

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Application ID: 86508252021081814

Application Status: Pending

Program Name: Virginia Telecommunications Initiative 2022

Organization Name: Botetourt County

Organization Address: 57 South Center Drive
Daleville, VA 24083

Profile Manager Name: Tony Zerrilla

Profile Manager Phone: (540) 928-2102

Profile Manager Email: tzerrilla@botetourtva.gov

Project Name: FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Project Contact Name: Ken McFadyen

Project Contact Phone: (540) 928-2145

Project Contact Email: kmcfadyen@botetourtva.gov

Project Location: 57 S Center Drive
Daleville, VA 24083-3001

Project Service Area: Botetourt County, Buchanan Town, Fincastle Town, Troutville Town

Total Requested Amount: \$3,084,796.00

Required Annual Audit Status: Accepted

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$3,084,796.00	\$4,824,937.00	\$7,909,733.00
Construction	\$2,673,796.00	\$2,838,638.00	\$5,512,434.00
Construction Related Soft Costs	\$0.00	\$1,343,453.00	\$1,343,453.00
Other: Installs and Long Drops	\$411,000.00	\$642,846.00	\$1,053,846.00
Total:	\$3,084,796.00	\$4,824,937.00	\$7,909,733.00

Budget Narrative:

This VATI grant proposal seeks to deliver Fiber-to-the-Home (FTTH) broadband connectivity to 1,901 addresses utilizing the construction of 243 miles of main fiber, 27 miles of new conduit at a projected total cost of \$7,909,733 or \$4,161 per address served. Botetourt County and Lumos are proposing to match the VATI funding request with \$4,824,937 (61% of the total project cost) for a total VATI request of \$3,084,796 (\$1,623 per address). Botetourt County and Lumos Networks have developed what we hope is a competitive proposal that is part of a broader strategy to achieve universal coverage to the remaining 9,181 addresses in Botetourt County currently unserved with broadband fiber connectivity.

Questions and Responses:

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

1. Project Description and Need

Describe 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:

Botetourt County and Lumos Networks appreciate the opportunity to submit this Virginia Telecommunications Initiative (VATI) proposal to achieve universal coverage of broadband Fiber-to-the-Home service throughout the remainder of Botetourt County in areas currently unserved by at least 25/3 connectivity. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

This VATI grant proposal seeks to deliver Fiber-to-the-Home (FTTH) broadband connectivity to 1,901 addresses utilizing the construction of 243 miles of main fiber, 27 miles of new conduit at a projected total cost of \$7,909,733 or \$4,161 per address served. Botetourt County and Lumos are proposing to match the VATI funding request with \$4,824,937 (61% of the total project cost) for a total VATI request of \$3,084,796 (\$1,623 per address).

Universal broadband fiber connectivity is currently lacking for a remaining 9,181 addresses in Botetourt County that can be served by Lumos Networks. Of this count of 9,181 addresses lacking broadband fiber connectivity of minimum 25/3 service, Lumos has received ACAM funding to serve 2,639 addresses with service exceeding 25/3; 4,641 addresses are currently served by another provider with cable service (not fiber); Lumos plans to construct fiber infrastructure to these cable customers separately from this VATI proposal. These non-VATI fiber broadband expansions represent an investment by Lumos and ACAM of a combined \$24,252,227.

This VATI proposal seeks to deliver fiber connectivity to the 1,901 remaining addresses. Of this count of 1,901 addresses, 1,278 addresses currently have service less than 25/3 (i.e. enhanced DSL cooper service). A combined 623 addresses, principally in the Eagle Rock, Springwood, and Blue Ridge communities of Botetourt County, currently have service less than 10/1 service. Among these addresses, this VATI expansion project seeks to serve 1,852 residential addresses, 38 businesses, 6 non-residential addresses (churches), and 5 community anchors. This VATI proposal represents a total project cost of \$7,909,733, of which Botetourt County and Lumos are proposing to match the VATI funding request with \$4,824,937 (61% of the total project cost) for a total VATI request of \$3,084,796.

This VATI proposals follows two previous successful VATI projects and a DHCD-funded CARES expansion project in Botetourt County serving a total of approximately 1,500 addresses and culminates the County's work to deliver broadband connectivity to every residence and business, begun in 2017 with the broadband demand study.

The project map is attached.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

2. List existing providers in the proposed project area and the speeds offered. Please do not include satellite. Describe your outreach efforts to identify existing providers and how this information was compiled with source(s).

Answer:

There are three principal ISPs in Botetourt County's proposed project area: Comcast, Verizon, and Lumos. Botetourt County understands that Verizon operates a DSL network offering 10/1 service. We further understand this ISP is not offering service to new customers and is only offering phone service; the 10/1 service is only for existing customers. This VATI proposal seeks to deliver fiber broadband connectivity to these DSL covered areas.

Botetourt County and Lumos also understand Comcast offers up to 800/5 service in the county; however, this level of service lacks upload capabilities but meets the VATI standard of minimum 25/3 speeds. We have therefore eliminated the overbuild of the Comcast-served area to within the 10% allowed under the VATI guidelines. There are 113 addresses in the Blue Ridge area that have access to Comcast 800/5 service but are included in this project's count of 1,901 addresses.

Botetourt County has met countless times with Lumos Networks since 2016 to arrive at the point where an universal coverage VATI proposal can be prepared and submitted to the Commonwealth of Virginia. The County worked successfully with the Craig-Botetourt Electric Cooperative (CBEC) in recent years and completed a successful VATI project to serve 621 addresses with CBEC as the service provider. Dominion Energy is working currently to deliver fiber connectivity in Botetourt County north of Buchanan to approximately 350 addresses; Botetourt County supports Dominion's project and is actively engaged with it.

Outreach efforts with other internet service providers (ISPs) have occurred most recently at the regional level. The Roanoke Valley Broadband Authority (RVBA) organized two meetings during the summer of 2021 with all known ISPs in the Roanoke Valley market, including those with a presence in Botetourt, to encourage collaboration and the development of VATI proposals for this round of funding. The initial meeting occurred on June 28, 2021 among the RVBA's localities, including Botetourt, to begin VATI proposal discussions. On July 21, 2021, a follow-up meeting occurred when ISPs were asked to provide formal requests to seek VATI funding with the region's localities and through the RVBA. Botetourt County provided intent to apply for VATI funding letters with Lumos Networks, CBEC, and Briscnet. Lumos and Botetourt further met to develop to a VATI proposal to deliver universal broadband coverage to the remaining 1,901 addresses in Botetourt not covered by federally-funded service areas or currently with broadband availability.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

3. Describe if any areas near the project have received funding from federal grant programs, including but not limited to Connect America Funds II (CAF II), ACAM, ReConnect, Community Connect, and Rural Digital Opportunity Funds (RDOF). If there have been federal funds awarded near the project area(s), provide a map showing these areas, verifying the proposed project area does not conflict with these areas. Do not include areas awarded to satellite broadband providers. Label Map: Attachment 2 – Documentation on Federal Funding Area.

Answer:

Lumos has been awarded with ACAM funding to provide service to 2,639 in Botetourt County. Lumos plans to deliver service connectivity greater than 25/3 speeds in the ACAM project area. The 2,639 addresses to be served by LUMOS through ACAM are not included in this VATI proposal.

Dominion Energy and the Bath-Alleghany-Rockbridge Electric Cooperative, through the Rural Electric Co-Op Consortium, are administering RDOF and CAF-II support to deliver broadband connectivity to approximately 350 addresses in northern Botetourt County adjacent to the Rockbridge County line. This project is not included in this VATI project area.

There are awards to satellite providers that will not be addressed in this proposal.

4. Describe if any blocks awarded in Rural Digital Opportunity Fund (RDOF), excluding those awarded to satellite internet service providers, are included in the VATI application area. If RDOF areas awarded to terrestrial internet service providers are included in the VATI application, provide a map of these areas and include information on number of passings in RDOF awarded areas within the VATI application area, and Census Block Group ID number for each block group in the project area. Label Attachment: Attachment 3 – RDOF Awarded Areas Form in VATI Area

Answer:

There is a Rural Digital Opportunity Fund (RDOF) award to a terrestrial ISP- Co-op Connections Consortium (Bath-Allegheny- Rockbridge Electric Cooperative (BARC)) in Botetourt County, including census block # 510230402002. BARC's awarded RDOF area is not included in this VATI proposal project area. The RDOF area is reflected in the project map available at <https://web.botetourtva.gov/broadband/>. Attachment 3 is not needed.

5. Overlap: 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 below 25/3 mbps and with less than 25% service overlap within the project area for wireless projects and 10% for wireline projects. Describe any anticipated service overlap with current providers within the project area. Provide a detailed explanation as to how you determined the percentage overlap. Label Attachment: Attachment 4 – Documentation Unserved Area VATI Criteria.

Answer:

Botetourt County and Lumos understand Comcast offers up to 800/5 service in the county; however, this level of service lacks upload capabilities but meets the VATI standard of minimum 25/3 speeds. We have therefore eliminated the overbuild of the Comcast-served area to within the 10% allowed under the VATI guidelines. There are 113 addresses in the Blue Ridge area that have access to Comcast 800/5 service but are included in this project's count of 1,901 addresses, representing an overlap of 5.9%. To determine the percentage overlap, Lumos used the form 477 data from Comcast and Comcast address portal to verify if services were available to the subject addresses. Lumos performed this exercise for over 200 addresses in the Blue Ridge coverage area to confirm the exact location of the 800/5 service.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

6. Total Passings: Provide the number of total serviceable units in the project area. Applicants are encouraged to prioritize areas lacking 10 Megabits per second download and 1 Megabits per second upload speeds, as they will receive priority in application scoring. For projects with more than one service area, each service area must have delineated passing information. Label Attachment: Attachment 5 – Passings Form.
- Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area. (Up to 10 points for businesses and community anchor institutions)
 - If applicable, of the total number of RDOF passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.
 - If applicable, provide the number of passings that will require special construction costs, defined as a one-time fee above normal service connection fees required to provide broadband access to a premise . Describe the methodology used for these projections.
 - If applicable, provide the number of passings included in the application that will receive broadband access because special construction costs have been budgeted in the VATI application. Describe the methodology used for determining which passings with special construction costs were budgeted in the application.
 - Provide the number of passings in the project area that have 10/1 mbps or less. Describe the methodology used for these projections. (up to 15 points)

Answer:

- Of the total 1,901 addresses to be passed, this VATI expansion project seeks to serve 1,852 residential addresses, 38 businesses, 6 non-residential addresses (churches), and 5 community anchors.
- RDOF passings- There are no RDOF passings.
- A total of 1,432 addresses in this VATI proposal include a long drop. In the Springwood project area, 158 addresses require special construction with long drops. The Springwood area has a median family income of \$59,911 compared to Botetourt County's overall median family income of \$71,110. The Springwood community's median family income is 84.3% that of the County's overall median family income. Generally, long drops not covered by Lumos's normal service connection fee. Drops in excess of 500 linear feet, from the main conduit to the served structure, are considered to be long drops.
- Are we budgeting all special construction costs as VATI project expense? This VATI proposal includes \$405,256 for long drops for the 1,432 addresses requiring them. By covering the long drops as a VATI project expense, especially in the Springwood community where there are at least 158 addresses requiring long drops, Botetourt County and Lumos Networks are addressing digital equity and providing service availability to those households that may not otherwise be able to afford the additional cost to connect to the network.
- Currently, 1,453 passings (76.4% of all project addresses) in the project area have less than 10/1 service.
- For wireless projects only:** Please explain the ownership of the proposed wireless infrastructure. Please describe if the private co-applicant will own or lease the radio mast, tower, or other vertical structure onto which the wireless infrastructure will be installed.

Answer:

N/A

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

8. Speeds: Describe the internet service offerings, including download and upload speeds, to be provided after completion of the proposed project. 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. List the private co-applicant's tiered price structure for all speed offerings in the proposed project area, including the lowest tiered speed offering at or above 25/3 mbps. (up to 10 points)

Answer:

Service Offering: Consumers will have access to Lumos Networks' complete portfolio of symmetrical fiber broadband product profiles. Residential customers may select the best fit for their unique household requirements for work-at-home, learn-at-home, gaming, streaming, or basic Internet applications. All fiber Internet services allow for unlimited broadband data usage consumption, without throttling or data capping, and there are no contracts or term commitments. Discounts are applicable when fiber broadband is bundled with voice or entertainment services. Fiber broadband speed packages are competitively priced as part of a strong value proposition centered on fast, reliable connections and 24/7 local support. Residential fiber broadband prices range from \$44.95 for symmetrical 200/200 mbps broadband service to \$99.95 for symmetrical 1Gig/1Gig service. Business customers may customize pricing by bundling services and other parameters, and may choose fiber broadband profiles up to 8Gig/8Gig symmetrical. Speeds are based on dedicated bandwidth.

The response to Question #8 describes the technology used for this project. Lumos Networks will utilize part of its existing fiber infrastructure to extend its redundant fiber network into the project area. Lumos currently provides service utilizing its partnership with Adtran for its Access Networks equipment. Utilizing ERPS ring topology, the solution provides redundant network paths to the access equipment in the field. Lumos utilizes the Adtran TA5000 access platform that provides a multi-solution platform that includes voice, DSL and GPON. For this solution, we will utilize the GPON cards in the access equipment to service the area. Lumos Networks will build 59 miles of fiber to service all the addresses. From the GPON card, Lumos will build fiber to a local convergence point (LCP) and place our splitters in this cabinet which will service up to 32 customers per splitter. From the LCP cabinet towards the customers, we will build distribution fiber out that will be splice in using multiports. The size of the multiports will vary depending on the expected number of homes in the area ranging from 4 up to 12 ports. From the multiport, Lumos will install a single fiber drop to each customer that will be plugged into the fiber Optical Network Terminal (ONT). Majority of Lumos' ONT are indoor and we have capabilities of offering up to 48 hours of battery backup for residential customers. Using this same format of deployment, Lumos Networks currently offers service to over 100,000 addresses that can receive the fiber services and up to 1 GIG speeds.

9. Network Design: 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. Provide a detailed explanation of how this information was determined with sources. Provide information on how capacity for scalability, or expansion, of how the network can adapt to future needs. If using a technology with shared bandwidth, describe how the equipment will handle capacity during peak intervals. For wireless projects, provide a propagation map for the proposed project area with a clearly defined legend for scale of map. Label Map: Attachment 6 – Propagation Map Wireless Project.

