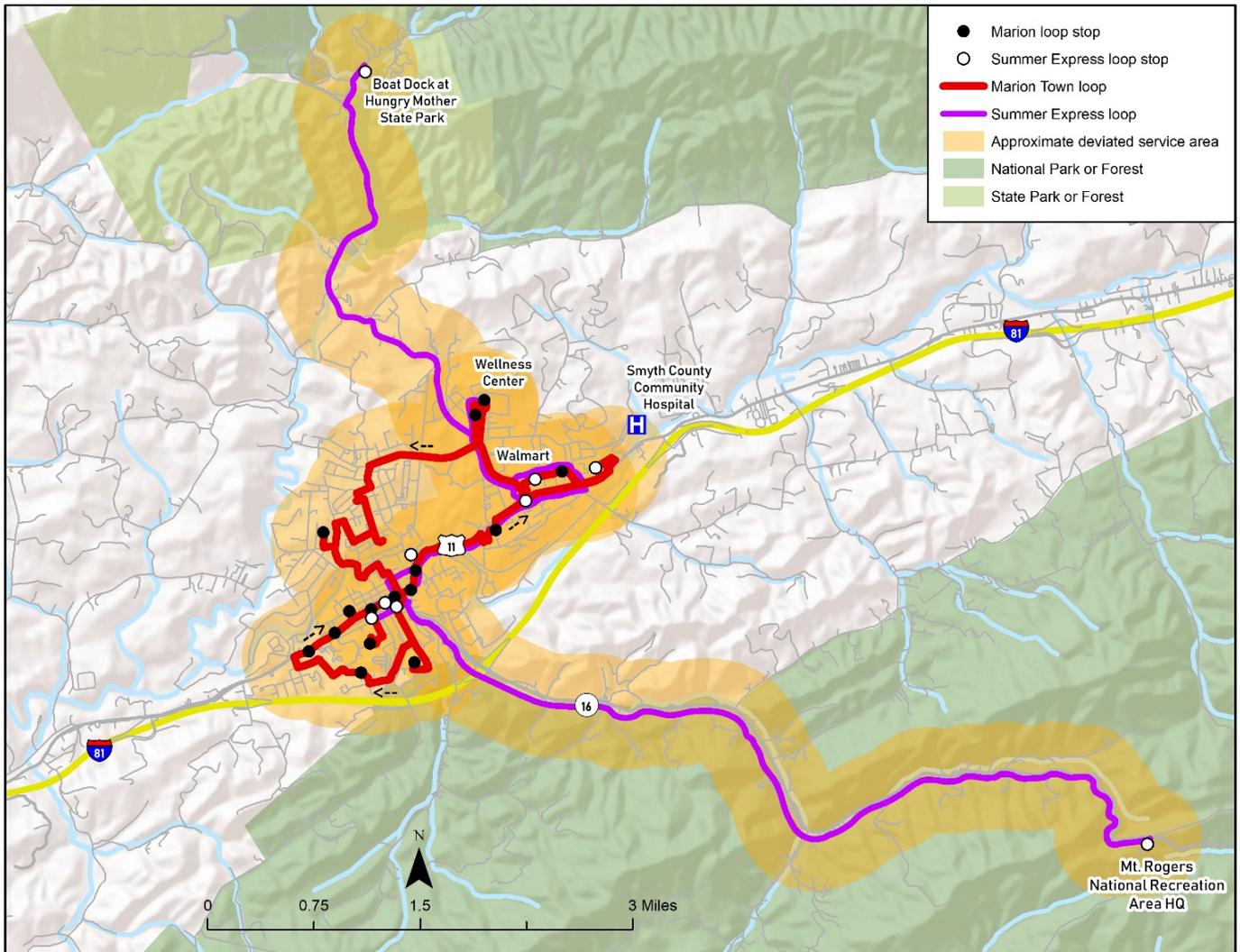


Figure 3-4 illustrates the Marion Summer Express loop. This loop runs seasonally beginning on the day after Memorial Day through mid-August. During the week, it runs Monday through Friday from 8:00 a.m. to 6:00 p.m. and Saturday from 10:00 a.m. to 4:00 p.m., connecting

Marion with the Mt. Rogers National Recreation Area Headquarters (NRA HQ) and Hungry Mother State Park (HMSP). The bus operates hourly along a flexible route, along state highway 11 and local roads including Buchanan Highway/Park Boulevard and VA-16. The loop takes about an hour from start to finish with one-hour headways, beginning and ending at the Farmer’s Market in downtown Marion, where it stops every 30 minutes.

Figure 3-4: Marion Town and Summer Express Loops



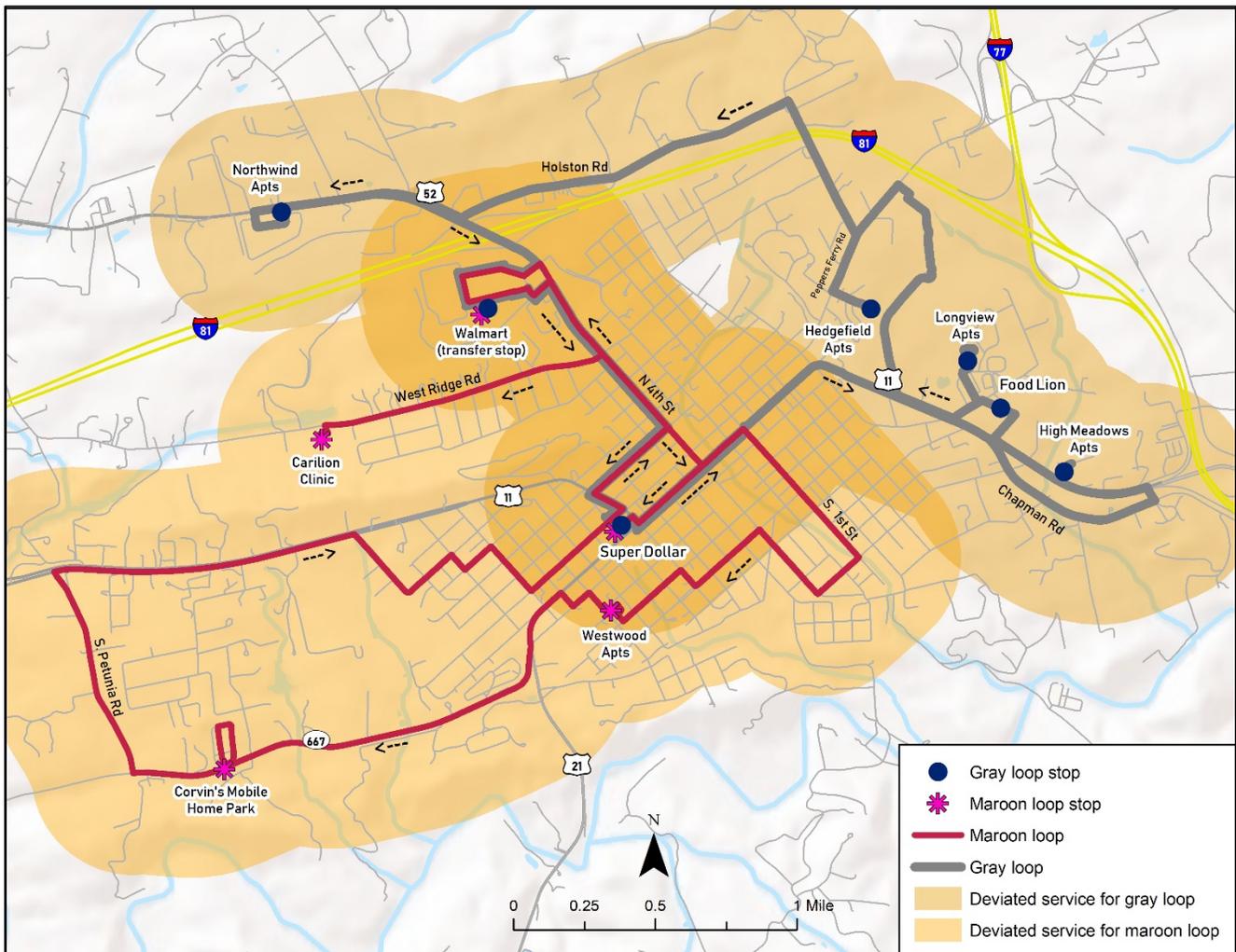
Wytheville Loops: Gray and Maroon

Figure 3-5 illustrates the Wytheville Gray and Maroon Loop. Both loops run Monday through Friday from 7:00 a.m. to 5:00 p.m., and on Saturdays from 10:00 a.m. to 4:00 p.m. In the summer, the Summer Saturday Loop runs from 8:00 a.m. to 2:00 p.m., with reduced service. The Summer Saturday Loop operates by alternating loops beginning at the Super Dollar every

hour, starting with the Gray Loop at 8:00 a.m., followed by the Maroon Loop at 9:00 a.m. The buses operate hourly along a flexible route, primarily along Highway 52. The loops take about an hour from start to finish with one-hour headways, beginning and ending at the Super Dollar, where it stops about every 30 minutes.

- For both loops, passengers may transfer to the other loop at the Walmart at every 0:50 of the hour.
- The Gray Loop serves major grocery stores including Super Dollar, Food Lion and Walmart and four multifamily residential developments.
- The Maroon Loop serves the Super Dollar, Walmart, as well as the town clinic, and residential areas.

Figure 3-5: Wytheville Town Loop



RECENT COMPLIANCE REVIEW RESULTS

Mountain Lynx Transit was scheduled for an FTA compliance review in 2020 that has been postponed due to the COVID-19 pandemic. This review will focus on the system's compliance in the following areas:

- Organizational Management
- Project Management/Grant Administration
- Financial Management
- Satisfactory Continuing Control
- Procurement
- Personnel Issues
- Operations and Service Requirements (including Maintenance)
- Service Provision
- Planning and Coordination (including Title VI)

DRPT completed a financial compliance review for Mountain Lynx Transit for the July 1, 2015 through June 30, 2019 period. These compliance review report stated that Mountain Lynx Transit did materially comply with the requirement of the various agreements and policies and procedures that govern DRPT-controlled funding. The report did note two findings through that review, one related to the documentation of performance data and another regarding an incorrect listing in TransAm. Mountain Lynx Transit submitted a corrective action plan that addressed both findings.

MOUNTAIN LYNX TRANSIT PASSENGER SURVEY RESULTS

An important task for the TDP was to gather opinions from current customers concerning Mountain Lynx Transit's (MLT) services, as well as to develop a passenger profile. With input from Mountain Lynx Transit staff, a rider survey was prepared. Separate surveys were produced for each local circulator route (Wytheville, Marion, Abingdon and Galax) as well as one survey for demand response riders throughout the Mountain Lynx Transit service area. Copies of the rider surveys are provided in Appendix C.

The survey was administered on board vehicles by KFH staff and Mountain Lynx Transit drivers, primarily between October and November in 2019. Survey response was not considerable, as only 55 customers agreed to complete surveys. However, this information provides some insights into the current Mountain Lynx Transit riders and the service improvements they would like.

Abingdon Rider Survey Results

In Abingdon, twenty completed surveys were collected or returned at a later date. The following are some highlights from the rider survey results:

- **Trip Purpose** – When asked to select among seven options (riders could select more than one) most riders said that their main purpose for their trip on the Abingdon Loop was evenly split between home, work, errands/personal business, shopping, and medical services. A couple riders noted they were taking the trip for school.
- **Frequency and Duration of Riding the Bus** –
 - 50% of riders who completed the survey reported taking the bus 2-3 times per week
 - 40% take it four times per week or more
 - 35% reported taking the bus between 1-2 years
 - 25% said they have been using the bus for more than 5 years
- **Alternative Transportation Options** – If transit was not available, many riders (42%) would not be able to make the trip, while others would ride with a family member or friend (37%) or walk (26%).
- **Like Best about MLT** – Many riders found the kindness and service provided by drivers (40%) as the best thing about MLT, while others also noted the conveniences of the routes and not having to use a car for the trip.
- **Like Least about MLT** – Many riders (41%) said that the new route was their biggest complaint, noting it took too long to ride and wait between runs. For example, one rider noted it took two hours to ride from Kroger and another noted they had to ride the loop and then make a connection to get to an appointment ten minutes away. Others said they wanted service to more places beyond Abingdon, and Saturday service.
- **Desired Destinations** – When asked if there were places that riders wished they could go to regularly on the bus, many said Bristol (26%), while others wanted to go to the church on Sunday, Coomes Center on weekends, Chillhowie, Marion, and the jail. Four riders said “no” or did not need to go to any other places.
- **Service Improvements** – When asked to select from a list of potential service improvements (up to three) that would be most useful, almost everybody (90%) picked Saturday service. The next most popular improvement that riders picked was “Later evening hours” (55%) followed by a three-way tie for “More direct routing between places” (30%), “More areas served” (30%) and “Earlier Morning hours (30%).

- **Overall Satisfaction** – Riders indicated that they are either very satisfied or satisfied. Riders were most satisfied by the cost of services (85%) and driver customer service (76%), and the least satisfied by the days and hours of service (42%) and the trip scheduling process (24%).
- **Rider Demographic** – The average rider does not own a car, is 35-54 years old, identifies as White/Caucasian, has an internet-enabled smart phone (67%), is unemployed, and has a household annual income of \$14,999 or less.
- **Mobility Needs** – The majority of riders (67%) said they did not have any mobility needs; however, the rest were about evenly distributed between needing a walker, cane, and personal care attendant. One said they needed a service animal.

When asked for comments or suggestions for MLT, five riders had comments:

- One rider suggested services to Bristol for the Cancer Center/Hospital and the Pinnacle.
- Two respondents complimented the drivers.
- Two respondents emphasized having to ride the bus for a long time.

Of note, one long-time rider noted that the transit used to be better years ago, as they had to ride the bus now during very inconvenient times and that switching buses at Food City after riding for an hour and a half was too much. The rider wished they had more access to the X bus as it was often booked up or unavailable.

Galax Rider Survey Results

In Galax, twenty-three completed surveys were collected or returned at a later date. The following are some highlights from the rider survey results:

- **Trip Purpose** – When asked to select among seven options (riders could select more than one) most riders said that their main purpose for their trip on the Galax Loops was shopping (74%), followed by medical services (30%) and “home”.
- **Frequency and Duration of Riding the Bus** –
 - 32% ride 4 times a week or more
 - 32% of riders take the bus once a week
 - 27% ride 2-3 times per week
 - The majority of riders (61%) have been using the bus for more than 5 years.
- **Alternative Transportation Options** – If transit was not available, most riders (38%) said they would ride with friends or family or not be able to make the trip (33%). Some said they would walk (28%).

- **Like Best about MLT** – Most riders (57%) found the drivers or the service (specifically described as friendly) as the best thing about MLT, others liked spending time with people, the convenience, and service to shopping areas, appointments, and places like Goldy and Fries.
- **Like Least about MLT** – The vast majority of riders said “nothing” or “n/a” but others disliked the bus had service only once a week, lacked service to High Point Bus Center, and lacked evening hours and the number of buses.
- **Desired Destinations** – When asked if there were places that riders wished they could go to regularly on the bus, two riders wished they could go to the bus center for the Greyhound Station, the DMV and service to their doctor. One wanted to get to a farm 3 miles out of range.
- **Service Improvements** – When asked to select from a list of potential service improvements (up to three) that would be most useful, the majority (42%) wanted later evening hours, followed by Saturday Service (32%) and more areas served (32%).
- **Overall Satisfaction** – Riders indicated that they are either very satisfied (64%) or satisfied (36%). Riders were most satisfied by the cleanliness of vehicles (93%) and driver customer service (88%). One rider marked dissatisfaction with the trip scheduling process.
- **Rider Demographic** – The average rider does not own a car, is age 65 or older, identifies as White/Caucasian, does not own an internet-enabled smart phone (65%), is retired, and has a household annual income of \$14,999 or less.
- **Mobility Needs** – Most riders (87%) did not have a mobility need (such as a walker, wheelchair, or personal care attendant) on a daily basis, but two riders noted they needed a walker or cane.

When asked for comments or suggestions for MLT. One noted they would like an extra hour a day, another wanted Monday service, and one said it was a life saver. Others noted they were grateful for the service and wanted 30 minutes for trip scheduling.

Marion Rider Survey Results

In Marion, seven completed surveys were collected or returned at a later date. The following are some highlights from the rider survey results:

- **Trip Purpose** – When asked to select among seven options (riders could select more than one) most riders said that their main purpose for their trip on the Marion Loops was for errands/personal business (83%), followed by shopping (66%) and home (50%).
- **Frequency and Duration of Riding the Bus** –
 - 57% of riders take the bus four times per week or more
 - 29% ride it 2-3 times a week or more
 - The majority of riders (57%) have been using the bus for more than 5 years.
- **Alternative Transportation Options** – If transit was not available, 43% of riders said they would ride with friends or family while 28% said they would take a taxi or use a rideshare service. Forty-three percent said they rode other services provided by MLT.
- **Like Best about MLT** – Most riders (43%) found the drivers or the service as the best thing about MLT, and 28% said they liked the drivers or the people.
- **Like Least about MLT** – Most riders (43%) said that there was nothing they did not like about MLT, and one rider said they liked the availability of MLT the least.
- **Desired Destinations** – When asked if there were places that riders wished they could go to regularly on the bus, 28% of riders said they wanted access to their medical appointments, while most riders said there were no other places they wished to go to.
- **Service Improvements** – When asked to select from a list of potential service improvements (up to three) that would be most useful, the top two improvements were Saturday service (43%) and later evening hours (43%).
- **Overall Satisfaction** – Riders mostly indicated that they were very satisfied (80%), the second highest percentage of all transit regions. Riders were almost unanimously “very satisfied” by all the service categories provided.
- **Rider Demographic** – The average rider does not own a car, is age 65 or older, identifies as White/Caucasian, does not own an internet-enabled smart phone (64%), is retired, and has a household annual income of \$14,999 or less.
- **Mobility Needs** – Almost all riders (71%) did not have a mobility need (such as a walker, wheelchair, or personal care attendant) on a daily basis, but one rider noted they needed a cane and another needed a personal care attendant.

When asked for comments or suggestions for MLT, two had comments. One noted they lived in an assisted living facility and another said they would not be able to go to a lot of places without the bus.

Wytheville Rider Survey Results

In Wytheville, four completed surveys were collected or returned at a later date. The following are some highlights from the rider survey results:

- **Trip Purpose** – When asked to select among seven options (riders could select more than one) half of the riders said their main purpose on the Wytheville loop was work or shopping.
- **Frequency and Duration of Riding the Bus** –
 - 100% of riders take the bus four times per week or more
 - The majority of riders (75%) have been using the bus for more than 2 years.
- **Alternative Transportation Options** – If transit was not available, 100% of riders said they would walk, and 25% said they would ride with friends/family.
- **Like Best about MLT** – Half of the riders said “the drivers”, others said “the times are consistent” and “everything”.
- **Like Least about MLT** – Comments include: “longer hours”, “could run longer” and “smelly passengers”.
- **Desired Destinations** – When asked if there were places that riders wished they could go to regularly on the bus, every respondent said “no”.
- **Service Improvements** – When asked to select from a list of potential service improvements (up to three) that would be most useful, 100% said “later evening hours”.
- **Overall Satisfaction** – Riders mostly indicated that they were satisfied (80%). 100% of riders indicated they were “very satisfied” by driver customer service and the cost of services.
- **Rider Demographic** – The average rider does not own a car, is age 35-64, identifies as White/Caucasian, owns an internet-enabled smart phone, is employed (full-time), and has a household annual income of \$14,999 or less.
- **Mobility Needs** – No riders indicated they had a mobility need (such as a walker, wheelchair, or personal care attendant).

When asked for comments or suggestions for MLT, one respondent asked for longer hours and weekend service.

Mountain Lynx Transit in Other Areas – Onboard Rider Survey Results

In other areas of the service area, ten completed surveys were collected or returned at a later date. The following are some highlights from the rider survey results:

- **Rider Residence** – Riders lived in the following areas: Whitetop (3), Washington County (2), and Saltville (5).
- **Trip Purpose** – When asked to select among seven options (riders could select more than one) every rider said shopping. One picked errands/personal business, while another picked social/recreation.
- **Frequency and Duration of Riding the Bus** –
 - Frequency**
 - 60% of riders take the bus once a week
 - 30% took the bus 2-3 times per week
 - Duration**
 - 40% have been riding for more than 2 years
 - 50% have been riding the bus for more than 5 years
- **Source of Learning about MLT** – When asked how the rider initially found out about MLT, 50% said the Senior Center or Agency staff, 40% said they “already knew about it” and one learned about it from the website.
- **Alternative Transportation Options** – If transit was not available, 56% of riders said they would not be able to make the trip. Twenty-two percent said they would ride with friends or family, and 30% said they ride other services offered by MLT.
- **Like Best about MLT** – When asked what they liked the most about MLT, 33 % of riders said they liked to go shopping. Twenty percent said they liked the drivers, while 20% also said they liked its reliability.
- **Like Least about MLT** – Out of 4 riders that answered, 3 said “nothing.” One rider said they couldn’t go shopping in Bristol on Wednesdays or Fridays.
- **Desired Destinations** – When asked if there were places that riders wished they could go to regularly on the bus, 3 answered “no.”
- **Service Improvements** – When asked to select from a list of potential service improvements (up to three) that would be most useful, the top two improvements were more areas served (50%) and later evening hours (38%).

