

Application to DHCD Submitted through CAMS

Carroll County

Carroll County VATI 2024

Application ID: 107412112023081847
Application Status: Pending
Program Name: Virginia Telecommunication Initiative 2024
Organization Name: Carroll County
Organization Address: 605-1 Pine Street
Hillsville, VA 24343-1463
Profile Manager Name: Crystal Adams
Profile Manager Phone: (276) 730-3001
Profile Manager Email: cadams@CarrollCountyVA.org

Project Name: Carroll County VATI 2024
Project Contact Name: Michael Watson
Project Contact Phone: (276) 730-3001
Project Contact Email: michael.watson@carrollcountyva.gov
Project Location: 605 PINE ST STE 1
HILLSVILLE, VA 24343-1463
Project Service Area: Carroll County

Total Requested Amount: \$23,358,915.00

Required Annual Audit Status: Accepted

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Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$23,358,915.00	\$28,549,785.00	\$51,908,700.00
Construction	\$23,358,915.00	\$28,549,785.00	\$51,908,700.00
Total:	\$23,358,915.00	\$28,549,785.00	\$51,908,700.00

Budget Narrative:

ZiTEL is investing \$25,967,306.00 of in-kind resources and cash to the project as co-applicant. Carroll County is providing \$2,582,479.00 in cash to supplement the request from VATI for \$23,358,915.00. Bringing the total estimated project cost to \$51,908,700.00. The co-applicant match percentage of 50% and the applicant match percentage of 5% exceeds the minimum match requirements.

Questions and Responses:

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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:

This project is designed to assist in accomplishing functional universal coverage in Carroll County. The project area was selected based in part on a broadband study completed in the fall of 2021, by Design Nine. Each section is considered unserved, and a high priority based on data gathered from Carroll County GIS and planning. The study included meetings with stakeholders and interested parties in the county, interviews and meetings with businesses, meetings with county officials, and residential and business broadband surveys. Each section of the proposed project area is considered unserved based on data gathered from the work completed with the broadband study and by the selected ISPs research. Based on the survey data, most of the respondents need better internet service. 88% are interested in gigabit fiber internet. 40% of residents report the quality of internet service is affecting where they choose to live. 80% of businesses indicated that the internet is important to the success of their business. 73% of businesses reported that they need employees the capability to work from home.

The data gathered and proposed serviceable locations were also composed using the data provided at:

<https://data.virginia.gov/Government/Underserved-BEAD-Eligible-Locations/ux3c-2acy>

<https://data.virginia.gov/Geographic-Information/Unserved-BEAD-Eligible-Locations/yjaw-9kff>

This data clearly shows the state also agreed as recently as October 6th, 2023, that Carroll County has an unmatched need for broadband.

In Spring 2022, Carroll County solicited qualified Internet Service Providers to submit proposals to make county-wide residential and commercial broadband available to as many county consumers as possible. Carroll County organized a Broadband Committee to review proposals, interview candidates, and recommend an ISP to the Carroll County Board of Supervisors. The Committee recommended ZITEL, which entered into an agreement with Carroll County. This is a new public-private partnership and the first project for ZITEL in Carroll County. The project would be a new area build for ZITEL fiber work and would commence in coordination with other fiber to the home, work in progress. As shown on the Project Area Map, this is a large build, covering the majority of Carroll County.

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2. List existing providers in the proposed project area and the speeds offered. Describe your outreach efforts to identify existing providers and how this information was compiled with source(s).

Answer:

Local provider information was gathered from the completed Carroll County broadband study and the delineated FCC maps. The list of existing providers and provided speed:

CentryLink – 1.5/0.5
Citizen's Coop – 1,000/500
Comcast – cable - 1000/35
Spectrum (Charter) – 400/35
Xfinity – 1200/
Lingo Fiber – 500/40
Lumen Technologies, Inc. – 1,000/50
Lumos Fiber – 1000/1000
FastLink Wireless – 30/3
HughesNet - Satellite 25/3
Starlink – Satellite - 100/40
ViaSat, Inc. – Satellite - 3/3
Wired Road-Lingo Fiber – 1,000/50
Wired Road-1 Point Fiber – 100/10

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. Label Map: Attachment 2 – Documentation on Federal Funding Area.

Answer:

RDOF – CCO Holdings, LLC (Charter)

RDOF – Space Exploration Technologies Corp. (SpaceX) (Rejected)

CAF II – Century Link (Connect America Fund Broadband Map (usac.org))

4. 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 100/20 Mbps and with less than 25% service overlap within the project area for wireless projects and 20% 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 3 – Documentation Unserved Area VATI Criteria.