Answer:

Lumos Networks will utilize part of its existing fiber infrastructure to extend its redundant fiber network to the project area. Lumos currently provides service utilizing its partnership with Adtran for its Access Network equipment. Utilizing ERPS ring topology, the solution provides redundant network paths to the access equipment in the field. Lumos utilizes the Adtran TA5000 access platform that provides a multi-solution platform that includes voice, DSL, and Gigabit Passive Optical Networks (GPON).

For this solution, we will utilize the GPON cards in the access equipment to serve the project area. Lumos Networks will build 243 miles of conduit to serve all the addresses. From the GPON card, Lumos will build fiber to a local convergence point (LCP) and place our splitters in this cabinet which will serve up to 32 customers per splitter. From the LCP cabinet to the customers, we will build distribution fiber out that will be spliced using multiports. The size of the multiports will vary depending on the expected number of homes in the area ranging from 4 up to 12 ports. From the multiport, Lumos will install a single fiber drop to each customer that will be plugged into the fiber Optical Network Terminal (ONT). The majority of Lumos's ONTs are indoor and we have capabilities of offering up to 48 hours of battery backup for residential customers. Using this same format of deployment, Lumos Networks currently offers service to over 100,000 addresses that can receive the fiber services and up to 1 GIG speeds.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

10. Explain how the proposed project achieves universal broadband coverage for the locality or fits into a larger plan to achieve universal broadband coverage for the locality. If applicable, explain the remaining areas of need in the locality and a brief description of the plan to achieve universal broadband coverage. (up to 50 points)

Answer:

Universal broadband fiber connectivity is currently lacking for a remaining 9,181 addresses in Botetourt County that can be served by Lumos Networks. Generally, Lumos has the ability to provide connectivity throughout Botetourt County. Of this count of 9,181 addresses lacking broadband fiber connectivity of minimum 25/3 service, Lumos has received ACAM funding to serve 2,639 addresses with service exceeding 25/3; 4,641 addresses, respectively, are currently served by another provider with cable service (not fiber); Lumos plans to construct fiber infrastructure to these cable customers separately from this VATI proposal. These non-VATI fiber broadband expansions represent an investment by Lumos and ACAM of a combined \$24,252,227.

This VATI proposal seeks to deliver fiber connectivity to the 1,901 remaining addresses. Of this count of 1,901 addresses, 1,278 addresses currently have service less than 25/3 (i.e. enhanced DSL cooper service). A combined 623 addresses, principally in the Eagle Rock, Springwood, and Blue Ridge communities of Botetourt County, currently have service less than 10/1 service. Among these addresses, this VATI expansion project seeks to serve 1,852 residential addresses, 38 businesses, 6 non-residential addresses (churches), and 5 community anchors.

In 2017, Botetourt County estimated that approximately 30% of homes lacked broadband connectivity. There are approximately 15,000 residential structures in the county, which suggested in 2017 that 4,500 of these structures lacked broadband connectivity. In further reviewing the availability of fiber infrastructure, we have learned that the estimate is approximately twice what was determined in 2017, 4,500 to 9,181 addresses, respectively. In working with our partners with the Roanoke Valley Broadband Authority, Department of Housing & Community Development, Commonwealth of Virginia, we have canvassed the county to determine where service is unavailable. Also, through frequent press releases, reports during Board of Supervisors meetings, and the formation and meeting of the Botetourt County Broadband Commission, we have raised awareness of the County's emphasis on delivering broadband connectivity to our residents and businesses. Our County website has included a portal for residents to provide their physical address and information, including broadband lack of availability, that we have in turn used to locate "dead spots." In 2018, Botetourt County convened a Broadband Summit with national broadband experts to raise awareness and to address needs and opportunities. These and many other efforts have resulted in two previously funded VATI projects serving 1,169 addresses and this proposal to serve an additional 1,901 addresses. Botetourt County leadership has also testified to the State Corporation Commission to provide support to Dominion Energy's broadband expansion project in northern Botetourt County to serve yet another 350 addresses.

Going forward, the Botetourt County Department of Community Development is drafting Comprehensive Plan and ordinance amendments that would require developers to require broadband infrastructure in subdivisions and residential and commercial developments. In the attachments is a letter of support from Nicole Pendleton, Botetourt County's director of community development, outlining this commitment to ensure that the broadband infrastructure commitments made today are enhanced in the future by maintaining universal coverage throughout the County.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

11. Project Readiness

Describe the current state of project development, including but not limited to: planning, preliminary engineering, identifying easements/permits, status of MOU or MOA, and final design. Prepare a detailed project timeline or construction schedule, identifying specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Applicants must include Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) between applicants (drafts are allowable). Label Attachments: Attachment 7 – Timeline/Project Management Plan; Attachment 8 – MOU/MOA between Applicant/Co-Applicant; (up to 20 points)

Answer:

The project area has passed initial engineering reviews and financial commitments within Lumos Networks and Botetourt County has provided its letter of funding commitment. Final design is pending funding award. In the Excel attachments, the timeline and project management plan is included that lays out all the major task, staffing, start and completion dates.

The Memorandum of Agreement between Lumos Networks and Botetourt County is drafted and ready for approval pending a favorable VATI decision.

12. Has the applicant or co-applicant received any VATI grants? If so, provide a list of these grants, with a detailed summary of the status of each.

Answer:

In 2019, Botetourt County and the Craig-Botetourt Electric Cooperative (CBEC) initiated a VATI expansion to 621 addresses in western Botetourt County adjacent to CBEC's electric service territory. The DHCD/ VATI project number is 2019-BC-001. The VATI grant of \$758,998 was matched with \$1,201,999 in Botetourt County and CBEC funds for a 61% local/private match to serve the 621 addresses. The total project cost per address served is \$3,167 and the VATI award per address served is \$1,222. The project was closed out earlier in 2021 after attaining substantial completion in October/November 2020.

Currently, Botetourt County and Lumos Networks are administering a VATI expansion to 548 addresses in the Buchanan/Springwood area of Botetourt County. The DHCD/ VATI project number is 2021-003. The VATI grant of \$1,364,337 is matched with \$1,254,000 in Botetourt County and Lumos funds for a 52% local/private match to serve 548 addresses. The total project cost per address served is \$4,778 and the VATI award per address served is \$2,490.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

13. Matching funds: Complete the funding sources table indicating the cash match and in-kind resources from the applicant, co-applicant, and any other partners investing in the proposed project (VATI funding cannot exceed 80 percent of total project cost). In-kind resources include, but are not limited to: grant management, acquisition of rights of way or easements, waiving permit fees, force account labor, etc. Please note that a minimum 20% match is required to be eligible for VATI, the private sector provider must provide 10% of the required match. If the private co-applicant cash match is below 10% of total project cost, applicants must provide financial details demonstrating appropriate private investment. Label Attachments: Attachment 9 - Funding Sources Table; Attachment 10 – Documentation of Match Funding

Answer:

Potential VATI Funding Request	Address	Cost	Contribution	Cost Area	Address	Total Cost	Lumos Portion	BOCO Portion	VATI
1,278	Blue Ridge Fiber Construction	\$ 4,146,823	\$ 1,278,000	Base Fiber Construction	1,278	\$ 4,146,823	\$ 1,251,562	\$ 1,617,261	Blue Ridge Fiber Construction
356	Blue Ridge Fiber Construction	\$ 1,832,503	\$ 356,000	Base Fiber Construction	356	\$ 1,832,503	\$ 356,000	\$ 761,827	Blue Ridge Fiber Construction
267	Springwood-Buchanan Area	\$ 267,000	\$ 267,702	Install and Equipment cost	267	\$ 267,702	\$ 341,859	\$ 648,590	Springwood-Buchanan Area
		\$ 197,820	\$ 197,820	Long Drop Cost		\$ 197,820	\$ 252,950	\$ 405,256	
		\$ 123,603	\$ 123,603	Total Build Cost		\$ 123,603	\$ 158,050	1,901	
				Total Cost Per Address			\$ 7,909,733	\$ 2,222,423	\$ 2,602,514
		\$ 4,161	\$ 1,169			\$ 1,369	\$ 1,623		

Percentage Contributions Cost Area

% Lumos % BOCO % VATI Request Base Fiber Construction

30.8% 30.2% 39.0% Blue Ridge Fiber Construction

19.4% 41.6% 39.0% Springwood-Buchanan Area

30.5% 30.5% 39.0% Install and Equipment cost

30.5% 30.5% 39.0% Long Drop Cost

30.5% 30.5% 39.0% Total Build Cost

28.1% 32.9% 39.0%

14. Leverage: Describe any leverage being provided by the applicant, co-applicant, and partner(s) in support of the proposed project. (up to 10 points)

Answer:

Botetourt County's Office of Communications will collaborate with Broadband Marketing initiatives to further engagement with the community. This will be accomplished by social media marketing, utilizing traditional media outlets and also working with influencers within the community. The emphasis for communications will be placed on informing the Botetourt community of project progress with delivering connectivity and celebrating milestone successes. Botetourt County Libraries has a robust online presence and can incorporate additional programming as connectivity increases to the 1,901 addresses. <https://web.botetourtva.gov/library/online-library/>

15.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Marketing: Describe the broadband adoption plan.

a. Explain how you plan to promote customer take rate, including marketing activities, outreach plan, and other actions to reach the identified serviceable units within the project area. Provide the anticipated take rate and describe the basis for the estimate. (up to 10 points)

b. Describe any digital literacy efforts to ensure residents and businesses in the proposed project area sufficiently utilize broadband. Please list any partnering organizations for digital literacy, such as the local library or cooperative extension office.

Answer:

a. Lumos Networks will employ a robust marketing communications program designed to inform, educate, and promote fiber services to potential customers. Various marketing instruments create integrated marketing campaigns that communicate at various touchpoints before, during, and after fiber Internet services become available. Elements integrated marketing campaigns utilize printed and digital assets to drive the greatest opportunity for acceptance, and are supplemented with traditional marketing programs that include press releases, social media marketing, direct mail, broadcast, out of home, and print communication. Botetourt County's Office of Communications will collaborate with Broadband Marketing initiatives to further engagement with the community. This will be accomplished by social media marketing, utilizing traditional media outlets and also working with influencers within the community.

Pre-Construction Neighborhood Activation Activities

Letters, post cards, street teams and a digital assets communicate multiple times with applicable addresses within a new fiber available service area. The communications educate and inform consumers on the benefits of fiber technology, and transition to promotional offers as we bring the "Network of the Future" to their respective neighborhoods.

Communication

Primary Purpose – Educate, Inform, and Promote

Initial Correspondence Letter

Makes the introduction of the brand and the project

Door Hanger

Creates awareness of construction activity, and presents an opportunity for gathering email addresses for future marketing communications

Email, landing pages or special areas on website

Digital communications to ensure reach, information, and capture interest

Construction Crew Handout

Create awareness in field, and direct users where to find more information

Outbound Campaigns

Calling potential users to inform and promote

Construction Direct Mail

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Reminder communication of construction

Press Release & Social Media Marketing

Announce, inform, educate, and promote

Post-Construction Neighborhood Activation Activities

After fiber construction is complete in a new neighborhood, communication efforts transition to integrated marketing outreach programs. Similar tactics may be used to attract both consumer and business prospects, and messaging can be tailored to include area specific offers or special promotions. Communications are supported by a comprehensive digital presence and mobile-friendly website that showcases company, product, and technology information.

Communication

Primary Purpose – Acquisition of new customers

Email

Digital communications which can be customized

Direct mail

Creates visual communication

Blog, Testimonial and Social Media Strategy

Blogs or feature stories promote the use of broadband in a digital environment

Street teams

Communication of special offers in specific areas

Outbound Sales

Calling campaigns

Events/Sponsorships/OOH/Broadcast/Print

Advertising and an array of community and event sponsorships

b. Botetourt County Libraries deliver several digital literacy programs through the four branch libraries located in Botetourt County. Inherent to digital literacy is connectivity, which this VATI proposal in part seeks to deliver as part of a comprehensive universal coverage strategy. The Botetourt County Library Director has provided a letter of support and the provided web link outlines the County's digital literacy programs- <https://web.botetourtva.gov/library/kids/kids-digital-books/>. These digital literacy programs will be further promoted through Botetourt County's Office of Communications that will collaborate with broadband marketing initiatives to further engagement with the community. This will be accomplished by social media marketing, utilizing traditional media outlets and also working with influencers within the community.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

16. Project Management: Identify key individuals who will be responsible for the management of the project and provide a brief description of their role and responsibilities for the project. Present this information in table format. Provide a brief description of the applicant and co applicant's history and experience with managing grants and constructing broadband communication facilities. Please attach any letters of support from stakeholders. If the applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality. Attachment 11 – Letters of Support.

Answer:

Lumos Organization

Diego Anderson, Senior Vice President and General Manager

Diego Anderson supports engineering, operations, sales, marketing, and service delivery.

From Charleston, SC

B.S. in Electrical Engineering Technology- South Carolina St.

Masters in Administration- Central Michigan University.

More than 25 years of experience in various business management and executive leadership roles.

David Smith

Vice President of Technical Operations and Planning

David Smith is responsible for network and field operations, engineering, outside plant, and project management.

From Covington, VA

B.S. in Information Systems Management- Bridgewater College

MBA from Averett University

More than 10 years of industry experience along with various business management roles.

John Spilman

SR. Director of Product Management

John Spilman leads product lifecycle management and market analytics for [Segra's Lumos Networks](#) and NorthState brand service offerings.

From West Chester, PA

B.A. in Economics- Randolph-Macon College

Various leadership roles within product development, operations, regulatory affairs, and finance successfully supporting the launch and management of new fiber-based services and applications.

Karen Hoch

Director of Marketing

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Karen Hoch has extensive experience as a marketing leader creating integrated programs to enhance brand loyalty and drive new business.

From North Carolina

B.S.B.A. in Business- Salem College.

Heidi Padgett

Director of Sales

Heidi Padgett leads the organization in supporting new sales opportunities across residential and business segments throughout the [Lumos Networks](#) and NorthState service areas.