- **Overall Satisfaction** – Riders indicated that they were very satisfied (100%) out of 5 responses. Almost all riders also indicated they were very satisfied with all the other service categories.
- **Rider Demographic** – The average rider did not have a vehicle available for this trip nor did they have a vehicle available in their household.

When asked for comments or suggestions for MLT, four had comments. One noted they lived in an assisted living facility and another said they would not be able to go to a lot of places without the bus.

POPULATION ANALYSIS

This section provides a general population profile for the study area, identifies and evaluates underserved population subgroups, and reviews the demographic characteristics pertinent to a Title VI analysis. The study area consists of Washington, Smyth, Wythe, Grayson and Carroll counties and the city of Galax. This analysis includes data sources from the 2010 U.S. Census and the 2018 American Community Survey (ACS) 5-year estimates.

Population

Table 3-4 shows U.S. Census population counts for the study area from 1990 to 2018. During the 2018 ACS 5-year estimate, the United States Census Bureau reported that Mountain Lynx Transit's service area had a population of 166,592. This was an 8.7% increase from 1990, and a 0.5% increase from 2000, and a -1.4% decrease from 2010.

With seven jurisdictions under the umbrella of Mountain Lynx Transit's service area, population gains and losses can show striking comparisons. For example, Washington County experienced an 18.5% population increase from 1990 to 2018. During the same period, Grayson County saw a 2.9% decline in population, and Smyth County saw a 4.2% decline.

Since 1990, Carroll County, Washington County and Wythe County have shown population growth. Since 2010, all counties experienced slight decreases in population. The only county with a population increase since 2010 was Grayson. The population data by jurisdiction for the three Census periods are shown in Table 3-4. Population is forecasted to decrease slightly for the region in the next couple decades (Table 3-5). Grayson, Smythe, and Bland counties will see the largest population decreases, and the largest increases in the 65 and older age group. By 2030, adults age 65 and older will increase about 12% in the region, while all other age groups will decrease slightly, but rebound by 2040.

Table 3-4: Population by Jurisdiction for Mountain Lynx Transit

Location	1990 Population	Growth Rate	2000 Population	Growth Rate	2010 Population	Growth Rate	2018 Estimate	1990 – 2018 % Change
Washington County	45,887	11.4%	51,103	7.4%	54,876	-0.8%	54,406	18.5%
Smyth County	32,370	2.2%	33,081	-2.6%	32,208	-3.7%	31,059	-4.2%
Wythe County	25,466	8.4%	27,599	5.9%	29,235	-1%	28,940	13.6%
Grayson County	16,278	10.1%	17,917	-13.3%	15,533	1.8%	15,811	-2.9%
Carroll County	26,594	10%	29,245	2.7%	30,042	-1.8%	29,738	11.8%
Bland County	6,514	5.5%	6,871	-0.7%	6,824	-5.8%	6,447	-1%
City of Galax	6,670	2.5%	6,837	3%	7,042	-6%	6,638	-0.4%
Total Service Area (MLT)	153,265	8.2%	165,782	1.9%	168,936	-1.4%	166,592	8.7%

Source: U.S. Census, American Factfinder

Table 3-5: Age Divisions and Population Forecasts

Age Group	2020 Population		2030 Projection		2040 Projection	
	Population	Percentage	Population	10-Year Change	Population	10-Year Change
Virginia	8,655,021	-	9,331,666	+7.8%	9,876,728	+5.8%
0-19	2,152,495	24.9%	2,298,450	+6.8%	2,452,625	+6.7%
20-64	5,150,078	59.5%	5,309,834	+3.1%	5,614,317	+5.7%
65+	1,352,448	15.6%	1,723,382	27.4%	1,809,787	5.0%
MLT Region	169,903	-	166,562	-2.0%	161,271	-3.3%
0-19	36,113	21.26%	34,181	-5.7%	35,785	+4.7%
20-64	94,058	55.36%	88,455	-6.3%	94,171	+6.5%
65+	39,721	23.38%	44,358	+11.7%	48,275	+8.9%
Bland County	6,365	-	6,042	-5.0%	5,652	-7.0%
0-19	1,193	19%	1,079	-10.5%	713	-51.3%
20-64	3,679	58%	3,443	-6.8%	3,126	-10.1%
65+	1,494	23%	1,520	+1.8%	1,517	-0.2%
Carroll County	29,014	-	28,579	-2%	27,805	-2.8%
0-19	6,181	21%	5,895	-4.8%	4,410	-40.1%
20-64	15,630	54%	14,786	-5.7%	13,977	-11.8%
65+	7,203	25%	7,898	+9.6%	7,911	+9.8%
Galax City	6,508	-	6,286	-3.5%	5,993	-4.9%
0-19	1,441	22%	1,376	-4.8%	1,003	-43.7%
20-64	3,467	53%	3,252	-6.6%	3,049	-13.7%
65+	1,599	25%	1,659	3.7%	1,622	1.4%
Grayson County	15,319	-	13,701	-11.8%	11,956	-14.6%
0-19	3,093	20%	2,592	-19.3%	2,343	-1.0%
20-64	7,830	51%	6,979	-23.1%	5,760	-21.2%

	2020 Population		2030 Projection		2040 Projection	
65+	3,632	24%	4,130	+13.7%	3,853	-7.2%
Smyth County	30,182	-	28,361	-6%	26,237	-8.1%
0-19	6,722	22.2%	6,004	-12.0%	6,066	1%
20-64	16,868	55.9%	15,312	-10.2%	14,839	-3.2%
65+	6,592	21.8%	7,476	+13.4%	7,733	+3.4%
Washington County	53,918	-	54,802	+1.6%	54,990	+0.3%
0-19	11,283	20.9%	11,231	-0.4%	11,461	2.0%
20-64	30,082	55.8%	29,371	-2.4%	29,502	+0.4%
65+	12,553	23.3%	14,199	+13%	14,026	-1.2%
Wythe County	28,597	-	28,791	+1.0%	28,638	-0.5%
0-19	6,200	21.7%	6,004	-3.2%	6,066	+1.0%
20-64	15,738	55.0%	15,312	-2.7%	14,839	-3.2%
65+	6,648	23.3%	7,476	+12.4%	7,733	+3.4%

University of Virginia Weldon Cooper Center, Demographics Research Group. (2019). Virginia Population Projections. Retrieved from <https://demographics.coopercenter.org/virginia-population-projections>

TRANSIT DEPENDENT POPULATION ANALYSIS

Public transportation needs are defined in part by identifying the relative size and location of segments within the general population that are most likely to be dependent on transit services. This includes individuals who may not have access to a personal vehicle due to income status or are unable to drive due to age or disability. The results of this demographic analysis highlight areas within the study area with the greatest transportation needs.

For the purpose of developing a relative process of ranking socioeconomic need, block groups are classified relative to the entire study area by using a five-tiered scale of “Very Low” to “Very High.” A block group classified as “Very Low” can still have a significant number of potential transit dependent persons, as “Very Low” only means below the study area’s average. At the other end of the spectrum, “Very High” means greater than twice the study area’s average. The exact specifications for each score are summarized in Table 3-6.

Table 3-6: Relative Ranking Definitions for Transit Dependent Populations

Number of Vulnerable Persons or Households	Score
Less than and equal to the study area’s average	Very Low
Above the average and up to 1.33 times the average	Low
Above 1.33 times the average and up to 1.67 times the average	Moderate
Above 1.67 times the average and up to two times the average	High
Above two times the average	Very High

Figure 3-6 displays Transit Dependence Index (TDI) rankings for the study area. According to the TDI, areas with higher transit need are generally found in high density areas, including block groups in Abingdon, Marion, Wytheville and Galax. Chillhowie and Atkins also have a high TDI index but is not a high-density area.

The Transit Dependence Index Percent (TDIP) is similar to the TDI measure; however, it excludes the population density factor. The TDIP for each block group in the study area was calculated based on autoless households and the elderly/youth/below poverty populations.

By removing the population density factor, the TDIP can measure the degree of vulnerability. It represents the percentage of population within the block group with above socioeconomic characteristics, and it follows the TDI's five-tiered categorization of "Very Low" to "Very High." It does not highlight block groups that are likely to have higher concentrations of vulnerable populations only because of their population density.

Figure 3-7 shows transit need based on percentage. According to the TDIP, there are six block groups with a high transit need based on percent, which are found in Galax City and Washington, Smyth, Wythe and Carroll counties. Overall, areas that fall into a moderate classification are more dispersed in Washington, Smyth and Carroll counties.

Figure 3-6: Transit Dependence Index (TDI)

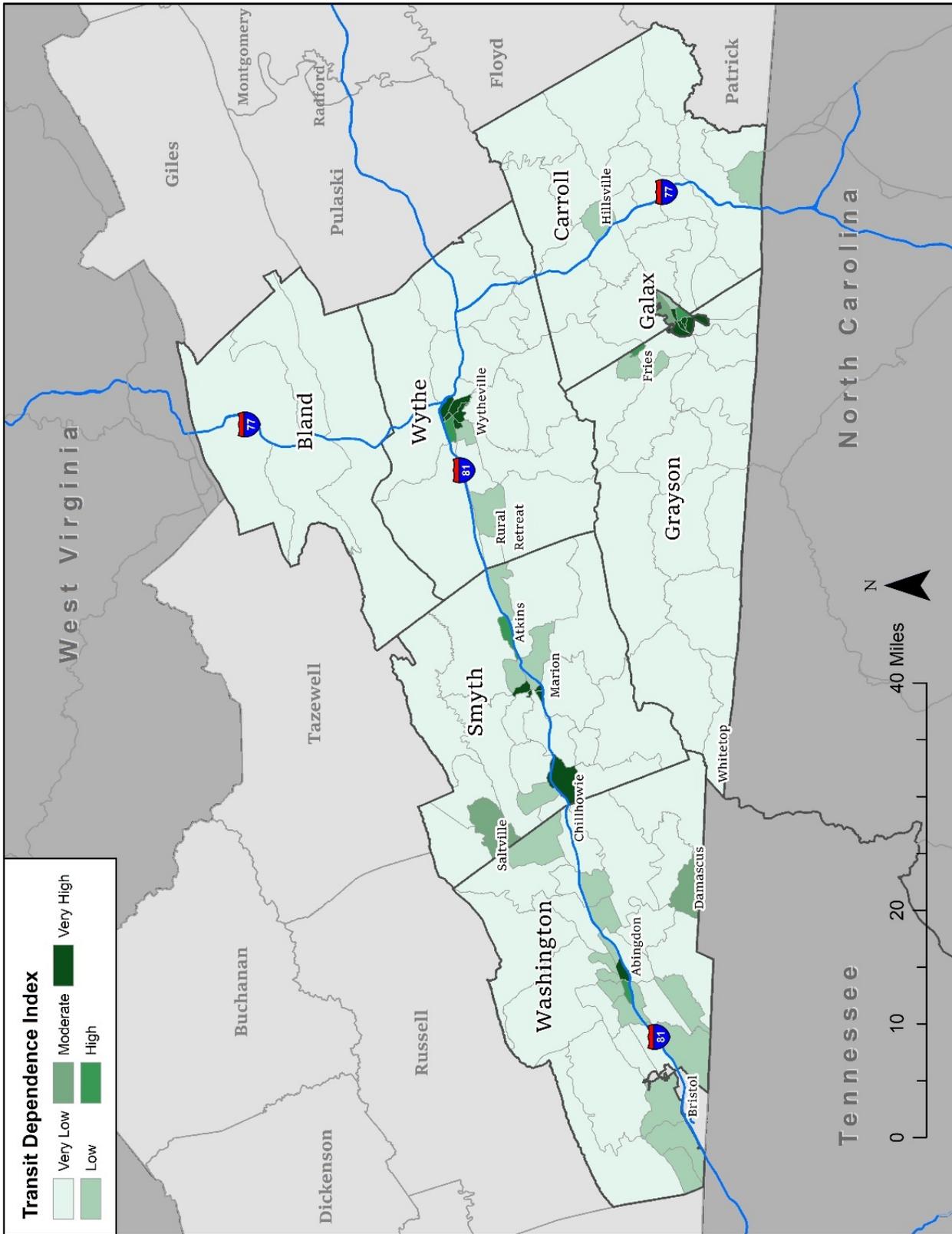
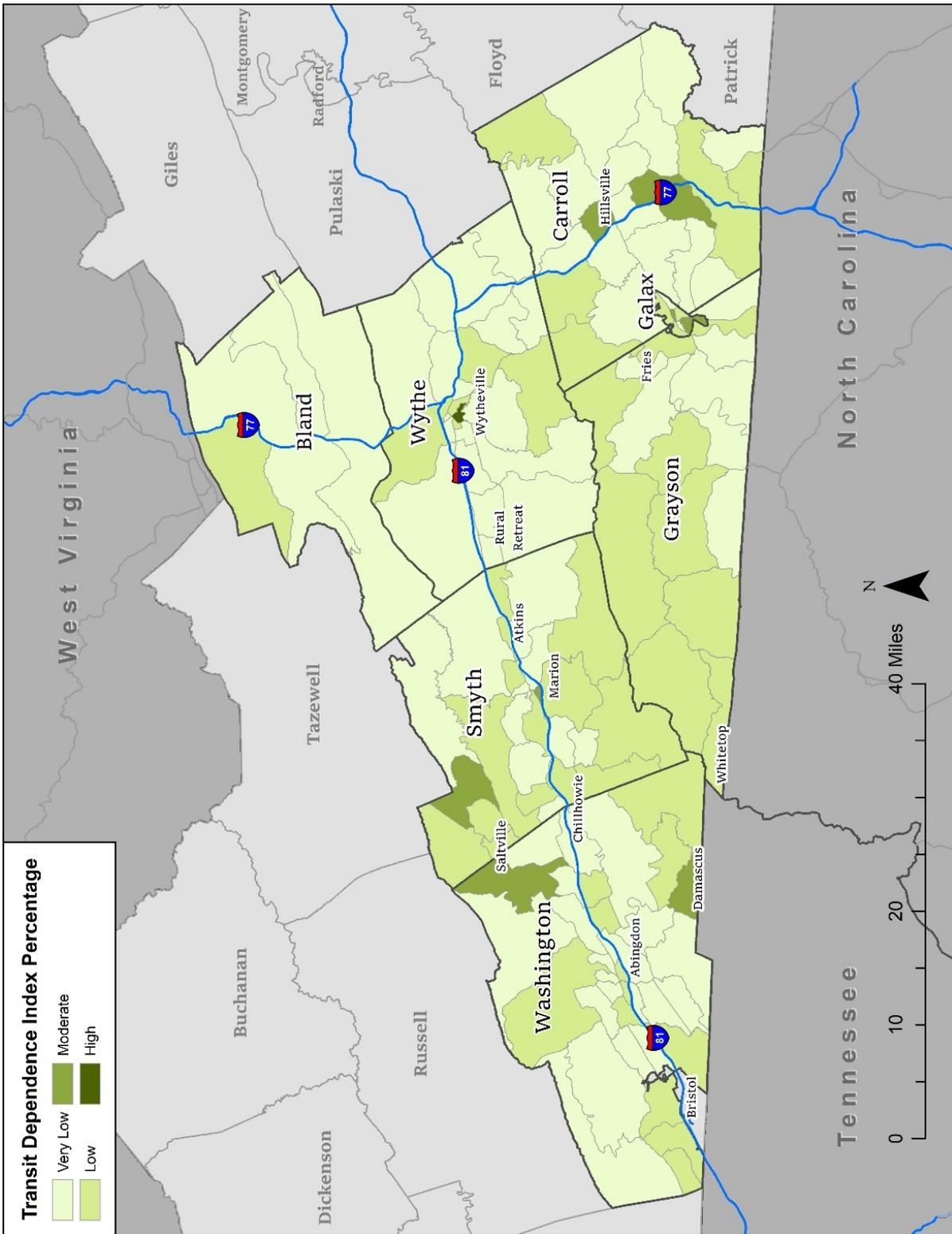


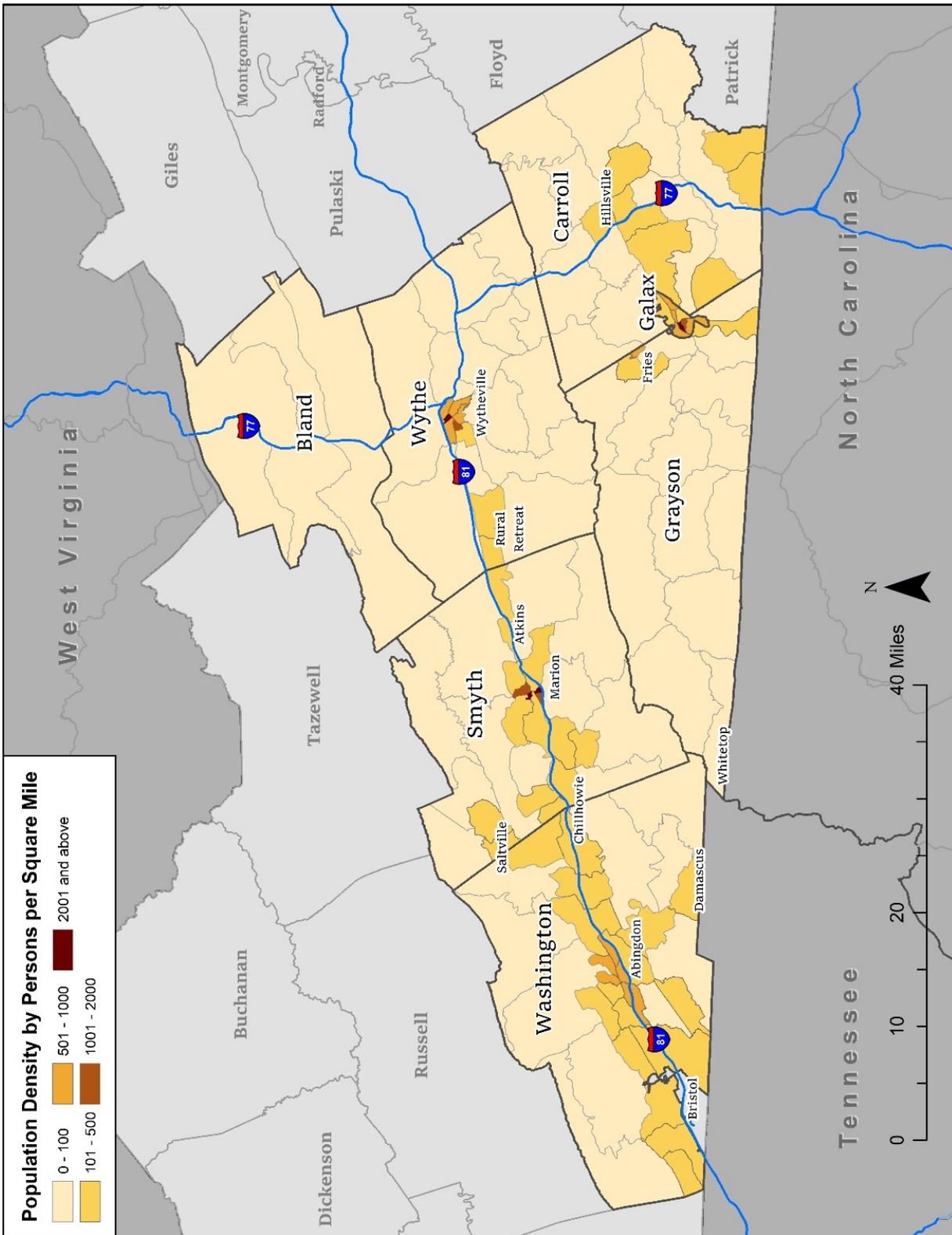
Figure 3-7: Transit Dependence Index Percentage (TDIP)



Population Density

Population density is an important indicator of how rural or urban an area is, which in turn affects the types of transportation that may be most viable. While fixed route transit is more practical and successful in areas with 2,000 or more persons per square mile, specialized transportation services are typically a better fit for rural areas with less population density. As shown in Figure 3-8, most of the Mountain Lynx Transit service area has a population density of less than 100 persons per square mile, particularly in Bland and Grayson counties. Block groups with a population density between 101 – 500 people per square mile are found along I-81 between Washington and Wythe counties, outside of Bristol, VA (which provides its own transit service), Damascus, Saltville, Galax, and along I-77 in Carroll County. Block groups with a population density more than 1000 people per square mile are present in Marion, Wytheville and Galax.