Answer:

With this proposal, ZITEL is making every effort to avoid encroaching on incumbent ISP territories except where necessary for a conjoined build or connections of the current footprint to underserved and unserved areas.

Attachment 3 – Documentation Unserved Area VATI Criteria – Comcast Cable Communications, LLC
AND Documentation Unserved Area VATI Criteria – Shenandoah Telecommunications Company

Although the incumbent ISPs report having much more service area blocks than they currently do service. ZITEL has found those mappings to be very inaccurate and in conjunction with Carroll County, there is still a great need in most of those areas.

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5. Total Passings: Provide the number of total serviceable units in the project area. Applicants are encouraged to prioritize areas lacking 25 Megabits per second download and 3 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 4 – Passings Form.
- a. Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.
 - b. 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.
 - c. 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.
 - d. 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.
 - e. Provide the number of passings in the project area that have 25/3 Mbps or less. Describe the methodology used for these projections. (up to 15 points)

Answer:

- A.) This application is for a total of 10,271 VATI passings, containing 7,267 residential units, 1,972 business units, 1,002 number of non-residential units, and 30 Community Anchor units. Carroll cannot determine the number of the in-home business passings, as it does not require county business licenses.
- B.) There are no RDOF passings in this proposal.
- C.) There are no passings that will require special construction costs in this proposal.
- D.) There are no passings that will require special construction costs in this proposal.
- E.) The number of passings in this project area that have 25/3 Mbps or less is 8,894 units. The methodology used for these projections are based from: <https://data.virginia.gov/Geographic-Information/Unserved-BEAD-Eligible-Locations/yjaw-9kff>

Reference: Attachment 4 – Passings Form

6. Describe if any blocks awarded in Rural Digital Opportunity Fund (RDOF) are included in the VATI application area. If RDOF areas 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 5 – RDOF Awarded Areas Form in VATI Area

Answer:

There are no RDOF blocks within this application area.

7. **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

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8. 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:

ZiTEL currently has no existing infrastructure in the proposed areas. This expansion of our footprint throughout Carroll County is a brand-new build but is part of a planned path that will be a continuous build back to our primary CO in Bedford County. This will not only allow ZiTEL to extend service to many unserved areas, but also be able to provide better service and support to its current customer base and put us in a position to develop our coverage area to different locations within the region.

For ZiTEL's solution, all proposed areas will have new fiber optic cable built to each service location from current or future point(s) of presence or a new ZiTEL Central Office. ZiTEL will have 829 miles of new fiber construction utilizing single-mode fiber either buried in the VDOT easement or along pole attachments with various pole owners. In the field, it will be deployed as a distributed split model which will serve up to 32 customers per original strand based on our split methodology. The fiber is continued to the customer location, terminated on their home or business with an outside test point inside the NID. Then utilizing a GPON ONT we convert the Category 6 Ethernet cable to provide a DMARC into the home to install the router. Our service is completely scalable because the upper limits of fiber have yet to be found, so we can increase bandwidth with simple electronic equipment changes at the data center and customer end. Our current standard electronics allow up to 2.4 Gbps Downstream and 1.2 Gbps Upstream, support up to 20 km GPON Links, with powerful Layer 2/3 management features. ZiTEL has tested the latest electronics for XGSPON. XGSPON is ready for deployment and on the roadmap scheduled for a 2024 release. ZiTEL will announce and begin to deploy services that can reach 5GIG and 10GIG of capacity to residential and business customers. ZiTEL is still developing a pricing structure and deployment strategy, but we are confident that our current and future fiber infrastructure will support the latest speed offerings, well above the needs and standards.

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9. **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 100/20 Mbps. (up to 10 points)

Answer:

Speeds: Download and Upload Speeds: All locations will have access to Zitel's Fiber Gigabit service, which provides a 1000 Mbps download and 1000 Mbps upload. Bandwidth is dedicated. XGSPON is on Zitel's 2024 roadmap which will offer increased symmetrical packages of 5GIG and 10GIG of capacity to residential and business customers.