From Bedford, VA

More than 20 years of telecom industry experience in various customer support and sales leadership roles.

Stephanie Houghtaling

Director of Customer Care

Stephanie Houghtaling leads the Care and Service Delivery teams for [Lumos Networks](#) and NorthState, both divisions of [Segra](#).

From Piedmont Triad of NC home

PMP certification

B.A. - East Carolina University

Master's degree- Georgia State University.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

17. Project Budget and Cost Appropriateness

Budget: Applicants must provide a detailed budget that outlines how the grant funds will be utilized, including an itemization of equipment, construction costs, and a justification of proposed expenses. If designating more than one service area in a single application, each service area must have delineated budget information. For wireless projects, please include delineated budget information by each tower. Expenses should be substantiated by clear cost estimates. Include copies of vendor quotes or documented cost estimates supporting the proposed budget. Label Attachments: Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates. (up to 10 points)

Answer:

This VATI grant proposal seeks to deliver Fiber-to-the-Home (FTTH) broadband connectivity to 1,901 addresses utilizing the construction of 243 miles of main fiber, 27 miles of new conduit at a projected total cost of \$7,909,733 or \$4,161 per address served. Botetourt County and Lumos are proposing to match the VATI funding request with \$4,824,937 (61% of the total project cost) for a total VATI request of \$3,084,796 (\$1,623 per address).

Universal broadband fiber connectivity is currently lacking for a remaining 9,181 addresses in Botetourt County that can be served by Lumos Networks. Of this count of 9,181 addresses lacking broadband fiber connectivity of minimum 25/3 service, Lumos has received ACAM funding to serve 2,639 addresses with service exceeding 25/3; 4,641 addresses are currently served by another provider with cable service (not fiber); Lumos plans to construct fiber infrastructure to these cable customers separately from this VATI proposal. These non-VATI fiber broadband expansions represent an investment by Lumos and ACAM of a combined \$24,252,227.

Below is a project budget according to object.

Project Estimate by Object Engineering \$ 258,841 3.3% Pole Work \$ 964,165 12.2% Crossings \$ 120,447 1.5%
Construction \$ 5,512,434 69.7% Installs & Network Equipment \$ 1,053,846 13.3%

Total = \$ 7,909,733 100.0%

18. The cost benefit index is comprised of state cost per unit passed. Individual cost benefit scores are calculated and averaged together to create a point scale for a composite score. Provide the following:

a. Total VATI funding request

b. Number of serviceable units
(up to 125 points)

Answer:

a. Total VATI funding request - \$3,084,786

b. Number of serviceable units - 1,901

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

19. Commonwealth Priorities (Up to 40 points)

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:

a. Businesses, community anchors, or other passings in the proposed project area that will have a significant impact on the locality or region because of access to broadband.

b. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.

c. Digital equity efforts to ensure low to moderate income households in the proposed project area will have affordable access to speeds at or above 25/3 mbps.

Answer:

Botetourt County and Lumos Networks are principally addressing the Commonwealth's priorities through identifying opportunities to deliver digital equity to low to moderate income households in the proposed project area. Specifically, the northern section of Botetourt County generally has a median family income approximately 84% that of Botetourt County's overall median family income. Botetourt County's median family income is \$71,110 according to the 2020 Census. The Buchanan/ Springwood census tract in the northern section of the county has a median family income of \$59,911, which is 84% that of the overall median family income. In terms of how we are providing digital equity, the VATI project budget includes an allocation of \$405,256 for long drops. Lumos Network's policy for long drops is to request an additional installation fee from subscribers whose structures are located more than 500 feet from the main conduit. For this project, we have identified 1,432 of the 1,901 addresses to be served as requiring a long drop. In the Springwood sub-project area alone, 158 addresses require special construction with long drops. It is a reasonable expectation that many of these addresses represent households that have median family incomes at or below the Buchanan/ Springwood median family income of \$59,911. These households would otherwise face a disproportionate expense to connect to essential broadband services without the special construction and long drops expense being covered as a VATI project expense.

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

20. Additional Information

Provide the two most recent Form 477 submitted to the FCC, or equivalent, as well as point, polygon, and, for wireless providers, RSSI shapefiles for the project area **in .zip file form**. With attachments 17 through 20, attach any other information 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 - Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area
- c. Attachment 16 - For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area
- d. Attachment 17 – XXXXXXXX
- e. Attachment 18 – XXXXXXXX
- f. Attachment 19 – XXXXXXXX
- g. Attachment 20 – XXXXXXXX

Answer:

Botetourt County and Lumos Networks appreciates the opportunity to submit this VATI proposal to serve 1,901 in the county. This project is an integral and vital component of the overall strategy to achieve universal coverage throughout the County. Local and provider match is 61% to the overall VATI project budget. This VATI request for \$3,084,796 within the overall VATI project budget of \$7,909,733 sets the stage for the further implementation of Lumos Network's total investment of \$24,252,277. We are requesting VATI support for the portion of this overall strategy to achieve fiber broadband connectivity for the remaining 9,181 addresses with those addresses that meet VATI eligibility.

Broadband expansion and fiber connectivity for every residence and business has been a top priority for Botetourt County leadership since 2016. We have come a long way in developing the initial 2017 demand study to holding a successful Broadband Summit, which included Department of Housing & Community Development participation, to the most recent successful VATI projects serving 1,169 addresses. A final VATI project to serve 1,901 addresses represents a great capstone to solving a problem that Botetourt citizens, businesses, and the Commonwealth of Virginia are acutely aware needs to be solved. We appreciate the Commonwealth's partnership.

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap914202161839.pdf

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Documentation of Federal Funding (CAF/ACAM/USDA/RDOF, etc...) in and/or near proposed project area.

Attachment2DocumentationofFederalFundingArea914202162305.pdf

RDOF Awarded Areas included in VATI Application (Use template provided)

Attachment3RDOFAwardedAreasIncludedintheVATIApplication914202162322.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationUnservedAreaVATICriteria914202165155.pdf

Passings Form (Use template provided)

Attachment5PassingsForm914202160753.pdf

Timeline/Project Management Plan

Attachment7TimelineProjectManagementPlan914202163718.pdf

MOU/MOA between applicant/co-applicant (can be in draft form)

Attachment8MOUMOAbetweenBotetourtLumos914202163343.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTable914202161643.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFunding914202163140.pdf

Letters of Support

Attachment11LetterofSupport914202163122.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts914202163959.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates914202165606.pdf

Application to DHCD Submitted through CAMS

Botetourt County

FY 22 Botetourt/ Lumos Networks VATI Universal FTTH Deployment

Two most recent Form 477 submitted to the FCC or equivalent

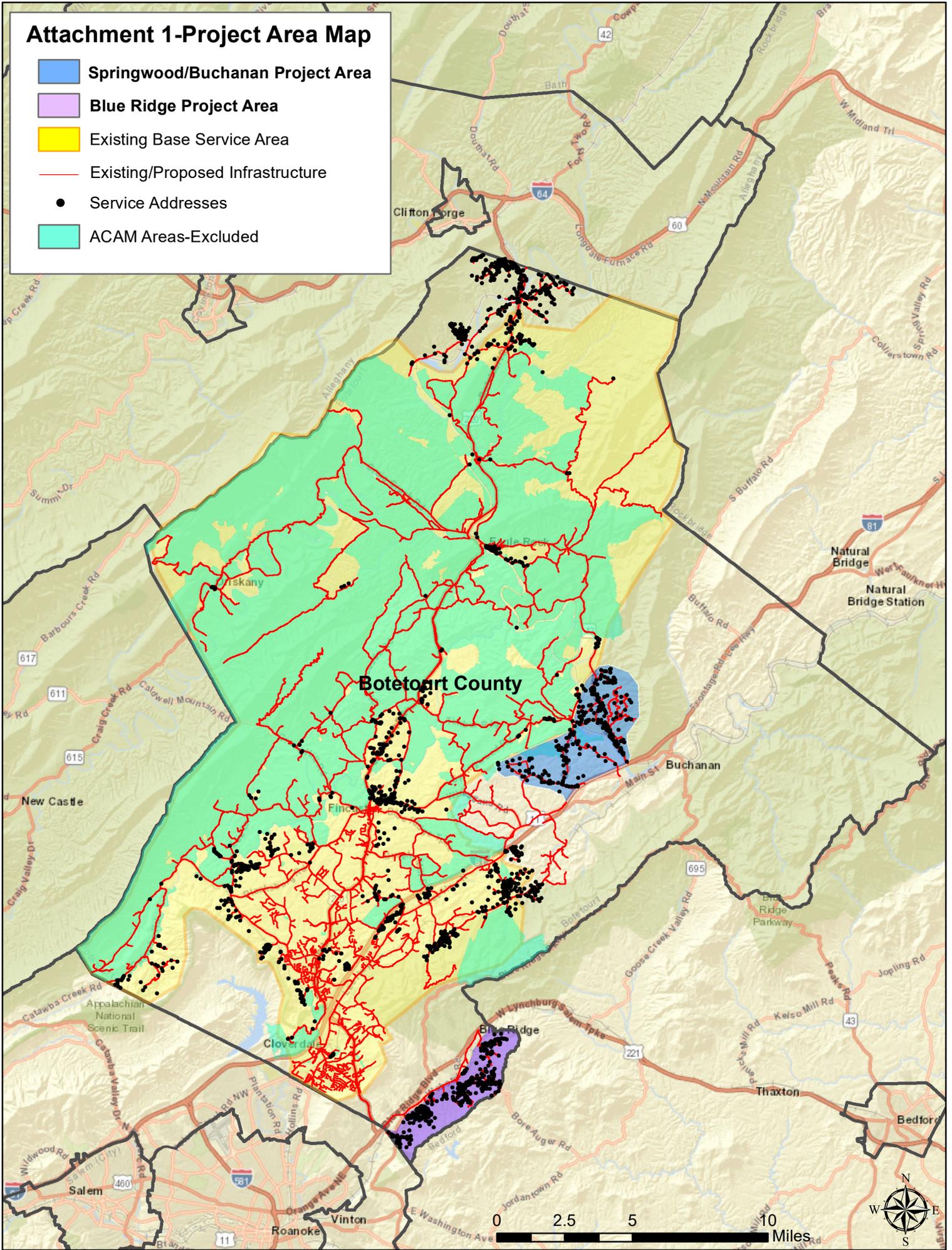
Attachment14TwomostrecentForm477submittedtotheFCC914202164552.pdf

Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area

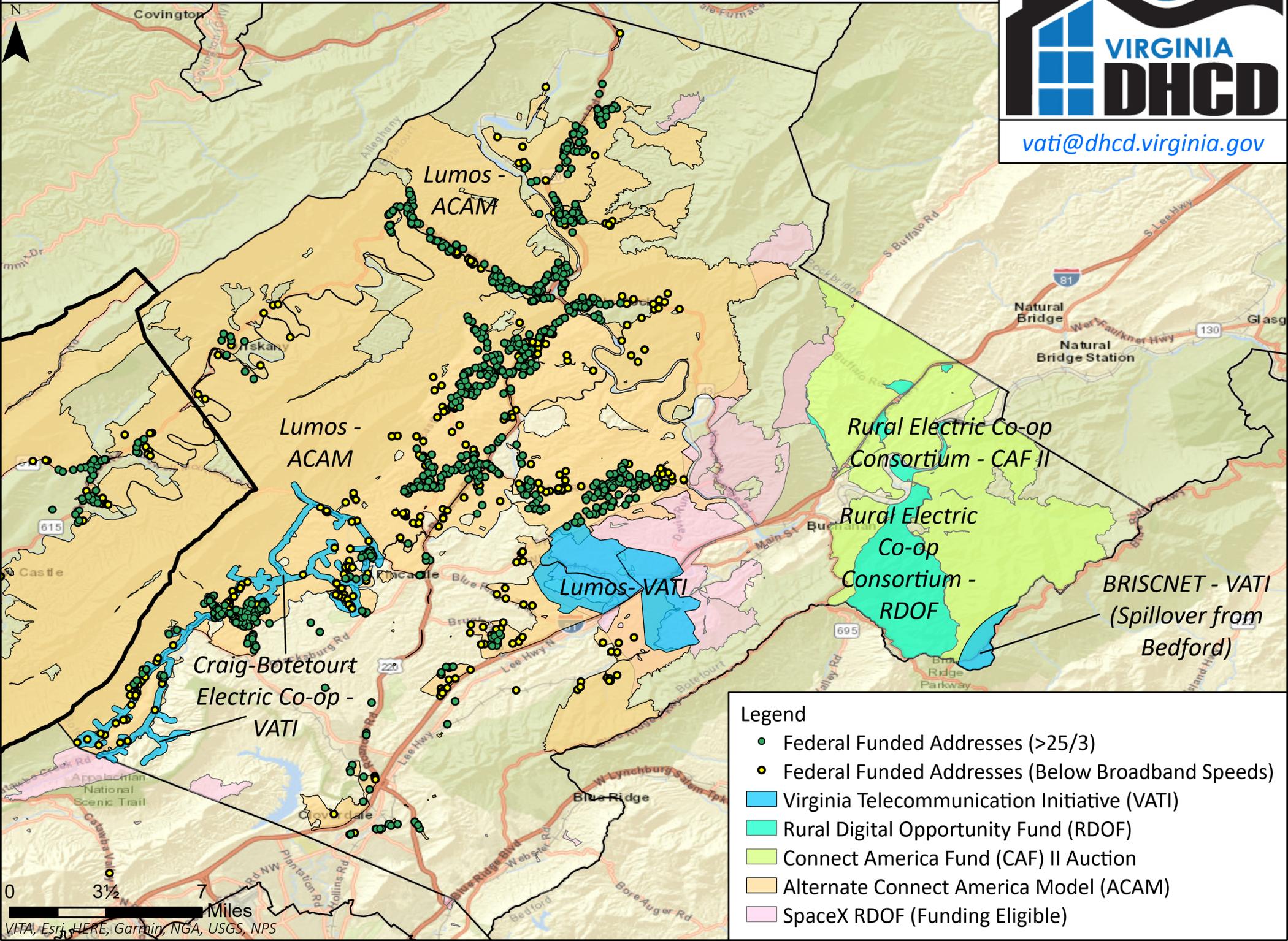
Attachment15PointandPolygonShapefiles914202164757.zip

Attachment 1-Project Area Map

-  Springwood/Buchanan Project Area
-  Blue Ridge Project Area
-  Existing Base Service Area
-  Existing/Proposed Infrastructure
-  Service Addresses
-  ACAM Areas-Excluded



Broadband Funding in Botetourt County



Legend

- Federal Funded Addresses (>25/3)
- Federal Funded Addresses (Below Broadband Speeds)
- Virginia Telecommunication Initiative (VATI)
- Rural Digital Opportunity Fund (RDOF)
- Connect America Fund (CAF) II Auction
- Alternate Connect America Model (ACAM)
- SpaceX RDOF (Funding Eligible)

Attachment 3 – RDOF Awarded Areas Included in the VATI Application

There are no RDOF areas included in the VATI application

Attachment 4 – Documentation Unserved Area VATI Criteria

There are three principal ISPs in Botetourt County's proposed project area: Comcast, Verizon, and Lumos. Botetourt County understands that Verizon operates a DSL network offering 10/1 service. We further understand this ISP is not offering service to new customers and is only offering phone service; the 10/1 service is only for existing customers. This VATI proposal seeks to deliver fiber broadband connectivity to these DSL covered areas.