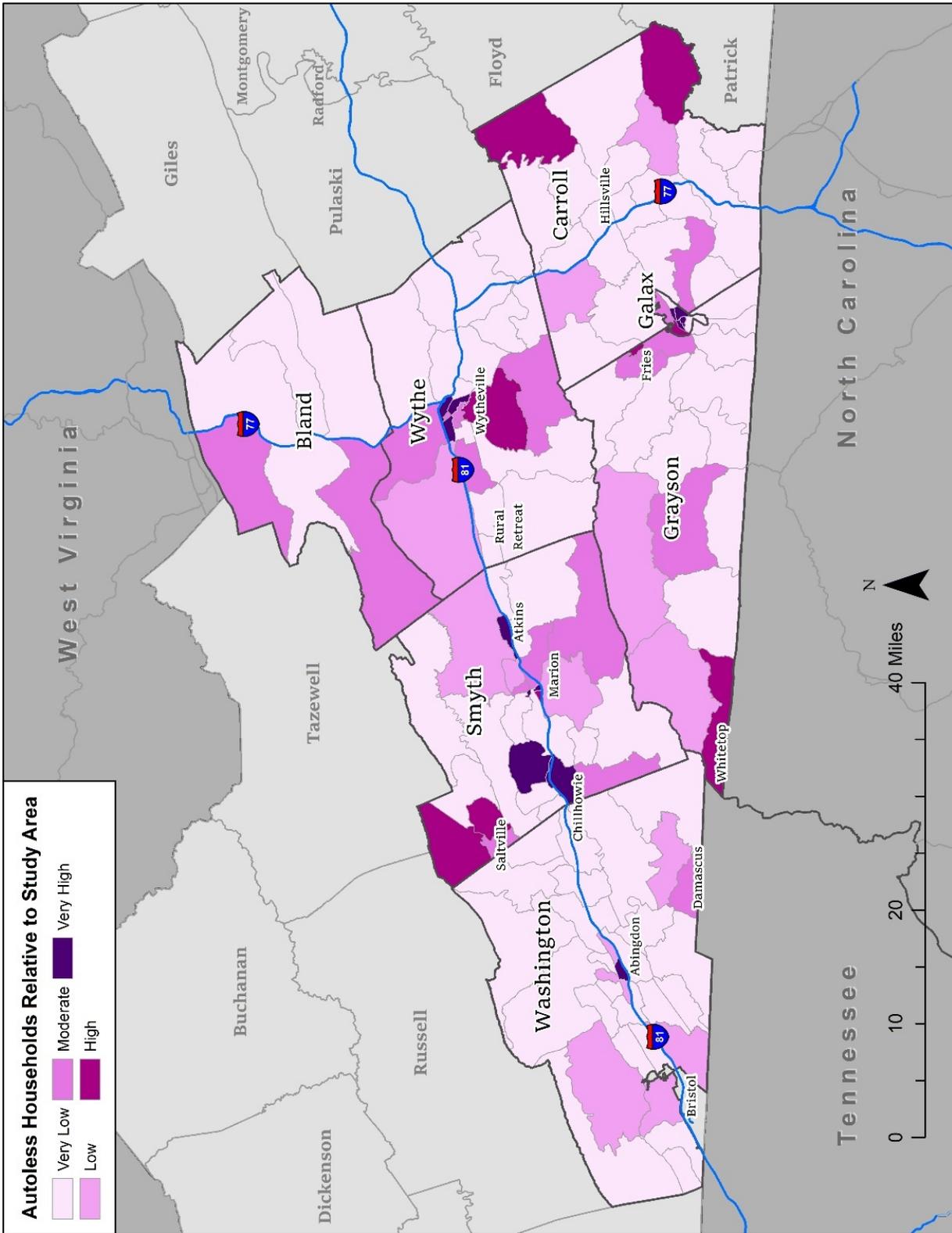
Figure 3-8: Population Density in the Study Area



Autoless Households

Households without at least one personal vehicle are more likely to depend on the mobility offered by public transit and human service organizations than those households with access to a car. Figure 3-9 displays the relative number of autoless households for the region. Block groups with a classification of “Very High” or “High” are found in Abingdon in Washington County; Chillhowie, Marion and areas around Saltville in Smyth County; Wytheville in Wythe County; Whitetop and Fries in Grayson County; Galax City; and portions of eastern Carroll County.

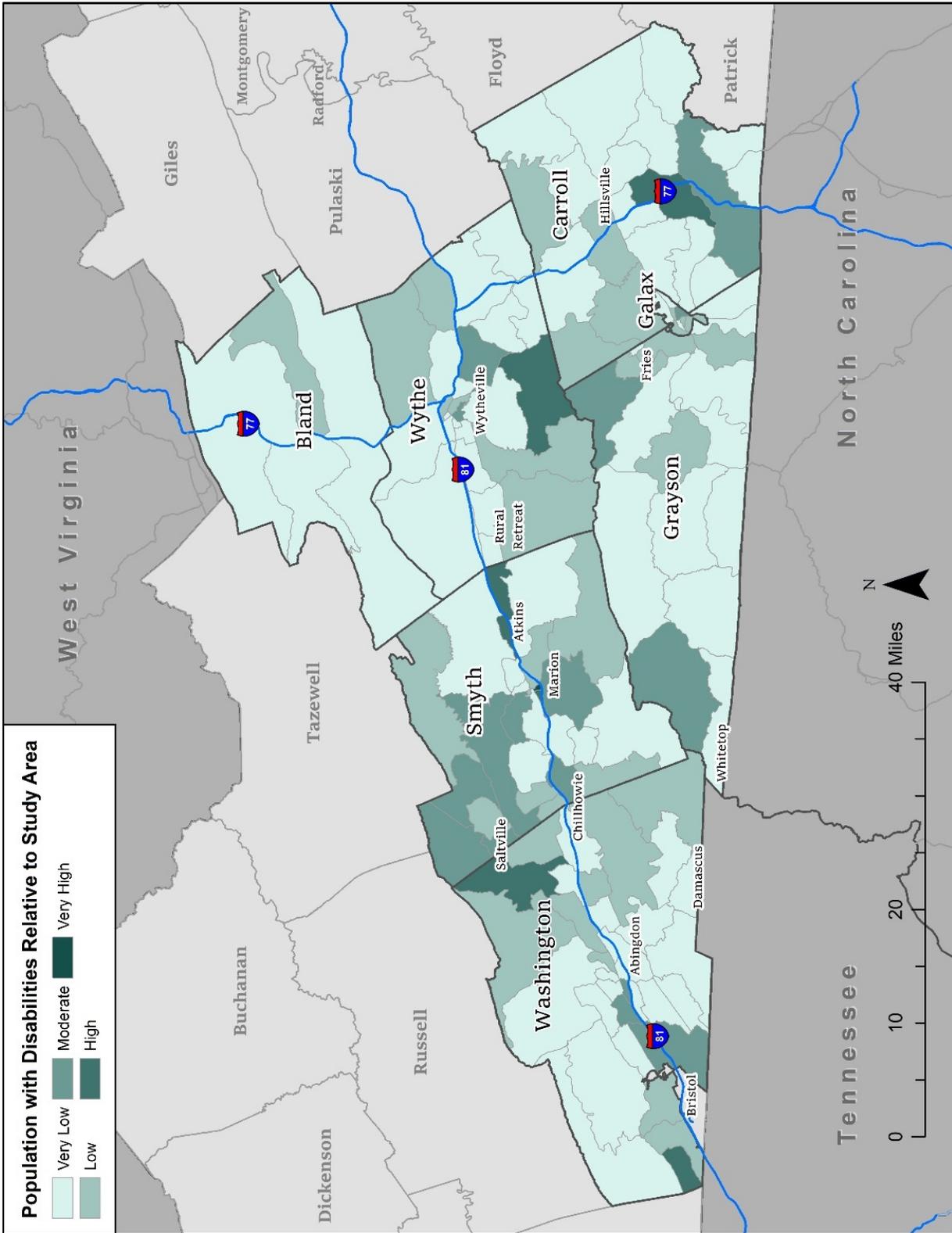
Figure 3-9: Autoless Households in the Study Area



Individuals with Disabilities

Those with disabilities may be unable to operate a personal vehicle and thus be more likely to rely on public transportation. Figure 3-10 displays the relative number of individuals with disabilities. Block groups classified as “High” or “Very High” can be found in Washington County near Clinchburg and west of Bristol; in Smyth County specifically near Marion and Atkins; and southern portions of Wythe; and Carroll County.

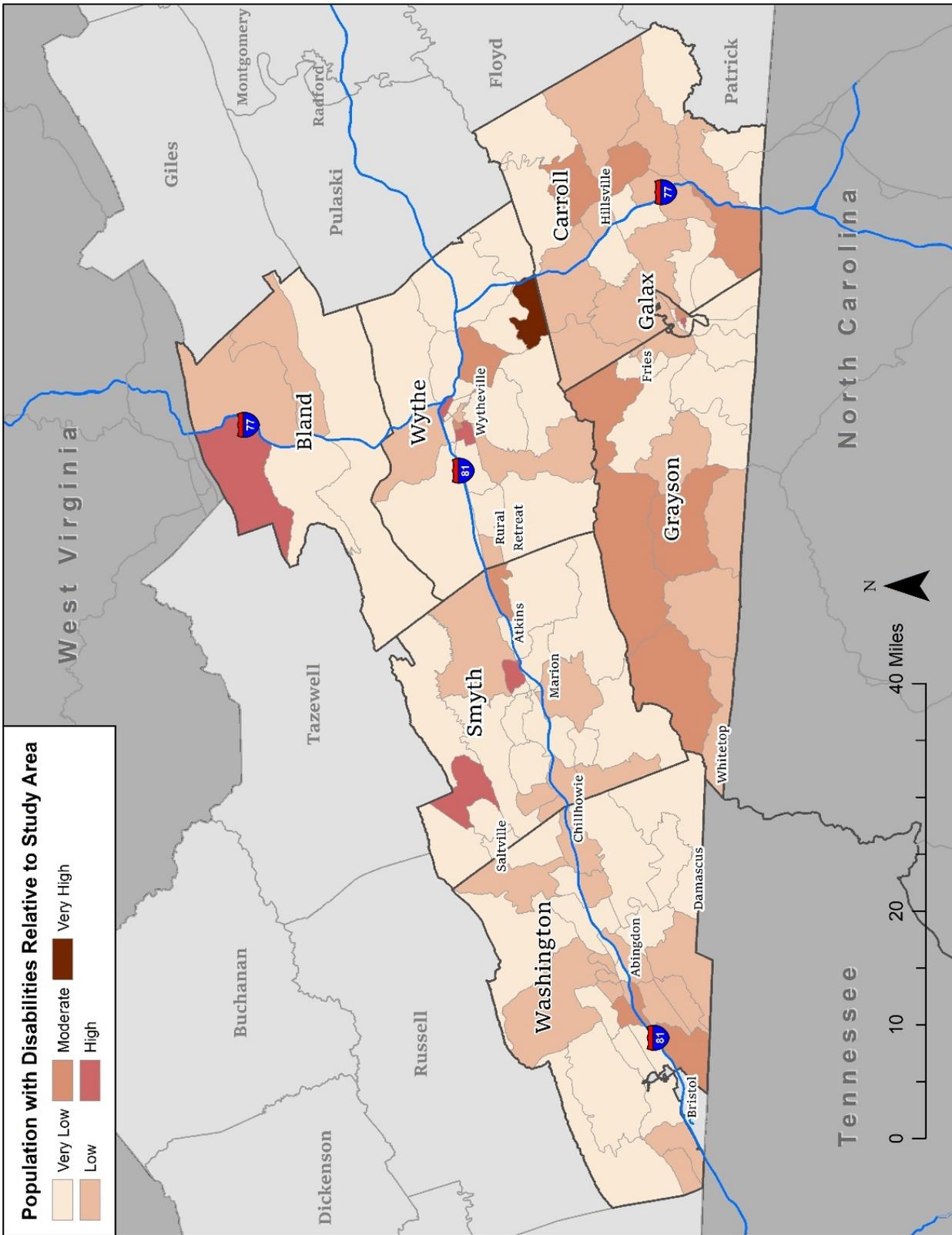
Figure 3-10: Populations with Disabilities in the Study Area



Senior Adult Populations

Individuals aged 65 and older may scale back their use of personal vehicles as they age, leading to greater reliance on public transportation compared to those in other age brackets. According to the American Community Survey (ACS), approximately 22% of the region's population is age 65 or older. Figure 3-11 displays the relative concentration of older adults. The block groups classified as having a high number of older adults are generally in lower density areas, and are located north of Marion, east of Saltville, northern Bland County, areas surrounding Wytheville, and Galax. The only block group with a very high concentration of older adults is in southern Wythe County near Austinville.

Figure 3-11: Populations with Older Adults in the Study Area



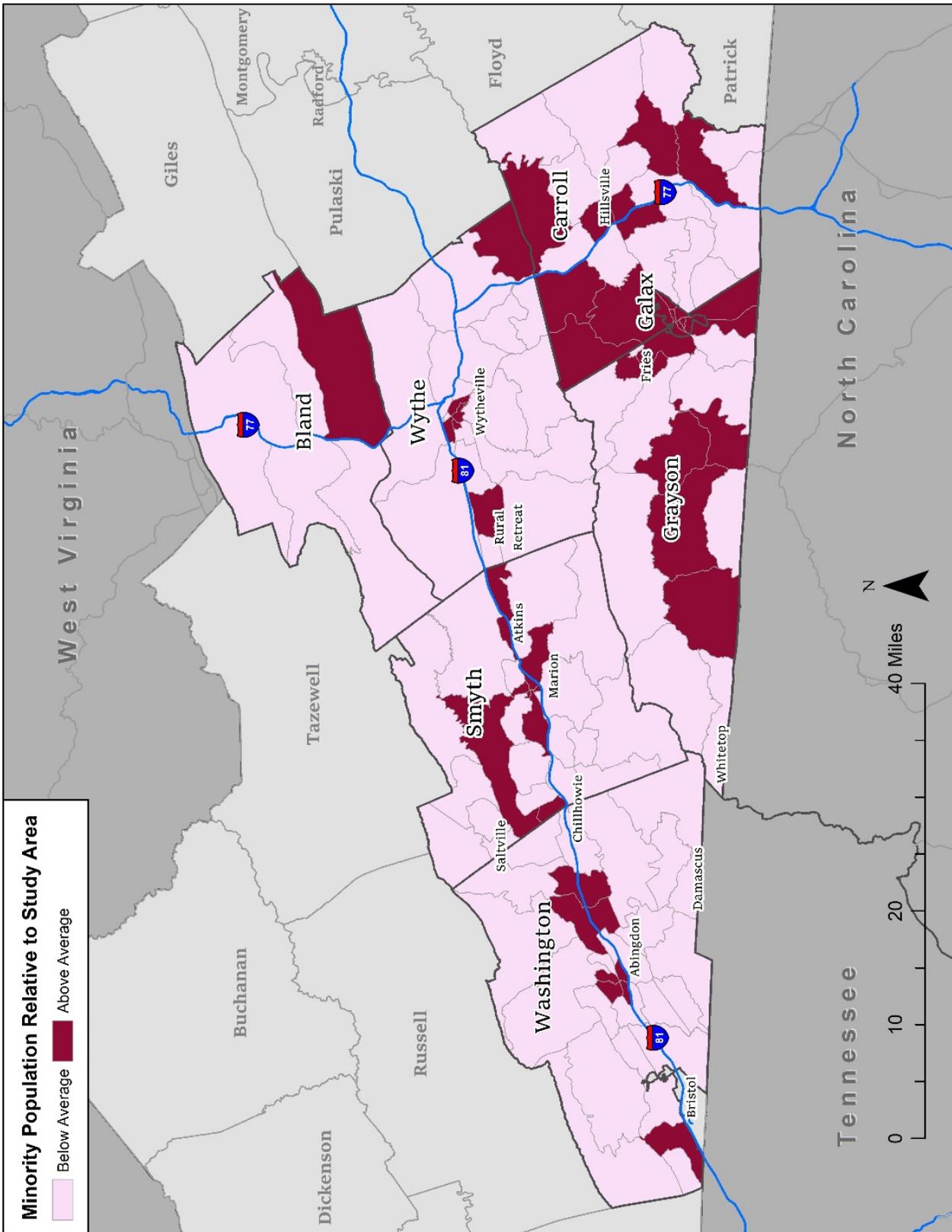
TITLE VI DEMOGRAPHIC ANALYSIS

The Civil Rights Act of 1964, Title VI prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following section examines the minority and below poverty level populations in the study area.

Minority Population

It is important to ensure that areas with an above average percentage of racial and/or ethnic minorities are not negatively impacted by any proposed alterations to existing public transportation services. In the study area, the average percentage of the minority population in a block group is 6.9%. Figure 3-12 illustrates the density of minority populations above and below the area's average. The block groups classified as having an above-average percentage of minorities include some adjacent to I-81 between Abingdon and Wytheville, as well as block groups near Fries, Galax and Hillsville. The counties with more block groups with more above-average concentrations of minorities are Smyth, Grayson, and Carroll counties.

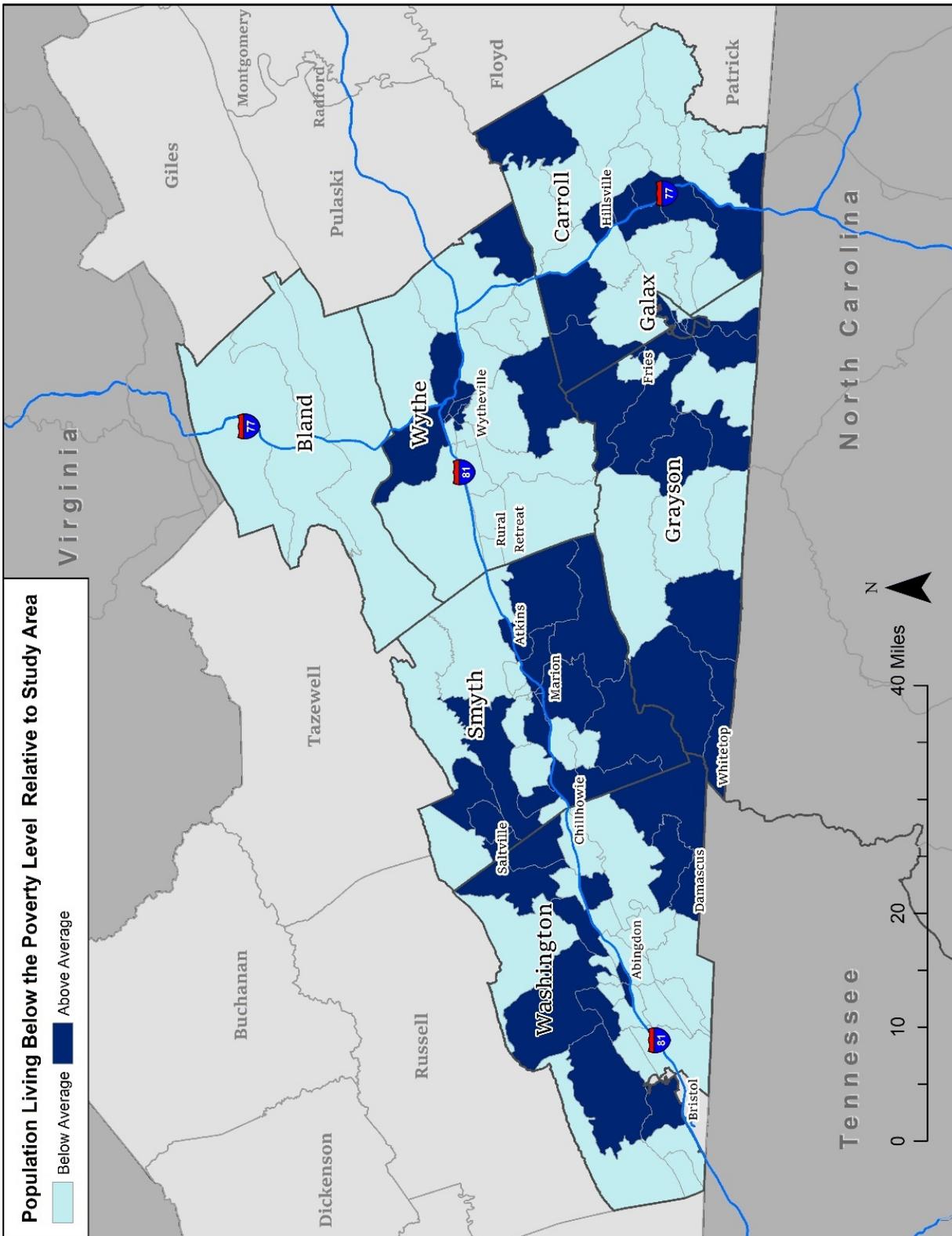
Figure 3-12: Distribution of the Minority Population in the Study Area



Below Poverty Populations

The second group included in the Title VI analysis represents those individuals who earn less than the federal poverty level. This segment of the population may find it a financial burden to own and maintain a personal vehicle, thus relying on public transit as their primary means of transportation. The average percentage of individuals in a block group living below the federal poverty level is 16.6%. Figure 3-13 depicts the concentration of population above or below the average percentage of individuals living below poverty. The block groups classified as having more above-average percentages of individuals below the poverty line make up about half of Washington, Smyth, Grayson and Carroll counties. Many of these block groups are adjacent to I-81 (particularly in Smyth County), I-77 (in Carroll County) and the intersection of I-81 and I-77 in Wythe County.

Figure 3-13: Populations Below the Poverty Line in the Study Area



Limited-English Proficiency

In addition to providing public transportation for a diversity of socioeconomic groups, it is also important to serve and disseminate information to those of different linguistic backgrounds. As shown in Table 3-7, at least 98% of persons residing in the study area speak English. Grayson, Smythe, and Washington County have at least 700 people that speak a language other than English at home (mostly Spanish); however, they represent only 1% of the population. Of those households where a non-English language is spoken, the vast majority are also able to speak English “Very Well,” with Bland County having the highest number of households that speak English “Very Well” and Wythe County having the lowest number.

