

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Application ID: 64508022019094907
Application Status: Pending
Program Name: Virginia Telecommunications Initiative 2020
Organization Name: Central Shenandoah Planning District Commission
Organization Address: 112 MacTanly Place
Staunton, VA 24401-2373
Profile Manager Name: Elizabeth McCarty
Profile Manager Phone: (540) 885-5174
Profile Manager Email: elizabeth@cspdc.org

Project Name: BARC Connects Rockbridge and Bath Counties
Project Contact Name: Hunter Moore
Project Contact Phone: (540) 885-5174
Project Contact Email: hunter@cspdc.org
Project Location: 84 High St
Millboro, VA, VA 24460-0264
Project Service Area: Bath County, Rockbridge County

Total Requested Amount: \$2,202,000.00

Required Annual Audit Status: Accepted

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$2,202,000.00	\$15,633,969.00	\$17,835,969.00
Construction	\$2,170,000.00	\$14,088,325.00	\$16,258,325.00
Construction Related Soft Costs	\$0.00	\$629,000.00	\$629,000.00
Contingencies	\$0.00	\$167,363.00	\$167,363.00
Other: Grant Administration	\$32,000.00	\$8,000.00	\$40,000.00
Other: Equipment	\$0.00	\$741,281.00	\$741,281.00
Total:	\$2,202,000.00	\$15,633,969.00	\$17,835,969.00

Budget Narrative:

A detailed breakdown of costs for this project is provided in Attachment 11 – Derivation of Costs; Attachment 12 - Documentation of Supporting Costs; and Attachment 13 – Supporting Documentation of Cost Estimates. These costs include design, equipment, construction and miscellaneous fees required to bring FTTP service to both residents and businesses in the proposed project areas in Rockbridge County and Bath County. BARC is prepared to fund the majority of costs associated with this project for construction and construction soft costs for this project. The VATI funding request includes \$2,170,000 to assist with funding for the fiber construction costs, that total \$13,302,000, and \$32,000 for the CSPDC to administer the grant for the two localities. Rockbridge and Bath counties are contributing cash funds towards the cost of grant administration.

Questions and Responses:

1. Project Area

Explain why and how the project area(s) was selected. Describe the proposed geographic area including specific boundaries of the project area (e.g. street names, local and regional boundaries, etc.). Attach a copy of the map of your project area(s). Label map: Attachment 1 –Project Area Map.

Answer:

When 2020 VATI funds were announced, the counties of Rockbridge and Bath quickly recognized the value and economies of scale possible in working together with BARC Electric Cooperative (BARC) to submit a multi-jurisdictional grant application. BARC is the main electric service provider in both counties and was the first electric cooperative in Virginia to launch a subsidiary broadband Internet service provider. The shared goal of the two localities is to collaboratively connect unserved residences and businesses in their neighboring localities by using BARC's electric system and fiber network. On behalf of the two localities, the CSPDC is the applicant for this multi-jurisdictional proposal including public partners Rockbridge and Bath counties and private partner BARC.

Access to high-speed Internet is the foundation for economic growth, yet for most parts of rural Virginia, broadband is scarce and opportunities for business growth even scarcer. In December 2018, Governor Northam

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

announced the first part of a multi-year, multi-million dollar plan to improve internet access across the Commonwealth. The Governor's initiative aligns with a multi-phase project BARC Electric Cooperative and its subsidiary, BARC Connects LLC (dba "BARC Connects"), undertook starting in 2017 to provide ubiquitous Fiber-to-the-premise (FTTp) Internet service to all 13,000 of its electric members. BARC is nearing completion of the first phase of its project, having made service available to over 4,000 homes and businesses, and is underway with construction of Phase 2, providing service to another 3,000 homes and businesses in Rockbridge and Bath counties.

BARC provides electricity and broadband services to parts of five Virginia counties including the majority of Rockbridge and Bath. Pursuant to an affiliate arrangement approved by the Virginia State Corporation Commission, BARC leases its fiber and related equipment to BARC Connects under a Fiber & Network Lease Agreement. BARC Connects operates the leased network and provides last-mile Internet service to BARC Electric as well as other customers.

The project partners have identified areas unserved by 10/1 internet speeds for the proposed project area by using the most current Center for Innovative Technology (CIT) and Federal Communications Commission (FCC) maps. This project will maximize the impact of the requested grant funding by matching a significant amount (88%) in Cooperative-provided funding to reach as many unserved residents and businesses as possible. BARC has been awarded funding in the Connect America Fund Phase II (CAF2) auction for some areas adjacent to the proposed project area and is awaiting possible funding from the Appalachian Regional Commission (ARC) for a potential fiber build in another area of Rockbridge. In mapping fiber routes for this proposal, these awards were taken into consideration to best leverage all funding to connect the largest number of residences and businesses while not "double dipping" for financial support. Attachment 1 – Project Area Map identifies this total project area including boundaries with road locations.

This project leverages BARC's existing network operations center (NOC) to expand BARC's broadband service network. BARC proposes to deploy 314 total miles of gigabit last mile fiber infrastructure providing Fiber-To-The-Premise (FTTp) service to unserved residents and businesses. This includes 111 miles of fiber that will pass 462 residents and 31 businesses in Rockbridge and 203 miles of fiber that will pass 466 residents and 126 businesses in Bath. A total of 1,085 residences/businesses will be served through this project. Refer to the table in Attachment 16 for distribution of residences/businesses by location.

The VATI-requested funding will be allocated solely to connecting homes and businesses in the unserved areas of both Rockbridge and Bath counties as identified on the CIT map. The match provided by BARC will be used for fiber construction to build to the unserved areas, as well as inside the unserved areas, making FTTp service available to all customers along the routes. This increases availability of service to an additional 1,165 residents in Rockbridge and Bath. Though this will not connect every resident and business in these two localities, it opens additional pathways to future network expansion to connect the remaining unserved and underserved areas in both counties.

The VATI request of \$2,202,000 (12% of project cost) will be used to reduce the cost to connect homes and businesses in the unserved areas of the project area. This calculates to \$2,000 in VATI support per unserved location passed (1,085), plus costs incurred by the CSPDC to administer the grant. BARC will provide the matching funds to complete construction \$15,625,969 (88% of project cost). Additionally, both localities have agreed to share an equitable portion of the grant administration costs to the CSPDC totaling \$8,000.

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Besides BARC's matching funds, BARC expects to invest an additional \$14 million in leveraged private investment over the next two years in fiber project expansion in Bath and Rockbridge in 2019 and 2020. This investment will be for construction of additional fiber-optic plant including service drops and connections to over 3,000 eligible homes and businesses.

Without VATI funding, BARC's goal of connecting all of its members in both counties with reliable high-speed Internet will take many years due to the high capital costs and low return on investment experienced in areas with low population density. This project will create economic growth opportunities such as new small and home-based businesses, telecommuting, and new housing starts and increased sales of existing homes. It will provide opportunities for business attraction and expansion, workforce retention, and greater competition with urbanized areas that currently offer broadband service. With BARC's broadband expansion assisted by VATI, Rockbridge and Bath counties will be poised to experience long-term sustainable economic growth.

2.

Describe your outreach efforts to identify existing providers in the selected project area. Provide a detailed explanation of how this information was compiled and the source(s). Provide a map and list of all existing providers (fixed and wireless) and speeds offered within the project area. Label Map: Attachment 2 – Existing Provider Map; label documentation: Attachment 3 – Documentation on CAF Funding Area.

Answer:

Rockbridge and Bath counties have conducted research and have knowledge of unserved areas. To have a "challenge-free" objective proposal, however, the applicants chose to utilize the attached CIT map, Attachment 2 – Existing Provider Map, which identifies existing providers and offered speed tiers. This past summer, both counties sent letters to each provider registered in their respective locality requesting collaboration and interest in partnering on a VATI grant application. Bath County received responses from MGW and BARC. Rockbridge County received a response only from BARC. Due to the lack of additional responses, neither county has comprehensive data on existing coverage levels or areas of coverage because these private ISP companies tend not make this information public. The application includes maps that are publicly available from CIT to show the types of coverage and areas, overlaid against the unserved areas identified by CIT. Due to the lack of response to the counties' solicitation letters from the existing providers, there is not complete and accurate information to identify where there is and is not service.

To accompany the existing provider map is Attachment 3 – Documentation of CAF Funding Area which confirms that CAF funding areas are outside of the proposed project area for this grant application. As you can see, BARC is identified as a CAF2 funding recipient in Rockbridge County in the area of Vesuvius on the attached map. If awarded, this project would allow BARC to expand the current Phase 1 of its fiber network to the proposed unserved area funded by VATI, extending farther to the CAF2 awarded area, increasing service availability to one of the most remote and hard to reach regions in Rockbridge County.

3. Project Need/Description

To be eligible for VATI, applicants must demonstrate that the proposed project area(s) is unserved. An unserved area is defined as an area with speeds of 10 Mbps / 1 Mbps or less and with less than 10 percent service overlap within the project area. Describe any anticipated service overlap with current providers within the project area.

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Provide specific information as to how you determined the percentage overlap. Label Attachment: Attachment 4 – Documentation Unserved Area VATI Criteria.

Answer:

As stated above, the project partners chose to use the most current CIT map and focus solely on areas designated as unserved. Additionally, the project partners are not aware of any existing providers identified in the proposed project areas offering services above 10/1 where VATI funding is sought, and therefore no overlap of services exists. Attachment 4 – Documentation of Unserved Area VATI Criteria is attached and outlines the proposed project routes where VATI funding would be used to deploy last-mile gigabit infrastructure for both counties.

4. Provide the number of residential serviceable units in the project area(s). Describe the eligible premises that will be served by the proposed project and the basis for these projections.

Answer:

Rockbridge County mapped the proposed project routes against areas identified by CIT as unserved by 10/1 internet and pinpointed all residential serviceable units based on Rockbridge County data. In Rockbridge, there are a total of 462 unserved residential consumers. In addition, there are 292 locations outside of the unserved areas in Rockbridge that are eligible for FTTP service along the project routes.

BARC and the CSPDC utilized electric consumer meter information to map the proposed project routes in Bath County against areas identified by CIT as unserved by 10/1 internet to identify residential services. BARC and the CSPDC identified 466 unserved residential consumers in Bath. In addition, there are 873 locations outside of the unserved areas in Bath that are eligible for FTTP service along the project routes.

5. Indicate the numbers of businesses and community anchor institutions the proposed project will pass in the project area. Also indicate the number of home-based businesses. Provide specific information.

Answer:

Rockbridge County mapped the proposed project routes against areas identified by CIT as unserved by 10/1 internet and pinpointed all commercial serviceable units based on Rockbridge County data. In Rockbridge, there are a total of 31 unserved business/commercial consumers.

These include several home-based businesses, churches and country stores, among others.

As the sole electric utility provider for Bath County, BARC used electric meter information for each business it serves to determine the number of commercial serviceable units in the unserved portion of Bath County. BARC found 126 unserved commercial consumers and/or anchor institutions and home-based businesses. These include the water service authority, school board offices, community centers, volunteer fire departments, churches, and farms.

6. Understanding that projected take rates are an estimate, provide the anticipated take rate for the proposed service within one year of project completion and describe the basis for the estimate. Also detail all actions (e.g. marketing activities, outreach plan) to be implemented to reach the identified potential serviceable units within the project area.

Answer:

BARC's feasibility study forecasts a conservative 45% take rate on broadband services made available in this project. This is consistent with the take rate experienced to date in the first phase of BARC's fiber project

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

(however, signups continue to occur at a rate of around 15 per week, so a final take rate has still not settled out). BARC believes this to be a conservative take rate for fiber service based on higher take rates reported by electric cooperatives throughout the country.

To achieve this estimated take rate, or hopefully greater, BARC, CSPDC and both counties commit to the following outreach and marketing plan:

1. Developing and distributing marketing materials including postcards, flyers, email notices, and letters detailing the services available to the eligible addresses in the proposed project area. This information will include:

- Construction notification
- All broadband services available to units including fiber internet, TV and phone
- Price points for all services, including various internet speed tiers; various TV packages; home phone service
- Dedicated commercial sales staff to work with eligible businesses to answer questions
- Dedicated customer service staff to work with eligible residents to answer questions

2. Plan and execute community meetings in conjunction with each jurisdiction (Rockbridge County and Bath County) to meet face-to-face with residents and businesses to discuss the project; eligible service area; available services; pricing and additional questions.

3. Marketing service availability in BARC's monthly magazine, Cooperative Living, on BARC's podcast, The BARC Connection, on BARC's website and on BARC's Facebook Page

7. For wireless projects only: Please explain the ownership of the proposed wireless infrastructure. Will the wireless co-applicant own or lease the radio mast, tower, or other raised structure onto which the wireless infrastructure will be installed?

Answer:

This project is not installing wireless infrastructure.

8. Provide the proposed download and upload speeds for the project area. Detail whether that speed is based on dedicated or shared bandwidth, and detail the technology that will be used. This description can be illustrated by a map or schematic diagram, as appropriate. Describe the Internet service offerings to be provided after completion of this project and your price structure for these services. The service offerings should include all relevant tiers.

Answer:

The broadband service that will be provided for both phases of this project will be Fiber-To-The-premise (FTTp). BARC has successfully implemented the first phase of its (FTTp) project in Rockbridge County providing high-speed internet service and TV and phone service to residents and businesses. The infrastructure from the Cabinet to the premise Optical Network Terminal (ONT) is capable of speeds up to 1 Gbps without data caps. The proposed system will be deployed using a GPON architecture system. The speed tiers and costs are as follows:

Internet Service Speed Tiers and Pricing:

- 50 Mbps download / 10 Mbps upload; Cost: \$60 per month
- 100 Mbps download / 50 Mbps upload; Cost \$70 per month
- 250 Mbps download / 125 Mbps upload; Cost \$80 per month

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

500 Mbps download / 250 Mbps upload; Cost \$150 per month

Gigabit 1,000 Mbps download / 1,000 Mbps upload; Cost \$500 per month

All service packages include one free fiber modem; one free wireless router; and no data caps.

In addition to reliable internet service, BARC also offers home phone and various TV packages to consumers who are interested in expanded broadband services.

9. Provide a description of the network system design used to deliver broadband service from the network's primary Internet point(s) of presence to end users, including the network components that already exist and the ones that would be added by the proposed project. Also describe specific advantages of using this technology. Provide a detailed explanation on how this information was compiled and source(s). For wireless projects, provide a propagation map including the proposed project. Label Map: Attachment 5 – Propagation Map Wireless Project

Answer:

BARC Electric plans to construct and operate a fiber to the premises (FTTp) network to provide advanced broadband services, including high speed Internet, video and voice services. The network provides an all-fiber infrastructure utilizing existing BARC Electric substations and rights-of-way. The network is engineered to create diverse redundant paths for each substation network, all converging at the BARC NOC. BARC Network Element electronics are categorized as follows:

GPON Access Network:

BARC uses a Gigabit Passive Optical Network technology. GPON provides a robust and cost-effective solution while still meeting the high standards necessary for a carrier-class network. BARC's GPON solution uses GPON Optical Line Terminations (OLTs) connected to residential Optical Network Termination equipment (ONTs) through use of proper passive optical splitters. BARC uses Calix E7s and a combination of 844G, 801 & 716 ONTs for deployment at residential and business locations. All E7s are configured in a 10G redundant ring back to the BARC data center.

Core & Edge Routers:

BARC currently has two carrier-grade Juniper core routers in its data center (primary and backup) with redundant 10G circuit uplinks to BARC's edge peering point at the Equinix data center in Ashburn, VA. From there, BARC has Juniper routers with connections to two different Tier 1 transit providers as well as our video partner. BARC runs both IPv4 and IPv6 natively on its network. There is full redundancy to all devices off the core router within the data center. BARC has a VMWare environment which contains its public facing servers which host services such as DNS & DHCP as well as a set of private servers that run network monitoring software, Calix CMS, etc.

Description of CPE and Method of Acquisition:

BARC standardized its Customer Premise Equipment (CPE) for its broadband, IPTV and VOIP services with Calix. The proposed CPE will be located inside the home in close proximity to the entertainment center. The gateway device will terminate the fiber, convert light to electrical signal, and will provide the following ports: HDMI, 4 Ethernet ports, one POTS port, and will provide in-home secure Wi-Fi service. For IPTV, BARC will provide TV remotes and either wired or wireless set-top boxes with and without DVRs.

BARC personnel will offer assistance with setup and installation and BARC intends to offer in-home wiring service for an additional fee. The method of customer acquisition will be through various marketing channels,

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

including community meetings and online portal access. Once an order is confirmed, the service delivery date will be established. On the service delivery date, the service will be provisioned while the installer performs the drop installation and performs in-home wiring. There will be sufficient inventory of CPE on technician vehicles as well as inventory at the warehouse.

10. Project Readiness

What is the current state of project development (e.g. planning, preliminary engineering, identifying easements/permits, final design, etc.)? Prepare a detailed project timeline or construction schedule which identifies specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Provide any Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) (drafts are allowable), letters of support, etc. The timeline should include all activities being completed within 12 months of contract execution with DHCD. Label Attachments: Attachment 6 – Timeline/Project Management Plan; Attachment 7 – Relationship between Applicant/Co-Applicant; Attachment 8 – Letters of Support;

- i. If the partnership is formalized in a written agreement, provide a copy of that agreement.
- ii. If the partnership has not been formalized, provide a short description of the project management role, financial commitment, or other contribution to the project for the applicant, co-applicant, and any additional partners.
- iii. If applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality.

Answer:

BARC's engineering and construction departments work closely with its outside engineers to perform all aspects of fiber network engineering, make ready, design, and project management. As stated elsewhere in this application, BARC has completed construction on approximately 300 miles of fiber serving over 4,000 homes and businesses and is underway with construction on an additional 320 miles in Phase 2. The proposed VATI project would become the next focus of BARC's internal and outside engineers to design and begin make-ready assessments in preparation for construction. Our experience with hundreds of miles of existing fiber construction enables us to recognize problems before, during, and after the construction process and proactively address them before they become significant issues or lead to delays. Based on our experience, we envision the project timeline as follows (from contract execution with DHCD):

Phase 1:

Months 1-2: Make-ready engineering (MRE)

- Gather GPS coordinates for all planned poles and customer locations
- Perform a make-ready assessment for attachment to each pole
- Generate work orders to replace necessary poles and make on-pole adjustments
- Work with other pole attachers to clear any existing make-ready violations (clearance issues) prior to construction

Months 2-3: Fiber design

- Use the MRE data to prepare fiber design plans and prints for fiber construction, including construction maps, splice diagrams and bills of material (BOMs)

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Months 2-3: Material acquisition

- Prepare an initial bill of materials (BOM) needed for the start of fiber construction. Additional BOMs will be created during the fiber construction process to provide the necessary materials for construction.

Months 2-3: Pre-sale

- Announce a fiber pre-sale encouraging customers to sign up for service in preparation for construction. Free service drops will be provided to customers who sign up during the pre-sale period.

Months 4-10: Fiber construction; testing

- Bid/award fiber construction contract
- Construct the fiber network, including laterals and drops to customer homes/businesses
- Project manage and perform quality control checks during fiber construction

Months 6-12: Customer installations

- Pull fiber from exterior NID to the interior of the customer premise and launch the customer's services, including residential and commercial customers.

11. Matching funds: Provide a description of the matching funds the applicant and co-applicant will invest in the proposed project (VATI funding cannot exceed 80 percent of total project cost). The Funding Sources Table must be completed. Label Attachments: Attachment 9 - Documentation of Match Funding; Attachment 10 – Funding Sources Table;
- i. For each element of matching funds in the description, indicate the type of match (e.g. cash, salary expense, or in-kind contribution).
 - ii. Identify whether the applicant or co-applicant is responsible for providing each element of the proposed matching funds.
 - iii. Include copies of vendor quotes or documented cost estimates supporting the proposed budget.

Answer:

Attachment 9 – Documentation of Matching Funding outlines that BARC Electric Cooperative and its Board of Directors is committed to a cash match totaling \$15,625,969. These funds will be used for activities including equipment purchases, contractual services, outside plant materials, and fiber construction, among other items for the identified project area to unserved homes and businesses. These matching funds have been allocated in BARC's 2020 budget and any unspent funds will be carried forward into future fiscal years as necessary. The BARC matching funds will be used towards the listed items above to provide service to both unserved homes and businesses and additional potential addresses passed during the construction of this project.

12. Applicant and Co-Applicant: A description of the public-private partnership involved in the project. Detail the local government assistance: Local government co-applicants should demonstrate assistance to project that will lower overall cost and further assist in the timely completion of construction, including assistance with permits, rights of way, easements, and other issues that may hinder or delay timely construction and increase cost. Provide detail if this project includes additional partners such as municipal providers, middle-mile providers, or investor-owned utilities

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Answer:

This project is a joint effort of Rockbridge County, Bath County and BARC to bring reliable, affordable high-speed internet service to the residents and businesses that are unserved in the defined project area of these two localities. All three partners are committed to connecting these rural areas to reliable high-speed internet services. Both Rockbridge and Bath County have experience working with BARC and recognize BARC’s proven track record in providing both reliable electric service and reliable broadband service in both communities.

Both Rockbridge County and Bath County will provide significant local assistance with this project to ensure its success in the region. These activities will include organizing frequent and meaningful community meetings with leaders, residents and businesses in each jurisdiction to discuss the project; mobilizing GIS resources to assist BARC with defining the project boundaries to clearly identify who will be eligible for service; and provide assistance to BARC staff to help respond to residents to answer any questions or concerns related to this project. Additionally, each jurisdiction will assist with the distribution of information including marketing materials; pricing for available services; guidance to sign-up for selected services. If needed, both jurisdictions agree to assist in areas related to permits, rights of way, easements and any other issues that may hinder or delay the proposed project.

- Identify key individuals, including name and title, who will be responsible for the management of the project. Provide a concise description of their role and responsibilities for the project. Present this information in table format.

Answer:

Name	Title	Role
Bonnie Riedesel	CSPDC Executive Director	Grant Management, Execute Contracts/MOUs, Oversight of Project, Reporting to DHCD and localities.
Hunter Moore	CSPDC Regional Planner / GIS Coordinator	Coordination with localities, DHCD and ISP provider. Attending PM meetings, preparing progress reports. Assistance with GIS/mapping.
TBD	CSPDC Financial Officer	Fiscal reporting, drawdown requests, fiscal management, tracking in-kind. Paying ISP
Michael Keyser	CEO, BARC Electric Cooperative	Maintain schedules, perform make ready applications, coordinate engineering tasks, maintain network system post installation
Spencer Suter	Rockbridge County Administrator	Responsible for overseeing Rockbridge County BOS matching contributions for grant
Sam Crickenberger	Rockbridge County Director of Community Development	Responsible for overseeing Rockbridge County commitments for assistance as needed
Ashton Harrison	Bath County Administrator	Responsible for overseeing Bath County BOS matching contributions for grant and commitments for assistance as needed

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

For additional descriptions of personnel and areas of responsibilities, please refer to the Project Management Plan and the list of

14. Project Budget and Cost Appropriateness

Applicants shall provide a detailed budget as to how the grant funds will be utilized, including an itemization of equipment and construction costs and a justification of proposed expenses. Expenses should be substantiated by clear cost estimates. Label Attachment: Attachment 11 – Derivation of Costs; Attachment 12 - Documentation of Supporting Costs; Attachment 13 – Supporting Documentation of Cost Estimates.