Botetourt County has met countless times with Lumos Networks since 2016 to arrive at the point where an universal coverage VATI proposal can be prepared and submitted to the Commonwealth of Virginia. The County worked successfully with the Craig-Botetourt Electric Cooperative (CBEC) in recent years and completed a successful VATI project to serve 621 addresses with CBEC as the service provider. Dominion Energy is working currently to deliver fiber connectivity in Botetourt County north of Buchanan to approximately 350 addresses; Botetourt County supports Dominion's project and is actively engaged with it.

Outreach efforts with other internet service providers (ISPs) have occurred most recently at the regional level. The Roanoke Valley Broadband Authority (RVBA) organized two meetings during the summer of 2021 with all known ISPs in the Roanoke Valley market, including those with a presence in Botetourt, to encourage collaboration and the development of VATI proposals for this round of funding. The initial meeting occurred on June 28, 2021 among the RVBA's localities, including Botetourt, to begin VATI proposal discussions. On July 21, 2021, a follow-up meeting occurred when ISPs were asked to provide formal requests to seek VATI funding with the region's localities and through the RVBA. Botetourt County provided intent to apply for VATI funding letters with Lumos Networks, CBEC, and Briscnet. Lumos and Botetourt further met to develop to a VATI

proposal to deliver universal broadband coverage to the remaining 1,901 addresses in Botetourt not covered by federally-funded service areas or currently with broadband availability.

Botetourt County and Lumos understand Comcast offers up to 800/5 service in the county; however, this level of service lacks upload capabilities but meets the VATI standard of minimum 25/3 speeds. We have therefore eliminated the overbuild of the Comcast-served area to within the 10% allowed under the VATI guidelines. There are 113 addresses in the Blue Ridge area that have access to Comcast 800/5 service but are included in this project's count of 1,901 addresses, representing an overlap of 5.9%. To determine the percentage overlap, Lumos used the form 477 data from Comcast and Comcast address portal to verify if services were available to the subject addresses. Lumos performed this exercise for over 200 addresses in the Blue Ridge coverage area to confirm the exact location of the 800/5 service.

2022 Virginia Telecommunication Initiative (VATI)

Passing Form

Botetourt County/ Lumos Networks

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 10/1 or below in Project Area ⁴
Residential	1,852	469	1,432	1,453
Businesses (non-home based)	38			
Businesses (home-based)				
Community Anchors	5			
Non-residential	6			
Total	1,901			

Note: The Total Number of Passings **MUST** be equal to the Residential, Business (non-home based), Non-residential and Community Anchors sum.

Note: Do not include passings in RDOF awarded areas that were awarded to the co-applicant; these passings should be included in the RDOF Passings Form. Passings included in this application in RDOF awarded areas that were not awarded to the co-applicant, unless successfully challenged, are considered unserved and should be counted as passings in this form.

¹The total number of structures in the project area that can receive service. See definition of passing below for more detail.

²The number of structures in the project area that will not require special construction costs to provide service to. These passings fall within the broadband provider’s standard service connection drop length and do not require nonstandard equipment or any additional fees above normal service connection fees required to provide broadband access to a premise.

³The number of structures in the project area with all construction costs budgeted in the application. These passings will not require any additional special construction costs beyond those budgeted for in the VATI application.

⁴The number of structures in the project area that do not have access to internet at speeds of at least 10 mbps download and 1mbps upload.

Definitions

Passing – any structure that can receive service. Multi-unit structures may be counted as more than 1 passing, provided individual connections and account are planned at that structure.

Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

Community Anchor - schools, libraries, medical and health care providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and the aged.

Non-Residential Passing – places of worship, federal, state, or local facilities or other potential customers that are neither a residence, business or a community anchor as defined above.

PROJECT MANAGEMENT PLAN

PROJECT NAME : Botetourt County/ LUMOS Networks Fiber Expansion
PROJECT GRANTEE: Botetourt County, VA

VATI # _____

1. PROJECT DESCRIPTION

The Botetourt County/ LUMOS Networks Fiber Expansion Project, herein referred to as the "Project," is a project funded through a grant from the Virginia Department of Housing and Community Development's (DHCD) Virginia Telecommunication Initiative (VATI) Program. The purpose of this project is to extend fiber broadband service 1,901 unserved addressed locations in the county. The project area is located throughout Botetourt County, with specific project areas in Blue Ridge, Springwood, and Eagle Rock.

The Botetourt County Board of Supervisors shall be the grantee for the VATI funds and the Economic Development Authority of Botetourt County shall enter into an agreement with LUMOS Telephone Incorporated and the Botetourt County Board of Supervisors to administer the grant funds.

Project activities include the design and engineering of the broadband network, coordination of pole attachments with American Electric Power, and the construction of two hundred forty-three (243) miles of fiber conduit and aerial lines to deliver Fiber-to-the-Home and the construction cost per mile is \$32,550, which is a competitive cost to construct a new fiber network based on similar projects with similar topography and physical attributes.

2. PROJECT MANAGEMENT TEAM

The Management Team shall consist of members including the County Administrator or designee; the Grant Manager; the Financial Manager; the Project Architect/Engineer; Internet Service Provider (ISP) and other stakeholders as appropriate.

The Management Team will meet monthly to ensure the effective and timely implementation of all project components. The team will review project activities and propose adjustments to the project management plan, as needed, to make certain the project is professionally designed, within budget, and on track to achieve the proposed benefit. Any significant revisions to the project activities or budget will be shared with the Board of Supervisors, Economic Development Authority and DHCD as appropriate and/or necessary.

3. PROJECT ROLES AND RESPONSIBILITIES

The following lists the individual members of the Project Management Team and outlines their

roles and responsibilities for the pre-contract and implementation phases of the project.

Chief Administrative Official for Botetourt County- Gary Larrowe, County Administrator- responsible for general oversight of the project in coordination with the Project Management Team.

Chief Administrative Official for Lumos- Diego Anderson, Senior Vice President & General Manager- responsible for general oversight of the engineering, design, and construction of the project in coordination with the Project Management Team.

Grant/ Project Manager- Ken McFadyen, Director of Economic Development- reviews and presents grant disbursement requests to the Economic Development Authority and ensures that all grant reporting will be submitted to DHCD; coordinates activities among the Project Management Team and DHCD.

Financial Manager- Tony Zerrilla, Botetourt County Director of Finance- reviews and recommends grant disbursement requests; ensures transfers of funds from the Board of Supervisors to the Economic Development Authority to cover approved expenditures.

Project Architect/Engineer/ISP- David Smith, Senior Director Technical Operations and Planning- responsible for the day-to-day progress with the engineering, design, and construction of the project, to and responsible for submitting detailed pay requests to the Financial Manager on a frequent basis.

Attorneys- for Botetourt County- Mike Lockaby, and for the Economic Development Authority- Webster Day- responsible for drafting and finalizing grant agreements on behalf of the Board of Supervisors and Economic Development Authority.

DHCD Telecommunication and Broadband Project Manager – The Telecommunication and Broadband Project Manager will provide technical assistance and general oversight to ensure the project’s compliance with VATI guidelines and DHCD policy and will conduct regular compliance reviews throughout the DHCD contract period. The Telecommunication and Broadband Project Manager may attend Project Management Team meetings as her/his schedule allows.

4. PROCESS FOR FINANCIAL MANAGEMENT

The Financial Manager will be responsible for submitting remittance requests and budget revisions, as applicable, to DHCD. The following describes the process for review, approval, and payment of invoices related to all project expenditures, including leverage funds:

The County will provide the funds to the Authority for the purpose of making the VATI and County grant payments as set forth in the grant agreement with DHCD and in the agreement among the County, Economic Development Authority, and LUMOS. LUMOS will use the Grant proceeds as reimbursement of expenses related to construction of the Project, which expenses may include permit fees charged by the County and paid by the Company for the Project. The total amount of the Grant, including both state funds and local match, shall be \$5,687,330, broken down as follows:

Pass-through VATI Grant from DHCD:	\$1,364,337
EDA Economic Development Grant:	\$384,000

County Fee Waivers:

\$20,000

Grants shall be made not more frequently than monthly upon LUMOS's submission to the Authority and the County of detailed invoices verifying expenditure of funds and delivery of goods, services, or construction work in furtherance of the Project. For each invoice, the Authority will issue a grant payment of 90% of the face amount of each invoice, until it has reached the maximum cash match of \$5,687,310, less 10% (\$568,731). If LUMOS meets its Targets on or before the Performance Date, the Authority will disburse a final payment of \$568,731. In the event that County fee waivers do not equal or exceed \$20,000, the amount of the EDA Economic Development Grant will increase to cover the difference in County fee waivers. The total of the EDA Economic Development Grant and County Fee Waivers shall not be less than \$2,602,514. The EDA Economic Development Grant shall not be less than \$2,582,514 nor greater than \$2,602,514 in cash paid to LUMOS.

With the monthly pay requests, County members of the Project Management Team may physically inspect the work that has been performed in the field to confirm construction targets have been met.

5. NOTIFICATIONS

The Grant/Project Manager will notify the Project Management Team of all meetings. The Chief Administrative Official for Botetourt County will also notify the Board of Supervisors of any significant revisions to the project activities or budget. The Grant/ Project Manager will also notify the Economic Development Authority of any significant revisions to the project activities or budget.

6. PROCESS FOR DESIGN AND CONSTRUCTION

The following outlines the process for the project's design and construction contract administration which will include surveying, preparing and reviewing bid documents and plans, bidding, change order approval, and local government inspection and oversight.

The project area has passed initial engineering reviews and financial commitments within Lumos Networks and Botetourt County has provided its letter of funding commitment. Final design is pending funding award. In the Excel attachments, the timeline and project management plan is included that lays out all the major task, staffing, start and completion dates.

Lumos Networks will utilize part of its existing fiber infrastructure to extend its redundant fiber network to the project area. Lumos currently provides service utilizing its partnership with Adtran for its Access Network equipment. Utilizing ERPS ring topology, the solution provides redundant network paths to the access equipment in the field. Lumos utilizes the Adtran TA5000 access platform that provides a multi-solution platform that includes voice, DSL, and Gigabit Passive Optical Networks (GPON). For this solution, we will utilize the GPON cards in the access equipment to serve the project area. Lumos Networks will build 59

miles of fiber to serve all the addresses. From the GPON card, Lumos will build fiber to a local convergence point (LCP) and place our splitters in this cabinet which will serve up to 32 customers per splitter. From the LCP cabinet to the customers, we will build distribution fiber out that will be spliced using multiports. The size of the multiports will vary depending on the expected number of homes in the area ranging from 4 up to 12 ports. From the multiport, Lumos will install a single fiber drop to each customer that will be plugged into the fiber Optical Network Terminal (ONT). The majority of Lumos's ONTs are indoor and we have capabilities of offering up to 48 hours of battery backup for residential customers. Using this same format of deployment, Lumos Networks currently offers service to over 100,000 addresses that can receive the fiber services and up to 1 GIG speeds.

With the monthly pay requests, County members of the Project Management Team may physically inspect the work that has been performed in the field to confirm construction targets have been met.

In addition, see Botetourt-Lumos Milestone Timeline

7. PROJECT OUTCOMES (Closeout, Six Month Post-Closeout and Twelve Month Post-Closeout)

The Botetourt County/ LUMOS Networks Fiber Expansion project proposes to achieve the following passings(s) and estimated % subscribers (including type):

1,901 unserved residences;

Two hundred forty-three (243) miles of fiber conduit and aerial lines to deliver Fiber-to-the-Home;

60% subscriber "take rate" or 1,141 residences.

The County and ISP will utilize the following process to document how the project will achieve its proposed benefit and it will maintain appropriate documentation on file for five years after project closeout.

Service Offering: Consumers will have access to Lumos Networks' complete portfolio of symmetrical fiber broadband product profiles. Residential customers may select the best fit for their unique household requirements for work-at-home, learn-at-home, gaming, streaming, or basic Internet applications. All fiber Internet services allow for unlimited broadband data usage consumption, without throttling or data capping, and there are no contracts or term commitments. Discounts are applicable when fiber broadband is bundled with voice or entertainment services. Fiber broadband speed packages are competitively priced as part of a strong value proposition centered on fast, reliable connections and 24/7 local support. Residential fiber broadband prices range from \$44.95 for symmetrical 200/200 mbps broadband service to \$99.95 for symmetrical 1Gig/1Gig service. Business customers may customize pricing by bundling services and other parameters, and may choose fiber broadband profiles up to 8Gig/8Gig symmetrical. Speeds are based on dedicated bandwidth.

8. CERTIFYING OFFICER(S):

The following Certifying Officer(s) will be responsible for approving and signing any official grant-related documents or any document related to project implementation.