Table 3-7: Limited English Proficiency

	Bland County		Grayson County		Smythe County		Washington County		Wythe County	
Persons Ages 5 Years and Older	6,199		14,773		29,587		52,106		27,615	
Languages Spoken	Number	%	Number	%	Number	%	Number	%	Number	%
English	6102	98%	14,427	99%	28,883	99%	51,085	99%	27,223	99%
Language other than English	97	2%	715	1%	754	1%	1,021	1%	392	1%
Spanish	44	1%	566	0%	460	1%	544	1%	118	1%
Indo- European Languages	30	0%	70	1%	172	1%	320	0%	133	1%
Asian/Pacific Island Languages	14	0%	59	0%	67	0%	119	0%	122	0%
Other	9	0%	20	0%	55	0%	38	0%	19	0%
Ability to Speak English (Ages 18 and up)	Number	%	Number	%	Number	%	Number	%	Number	%
Speak English Only or speak English “very well”	87	100%	324	88.8%	304	89.1%	527	84.2%	226	77.7%
Speak English less than “very well”	0	0%	41	11.2%	37	10.9%	99	15.8%	65	22.3%

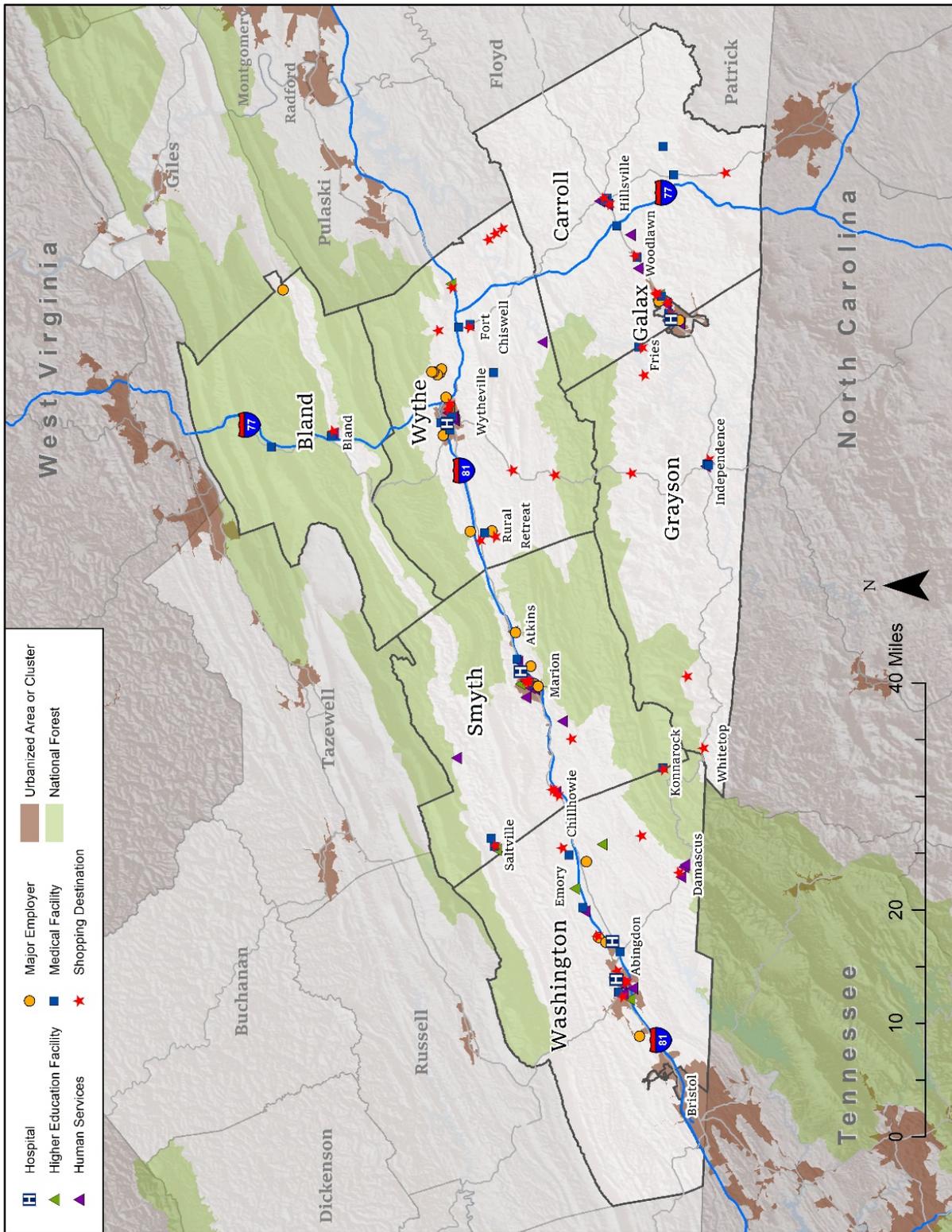
Source: American Community Survey, Five-Year Estimates (2013-2018), Table S1601.

LAND USE PROFILE

Major Trip Generators

Identifying land uses and major trip generators in the study area complement the above demographic analysis by indicating where transit services may be most needed. Trip generators attract transit demand and include common origins and destinations, like multi-unit housing, major employers, medical facilities, educational facilities, non-profit and governmental agencies, and shopping centers. The data on major trip generators was obtained through various county websites, Google Maps and the Virginia Industrial Advancement Alliance. As seen in Figure 3-14, the majority of trip generators are located in or near the larger population centers in the service area, along major travel corridors and areas served daily by Mountain Lynx Transit. A few places with an above-average number of trip generators that do not have daily MLT service include Chillhowie, Saltville, Damascus, Rural Retreat, Fort Chiswell and Hillsville. Appendix D provides the names and addresses for each of the major trip generators.

Figure 3-14: Mountain Lynx Transit – Major Trip Generators



Employment Travel Patterns

In addition to considering the locations of the region's major employers, it was also important to take into account the commuting patterns of residents. This is particularly important given the desire to examine the potential for work-oriented park and ride services along the I-81 and I-77 corridors. According to ACS five-year estimates for 2013-2017, 60% of the region's workers ages 16 and older worked at locations within their home counties. As seen in Table 3-8, in-county commuting has the highest rates in Smyth, Wythe, and Washington counties. Commuters from Grayson and Bland counties and the city of Galax predominately work in other counties across the state. Carroll County commuters travel outside the state more than commuters from the other jurisdictions in the region, with 16.3% of the workers leaving Virginia, for North Carolina.

About 31% of the region's workers commute to other Virginia counties and 16.4% of workers commute to other states. These are slight increases from the 2007-2011 ACS, when 28% of workers commuted to other counties and 10% of workers commuted to other states.

Table 3-8: Journey to Work Travel Patterns

Place of Residence	Bland County	Carroll County	Galax City	Grayson County	Smyth County	Washington County	Wythe County
Workers Ages 16 and Older	2539	12,729	2,744	6,261	12,330	23,544	12,905
Location of Workplace							
In State of Residence	85.6%	83.7%	93.7%	89.6%	97.7%	86.3%	97.9%
a) In County of Residence	36.6%	47%	43.6%	40.3%	69.7%	63.3%	69.3%
b) Outside County of Residence	49%	36.7%	47.1%	49.3%	28%	23%	28.7%
Outside State of Residence	14.4%	16.3%	6.3%	10.4%	2.3%	13.7%	2.1%
Means of Transportation to Work							
Car, Truck, or Van (drove alone)	95.4%	95.3%	92.3%	92.9%	93%	92.7%	93.8%
Car, Truck, or Van (carpooled)	5.6%	14.2%	12.1%	9%	10.5%	9.3%	8.8%
Public Transportation	0.6%	0%	0.8%	0.4%	0.6%	0.2%	0.5%
Walked	0.9%	0.9%	0.3%	3.2%	2%	1.8%	2.1%
Taxicab, Motorcycle, Bike, or Other	1.7%	0.4%	1.3%	0.8%	1.3%	1%	0.9%
Worked at Home	1.5%	3.4%	5.2%	2.7%	3.1%	4.1%	2.7%

Source: ACS, Five-Year Estimates (2013-2018), Table S0801

Table 3-9: Top Ten Employment Destinations for County Residents in Mountain Lynx Transit Service Area

Washington County			Smyth County		
Place	Number	Percent	Place	Number	Percent
Abingdon, VA	4,457	19.5%	Marion, VA	3,559	28.7%
Bristol, VA	2,510	11.0%	Atkins CDP, VA	909	7.3%
Bristol, TN	1,242	5.4%	Chillhowie, VA	558	4.5%
Marion, VA	763	3.3%	Wytheville, VA	541	4.4%
Kingsport, TN	653	2.9%	Abingdon, VA	524	4.2%
Lebanon, VA	630	2.8%	Saltville, VA	287	2.3%
Johnson City, TN	412	1.8%	Bristol, VA	229	1.8%
Atkins CDP, VA	277	1.2%	Lebanon, VA	136	1.1%
Chillhowie, VA	236	1.0%	Rural Retreat, VA	124	1.0%
Wytheville, VA	206	0.9%	Roanoke, VA	114	0.9%
All Other Locations	11,420	50.1%	All Other Locations	5,441	43.8%
Bland County			Grayson County		
Wytheville, VA	325	12.7%	Galax, VA	1,234	19.8%
Bland CDP, VA	246	9.6%	Independence, VA	736	11.8%
Bluefield, WV	95	3.7%	Wytheville, VA	235	3.8%
Princeton, WV	90	3.5%	Hillsville, VA	190	3.0%
Bluefield, VA	50	2.0%	Marion, VA	127	2.0%
Tazewell, VA	43	1.7%	Atkins CDP, VA	89	1.4%
Blacksburg, VA	36	1.4%	Sparta, NC	84	1.3%
Christiansburg, VA	36	1.4%	Roanoke, VA	81	1.3%
Marion, VA	33	1.3%	Woodlawn CDP, VA	71	1.1%
Roanoke, VA	29	1.1%	Abingdon, VA	65	1.0%
All Other Locations	1,580	61.6%	All Other Locations	3,327	53.3%
Wythe County			Carroll County		
Wytheville town, VA	4,071	33.1%	Hillsville town, VA	1,946	16.5%
Marion town, VA	323	2.6%	Galax city, VA	1,743	14.8%
Pulaski town, VA	311	2.5%	Mount Airy city, NC	501	4.3%
Rural Retreat town, VA	287	2.3%	Woodlawn CDP, VA	408	3.5%
Atkins CDP, VA	268	2.2%	Wytheville town, VA	406	3.4%
Radford city, VA	256	2.1%	Christiansburg town, VA	172	1.5%
Fort Chiswell CDP, VA	241	2.0%	Pulaski town, VA	151	1.3%
Christiansburg town, VA	221	1.8%	Radford city, VA	149	1.3%
Galax city, VA	213	1.70%	Roanoke city, VA	134	1.1%
Blacksburg town, VA	156	1.3%	Blacksburg town, VA	128	1.1%
All Other Locations	5,939	48.3%	All Other Locations	6,033	51.3%

Source: Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2017.

Employment Projections

The Virginia Employment Commission prepares employment projections for counties, cities, and regions of the Commonwealth. For residents in the Mountain Lynx Transit area, the projections are not available by jurisdiction, but are available for Local Workforce Development Area II, which includes all of the MLT counties (Bland, Carroll, Washington, Smyth, Wythe and Grayson counties) in addition to the city of Radford and these adjacent counties: Floyd, Giles, Montgomery, Pulaski.

Table 3-10: Local Workforce Development Area II Employment Projections 2018 - 2028

	Employment			Percent	
	Estimated 2018	Projected 2028	Change	Total	Annual
Total All Industries	146,832	158,439	11,607	7.9%	0.66%
Goods Producing	30,464	29,338	-1,126	-3.7%	-0.31%
Natural Resources and Mining	677	788	111	16.4%	1.37%
Construction	3,990	4,149	159	4%	0.33%
Manufacturing	25,797	24,401	-1,396	-5.4%	-0.45%
Services Providing	109,811	121,858	12,047	11%	0.92%
Trade, Transportation, and Utilities	24,494	25,640	1,146	4.7%	0.39%
Information	1,206	1,152	-54	-4.5%	-0.38%
Financial Activities	3,931	4,155	224	5.7%	0.48%
Professional and Business Services	11,613	13,334	1,721	14.8%	1.23%
Education and Health Services	37,416	43,890	6,474	17.3%	1.44%
Leisure and Hospitality	15,138	16,761	1,623	10.7%	0.89%
Other Services (except Government)	3,220	3,502	282	8.8%	0.7% ³
Government	12,793	13,424	631	4.9%	0.41%
Unclassified	6,557	7,243	686	10.5%	0.88%

Source: Virginia Employment Commission, Long-term Workforce Area Industry Projections, 2018 - 2028

This data projects modest growth in the region (7.9% over the ten-year period). The largest employment growth sectors are expected to be: Natural Resources and Mining (16.4%); Education and Health Services (17.3%); and Professional and Business Services (14.8%). Declining sectors are expected to include: Manufacturing (-5.4%), Information (-4.5%), and Goods Producing (-3.7%).

SUMMARY OF DEMOGRAPHIC ANALYSIS

Presented below are key observations collected from demographic, land-use, and commuter trends analyzed in the previous sections:

- The majority of the region is low density, with fewer than 500 people per square mile. Concentrations of populations greater than 500 are found along I-81, however, there are block groups with transit-dependent households that do not receive frequent MLT service including Chillhowie, Saltville, Atkins, Rural Retreat, Fries and Hillsville.
- The region's population overall is predicted to decrease slightly by 2030. The population with age groups between ages 0-64 will decrease by about 12%, while adults ages 65 and older will increase almost 12%. In the next decade, every county's population of adults ages 0-64 will decrease, while adults age 65+ is predicted to increase by at least 10% in every area - except Bland and Galax. Two counties will experience slight increases in population: Washington County (1.6%) and Wythe County (1%).
- Commuting habits differ widely by county. While about two-thirds of commuters from Washington, Smythe and Wythe counties commute within their counties, nearly one-half of commuters from Grayson, Bland and the Galax commute outside of their counties. Top destinations for out-of-county commuters include Wytheville, Galax and Marion. Carroll County also has a significant number of out of state commuters and the highest percentage (16%) working out of state, in North Carolina.

REVIEW OF PREVIOUS PLANS AND STUDIES

DRPT Coordinated Human Service Mobility Plan

The DRPT Coordinated Human Service Mobility (CHSM) Plan, updated in 2019, meets federal requirements for a locally developed, coordinated public transit-human services transportation plan. The plan assesses available transportation services; details unmet needs for individuals with disabilities, older adults, and people with low incomes; and prioritizes strategies to address identified gaps.

The Southwest Region section of this plan covers the six counties served by Mountain Lynx Transit. It provided a variety of action items to meet transportation gaps in the region, specifically in regard to:

- Education and Opportunities
- Trip Eligibility
- Funding
- Service Alternatives.

VTrans 2040: Virginia's Long-Range Multimodal Transportation Plan

VTrans 2040 is Virginia's long-range multimodal policy plan that sets the vision, goals, and investment priorities for Virginia's transportation systems. It was completed in 2018. The

VTrans 2040 plan was drafted with the intention of outlining the goals and objectives needed to guide transportation planning within the state of Virginia. VTrans 2040 is a comprehensive plan that incorporates all modes of transportation into its analysis. VTrans 2040 builds on preceding VTrans plans by updating the vision, goals, and objectives outlined in VTrans 2035. As part of its analysis, VTrans performed a needs assessment for each Virginia Department of Transportation (VDOT) district. Mountain Lynx Transit's service area is in the Bristol district, and discussed in the Crescent Corridor section of the plan. That section notes that transit services in the region have limited range and limited operating hours, and there is no bus or rail service available from Bristol to other cities in the corridor.

Mount Rogers Planning District Commission 2035 Rural Long-Range Transportation Plan (RLRTP)

The Mount Rogers 2035 RLRTP was last updated in January 2011 and analyzes the demographics, land use trends, and transportation network of the Mount Rogers Planning District Commission (MRPDC) which includes the areas within the county borders of Bland, Carroll, Grayson, Smyth, Washington and Wythe. It excludes those areas of Virginia covered under the Bristol Metropolitan Planning Organization (the City of Bristol and adjacent urbanized portions of Washington County).

The Plan notes that population growth in the MRPDC has slowed over recent decades and is expected to be minimal or decline slightly. By 2030, projections forecast that Bland, Washington and Wythe Counties will grow in population. Topography will continue to shape the region's development, with growth occurring within existing cities and towns, within valleys and along major roadways. Land use is unlikely to change dramatically, especially due to the PDC's large tracts of forested lands like the Mount Rogers National Recreation Area and the Jefferson National Forest. However, the Plan does identify potential growth areas based on the comprehensive plans of the component jurisdictions. They include corridors of U.S. Route 19 surrounding Abingdon, Interstate 81 between Marion and Rural Retreat, and U.S. Routes 52 and 58, and State Road 100 near Hillsville and Galax.

Town of Abingdon, Virginia Comprehensive Plan 2027

Adopted on August 27th, 2007, and last updated in 2013, the 2027 Comprehensive Plan is an update of the 2000 Comprehensive Plan and serves as a long-term guide for land use decisions within the Town of Abingdon. The plan includes both land use and transportation components. It describes Abingdon's goals under three areas of concern: economic development, arts and history, and the environment.

The land use component of the plan prioritizes higher density development to occur within the center of town and encourages conservation methods for residential development in the town's perimeter. Downtown Abingdon, designated an official Main Street Community, is a focus of revitalization and includes the development of an Arts Master Plan and expansion of historic districts. Future development strategies stress the importance of maintaining the quality of the

area's environmental assets. The improvement of pedestrian amenities and facilities, including traffic calming, is also stressed to improve safety for residents and visitors, and to encourage multi-modal transportation.

The transportation component begins by documenting existing infrastructure and discussing priority transportation improvements, ranging from intersection improvements and gateway corridor designs, to road extensions. Regarding public transit, the plan notes Abingdon Public Transit, operated by Mountain Lynx Transit, as the town's public bus system. Expansion of the system is noted as a method to increase tourism efforts; specifically, a "local trolley system, small guided bus tours, or other group transportation activities." The plan calls for "a survey of transportation needs to determine where there are deficiencies in public transportation."

Abingdon 2020 Transportation Plan

The Abingdon Transportation Plan was adopted in August 2001. The plan was developed by the Virginia Department of Transportation in cooperation with the U.S. Department of Transportation and the Town of Abingdon. The purpose of the study was to evaluate the existing transportation system and future demand while recommending a set of transportation improvements to be undertaken in the future.

Adopted before Abingdon Public Transit (now operated by Mountain Lynx Transit) was established, the Transportation Plan recommends that "a shuttle service be added to link tourists and pedestrians with parking facilities and hotels located outside of downtown." The streetscape improvements that resulted from the implementation of the Transportation Plan and subsequent efforts are helping to make downtown Abingdon a more inviting and pleasant place to be a pedestrian. A high-quality pedestrian experience is conducive to transit ridership and may encourage residents to use transit; riders can take advantage of the amenities and enhanced connectivity while walking to and waiting at their stops.

Bland County Comprehensive Plan 2018

The current Bland County Comprehensive Plan was adopted on May 22, 2018. The Comprehensive Plan indicates that the county will have the second highest rate of population growth of the counties in the Mount Rogers Planning District (an increase of about 600 people over the next three decades), while experiencing the region-wide decline in the younger population. Bland County is located along Interstate 77 and is just 12 miles north of the interchange with Interstate 81. Approximately 95% of Bland County is used for agriculture and conservation, the remaining 5% is used for more intensive uses. These conditions limit development to linear patterns along major roadways, most notably Interstate 77, where previously established land uses exist. One objective is to create industrial park sites through Planned Growth Districts along the I-77 corridor.

The Plan's chapter on transportation documents Mountain Lynx Transit's rural transportation service, which serves parts of Bland County on specified days of the week. These areas include Route 42 East, Kimberling, Hollybrook, Bastian, Mechanicsburg, South Gap with service to

Bluefield, Bland and Wytheville. The chapter stresses the importance of pedestrian friendly communities, supporting active modes of transportation, a road network to strengthen the development of the county's economic base, and a participatory transportation planning process.

City of Bristol Comprehensive Plan 2016

The land use and future development sections of the comprehensive plan note in-fill, mixed-use and rehabilitation as the main strategies for future development. According to the plan, approximately 2,932 acres of vacant land exists within the City, mostly consisting of small isolated lots in residential areas. Future development should be aimed at those locations.

The public transit component of the comprehensive plan provides an overview of current service and outlines some goals and implementation strategies targeted towards transit. Buses are operated by the Bristol, Virginia Transit System. The goals include “reducing the development of future traffic problems by making economically and ecologically sound improvements”; and “providing public transportation that is convenient and accessible for all residents”. Some strategies outlined for achieving these goals include creating more clearly marked transit stops, extending service to weekends and hours during the week, adding route to go to the hospital and improving regional transit to other cities in Tri-Cities. The plan also calls for improvement to the street system by adding bike lanes and better street naming and mapping.

Bristol Virginia Transit - Transit Development Plan (2010 – 2015)

The Transit Development Plan (TDP) for Bristol, Virginia was finalized in September of 2009. The TDP covers fiscal years 2010 to 2015. The plan assesses current services offered, goals and objectives, service and system evaluation, transit needs assessment, service and facility recommendations, capital improvements program, financial plan and monitoring and evaluation.