Answer:

A detailed breakdown to answer the above questions are included in Attachments: Attachment 11 – Derivation of Costs; Attachment 12 – Documentation of Supporting Costs; Attachment 13 – Supporting Documentation of Cost Estimates

15. The cost benefit index is comprised of three factors: (i) state share for the total project cost, (ii) state cost per unit passed, and (iii) the internet speed. From these statistics, individual cost benefit scores are calculated. Finally, the three component scores are averaged together and converted to a 30-point scale to form a composite score. Please provide the following three pieces of information:

a. Total State funding requested / Total Project cost

b. Number of serviceable units

c. Highest residential speed available

Answer:

a. Total State funding requested / Total Project Cost

Total State funding request: \$2,202,000 / Total Project Cost: \$17,835,969

b. Number of serviceable units: 1,085 unserved; 1,165 outside the unserved area

c. Highest residential speed available: 1 gigabit/second synchronous

16. A brief description of applicant and co-applicant's history or experience with managing grants and constructing broadband communication facilities in the Commonwealth of Virginia and elsewhere.

Answer:

The proposed project will be owned by BARC Electric Cooperative and leased to its wholly-owned subsidiary, BARC Connects. Grant management will be provided through the Central Shenandoah Planning District Commission (CSPDC).

The Central Shenandoah Planning District Commission works with local governments and is the region's leading public planning organization. The CSPDC has the staff resources and capacity to carry out the proposed VATI project in an efficient manner. For 50 years, the CSPDC has been providing assistance to the 21 jurisdictions in the

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Central Shenandoah Valley and their citizens with issues including land use planning and regulations, transportation, solid waste management, water and wastewater utilities, housing, economic development, water resource management, disaster mitigation and education, and human services. Cooperative, cost-saving solutions to problems are addressed at the CSPDC through regional efforts and partnerships with its local jurisdictions and other stakeholders. The CSPDC has a proven record of successfully implementing local and regional projects and programs. The CSPDC provides grant management, project administration, and financial management for a number of federal, state, and locally funded programs.

BARC employees have extensive experience in managing and operating fiber networks and have nearly 80 years' experience in maintaining outside plant facilities. The cooperative also works with outside partners to provide billing and technical support, server maintenance, IPTV services, VOiP services, and other services that are more cost effective to outsource.

The Cooperative's FTTP project was a natural fit for BARC's expertise. For this project, BARC Electric will own and maintain the fiber facilities. Subscription revenues will produce recurring revenue streams to support sustainability of the project. A 10-year pro-forma financial model showing the sustainability of this phase of the project is included in this application under Attachment 12.

17. Commonwealth Priorities

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. Please describe if the project fits into a larger locality or regional universal broadband plan.

Answer:

In December 2018, Virginia Governor Ralph Northam announced a proposal to spend \$50 million on building universal broadband internet service in his upcoming budget, the first part of a multi-year \$250 million plan to improve internet access across the Commonwealth. This initiative aligns with a multi-phase project BARC Electric Cooperative and its subsidiary, BARC Connects LLC, has been working on in the electric service area they serve, and beyond, since 2017.

This proposed broadband project aligns with both Rockbridge County and Bath County's comprehensive plans and strategy to deploy fiber for broadband services to attract new business; expand existing business; develop the potential for an entrepreneurial ecosystem and attract and retain a local workforce with new job creation. In addition, this project will provide services to residential customers currently without broadband capability and allow for telecommuting (work from home) options for residents.

Furthermore, the CSPDC is a designated Economic Development District (EDD) under a program administered by the U.S. Department of Commerce's Economic Development Administration. As an EDD, the CSPDC prepares a Comprehensive Economic Development Strategy (CEDS) through an intensive planning process. The 2018 CEDS establishes regional economic development goals to guide the region in achieving its vision. One vision of the plan is to address critical infrastructure updates and anticipate future community needs to improve the Central Shenandoah Region's competitiveness to attract and retain business (Vision II). The first goal under this vision is to expand and improve the Region's technology and telecommunications systems. Specific objectives are (1) Develop stronger, reliable broadband coverage through innovative partnerships between localities and telecommunications companies, specifically focusing on rural areas; (2) Expand and advance cell service availability throughout the region to attract businesses and residents; and (3) Utilize state and federal broadband funds to implement

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

telecommunication projects.

18. Additional Information

Any other equitable factor that the applicant desires to include. Applicants are limited to four additional attachments. Label Additional Attachments as:

- a. Attachment 14 – Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 15 – Copy of Public Notice
- c. Attachment 16 – XXXXXXXX
- d. Attachment 17 – XXXXXXXX
- e. Attachment 18 – XXXXXXXX
- f. Attachment 19 – XXXXXXXX

Answer:

N/A

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaFINAL829201933724.pdf

Map(s) or schematic of existing broadband providers (inventory of existing assets)

Attachment2ExistingBroadbandProviders829201933732.pdf

Documentation that proposed project area is not designated for Connect America Funding (CAF)

Attachment3DocumentationofCAFFundingArea829201933741.jpg

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationVATICriteria8302019110242.pdf

Project Management Plan

Attachment6TimelineProjectManagementPlan1830201933447.pdf

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

BARC Connects Rockbridge and Bath Counties

Documentation of relationship between applicant and co-applicant (formal or informal)

Attachment7ApplicantCoapplicantAgreementCSPDCBARC829201933836.pdf

Letters of Support

Attachment8LettersofSupport829201944726.pdf

Documentation for in-kind contributions, including value(s)

Attachment9DocumentationofMatchingFunding829201933853.pdf

Funding Sources Table

Attachment10FundingSourcesTable829201933903.pdf

Derivation of Cost (Project Budget)

Attachment11DerivationofCostsWorksheet829201945218.pdf

Documentation supporting project costs (i.e. vendor quotes)

Attachment12DocumentationofSupportingCosts829201933913.pdf

Supporting documentation for costs estimates

Attachment13SupportingDocumentationofCostEstimates829201933935.pdf

Two most recent Form 477 submitted to FCC

Attachment14Form477SubmissionstoFCC829201933947.pdf

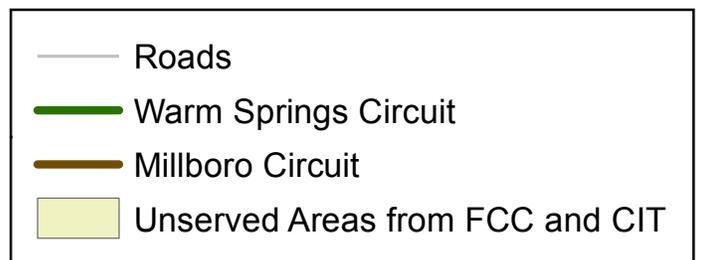
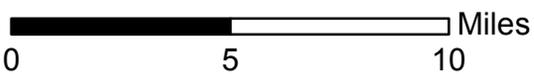
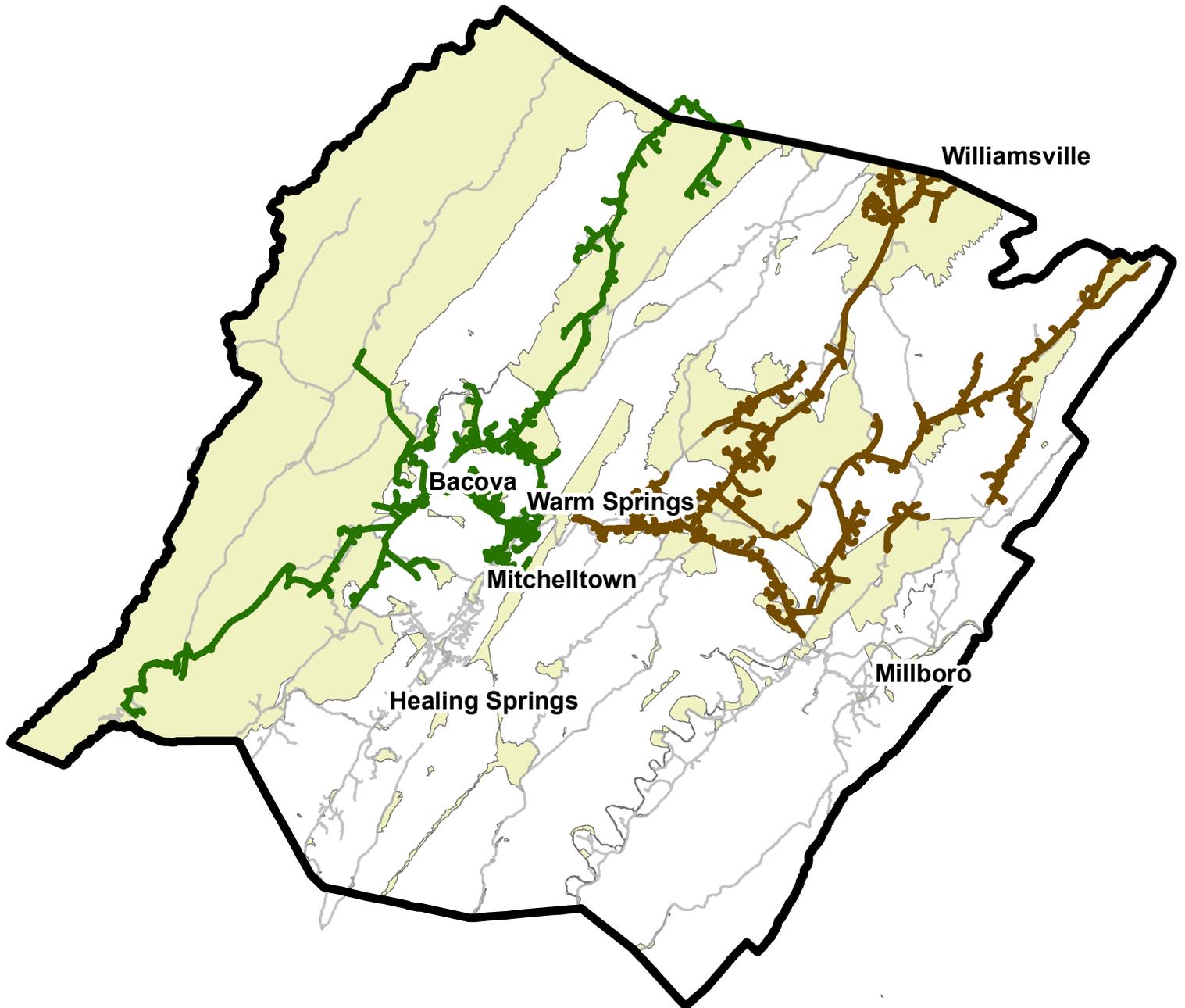
Copy of Public Notice

Attachment15PublicNotices829201944631.pdf

Optional

Attachment16TableUnservicedLocations829201933954.pdf

Bath County Proposed Routes

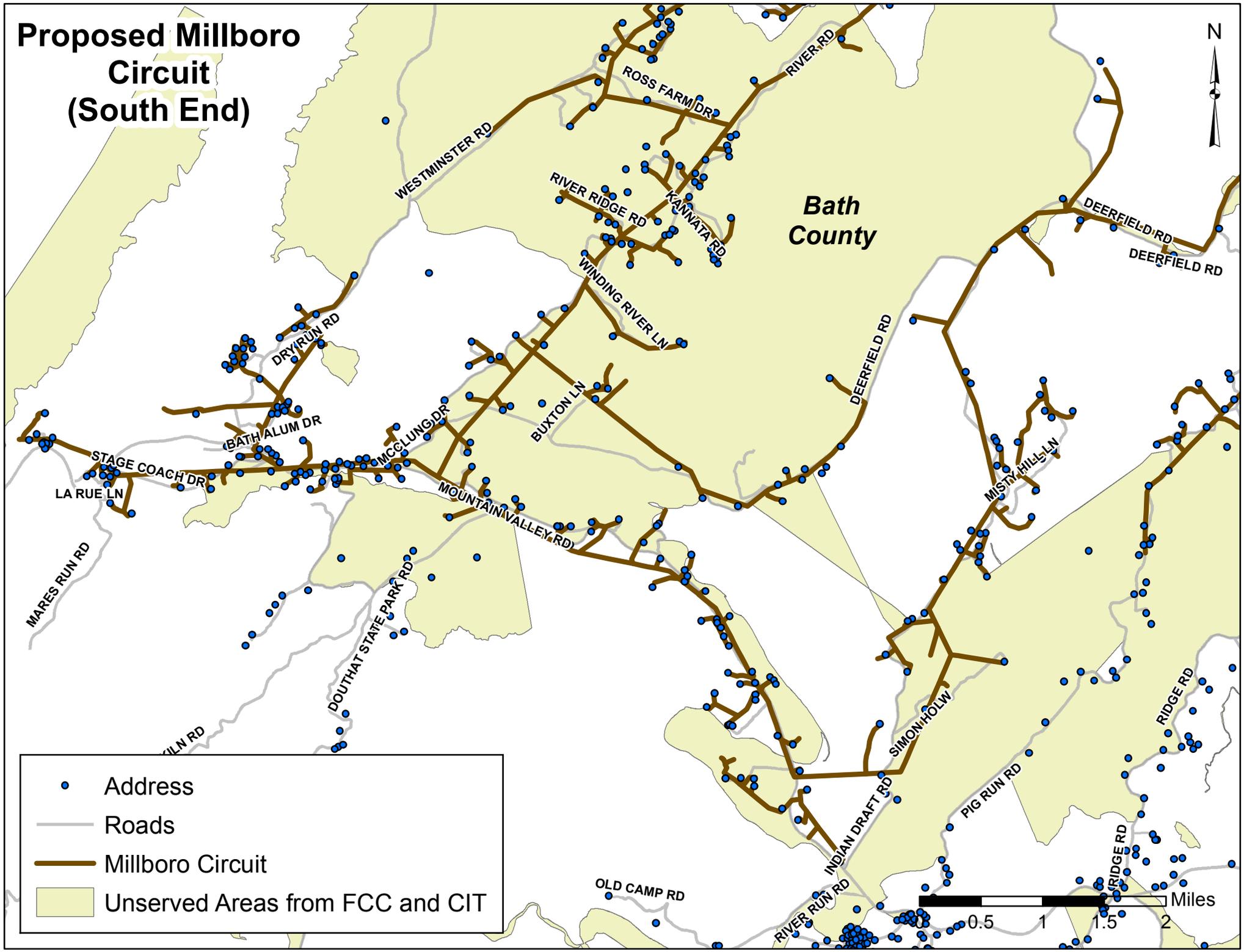
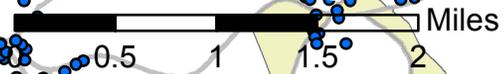


Proposed Millboro Circuit (South End)

Bath
County



-  Address
-  Roads
-  Millboro Circuit
-  Unserved Areas from FCC and CIT

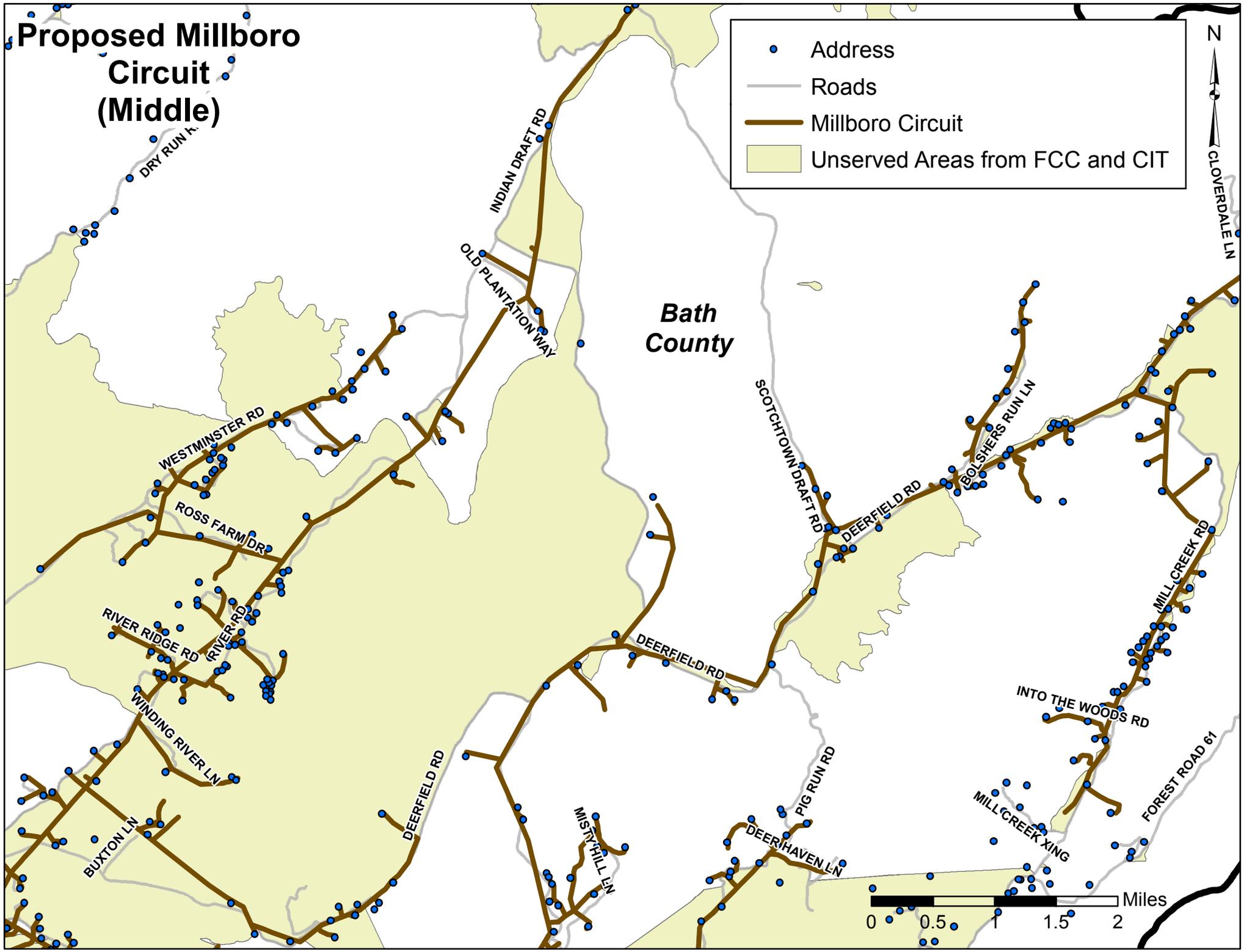


Proposed Millboro Circuit (Middle)

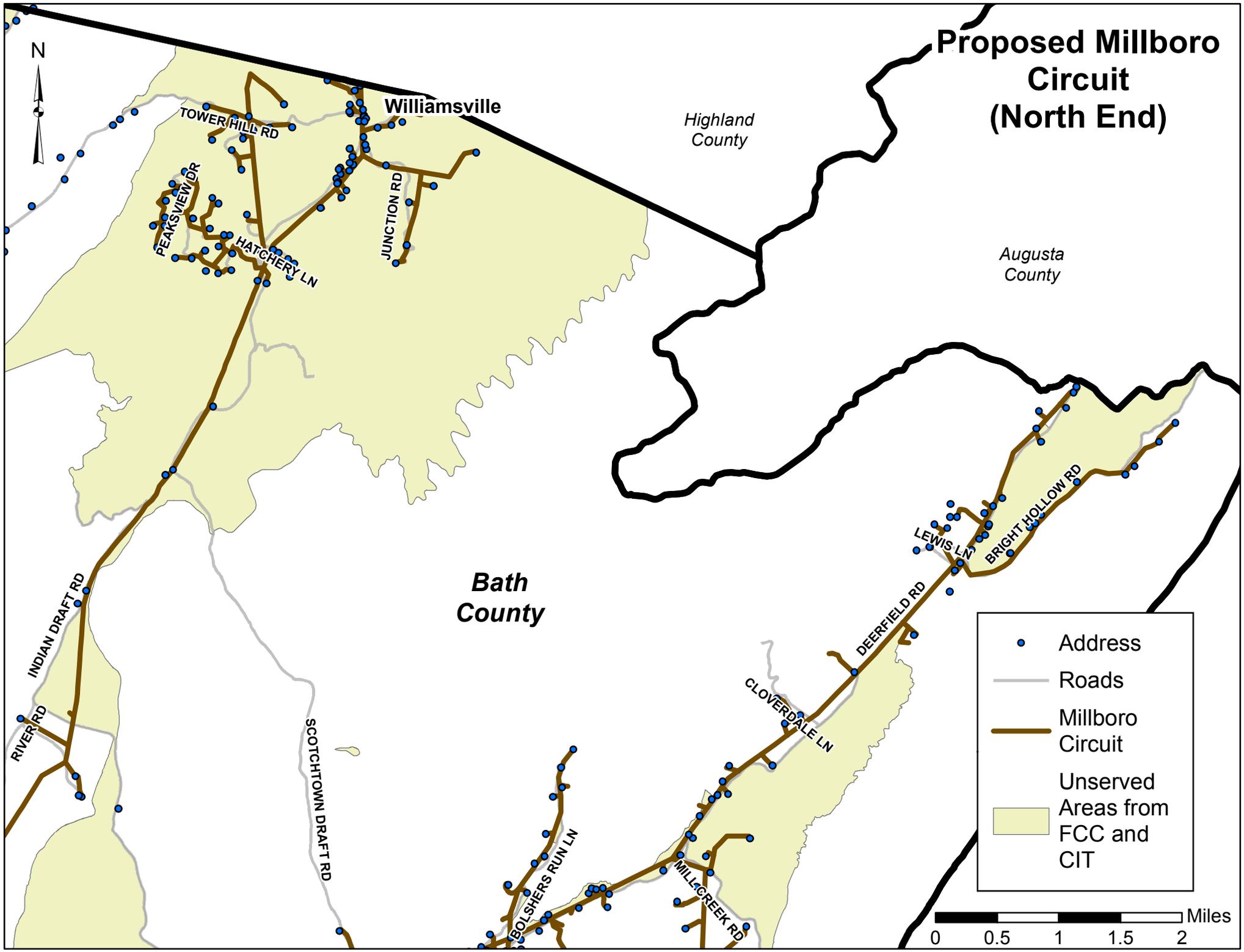
- Address
- Roads
- Millboro Circuit
- Unserved Areas from FCC and CIT