Technology: The technology that will be used is "Fiber to the Home," or "GPON/XGS." GPON/XGS is a "Gigabit Passive Optical Network." In a Fiber to the Home/GPON environment, voice, and high-speed data (up to 1Gbps/10Gbps) is transported on a single fiber (one wavelength for transmission, another wavelength for receive) from the office/remote electronics to the home or premises. The single fiber operates at a rate of 2.4Gbps downstream (to the home) and 1.2Gbps upstream (from the home) or for XGS having a total non-blocking line rate of symmetrical 9.95Gbit/s. The GPON infrastructure eliminates the need for active electronics (and the associated powering, real estate, and maintenance costs) in the distribution plant, depending on the distance from the Central Office/ Remote and available feeder fibers.

Service offering: Pricing for Zitel services is generally a nationwide price so that customers in rural Virginia pay the same rate as customers in urban areas or other states. Zitel currently advertises three synchronous speed tiers for fiber-to-the-home residential customers as part of the Zitel Broadband package, which are Essentials – up to 100 Mbps for \$54.99/month, Deluxe – up to 300 Mbps for \$69.99 or Extreme – up to 1000 Mbps for \$97.99/month without any introductory offers or periods that would increase pricing after a period of time. There are additional options bundled with other services like Fiber Gigabit (1000 Mbps) plus Home Phone Unlimited. Zitel offers 3 tiers for business class customers along with Enterprise class service as well. The above rates do not include any required taxes or fees, and plans are always subject to change, please refer to www.zitel.com for the most up-to-date information. We are working toward other opportunities for digital equity for this project; working with the school division to consider credits and other creative options. Zitel can provide qualifying low-income customers access to Lifeline. Lifeline is the FCC's program to help make communications services more affordable for low-income consumers. Lifeline provides subscribers with a discount on monthly telephone service purchased from participating providers. The discounts can be applied to standalone broadband or bundled voice-broadband packages that low-income consumers can afford state-of-the-art Broadband and the access it provides to jobs, education, and opportunities. Zitel verifies a speed test using fast.com at the time of installation and stores a screenshot of that speed test in the customer's digital profile in our CRM system. Zitel is still developing an XGS pricing structure and deployment strategy.

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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:

This project achieves universal broadband coverage by designing a network to reach the unserved and underserved locations that lack existing service or federal, state, or locally funded coverage commitments. Carroll County's Board of Supervisors' top priority for the locality is providing broadband. During the pandemic, it became very evident the County's citizens and businesses were lacking in availability of reliable internet service. To truly understand the demand, the Board of Supervisors conducted a broadband study which was completed in the fall of 2021, by Design Nine. The study included meetings with stakeholders and interested parties in the county, interviews and meetings with businesses, meetings with county officials, and residential and business broadband surveys. Each section of the proposed project area is considered unserved or underserved based on data gathered from the work completed with the broadband study and by the selected ISPs research. Based on the survey data, most of the respondents need better internet service. 88% are interested in gigabit fiber internet. 40% of residents report the quality of internet service is affecting where they choose to live. 80% of businesses indicated that the internet is important to the success of their business. 73% of businesses reported that they need employees able to work from home.

In Spring 2022, Carroll County solicited qualified Internet Service Providers to submit proposals to make county-wide residential and commercial broadband available to as many county consumers as possible. Carroll County organized a Broadband Committee to review proposals, interview candidates, and recommend an ISP to the Carroll County Board of Supervisors. The Committee recommended ZiTTEL, who had entered into an agreement with Carroll County. This is a new public-private partnership and the first project for ZiTTEL in Carroll County. This project achieves universal broadband coverage for Carroll County by designing a fiber network that will reach homes and businesses that lack adequate internet service or no service. As shown in maps and other information with this application, ZiTTEL will provide service to all underserved and unserved locations within Carroll County.

Leveraging the joint unserved analysis outlined in question 1, the ZiTTEL project is designed to achieve functional universal coverage. This VATI project will cover 10,271 units of underserved and unserved locations.

Carroll's goal in continuing collaboration with its private-sector partner is to continue to drive fiber further into remote areas to reach even these remaining homes. This effort will build off existing expansion projects in the County as well as refined broadband maps being developed at the federal and state levels. The ZiTTEL project will address Carroll's known broadband needs, and as more information is obtained in the future, the County will be excellently positioned with an extensive and competitive set of fiber networks that will be able to address any further broadband holes that emerge.