Goals and objectives have been defined for the Bristol TDP based on community input and review of the Bristol Comprehensive Plan and the Metropolitan Planning Organization's Long-Range Transportation Plan. The goals focus on specific themes and objectives:

- Provide safe and reliable fixed-route and demand responsive services that meets the transportation needs of Bristol, Virginia residents.
- Market existing transit services.
- Deliver fixed route and demand responsive services in a cost-effective manner.
- Deliver fixed route and demand responsive services in a safe manner.
- Provide transit services that are accessible to citizens.

The plan identified the following potential service improvements:

- An additional early morning service hour for two of BVT's routes,
- Mid-day service for the East Bristol/East Ridge Route,
- Weekday evening fixed route service,
- More direct routing,
- Saturday demand-response service,
- Saturday fixed-route service, and
- Service to the Town of Abingdon.

The plan further notes that expansion is unlikely in the near-term, given Bristol's financial condition. The following facility recommendations were also included in the plan:

- Maintenance facility - communication equipment,
- Bus stop signage,
- Bus stop shelter and benches,
- Bus and van replacements, and
- An additional bus if Abingdon service were to be implemented.

The 2030 Carroll County Plan (2010)

The 2030 Carroll County Plan was adopted on December 14, 2010. The plan promotes five themes as a guide to development: Town and Country, Protecting Agriculture, Development Opportunities and Responsibilities, Balancing Fiscal Responsibility and Infrastructure Provision, and Working Together as a Region.

In an effort to protect the county's agricultural lands, planned growth areas have been established along primary road corridors and around previously developed areas. The future land use section of the plan outlines the planned growth areas along U.S. Route 221, from Galax to Hillsville; some sections along U.S. Route 52; and the northern and southern sections of Interstate 77.

The transportation portion of the plan documents planned and pending projects for principal arterial roads throughout the county. Public transportation is not mentioned throughout the plan. However, a section of the transportation chapter is devoted to land use and transportation linkage. The section promotes moderate intensity, mixed-use development that will allow for multiple transportation options and reduce long commutes. In the 2000 census, nearly half of all commuters in Carroll County worked in other counties, with a significant number also working in North Carolina.

Grayson County, Comprehensive Plan 2018

The Comprehensive Plan for Grayson County was adopted in February 2018 by the Grayson County Board of Supervisors. The plan cites a decline in population from 2020 to 2040, some of which is linked to the county's aging population. However, decision-making at the county

level such as public water and sewer infrastructure, expansion of tourism, and small business and industry support could spur growth. Projected growth should occur in the areas south and west of Galax and the areas near Independence; other growth would be dispersed throughout the county. The comprehensive plan's goal for transportation is "support a sustainable transportation system that links highways, transit, greenways, sidewalks and bike trails to provide multimodal transportation options." Regular routes are available from all over the county on specified days with destinations including: Independence, Galax, Whitetop, Marion, Galax and Abingdon. Strategies include working with VDOT to implement projects, partnering with towns to expand bicycling and pedestrian transportation options, supporting the Twin County Airport, analyzing the need for Park & Ride locations and reducing strip development.

Town of Marion, Comprehensive Plan 2019

The Marion Comprehensive Plan was adopted on January 2, 2018 by the Town of Marion Town Council. Between 1970 and 2010, the population has been stagnant, which has mirrored the county. Since 1980, the larger trend is that younger people under age 34 have continued to leave the town. However, in the 2015 ACS, the population aged 30-35 increased by 7.3% over 2010 numbers. To ensure a stable population base, the plan notes Marion must continue pursuing economic development, expanding affordable housing, bolstering educational opportunities and other actions. According to the plan, Marion is in an economic upswing, supported by the strength of local businesses, work opportunities, growth at Emory & Henry College and tourism at Hungry Mother State Park. Most of the primary goals in the plan are still relevant from the 2012 Comprehensive plan, which includes converting vacant land to urban use, guiding new development to complement existing uses, and provide proper and efficient road system connectivity between different land uses.

Under the public transportation component of the plan, District Three (now Mountain Lynx Transit) is noted as the provider of Marion Public Transit. Greyhound Bus Lines also provides regular intercity bus service. Other transportation components of the plan describe roadway upgrades, possible passenger rail service by TransDominion Express, and increased pedestrian connectivity through VDOT grants. The transportation goal is to "maintain a safe, efficient, compatible, and balanced town transportation network." A couple objectives include pursuing increased federal and state funding to expand public transportation services and to evaluate the extension of bicycle routes along primary corridors.

Washington County, Comprehensive Plan, 2014

The 2014 Washington County, Virginia Comprehensive plan was adopted by the Board of Supervisors on July 28, 2014. It is intended to shape the community over twenty years. Through community meetings and an online survey, Washington County residents determined a series of vision statements for different categories. For example, the land use statement summary is: "rural, residential, retail, and industrial endeavors prosper throughout Washington County in a mutually respectful and non-invasive fashion." By 2030, the population is forecast to grow by

about 4,000 residents but notes the County must be “mindful of the aging demographic and residential choice of younger generations.”

In regards to transportation, the plan notes that careful attention must be given to the relationship between land use and transportation as the county grows, and that while the primary mode for transportation is currently the automobile, the plan also supports mobility, accessibility and alternative modes of transportation. Public transit operated by District Three (now Mountain Lynx Transit) provides shopping routes, congregate nutrition sites and town transit in Abingdon, Chillhowie, Galax, Marion and Wytheville. The comprehensive plan lists transportation strategies from the VTrans 2035 and Virginia’s 2035 State Highway Plan for Washington County which includes construction of I-73, safety improvements, enhanced demand response transit, intelligent transportation systems, expanded freight rail service, increased park and ride capacity and increased and improved bicycle and pedestrian facilities.

Wythe County Comprehensive Plan, 2015

The Wythe County Comprehensive Plan was adopted on September 22, 2015. Through the participation of county residents, a visioning exercise led to several vision statements including, “In 2030, Wythe County’s economy will be vibrant with sustainable growth offering competitive jobs focused around industrial and tourism related activities.” Respondents to a community survey said their most important factors for staying in the county included: employment opportunities, cost of living, crime rate safety, quality of schools and access to medical care. In regard to housing, almost 80% of respondents either “strongly agreed” or “agreed” that they preferred to see housing designed to meet the needs of the elderly.

The Comprehensive Plan details the services offered by District Three (now Mountain Lynx Transit) through Wythe County Transit and Wytheville Transit. The plan notes: “Wythe County Transit links county residents with such local points of interest as pharmacies, health care providers, shopping centers, and restaurants, serving a different area of the county each day, Monday through Friday.” The plan points to an increased need for public transit due to a rising population and aging community. Within the transportation objectives and strategies section, one objective is to “increase the availability of public transit, including passenger rail and bus services.” A related strategy is to “support increased federal or state funding for the expansion of services by the District Three Governmental Cooperative (Mountain Lynx Transit) to the county” as well as to “evaluate the potential of a transit hub in anticipation of passenger rail being extended from Roanoke to Bristol via the Town of Wytheville.”

Town of Wytheville Comprehensive Plan 2013

The Town of Wytheville’s Comprehensive Plan was adopted by the Board of Supervisors in 2013. The plan approximates the population of Wytheville could expand to 10,000 persons by the year 2030. Future development is expected to occur near Interstates 77 and 81 and residential land use is expected to expand into the agricultural areas along the Town’s periphery.

The public transit component of the plan outlines District Three’s Wytheville Public Transit as “composed of a fixed route combined with a demand response system that provides pickup and delivery services in the morning, Monday through Friday, based on passenger reservations, and a fixed route system that works in conjunction with the demand-response system.” The Plan’s overarching goal for transportation is to “provide a balanced and efficient transportation system that will expand to shape and serve the Town’s growth.” Under that goal, a few of the strategies are to “encourage alternative methods of transportation for both freight and passenger movement, including rail, air, transit, bicycling and walking,” “increase hours of operation for public transportation,” and “establish new Transportation Demand Management (TDM) service for residents commuting to distant employment centers.” The plan also mentions the town’s commitment to “complete streets” to meet the needs and safety of all potential users including bicyclists, vehicles, transit vehicles, children, the elderly and people with disabilities.

CHAPTER SUMMARY

The system evaluation and needs analysis involved collecting and reviewing data and input from many different sources:

- Performance Data
- Passenger Survey
- Demographics
- Land Use and Transportation Plans

The results of the system evaluation and the priorities identified in this needs analysis were used in the development of service alternatives and improvements discussed in the next chapter of the TDP.

Chapter 4

Service and Capital Improvement Plan

INTRODUCTION

The purpose of this chapter is to present potential service and capital improvements for the ten-year planning horizon covered by the TDP. Possible improvements were developed based on the data compiled and analyzed in Chapters 1-3, and then updated based on input from Mountain Lynx Transit and DRPT staff. The proposed projects are then prioritized for implementation in Chapter 5 of the TDP.

SERVICE PROPOSALS

This section discusses proposals for improving or expanding Mountain Lynx Transit services. Each service concept includes:

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

The service proposals begin with considerations that are cost neutral, and would not require additional funding to implement. This is then followed by proposed expansions to the current Loop routes in each of the four jurisdictions served by Mountain Lynx Transit, and then a potential regional service expansion.

The cost information for these proposals is expressed as the fully allocated costs, which means all program costs on a per unit basis are considered when contemplating expansions. This overstates the incremental cost of minor service expansions, as there are likely to be some administrative expenses that would not be increased with the addition of a few service hours. These cost estimates were based on FY2019 operating expenses.

Interline Routes

Through the rider survey process some customers expressed dissatisfaction with the need to transfer between routes in Abingdon, Galax, and Wytheville. Currently in those communities one bus runs the same route all day, requiring people to transfer to the other route (and bus) at the transfer point.

This alternative proposes that routes that connect in Abingdon, Galax, and Wytheville be interlined so that when they meet at designated transfer points, they become the other route. Interlining is a practice of combining two or more routes in order to reduce transfers and improve efficiencies, benefitting customers and the system. For instance, in Abingdon the Silver Loop would become the Blue Loop when they meet at the Food City transfer point, and the Blue Loop would become the Silver Loop.

Interlining is most effective when origin based routes are interlined with destination based routes. Since Mountain Lynx Transit operates two routes in Abingdon, Galax, and Wytheville, this symmetry is already in place. Some examples of where interlining would benefit customers include:

- A customer living at the Abingdon Terrace Apartment could travel to Food Country and Walmart without needing to transfer.
- A customer living at Harmony House Apartments in Marion would be able to travel to Dollar General without the need to transfer.
- A customer living at the Westwood Apartments in Wytheville would be able to travel to Food Lion without needing to transfer.

An important advantage of this proposed service modification is that it improves the customer experience, while not increasing operating costs.

Advantages

- Responds to customer complaints about the need to transfer.
- Does not require schedule or route changes.
- There would be no increase in operating expenses.

Disadvantages

- Customers will need to be educated on the way the interlined routes operate.
- If not already, drivers will need to be cross trained on both routes in each jurisdiction.
- Does not reduce travel time, also noted by some customers in conjunction with the need to transfer.

Expenses

- Interlining routes will not result in any additional operating costs, while responding to customer input through the rider survey.

Ridership

- Eliminating the need to transfer between routes will make services more convenient for customers, therefore potentially helping to increase ridership.
- While Mountain Lynx Transit would be providing more customer friendly service through interlining, reducing the need to transfer could reduce ridership numbers from previous years. It will be important that this is taken into account when both the system and DRPT are evaluating ridership after the interlining of the routes is implemented.

Eliminate the Fare on Loop Routes

Currently Mountain Lynx Transit charges the same fare for customers to ride the scheduled Loop routes (where customers need to meet the bus at a specific stop) as they do for the request-based X-bus service that is basically door-to-door. This fare structure is counter to efforts to encourage ridership on the Loop system. Though customers prefer door-to-door service, it is also the most expensive form of transit to operate on a per trip basis. It is also very labor intensive, with the need for customers to contact Mountain Lynx Transit to schedule rides.

The overall strategy should always be to have as many people ride the scheduled routes that operate with fixed costs, and demand response services provided only for people who cannot use the scheduled Loop system. In addition, services should not compete against each other.

Therefore, there should be a clear distinction between the fares for the two services. Recognizing that Mountain Lynx Transit serves people with lower and/or fixed incomes, a fare increase would be inappropriate. However, Mountain Lynx Transit could explore the concept of eliminating the fare on the Loop routes. Transit industry research concerning the implementation of fare-free service indicates mostly positive results, particularly for small urban and rural communities where fare revenue typically comprises a small percentage of the agencies' budgets.¹ The following additional summary points from *TCRP Synthesis #101: Implementation and Outcomes of Fare-Free Transit Systems* are relevant to rural and small urban systems:

- Agencies that receive federal Section 5311 funding can potentially receive a higher federal subsidy without the subtraction of fare revenue from their total expenses (i.e., the net deficit is higher, so the 50% reimbursement through the Section 5311 Program would be a higher amount). For Mountain Lynx Transit this is true to the extent that the Federal 5311 dollars are available. DRPT is the direct recipient of Section 5311 funding and allocates the available funds among the rural transit systems in Virginia.

¹ Transit Cooperative Research Program, TCRP Synthesis 101: Implementation and Outcomes of Fare-Free Transit Systems. Joe Volinski, National Center for Transit Research, University of South Florida, 2012.

- In states where performance-based funding is in place, transit programs can potentially increase their state subsidies through the increased ridership that is experienced by eliminating the fare. This is true in Virginia under the recently implemented performance-based funding scenario.
- Fare-free transit increased ridership in all of the communities that were studied. The literature search conducted for the study showed increases of between 20% and 60%. Most new trips were made by existing customers.
- Even though the public subsidy for transit services increases with fare-free service, the subsidy per passenger trip decreases because of the increase in ridership.
- Some public transit systems that have implemented fare-free service have been overwhelmed with demand or been challenged by the presence of disruptive passengers. The report suggested that local ordinances can be crafted to help eliminate this issue and also indicated that most transit managers did not report disruptive passengers as a major concern.
- Local communities have received positive recognition through the implementation of fare-free service.

The potential implications for Mountain Lynx Transit are outlined below.

Advantages

- Will help riders financially particularly those who make multiple trips per day.
- Eliminates all potential fare payment conflicts between passengers and drivers.
- Reduces administrative burden on drivers and management.
- Will improve ridership and productivity.
- May result in higher subsidies through performance-based funding.
- Speeds boarding time.
- May lead to wider economic and social benefits for the community by allowing greater access to local businesses and services.

Disadvantages

- May encourage people to ride continuously without a specific transportation purpose. This could be mitigated through enforcement.

- Eliminates revenue generated through current Loop routes.

Expenses

- The expense to implement fare-free service is the lost fare revenue. In FY2019 Mountain Lynx Transit collected \$66,677 in fares. While fares would continue to be charged on X-Bus service and on the County routes, fare revenues be reduced and will need to be made up through other sources.
- While it is not anticipated that there would be a significant number of passengers who would ride free-fare routes continuously during the day, there could be some expenses with potential enforcement of any disruptions caused by this issue.

Ridership

- Eliminating the fare will likely boost ridership, which will help Mountain Lynx Transit's productivity.

Implement Saturday Service in Abingdon

The results of the rider survey conducted in the Town of Abingdon for the TDP indicated that the most highly desired transit improvement was for Saturday service. Currently Mountain Lynx Transit operates Saturday service in Galax, Marion, and Wytheville from 10:00 a.m. to 4:00 p.m., so this service expansion would ensure consistency between the four communities. Therefore, this alternative proposes that Mountain Lynx Transit operates transit services in Abingdon on both loops for a similar six-hour period.

Advantages

- Responds to the top need expressed by current Mountain Lynx Transit customers in Abingdon.
- Expands access to important destinations in the region on Saturdays.
- Utilizes vehicles in existing fleet.

Disadvantages

- Adds operating costs for service expansion.
- Results in additional mileage on current vehicles, thereby accelerating the need to replace vehicles in the current fleet.

- Requires the need to recruit and hire additional drivers. Mountain Lynx Transit has noted the challenges in finding drivers willing to work on the weekends.

Expenses

- Operating both Abingdon loops for six hours on Saturdays would result in approximately 624 annual vehicle hours per route. Using FY2019 cost per hour data of \$43.67 per hour, the estimated annual operating cost for Saturday service for the Abingdon service expansion would be \$27,250.
- Vehicles in the current fleet will be used, so no immediate additional capital costs would be incurred. However, the vehicle replacement schedule would accelerate. This factor will be considered when developing the Capital Improvement Plan that will be detailed in Chapter 6.

Ridership

- While implementing Saturday service is the top priority of current Abingdon customers, this expansion may not lend itself to large ridership numbers at the outset of service. However, to the customers who need these trips – in particular to access shopping locations or jobs – these trips are critical.
- Assuming ridership on Saturday would initially be about one half of current average trips per hours on the Abingdon Loops, projected annual ridership for Saturday service would be 2,334 passenger trips.

Implement Abingdon - Bristol Connector Route

Mountain Lynx Transit has recently operated service between Abingdon and Bristol that is funded through the Section 5307 Program. Therefore, the service is open to the public but is designed to primarily serve Virginia Highlands Community College (VHCC) students since the college supplies the full local match.

When Mountain Lynx Transit launched the new service between Abingdon and Bristol they were unsure of the demand, and how often they would need to operate the service. Mountain Lynx Transit was hoping a pattern would emerge, and the route could then be effectively marketed to the general public. They report, though, that the schedule and route has been somewhat erratic, as students utilizing the service would come and go. The route was then stopped once VHCC closed in response to the COVID-19 pandemic. In addition, VHCC has not secured funding for 2020-2021 school year, so the local match component is uncertain.

At the outset of the TDP process Mountain Lynx Transit staff discussed the need to connect Abingdon with Bristol, and through the Abingdon Rider Survey some customers noted the need for transit service that would go beyond Abingdon. A proposal for a regular connector

service that would provide a link between Abingdon and Bristol was also included in the 2013 District Three Public Transit TDP, and was also cited in the most recent TDP for Bristol Transit.

Therefore, this alternative proposes implementing regular service between Abingdon and Bristol, designed to meet both student and general public needs. To be successful this route would need to be operated so that so customers can depend on it for their travel needs, and the schedule published and marketed to both the Abingdon and Bristol communities. Implementation would also be dependent on the reopening of the VHCC campus.

It is anticipated that this connector route could provide service from one or two central locations along the Abingdon Loop to selected destinations in Bristol, and would allow for a timed meeting with Bristol Transit (so that customers could then access any location on the Bristol Transit network) at the transfer location in the 800 block of State Street in Bristol. The overall potential routing for this service will be discussed with Mountain Lynx Transit, and then detailed in the Implementation Plan that will be provided in Chapter 5.

Advantages

- Addresses a need articulated by Abingdon area customers.
- Addresses a need indicated in the Bristol Transit TDP.
- Provides an opportunity for coordination between Mountain Lynx Transit and Bristol Transit.

Disadvantages

- Adds operating costs for expanded service.
- Would require identifying local match funds if VHCC can no longer provide.
- Requires additional vehicles to operate new services.

Expenses

- Based on service operating Monday through Friday for ten hours would result in approximately 2,600 annual vehicle hours. Using current cost per hour data of \$43.67 per hour, the estimated annual operating cost for the Abingdon-Bristol Connector would be \$113,542.
- Assuming a bus would not be available in the current fleet to operate this route, a new vehicle would be needed to implement the Abingdon-Bristol service. A new vehicle is estimated to cost \$98,000.

Ridership

- Assuming ridership on the new Abingdon-Bristol service would initially be at least half of current ridership on the Loop routes, projected annual ridership would be approximately 9,490 passenger trips. As noted earlier, ridership would be dependent on operating a set schedule that would be highly marketed to VHCC students and to the broader general public.

Implement Bi-Directional Service

Through the rider survey some customers expressed dissatisfaction with long travel times. Currently each of the Loop routes, as indicated in the names, operate in a circuitous manner. The current route structure leads to disproportional travel times between two destinations. For instance, a customer living at the Presidential Apartments in Marion has a five-minute trip to Walmart, but a 55-minute trip home since the Marion Town Loop operates in a one-way circular manner. Mountain Lynx Transit noted that often customers will find another way home in cases like this one, though for riders with no other mobility options they would need to ride the entire loop to return home.

One of the options to reduce travel time is to implement bi-directional service on current routes. In this proposed expansion buses would depart the transfer location in each community, and operate the route in the opposite direction along the current loop. Travel times between two locations would then be similar in either direction.

While this expansion would greatly improve services for current customers, and potentially attract new riders since the service would be more convenient, it would double operating costs for the route. There would also be staffing and vehicle implications. Potentially the bi-directional service could be implemented through a community-by-community phased-in approach. Implementing bi-directional service, though, would ultimately be dictated by local support for this expansion.

Advantages

- Responds to customer complaints regarding travel time.
- Provides riders with more convenient and attractive service and greater flexibility with their mobility needs.
- Bi-directional service may attract choice riders.

Disadvantages

- Doubles operating expenses for each loop where bi-directional service is implemented.

- Will require sufficient staffing and vehicles to operate double the services.
- While ridership will likely increase with more convenient service, it is not likely to double and therefore productivity will likely be somewhat lower.

Expenses

- Cost estimates for implementing bi-directional service (at similar Monday through Friday hours of current loops) would vary between the different communities. Using current cost per hour data of \$43.67 per hour, the estimated annual operating cost would be:
 - Abingdon: \$204,376
 - Galax: \$181,667
 - Marion: \$113,542
 - Wytheville: \$204,376
- Assuming a bus would not be available in the current fleet to operate this route, a new vehicle would be needed to implement bi-directional service in each community. A new vehicle is estimated to cost \$98,000.