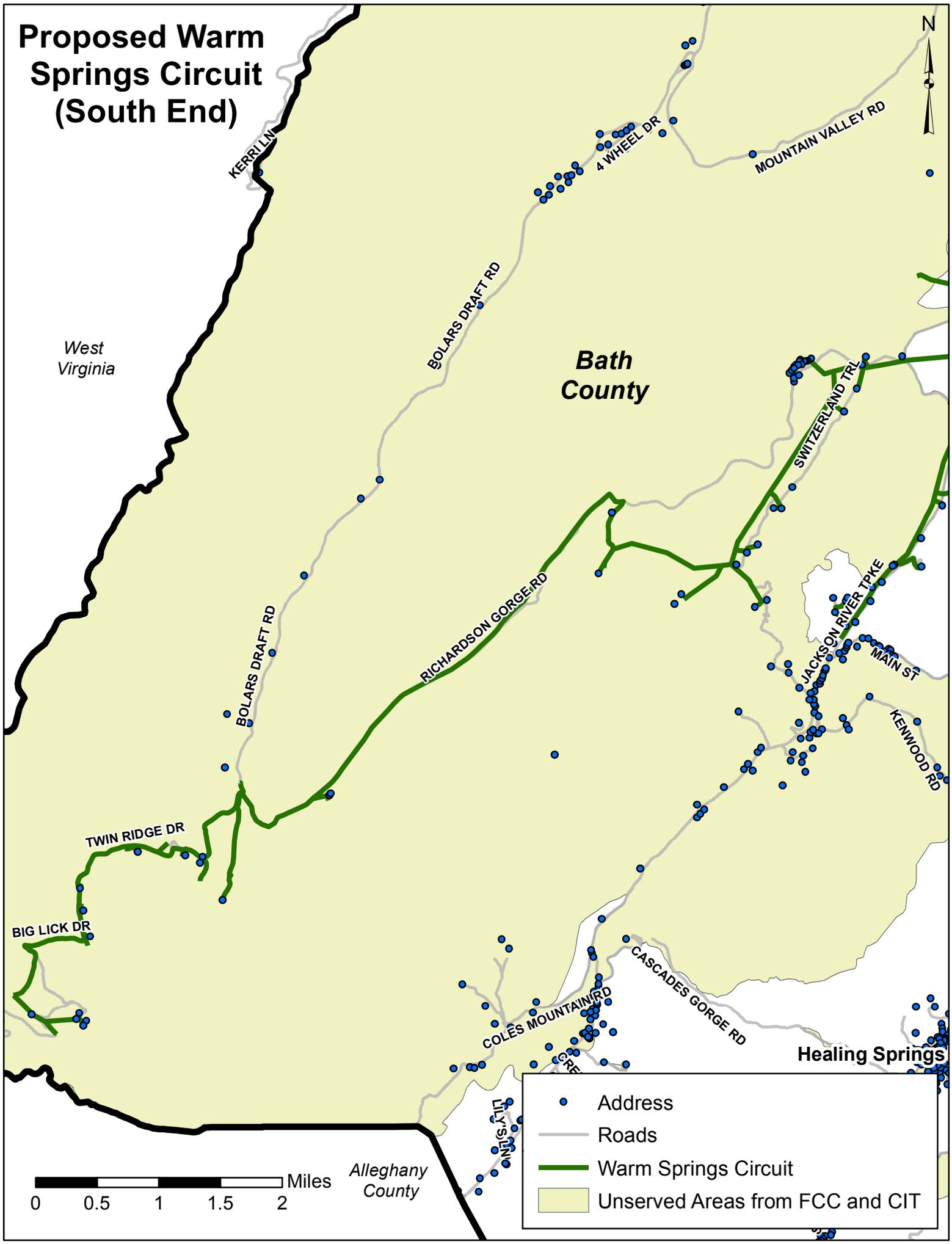
**Bath
County**



Proposed Millboro Circuit (North End)



Proposed Warm Springs Circuit (South End)



West Virginia

Bath County

Healing Springs

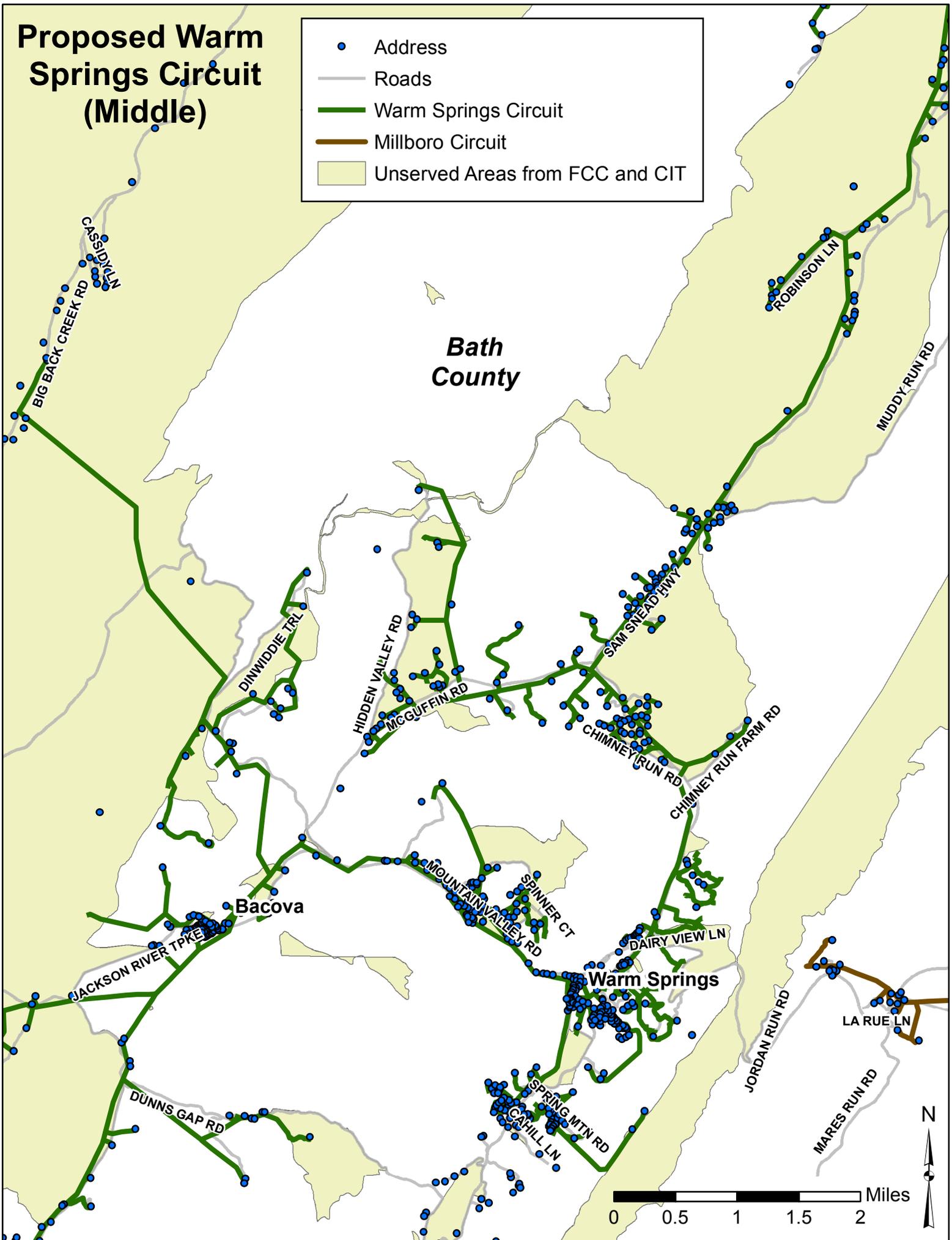
Allegheny County

- Address
- Roads
- Warm Springs Circuit
- Unserved Areas from FCC and CIT

0 0.5 1 1.5 2 Miles

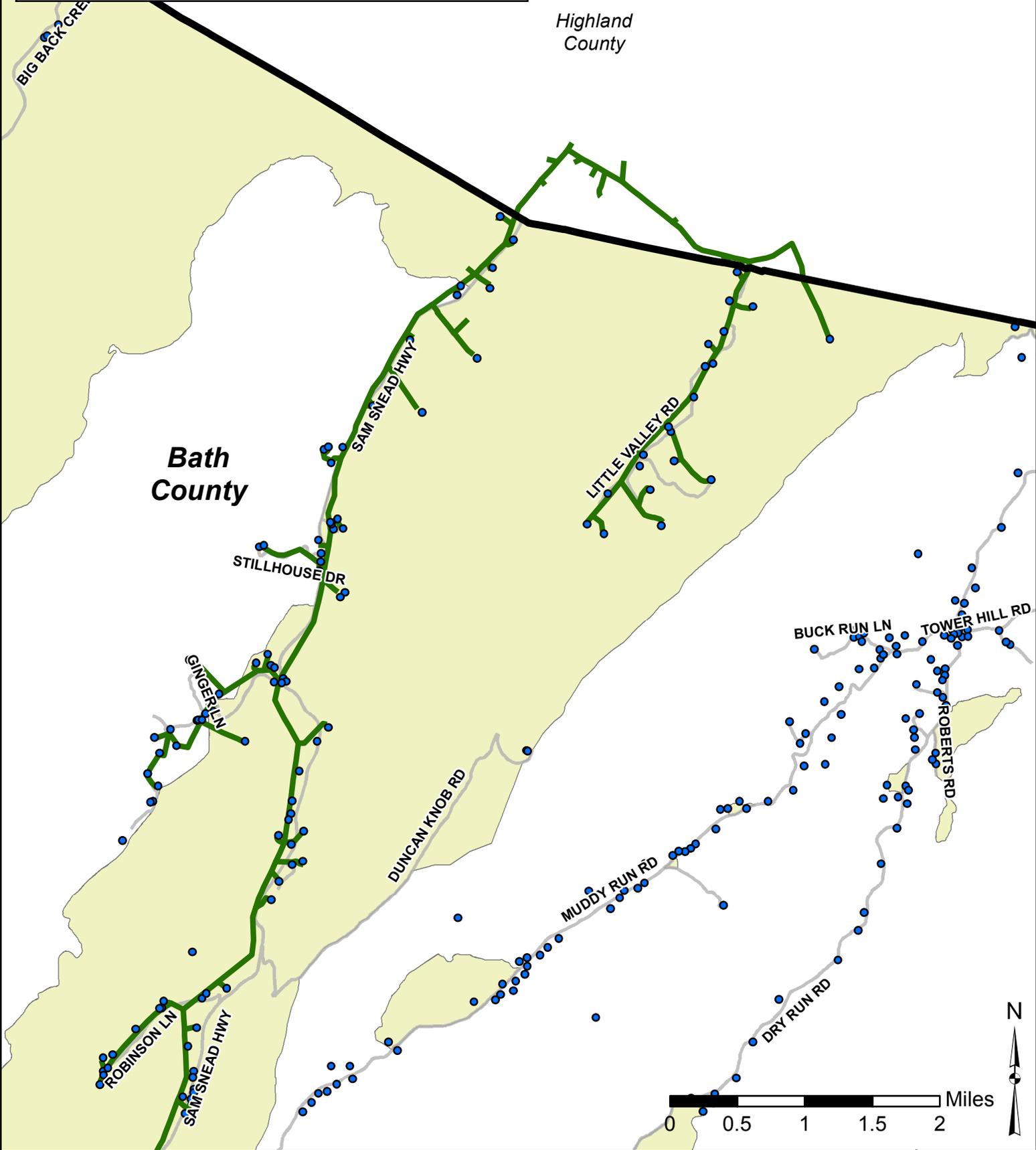
Proposed Warm Springs Circuit (Middle)

- Address
- Roads
- Warm Springs Circuit
- Millboro Circuit
- Unserved Areas from FCC and CIT



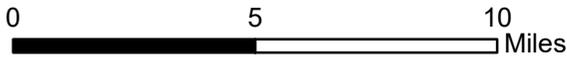
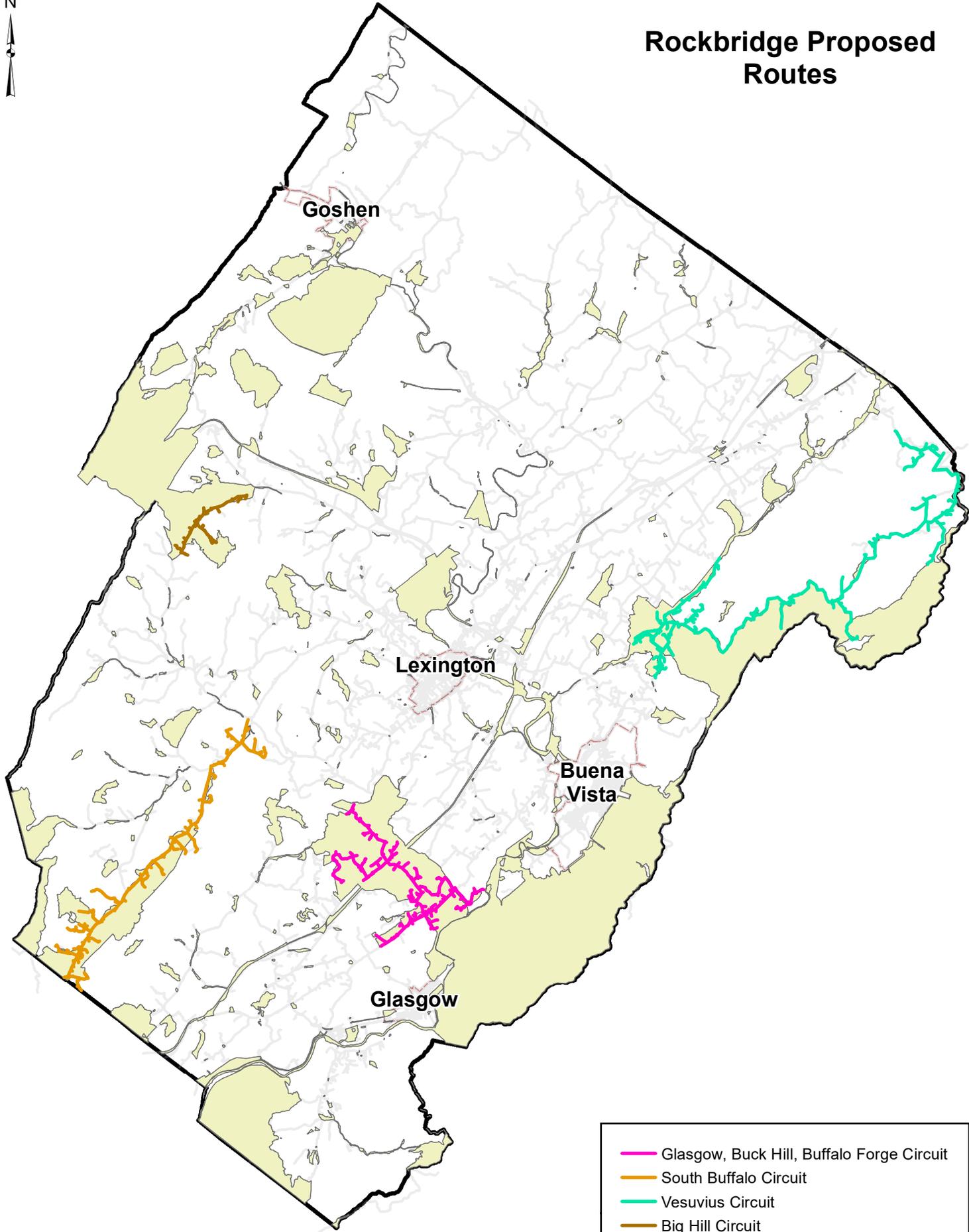
Proposed Warm Springs Circuit (North End)

- Address
- Roads
- Warm Springs Circuit
- Unserved Areas from FCC and CIT



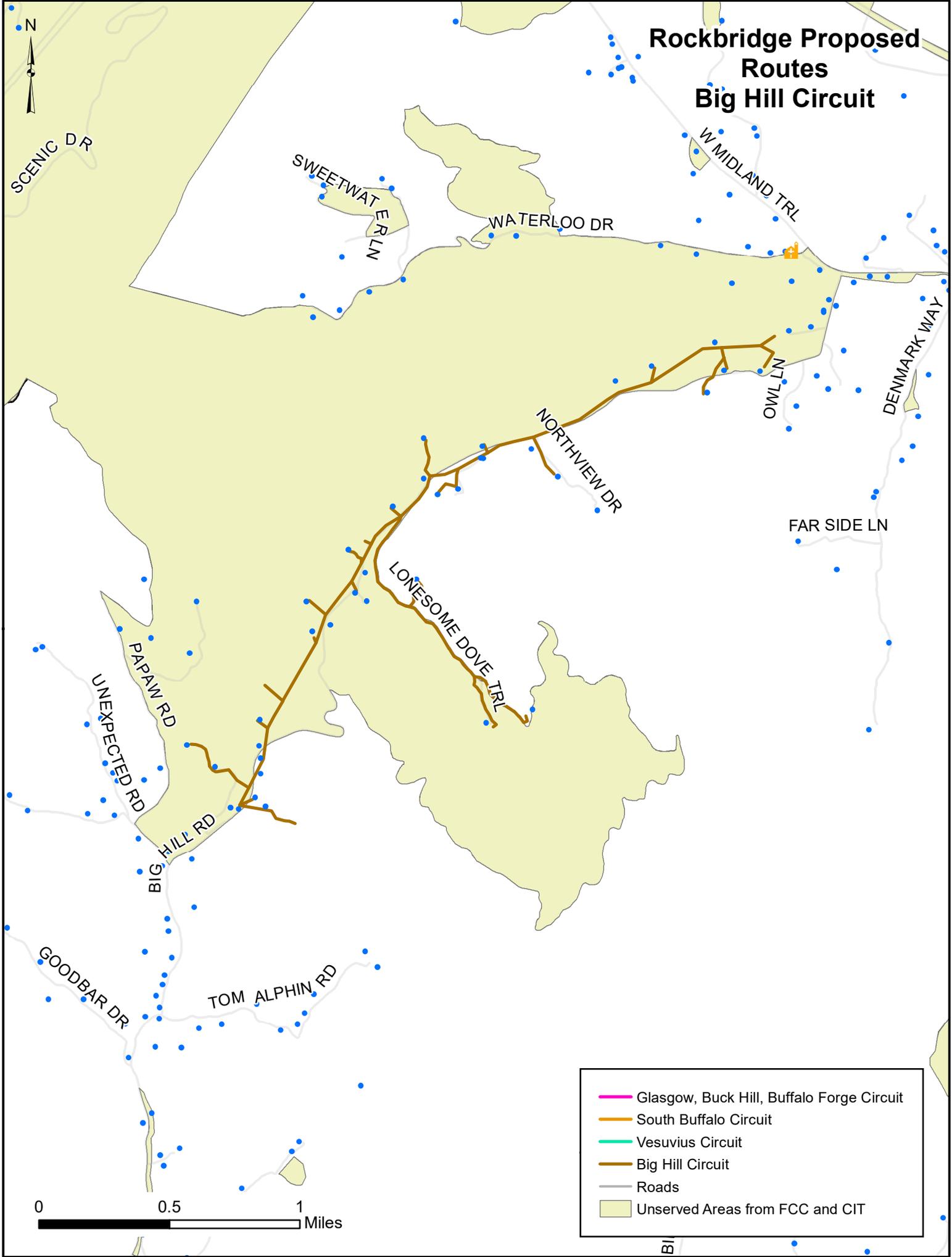


Rockbridge Proposed Routes



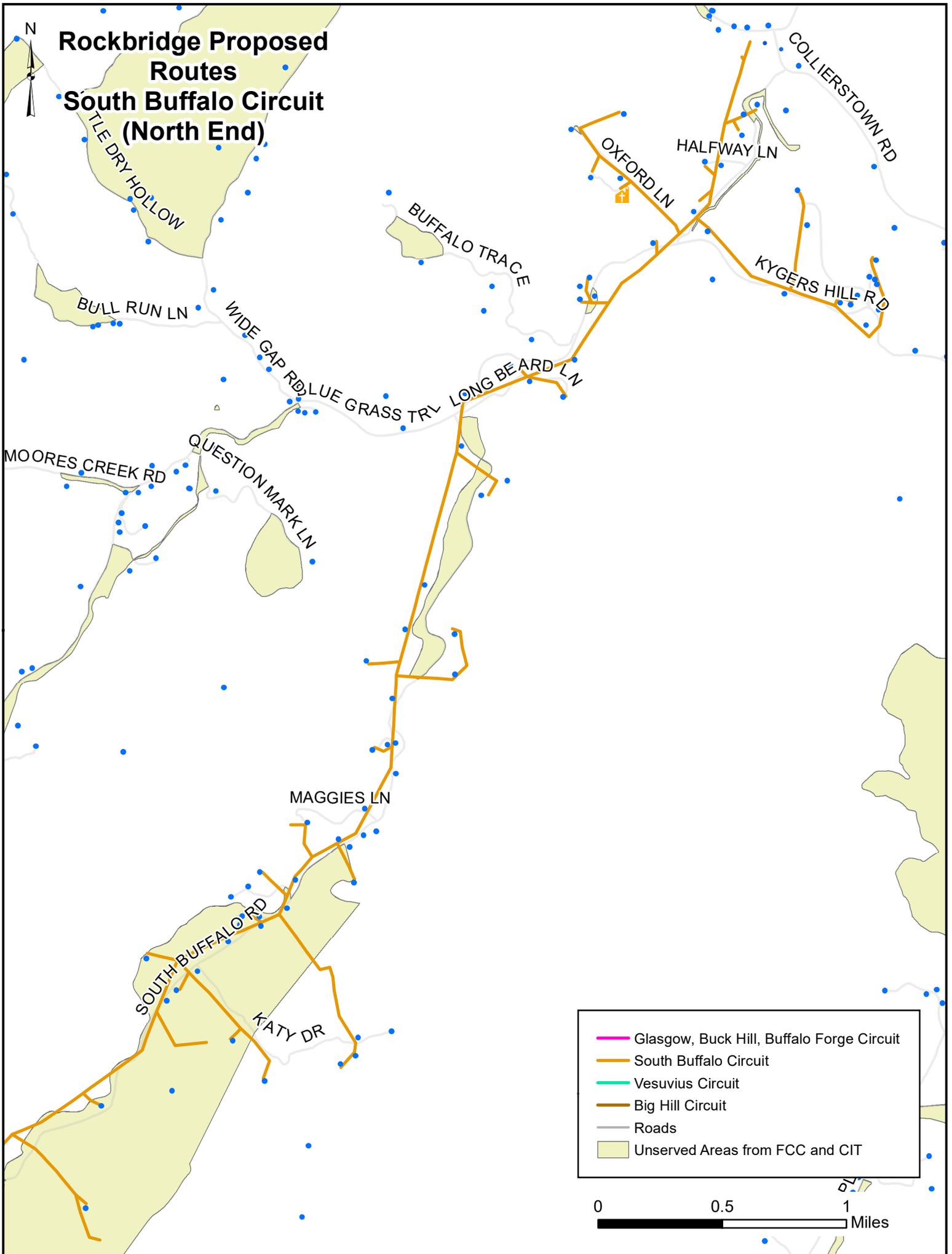
-  Glasgow, Buck Hill, Buffalo Forge Circuit
-  South Buffalo Circuit
-  Vesuvius Circuit
-  Big Hill Circuit
-  Roads
-  Unserved Areas from FCC and CIT

Rockbridge Proposed Routes Big Hill Circuit



- Glasgow, Buck Hill, Buffalo Forge Circuit
- South Buffalo Circuit
- Vesuvius Circuit
- Big Hill Circuit
- Roads
- Unserved Areas from FCC and CIT