John Kilby, Chairman, Botetourt County Economic Development Authority

Diego Anderson, Senior Vice President & General Manager, LUMOS

Gary Larrowe, County Administrator, Botetourt County

PROJECT TIMELINE / RESPONSIBILITIES			
Pre-Contract			
ACTIVITY	RESPONSIBLE ENTITY	TARGET DATE	STATUS
Project Management Plan	Botetourt County		
Project Pay-for-Performance Budget and Documentation of Leverage	LUMOS/ Botetourt County		
Assignment of Grant Manager	Project Management Team		
Co Applicant and Draft Contract	Lumos and Botetourt County		
Prior Authorization Letter	N/A		
Other Items Identified at Contract Negotiation	Botetourt County and LUMOS		

Execute VATI Contract	DHCD and Botetourt County		
Project Implementation			
ACTIVITY	RESPONSIBLE ENTITY	TARGET DATE	STATUS
Pre-Construction Conference	LUMOS		
Notice to Proceed (Locality to ISP)	Botetourt County Economic Development Authority		
Construction Start Date	LUMOS		
Substantial Completion	LUMOS		
Final Completion	LUMOS/ Botetourt County/ DHCD		
Compliance	DHCD		
Monthly Progress Reports	LUMOS		
Achievement of Benefits	LUMOS		

Administrative Close-out	DHCD and Botetourt County		
Six Month Post-Closeout Reporting	Botetourt County and DHCD		
Twelve Month Post-Closeout Reporting	Botetourt County and DHCD		

Project Management Team Signatures

Chief Administrative Official
Grant Administrator
 Name and Title
 Organization

 Date

Grant Administrator
 Name and Title
 Organization

 Date

Grant Manager
 Name
 Organization

 Date

Project Manager
 Name and Title
 Organization

 Date

Financial Manager
Name and Title
Organization

Date

Project Architect/Engineer/ISP
Name and Title
Organization

Date

DRAFT

ECONOMIC DEVELOPMENT GRANT AGREEMENT

THIS AGREEMENT (“Agreement”) is entered as of this ___ day of ___ 2022, by and between BOTETOURT COUNTY, VIRGINIA, a political subdivision of the Commonwealth of Virginia (the “County”), the ECONOMIC DEVELOPMENT AUTHORITY OF BOTETOURT COUNTY, VIRGINIA, a political subdivision of the Commonwealth of Virginia (the “Authority”), and the LUMOS Telephone Incorporated, a telecommunication provider (“Lumos”), each a “Party” and collectively the “Parties.” For their Agreement, the Parties state:

Recitals:

WHEREAS, the County is a political subdivision of the Commonwealth of Virginia, authorized to provide funds to the Authority under Sections 15.2-953 and 15.2-1205 of the Code of Virginia, 1950, as amended, for the purposes of the Authority; and

WHEREAS, the Authority is a political subdivision of the Commonwealth of Virginia, authorized to make grants for the purposes of promoting industry, developing trade, and inducing manufacturing, industrial, governmental, nonprofit and commercial enterprises and institutions to locate, remain, or expand facilities in the Commonwealth, under Section 15.2-4905 of the Code of Virginia, 1950, as amended; and

WHEREAS, LUMOS is a telecommunications provider, authorized by the Utility Consumer Services Cooperative Act, Sections 56-231.15 et seq., of the Code of Virginia, 1950, as amended, to provide telecommunications services; and

WHEREAS, LUMOS anticipates making an investment of not less than \$2,222,423 in cash and in-kind services to the project; and

WHEREAS, the County, in collaboration with LUMOS, submitted an application for grant funding to the Virginia Department of Housing and Community Development (DHCD) Virginia Telecommunications Initiative (VATI), to fund a telecommunications extension project to certain unserved and underserved areas of Botetourt County, Virginia, for the purposes of economic development and expansion of the County’s tax base; and

WHEREAS, DHCD has awarded to Botetourt County a VATI Grant in the amount of \$3,084,796, to be used for the Project; and

WHEREAS, the County wishes to make certain funds available to the Authority, and the Authority wishes to make a grant to LUMOS, for the purposes of incentivizing LUMOS to expand its facilities in Botetourt County, increase jobs and employment, and otherwise expand the tax base of the County, including \$2,602,514 in local grants and acting as a conduit for \$3,084,796 in VATI Grant funds; and

WHEREAS, the stimulation of additional tax revenue and economic activity to be generated by the Project, new jobs, and retention of existing jobs, constitutes a valid public purpose for the expenditure of public funds and is the animating purpose for this Grant.

Witnesseth

NOW THEREFORE, in consideration of the foregoing premises, the mutual benefits, promises, and undertakings of the parties to this Agreement as set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties covenant and agree as follows:

I. Definitions & Incorporations by Reference.

For the purposes of this Agreement, the following terms shall have the following definitions, unless the context or manifest purpose of this Agreement indicate otherwise:

Capital Investment means a capital expenditure by LUMOS as set forth in the Grant Agreement. The total expected Capital Investment is not less than \$ \$7,909,733 and approximately \$20,000 in fees (to be waived by the County as part of the Grant).

Performance Date means [DATE as determined during pre-contract meeting with DHCD].

Project means that project contemplated by the Grant Agreement and substantially as set forth in the Grant Application.

Targets means the LUMOS’s obligation pursuant to this Agreement to make Capital Investments at the Facility of at least \$ \$7,909,733 as of the Performance Date. The Company shall also, as of the Performance Date, provided documentation of (1) the number of takes and the take rate; and (2) the speeds achieved by the Project.

This Agreement incorporates by reference the following documents, which may be referred to as follows:

Grant Application means the *Application to DHCD Submitted through CAMS*, Application ID [###], dated _____, and all exhibits thereto.

Grant Agreement between the Virginia Department of Housing and Community Development and the County, dated _____, for the Project.

II. Targets.

LUMOS will construct and operate the Project in the County and make a Capital Investment of not less than \$7,909,733 as of the Performance Date. In its application for the VATI Grant, the County represented, based upon LUMOS’s representation to it, that this would result in 1,901 passes of unserved addresses, with an estimated take rate of 60%, or 1,141 addresses. LUMOS must diligently use its best efforts for community outreach and marketing the services. The County and the Authority will use their best efforts, consistent with all provisions of law, to assist LUMOS in meeting these goals. The Parties understand, however, that the number of customers who choose to subscribe is beyond the Parties’ control and is expressly not an item of consideration for this Grant.

III. Grant.

The County will provide the funds to the Authority for the purpose of making the Grant as set forth herein. LUMOS will use the Grant proceeds as reimbursement of expenses related to construction of the Project, which expenses may include permit fees charged by the County and

paid by the Company for the Project. The total amount of the Grant, including both state funds and local match, shall be \$2,618,337, broken down as follows:

Pass-through VATI Grant from DHCD:	\$3,084,796
EDA Economic Development Grant:	\$2,602,514
County Fee Waivers:	\$20,000

Grants shall be made not more frequently than monthly upon LUMOS's submission to the Authority and the County of detailed invoices verifying expenditure of funds and delivery of goods, services, or construction work in furtherance of the Project. For each invoice, the Authority will issue a grant payment of 90% of the face amount of each invoice, until it has reached the maximum cash match of \$5,687,310, less 10% (\$568,731). If LUMOS meets its Targets on or before the Performance Date, the Authority will disburse a final payment of \$568,731. In the event that County fee waivers do not equal or exceed \$20,000, the amount of the EDA Economic Development Grant will increase to cover the difference in County fee waivers. The total of the EDA Economic Development Grant and County Fee Waivers shall not be less than \$2,602,514. The EDA Economic Development Grant shall not be less than \$2,582,514 nor greater than \$2,602,514 in cash paid to LUMOS.

In the event the above grants are not made due to an event of non-appropriation or otherwise, the Company's obligations for performance under this Agreement shall be void and of no force and effect.

IV. Reporting.

LUMOS shall provide, at its own expense, detailed verification reasonably satisfactory to the County and the Authority of its progress on the Targets in aid of the County's reporting requirements to DHCD. Such progress reports will be provided monthly upon request. For the purposes of verifying the accuracy of reports, and for no other purpose, the Company hereby waives its protections under Section 58.1-3 of the Code of Virginia, 1950, as amended, and authorizes the Commissioner of the Revenue for Botetourt County, Virginia, to provide verification to the County and the Authority from his records; provided, however, that such disclosure shall not waive the protections of § 58.1-3 as to any other person, nor authorize the County or the Authority to disclose such information to any other person other than DHCD. Further, LUMOS grants the County and the Authority the right to inspect any site at which work on the Project is or has been carried on during the term of this Agreement in order to verify work for which an invoice has been submitted.

DHCD, in furtherance of the VATI Grant, will conduct an Intermediate and Final Compliance Review. The LUMOS must make all records available upon DHCD's request. LUMOS shall retain financial records, supporting documents, statistical records, and all other records pertinent to the VATI Grant for a period of no less than five years from the date of submission of the final expenditure report. When applicable, all contractors and the County shall comply with the Virginia Public Procurement Act (§ 2.2-4300 et seq. of the Code of Virginia, 1950, as amended). DHCD also anticipates receiving the following reports from the County and LUMOS:

- a. Monthly progress reports, to be submitted not later than the 15th day of each month. The reports must document VATI Grant and non-Grant funds obligated and expended to date and the actions taken on key deliverables, including but not

limited to construction status, numbers of passings of serviceable units, and number of subscribers.

- b. Final project progress report, to be submitted not later than _____, detailing total VATI Grant and non-Grant funds expended and the actions taken on key deliverables.
- c. Post-closeout report on subscribers at six (6) months and one (1) year from the Performance date.

LUMOS will assist the County with providing the detailed verification information required by DHCD and uploading this information into CAMS.

LUMOS and County staff should meet on a regular basis, not less frequently than monthly, in order to discuss progress on the Project and ensure positive communications. The meeting may be carried out by telephone or canceled if no significant matters are necessary for discussion in a particular month.

V. Notices.

Any notices required or permitted to be given under this Agreement shall be given in writing, and shall be deemed to be received upon receipt or refusal after mailing of same in the United States by First-Class U.S. Mail, certified, postage prepaid, or by customary commercial overnight courier (refusal shall mean return of certified mail or overnight courier package not accepted by addressee):

If to LUMOS, to:

LUMOS NETWORKS
1 Lumos Plaza
Waynesboro, Va 22980
Attn: Diego Anderson,

With a copy to:

Lumos Networks
1900 Roanoke Road
Daleville, VA 24083
Attn: David Smith, VP Technical OPS

If to the Authority, to:

ECONOMIC DEVELOPMENT
AUTHORITY OF BOTETOURT COUNTY,
VIRGINIA
One West Main Street, #1
Fincastle, Virginia 24090
Attn: John Kilby, Chair

With a copy to:

AUTHORITY COUNSEL
Spilman, Thomas & Battle, PLLC
310 First Street, Suite 1100 (ZIP 24011)
P.O. Box 90
Roanoke, Virginia, 24002-0090
Attn: F.B. Webster Day, Esq.

If to the County, to:

BOTETOURT COUNTY, VIRGINIA
One West Main Street, #1
Fincastle, Virginia 24090
Attn: Gary P. Larrowe, County Administrator

With a copy to:

COUNTY ATTORNEY
Guynn, Waddell, Carroll & Lockaby, P.C.
415 South College Ave.
Salem, Virginia 24153
Attn: Michael W.S. Lockaby, Esq.

The addresses set forth in this section only may be amended by sending written notice to all other parties of a change of address, without need of signed amendment to this Agreement.

VI. Miscellaneous.

Indemnity. The Company agrees to indemnify and hold harmless the Authority, the County, and their officers, directors, and employees free and harmless for and from any and all claims, causes of action, damages or any liability of any type, including reasonable attorney's fees, on account of any claims by or any injury or damage to any persons or property growing out of or directly or indirectly resulting or arising in any way out of any actions, omissions or activities of the Company or its agents, employees or representatives arising out of or connected in any way to any of the matters involved in this Agreement or its performance.

Integration. This Agreement, including the exhibits hereto, constitutes the full and complete agreement of the Parties respecting its subject matter, and any prior or contemporaneous agreements or understandings, written or oral, are hereby merged into and superseded by the provisions of this Agreement. This Agreement may only be amended or supplemented by a subsequent writing of equal dignity except where expressly set forth herein. This Agreement may not be assigned by a Party without the prior written consent of the other Parties.

No covenants of officials. No covenant, agreement or obligation contained in this Agreement shall be deemed to be a covenant, agreement or obligation of any present or future director, officer, employee or agent of the Authority or the County in his or her individual capacity, and neither County officials nor the directors of the Authority nor any officer, employee or agent thereof executing this Agreement or any related instrument shall be liable personally on this Agreement or such instrument or be subject to any personal liability or accountability by reason of the execution and delivery thereof. No director, officer, employee or agent of the Authority or the County shall incur any personal liability with respect to any other action taken by him or her pursuant to this Agreement or the Industrial Development and Revenue Bond Act or any of the transactions contemplated hereby or thereby, provided he acts in good faith.

Not a pledge of full faith and credit. Any obligation of the County to pay, set aside, or otherwise appropriate funds for performance of this Agreement shall be construed to be subject to appropriation, and shall not be construed to be in derogation of Article VII § 10 of the Virginia Constitution. THE OBLIGATIONS OF THE AUTHORITY UNDER THIS AGREEMENT, AND THE OBLIGATIONS OF THE COUNTY RELATING TO PASSING THROUGH VATI GRANT FUNDS, ARE NOT GENERAL OBLIGATIONS OF THE AUTHORITY OR COUNTY BUT ARE LIMITED OBLIGATIONS PAYABLE SOLELY FROM THE REVENUES AND RECEIPTS DERIVED BY THE AUTHORITY FROM THE COUNTY PURSUANT TO THIS AGREEMENT OR FROM THE COMMONWEALTH UNDER THE VATI GRANT. THE OBLIGATIONS OF THE AUTHORITY AND THE COUNTY HEREUNDER SHALL NOT BE DEEMED TO CONSTITUTE A DEBT OR A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE AUTHORITY AND THE COUNTY.

Rule of construction for dates. If any action is required to be performed, or if any notice, consent or other communication is given, on a day that is a Saturday or Sunday or a legal holiday in the Commonwealth of Virginia, such performance shall be deemed to be required, and such notice, consent or other communication shall be deemed to be given, on the first business day following such Saturday, Sunday or legal holiday. Unless otherwise specified herein, all references in this Agreement to a “day” or “days” shall refer to calendar days and not business days.