Ridership

- More convenient bi-directional service should encourage current customers to ride more often, and potentially attract new riders. Assuming that initially this service expansion would increase ridership by at least half of current ridership on the individual routes, projected annual ridership would be:
 - Abingdon: 17,503
 - Galax: 12,792
 - Marion: 12,740
 - Wytheville: 15,935

While implementing bi-directional service would be the preferred method to reduce travel times, if funding does not become available to implement this expansion another option to shorten ride times would be to modify the Loop routes into a more “out and back” system. As noted earlier long (over 30-minute) one-way loop routes result in disproportionate trip times between two locations, and typically hinder ridership. The out and back route design – where routes would travel back and forth from the transfer point along the same corridor – provides the opportunity to operate two-way service, with bus stops on both sides of the street. The downside would be restructuring a system already familiar to current customers.

Increase Frequency on Loop Routes

Currently each of the Loop routes operate on a one-hour headway (the time between buses going in the same direction on the same route). Another option to provide more convenient transit services would be to increase frequency on the Loop routes from hourly to every thirty minutes. This alternative was included in the previous TDP, and while it would not reduce travel times like the bi-directional service it would reduce wait time for a Mountain Lynx Transit bus.

Similar to the bi-directional service this expansion would greatly improve services for current customers, and potentially attract new riders since the service would be more convenient. However, like the potential bi-directional service it would double operating costs for the route and have staffing and vehicle implications.

Similar to the bi-directional service, this expansion could be implemented through a community-by-community phased-in approach. Increasing service frequency would also be dictated by local support. Another option would be to phase in expanded frequency during peak periods of the day.

Advantages

- Improved frequency will improve the convenience of current routes for customers, and provide riders with expanded mobility options.
- Improved frequency may serve to attract choice riders.
- Ridership will likely increase with more convenient service, though it is not likely to double.

Disadvantages

- Doubles operating expenses for each loop where frequency to every thirty minutes is implemented.
- Will require sufficient staffing and vehicles to operate more frequent service.
- While ridership will likely increase with more convenient service, it is not likely to double and therefore productivity will likely be somewhat lower.

Expenses

- Operating cost estimates for implementing bi-directional service (at similar Monday through Friday hours of current loops) would be the same as implementing bi-directional service.

- Assuming a bus would not be available in the current fleet to operate the expanded service a new vehicle would be needed to implement thirty minute headways in each community. A new vehicle is estimated to cost \$98,000.

Ridership

- More frequent service should encourage current customers to ride more often, and potentially attract new riders. It is assumed that initially this service expansion would increase ridership by at least half of current ridership.

CAPITAL PROPOSALS

Install Bus Stop Signs

The previous TDP noted the need for bus stop signs to be installed at the time point locations along the routes in Abingdon, Galax, Marion, and Wytheville. Since that time District Three Public Transit was rebranded as Mountain Lynx Transit, and bus stops signs with the new logo were produced but have not yet installed.

It is proposed that Mountain Lynx Transit make the installation of the bus stop signs a priority, as they will help riders identify stop locations and improve the overall visibility of Mountain Lynx Transit within the four communities. Since the signs have already been acquired, capital costs will primarily be for expenses associated with preparing locations for installation.



Advantages

- Eliminates any confusion with regard to stop locations.
- Increases the visibility of the transit system
- Reinforces the Mountain Lynx Transit brand.

Disadvantages

- There are costs associated with installing and maintaining signs.
- Bureaucratic or community obstacles at the local level would need to be resolved and agreement reached on the installation of bus stop signs.

Expenses

- Typically the total cost for a sign, post (if needed, depending upon location) and installation is about \$150. Assuming that the cost for installation would be about a half of this amount since the signs have already been acquired, and signs could be installed at all scheduled stop locations, the total cost to install signs would be estimated to be the following:
 - Abingdon: 17 stops x \$75 = \$1,275
 - Galax: 9 stops x \$75= \$675
 - Marion: 12 stops x \$75 = \$900
 - Wytheville: 10 stops x \$75 = \$750

Ridership

- The higher visibility provided through the installation of bus stop signs may increase ridership incrementally.

Complete Installation of Scheduling Software

As noted in Chapter 1 District Three Governmental Cooperative issued a Request for Proposal (RFP) from qualified companies to provide and implement software that will allow for more efficient and effective transit services and to assist in a variety of scheduling and dispatching functions. CTS Software was the successful vendor, and is currently in the process of training Mountain Lynx Transit in the use of this software and with the overall installation.

Previous funding from DRPT was used for the purchase of this software, though any potential additional capital costs are identified and included in the Chapter 6 of the TDP.

Make Necessary Repairs and Improvements to Marion Facility

Mountain Lynx Transit noted that the Marion facility is beginning to experience some issues that should be addressed during the cycle of this TDP. Specifically, Mountain Lynx Transit anticipates the acquisition of adjacent property to the Marion office to expand parking capacity, the need to repave the parking lot, to install a new roof, to replace flooring, and to install a new HVAC system. It is expected that these repairs and improvements will need to begin in 2022 when the current Marion facility will over 15 years old.

Conduct Feasibility Study for Galax Location

The previous TDP noted that the Galax office is inadequate for the needs of the transit program. The plan recommended that District Three Governmental Cooperative conduct a facility study to help determine if it would be more effective in the long run to lease a different

location that better meets the needs of the program or explore ownership of a facility. This project was included in the TDP as a vision project.

Since that time District Three Governmental Cooperative conducted an initial search for a property to either purchase using FTA funding or possibly from agency reserves. A former car dealership was identified that would have met Mountain Lynx Transit needs, but the City of Galax was not supportive of this effort and this option was not pursued further. District Three Governmental Cooperative has had subsequent discussions with DRPT about a feasibility study, and therefore it is proposed that this study be conducted during the timeframe for the current TDP.

SUMMARY OF TDP PROPOSALS AND NEXT STEPS

The service and capital proposals presented in this chapter are summarized in Table 4-1. Proposed projects for years 1-3 are considered short-term, those in years 4-7 are considered mid-term, and those planned for years 8 through 10 are considered long-term projects. As noted earlier they are then further prioritized in Chapter 5 of this TDP.

Table 4-1: Summary of Potential TDP Proposals

TDP Proposals	Estimated Annual Revenue Service Hours	Estimated Initial Ridership	Annual Operating Expenses	Capital Expenses	Anticipated Timeline
Operating Proposals:					
Interline Routes	-	Some increase	No change	None	Short-term
			No change - would reduce revenue		
Eliminate Fare on Loop Routes	n/a	Some increase		None	Short-term
Abingdon Saturday Service	624	2,334	\$27,250	\$0	Short-term
Abingdon - Bristol Connector Route	2,600	9,490	\$113,542	\$98,000	Short-term
Bi-Directional Service or Increased Frequency on Loop Routes					
Abingdon	4,680	17,503	\$204,376	\$98,000	Mid-term
Galax	4,160	12,792	\$181,667	\$98,000	Mid-term
Marion	2,600	12,740	\$113,542	\$98,000	Mid-term
Wytheville	4,680	15,935	\$204,376	\$98,000	Mid-term
Capital Proposals:					
Bus Stop Signs					
Abingdon	n/a	Some increase	n/a	\$1,275	Short-term
Galax	n/a	Some increase	n/a	\$675	Short-term
Marion	n/a	Some increase	n/a	\$900	Short-term
Wytheville	n/a	Some increase	n/a	\$750	Short-term
Marion Facility Repairs and Improvements (1)					
Acquisition of Adjacent Property	n/a	n/a	n/a	\$310,000	Short-term
Mill, Repair, and Repave Parking Lot	n/a	n/a	n/a	\$350,000	Short-term
Install New Roof	n/a	n/a	n/a	\$275,000	Short-term
Replace Flooring	n/a	n/a	n/a	\$75,000	Mid-term
Install New HVAC System	n/a	n/a	n/a	\$75,000	Mid-term
Galax Feasibility Study	n/a	n/a	n/a	tbd	Mid-term
Additional Scheduling Software Costs	n/a	n/a	n/a	tbd	Ongoing
Total	19,344	70,794	\$844,752	\$1,578,600	

(1) Based on estimates provided by Mountain Lynx Transit.

Chapter 5

Implementation Plan

INTRODUCTION

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

TRANSIT DEVELOPMENT PLAN INITIATIVES BY YEAR

Each planning year covered by the Mountain Lynx Transit 2020 TDP is listed below, followed by the list of improvements scheduled for the year, along with some general implementation steps. Greater detail is provided for the short-term projects than for the longer-term projects.

It should be noted that this schedule has been constructed using currently available information with regard to service priorities and funding constraints. Additional resources or shifting priorities may change this schedule, and Mountain Lynx Transit can address these changes through the annual TDP update process.

FY2021

- Complete installation of new scheduling software.
- Assess impacts of interlining routes, and identify routes that are preferred candidates for this transition.
- Conduct planning and preparations for Saturday service in Abingdon.
- Develop list with the highest priority locations for bus stop signs, and begin installation.

FY2022

- Interline routes identified as preferred ones for this service modification.
- Implement Saturday service in Abingdon.
- Conduct planning and preparations for Abingdon-Bristol Connector Route.
- Assess impacts and begin making preparations for fare-free service on loop routes.
- Continue installation of bus stop signs at key locations.
- Mill, repair, and replace Marion facility parking lot as part of capital improvements.

FY2023

- Implement Abingdon-Bristol Connector Route
- Implement fare free services on Loop routes.
- Conduct planning and preparations for bi-directional services. As part of this planning assess opportunities to modify Loop routes into more “out and back” routes.
- Complete installation of bus stops signs at key locations, and continue to assess other locations as appropriate.
- Work with DRPT to obtain funding to conduct feasibility study for potential Galax location.
- Install new roof for Marion facility as part of capital improvements.

FY2024

- Implement bi-directional service in two communities with current Loop routes, assuming that current route structures are maintained.
- Conduct feasibility study for potential Galax location.
- Replace flooring at Marion facility as part of capital improvements.

FY2025

- Implement bi-directional service in two other communities with current Loop routes.
- Monitor new services and impact of fare-free service.
- Install new HVAC at Marion facility as part of capital improvements.

FY2026

- Prepare for a full TDP update.
- Assess potential for increasing service frequency on Loop routes for consideration in the next full TDP update. This initiative may be moved up in the proposed TDP schedule if the bi-directional service is not implemented.

FY2027

- Conduct a full TDP update.

FY2028 – FY2030

- Begin implementing projects recommended within the FY2027 TDP.

CAPITAL NEEDS

Vehicle Replacement and Expansion Plan

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

Useful Life Standards

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

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

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

Source: FTA Circular 5100.1: Bus and Bus Facilities Formula Program Guidance

Vehicle Replacement Plan – Baseline Estimate

Table 5-2 provides Mountain Lynx Transit's existing fleet inventory with mileage as of June 20, 2020. This inventory also provides the estimated calendar year that each vehicle is eligible for replacement. The operating condition of the vehicles and the availability of funding will dictate the actual replacement year.

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

Table 5-2: Mountain Lynx Transit Vehicle Inventory and Replacement Schedule

Fleet Number	Model Year	Make/Model	Mileage 6/20/20	Estimated Replacement Year
112	2001	GMC 2500 Sierra PU	124,932	2020
141	2005	Chevrolet Tahoe	143,262	2020
159	2007	Dodge Mini Van	183,549	2020
161	2007	Chevrolet 3500 expr-Diesel 6.6	156,502	Surplus
165	2007	Chevrolet 3500 expr-Diesel 6.6	168,804	2020
166	2007	Chevrolet 3500 expr-Diesel 6.6	143,453	Surplus
168	2007	Chevrolet 3500 expr-Diesel 6.6	150,330	2020
170	2007	FORD E-450-Gas 6.8L	144,957	Surplus
171	2007	FORD E-450-Gas 6.8L	134,572	2020
172	2007	FORD E-450-Gas 6.8L	137,988	2020
174	2008	Ford E-450 - Gas 6.8L	80,794	2020
178	2009	Chevrolet 3500 Express- Gas-6.0L	148,414	2021
183	2011	FORD E450 - GAS	102,395	2021
184	2011	FORD E450 - GAS	102,932	2021
186	2011	FORD E450 - GAS	99,704	2021
188	2011	Jeep Liberty	93,020	2022
190	2012	Chevrolet 3500 Express-Gas-6.0L	110,038	2022
191	2012	Chevrolet 3500 Express-Gas-6.0L	123,500	2022
192	2012	Chevrolet 3500 Express-Gas-6.0L	114,608	2022
193	2012	Chevrolet 3500 Express-Gas-6.0L	119,067	2022
196	2013	Braun Entervan (Dodge Caravan)	74,524	2022
197	2013	Braun Entervan (Dodge Caravan)	72,901	2023
198	2013	Braun Entervan (Dodge Caravan)	64,656	2023
199	2013	Braun Entervan (Dodge Caravan)	103,553	2023
200	2013	Braun Entervan (Dodge Caravan)	87,170	2023
201	2013	Braun Entervan (Dodge Caravan)	65,391	2024

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

204	2014	Chevrolet Supreme Bus	84,416	2024
205	2014	Chevrolet Supreme Bus	56,133	2024
206	2014	Chevrolet Supreme Bus	87,807	2024
209	2014	Chevrolet Supreme Bus	83,272	2025
210	2014	Chevrolet Supreme Bus	73,596	2025
211	2015	Ford F-250	15,504	2025
215	2017	Starcraft Allstar	60,413	2026
216	2017	Starcraft Allstar	56,027	2026
217	2017	Starcraft Allstar	75,398	2026
218	2017	Starcraft Allstar	73,522	2026
219	2017	Starcraft Allstar	66,880	2027
220	2017	Starcraft Allstar	83,422	2027
221	2017	Arboc Spirit of Mobility	43,035	2027
230	2018	Starcraft Allstar	37,376	2028
231	2018	Starcraft Allstar	32,217	2028
232	2018	Starcraft Allstar	40,038	2028
233	2018	Starcraft Allstar	30,361	2028
238	2019	Ford Transit Van	12,987	2029
239	2019	Chevy Starcraft Allstar	15,314	2029
240	2019	Chevy Starcraft Allstar	23,429	2029
241	2019	Chevy Starcraft Allstar	24,020	2029
242	2019	Chevy Starcraft Allstar	16,222	2029
243	2020	Ford E-450	822	2030
244	2020	Ford E-450	993	2030
245	2020	Ford E-450	1,086	2030

Vehicle Replacement and Expansion Plan

The annual schedule for vehicle replacement and expansion plan based on the projected schedule provided in this chapter and the FTA’s vehicle useful life standards, is provided in Table 5-3.

This vehicle replacement schedule is based on estimates; actual vehicle purchases may vary depending upon service changes, funding availability, and unexpected economic shifts. Changes to this vehicle replacement schedule can be made by Mountain Lynx Transit within its annual TDP update letter to DRPT, if needed. Vehicles for the proposed service expansions are projected in the fiscal year prior to implementation.

Table 5-3: Mountain Lynx Transit Vehicle Replacement Schedule

Vehicle Type	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Replacement	4	6	4	4	3	4	3	4	5	3
Expansion	0	1	2	2	0	0	0	0	0	0
Total Vehicles	4	7	6	6	3	4	3	4	5	3

Passenger Amenities

As noted in Chapter 4, Mountain Lynx Transit has acquired bus stop signs, and through this implementation plan they are proposed to be installed over the next three years. There will be some costs associated with installing and maintaining these signs.

Technology and Equipment

Mountain Lynx Transit is currently in the process of implementing dispatching software. Therefore this plan only includes the routine replacement of computer hardware, as are shop equipment and spare parts.

Chapter 6

Financial Plan

INTRODUCTION

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

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

OPERATING EXPENSES AND FUNDING SOURCES

Tables 6-1 provides the financial plan for the operation of Mountain Lynx Transit's services under the ten-year plan. The table summarizes the annual revenue hours of service for the existing transit program as well as for the service projects that are recommended; provides operating cost estimates; and identifies the funding sources associated with these service projects.

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

- The projected cost per revenue hour and the operating costs to maintain the current level of service assume a 3% annual inflation rate.
- For FY2021, the first year of the plan, the expenses and revenues are based on Mountain Lynx Transit's FY2020 budget times this inflation rate.
- It is understood that none of the funding partners are committing to these funding levels, but that they are planning estimates. Specific funding amounts for each year will be determined during the annual SYIP adoption and budget cycle for the Commonwealth and the local funding partners.

Table 6-1: Mountain Lynx Transit TDP Financial Plan for Operations

Projects	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Projected Incremental Annual Revenue Hours										
Current Level of Service (1)	45,979	45,979	45,979	45,979	45,979	45,979	45,979	45,979	45,979	45,979
TDP Improvements										
Abingdon Saturday Service		624	624	624	624	624	624	624	624	624
Abingdon - Bristol Connector			2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Bi-Directional Service (2)				6,760	16,120	16,120	16,120	16,120	16,120	16,120
Total Transit Revenue Hours	45,979	46,603	49,203	55,963	65,323	65,323	65,323	65,323	65,323	65,323
Projects	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Projected Operating Expenses (3)										
Current Level of Service	\$2,211,234	\$2,277,571	\$2,345,898	\$2,416,275	\$2,488,763	\$2,563,426	\$2,640,329	\$2,719,539	\$2,801,125	\$2,885,159
TDP Improvements										
Abingdon Saturday Service		\$30,910	\$31,837	\$32,792	\$33,776	\$34,789	\$35,833	\$36,908	\$38,015	\$39,156
Abingdon - Bristol Connector			\$132,655	\$136,634	\$140,733	\$144,955	\$149,304	\$153,783	\$158,397	\$163,149
Bi-Directional Service (2)				\$355,250	\$872,548	\$898,724	\$925,686	\$953,456	\$982,060	\$1,011,522
Total Projected Operating Expenses	\$2,211,234	\$2,308,481	\$2,510,390	\$2,940,951	\$3,535,820	\$3,641,895	\$3,751,152	\$3,863,686	\$3,979,597	\$4,098,985
% Change Year by Year		4%	9%	17%	20%	3%	3%	3%	3%	3%
Anticipated Revenue and Subsidies	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Passenger Revenue (4)	\$67,526	\$69,552	\$17,910	\$18,447	\$19,000	\$19,570	\$20,157	\$20,762	\$21,385	\$22,026
Subtotal, Revenue	\$67,526	\$69,552	\$17,910	\$18,447	\$19,000	\$19,570	\$20,157	\$20,762	\$21,385	\$22,026
Net Deficit	\$2,143,708	\$2,238,929	\$2,492,480	\$2,922,504	\$3,516,820	\$3,622,325	\$3,730,994	\$3,842,924	\$3,958,212	\$4,076,958
Federal Funds	\$1,071,854	\$1,119,465	\$1,246,240	\$1,461,252	\$1,758,410	\$1,811,162	\$1,865,497	\$1,921,462	\$1,979,106	\$2,038,479
State Funds	\$473,346	\$580,778	\$646,549	\$758,098	\$912,263	\$939,631	\$967,820	\$996,855	\$1,026,760	\$1,057,563
Local Funds	\$598,508	\$538,686	\$599,691	\$703,155	\$846,147	\$871,531	\$897,677	\$924,608	\$952,346	\$980,916
Subtotal, Subsidies	\$2,143,708	\$2,238,929	\$2,492,480	\$2,922,504	\$3,516,820	\$3,622,325	\$3,730,994	\$3,842,924	\$3,958,212	\$4,076,958
Total Projected Operating Revenue and Subsidies	\$2,211,234	\$2,308,481	\$2,510,390	\$2,940,951	\$3,535,820	\$3,641,895	\$3,751,152	\$3,863,686	\$3,979,597	\$4,098,985

(1) Based on FY2019 Revenue Hours

(2) For projections assumes Galax and Marion implemented in FY2024, Abingdon and Wytheville in FY2025

(3) Based on FY2020 Budget times inflation rate.

(4) The fare elimination proposal for Loop routes is planned for FY2023; assumes 75% reduction in overall fare revenue

CAPITAL EXPENSES AND FUNDING SOURCES

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

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

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

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

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

State of Good Repair

Eligible activities for funding under State of Good Repair Include²:

Replacement/Rehabilitation of:

- Vehicles/rolling stock (buses, vans, rail cars, support vehicles, etc.)
- Administrative/maintenance facilities
- Customer amenities (parking facilities, bus shelters, benches, signage)

¹ DRPT, Making Efficient Responsible Investments in Transit (MERIT), Capital Assistance – Program Prioritization, FY 21 Technical Documentation.