0 0.5 1 Miles



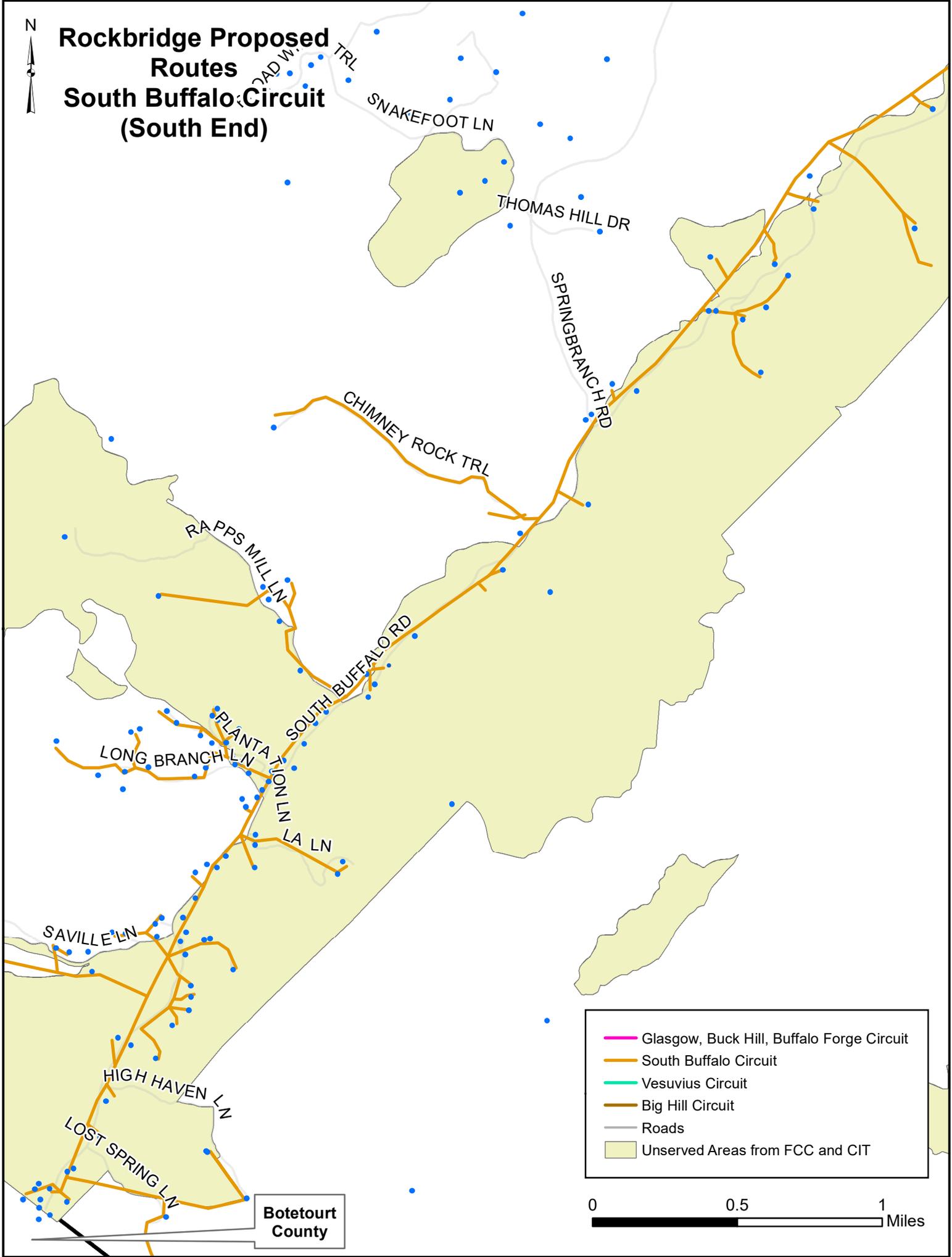
Rockbridge Proposed Routes
South Buffalo Circuit (North End)

- Glasgow, Buck Hill, Buffalo Forge Circuit
- South Buffalo Circuit
- Vesuvius Circuit
- Big Hill Circuit
- Roads
- Unserved Areas from FCC and CIT

0 0.5 1 Miles



Rockbridge Proposed Routes South Buffalo Circuit (South End)

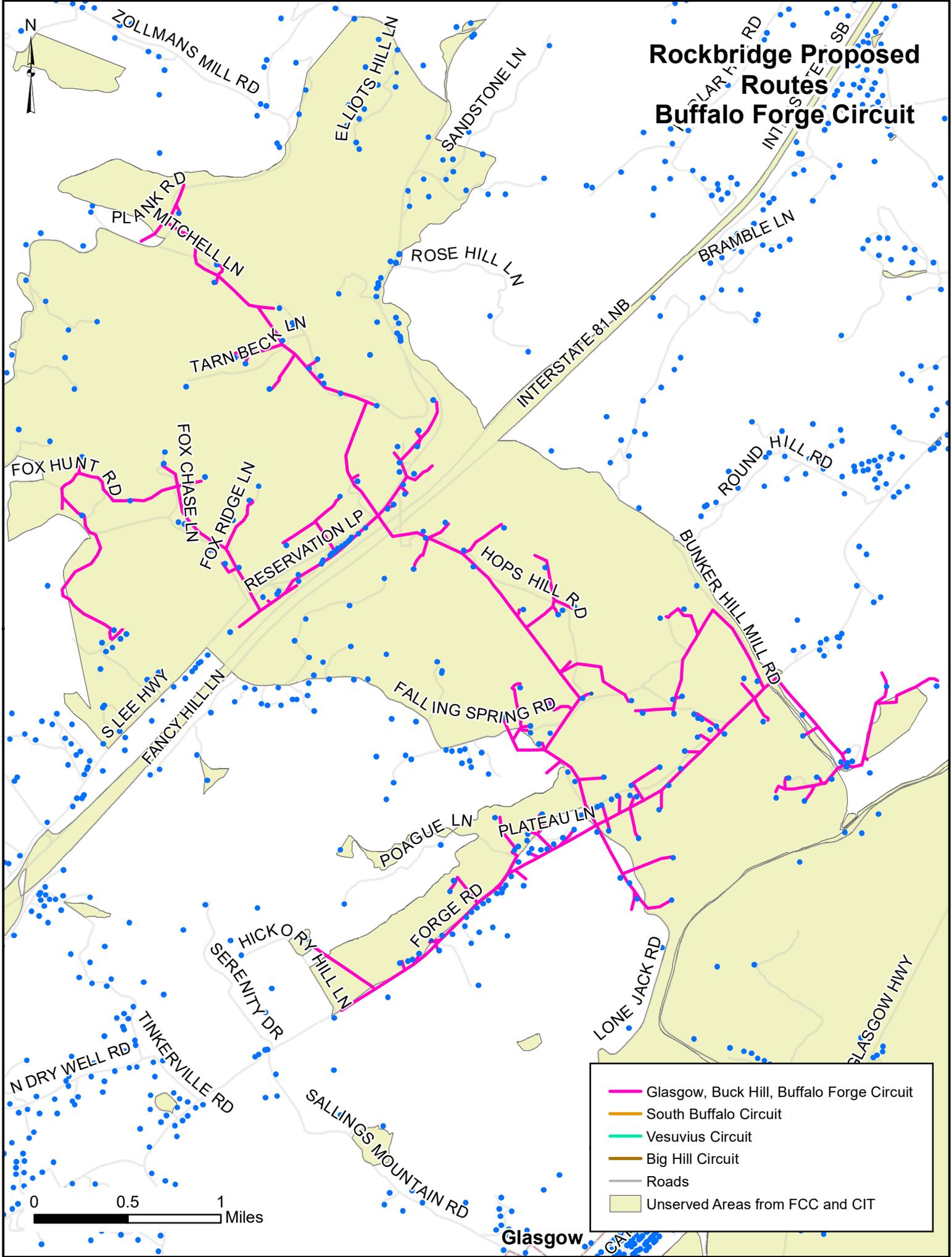


Botetourt
County

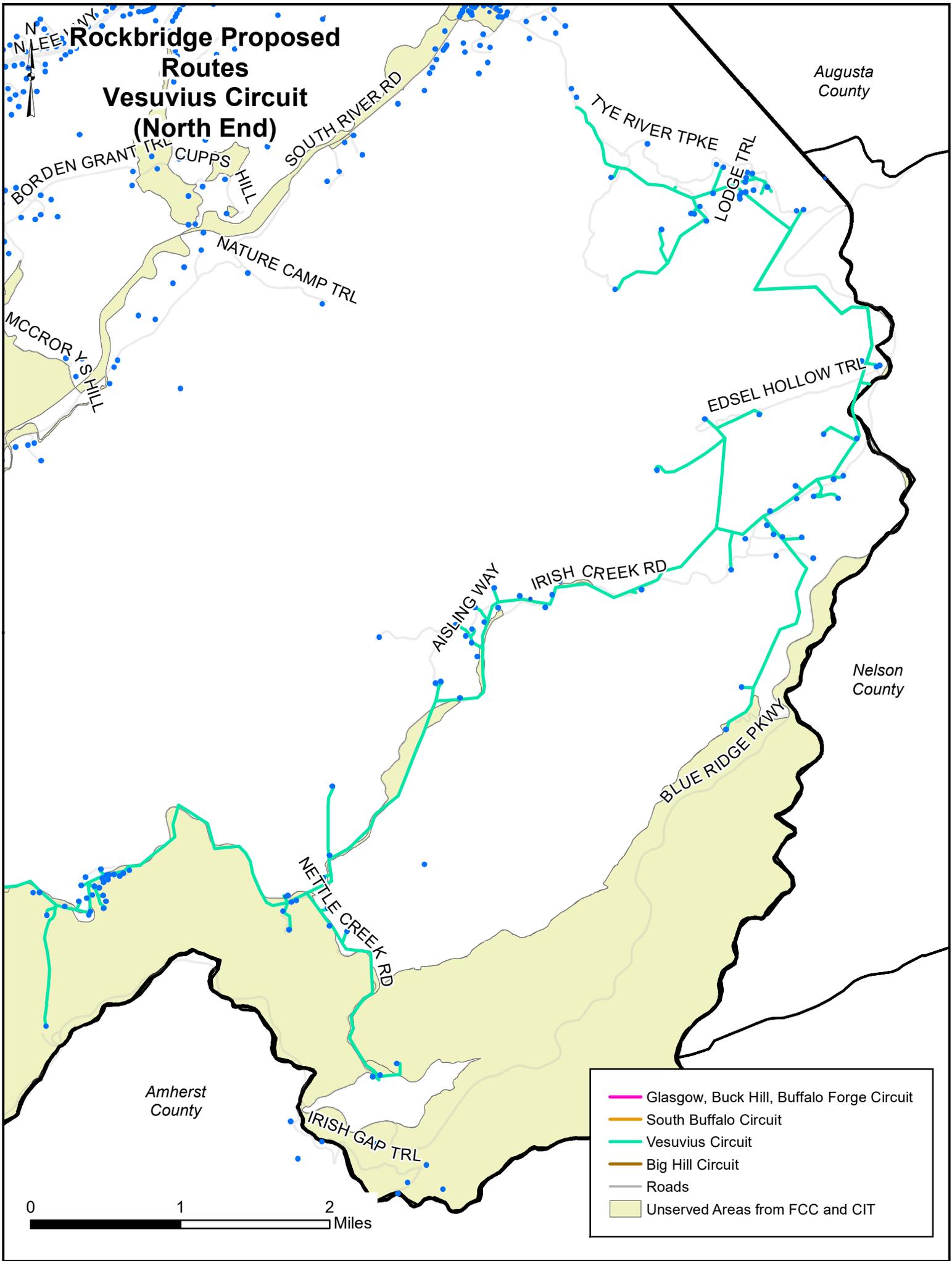
- Glasgow, Buck Hill, Buffalo Forge Circuit
- South Buffalo Circuit
- Vesuvius Circuit
- Big Hill Circuit
- Roads
- Unserved Areas from FCC and CIT

0 0.5 1 Miles

Rockbridge Proposed Routes Buffalo Forge Circuit

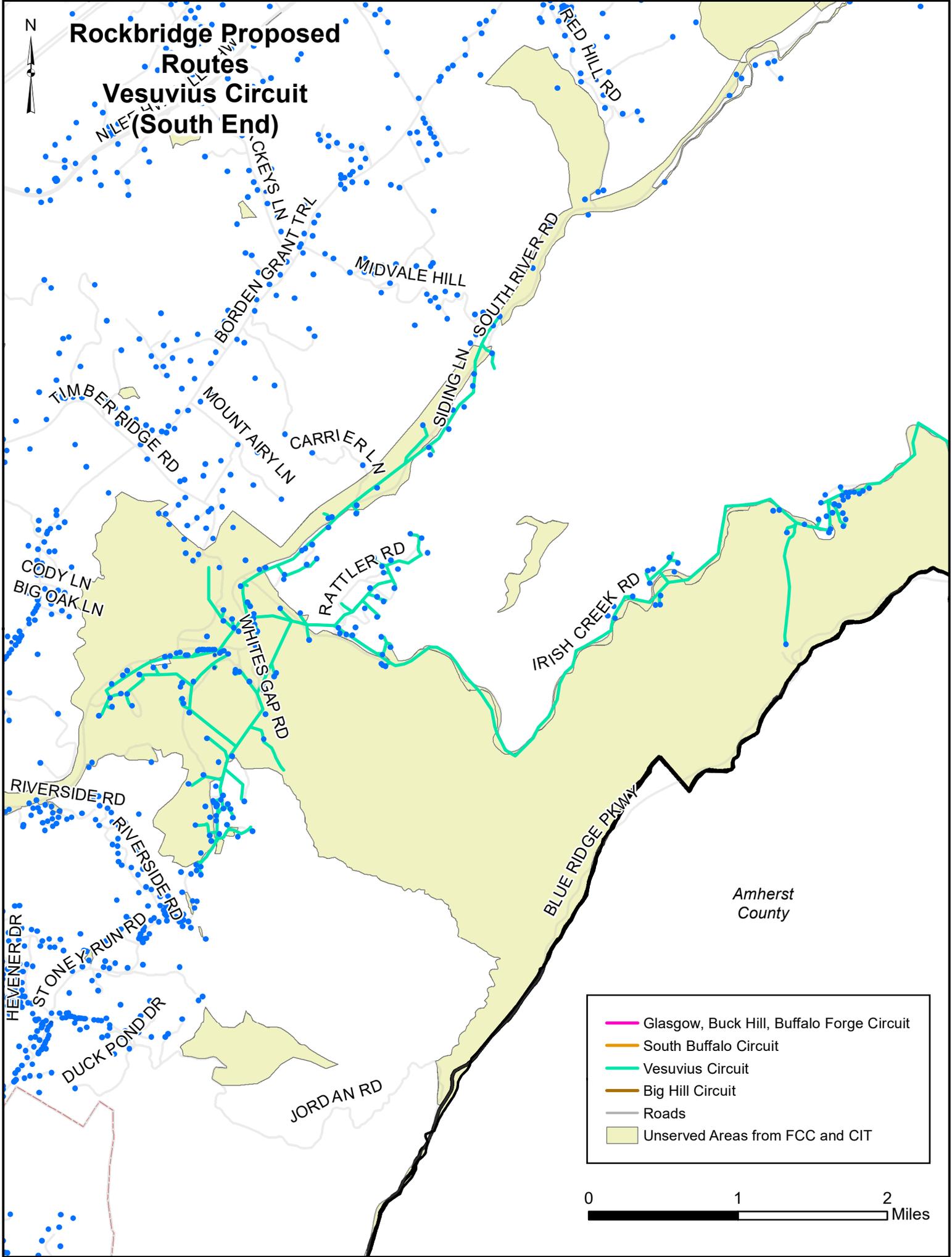


	Glasgow, Buck Hill, Buffalo Forge Circuit
	South Buffalo Circuit
	Vesuvius Circuit
	Big Hill Circuit
	Roads
	Unserviced Areas from FCC and CIT





Rockbridge Proposed Routes Vesuvius Circuit (South End)



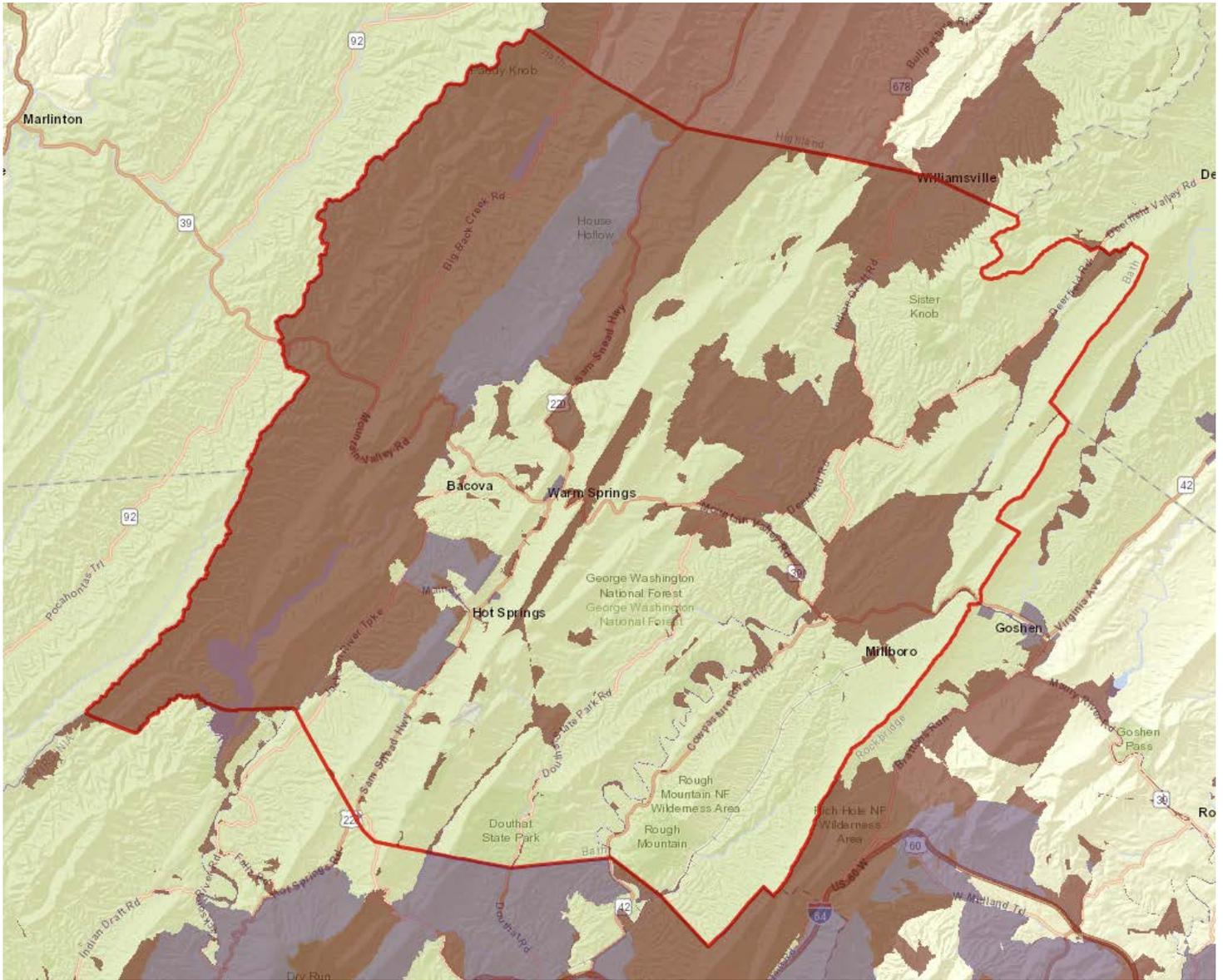
- Glasgow, Buck Hill, Buffalo Forge Circuit
- South Buffalo Circuit
- Vesuvius Circuit
- Big Hill Circuit
- Roads
- Unserved Areas from FCC and CIT



Attachment 2: Maps of existing broadband providers.

All maps are provided by the Center of Innovative Technology's (CIT) Virginia Broadband Availability Map.