Choice of law. This Agreement shall be construed according to the laws of the Commonwealth of Virginia without regard to its principles of conflicts of laws. The Parties consent to exclusive venue and jurisdiction in the Circuit Court or General District Court, as appropriate, of Botetourt County, Virginia.

Attorneys’ fees. The Parties agree that, except as specifically provided in this Agreement, if any Party pursues legal action to enforce the terms of this Agreement, the American Rule shall apply and each Party shall bear its own attorneys’ fees and expert costs and no fee shifting shall occur.

Drafter & Severability. This Agreement has been jointly drafted by the Parties, and is to be construed as jointly drafted and not be construed against any of the Parties as the drafter. This Agreement is severable, and if any provision is found to be invalid by any court of competent jurisdiction, the remainder shall survive. The section and paragraph headings in this Agreement are for convenience of reference only and do not modify or restrict any provisions hereof and shall not be used to construe any provisions of this Agreement except to clarify the intent of a section.

Covenant of Authority. All Parties warrant that the signatories below have full authority, and have undertaken such legal actions as may be necessary to ensure such authority, to bind the entities of which they are representatives to the full extent permitted by law. Company agrees that, during the term of this Agreement, it shall not allow its corporate existence to lapse or its certificate of authority in the Commonwealth of Virginia to be revoked or cancelled at any time. This Agreement may be executed by facsimile, electronic or original signature of the parties and in counterparts which, assuming no modification or alteration, shall constitute an original and when taken together, shall constitute one and the same instrument. All Parties further warrant that they have full legal authority to carry out the actions contemplated by this Agreement, and that they are aware of no litigation pending or threatened that would draw such authority into question,

Time of the Essence. Time is of the essence of all obligations set forth herein for which a time is stated.

Waiver. The failure of any Party to this Agreement to insist upon strict compliance with any term herein shall not be construed to be a waiver of that requirement.

Assignment of Agreement. Any obligation under this Agreement may only be assigned to a third party with the prior written consent of all Parties.

Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be construed to be an original and production of all of which shall not be necessary to prove the contents of this Agreement.

IN WITNESS WHEREOF, see the following signatures, of even date herewith:

BOTETOURT COUNTY, VIRGINIA:

Gary P. Larrowe
County Administrator

Approved as to legal form:

Michael W.S. Lockaby
County Attorney

**ECONOMIC DEVELOPMENT AUTHORITY OF BOTETOURT COUNTY,
VIRGINIA**

John Kilby
Chair of the Board of Directors

LUMOS NETWORKS,

Diego Anderson, SVP/GM

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	\$ 3,084,796	39.0%	Pending
LUMOS NETWORKS	\$ 2,222,423	28.1%	SECURED
Botetourt County	\$ 2,602,514	32.9%	Secured
	\$		
	\$		
	\$		
	\$		
TOTAL	\$ 7,909,733	100 %	

COUNTY ADMINISTRATION
botetourtva.gov

57 S. Center Drive, Suite 200
Daleville, VA 24083

P: (540) 928-2006
F: (540) 473-8225



57 South Center Drive
Daleville, Virginia 24083
9/14/2021

Tamarah Holmes, Ph.D
Office of Broadband
Department of Housing and Community Development 600
East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes,

It is with pleasure I submit this letter of formal support for the 2021 Botetourt County VATI application. Botetourt County has been working on the expansion of broadband since 2017 with the creation of a Broadband Commission under the leadership of BOS Chair, Dr. Mac Scothorn.

With the attached application Botetourt County would plan to have Universal Service by December 2023. In working with LUMOS to get the Universal Service, the total project cost is \$24,252,227 of which \$7,909,733 is the total cost of the 2021 VATI application. **To get to a 61% match between Botetourt County and LUMOS on this application, the Botetourt County portion will be \$2,602,514 while LUMOS will be contributing \$2,222,423. The requested VATI amount is \$3,084,796 for a total build amount of \$7,909,733.**

The remaining full build that has been committed to by LUMOS is funded in several ways outside of the 2021 VATI request.

Universal broadband coverage is a dream for most citizens of BoCo and we look forward to assisting in making this dream come true with the assistance of the Commonwealth and the VATI program. We appreciate the assistance of the Governor's Office, Evan, Kyle, DHCD, LUMOS and our own Ken McFadyen in making this application happen. We anxiously await the notice of funded projects.

Sincerely,

A handwritten signature in black ink that reads 'Gary Larowe'.

Gary Larowe
County Administrator

COUNTY ADMINISTRATION
botetourtva.gov

57 S. Center Drive, Suite 200
Daleville, VA 24083

P: (540) 928-2006
F: (540) 473-8225



CC: Dr. Mac Scothorn
Dr. Richard Bailey
Mr. Frank Smith
Mr. Ken McFadyen
Mr. Evan Feinman
Mr. Kyle Rosner
Mr. Walter Grigg



September 14, 2021

Dr. Tamarah Holmes
Associate Director Policy and Strategic Development Virginia Department of Housing and
Community Development
Main Street Center 600 East Main Street, Suite
Richmond, Virginia 23219

**Re: Botetourt County funding and partnership support for LUMOS' Virginia 2021
Telecommunications Initiative proposal**

Dear Dr. Holmes:

For 120 years, Lumos and its predecessors have faithfully served our communities, ensuring that our customers have state-of-the-art communications services. Our company was founded in 1897 to bring universal telephone service to areas the large incumbent deemed too rural to serve. We were early adopters of electronic switching and of replacing copper lines with fiber optic transport. Our customers had dedicated internet as soon as DSL technology became available. Now, we are a leader in deploying fiber-to-the-premise broadband service, with symmetrical 1GIG speed currently available to our residential customers. As the need arises, higher speeds can be accomplished simply by changing the optics equipment at the end of the fiber.

In 2020, Botetourt County partnered with Lumos on a successful VATI grant to extend our fiber optic network by an additional 59 miles, bringing fiber-to-the-premises to 550 rural locations in the county. This year, Botetourt County is again partnering with Lumos and asking for a VATI grant that will dramatically improve the availability of broadband. This VATI grant request would make it possible for Lumos to build over 340 miles of fiber to service 1,900 premises in the county. The total cost of the project is \$7,909,733 which Lumos is committing funds of \$2,222,423.

When combined with Lumos' other planned builds, over 5,000 additional premises in Botetourt will have fiber optic broadband bringing the total fiber broadband coverage to over 11,000 addresses in Botetourt. The result will be 100% broadband coverage of Botetourt County and 100% Fiber broadband coverage in the Lumos service area.

In addition to last year's VATI grant, Lumos received a stimulus grant in 2010 covering 50% of the cost to build fiber to over 4,500 locations in rural Alleghany County. Lumos completed that project on time and under budget, resulting in near universal fiber optic coverage in Alleghany. We are ahead of schedule in building fiber to over 3,000 premises as required by our federal Universal Service funding. Fiber optic broadband is now available to over 65% of Lumos customers in Virginia. Lumos knows exactly how to build every aspect of a fiber optic network.

Federal infrastructure funding has greatly increased the dollars available for VATI grants. That infrastructure funding is focused on broadband network deployment. And deployment is certainly a necessary first step. For people to truly benefit, however, a provider must deliver fast, reliable, and affordable broadband service to everyone, every minute of every day. For 120 years, Lumos has demonstrated this service commitment to its customers. That history is concrete assurance that the broadband service we provide using this fiber optic infrastructure will be second to none in quality and reliability.

Lumos has committed to Botetourt County that we will complete the construction described in the application on time and on budget. And we are committed to bringing fiber services to Botetourt residents that will reap the benefits of reliable, high-speed broadband service.

If you have any questions or comments, please reach out to me directly at 540-946-8687 or andersond@lumosnet.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Diego B. Anderson', with a long horizontal flourish extending to the right.

Diego B. Anderson
Senior Vice-President and General Manager
Lumos Networks



COMMONWEALTH OF VIRGINIA

HOUSE OF DELEGATES
RICHMOND

TERRY L. AUSTIN

POST OFFICE BOX 400
BUCHANAN, VIRGINIA 24066
NINETEENTH DISTRICT

COMMITTEE ASSIGNMENTS:
TRANSPORTATION
APPROPRIATIONS
RULES

September 13, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

I am pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. We believe that Lumos is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband fiber connectivity is currently lacking for a remaining 9,181 addresses in Botetourt County that can be served by Lumos Networks. Of these 9,181 addresses lacking broadband fiber connectivity of a minimum 25 megabits per second (mbps) download/ 3 mbps upload (25/3) service, Lumos has received federal ACAM funding to serve 2,639 addresses with service exceeding 25/3. An additional 4,641 addresses are currently served by another provider with cable service, not fiber. Lumos plans to construct fiber infrastructure to these cable customers separately from this VATI proposal. Botetourt County's VATI proposal and these other non-VATI fiber broadband expansions represent an investment of a combined \$24,252,227.

Botetourt County leaders have shared with me that the VATI grant proposal seeks to deliver Fiber-to-the-Home (FTTH) broadband connectivity to 1,901 addresses utilizing the construction of 243 miles of conduit at a projected total cost of \$7,909,733. Botetourt County and Lumos are proposing to match the VATI funding request by 61 % for a total VATI request of \$3,084,796 (or \$1,623 per address).



COMMONWEALTH OF VIRGINIA

HOUSE OF DELEGATES
RICHMOND

TERRY L. AUSTIN

POST OFFICE BOX 400
BUCHANAN, VIRGINIA 24066
NINETEENTH DISTRICT

COMMITTEE ASSIGNMENTS:
TRANSPORTATION
APPROPRIATIONS
RULES

As you know, the General Assembly fully supports the expansion of broadband service throughout the Commonwealth to achieve universal coverage. Botetourt County's grant proposal is a demonstration of our localities' commitment to deliver broadband connectivity to every Botetourt resident and business.

We all recognize the incredible importance of broadband to the citizens in Botetourt County. Strong, reliable internet connectivity is no longer a want, it is now a need. Improving broadband access will increase educational opportunities, enable economic growth, and close the digital divide that is so apparent between rural communities and more populated areas. Like water and electricity, broadband connectivity is an essential utility, and this VATI Grant will bring our rural areas into the 21st century.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Terry L. Austin".

Delegate Terry L. Austin
19th House District

COUNTY ADMINISTRATION
botetourtva.gov

57 S. Center Drive, Suite 200
Daleville, VA 24083

P: (540) 928-2006
F: (540) 473-8225



57 South Center Drive
Daleville, Virginia 24083
9/08/2021

Tamarah Holmes, Ph.D
Office of Broadband
Department of Housing and Community Development 600
East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes,

It is with great delight that I send this letter of support for the LUMOS/Botetourt (BoCo) VATI application to provide Universal coverage of fiber to the home for Botetourt citizens.

BoCo has worked exceptionally HARD on getting broadband distributed throughout the County since forming the Broadband Commission in 2017. BOS Chair, Dr. Mac Scothorn has been the Champion of this effort and the BOS is super excited to see this application to be submitted.

It has been said that Broadband is the “electricity of the 21st Century” and I would agree. Broadband availability will be the way future winners/losers will be picked from the standpoint of a sustainable and thriving community.

With the future availability of fiber to the home, I see BoCo expanding remote education, remote worker opportunities, tele-medicine, tele-health that will enhance every part of life. I also know of nothing that a local government can do to enhance the value of real property investments by 3-5% with a single act other than to assist in bringing Broadband to the citizens.

Universal broadband coverage is a dream for most citizens of BoCo and we look forward to assisting in making this dream come true. Please let us know of any questions you may have with regard to this project.

Sincerely,

A handwritten signature in black ink that reads 'Gary Larowe'.

Gary Larowe
County Administrator

COUNTY ADMINISTRATION
botetourtva.gov

57 S. Center Drive, Suite 200
Daleville, VA 24083

P: (540) 928-2006
F: (540) 473-8225



CC: Dr. Mac Scothorn Mr. Walter Grigg
Dr. Richard Bailey
Mr. Frank Smith
Mr. Ken McFadyen



601 S. Jefferson Street, Suite 110, Roanoke, VA 24011
Frank M. Smith, II, President & CEO
fsmith@highspeedroanoke.net Ph: 540.904.1073

BOARD MEMBERS:
James E. Tallafarro, II, City of Salem
Bob Cowell, City of Roanoke
Daniel O'Donnell, Roanoke County
Gary Larrowe, Botetourt County
Mike McEvoy, Citizen
Dr. Scott Middelf, Virginia Tech
Keith Perry, Carlton
rvba.online

September 9, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Roanoke Valley Broadband Authority (RVBA) is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. The RVBA looks forward to supporting Botetourt County in cooperation with Lumos Networks to deliver universal broadband coverage throughout Botetourt County. The need for universal broadband coverage that is high quality and affordable is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband coverage would be of great benefit, as there are a number of rural and underserved areas that do not have access to reliable internet service. When it comes to communications, it is imperative that these homes be connected to county news and events as well as crisis information. Botetourt County is "spot on" in its effort to connect the entire community.

The RVBA looks forward to supporting the Botetourt County team on this effort.

Respectfully,

A handwritten signature in black ink, appearing to read "Frank M. Smith II". The signature is written in a cursive style with some loops and flourishes.

Frank M. Smith II
President & CEO
RVBA

ANNA L. WEDDLE, Chair
Amsterdam District

MATTHEW J. EAST
Blue Ridge District

TIM DAVIDICK
Valley District



DANA McCALEB, Vice-Chair
Fincastle District

MICHELLE R. AUSTIN
Buchanan District

Dr. JONATHAN D. RUSS
Superintendent

September 8, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Dr. Holmes:

On behalf of Botetourt County Public Schools, I would like to express our support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. Throughout the COVID-19 pandemic, many of our students and their families have experienced first-hand the hardship of achieving remote and virtual learning without the broadband infrastructure required to do so. True 21st century learning incorporates technologies that deliver rich audio, video, and interactive media that wired networks of yesteryear simply cannot support. Families in rural areas of our county are among those impacted the most; however, even some of the more developed areas in Botetourt County do not have high-speed internet options.

As our students and the wider community face the increased need for learning and working remotely, we support any effort to deliver universal broadband coverage in Botetourt County. Thank you for your time, and please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Jonathan D. Russ". The signature is written in a cursive, flowing style.