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

- Any other specific existing pieces of equipment and/or technology that **do not** fall into the Special Asset Categories**

**** Special Asset Categories:**

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

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

Minor Enhancements

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

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

Table 6-2: Mountain Lynx Transit - State of Good Repair Projected Capital Expenses and Funding

	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Vehicle Replacements										
	4	6	4	4	3	4	3	4	5	3
Sub-Total Replacement Vehicles	4	6	4	4	3	4	3	4	5	3
Vehicle Costs										
Replacement Vehicles	\$403,760	\$623,809	\$428,349	\$441,199	\$340,827	\$468,069	\$361,583	\$496,574	\$639,339	\$395,111
Marion Facility Improvements	\$0	\$660,000	\$275,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0
Computer/Technology Replacements	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610
Total SGR Expenses	\$405,760	\$1,285,869	\$705,471	\$518,385	\$418,078	\$470,387	\$363,971	\$499,034	\$641,872	\$397,721
Anticipated Funding Sources - Current Federal/State/Local Matching Ratios										
Federal	\$324,608	\$1,028,695	\$564,377	\$414,708	\$334,462	\$376,310	\$291,177	\$399,227	\$513,498	\$318,177
State	\$64,922	\$205,739	\$112,875	\$82,942	\$66,892	\$75,262	\$58,235	\$79,845	\$102,700	\$63,635
Local	\$16,230	\$51,435	\$28,219	\$20,735	\$16,723	\$18,815	\$14,559	\$19,961	\$25,675	\$15,909
Total Funding	\$405,760	\$1,285,869	\$705,471	\$518,385	\$418,078	\$470,387	\$363,971	\$499,034	\$641,872	\$397,721

Notes: Future vehicle replacement purchases are assumed to be funded as follows: 80% federal; 16% state; and 4% local. □

Vehicle prices include inflation, and are based on the vehicles described in Chapter 5.

Table 6-3: Mountain Lynx Transit - Minor Enhancements Projected Capital Expenses and Funding

Capital Need	FY 2021	FY2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY2029	FY2030
Expansion Vehicles		\$103,968	\$214,174	\$220,600						
Bus Stop Sign Installation (1)	\$1,200	\$1,200	\$1,200							
Maintenance Equipment/Tools	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957
Total MIN Expenses	\$2,700	\$106,713	\$216,966	\$222,239	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957
Anticipated Funding Sources- Current Federal/State/Local Matching Ratios (2)										
Federal	\$2,160	\$85,371	\$173,573	\$177,791	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566
State	\$432	\$17,074	\$34,715	\$35,558	\$270	\$278	\$287	\$295	\$304	\$313
Local	\$108	\$4,269	\$8,679	\$8,890	\$68	\$70	\$72	\$74	\$76	\$78
Total Funding	\$2,700	\$106,713	\$216,966	\$222,239	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957

(1) Assumes installation over three years as noted in Implementation Plan □

(2) Funding split assumed to remain 80% federal; 16% state; and 4% local □

Total Capital Expenses over TDP Timeframe

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

Table 6-4: Mountain Lynx Transit Capital Budget- FY2021-FY2030

SGR	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Replacement Vehicles	\$403,760	\$623,809	\$428,349	\$441,199	\$340,827	\$468,069	\$361,583	\$496,574	\$639,339	\$395,111
Marion Facility Improvements	\$0	\$660,000	\$275,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0
Computer/Technology Replacements	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319	\$2,388	\$2,460	\$2,534	\$2,610
Total SGR Expenses	\$405,760	\$1,285,869	\$705,471	\$518,385	\$418,078	\$470,387	\$363,971	\$499,034	\$641,872	\$397,721
MIN										
Expansion Vehicles		\$117,017	\$241,055	\$248,287						
Bus Stop Sign Installation		\$15,000	\$15,000	\$15,000						
Maintenance Equipment/Tools	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957
Total MIN Expenses	\$1,500	\$133,562	\$257,647	\$264,926	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957
TOTAL CAPITAL EXPENSES	\$407,260	\$1,419,431	\$963,117	\$783,311	\$419,766	\$472,126	\$365,762	\$500,878	\$643,773	\$399,678
Anticipated Funding Sources- Current Federal/State/Local Matching Ratios (1)										
Federal	\$325,808	\$1,135,545	\$770,494	\$626,649	\$335,813	\$377,701	\$292,610	\$400,703	\$515,018	\$319,742
State	\$65,162	\$227,109	\$154,099	\$125,330	\$67,163	\$75,540	\$58,522	\$80,141	\$103,004	\$63,948
Local	\$16,290	\$56,777	\$38,525	\$31,332	\$16,791	\$18,885	\$14,630	\$20,035	\$25,751	\$15,987
Total Funding	\$407,260	\$1,419,431	\$963,117	\$783,311	\$419,766	\$472,126	\$365,762	\$500,878	\$643,773	\$399,678

(1) Funding split assumed to remain 80% federal; 16% state; and 4% local

Appendix A

District Three Governmental Cooperative Board of Commissioners

**DISTRICT THREE GOVERNMENTAL COOPERATIVE
BOARD OF COMMISSIONERS
2020**

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Appendix B
District Three Governmental
Cooperative Board of Commissioners
Meeting Minutes

**MINUTES OF THE
BOARD OF COMMISSIONERS
Thursday, September 17, 2020
Marion, Virginia**

The Board of Commissioners of District Three Governmental Cooperative met at 7:00 PM on Thursday, September 17, 2020 at the District Three offices in Marion. Members in attendance were: Brenda Sutherland, Grayson County; Dr. Tom Littrell, Carroll County; Larry Carter, Town of Marion; Phillip McCall, Washington County; Holly Atkins, Town of Wytheville; Randy Johnson, Bland County; Charles Atkins, Smyth County; James Anderson, Town of Abingdon; Michael Larrowe, City of Galax; and Brian Vaught, Wythe County.

Also present were staff members: Rhiannon Powers, Chris Stone, Crystal Anders, Benjamin Conner, and Brittany Story.

I/II. Call to Order/Public Comment Period

Ms. Sutherland called the meeting to order at 7:00 p.m. Ms. Sutherland opened the floor for any public comments, but no comments were made at this time. Board introductions were made for new members present at this meeting.

III. Minutes

On a motion by Mr. Vaught, seconded by Mr. Johnson, the minutes of the July 16, 2020 meeting were approved as presented.

IV. Financial and Service Reports

Members were provided a handout of the financial report from October 1, 2019 through August 31, 2020. At this point in the fiscal year, the targeted budget should be around 8.3% unspent budget; however, the agency is currently under budget by almost 9%. The majority of the underspending results from the agency taking measures to spend CARES Act funding and also due to the fact that some programs are unable to operate at full capacity due to COVID-19 restrictions. The remainder of the 2020 funds will be allowed a one-time unlimited carryover into FY 2021.

The service units were presented for each program. Most units of service are on target, close to the targeted goal, or have outperformed for this point in the year.

V. Old Business

1. Senior Farmers Market Program 2020

The Senior Farmer's Market Program was allotted a total of 3,800 coupon booklets to distribute to qualifying seniors to spend at local farmer's markets for the purchase of fresh fruits and vegetables. To date, the program has distributed a total of 3,612 coupons, and applications are still being accepted for the remaining 188. Coupons will be valid for use until November 21.

2. COVID-19 Update

Ms. Powers provided the Board with an update regarding the agency's measures to address COVID-19 impacts. Several procedures were discussed (and included as a part of these minutes) regarding methods staff are using to address COVID-19 within the aging and transit departments. Staff also noted the following updates to the agency's COVID response:

- Staff is working to comply with the new Emergency Temporary Standard established by Virginia Occupational Safety & Health (VOSH).
- The agency recently had ultraviolet light air sanitation units installed in the HVAC system to improve indoor air quality and kill many germs, viruses, bacteria, and mold.

3. Other

With no further old business to discuss, the Board moved on to new business.

VI. **New Business**

1. Department of Labor and Industry Letter and Agency Response

The agency received an anonymous employee complaint issued through the state Department of Labor and Industry with a concern related to face coverings and social distancing at District Three offices. It was noted that the letter was not intended to be a citation or proposed penalty, but advised that the agency respond to the complaint and provide documentation of corrective measures.

The Board was provided with a copy of the complaint letter along with the agency's proposed response to the allegations as presented. The Board was notified that the letter and response will be posted in each office and made available to all employees. The agency will also send information and documentation to the Department of Labor to follow-up on the complaint.

2. Veterans Clinic Lease Update

The agency was officially notified on August 14, 2020 by the Veterans Administration that they will not pursue the lease extension and intend to end the contract with District Three for office space as of September 30, 2020.

3. Annual Contracts-Bid Evaluation Reports

The Fiscal Year 2021 bid summaries were presented to the Board. Bids for frozen meals, shelf-stable meals, and congregate hot meals were opened in August and staff committees prepared recommendations to present to the Board.

Only one bid was received each for frozen and shelf-stable meals. In both cases, the previous year's vendors were the only ones to submit a bid and the cost for each increased from the prior year. Staff made the assumption that vendors may have apprehensive about the bidding process this year due to the COVID-19 pandemic and being uncertain of their ability to supply the demand for the food products needed. Ultimately, the staff committee recommended the GA Food Service bid for frozen meals and the JA Food Service bid for shelf-stable meals.

Congregate meals are prepared in bulk form for fifteen nutrition sites within the district, however, operations are on hold at meals sites due to COVID-19. Bid information was

distributed to several vendors and two bidders responded to the request for congregate meals: the Marion Food City and Jackie's Catering. Food City offered to maintain their current cost per meal at \$6.00 while Jackie's bid was a bit higher at \$8.50 per meal. The bid evaluation committee recommended accepting the Food City bid for FY 2021.

Copies of each bid summary are attached and made a part of these minutes. After much discussion, a motion was made by Mr. Carter, seconded by Mr. Larrowe, and the Board voted to accept the bid evaluation committees' recommendations for frozen meals, shelf-stable meals and congregate meals.

4. Advisory Council Composition

The composition of the Advisory Council on Aging Services must meet certain federal guidelines. Advisory Council members are surveyed annually in order to determine if the composition guidelines are met. The categories that are not represented are filled by the Board of Commissioners as At-Large appointments.

Staff ask that Chip Shuler, Alice Crockett, and Anthony Ellis be considered for reappointment to the Advisory Council in order to fill the gaps in composition. On a motion by Mr. Vaught, seconded by Mr. Anderson, the Board voted unanimously to reappoint Mr. Shuler, Ms. Crockett, and Mr. Ellis as At-Large members to the Advisory Council on Aging Services.

5. Designated Check Signers

Currently, the agency has four staff members, including Brenda Jones, assigned to sign checks. With Brenda's departure, a new assignment must be made. Staff requests to add Rhiannon Powers to the list of designated check signers.

A copy of the resolution from the Bank of Marion listing the staff authorized to sign checks is to be signed by those newly appointed. The resolution must also be signed by the Board Secretary as well as one other officer. On a motion made by Mr. Carter, seconded by Dr. Littrell, the Board voted unanimously to adopt the authorized resolution and add Rhiannon Powers to the approved list to endorse checks.

6. Transit Development Plan

The Transit Development Plan (TDP) was mailed for review prior to this meeting and presented to the Board. The Transit Development Plan (TDP) is a state-required document which is submitted to the Department of Rail and Public Transportation (DRPT). A new plan is required every six years and is updated annually. It's designed to help transit systems improve their efficiency and effectiveness by identifying needs and required resources for modifying and enhancing services provided to the general public, while also helping the system effectively execute planning, funding, and implementation of its public transit services. The plan provides a foundation for funding requests and feeds directly into the programming process.

DRPT hired the consulting firm KFH of Bethesda, MD to develop the new plan. KFH developed the agency's previous TDP along with a number of other projects over the past 15 years. Among the numerous recommendations being considered for future development are: interline service to connect Abingdon, Marion, Wytheville, and Galax; as well as a

bidirectional service model to expand loop services in Abingdon, Marion, Wytheville, and Galax.

It was noted that the adoption of the plan is required by the Board of Commissioners; however, the plan does not obligate local governments, the Board or the agency to any future expenditures for services or capital items. Service expansions reflect feedback received from public participation surveys.

On a motion by Mr. Atkins and seconded by Mr. Larrowe, the new six-year Transit Development Plan was approved as presented.

7. Report of Nominating Committee

The nominating committee met following the July Board meeting and recommended a slate of officers to fill vacancies in the Executive Committee. Dr. Thomas Littrell was nominated for the position of Chair, Charles Atkins for Vice Chair, and Phillip McCall for Secretary/Treasurer. On a motion made by Ms. Sutherland, seconded by Mr. Carter, the Board voted unanimously to accept the slate of officers.

8. Report of the Personnel Committee

The Personnel Committee presented the following recommendations:

- Continue hazardous duty pay for those in the previously established qualifying positions until December 31, 2020.
- Eliminate flex days and return to a normal five-day per week office operation.
- Re-classify Money Managers according to the agency's rate classification scale effective October 1, 2020.
- In lieu of annual raises, pay all eligible employees (excluding Title V Senior Employment Program which must pay the minimum wage and excluding those receiving the hazard duty pay as noted above) a one-time bonus equal to 5% of their earnings from fiscal year 2020. The bonus will be derived from the fiscal year 2020 funds.

Documents to this effect will be included at the November Board meeting to note the changes to the recommendations as presented. On a motion by Mr. McCall, and seconded by Dr. Littrell, the Personnel Committee recommendations were approved as presented.

9. Guardianship Program Court Summons Statement

On September 1, 2020 District Three Governmental Cooperative received a summons to show cause why the agency should not be found in contempt of court in the Montgomery County Court Circuit.

The reason for the summons was that one of the public guardians failed to submit an initial Annual Report of Guardian as an oversight on his part. The report was immediately submitted to Montgomery County Department of Social Services (DSS) and to the Court upon receipt of the summons. The Department for Aging and Rehabilitative Services (DARS) Public Guardianship Program Coordinator, Patti Meire, was also notified by District Three staff of this error.

Rhiannon Powers, Executive Director; Christine Stone, Director of Aging and Disability Services; Emma Walbroehl, Guardianship Program Director; and the Public Guardian attended Court to give an account of the circumstances. The case was dismissed and removed from the docket because District Three was found to be in compliance per submission of the DSS report.

To prevent this from occurring in the future, the guardian received a written letter of warning for neglect of duties. Each guardian has gone through their files and updated their "due" list to ensure all clients are listed and report dates are accurate. The Program Director has also created a "Master Due" list to remind guardians of report dates and guardians will now report to the Program Director when reports are submitted.

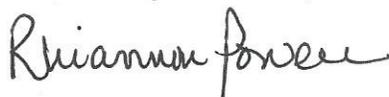
10. Staff Reports

- Staff is currently exploring opportunities to upgrade and replace major systems at its Central Office that are starting to reach their useful lives. Systems that likely would need to be replaced over the next several years include: repaving, roof replacement, HVAC, and flooring. The agency would need to utilize the services of an outside firm to develop the specifications on the more complex upgrades. Staff would return to the Board for approval prior to issuing any RFPs.
- The Community Services Division has applied for two additional grants. The first is for the Senior Snap Enrollment Initiative provided by the National Council on Aging to assist older adults age 60 and over in applying for and enrolling in the Supplemental Nutrition Assistance Program (SNAP). The second grant is a mini-grant from the Virginia Diabetes Council whose aim is to improve access to Centers for Disease Control (CDC)-recognized National Diabetes Prevention Programs in underserved and high-risk populations.

VII. **Adjournment**

With no other business to discuss, on a motion by Mr. Carter and seconded by Mr. Johnson, the meeting was adjourned at 8:30 PM.

Respectfully submitted,



Rhiannon Powers,
Executive Director

Prepared by,



Brittany Story,
Personnel Manager

Appendix C

Copies of Rider Surveys

CUSTOMER SURVEY



Please take a few minutes to complete the following survey and return to your driver. This survey will help us to better understand the needs of our customers and to plan for improvements to service in Abingdon. If you have already completed a survey, you do not need to complete a second one. Thank you!

1. What is the purpose of your trip today? You may check more than one.

- Home Work Social/ Recreation Errands/Personal Business
 Shopping Medical School Other: _____

2. How often do you ride Mountain Lynx Transit?

- 4 times per week or more Once a week Once a month
 2-3 times per week 2-3 times per month Less than once a month

3. How long have you been using Mountain Lynx Transit?

- Six months or less About one year More than 2 years
 Between six months and a year Between 1 and 2 years More than 5 years

4. If you were not riding the bus, how would you make this trip?

- Drive myself Walk Taxi or Rideshare Service
 Ride with friends/family Bike I would not be able to make this trip

5. Do you ride other services offered by Mountain Lynx Transit?

- Yes No If yes, which service: _____

6. What do you like most about Mountain Lynx Transit?

7. What do you like least about Mountain Lynx Transit?

8. Are there places in Abingdon or in the region where you would like to go on a regular basis, but you cannot because there is no public transportation? Please be as specific as possible.

9. What service improvements would be most useful to you? Please pick up to three.

- Saturday Service Sunday Service More frequent service More areas served
 Earlier Morning hours Later evening hours More shelters/benches at stops
 More direct routing between places Improved access to transit information
 Other: _____

OVER, PLEASE 

10. Please rate Mountain Lynx Transit in the following areas by placing an X:

	 Strongly Satisfied	 Satisfied	 Neutral	 Dissatisfied	 Strongly Dissatisfied
Overall service					
Days and hours of service					
On-time performance					
Cost of services					
Trip scheduling process					
Telephone customer service					
Driver customer service					
Availability of information on MLT					
Usefulness of MLT website					
Sense of safety and security					
Cleanliness of vehicles					

Please tell us a little about yourself:

How old are you?
 Under 18 18-24 25-34 35-54 55-64 65+

Do you need any of the following to help you on a daily basis? (check all that apply)
 Wheelchair Walker Cane Service Animal Personal Care Attendant No

Do you have an internet enabled "smart" phone? Yes No

Do you have a valid driver's license? Yes No

Do you have access to a working vehicle? Yes No

Do you consider yourself Hispanic/Latino? Yes No

Which one of the following best describes your race? (check all that apply)
 White/Caucasian African American/Black Asian Prefer not to answer
 American Indian/Alaskan Native Native Hawaiian/Pacific Islander

What is your employment status? (check all that apply)
 Employed (Full-time) Student (Full-time) Retired Unemployed
 Employed (Part-time) Student (part-time) Homemaker Other

What is your annual household income?
 \$14,999 or less \$15,000 - \$29,999 \$30,000 - \$44,999
 \$45,000 - \$59,999 \$60,000 - \$74,999 \$75,000 or higher

11. Please provide any additional comments concerning Mountain Lynx Transit.

CUSTOMER SURVEY



Please take a few minutes to complete the following survey and return to your driver. This survey will help us to better understand the needs of our customers and to plan for improvements to service in Galax. If you have already completed a survey, you do not need to complete a second one. Thank you!

1. What is the purpose of your trip today? You may check more than one.

- Home Work Social/ Recreation Errands/Personal Business
 Shopping Medical School Other: _____

2. How often do you ride Mountain Lynx Transit?

- 4 times per week or more Once a week Once a month
 2-3 times per week 2-3 times per month Less than once a month

3. How long have you been using Mountain Lynx Transit?

- Six months or less About one year More than 2 years
 Between six months and a year Between 1 and 2 years More than 5 years

4. If you were not riding the bus, how would you make this trip?

- Drive myself Walk Taxi or Rideshare Service
 Ride with friends/family Bike I would not be able to make this trip

5. Do you ride other services offered by Mountain Lynx Transit?

- Yes No If yes, which service: _____

6. What do you like most about Mountain Lynx Transit?

7. What do you like least about Mountain Lynx Transit?

8. Are there places in Galax or in the region where you would like to go on a regular basis, but you cannot because there is no public transportation? Please be as specific as possible.

9. What service improvements would be most useful to you? Please pick up to three.

- Saturday Service Sunday Service More frequent service More areas served
 Earlier Morning hours Later evening hours More shelters/benches at stops
 More direct routing between places Improved access to transit information
 Other: _____

OVER, PLEASE ☞

10. Please rate Mountain Lynx Transit in the following areas by placing an X:

	 Strongly Satisfied	 Satisfied	 Neutral	 Dissatisfied	 Strongly Dissatisfied
Overall service					
Days and hours of service					
On-time performance					
Cost of services					
Trip scheduling process					
Telephone customer service					
Driver customer service					
Availability of information on MLT					
Usefulness of MLT website					
Sense of safety and security					
Cleanliness of vehicles					

Please tell us a little about yourself:

How old are you?
 Under 18 18-24 25-34 35-54 55-64 65+

Do you need any of the following to help you on a daily basis? (check all that apply)
 Wheelchair Walker Cane Service Animal Personal Care Attendant No

Do you have an internet enabled "smart" phone? Yes No

Do you have a valid driver's license? Yes No

Do you have access to a working vehicle? Yes No

Do you consider yourself Hispanic/Latino? Yes No

Which one of the following best describes your race? (check all that apply)
 White/Caucasian African American/Black Asian Prefer not to answer
 American Indian/Alaskan Native Native Hawaiian/Pacific Islander

What is your employment status? (check all that apply)
 Employed (Full-time) Student (Full-time) Retired Unemployed
 Employed (Part-time) Student (part-time) Homemaker Other

What is your annual household income?
 \$14,999 or less \$15,000 - \$29,999 \$30,000 - \$44,999
 \$45,000 - \$59,999 \$60,000 - \$74,999 \$75,000 or higher

11. Please provide any additional comments concerning Mountain Lynx Transit.

CUSTOMER SURVEY



Please take a few minutes to complete the following survey and return to your driver. This survey will help us to better understand the needs of our customers and to plan for improvements to service in Marion. If you have already completed a survey, you do not need to complete a second one. Thank you!