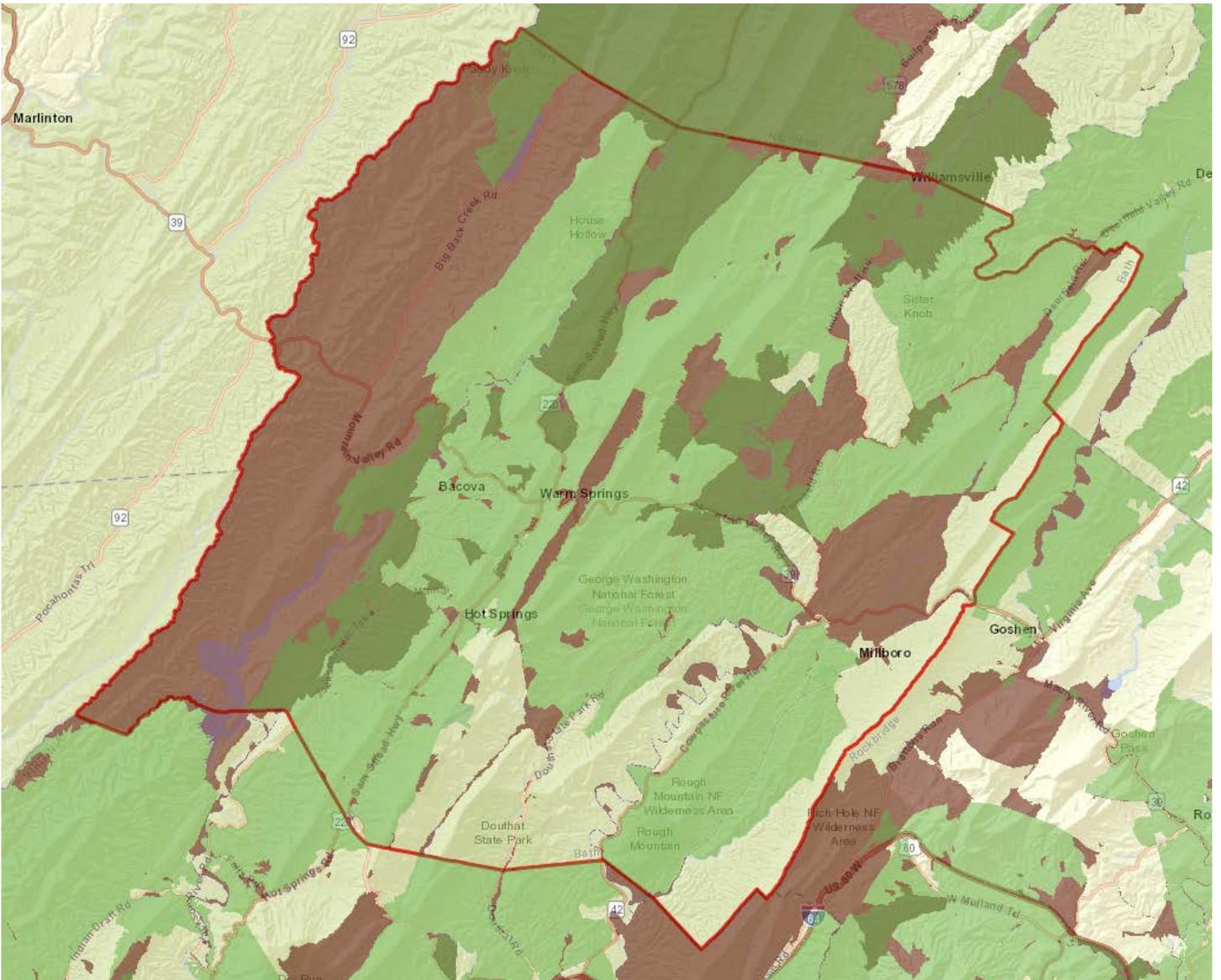
Bath County: Cable Wireline Coverage and Unserved Areas



■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

! ■ Cable Wireline Coverage (Dec. 2017)

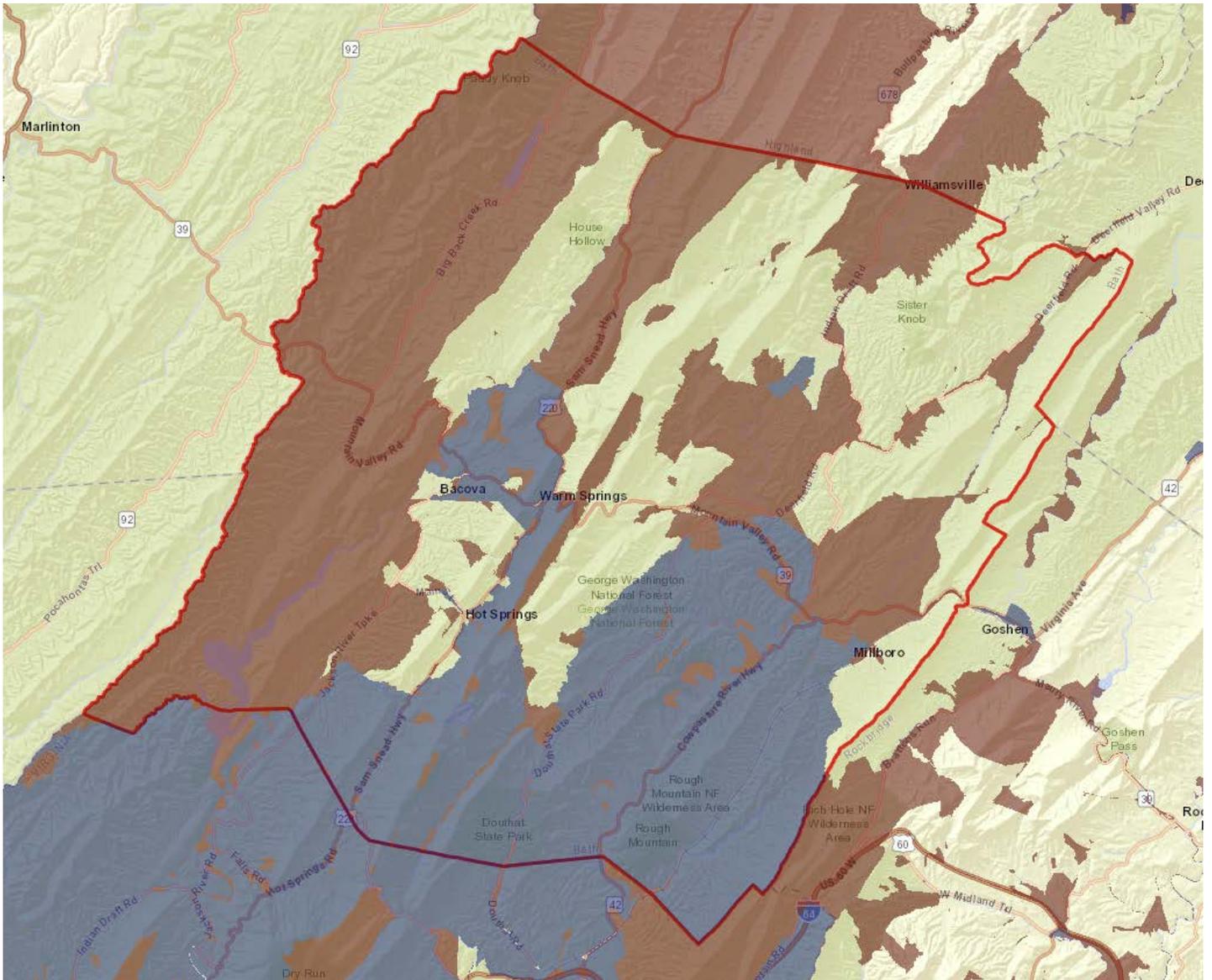
Bath County: DSL/Copper Coverage and Unserved Areas



 ■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

 ■ DSL/Copper Coverage (Dec. 2017)

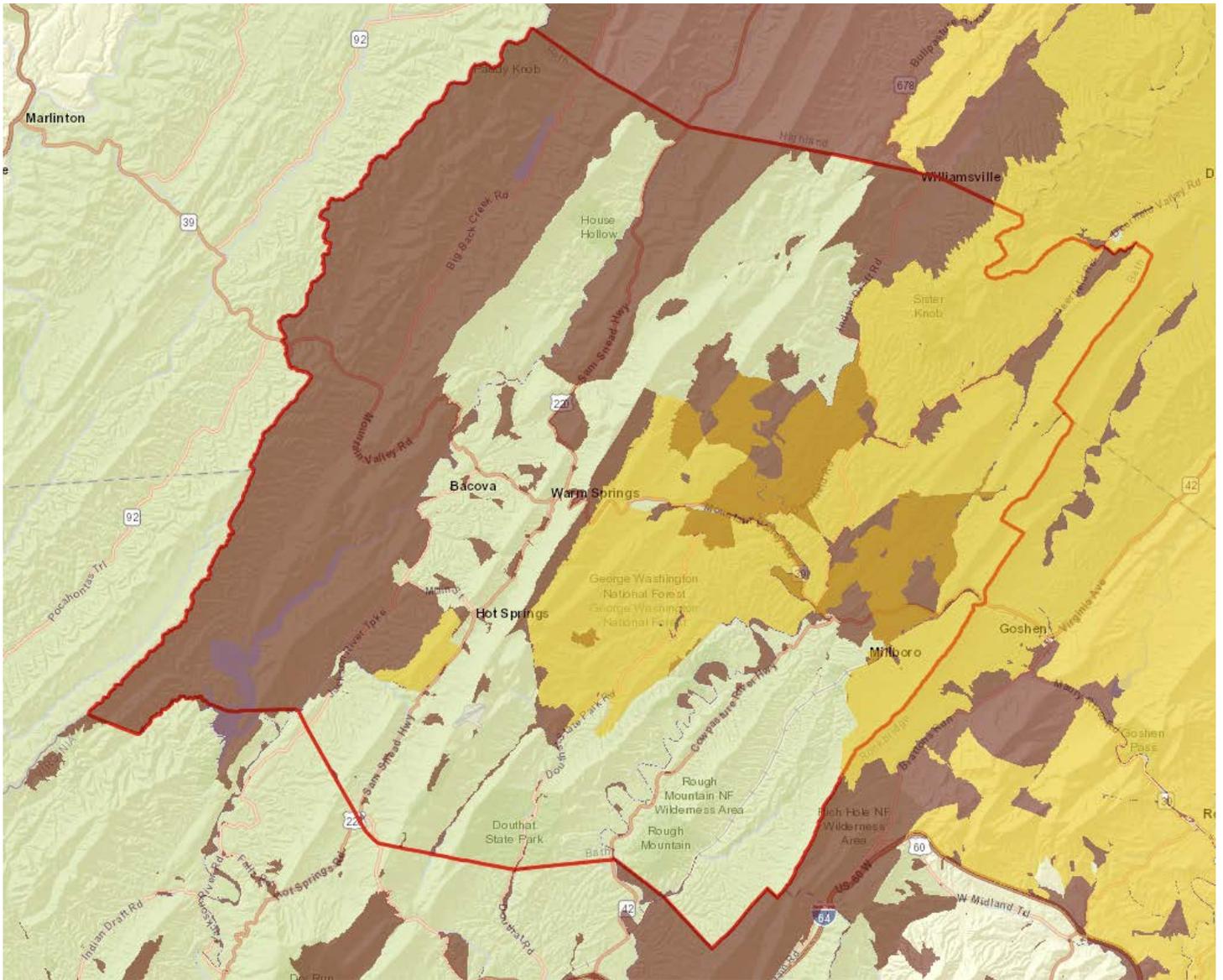
Bath County: Fiber Optic Coverage and Unserved Areas



 ■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

 ■ Fiber Optic Coverage (Dec. 2017)

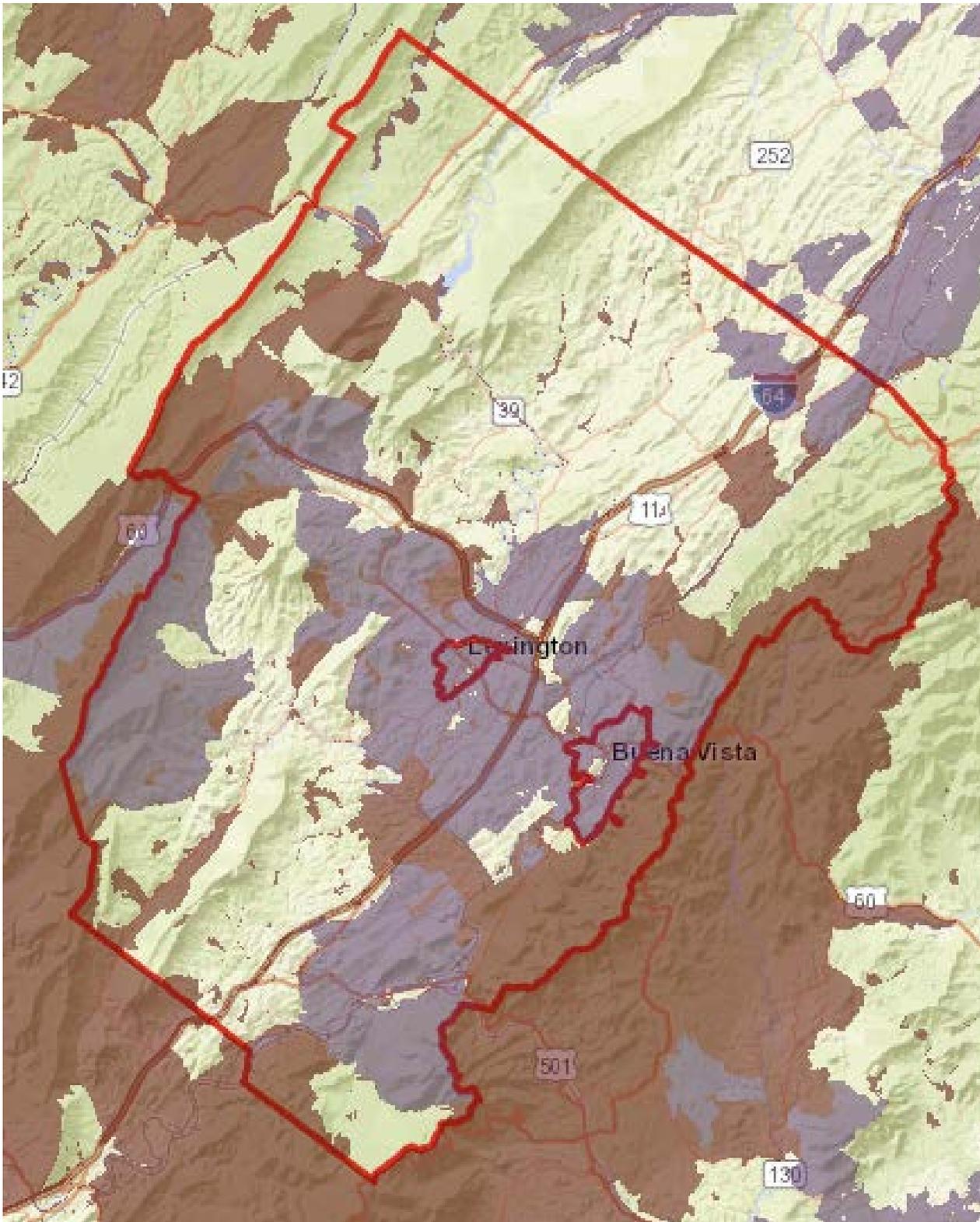
Bath County: Fixed Wireless Coverage and Unserved Areas



 ■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

  ■ Fixed Wireless Coverage (Dec. 2017)

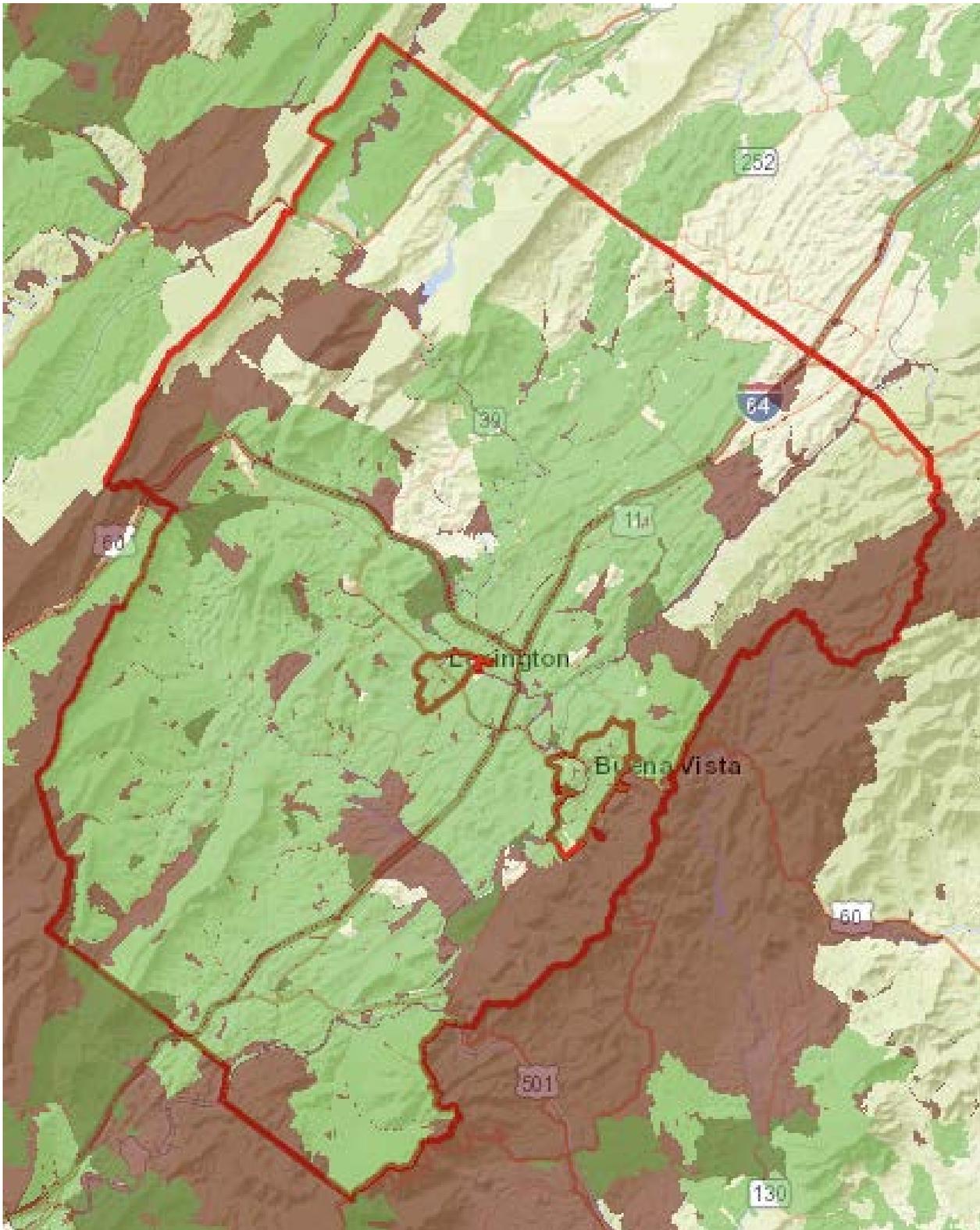
Rockbridge County: Cable Wireline Coverage and Unserved Areas



■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

! ■ Cable Wireline Coverage (Dec. 2017)

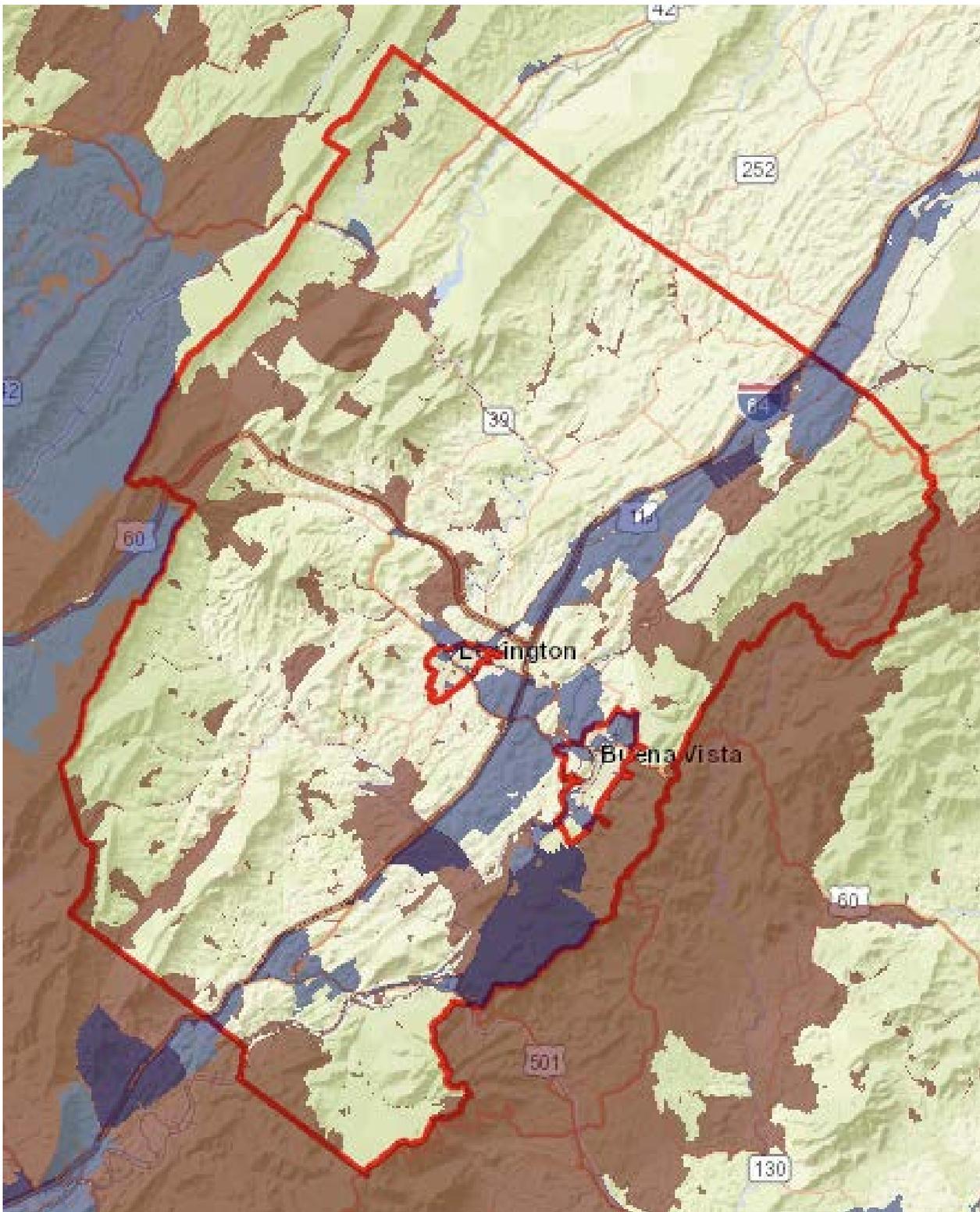
Rockbridge County: DSL/Copper Coverage and Unserved Areas



■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

! ■ DSL/Copper Coverage (Dec. 2017)

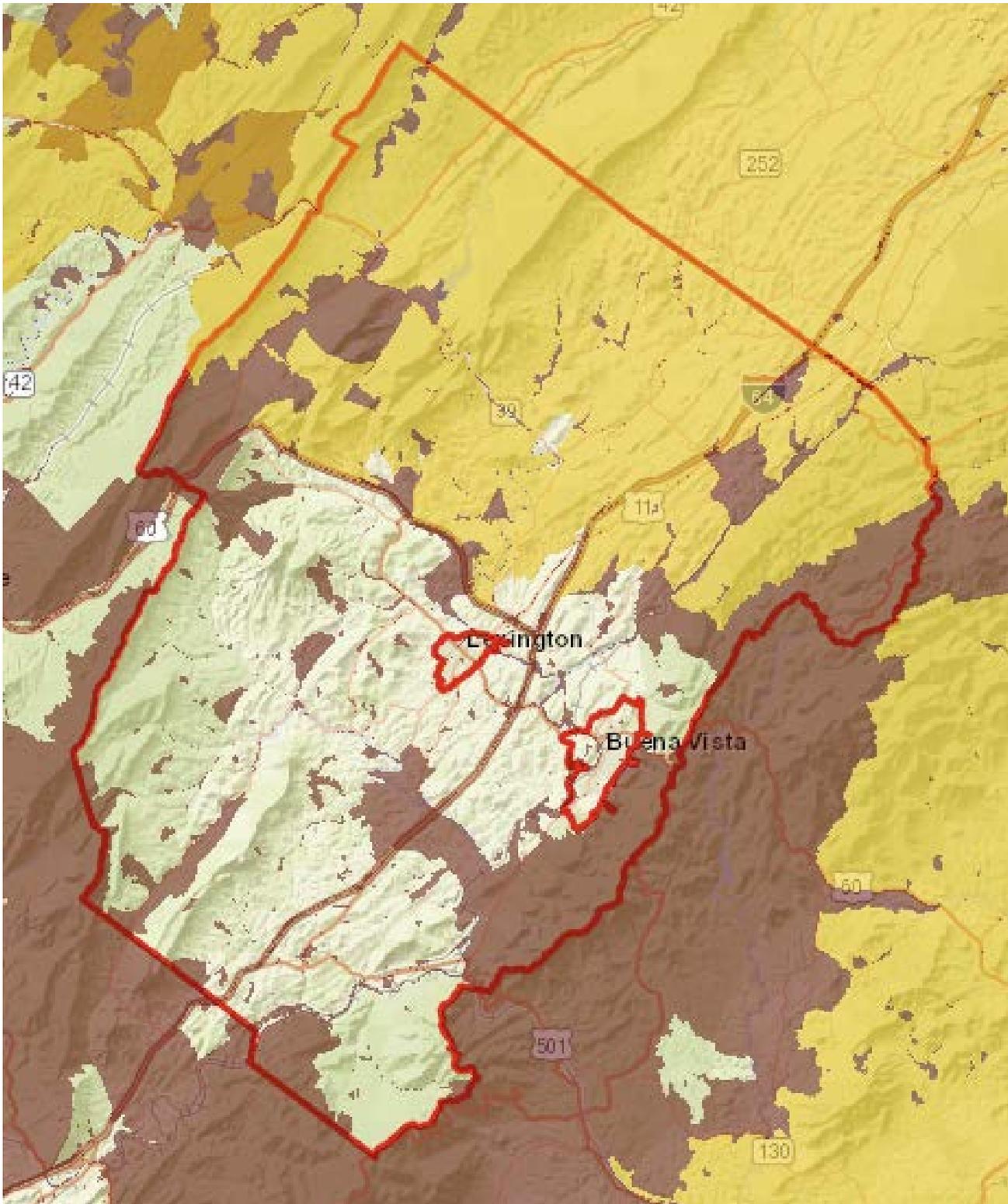
Rockbridge County: Fiber Optic Coverage and Unserved Areas