Jonathan D. Russ, Ed.D.
Superintendent
Botetourt County Public Schools
jruss@bcps.k12.va.us
(540)473-8263



September 8, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Botetourt County Chamber of Commerce is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. We believe that Lumos is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband coverage would be of great benefit, as there are a number of rural and underserved areas that have small and home based businesses which are in desperate need of broadband and internet. This universal broadband coverage will enable those at-home businesses that lack service now to more fully engage in the digital economy and create greater prosperity for their businesses and the Botetourt community.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Maggie K. [unclear]".

Board President

A handwritten signature in black ink, appearing to read "John [unclear]".

Executive Director

PO Box 413 1324 Roanoke Road Daleville, VA 24083
(540) 566-8812 www.botetourtchamber.com

COMMUNITY DEVELOPMENT
botetourtva.gov

57 S. Center Drive
Daleville, VA 24083

P: (540) 928-2080
F: (540) 473-2018



September 8, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Botetourt County Office of Community Development is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. We believe that Lumos is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband coverage would be of great benefit, as there are a number of rural and underserved areas, some of whom are home to our workers in the construction industry and are in need of internet services to conduct their office related business remotely, allowing them to spend less time traveling across the county for permitting and clerical work. In addition, should Botetourt achieve universal broadband coverage with VATI support, our office is drafting Comprehensive Plan and ordinance amendments that would require developers to require broadband infrastructure in subdivisions and residential developments.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads 'c. nicole pendleton'.

C. Nicole Pendleton, AICP, CZA, CFM
Director, Community Development

September 9, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

Each day, our public libraries assist Botetourt County citizens who lack internet access at home. When our facilities are open, patrons access the internet on our public computers and wireless network to do homework, run a small business, attend virtual meetings, apply for jobs, fill out medical forms, communicate with family, find information, learn a new skill, share videos, and more. After hours, people sit in our parking lots to connect to our 24/7 public wireless network.

Our library staff see firsthand the disadvantages of not having high-speed internet access at home. These patrons often lack necessary technology skills, having less opportunity to practice. They struggle to find childcare or someone to stay with elderly parents when they must leave home to work or perform other internet-based tasks. They spend time in hot or cold cars (depending on the season) or purchasing yet more coffee so they can stay in a climate-controlled café when libraries are not open. Their children fall behind in school while their tech-savvy peers gain the advantage. The detriment not only to this generation, but also to the next, is palpable and real for anyone who lacks broadband access at home.

Living without internet is no longer a viable option for our County residents. This is why Botetourt County Libraries enthusiastically offer this letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. As a Lumos customer ourselves, we can vouch for their exceptional service and believe them to be the perfect partner to deliver universal broadband coverage throughout Botetourt County.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program. We would be happy to answer questions or assist in any way possible. Thank you for your consideration.

Sincerely,



Julie Phillips
Botetourt County
Library Director
jphillips@botetourtva.gov
(540)928-2901

PARKS AND RECREATION
botetourtva.gov

16 East Main Street
P.O. Box 587
Fincastle, VA 24090

P: (540) 928-2130



September 13, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

As Director of Parks and Recreation I am writing to express my highest support for Botetourt County's latest Virginia Telecommunications Initiative (VATI) proposal.

Broadband access is more important now more than ever for our citizens. Being that Botetourt County is a suburban, but mostly rural community, access the infrastructure such as broadband is a critical component to public health, wellness, and recreation.

Botetourt County Parks and Recreation strives to offer programming for all citizens and access to broadband will allow us to communicate opportunities and facilitate registration more effectively, thus reaching more citizens. In addition, there are endless opportunities for virtual programming that could be offered to residents with universal broadband coverage. Botetourt has had great success in moving the needle on broadband in recent years and hopefully with the help of this grant, can afford for universal opportunities from the most rural to our suburban areas.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in blue ink that reads 'Mandy Adkins'.

Mandy Adkins
Parks and Recreation, Director
madkins@botetourtva.gov
(540) 928-2130

COUNTY ADMINISTRATION
botetourtva.gov

57 S. Center Drive, Suite 200
Daleville, VA 24083

P: (540) 928-2006
F: (540) 473-8225



September 7, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband,
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Botetourt County Office of Communications is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. We believe that Lumos is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband coverage would be of great benefit, as there are a number of rural and underserved areas that do not have access to reliable internet service. When it comes to communications, it is imperative that these homes be connected to county news and events as well as critical information that would be shared during a manmade or natural disaster. This universal broadband coverage will enable all homes to be engaged with our Botetourt County communications efforts and will help to ensure equity in our communication initiatives. Botetourt County is striving to connect with all our residents, and we do not want lack of internet service to be a barrier.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads 'Tiffany Bradbury'.

Tiffany Bradbury
Botetourt County Director of Communications
tbradbury@botetourtva.gov
(540)928-2004

Traci S. Clark
VREO
Virginia Certified General Registrar

Director of Elections
& General Registrar



**Department of Elections &
Voter Registration**

2 East Main Street
P.O. Box 62
Fincastle, VA 24090
(540) 928-2120 Office
(540) 473-8657 Fax

September 7, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Botetourt County Department of Elections & Voter Registration is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. We believe that Lumos is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County. The need for the universal coverage of quality, affordable broadband service for our residents and businesses is clear in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

Universal broadband coverage would be of great benefit to the voters of Botetourt County. In the current heightened political climate, voters rely on the internet to research candidates and/or pressing issues, be informed on deadlines associated with upcoming elections, find notices of meetings of the local and state electoral boards, locate their polling location, find hours for early voting, and maintain their voter registration record. We have seen a marked increase in the number of voter registration applications and absentee ballot applications submitted online over the last 18-months. This universal broadband coverage will enable voters in all areas of the County to have access to information needed to make informed decisions when exercising their right to vote.

Thank you for your time and consideration of Botetourt County's VATI proposal.

Sincerely,

A handwritten signature in black ink that reads "Traci S. Clark". The signature is written in a cursive style.

Traci S. Clark
Director of Elections & General Registrar

Botetourt County Electoral Board

John W. Rader, Jr.
Chairman

William L. Heartwell, III
Secretary

P. Stephen Vaughn
Vice Chairman



Botetourt County, Virginia
Financial Services

September 8, 2021

6 East Main Street, No. 6
Fincastle, Virginia 24090
Phone (540) 928-2102
Fax (540) 473-8229

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

The Botetourt County Financial Services Department is pleased to provide a letter of support for Botetourt County's Virginia Telecommunications Initiative (VATI) proposal with Lumos Networks. As the County's Finance Director, I have worked on previous VATI grants that have culminated in bringing broadband coverage to areas that benefitted greatly from the enhanced service. With respect to the current VATI grant that was awarded, it joins Botetourt County with Lumos Networks. We are just beginning together on this project, and it is already apparent that Lumos is the partner that will make this broadband application a success. With that realization, we believe that Lumos is the preferred partner to work with the Commonwealth of Virginia and Botetourt County to deliver universal broadband coverage throughout Botetourt County.

Universal broadband coverage would be of great benefit in terms of quality, affordable broadband service, as there are several rural and underserved areas that have small and home-based businesses which are in desperate need of broadband and internet. The awarding of this Lumos Networks proposal by the DHCD will create greater prosperity for their businesses and the Botetourt community.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Anthony G. Zerrilla". The signature is written in a cursive style.

Anthony G. Zerrilla
Director of Financial Services
Botetourt County, Virginia

September 7, 2021

Dr. Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, Virginia 23219

Dear Dr. Holmes:

As Chief for Botetourt County's Department of Fire & EMS, I am writing to express my highest support for Botetourt County's latest Virginia Telecommunications Initiative (VATI) proposal.

Broadband access is more important now more than ever for our citizens. Being that Botetourt County is a suburban, but mostly rural community, access the infrastructure such as broadband for public health and safety can be ground-breaking during these trying times. The advantage of broadband for access to telehealth is something that we are actively exploring, as the pandemic continues to evolve, and hospitals and other medical facilities remain over capacity.

Botetourt County has been fortunate in the past year to continue to expand broadband. The continued attempt for universal broadband is a great opportunity to ensure all areas of the community have access to what has become a standard component of infrastructure in other parts of the country. Botetourt has had great success in moving the needle on broadband in recent years and hopefully with the help of this grant, can afford for universal opportunities from the most rural to our suburban areas.

We look forward to working with the Department of Housing & Community Development to deliver universal broadband coverage in partnership with you and the VATI program.

Please let us know of any questions or needs. Thank you for your time and consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J.D. Ferguson', with a long horizontal flourish extending to the right.

Jason D. Ferguson B.S. EFO
Chief of Fire & EMS
jferguson@botetourtva.gov
(540) 928-2201

CDBG Derivation of Cost

Product	Total	VATI	Botetourt	Lumos	Source of Estimate	Date
Construction						
Engineering	\$ 198,512		\$ 198,512	\$ -	Lumos Networks Project Work Book	9/8/2021
Drafting	\$ 60,328			\$ 60,328	Lumos Networks Project Work Book	9/8/2021
Pole Application Fees	\$ 370,833		\$ 370,833		Lumos Networks Project Work Book	9/8/2021
	\$ 593,332			\$ 593,332	Lumos Networks Project Work Book	9/8/2021
Pole Make Ready	\$ 94,263			\$ 94,263	Lumos Networks Project Work Book	9/8/2021
Rail Road Crossing	\$ 26,184			\$ 26,184	Lumos Networks Project Work Book	9/8/2021
Interstate Crossing	\$ 101,160			\$ 101,160	Lumos Networks Project Work Book	9/8/2021
Traffic Control	\$ 4,135,945	\$ 1,398,466	\$ 1,711,746	\$ 1,025,733	Lumos Networks Project Work Book	9/8/2021
Fiber Splicing	\$ 463,789	\$ 463,789			Lumos Networks Project Work Book	9/8/2021

CDBG Derivation of Cost

LCP Equipment	\$ 73,297	\$ 73,297			Lumos Networks Project Work Book	9/8/2021
Feeder Fiber Build	\$ 738,243	\$ 738,243			Lumos Networks Project Work Book	9/8/2021
Installs & Network Equipment	\$ 1,053,846	\$ 411,000.00	\$ 321,423	\$ 321,423.00	Lumos Networks Project Work Book	9/10/2021
	Total	VATI	Botetourt	Lumos		
TOTAL	\$ 7,909,733	\$ 3,084,796	\$ 2,602,514	\$ 2,222,423	Lumos Networks Project Work Book	9/8/2021
As % of Total	100%	39%	33%	28%		

RSB WORKBOOK						
CUSTOMER NAME	LUMOS NETWORKS			ENGINEER	Terry St	
CUSTOMER LOCATION	Botetourt VATI Grant			DATE	9/11/20	
SALES PERSON				Project #	HLE	
SALES SUPPORT PERSON		Permits Due Date		Job Package Date		
CAPITAL BUDGET #		Planning Guide #				
					Cost	
Project #		Aerial Construction	0	DOH	\$0.00	
EWO #		New Aerial	0	Municipal	\$0.00	
DDID #		Overlash	0	RR	\$94,263.00	
Planned Completion		Buried Construction	135,000	Easement	\$0.00	
HLE		Existing Conduit	0	Pole	\$593,332.00	
Detailed		Fiber Footage	1283040	Conduit	\$0.00	
Job Package		Distance Covered	135000	Other	\$397,017.00	
MRC	-	Variance Approved Dates		Traffic Control	\$101,160.00	
NRC	-	HLE to Detailed Est		Engineering	\$198,512.00	
Total OSP Cost	\$7,909,732.77	Detailed Est to JP		Drafting	\$60,328.00	
Total Including Equ.	\$7,909,732.77				Permitting	\$0.00
					Construction	\$4,874,188.00
LCP Name				Splicing	\$463,789.00	
Fibers Reserved				Access Equipment	\$1,053,846.00	
					LCP Equipment	\$73,297.00
LIST OF PERMITS - EASEMENTS - IRU SPLICING NEEDED						
NAME	DESCRIPTION			DUE	SENT	
COMMENTS						
Botetourt 2021 Grant for 1,901 addresses for Base, Springwood and Blue Ridge						
*** BELOW IS FOR ADMIN USE ONLY***						
JP Approval Date:		Approved By:		Date sent to Construction:		
Construction Complete:				Miss Utility Polygon:		
REVISION DATE 5/3/2018						

CUSTOMER NAME - LUMOS NETWORKS
 ENGINEER - Terry Strook
 Project # - HLE

Solid Rock Adder

A U AND AFO

Task Name	QUANTITY	UNIT	UNIT DESCRIPTION	UNIT COST	TOTAL
	-		ENGINEERING		
	1283040.00		PROJECT PLANNING / DESIGN - COMPANY LABOR	0.16	\$198,512.00
	-		DRAFTING		
	1215		CONTRACTOR - CAD INPUT / MAPPING (M4)	50.00	\$50,328.00
	-		PERMITTING		
	-		PERMIT FEES - RR	94,263.00	\$94,263.00
	-		PERMIT FEES - POLE	593,332.00	\$593,332.00
	-		PERMIT FEES - OTHER	397,017.00	\$397,017.00
	-		PERMIT FEES - TRAFFIC CONTROL (ENGINEERING DESIGN)	101,160.00	\$101,160.00
	-		AERIAL		
O.FBR,AERL	678843	100AF	PLACE AERIAL FIBER PER S&N CONTRACT - NEW CONSTRUCTION	2.59	\$1,758,203.37
O.FBR,AERL	469197	100A1	PLACE AERIAL FIBER PER S&N CONTRACT - OVERLASH	1.35	\$633,415.95
	-		BURIED FIBER		
O.FBR,BURD	48836	210	PULL FIBER IN EXISTING CONDUIT	1.20	\$58,603.20
O.FBR,BURD	135000	200	BURIED ANY METHOD PER S&N CONTRACT	13.40	\$1,809,000.00
O.FBR,AERL	944	112	Install Closure - Two (2) Cables	150.00	\$141,600.00
O.FBR,AERL	2343	122	Fusion Splice (Testing Included): 1 - 36 Fibers	32.00	\$74,976.00
O.FBR,AERL	92	129	Lower Aerial Cable/Closure/Loop from Strand (Bucket Truck)	75.00	\$6,900.00
O.FBR,AERL	92	130	Raise Aerial Cable/Closure/Loop on Strand (Bucket Truck)	75.00	\$6,900.00
	-		FTTP UNIT PRICING		
O.FBR,AERL	138	803	Mount Multi Port Tap to Strand	16.50	\$2,277.00
O.FBR,BURD	9	815	Place/Remove or Transfer Fiber Term/LCP (Pole or Handhole installation)	202.00	\$1,818.00
			TOTAL LABOR COST		\$5,928,305.52