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 are encouraged to extensively discuss, where applicable, easements relating to railroad crossings, federally-owned lands and parks, partnerships with the Virginia Department of Transportation, and mobile home parks. 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 10 points)

Answer:

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The project is currently in the planning stage, although most of the network planning has been completed. ZITEL's map in Attachment 1 – Project Area Map shows all fiber routes needed to complete the project. All the planning needed to submit this application has been completed and the remaining work will begin once an award is made. ZITEL has attached, as Attachment 7 – Timeline/Project Management Plan, a timeline of work from grant award to completion of the project. This project management plan is a custom plan that ZITEL created to use for this project but, is very similar to other projects where ZITEL completed the work on time and within budget. A formal partnership between Carroll County and ZITEL is in place. An executed MOU is included in Attachment 8 – MOU/MOA between Applicant/Co-Applicant. A formal agreement has been prepared and will be signed once the grant is approved. This agreement is included for reference in Attachment 8 – MOU/MOA between Applicant/Co-Applicant.

ZITEL has a great working relationship with VDOT and its local district offices. Over the years our repour with VDOT officials has led to a trend of receiving permit approval faster than the project forecast, for submitted packets. ZITEL worked closely with VDOT in developing the “new standard” for submitting permits for the Salem VDOT District. All prints and engineering documents are submitted per the VDOT recommendations to facilitate an expedited turnaround so that we experience little to no delays in construction. ZITEL employees receive all necessary VDOT training and certifications for roadway construction and safety so that we meet and exceed all necessary and recommended levels of competency to perform work within the VDOT right of way.

The County permitting office will fast-track all ISP permitting submissions and will create a protocol to facilitate this process to ensure success with not only the County procedures but also any required coordination with VDOT. The goal will be to avoid lengthy processing delays with the understanding there may be a large volume of mapping and permitting data submitted.

ZITEL currently has a pole attachment agreement with AEP to facilitate all engineering and make ready during the installation. AEP and ZITEL have already worked very closely with Bedford County during Care Act Funding project starting in 2020 throughout our existing VATI awards with minimalistic delays incurred. This established relationship will further leverage the Carroll County project.

While ZITEL tends to design most builds to avoid railway crossings, sometimes the need does arise. In the past ZITEL has worked with other utilities and partners to secure and utilize crossings that are already existing, but we also have a complete procedure in place to work with Norfolk and Southern to facilitate the need to obtain permits to cross their tracks if the need arises in our design.

In the current design for Carrol County, there are not any designed fiber routes that cross federally owned lands or parks.

ZITEL has worked extensively in the past with privately owned mobile home parks in other counties in Virginia and has always been successful at securing an amicable partnership with the owners to facilitate delivering service to the residents. If the need arises in Carroll County ZITEL has full confidence in our ability to duplicate the process for any mobile home parks.

ZITEL's obligations are to implement the Project Management Plan within the designated period, to provide updates to the County on the status of the project, to notify the County if assistance is needed with issues where the County can assist, to submit requests for payment as work is completed, to complete all work within the required timeframe, to provide the County with information showing the locations where broadband has been enabled and to propose any non-disclosure agreements that ZITEL believes might be required if ZITEL is requested to share confidential information. The agreement includes obligations of Carroll County to process payment requests promptly, review information provided by ZITEL and submit requests for additional information promptly, complete any necessary non-disclosure agreements, provide necessary right of way, and assist in contacting citizens and others when appropriate to assist in completing the project within the required timeframe.

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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 2022, ZITEL received a VATI grant in partnership with Bedford County for \$22,101,133.83. This grant was awarded to construct 417 miles of Fiber to the home Internet Service. The construction phase of this grant is currently underway and is expected to be completed on time.

Carroll County has not directly received any VATI grants.

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. If applicants and co-applicants are seeking to include prior expended funds as matching funds, Attachment 11 must be completed. Label Attachments: Attachment 9 - Funding Sources Table; Attachment 10 - Documentation of Match Funding; Attachment 11 - Prior Expended Match Form

Answer:

The matching funds invested by ZITEL are listed in Attachment 9 - Funding Sources Table and Attachment 10 - Documentation of Match Funding; Those funds include all the costs for the project, including engineering, planning, permits, materials, and labor for the construction of OSP of the fiber plant necessary for this project. Cost estimates are documented supporting the proposed budget.

ZITEL is investing \$25,967,306.00 of in-kind resources and cash in the project as a co-applicant. Carroll County is providing \$2,582,479.00 in cash to supplement the request from VATI for \$23,358,915.00. The total estimated project cost is \$51,908,700.00. The co-applicant match percentage of 50% and the applicant match percentage of 5% exceed the minimum match requirements.

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:

Carroll County Fire and EMS is currently working with ZITEL to include a Fiber Distribution Hut within their facilities. The use of existing community anchors assists in reducing construction costs for standalone huts and further leverages the private-public partnership being established with this project.