1. What is the purpose of your trip today? You may check more than one.

- Home Work Social/ Recreation Errands/Personal Business
 Shopping Medical School Other: _____

2. How often do you ride Mountain Lynx Transit?

- 4 times per week or more Once a week Once a month
 2-3 times per week 2-3 times per month Less than once a month

3. How long have you been using Mountain Lynx Transit?

- Six months or less About one year More than 2 years
 Between six months and a year Between 1 and 2 years More than 5 years

4. If you were not riding the bus, how would you make this trip?

- Drive myself Walk Taxi or Rideshare Service
 Ride with friends/family Bike I would not be able to make this trip

5. Do you ride other services offered by Mountain Lynx Transit?

- Yes No If yes, which service: _____

6. What do you like most about Mountain Lynx Transit?

7. What do you like least about Mountain Lynx Transit?

8. Are there places in Marion or in the region where you would like to go on a regular basis, but you cannot because there is no public transportation? Please be as specific as possible.

9. What service improvements would be most useful to you? Please pick up to three.

- Saturday Service Sunday Service More frequent service More areas served
 Earlier Morning hours Later evening hours More shelters/benches at stops
 More direct routing between places Improved access to transit information
 Other: _____

OVER, PLEASE 

10. Please rate Mountain Lynx Transit in the following areas by placing an X:

	 Strongly Satisfied	 Satisfied	 Neutral	 Dissatisfied	 Strongly Dissatisfied
Overall service					
Days and hours of service					
On-time performance					
Cost of services					
Trip scheduling process					
Telephone customer service					
Driver customer service					
Availability of information on MLT					
Usefulness of MLT website					
Sense of safety and security					
Cleanliness of vehicles					

Please tell us a little about yourself:

How old are you?
 Under 18 18-24 25-34 35-54 55-64 65+

Do you need any of the following to help you on a daily basis? (check all that apply)
 Wheelchair Walker Cane Service Animal Personal Care Attendant No

Do you have an internet enabled "smart" phone? Yes No

Do you have a valid driver's license? Yes No

Do you have access to a working vehicle? Yes No

Do you consider yourself Hispanic/Latino? Yes No

Which one of the following best describes your race? (check all that apply)
 White/Caucasian African American/Black Asian Prefer not to answer
 American Indian/Alaskan Native Native Hawaiian/Pacific Islander

What is your employment status? (check all that apply)
 Employed (Full-time) Student (Full-time) Retired Unemployed
 Employed (Part-time) Student (part-time) Homemaker Other

What is your annual household income?
 \$14,999 or less \$15,000 - \$29,999 \$30,000 - \$44,999
 \$45,000 - \$59,999 \$60,000 - \$74,999 \$75,000 or higher

11. Please provide any additional comments concerning Mountain Lynx Transit.

CUSTOMER SURVEY



Please take a few minutes to complete the following survey and return to your driver. This survey will help us to better understand the needs of our customers and to plan for improvements to service in Wytheville. If you have already completed a survey, you do not need to complete a second one. Thank you!

1. What is the purpose of your trip today? You may check more than one.

- Home Work Social/ Recreation Errands/Personal Business
 Shopping Medical School Other: _____

2. How often do you ride Mountain Lynx Transit?

- 4 times per week or more Once a week Once a month
 2-3 times per week 2-3 times per month Less than once a month

3. How long have you been using Mountain Lynx Transit?

- Six months or less About one year More than 2 years
 Between six months and a year Between 1 and 2 years More than 5 years

4. If you were not riding the bus, how would you make this trip?

- Drive myself Walk Taxi or Rideshare Service
 Ride with friends/family Bike I would not be able to make this trip

5. Do you ride other services offered by Mountain Lynx Transit?

- Yes No If yes, which service: _____

6. What do you like most about Mountain Lynx Transit?

7. What do you like least about Mountain Lynx Transit?

8. Are there places in Wytheville or in the region where you would like to go on a regular basis, but you cannot because there is no public transportation? Please be as specific as possible.

9. What service improvements would be most useful to you? Please pick up to three.

- Saturday Service Sunday Service More frequent service More areas served
 Earlier Morning hours Later evening hours More shelters/benches at stops
 More direct routing between places Improved access to transit information
 Other: _____

OVER, PLEASE 

10. Please rate Mountain Lynx Transit in the following areas by placing an X:

	 Strongly Satisfied	 Satisfied	 Neutral	 Dissatisfied	 Strongly Dissatisfied
Overall service					
Days and hours of service					
On-time performance					
Cost of services					
Trip scheduling process					
Telephone customer service					
Driver customer service					
Availability of information on MLT					
Usefulness of MLT website					
Sense of safety and security					
Cleanliness of vehicles					

Please tell us a little about yourself:

How old are you?
 Under 18 18-24 25-34 35-54 55-64 65+

Do you need any of the following to help you on a daily basis? (check all that apply)
 Wheelchair Walker Cane Service Animal Personal Care Attendant No

Do you have an internet enabled "smart" phone? Yes No

Do you have a valid driver's license? Yes No

Do you have access to a working vehicle? Yes No

Do you consider yourself Hispanic/Latino? Yes No

Which one of the following best describes your race? (check all that apply)
 White/Caucasian African American/Black Asian Prefer not to answer
 American Indian/Alaskan Native Native Hawaiian/Pacific Islander

What is your employment status? (check all that apply)
 Employed (Full-time) Student (Full-time) Retired Unemployed
 Employed (Part-time) Student (part-time) Homemaker Other

What is your annual household income?
 \$14,999 or less \$15,000 - \$29,999 \$30,000 - \$44,999
 \$45,000 - \$59,999 \$60,000 - \$74,999 \$75,000 or higher

11. Please provide any additional comments concerning Mountain Lynx Transit.

CUSTOMER SURVEY



Please take a few minutes to complete the following survey and return to your driver. This survey will help us to better understand the needs of our customers and to plan for improvements. If you have already completed a survey, you do not need to complete a second one. Thank you!

1. In what city, town, or community do you live?

2. What is the purpose of your trip today? You may check more than one.

- | | | | |
|-----------------------------------|----------------------------------|---|--|
| <input type="checkbox"/> Home | <input type="checkbox"/> Work | <input type="checkbox"/> Social/ Recreation | <input type="checkbox"/> Errands/Personal Business |
| <input type="checkbox"/> Shopping | <input type="checkbox"/> Medical | <input type="checkbox"/> School | <input type="checkbox"/> Other: _____ |

3. How often do you ride Mountain Lynx Transit?

- | | | |
|---|--|---|
| <input type="checkbox"/> 4 times per week or more | <input type="checkbox"/> Once a week | <input type="checkbox"/> Once a month |
| <input type="checkbox"/> 2-3 times per week | <input type="checkbox"/> 2-3 times per month | <input type="checkbox"/> Less than once a month |

4. How long have you been using Mountain Lynx Transit?

- | | | |
|--|--|--|
| <input type="checkbox"/> Six months or less | <input type="checkbox"/> About one year | <input type="checkbox"/> More than 2 years |
| <input type="checkbox"/> Between six months and a year | <input type="checkbox"/> Between 1 and 2 years | <input type="checkbox"/> More than 5 years |

5. How did you initially find out about Mountain Lynx Transit?

- | | | |
|---|---|---------------------------------------|
| <input type="checkbox"/> Already knew about it | <input type="checkbox"/> Senior Center/ Agency Staff | <input type="checkbox"/> Asked Driver |
| <input type="checkbox"/> Asked someone who uses the service | <input type="checkbox"/> Website | <input type="checkbox"/> Other: _____ |
| | <input type="checkbox"/> Telephoned Mountain Lynx Transit | |

6. If you were not riding the bus, how would you make this trip?

- | | | |
|---|-------------------------------|--|
| <input type="checkbox"/> Drive myself | <input type="checkbox"/> Walk | <input type="checkbox"/> Taxi or Rideshare Service |
| <input type="checkbox"/> Ride with friends/family | <input type="checkbox"/> Bike | <input type="checkbox"/> I would not be able to make this trip |

7. Do you ride other services offered by Mountain Lynx Transit?

- Yes No If yes, which service: _____

8. What do you like most about Mountain Lynx Transit?

9. What do you like least about Mountain Lynx Transit?

10. Are there places in the region where you would like to go on a regular basis, but you cannot because there is no public transportation? Please be as specific as possible.

OVER, PLEASE ☞

11. What service improvements would be most useful to you? Please pick up to three.

- Saturday Service
- More areas served
- Earlier morning hours
- Improved access to transit information
- Other: _____
- Sunday Service
- Easier scheduling process
- Later evening hours

12. Please rate Mountain Lynx Transit in the following areas by placing an X:

	 Strongly Satisfied	 Satisfied	 Neutral	 Dissatisfied	 Strongly Dissatisfied
Overall service					
Days and hours of service					
On-time performance					
Cost of services					
Trip scheduling process					
Telephone customer service					
Driver customer service					
Availability of information on MLT					
Usefulness of MLT website					
Sense of safety and security					
Cleanliness of vehicles					

13. Please tell us a little about yourself:

- How many vehicles (cars, trucks) are available in your household? 0 1 2 3 4 or more
- Was a vehicle available for this trip? Yes No
- Do you have a valid driver's license? Yes No

14. Please provide any additional comments concerning Mountain Lynx Transit.

Thank you!

Appendix D

List of Trip Generators by Type

Appendix D

List of Trip Generators by Type

Higher Education Facility

Name	Address or Location
Breckbill Bible College	4927 Lee Hwy, Max Meadows, VA 24360
E&H Bartlett-Crowe Field Station	35000 Barrtree Ln, Glade Spring, VA 24340
Emory & Henry College School of Health Sciences	565 Radio Hill Rd, Marion, VA 24354
Emory and Henry College	30461 Garnand Dr, Emory, VA 24327
Old Dominion University ODUOnline	1000 E Main St, Wytheville, VA 24382
Smyth County Education Center	300 Gordondale Rd, Atkins, VA 24311
SWCC-Education & Training	141 Highlands Dr, Lebanon, VA 24266
Virginia Highlands Community College	100 VHCC Dr, Abingdon, VA 24210
Virginia Tech Aquaculture Resources	413 W Main St, Saltville, VA 24370
Wytheville Community College	1000 E Main St, Wytheville, VA 24382
Wytheville Community College	1115 E Stuart Dr, Galax, VA 24333

Human Services Organization

Name	Address or Location
American Legion	107 Laurel Springs Rd, Marion, VA 24354
Benevolent Medication Program	680 W Main St, Wytheville, VA 24382
Bland County Social Services Department	612 Main St #208, Bland, VA 24315
Brain Injury Services of SW Va	710 W Ridge Rd, Wytheville, VA 24382
Carroll County Social Services	605 Pine St # 8, Hillsville, VA 24343
Commonwealth Payee Service	487 Stone Brook Dr, Galax, VA 24333
Creative Family Solutions Inc	215 Valley St NE, Abingdon, VA 24210
Damascus Senior Citizens Inc	209 N Legion St, Damascus, VA 24236
Damascus Volunteer Rescue Sqd	32094 Government Rd, Damascus, VA 24236
Family Preservation Services	642 N Main St, Marion, VA 24354
Family Resources Center Inc	121 W Grayson St, Galax, VA 24333
Galax Social Services Department	105 E Center St, Galax, VA 24333
Grayson County Social Services Department	129 State Rte T 1101, Independence, VA 24348
Joy Ranch Home For Children	813 Joy Ranch Rd, Woodlawn, VA 24381
Loaves & Fishes Chilhowie Area	R82F+QR Chilhowie, VA

Marion VA Clinic	4451 Lee Hwy, Marion, VA 24354
Meadowview Headstart Center	28506 Hillman Hwy, Meadowview, VA 24361
Mt Rogers Community Services Board	156 Long Hollow Rd, Saltville, VA 24370
Smyth County Social Services Department	121 Bagley Cir # 200, Marion, VA 24354
Social Services Department	190 Patton St, Abingdon, VA 24210
Southeast Rural Co Assistance	745 Painters Hill Rd, Ivanhoe, VA 24350
Unemployment Insurance Services	963 E Stuart Dr, Galax, VA 24333
US Veterans Affairs	180 W Main St, Abingdon, VA 24210
Veterans of Foreign Wars	701 W Stuart Dr, Hillsville, VA 24343
VFW Post 4667	861 Goolsby St, Marion, VA 24354
VFW Post 9830	Damascus, VA 24236
War Veterans Claims Division	180 S 4th St #201, Wytheville, VA 24382
Wythe County Department of Social Services	290 S 6th St, Wytheville, VA 24382
Wytheville CBOC	165 Peppers Ferry Rd, Wytheville, VA 24382
American Legion	107 Laurel Springs Rd, Marion, VA 24354

Major Employer

Name	Address or Location
Amcor Rigid Plastics	474 Gator Ln, Wytheville, VA 24382
Atsumi Car Equipment Inc	3045 Peppers Ferry Rd, Wytheville, VA 24382
Camrett Logistics	2460 N 4th St, Wytheville, VA 24382
Food City Distribution Center	26331 Hillman Hwy, Abingdon, VA 24210
Gatorade Blue Ridge	316 Gator Ln, Wytheville, VA 24382
General Dynamics Ordnance and Tactical Systems	150 Johnston Rd, Marion, VA 24354
General Dynamics Plant 1	325 Brunswick Ln, Marion, VA 24354
K-VA-T Corporate Support Center	1 Food City Cir, Abingdon, VA 24210
Klockner Pentaplast of America	555 E Buck Ave, Rural Retreat, VA 24368
Moog Components Group	115 Jack Guynn Dr, Galax, VA 24333
Musser Lumber Co Inc	200 Shoal Ridge Dr, Rural Retreat, VA 24368
Pepsi Beverages Co	200 Pepsi Way, Wytheville, VA 24382
Somic America	343 E Lee Trinkle Dr, Wytheville, VA 24382
Teds, Inc	235 Mountain Empire Rd, Atkins, VA 24311
Universal Companies, Inc.	18260 Oak Park Dr, Abingdon, VA 24210
Utility Trailer Manufacturing Company (Factory)	13160 Monroe Rd, Glade Spring, VA 24340
Vaughan-Bassett Furniture	300 E Grayson St, Galax, VA 24333
Wytheville Metals	3040 Peppers Ferry Rd, Wytheville, VA 24382

Amcor Rigid Plastics	474 Gator Ln, Wytheville, VA 24382
Atsumi Car Equipment Inc	3045 Peppers Ferry Rd, Wytheville, VA 24382

Medical Facility

Name	Address or Location
Ballad Health Medical Associates Urgent Care	245 Medical Park Dr, Marion, VA 24354
Bland County Medical Clinic	12301 Grapefield Rd, Bastian, VA 24314
Bland Family Clinic	8494 S Scenic Hwy # D, Bland, VA 24315
Blue Ridge Cancer Care	710 W Ridge Rd Suite E, Wytheville, VA 24382
Blue Ridge Family Medicine/peds	445 Gienow Rd, Rural Retreat, VA 24368
Brock Hughes Medical Center	450 W Monroe St, Wytheville, VA 24382
Carilion Clinic Family Medicine - Galax	544 E Stuart Dr Suite D, Galax, VA 24333
Carilion Clinic Family Medicine - Hillsville	416 S Main St, Hillsville, VA 24343
Community Home Care Services (HNC)	1375 W Ridge Rd, Wytheville, VA 24382
Crossroads Medical Clinic	1204 N Main St, Marion, VA 24354
Family Medical Care Inc	1953 Carrollton Pike, Hillsville, VA 24343
Family Medicine of Our Mountains	245 Fort Chiswell Rd, Max Meadows, VA 24360
Fancy Gap Medical Clinic	M8C4+W5, Fancy Gap, VA 24328
FGMC	1661 Turner Spur Rd, Fancy Gap, VA 24328
Fresenius Medical Care at Johnston Memorial Hospital	351 Court St NE, Abingdon, VA 24210
JMH Surgery Center	613 Campus Dr, Abingdon, VA 24210
Johnston Memorial Hospital	16000 Johnston Memorial Dr, Abingdon, VA 24211
Konnarock Family Health Center	20471 Azen Rd, Damascus, VA 24236
Lincare	1047 E Stuart Dr, Galax, VA 24333
Marion VA Clinic	4451 Lee Hwy, Marion, VA 24354
Meadowview Health Clinic	13168 Meadowview Square, Meadowview, VA 24361
Mid- Atlantic Eldercare, PLLC	5261 Carrollton Pike B, Woodlawn, VA 24381
MSMG Glade Spring Family Medicine	636 S Monte Vista Dr, Glade Spring, VA 24340
Saint Mary's Medical Center	430 W Stuart Dr, Hillsville, VA 24343
Saltville Medical Center	308 W Main St, Saltville, VA 24370
Smyth County Community Hospital	245 Medical Park Dr, Marion, VA 24354
Southwest Virginia Community Health Systems	319 5th Ave, Saltville, VA 24370
Southwestern Virginia Mental Health Institute	340 Bagley Cir, Marion, VA 24354
Twin County Regional Healthcare	225 Hospital Dr, Galax, VA 24333
WCCH Clinic	791 Fort Chiswell Rd, Max Meadows, VA 24360

Wellmont Medical Associates Abingdon	24530 Falcon Pl Blvd #201, Abingdon, VA 24211
Wythe County Community Hospital	600 W Ridge Rd, Wytheville, VA 24382
Wythe Family Care Center	245 Holston Rd Suite B, Wytheville, VA 24382
Wythe Physician Practices Family Care	791 Fort Chiswell Rd, Max Meadows, VA 24360
Ballad Health Medical Associates Urgent Care	245 Medical Park Dr, Marion, VA 24354
Bland County Medical Clinic	12301 Grapefield Rd, Bastian, VA 24314
Bland Family Clinic	8494 S Scenic Hwy # D, Bland, VA 24315

Shopping Facility

Name	Address or Location
21 Grocery	9345 Elk Creek Pkwy, Elk Creek, VA 24326
Abingdon Shopping Center	328 Cummings St, Abingdon, VA 24210
Blevins Grocery	2215 Riverside Rd, Marion, VA 24354
Carpenter's Grocery	107 Brim Ln, Max Meadows, VA 24360
Cherry Hill Plaza	1126-1138 E Stuart Dr, Galax, VA 24333
Country Store	JGQ6+RW Troutdale, Wilson Creek, VA
Dollar General	806 E Main St, Fries, VA 24330
East Gate Shopping Center	532 E Main St, Abingdon, VA 24210
Family Dollar	3553 Foster Falls Rd, Barren Springs, VA 24313
Family Dollar	1221 E Lee Hwy, Chilhowie, VA 24319
Food City	955 E Stuart Dr, Galax, VA 24333
Food City	910 N Main St, Marion, VA 24354
Food City	145 W Lee Hwy, Chilhowie, VA 24319
Food City	151 Cook St, Abingdon, VA 24210
Food City	736 N Beaver Dam Ave, Damascus, VA 24236
Food City	955 E Stuart Dr, Galax, VA 24333
Food City	568 E Main St, Independence, VA 24348
Food City	145 W Lee Hwy, Chilhowie, VA 24319
Food City Gas 'N Go	1040 N Main St, Marion, VA 24354
Food City Warehouse	26331 Hillman Hwy, Abingdon, VA 24210
Food Country USA	512 E Glade St, Glade Spring, VA 24340
Food Country USA	566 E Main St, Abingdon, VA 24210
Food Country USA	675 Fort Chiswell Rd, Max Meadows, VA 24360
Food Country USA	576 S Main St, Rural Retreat, VA 24368
Food Country USA	402 Palmer Ave, Saltville, VA 24370
Food Lion	26331 Hillman Hwy, Abingdon, VA 24210
Food Lion	845 Village Blvd, Abingdon, VA 24210

Food Lion	1380 E Main St, Wytheville, VA 24382
Food Lion	1155 N 4th St #200, Wytheville, VA 24382
Food Lion	125 S Main St, Hillsville, VA 24343
Fox Mountain Market & Thrift	4744 E Lee Hwy # B, Max Meadows, VA 24360
Galax Plaza	544 E Stuart Dr, Galax, VA 24333
Grant's Supermarket	544 E Stuart Dr, Galax, VA 24333
Grant's Supermarket	615 Main St, Bland, VA 24315
Hershberger's Country Market	73 Coulson Church Rd, Woodlawn, VA 24381
Hickory Hills Shopping Center	845 W Stuart Dr, Hillsville, VA 24343
Hilly Haven Market	1496 Wysor Hwy, Barren Springs, VA 24313
KONNAROCK STORE & GAS	20433 Azen Rd, Damascus, VA 24236
Kroger	466 S Cummings St, Abingdon, VA 24210
Mac's grocery	US-11, Rural Retreat, VA 24368
Max Meadows Grocery	111 Horseshoe Dr, Max Meadows, VA 24360
Midway Junction	4274 Grayson Turnpike, Crockett, VA 24323
Smyth Valley Crossing	1125 N Main St, Marion, VA 24354
Speedwell Market	6752 Grayson Turnpike, Speedwell, VA 24374
Star Market Inc	2406 Scenic Rd, Fries, VA 24330
T & M Grocery & Deli	12178 Fancy Gap Hwy, Cana, VA 24317
Valley Grocery & Deli	35950 Widener Valley Rd, Glade Spring, VA 24340
Valley Health Care Center	940 E Lee Hwy St, Chilhowie, VA 24319
Walmart	1193 N Main St, Marion, VA 24354
Walmart Supercenter	345 Commonwealth Dr, Wytheville, VA 24382
Walmart Supercenter	1140 E Stuart Dr, Galax, VA 24333
Walmart Supercenter	2400 N Franklin St, Christiansburg, VA 24073
Whitetop Food & Gas	16164 Highlands Pkwy, Whitetop, VA 24292
Wythe Shopping Plaza	800 E Main St, Wytheville, VA 24382