■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

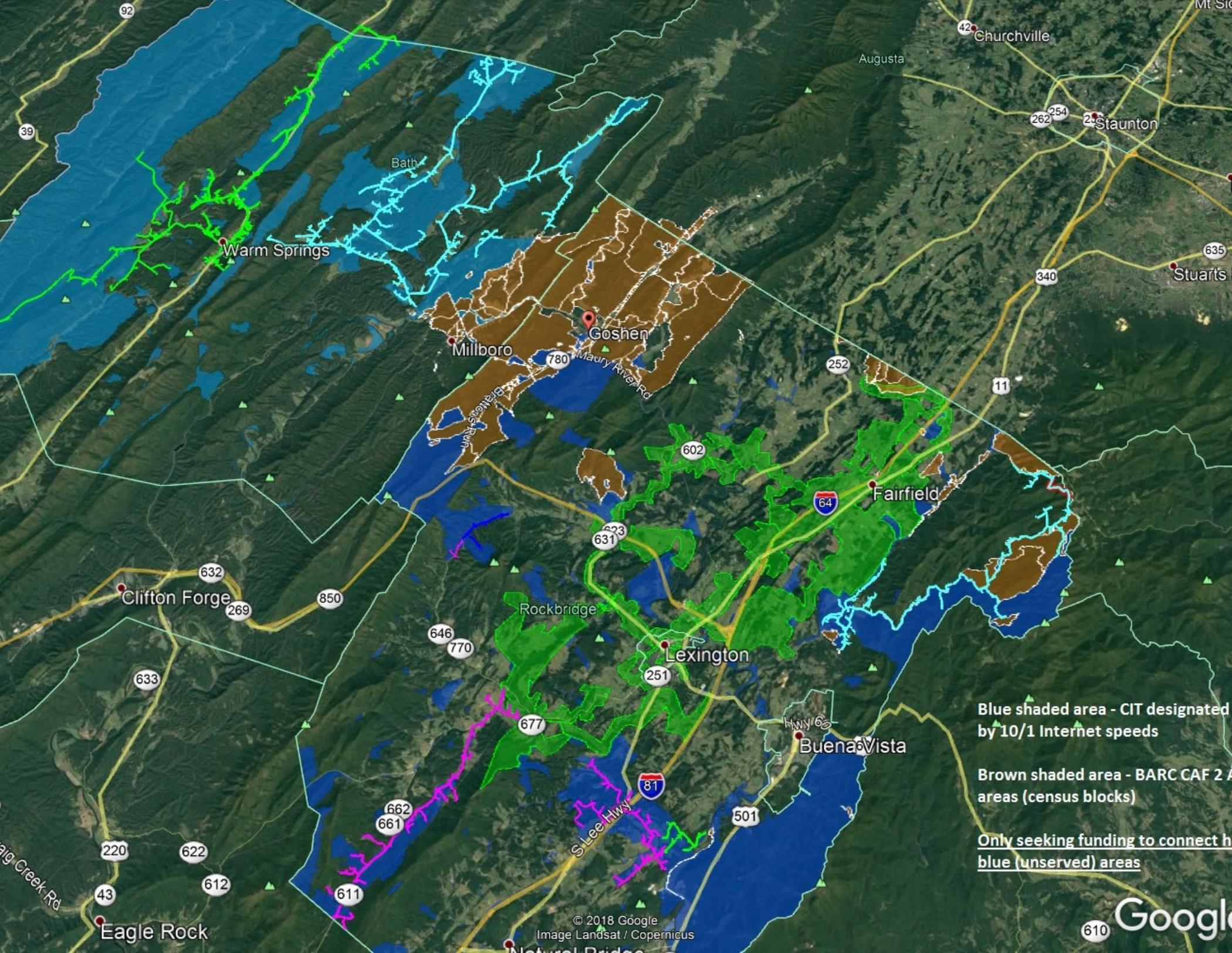
■ Fiber Optic Coverage (Dec. 2017)

Rockbridge County: Fixed Wireless Coverage and Unserved Areas



☑ ■ Unserved Areas
[below or equal to 10 Mbps download and 1 Mbps upload] (Dec. 2017)

☑ ! ■ Fixed Wireless Coverage (Dec. 2017)



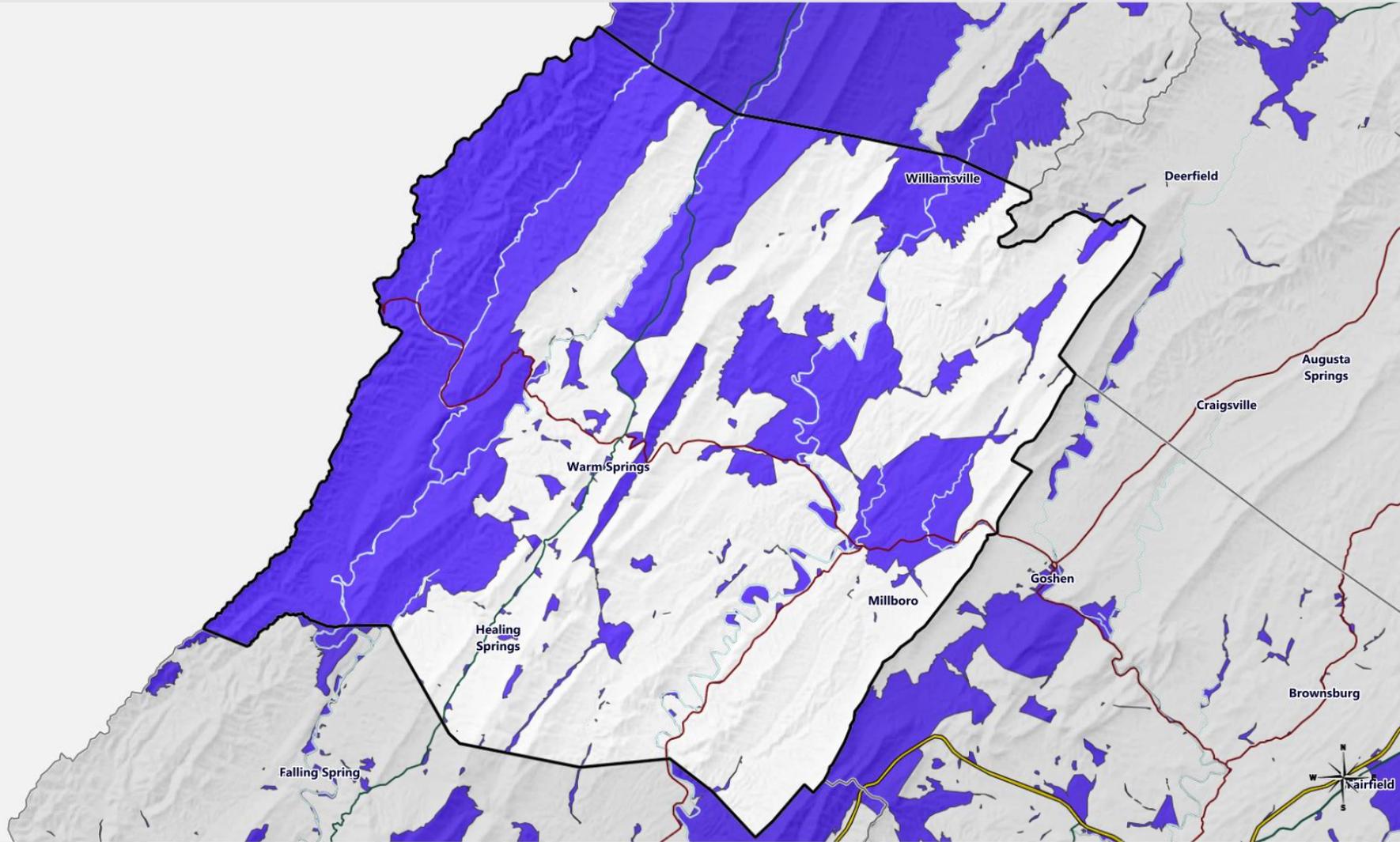
Blue shaded area - CIT designated by 10/1 internet speeds

Brown shaded area - BARC CAF 2 A areas (census blocks)

Only seeking funding to connect blue (unserved) areas

Attachment 4:

Below are maps generated by the Center of Innovative Technology (CIT) that show unserved areas in Bath and Rockbridge Counties. CIT has the same definition for unserved areas as the VATI criteria (10 Megabits per second download and 1 Megabits upload or less). Please see attachment 1 (Project Area) to see where the proposed project areas intersect with CIT's unserved areas.



Legend

■ Unserved Areas

At a Glance

Population: 4470

Population data from 2015 Census estimates

About the Map

5 mi

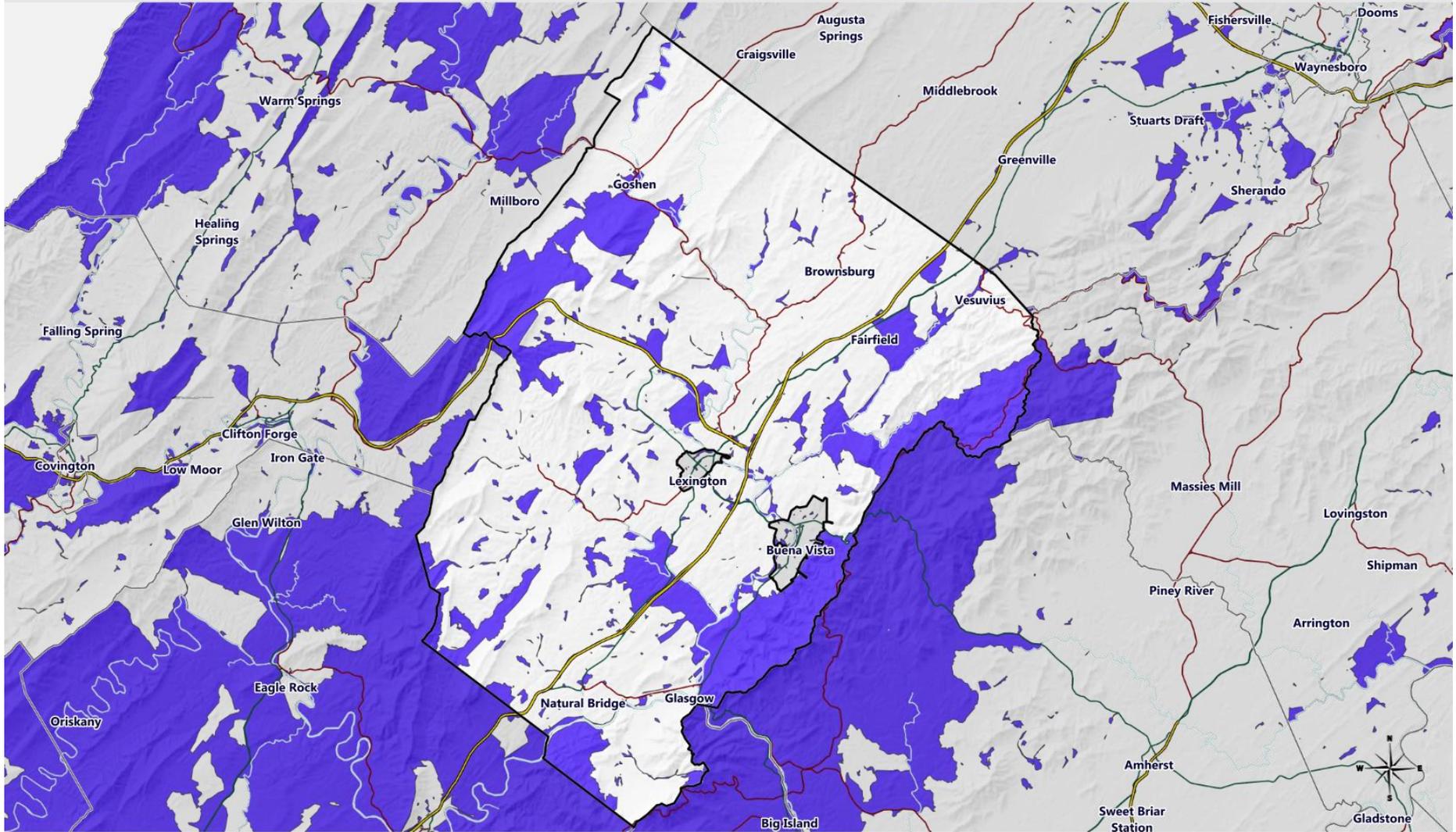
Scale 1:303189



Projection: NAD 1983 HARN Virginia Lambert
Data Sources: USGS, VGIN, VITA, US Census Bureau, CGIT
Report generated on 8/12/2019
Virginia Broadband Map gismaps.vita.virginia.gov/broadband/
Virginia Office of Telework Promotion and Broadband Assistance wired.virginia.gov
CGIT Broadband Planning & Analysis Toolbox cgit.vt.edu/broadband/

Rockbridge County

Unserved Areas



Legend

■ Unserved Areas

At a Glance

Population: 22354
Population data from 2015 Census estimates

About the Map

5 mi

Scale 1:397525



Projection: NAD 1983 HARN Virginia Lambert
Data Sources: USGS, VGIN, VITA, US Census Bureau, CGIT
Report generated on 8/12/2019
Virginia Broadband Map gismaps.vita.virginia.gov/broadband/
Virginia Office of Telework Promotion and Broadband Assistance wired.virginia.gov
CGIT Broadband Planning & Analysis Toolbox cgit.vt.edu/broadband/

VATI Applicant and Co-Applicant Agreement
DRAFT

This agreement is made on _____, _____ between the **Central Shenandoah Planning District Commission**, 112 MacTanly Place Staunton, Virginia 24401 (“CSPDC”) and **BARC Electric Cooperative**, 84 High Street, Millboro, Virginia 24460 (“BARC”).

RECITALS:

- A. Whereas, the Department of Housing and Community Development (DHCD) will be implementing the Virginia Telecommunications Initiative (VATI) grant program; and
- B. Whereas, the primary objective of the VATI is to provide financial assistance to supplement construction costs by private sector broadband service providers, in partnership with local units of government to extend service to areas that presently are unserved by any broadband provider; and
- C. Whereas, applications must be submitted by a unit of government (Towns, Cities, Counties, EDA/IDA, Broadband/Wireless Authorities, Planning District Commissions, etc.) with a private sector provider(s) as a co-applicant; and
- D. Whereas, Rockbridge and Bath counties have requested that the CSPDC be the applicant on their behalf; and
- E. Whereas, Rockbridge and Bath counties have designated BARC Electric Cooperative as the co-applicant, and
- F. Whereas, the CSPDC and BARC Electric Cooperative will partner for a grant application for the VATI grant program to serve areas in Bath and Highland counties.

NOW, therefore, the parties agree that they will uphold the following responsibilities:

THE CSPDC on behalf of Rockbridge County and Bath County:

- 1. The CSPDC will act as fiscal agent for the project and maintain accurate records of the financial expenditures of the VATI monies, including, but not limited to financial reports, monthly funding draws; approval of BARC expenditures and invoices, documentation of matching funds, etc.; and
- 2. The CSPDC will provide overall grant management of the VATI project and provide coordination and administration of the project by working as a liaison between the localities, BARC and DHCD.
- 3. The CSPDC will provide assistance with GIS mapping throughout the project; and
- 4. The CSPDC will assist the counties and BARC with educating the public about the project and services to be available in their areas.

BARC:

- 5. BARC will provide the CSPDC required information for the management of the VATI grant, including, but not limited to progress reports and monthly invoices; and
- 6. BARC will provide the required documents to the counties for zoning and

permit applications; and

7. BARC will design, engineer, construct and implement broadband services as designated in the VATI application by the grant deadline, and
8. BARC will guarantee that the standard bandwidth offerings for the projects will be a minimum 50 Mbps download and 10 Mbps upload; and
9. BARC will own the assets associated with the projects.

This agreement will terminate when DHCD notifies the CSPDC that all grant requirements have been satisfied.

Witness the following authorized signatures on behalf of the parties:

Date

By: _____
Bonnie S. Riedesel
CSPDC Executive Director

Date

By: _____
Michael Keyser
CEO, BARC Electric Cooperative



SPENCER H. SUTER
County Administrator
Office: (540) 463-4361
Fax (540) 463-4346

County of Rockbridge

150 South Main Street
Lexington, VA 24450

ECONOMIC DEVELOPMENT
(540) 464-9662
BUILDING DEPARTMENT
(540) 463-9361
DATA PROCESSING
(540) 464 1241
FISCAL SERVICES
(540) 463 4361
GEOGRAPHIC INFORMATION
SYSTEMS
(540) 464 9656
PLANNING & ZONING
(540) 464 9662
RECYCLING COORDINATOR
(540) 463 2437

August 22, 2019

Ms. Tamarah Holmes, Ph.D.
Associate Director
Project Management Office
Virginia Department of Housing &
Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Letter of Support for VATI Application

Dear Ms. Holmes:

On behalf of the Rockbridge County Economic Development Authority (EDA), I want to express enthusiastic support for a multi-jurisdictional Virginia Telecommunications Initiative (VATI) grant application for Rockbridge and Bath counties. The Central Shenandoah Planning District Commission (CSPDC) will apply on behalf of Rockbridge and Bath counties and act as fiscal agent and grant administrator for the project. The co-applicant, BARC Electric Co-op (BARC), will implement the project.

In line with the Governor's universal broadband initiative in the Commonwealth of Virginia, BARC proposes to deploy 314 miles of gigabit last mile fiber infrastructure within the counties of Rockbridge and Bath. This project will provide Fiber-To-The-Premise (FTTp) service to 928 residents and 157 businesses currently considered unserved by the Virginia Center for Innovative Technologies (CIT) in these localities in rural Virginia. Grant funding for this project will help reduce the cost to construct FTTp service in the unserved areas of the project. Additionally, with the 88% match from BARC, an additional 1,165 addresses will also be eligible for broadband service through this project. This project will leverage BARC's existing network operations center (NOC) to expand broadband service in Rockbridge County and Bath County that are part of a growing fiber network that serves over 1,000 subscribers to date, including all 12 public schools in the Rockbridge County region.

The commitment of BARC to work in partnership with our two localities as well as other

educational, business, and government leaders in the area to develop and implement last mile fiber will greatly benefit both individuals and businesses alike through workforce development, community enhancement, health care and educational opportunities. BARC has proven to be an excellent community partner in several endeavors over the past many years it has served our area. Most recently, BARC and Rockbridge County worked together to provide an adaptive reuse of a shuttered school to serve as the center of their operation in the County. This served as a springboard to launch the Commonwealth of Virginia's first Community Solar Field project and serve as a base for BARC's fiber business, BARC Connects, allowing the company to partner with the Rockbridge Area Network Authority (RANA), leveraging RANA's fiber network and expand broadband service to homes and businesses across the County.

Access to broadband is no longer a luxury, but a necessity that serves as an economic engine and connects a global world. Rural localities like ours are lacking in this infrastructure that is a foundation for economic growth, job creation, global competitiveness and quality of life. We see this grant application as an exciting opportunity to expand broadband service in Rockbridge to those areas currently unserved and provide significant and tangible benefits with regards to economic development and education, by encouraging businesses to come, stay and grow, and allowing our students access to critical information efficiently in their homes.

Thank you for your consideration of our VATI grant application to bring broadband fiber to our communities. If you have any questions regarding our support, please do not hesitate to contact me.

Sincerely,



Sam Crickenberger
Secretary, County EDA



www.co.rockbridge.va.us

SPENCER H. SUTER
County Administrator
Office: (540) 463-1460
Fax: (540) 463-4346
ssuter@rockbridgecountyva.gov

County of Rockbridge

Office of the County Administrator

150 South Main Street

Lexington, Virginia 24450

County Board of Supervisors

JOHN M. HIGGINS
Buffalo
Magisterial District

DANIEL E. LYONS
Kerrs Creek
Magisterial District

DAVID W. HINTY, JR.
Natural Bridge
Magisterial District

R. W. DAY
South River
Magisterial District

A.J. "JAY" LEWIS, II
Walkers Creek
Magisterial District

September 3, 2019

Mr. Erik Johnston, Director
Virginia Department of Housing &
Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Letter of Support for VATI Application

Dear Mr. Johnston:

On behalf of the Rockbridge County Board of Supervisors, I want to express the County's support for a multi-jurisdictional Virginia Telecommunications Initiative (VATI) grant application for Rockbridge and Bath counties. The Central Shenandoah Planning District Commission (CSPDC) will apply on behalf of Rockbridge and Bath counties and act as fiscal agent and grant administrator for the project. Rockbridge County will cost share in the grant administrative fees for the CSPDC. The co-applicant, BARC Electric Co-op (BARC), will implement the project.

In line with the Governor's universal broadband initiative in the Commonwealth of Virginia, BARC proposes to deploy 314 miles of gigabit last mile fiber infrastructure within the counties of Rockbridge and Bath. This project will provide Fiber-To-The-Premise (FTTP) service to 928 residents and 157 businesses currently considered unserved by the Virginia Center for Innovative Technologies (CIT) in these localities in rural Virginia. Grant funding for this project will help reduce the cost to construct FTTP service in the unserved areas of the project. Additionally, with the 88% match from BARC, an additional 1,165 addresses will also be eligible for broadband service through this project. This project will leverage BARC's existing network operations center (NOC) to expand broadband service in Rockbridge County and Bath County that are part of a growing fiber network that serves over 1,000 subscribers to date, including all 12 public schools in the Rockbridge County region.

The commitment of BARC to work in partnership with our two localities as well as other educational, business, and government leaders in the area to develop and implement last mile fiber will greatly benefit both individuals and businesses alike through workforce development,

community enhancement, health care and educational opportunities. This project will allow BARC to provide critical broadband services to unserved and underserved areas and enhance the quality of life and help to stimulate the economy in this rural region.

Thank you for your consideration of our VATI grant application to bring broadband fiber to our communities. If you have any questions regarding our support, please do not hesitate to contact me.

Warmest Regards,

A handwritten signature in blue ink, appearing to read "Spencer H. Suter". The signature is fluid and cursive, with the first name being the most prominent.