CUSTOMER NAME LUMOS NETWORKS

ENGINEER Terry Strook

Project # HLE

Tax 5%
Provisioning 10%

Task Name	QUANTITY	ACTUAL QUANTITY	REEL NUMBER	ITEM #	DESCRIPTION	COST	TOTAL
AERIAL FIBER ASSET MATERIAL							
O.FBR,AERL	1283040			FIBOFSH144F0RTEX	Average for all cable sizes	0.86	\$1,103,414.40
O.FBR,AERL	632			HDWANCH10HLX	ANCHOR 10" HELIX C102-5205	41.64	\$26,314.33
O.FBR,AERL	632			HDWTRPLEYENUUT	TRIPLEVE EYENUUT 12585	7.51	\$4,744.74
O.FBR,AERL	632			HDWANCHRDI1X7	ANCHOR ROD 1" X 7' 12334P	32.49	\$20,530.52
O.FBR,AERL	138			MTPCOM6PRT700	Average for 2,4, and 6 Port MP	188.00	\$25,944.00
O.FBR,AERL	119968			STRSTRAND6MM	STRAND 6M	0.34	\$40,369.23
O.FBR,AERL	3780			STRSTRAND10M	STRAND 10M	0.51	\$1,923.26
O.FBR,AERL	453			HDWGGGRDIYLW7	GUY GUARD YELLOW PVC X 7'0 G5517	4.58	\$2,074.74
O.FBR,AERL	546			HDWLUMOAERCBITAG	LUMOS AERIAL CABLE WRAP TAG	3.51	\$1,916.46
BURIED FIBER ASSET MATERIAL							
O.FBR,BURD	87			PEDFTTHPRFRM10	PEDESTAL - FTTH - PRO10FSNGURB 10" PROFORM - EMERSON	76.19	\$6,628.82
CONDUIT ASSET MATERIAL							
O.CONDUIT	135000			INDSMOOTH2	Average for 2" and 1.25" Conduit	0.79	\$106,650.00
O.CONDUIT	218			PBXCHI30X48X24	Average for All Pull Box Sizes	432.00	\$94,176.00
O.CONDUIT	166			SPLROUTE MARKER	FIBER ROUTE MARKER SIGN	20.60	\$3,419.60
AERIAL SPLICING MATERIAL							
O.FBR,AERL	370			SPLCOYCL95X28	9.5"x28" DOME KIT W/7 PORT ENDPATE & GROMMETS - 96F & LARGER	355.28	\$131,453.60
O.FBR,AERL	2960			SPLCOYTRAY0086	COVOTE SPLICE TRAY - 36 SPLICE PER TRAY - NEW CLOSURES	24.48	\$72,460.80
O.FBR,AERL	864			SPLHEATSHRINK60MM	HEAT SHRINK SLEEVE/SING FIBER(50MM)	0.21	\$180.49
MISC.	740			SPLGROM8003989	GROMMET 4 HOLE FLAT DROP ONLY	10.48	\$7,755.20
LCP / EQUIPMENT							
S.D.EQ	9			CABCOM432ARMLT	COMMSCOPE 432 PORT POLE MOUNT LCP (216 FIBER TAILS)	6,749.16	\$60,742.44
S.D.EQ	18			HDWCOMPLGNPLYSPLTR	COMMSCOPE 32 PORT SPLITTER FOR ALL LCPs (INCLUDES PIG TAILS)	682.32	\$12,281.76
Sheet Total							\$1,981,427.45



(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0003775244

Data as of: Dec 31, 2020

Operations: ILEC

Submission Status: Original - Submitted

Last Updated: Feb 20, 2021 19:33:13

Filer Identification

Section	Question	Response
Filer Information	Company Name	Lumos Telephone of Botetourt Inc.
	Holding Company Name	Lumos Networks Corp.
	SAC ID	190226, 190249
	499 ID	807075, 807819
Data Contact Information	Data Contact Name	Tim Pressley
	Data Contact Phone Number	(336) 821-8650
	Data Contact E-mail	tim.pressley@segra.com
Emergency Operations Contact Information	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(855) 465-8667
	Emergency Operations E-mail	HELP@lumos.net
Certifying Official Contact Information	Certifying Official Name	Mary McDermott
	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_TL_Broadband_Deployment.csv	Feb 20, 2021 19:30:53	2639
Fixed Broadband Subscription	FCC_TL_Broadband_Subscription.csv	Feb 20, 2021 19:09:48	505
Fixed Voice Subscription	FCC_TL_Voice_Telephone_Subscription.csv	Feb 19, 2021 18:31:22	39

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lumos Networks Inc	Asymmetric xDSL	972
		Optical Carrier/Fiber to the End User	1406
		VDSL	261
Total			2639

Fixed Broadband Subscription

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

State	Technology	Census Tracts	Subscriptions			Total
			Consumer	Business / Govt	Total	
Virginia	Asymmetric xDSL	161	4646	450	5096	
	Optical Carrier/Fiber to the End User	335	10014	609	10623	
	Other Copper Wireline	4	0	4	4	
	Symmetric xDSL	5	0	7	7	
Total		505	14660	1070	15730	

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.128	38	0	38
1.000	1.000	0	4	4
1.500	0.512	3	0	3
1.500	1.500	0	4	4
3.000	0.768	94	159	253
6.000	1.000	3907	199	4106
10.000	10.000	0	4	4
15.000	4.000	28	0	28
15.000	8.000	0	16	16
20.000	4.000	2	0	2
20.000	5.000	13	0	13
20.000	10.000	0	4	4
20.000	20.000	0	7	7
25.000	4.000	35	0	35
25.000	5.000	236	34	270
25.000	10.000	0	171	171
25.000	25.000	0	50	50
35.000	15.000	0	4	4
50.000	10.000	218	20	238

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
50,000	20,000	6	93	99
50,000	50,000	0	15	15
75,000	20,000	0	72	72
75,000	75,000	0	27	27
100,000	5,000	4476	0	4476
100,000	10,000	15	17	32
100,000	20,000	89	0	89
100,000	40,000	0	23	23
100,000	100,000	63	7	70
150,000	150,000	0	20	20
200,000	20,000	2988	0	2988
200,000	200,000	149	5	154
300,000	300,000	0	1	1
500,000	40,000	1219	0	1219
500,000	500,000	101	1	102
1000,000	250,000	803	41	844
1000,000	1000,000	177	69	246
2000,000	2000,000	0	3	3
Total		14660	1070	15730

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	0.256	0.128	38	0	38
	1.500	0.512	3	0	3
	3.000	0.768	94	159	253
	6.000	1.000	3907	199	4106
	15.000	4.000	28	0	28
	15.000	8.000	0	16	16
	20.000	5.000	13	0	13
	20.000	10.000	0	4	4
	25.000	5.000	235	34	269
	50.000	10.000	218	20	238
Optical Carrier/Fiber to the End User	50.000	20.000	6	1	7
	100.000	10.000	15	17	32
	100.000	20.000	89	0	89
	1.000	1.000	0	4	4
	10.000	10.000	0	4	4
	20.000	4.000	2	0	2
	20.000	20.000	0	7	7
	25.000	4.000	35	0	35
	25.000	5.000	1	0	1

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer		Business / Govt		Total
			Consumer	Govt	Business / Govt	Total	
	25,000	10,000	0	171	171	171	
	25,000	25,000	0	50	50	50	
	35,000	15,000	0	4	4	4	
	50,000	20,000	0	92	92	92	
	50,000	50,000	0	15	15	15	
	75,000	20,000	0	72	72	72	
	75,000	75,000	0	20	20	20	
	100,000	5,000	4476	0	4476	4476	
	100,000	40,000	0	23	23	23	
	100,000	100,000	63	7	70	70	
	150,000	150,000	0	20	20	20	
	200,000	20,000	2988	0	2988	2988	
	200,000	200,000	149	5	154	154	
	300,000	300,000	0	1	1	1	
	500,000	40,000	1219	0	1219	1219	
	500,000	500,000	101	1	102	102	
	1000,000	250,000	803	41	844	844	
	1000,000	1000,000	177	69	246	246	
	2000,000	2000,000	0	3	3	3	

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Other Copper Wireline	1,500	1,500	0	4	4
Symmetric xDSL	75,000	75,000	0	7	7
Total			14660	1070	15730

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	16387	9527	0	0
Total	16387	9527	0	0

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Total	by Bundle		by Product Type				
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt		
		& No PIC	& PIC	& No PIC	& PIC	& No PIC	& PIC	
Virginia	16387	1380	15007	4508	5019	3824	3036	
Total	16387	1380	15007	4508	5019	3824	3036	

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	by Ownership				by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper	
Virginia	16387	16387	0	0	5042	0	0	11345	
Total	16387	16387	0	0	5042	0	0	11345	

Filer Identification

Section	Question	Response
Filer Information	Company Name	Lumos Telephone of Botetourt Inc.
	Holding Company Name	Lumos Networks Corp.
Data Contact Information	SAC ID	190226, 190249
	499 ID	807075, 807819
	Data Contact Name	Jen Marshall
Emergency Operations Contact Information	Data Contact Phone Number	(540) 865-6805
	Data Contact E-mail	jen.marshall@segra.com
	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(855) 465-8667
	Emergency Operations E-mail	HELP@LUMOS.NET
	Certifying Official Name	Mary McDermott
Certifying Official Contact Information	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_TL_Broadband_Deployment3.csv	Feb 26, 2020 23:11:36	2984
Fixed Broadband Subscription	FCC_TL_Broadband_Subscription2.csv	Feb 26, 2020 15:29:27	444
Fixed Voice Subscription	FCC_TL_Voice_Telephone_Subscription2.csv	Feb 26, 2020 14:22:16	40

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lumos Networks Inc	Asymmetric xDSL	1223
		Optical Carrier/Fiber to the End User	1443
		Symmetric xDSL	1
		VDSL	317
Total			2984

Fixed Broadband Subscriptions

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

State	Technology	Census Tracts	Consumer	Business / Govt	Total
Virginia	Asymmetric xDSL	168	5126	538	5664
	Optical Carrier/Fiber to the End User	270	8494	568	9062
	Other Copper Wireline	5	0	5	5
	Symmetric xDSL	1	0	1	1
Total		444	13620	1112	14732

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.128	52	0	52
0.384	0.384	0	1	1
1.000	1.000	0	6	6
1.500	0.512	4	0	4
1.500	1.500	0	5	5
3.000	0.768	119	202	321
6.000	1.000	4271	223	4494
10.000	10.000	0	5	5
15.000	4.000	40	0	40
15.000	8.000	0	20	20
20.000	4.000	2	0	2
20.000	5.000	22	0	22
20.000	10.000	0	4	4
20.000	20.000	0	10	10
25.000	4.000	37	0	37
25.000	5.000	4774	42	4816
25.000	10.000	0	174	174
25.000	25.000	0	44	44
35.000	15.000	0	4	4
50.000	10.000	235	28	263
50.000	20.000	594	91	685
50.000	50.000	0	18	18
75.000	20.000	1861	59	1920

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

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
75,000	0	0	15	15
100,000	24	17	41	41
100,000	20,000	64	0	64
100,000	40,000	91	25	116
100,000	100,000	0	6	6
150,000	40,000	740	0	740
150,000	150,000	0	17	17
200,000	200,000	0	4	4
300,000	300,000	0	1	1
500,000	500,000	0	1	1
1,000,000	250,000	690	41	731
1,000,000	1,000,000	0	47	47
2,000,000	2,000,000	0	2	2
Total		13620	1112	14732

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	0.256	0.128	52	0	52
	1,500	0.512	4	0	4
	3,000	0.768	119	202	321
	6,000	1,000	4271	223	4494
	15,000	4,000	40	0	40
	15,000	8,000	0	20	20
	20,000	5,000	22	0	22
	20,000	10,000	0	4	4
	25,000	5,000	287	42	329
	50,000	10,000	235	28	263
	50,000	20,000	8	2	10
	100,000	10,000	24	17	41
	100,000	20,000	64	0	64
Optical Carrier/Fiber to the End User	1,000	1,000	0	6	6
	10,000	10,000	0	5	5
	20,000	4,000	2	0	2

**Fixed Voice
Subscription
(VGE Lines)**

VGE Lines Provided to Unaffiliated Providers by State

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	17620	10403	0	0
Total	17620	10403	0	0

**Fixed Voice
Subscription**

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	20,000	20,000	0	10	10
	25,000	4,000	37	0	37
	25,000	5,000	4487	0	4487
	25,000	10,000	0	174	174
	25,000	25,000	0	44	44
	35,000	15,000	0	4	4
	50,000	20,000	586	89	675
	50,000	50,000	0	18	18
	75,000	20,000	1861	59	1920
	75,000	75,000	0	15	15
	100,000	40,000	91	25	116
	100,000	100,000	0	6	6
	150,000	40,000	740	0	740
	150,000	150,000	0	17	17
	200,000	200,000	0	4	4
	300,000	300,000	0	1	1
	500,000	500,000	0	1	1
	1000,000	1000,000	690	41	731
	1000,000	1000,000	0	47	47
	2000,000	2000,000	0	2	2
Other Copper Wireline	1,500	1,500	0	5	5
Symmetric xDSL	0,384	0,384	0	1	1
Total			13620	1112	14732

UNE-L

Wholesale

State

State	Total	Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper	by Last-mile Medium	
									by Ownership	by Last-mile Medium
Virginia	17620	17620	0	0	5113	0	0	0	17620	12507
Total	17620	17620	0	0	5113	0	0	0	17620	12507

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	Sold w/ Internet	Sold w/o Internet	by Bundle			by Product Type	
				Consumer	Bus-Govt	& No PIC	& No PIC	& No PIC
Virginia	17620	3566	14054	4884	5519	4181	3036	3036
Total	17620	3566	14054	4884	5519	4181	3036	3036

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Wholesale	UNE-L
Virginia	0	0
Total	0	0