Spencer H. Suter
County Administrator

Ashton N. Harrison
County Administrator



Bath County Courthouse
P.O. Box 309
Warm Springs, Virginia 24484
540.839.7221 Phone
540.839.7222 Fax
aharrison@bathcountyva.org

September 3, 2019

Mr. Erik Johnston, Director
Virginia Department of Housing &
Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Letter of Support for VATI Application

Dear Mr. Johnston:

On behalf of the Bath County Board of Supervisors, I want to express the County's support for a multi-jurisdictional Virginia Telecommunications Initiative (VATI) grant application for Rockbridge and Bath counties. The Central Shenandoah Planning District Commission (CSPDC) will apply on behalf of Rockbridge and Bath counties and act as fiscal agent and grant administrator for the project. Bath County will cost share in the grant administrative fees for the CSPDC. The co-applicant, BARC Electric Co-op (BARC), will implement the project.

In line with the Governor's universal broadband initiative in the Commonwealth of Virginia, BARC proposes to deploy 314 miles of gigabit last mile fiber infrastructure within the counties of Rockbridge and Bath. This project will provide Fiber-To-The-Premise (FTTP) service to 928 residents and 157 businesses currently considered unserved by the Virginia Center for Innovative Technologies (CIT) in these localities in rural Virginia. Grant funding for this project will help reduce the cost to construct FTTP service in the unserved areas of the project. Additionally, with the 88% match from BARC, an additional 1,165 addresses will also be eligible for broadband service through this project. This project will leverage BARC's existing network operations center (NOC) to expand broadband service in Rockbridge County and Bath County that are part of a growing fiber network that serves over 1,000 subscribers to date, including all 12 public schools in the Rockbridge County region.

The commitment of BARC to work in partnership with our two localities as well as other educational, business, and government leaders in the area to develop and implement last mile fiber will greatly benefit both individuals and businesses alike through workforce development, community enhancement, health care and educational opportunities. This project will allow BARC to provide critical broadband services to unserved and underserved areas and enhance the quality of life and help to stimulate the economy in this rural region.

Thank you for your consideration of our VATI grant application to bring broadband fiber to our communities. If you have any questions regarding our support, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ashton Harrison", written in a cursive style.

Ashton Harrison
County Administrator



P.O. Box 264
Millboro, VA 24460-0264
1 (800) 846-BARC

August 13, 2019

Ms. Tamarah Holmes, Ph.D.
Associate Director
Project Management Office
Virginia Department of Housing &
Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: Match Certification

Dear Tamarah:

On behalf of the Board of Directors for BARC Electric Cooperative, I am writing to confirm BARC's financial commitment of \$15,625,969 for the BARC Electric Broadband Project. These matching funds have been allocated in BARC's current budget and any unspent funds will be carried forward into future fiscal years as necessary. BARC's matching funds represent 50% of the total project cost.

Activities that will be paid for with these funds include equipment purchases, contractual services, outside plant materials, and fiber construction, among other things. Please feel free to contact me with any additional questions you may have about BARC's matching funds, or the project, in general.

Warm Regards,

Michael Keyser
Chief Executive Officer

VATI FUNDING SOURCES TABLE

Please fill in the chart below with a description of the project funding source (local, federal, state, private, other), the amount from that source, the percentage of total project funding that source represents, and a description of the current status of the funds (pending, secured, etc.).

Source	Amount	%	Status
REQUESTED VATI	\$ 2,202,000	12.3%	PENDING
RURAL UTILITIES SERVICE (USDA)	\$ 15,625,969	87.6%	PENDING
BATH COUNTY	\$4,000	0.002%	APPROVED
ROCKBRIDGE COUNTY	4,000	0.002%	APPROVED
	\$		
	\$		
	\$		
TOTAL	\$17,835,969	100%	

Derivation of Cost

Item #	Product	Total	VATI	Non-VATI	Source of Estimate	Date
1	Access equipment (OLT cabinets, rectifiers, GPON shelves, GPON cards, optics)	\$ 159,800	\$ -	\$ 159,800	BARC actual costs based on Calix invoices	8/21/2019
2	Customer premise equipment, and materials and labor for in-home installations (indoor ONTs, inside wiring, terminators, CAT-6 cabling, contractor labor)	\$ 491,481	\$ -	\$ 491,481	BARC actual costs based on Calix invoices; BARC actual costs incurred in current project phase	8/21/2019
3	Purchase of IPv4 block	\$ 90,000	\$ -	\$ 90,000	BARC estimate based on known cost escalations since last IPv4 block purchase	8/21/2019
4	Right-of-way clearing	\$ 1,500,000	\$ -	\$ 1,500,000	BARC estimate based on current spend for similar mileage in current phase of fiber project	8/21/2019
5	Fiber construction (includes make-ready engineering, make-ready construction, fiber design, and contractor construction labor and materials)	\$ 13,302,000	\$ 2,170,000	\$ 11,132,000	BARC actual costs in current phase of fiber project	8/21/2019
6	Service drop construction, commercial (includes fiber and mounting hardware to building exterior)	\$ 176,625	\$ -	\$ 176,625	BARC actual costs in current phase of fiber project	8/21/2019
7	Service drop construction, residential (includes fiber and mounting hardware to building exterior)	\$ 1,883,700	\$ -	\$ 1,883,700	BARC actual costs in current phase of fiber project	8/21/2019
8	Misc. additional project management fees (inspectors, PE signatures)	\$ 25,000	\$ -	\$ 25,000	BARC estimate	8/21/2019
9	Contingency for cost overruns, unknown/unforeseen costs, rock adders, etc.	\$ 167,363	\$ -	\$ 167,363	BARC estimate	8/21/2019
10	Grant Administration	\$ 40,000	\$ 32,000	\$ 8,000	CSPDC quote	8/21/2019
	Total	\$ 17,835,969	\$ 2,202,000	\$ 15,633,969		

	CUSTOMER BUILD OUT PLAN			CHURN RATES	
	Max. Potential Customers	Take Rate	Projected Customers	1ST Month	Subsequent Months
				Monthly Disc. Rate	Monthly Reconnect Rate
Residential - Blue Zone	2,093	45.0%	942	100	100
Residential - Red Zone	-	0.0%	-	50	50
Commercial - Blue Zone	157	45.0%	71	10	10
Commercial - Red Zone	-	0.0%	-	10	10
TOTAL	2,250		1,013		

3550 tot. meters

	NEW CUSTOMERS - INSTALLATIONS									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Residential - Blue Zone	700	242	-	-	-	-	-	-	-
Residential - Red Zone	-	-	-	-	-	-	-	-	-	-
Commercial - Blue Zone	70	1	-	-	-	-	-	-	-	-
Commercial - Red Zone	70	(70)	-	-	-	-	-	-	-	-
TOTAL	840	173	-							

	CUMULATIVE INSTALLATIONS									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Residential - Blue Zone	700	942	942	942	942	942	942	942	942
Residential - Red Zone	-	-	-	-	-	-	-	-	-	-
Commercial - Blue Zone	70	71	71	71	71	71	71	71	71	71
Commercial - Red Zone	70	-	-	-	-	-	-	-	-	-
TOTAL	840	1,013								

FINANCING INTEREST RATES											
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Interest Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	
Interest Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	
Line of Credit Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	

Classification	ALL CAPITAL COSTS (Annual Investment)									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capital Costs - All Areas, Except Lexington	14,951,029	741,784	-	-	-	-	-	-	-	-
Capital Costs - Lexington	-	-	-	-	-	-	-	-	-	-
Total Investment	14,951,029	741,784	-							

Classification	CAPITAL COSTS (Cumulative Investment)									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capital Costs - All Areas, Except Lexington	14,951,029	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813
Capital Costs - Lexington	-	-	-	-	-	-	-	-	-	-
Total Investment	14,951,029	15,692,813								

INCOME STATEMENT										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3RD PARTY REVENUES	428,265	1,747,887	1,789,114	1,789,115	1,789,116	1,789,117	1,789,118	1,789,119	1,789,120	1,789,121
ELECTRIC USE OF FACILITIES	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
TOTAL REVENUE	453,265	1,772,887	1,814,114	1,814,115	1,814,116	1,814,117	1,814,118	1,814,119	1,814,120	1,814,121
COST OF GOODS SOLD	92,796	386,636	396,462	396,462	396,462	396,462	396,462	396,462	396,462	396,462
GROSS PROFIT	360,469	1,385,450	1,417,652	1,417,653	1,417,654	1,417,655	1,417,656	1,417,657	1,417,658	1,417,659
%	84%	79%	79%	79%	79%	79%	79%	79%	79%	79%
Per Cust.	\$ 1,531.20	\$ 1,403.57	\$ 1,400.15	\$ 1,400.15	\$ 1,400.15	\$ 1,400.15	\$ 1,400.15	\$ 1,400.15	\$ 1,400.16	\$ 1,400.16
OPERATING COSTS	103,251	205,017	205,600	205,600	205,600	205,600	205,600	205,600	205,600	205,600
EBITD	257,218	1,180,433	1,212,052	1,212,053	1,212,054	1,212,055	1,212,056	1,212,057	1,212,058	1,212,059
INTEREST EXPENSE - LOC	175,000	346,066	338,099	329,934	321,564	312,984	304,181	295,177	285,939	276,469
INTEREST EXPENSE - LT DEBT	639,454	644,722	644,722	644,722	644,722	644,722	644,722	644,722	644,722	644,722
DEPRECIATION	50,000	112,133	117,696	117,696	117,696	117,696	117,696	117,696	117,696	117,696
PROPERTY TAXES	864,454	1,102,921	1,100,518	1,092,352	1,083,982	1,075,403	1,066,609	1,057,596	1,048,357	1,038,887
TOTAL OPERATING COSTS	1,060,502	1,694,574	1,702,579	1,694,413	1,686,043	1,677,464	1,668,670	1,659,657	1,650,418	1,640,948
NET MARGINS	(607,236)	\$ 77,513	\$ 111,535	\$ 119,702	\$ 128,072	\$ 136,653	\$ 145,447	\$ 154,462	\$ 163,702	\$ 173,172
Per Cust./Per Month	(\$14.93)	\$ 6.54	\$ 9.18	\$ 9.85	\$ 10.54	\$ 11.25	\$ 11.97	\$ 12.71	\$ 13.47	\$ 14.25
%	-147%	4%	6%	7%	7%	8%	8%	8%	9%	10%

BALANCE SHEET										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash & Equivalents	542,000	302,000	246,000	206,000	186,000	391,814	1,044,803	1,686,236	2,315,766	2,931,982
Accounts Receivable	71,378	145,591	149,093	149,093	149,093	149,093	149,093	149,093	149,093	149,093
Materials Inventory	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Plant in Service	7,451,029	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813	15,692,813
Accumulated Depreciation	(639,454)	(1,284,176)	(1,928,899)	(2,573,621)	(3,218,343)	(3,863,065)	(4,507,787)	(5,152,509)	(5,797,232)	(6,441,954)
Construction Work in Progress	7,500,000	-	-	-	-	-	-	-	-	-
NET ASSETS	15,174,952	15,106,227	14,409,007	13,724,285	13,059,563	12,620,654	12,628,921	12,625,632	12,610,440	12,581,934
Equity	(607,236)	(529,724)	(418,189)	(298,488)	(170,415)	(33,763)	111,685	266,146	429,848	603,020
LT Debt - RUS	13,523,971	13,197,340	12,862,544	12,519,378	12,167,632	11,807,093	11,437,541	11,058,749	10,670,488	10,286,962
Accounts Payable	16,729	17,133	17,133	17,133	17,133	17,133	17,133	17,133	17,133	17,133
Current Portion of LT Debt	318,664	326,631	334,796	343,166	351,745	360,539	369,553	378,791	388,261	383,526
Line-of-Credit	2,084,547	2,261,962	1,785,231	1,320,997	876,762	658,340	887,093	1,104,289	1,309,580	1,501,556
NET EQUITY & LIABILITIES	15,336,675	15,273,342	14,581,516	13,902,187	13,242,858	12,809,343	12,823,005	12,825,109	12,815,310	12,792,197

ITEM #1 (DERIVATION OF COSTS WORKSHEET)
ACCESS EQUIPMENT COST BUDGET WORKSHEET

Warm Springs

Cabinet (including all internals)	\$	20,000
OLT shelf x2	\$	1,200
E7-2 GPON 8 cards x4	\$	32,000
20km Optics x8	\$	4,320
40km Optics x8	\$	7,440

Millboro

GPON 8 card	\$	8,000
20km Optics x6	\$	3,240
40km Optics x 6	\$	5,580

Kerr's Creek

20km Optics x1	\$	540
40km Optics x1	\$	930

Effinger

GPON 8 cards x4	\$	32,000
OLT shelf x2	\$	1,200
20km Optics x10	\$	5,400
40km Optics x10	\$	9,300

Cornwall

GPON 8 cards x2	\$	16,000
OLT shelf x2	\$	1,200
20km Optics x8	\$	4,320
40km Optics x4	\$	3,720
Misc. cabling	\$	3,410

\$ 159,800

Calix Network Configuration & Quotation

Customer Name:	BARC Electric Cooperative	Quote Reference Number:	578579A - 4
Project Name:	Barc ODC-200	Quote Type:	Traditional
Quote Description:	ODC-200EL with EXM Fiber	Quote Expires:	August 2, 2017
Author Name:	Mark Teed	Quote Modified:	August 2, 2017
Contact Name:	Gary	Quote Exp. History:	September 1, 2017

CABINETS

Equipment Summary

Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
E7					
000-00389	E7-2 Factory Install Package (ODC): Shelf with Blank Card, FTA, and Factory installation Kit		\$646.75	6	\$3,880.50
Electro Mechanical					
000-00780	EXM FTTP Pckg. - EXM enclosure & door w/ 18x splitter panel (no fiber frames)		\$2,684.00	6	\$16,104.00
000-01017	ODC-200 Pckg. E7-2 Local AC Pwr, 1x E7-2, Fiber Mgmt Raceway (no fiber frames), Battery Riser		\$11,516.00	6	\$69,096.00
100-03679	ODC-200 Generator Connector - 30 Amp	NA	\$364.00	6	\$2,184.00
100-03682	ODC-200 Pour-in-Place Pad Template	NA	\$292.00	6	\$1,752.00
100-04637	ODC-200 Expansion Modules Riser Only (used with battery base riser)		\$396.00	6	\$2,376.00
100-04725	ODC-200 Riser Battery Heater Installation Kit		\$276.00	6	\$1,656.00
Third Party					
100-03244	ODC-x000 190AH Energys SBS Battery String 12.4inH x 4.9inW x 22.1inL, 132lbs each		\$2,350.00	6	\$14,100.00
Equipment Total					\$111,148.50
Grand Total					\$111,148.50

Package Details:

000-00389 package consists of the following:

100-01449	E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card	1
100-01881	E7-2 Factory Install Kit for ODC-100/x000(E) (19 and 23" brackets, power and ground cables, etc)	1
100-03590	E7-2 Fan Tray Assembly 2 - FTA2	1

000-00780 package consists of the following:

100-03681	ODC-200 23in. Expansion Module (23in. Rack)	1
100-03685	ODC-200 GPON Ruggedized splitter Bulkhead panel, 18x splitters & parking lot	1
100-03721	ODC-200 23in. Expansion Module Door	1

000-01017 package consists of the following:

100-01449	E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card	1
100-01881	E7-2 Factory Install Kit for ODC-100/x000(E) (19 and 23" brackets, power and ground cables, etc)	1
100-03590	E7-2 Fan Tray Assembly 2 - FTA2	1
100-03669	ODC-200 Cabinet shell only	1
100-03676	ODC-200 AC Load Center	1

Calix Network Configuration & Quotation

Customer Name:	BARC Electric Cooperative	Quote Reference Number:	578579A - 4
Project Name:	Barc ODC-200	Quote Type:	Traditional
Quote Description:	ODC-200EL with EXM Fiber	Date Created:	August 2, 2017
Author Name:	Mark Teed	Date Modified:	August 2, 2017
Contact Name:	Gary	Quote Expiration:	September 1, 2017

100-03723	ODC-200 Front Door w/ 50W/C Heat Exchanger - Electronics & Power access (750W)	1
100-03813	Two LGX module Fiber Distribution Panel (1 RU frame only, 19" & 23")	1
100-03846	ODC-200 Emerson 502 Power kit: AC/DC Rectifier shelf, Controller, DC distrib. & cabinet integration	1
100-04119	ODC-200 Fiber Management Raceway Kit	1
100-04671	ODC-200 Battery Riser Kit	1
100-04696	ODC-200 Side Door (No HX, No Internal Battery Housing) - Distribution Access	1

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Unless specifically listed above, the order total shown does not reflect any charges related to shipping, taxes, insurance, customs duties or tariffs, which are the customer's sole responsibility. Unless specifically listed above, the actual freight charges incurred and related taxes will be added to your order at the time of shipping and will be reflected on your invoice. Equipment purchases are subject to our standard terms and conditions of sale, a copy of which can be found at the http://www.calix.com/terms_of_sale.html, or (if applicable) the terms and conditions of a previously executed written sales agreement between us.

Calix Warranty Summary

With the exception of Premises Products (e.g. Optical Network Terminal equipment), Calix warrants its Products for five (5) years from the date of shipment. The warranty for Premises Products is one (1) year from date of shipment. Certain 3rd party products are not warranted by Calix. For these items we "pass-through" the manufacturer's warranty. For the complete Calix warranty policy please visit the Customer Service Page inside your Calix Customer Center and look for the RMA and Warranty information module. For a list of the 3rd party equipment and applicable warranties, please contact your Calix account manager.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Email: om@calix.com
Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)

Customer: BARC CONNECTS
 Cart: 2019-104637
 Quote: 1566483206152
 Contact: Gary Sickler

Quote Released: 08/22/2019
 Quote Term: 12 Months
 Order Type: New

621814A - 1
 Equipment
 August 22, 2019
 August 22, 2019
 September 21, 2019

Equipment Summary

Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
	OIM GPON				
100-04200	GPON SFP OIM, Class B+, 1490/1310nm Single Fiber Transceiver, I-Temp (RT), C-Series	BVL3A6UFAA	\$928.50	1	\$928.50
Equipment Total					\$928.50
Grand Total					\$928.50

40 km Optic

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Calix Warranty - See Purchase Agreement.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Email: om@calix.com
 Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)

Calix Network Configuration & Quotation

Customer Name:	BARC CONNECTS	Quote Reference Number:	617494A - 1
Project Name:	Cart: 2019-99197	Quote Type:	Equipment
Quote Description:	Quote1558374620515	Date Created:	May 20, 2019
Author Name:	Gary Sickler	Date Modified:	May 20, 2019
Contact Name:		Quote Expiration:	June 19, 2019

Equipment Summary

Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
	E7				
000-00372	E7-2 Field Install Package (CO & ODC/RT): Shelf with Blank Card, FTA, and Field installation Kit		\$597.00	2	\$1,194.00
100-03006	E7-2 <u>GPON-8 card</u> (8xGPON OIM, 4xGE SFP, 2x10GE SFP+)	BVL3AXYFTA	\$7,837.20	2	\$15,674.40
	OIM 10GE Transport				
100-01424	Direct Attach SFP/SFP+ copper cable, 0.5 m, 30AWG, I-Temp	BVPQAE5UAA	\$40.00	4	\$160.00
	OIM GPON AXOS				
100-05148	GPON SFP OIM, Class B+, 20Km, 1490/1310nm Single Fiber Transceiver, I-Temp, AXOS <i>20 km optic</i>	BVL3BAFFAA	\$540.00	10	\$5,400.00
Equipment Total					\$22,428.40
Grand Total					\$22,428.40

Package Details:

000-00372 package consists of the following:

100-01449	E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card	1
100-01830	E7-2 Field Install Kit for CO & RT (19" and 23" mounting brackets, power and ground cables, etc)	1
100-03590	E7-2 Fan Tray Assembly 2 - FTA2	1

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Calix Warranty - See Purchase Agreement.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Email: om@calix.com

Calix Network Configuration & Quotation

Customer Name:	BARC CONNECTS	Quote Reference Number:	621083A - 1
Project Name:	Cart: 2019-103674	Quote Type:	Equipment
Quote Description:	Quote1565181351818	Date Created:	August 7, 2019
Author Name:	Gary Sickler	Date Modified:	August 7, 2019
Contact Name:		Quote Expiration:	September 6, 2019

Equipment Summary

Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
100-05148	OIM GPON AXOS GPON SFP OIM, Class B+, 20Km, 1490/1310nm Single Fiber Transceiver, I-Temp, AXOS	BVL3BAFFAA	\$540.00	16	\$8,640.00
Equipment Total					\$8,640.00
Grand Total					\$8,640.00

20 km Optic

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Calix Warranty - See Purchase Agreement.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Email: om@calix.com

Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)

ITEM #2 (DERIVATION OF COSTS WORKSHEET)
CUSTOMER PREMISE EQUIPMENT, MATERIALS AND LABOR

1 INDOOR GIGACENTERS		
844G		\$ 193
<i>ESTIMATED RESIDENTIAL SUBSCRIBERS FROM FEASIBILITY STUDY</i>	<i>MULTIPLIED BY</i>	942
	<i>SUBTOTAL</i>	<input type="text" value="\$ 181,806"/>
2 ONT INSTALL MATERIALS (CABLING, BATTERY BACKUPS, ETC.)		<input type="text" value="\$ 50,625"/>
3 ONT INSTALL LABOR		<input type="text" value="\$ 259,050"/>
\$275 x 942 SUBSCRIBERS		
	<i>SUBTOTAL (LINES 1,2,3)</i>	\$ 491,481

Calix Network Configuration & Question

Customer Name:	BARC CONNECTS	Quote Reference Number:	609600A - 1
Project Name:	Cart: 2018-90621	Quote Type:	Equipment
Quote Description:	My First Quote	Date Created:	December 20, 2018
Author Name:	Gary Sickler	Date Modified:	December 20, 2018
Contact Name:		Quote Expiration:	January 19, 2019

Equipment Summary

Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
000-00844	800 SG 844G-1 GigaCenter, 2 POTS, 4 GE, Dual Wi-Fi, 1 USB -AM Type A Power Adapter w/ 8-pin connector		\$192.93	400	\$77,172.00
Equipment Total					\$77,172.00
Grand Total					\$77,172.00

Package Details:

000-00844 package consists of the following:

100-04011	844G-1 GigaCenter, 2 POTS, 4 GE, Dual Wi-Fi, 1 USB -UPS Power Interface	1
100-04125	Power Adapter CPA5 12V 2.5Amp -AM Type A w/ 8-pin connector	1

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Unless specifically listed above, the order total shown does not reflect any charges related to shipping, taxes, insurance, customs duties or tariffs, which are the customer's sole responsibility. Unless specifically listed above, the actual freight charges incurred and related taxes will be added to your order at the time of shipping and will be reflected on your invoice. Equipment purchases are subject to our standard terms and conditions of sale, a copy of which can be found at the <https://www.calix.com/pages/terms-of-sale.html>, or (if applicable) the terms and conditions of a previously executed written sales agreement between us.

Calix Warranty Summary

With the exception of Premises Products (e.g. Optical Network Terminal equipment), Calix warrants its Products for five (5) years from the date of shipment. The warranty for Premises Products is one (1) year from date of shipment. Certain 3rd party products are not warranted by Calix. For these items we "pass-through" the manufacturer's warranty. For the complete Calix warranty policy please visit the Customer Service Page inside your Calix Customer Center and look for the RMA and Warranty information module. For a list of the 3rd party equipment and applicable warranties, please contact your Calix account manager.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Quote



CORE TELECOM SYSTEMS, INC.
1131 NORTH WARSON ROAD
ST. LOUIS, MO 63132
3143720240

Order Number: 0050539

Order Date: 1/7/2019

Salesperson: 0012

Customer Number: 30-BAR540

Sold To:

BARC ELECTRIC COOP
PO BOX 264
MILLBORO, VA 24460

Confirm To:

Gary Sickler

Ship To:

BARC ELECTRIC COOPERATIVE
1972 BIG SPRING DRIVE
LEXINGTON, VA 24450

Customer P.O.	Ship VIA	F.O.B.	Terms
Gigacenter BBU	UPS GROUND	Destination	NET 30

Item Code	Unit	Ordered	Shipped	Back Order	Price	Amount
PR1236DT-B	EACH	50.00	0.00	0.00	48.0000	2,400.00
NXG-PRO DT BBU 12V/30W W/ 12KV						Whse: 001
Desktop UPS with battery						
PP7P8M-B-1.5	EACH	50.00	0.00	0.00	3.5000	175.00
TELEMETRY CABLE, 2P TO 8P MOLEX, 1.5FT						Whse: 001
1.5 ft Cable to Gigacenter						
PP36L-12EX	EACH	6.00	0.00	0.00	35.9500	215.70
SPARE BATTERY MODULE FOR PP36L-12P POWER SUPPLY, 36 WATT, 8-10 AH AND ADDITIONAL BATTERY MODULE FOR PP36L-12U						Whse: 001
Spare batteries (8 hrs per battery)						

Net Order:	2,790.70
Less Discount:	0.00
Freight:	0.00
Sales Tax:	147.91
Order Total	2,938.61

Communication Installation Solutions
134 Wilson Blvd
Fishersville, VA 22939 US
(540) 294-1414
CISworkmail1@gmail.com

Invoice

BILL TO
Gary Sickler CIS installs week ending
5/17/19
1972 Big Spring Drive
Fishersville, VA 22939
United States

INVOICE #	DATE	TOTAL DUE	DUE DATE	TERMS	ENCLOSED
[REDACTED]	05/20/2019	[REDACTED]	06/19/2019	Net 30	

ACTIVITY	QTY	RATE	AMOUNT
FTTH Install Triple Play [REDACTED]	1	475.00	475.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Triple Play [REDACTED]	1	475.00	475.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Double Play [REDACTED]	1	375.00	375.00
FTTH Install Single Play [REDACTED]	1	275.00	275.00
FTTH Install Double Play [REDACTED]	1	375.00	375.00

ITEM #3 (DERIVATION OF COSTS WORKSHEET)
PURCHASE OF IPv4 BLOCK OF ADDRESSES

IPv4 ADDRESS BLOCK	\$ 90,000
(/20 Block)	

IPv4.GLOBAL

Powered by  Hilco

4 listings

Region

More filters

/20 Block registered in RIPE

Transferable to: ARIN, APNIC, RIPE

Original Price

\$81,920.00

Current Bid

\$20.00

Time Left

5h 20m 47s

Bids

0

/20 Block registered in ARIN

Transferable to: ARIN, APNIC, RIPE

Original Price

\$81,920.00

Current Bid

\$20.00

Time Left

5h 21m 29s

Bids

0

/20 Block registered in ARIN

Transferable to: ARIN, APNIC, RIPE

ENDING SOON
\$83,968.00

ENDING SOON
\$20.50

ENDING SOON
5h 23m 49s

/20 Block registered in LACNIC

Transferable to: LACNIC

ENDING SOON
\$81,920.00

ENDING SOON
\$20.00

ENDING SOON
7d 5h 23m

ENDING SOON
0

ITEM #5 (DERIVATION OF COSTS WORKSHEET)
 CONSTRUCTION COST BUDGET WORKSHEET

1 MAKE READY ENGINEERING AND FIBER DESIGN @ 314 MILES \$ 172,700
 \$550 PER MILE X 314 MILES

2 FIBER CONSTRUCTION

M.J. ELECTRIC WINNING BID FOR CURRENT FIBER PROJECT PHASE 2, PART 1 \$ 3,988,553

HOMES PASSED IN FIBER PROJECT PHASE 2, PART 1 [DIVIDED BY] 758

COST PER HOME PASSED (ACTUAL) \$ 5,262

2,250 TOTAL HOMES PASSED IN THIS PROJECT [MULTIPLIED BY] 2250

SUBTOTAL \$ 11,839,374

REMOVE ROCK ADDER UNIT (BM71) @15,000 LF FROM MJ BID \$ (1,254,000)

ADD BACK 5,883 LF (BM71) ESTIMATED ROCK IN VATI PROJECT \$ 491,926

SUBTOTAL \$ (762,074)

TOTAL FIBER CONSTRUCTION \$ 11,250,000

3 GIS DATA COLLECTION & MRE @ \$80 PER POLE ALL-IN \$ 432,000

4 MAKE READY CONSTRUCTION (MRC) \$ 1,620,000

5,400 POLES X 25% REPLACEMENT RATE X 30% FIBER-RELATED
 X \$4,000 PER POLE ALL-IN REPLACEMENT COST

TOTAL (LINES 1, 2, 3, 4) \$ 13,302,000

[VATI-FUNDED PORTION OF FIBER CONSTRUCTION]
 1,085 UNSERVED LOCATIONS x \$2,000 PER LOCATION \$ 2,170,000

[BARC-FUNDED PORTION OF FIBER CONSTRUCTION] \$ 11,132,000



Project Pricing

Our commitment and dedication to your project will ensure that the timeline is managed effectively and ensure that the quality meets or exceeds your company's expectations. At VPS, we believe that a client and engineering/consulting firm relationship should be a long-term partnership. With this relationship in place, BARC and VPS.



Part 1 – Data Collection

- 1. Field Data Collection - Kick-off Meeting \$3,500
- 2. Field Data Collection Services (Pole Tag, Pole GPS, Pole Inventory) \$25/Pole in ROW
\$40/pole out of ROW
- 3. MRE and Required Paperwork \$65/hour

Part 2 – OSP Engineering

- 1. Review of Requirements and FTTP Design Layout \$ 12,500
- 2. Pre-Staking Meeting \$ 3,500
- 3. Staking Services (300 mile, estimating 80% aerial, 20% buried, 5% city, 95% rural) \$ 215,000
 - Buried Town - \$3100/mile
 - Buried Rural - \$950/mile
 - Aerial Town - \$2,200/mile
 - Aerial Rural in -\$550/mile
- *Above rates assume VPS performs Part 1 – Data Collection
- 4. ROW Permitting and City Coordination \$ 4,600
- 5. As-Staked Mapping \$ 188,000
- 6. Plans and Specifications (contract fees) \$ 14,000
- 7. Pre-Bid Conference and Bid Letting \$ 3,500
- 8. Pre-Construction Conference \$ 3,500
- 9. OSP Inspection Services – 5 days per week, 11 hour days, 90 day contract \$ 236,000
 - Resident (1) \$58/hour
 - Inspector (2) \$50/hour
- 10. As-Built Records and Mapping \$ 100,000
- 11. OSP Contract Closeout \$ 14,000
- Part 2 Subtotal \$794,600

Notes:

- (1) Actual route mileage and composition (aerial, buried, city or town) may influence staking costs
- (2) Based on Geo based staking sheets with 4 sheets per rural mile and 6 sheets per town mile. As-Built in NISC MapWise
- (3) Estimated living expenses are included in the cost estimates. Actual expenses will be passed through as incurred with no markup.
- (4) Pole Loading Analysis to be performed at \$60/pole
- (5) The following additional items would be performed on a time and expense basis:
 - a. Private easement coordination
 - b. Project management

Agreed and Accepted:
BARC Electric Cooperative

Vantage Point Solutions, Inc.

PO Box 264
Milboro, VA 24460

2211 N Minnesota Street
Mitchell, SD 57301

Name: _____ Date _____
Title: _____

Name: _____ Date _____
Title: _____





June 11, 2019

Michael Keyser
BARC Electric Cooperative
1972 Big Spring Drive
Lexington VA 24450

RE: VA -- BARC -- P12.0
Bid Tabulation Results

Dear Michael:

Enclosed for your evaluation and consideration are the bid tabulation results from M.J. Electric, LLC having the low bid. These tabs are for the proposed construction of fiber and conduit facilities in the Turkey Hill, Kerr's Creek, Bratton's Run, & Millboro project.

Below is a summary of the results of the bid opening that was held at our office in Mitchell, South Dakota, on June 11, 2019 at 1:00 pm cdt.

	<u>Contractor</u>	<u>Bid</u>
1.	M.J. Electric, LLC	\$3,988,553.41
2.	Henkels & McCoy	\$4,575,530.97
3.	ElectriCom	\$4,631,537.66
4.	Thayer Power & Comm.	\$6,673,454.74

Vantage Point Solutions reviewed the bid from M.J. Electric, LLC and have found no issues or concerns with the bid pricing. Therefore, VPS recommends the acceptance of the low bid from M.J. Electric, LLC.

If you have any questions, please call me at 605-995-1748.

Sincerely,

Todd Sapp
Vice President of OSP Operations
Vantage Point Solutions

TS/jct
Enclosure: Bid Tabulations

TABULATION OF BIDS FOR GENERAL CONTRACT			RUS PROJECT NO N/A		BID DATE June 11, 2019
			NAME OF BORROWER BARC Electric Cooperative		

CONTRACT SECTIONS	BIDDERS NAME	BIDDERS NAME	BIDDERS NAME	BIDDERS NAME	BIDDERS NAME
	MJ Electric LLC De Pere, WI	Henkels & McCoy Batavia, IL	ElectriCom Paoli, IN	Thayer Power & Comm Fairview, PA	
	SECTION TOTAL	SECTION TOTAL	SECTION TOTAL	SECTION TOTAL	SECTION TOTAL
BDO	4,610.54	17,199.60	7,285.52	13,612.50	
BFO	271,064.28	145,559.50	190,585.08	330,619.56	
BH	11,871.78	17,683.50	12,300.02	10,322.00	
BM	1,519,087.36	1,175,127.25	1,113,237.80	2,491,593.86	
CFO	24,805.84	60,354.80	48,625.04	71,689.80	
CO	1,018,166.38	1,689,271.30	1,613,645.66	1,372,699.66	
HA	44,475.20	256,096.25	230,479.16	323,365.20	
HBF	11,035.64	18,796.80	19,310.72	34,478.40	
HO	155,012.20	174,369.00	180,418.00	183,574.00	
ONT	52,200.72	155,212.20	154,808.94	426,683.40	
PE	19,157.40	86,741.15	105,031.50	102,711.87	
PF	76,631.40	217,739.30	194,015.65	233,040.90	
PM	14,914.35	53,237.20	53,786.81	51,076.15	
SE	765,520.32	508,143.12	708,007.76	1,027,987.44	
TOTAL BID	\$3,988,553.41	\$4,575,530.97	\$4,631,537.66	\$6,673,454.74	

This is to certify that the bids tabulated herein were publicly opened and read at 1.00 o'clock pm/edt, June 11, 2019 at Vantage Point Solutions, 2211 North Minnesota St. Mitchell SD 57301. All bids were accompanied by acceptable certified checks or bidder's bonds.

Date Signature of Engineer

ITEM #6 (DERIVATION OF COSTS WORKSHEET)
SERVICE DROP CONSTRUCTION (COMMERCIAL)

\$ 2,488

BARC COST PER DROP ACTUAL, FIBER PROJECT PHASE 1
AVERAGE AERIAL/UG INCLUDING NID
INCLUDES LABOR AND MATERIALS

FORECASTED COMMERCIAL SUBS FROM FEASIBILITY STUDY

MULTIPLIED BY 71

TOTAL	\$ 176,625
--------------	-------------------

ITEM #6 (DERIVATION OF COSTS WORKSHEET)
SERVICE DROP CONSTRUCTION (RESIDENTIAL)

BARC COST PER DROP ACTUAL, FIBER PROJECT PHASE 1 \$ 2,000
AVERAGE AERIAL/UG INCLUDING NID
INCLUDES LABOR AND MATERIALS

FORECASTED RESIDENTIAL SUBS FROM FEASIBILITY STUDY *MULTIPLIED BY* 942

TOTAL	\$ 1,883,700
--------------	---------------------

ITEMS #8 & 9 (DERIVATION OF COSTS WORKSHEET)

MISC PROJECT MANAGEMENT FEES, INSPECTORS, PROFESSIONAL ENGINEER STAMPS/SIGNATURES & CONTINGENCY

PE STAMPS AND SIGNATURES OVERAGES	\$	2,500
PROJECT INSPECTOR OVERAGES	\$	15,000
PROJECT MANAGEMENT OVERAGES	\$	7,500
OTHER CONTINGENCIES (9.5%)	\$	167,363

TOTAL	\$	192,363
--------------	-----------	----------------

(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0002073427 | Data as of: Dec 31, 2018 | Operations: Non-ILEC | Submission Status: Revised - Submitted | Last Updated: Mar 7, 2019 13:57:48

Filer Identification

Section	Question	Response
Filer Information	Company Name	BARConnects, LLC
	Holding Company Name	BARC Electric Cooperative
	SAC ID	196141
	499 ID	826973
Data Contact Information	Data Contact Name	Michael Keyser
	Data Contact Phone Number	(800) 846-2272
	Data Contact E-mail	mkeyser@barcelectric.com
Emergency Operations Contact Information	Emergency Operations Name	Michael Keyser
	Emergency Operations Phone Number	(800) 846-2272
	Emergency Operations E-mail	mkeyser@barcelectric.com
Certifying Official Contact Information	Certifying Official Name	Michael Keyser
	Certifying Official Phone Number	(800) 846-2272
	Certifying Official E-mail	mkeyser@barcelectric.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FBD_BARC_12.31.18.csv	Mar 7, 2019 13:48:08	444
Fixed Broadband Subscription	FBS BARC 12.31.18.csv	Mar 7, 2019 13:48:08	31
Fixed Voice Subscription	FVS_BARC_123118.csv	Mar 7, 2019 13:48:08	5

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	BARC	Optical Carrier/Fiber to the End User	444
Total			444

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	End-user Type	Subscriptions
-------	------------	---------------	---------------

Fixed Broadband Subscription

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Optical Carrier/Fiber to the End User	31	249	23	272
Total		31	249	23	272

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
25.000	5.000	2	1	3
25.000	25.000	2	1	3
50.000	10.000	77	3	80
50.000	50.000	0	3	3
100.000	50.000	95	4	99
100.000	100.000	0	3	3
250.000	125.000	70	0	70
250.000	250.000	0	5	5
500.000	250.000	3	0	3
1000.000	1000.000	0	1	1
2000.000	2000.000	0	2	2
Total		249	23	272

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Optical Carrier/Fiber to the End User	25.000	5.000	2	1	3
	25.000	25.000	2	1	3
	50.000	10.000	77	3	80
	50.000	50.000	0	3	3
	100.000	50.000	95	4	99
	100.000	100.000	0	3	3
	250.000	125.000	70	0	70
	250.000	250.000	0	5	5
	500.000	250.000	3	0	3
	1000.000	1000.000	0	1	1
	2000.000	2000.000	0	2	2
Total			249	23	272

State	Total	by End-user Type		by Bundle		by Last-mile Medium			
		Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
Virginia	32	32	0	32	0	32	0	0	0
Total	32	32	0	32	0	32	0	0	0

(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0002073427 (0002073427) | Data as of: Jun 30, 2018 | Operations: Non-ILEC | Submission Status: Original - Submitted | Last Updated:
Sep 4, 2018 17:22:06

Filer Identification

Section	Question	Response
Filer Information	Provider Name	BARConnects, LLC
	Holding Company Name	BARC Electric Cooperative
	SAC ID	196141
	499 ID	
Data Contact Information	Data Contact Name	Steven Chernoff
	Data Contact Phone Number	(703) 584-8670 ((703) 584-8670)
	Data Contact E-mail	schernoff@fcclaw.com
Emergency Operations Contact Information	Emergency Operations Name	Mike Keyser
	Emergency Operations Phone Number	(800) 846-2272 ((800) 846-2272)
	Emergency Operations E-mail	mkeyser@barcelectric.com
Certifying Official Contact Information	Certifying Official Name	Mike Keyser
	Certifying Official Phone Number	(800) 846-2272 ((800) 846-2272)
	Certifying Official E-mail	mkeyser@barcelectric.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	BARConnects LLC_fbdd_2018Q2_083018.csv	Sep 4, 2018 12:32:19	882
Fixed Broadband Subscription	BARConnects LLC_fbsd_2018Q2_083018.csv	Sep 4, 2018 12:32:44	8
Fixed Voice Subscription	Interactive data entry		3

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	BARConnects LLC.	Optical Carrier/Fiber to the End User	882
Total			882

Fixed Broadband Subscriptions by State, Technology and End-user Type

Fixed Broadband Subscription

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Optical Carrier/Fiber to the End User	8	52	3	55
Total		8	52	3	55

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
50.000	10.000	14	0	14
50.000	50.000	0	2	2
100.000	50.000	20	0	20
250.000	125.000	18	0	18
250.000	250.000	0	1	1
Total		52	3	55

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Optical Carrier/Fiber to the End User	50.000	10.000	14	0	14
	50.000	50.000	0	2	2
	100.000	50.000	20	0	20
	250.000	125.000	18	0	18
	250.000	250.000	0	1	1
Total			52	3	55

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	0	0	33	33
Total	0	0	33	33

Fixed Voice Subscription (iVoIP)

Over-the-top VoIP Subscriptions by State and End-user Type

State	Total	Consumer	Business / Govt
Virginia	1	1	0
Total	1	1	0

All other VoIP Subscriptions by State, End-user Type, Bundle and Last-mile Medium

State	Total	by End-user Type		by Bundle		by Last-mile Medium			
		Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	0	0	119	114
Total	0	0	119	114

Fixed Voice Subscription (iVoIP)

Over-the-top VoIP Subscriptions by State and End-user Type

State	Total	Consumer	Business / Govt
Virginia	0	0	0
Total	0	0	0

All other VoIP Subscriptions by State, End-user Type, Bundle and Last-mile Medium

State	Total	by End-user Type		by Bundle		by Last-mile Medium			
		Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
Virginia	119	114	5	119	0	119	0	0	0
Total	119	114	5	119	0	119	0	0	0



PUBLIC COMMENT NOTICE

Bath County intends to file a grant application with the Virginia Department of Housing and Community Development (DHCD) under its 2020 Virginia Telecommunications Initiative Program (VATI). In accordance with the VATI Program Guidelines, Bath County is requesting public comments as to its submission of a grant. The County is working in partnership with BARC Electric Cooperative and its subsidiary BARC Connects on a multi-jurisdiction project to provide broadband to unserved areas.

Bath County consists of 529 square miles of which 35% of the total area is unserved by broadband as identified in the Center for Innovative Technology's 2017 survey. The purpose of this grant application is to facilitate deployment of a gigabit last mile FTTP network to unserved businesses and residents in the county, as well as properties owned by the county or its affiliated public safety agencies. BARC Electric Cooperative and its subsidiary BARC Connects proposes to own the gigabit last-mile network; the network will be constructed by BARC Electric Cooperative through its subsidiary BARC Connects. BARC proposes to offer four levels of broadband speeds: 50mbps/10mbps, 100mbps/50mbps, 250mbps/125mbps, and 500mbps/250mbps.

In order to provide a record to the Virginia Department of Housing and Community Development, comments should be addressed to Ashton Harrison, County Administrator for Bath County. The preferred methods of comment are in written form and would be by email to aharrison@bathcountyva.org or by letter sent to Ashton Harrison PO Box 309, 65 Courthouse Hill Road, Warm Springs, VA 24484. Public comment will be open from Tuesday, August 6, 2019 to Tuesday, August 27, 2019. A complete list of all the comments will be sent to DHCD.

DHCD will post electronic copies of all submitted applications to the agency website after the deadline for application submissions has passed and prior to project approval. Any private sector broadband service provider wishing to request that DHCD deem a proposed project area as ineligible for VATI grant funding must submit a challenge with the required information, found in the 2020 Virginia Telecommunication Initiative Program Guidelines and Criteria located on the DHCD website no later than 5:00 p.m. on October 9, 2019. DHCD will have 30 business days to validate a challenge.

PUBLIC COMMENT NOTICE

Rockbridge County intends to file a grant application with the Virginia Department of Housing and Community Development (DHCD) under its 2020 Virginia Telecommunications Initiative Program (VATI). In accordance with the VATI Program Guidelines, Rockbridge County is requesting public comments as to its submission of a grant. The County is working in partnership with BARC Electric Cooperative and its subsidiary BARC Connects on a multi-jurisdiction project to provide broadband to unserved areas.

Rockbridge County consists of 608 square miles of which 2.75% of the total area is unserved by broadband as identified in the Center for Innovative Technology's 2017 survey. The purpose of this grant application is to facilitate deployment of a gigabit last mile FTTp network to unserved businesses and residents in the county, as well as properties owned by the county or its affiliated public safety agencies. BARC Electric Cooperative and its subsidiary BARC Connects proposes to own the gigabit last-mile network; the network will be constructed by BARC Electric Cooperative through its subsidiary BARC Connects. BARC proposes to offer four levels of broadband speeds: 50mbps/10mbps, 100mbps/50mbps, 250mbps/125mbps, and 500mbps/250mbps.

In order to provide a record to the Virginia Department of Housing and Community Development, comments should be addressed to Sam Crickenberger, Director of Community Development for Rockbridge County. The preferred methods of comment are in written form and would be by email to scrickenberger@rockbridgecountyva.gov or by letter sent to Sam Crickenberger 150 South Main Street, Lexington, VA 24450. Public comment will be open from Tuesday, August 6, 2019 to Tuesday, August 27, 2019. A complete list of all the comments will be sent to DHCD.

DHCD will post electronic copies of all submitted applications to the agency website after the deadline for application submissions has passed and prior to project approval. Any private sector broadband service provider wishing to request that DHCD deem a proposed project area as ineligible for VATI grant funding must submit a challenge with the required information, found in the **2020 Virginia Telecommunication Initiative Program Guidelines and Criteria** located on the DHCD website no later than 5:00 p.m. on October 9, 2019. DHCD will have 30 business days to validate a challenge.

1 week
July 31, 2019

Sam Crickenberger
Director of Community Development

Breakout of the project area using VATI funding

BARC Electric Cooperative

Bath County and Rockbridge County

	Total Mileage	Unserved Homes	Unserved Businesses	Total Unserved Locations	Additional Locations Outside Unserved Areas	Total Locations
Warm Springs Bath County	97	266	21	287	549	836
Millboro Bath County	106	200	105	305	324	629
Vesuvius Rockbridge County	46	96	9	105	135	240
Big Hill Rockbridge County	7	46	4	50	12	62
Effinger South Buffalo Rockbridge County	28	90	3	93	96	189
Glasgow and Buck Hill Rockbridge County	30	230	15	245	49	294
TOTAL	314	928	157	1085	1165	2250