As part of the Agreement with local Volunteer Fire and Rescue facilities, ZITEL will provide free internet services to those organizations when partnered to locate fiber distribution points on their premises.

ZITEL and Carroll County public Libraries are working closely to develop a strategy for digital literacy to improve the public's awareness of how high-speed broadband can improve their ability to communicate with the rest of the world and allow them and their children to compete in the digital age. To further leverage this relationship, we are also closely working to develop a plan to notify all library patrons of the project and if and when they will be eligible for the service.

Currently, ZITEL maximizes its contract relationships with Mid-Atlantic Broadband, Meers Group, Millennium Financial, and Millennium Materials to leverage a fast turnaround with equipment, material, and installation, if awarded the 2024 VATI grant in partnership with Carroll County, ZITEL is prepared to bring the full force of these partners to make this a successful project.

ZITEL will utilize the Carroll County EDA, which also stands ready to help businesses learn to capitalize on the Gigabyte service through their ongoing relationship with the Blue Ridge Crossroads SBDC. One thread that runs through these programs is the effort to encourage and support entrepreneurship, innovation, and the development and sale of premium products and services, especially online. (See Attachment 11 for a letter of support from the Economic Development Authority and the SBDC office)

ZITEL and Carroll County are working closely with the Cooperative Extension Agent to facilitate an open channel of

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communication with Carroll County's farming community and how they can leverage high-speed broadband to improve their industry. Carroll County is a national leader in the pumpkin farming industry and bringing fiber internet connectivity to the industry will allow them to maintain and exceed others in the industry.

ZiTEL's plans to use the Wired Road fiber infrastructure will further facilitate the expansion across Carroll County. The Wired Road Authority currently provides service to Carroll County Municipal Complexes. ZiTEL will also maintain, mark, and expand from this fiber on behalf of the County.

Though it is not included in the budget for this project, ZiTEL will provide up to 1000 ft installation of fiber (drop) to all households that will be serviceable by fiber due to proximity to the eligible (LMI) special construction households—if and when these additional households order the new service. We assume 35% to 40% of them will request it within the first few months and be installed during this 18-month project, and up to 75% will ultimately subscribe (within 3 years.) Many of these 9,069 BSLs/10,272 units of underserved and unserved locations are likely also LMI, but we were not able to confirm this during this application period. The value of the estimated 4,100 installations during the immediate life of this project is at least \$1,150 per household, for a total of at least \$4,715,000.00.

The County permitting office will fast-track all ZiTEL permitting submissions and will create a protocol to facilitate this process to ensure success with not only the County procedures but also any required coordination with VDOT. This will facilitate the goal of being able to avoid lengthy processing delays with the understanding there may be a large volume of mapping and permitting data submitted.

ZiTEL currently has a pole attachment agreement with AEP to facilitate all engineering and make ready during the installation. AEP and ZiTEL have already worked very closely with Bedford County during the CARES Act Funding project starting in 2020 and throughout our existing VATI awards with minimalistic delays incurred. This established relationship will further leverage the Carroll County project.

ZiTEL plans to leverage strong relationships to provide distance learning and workforce training with the Carroll County Public Schools (CCPS), Wytheville Community College, the Carroll County Library Systems, and other not-for-profit private organizations. All these groups will be essential in providing support for the application and help further our efforts on digital literacy and public awareness throughout this project.

Finally, ZiTEL's GIS team will continue to map the fiber and wireless builds as data is received to accurately portray the County and universal coverage. These maps can also be used publicly to explain to citizens and businesses what ISPs are operating in their general vicinity.

15. Communications Plan: Describe efforts to keep the public informed of project progress and the broadband adoption plan.
 - a. Explain how you plan on communicating the project status to stakeholders, including but not limited to County leadership, project areas residents, etc. (Up to 10 points)
 - b. 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)
 - c. 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. Communicating the project status.**

County Leadership

Carroll County and ZiTEL intend to communicate in the following manner throughout the project period on the project status and progress with stakeholders and the general public. ZiTEL will provide the county with monthly reporting, including but not limited to information regarding project milestones and grant expenditures. All

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information and data that is required for the project will be submitted promptly to DHCD for review and approval. Progress on milestones will be reported for the following categories:

- Preconstruction Activities: engineering, field staking, and permitting
- Materials Distribution: distribution, and transport of fiber
- Network Construction: Installation of common fiber, drops, and ONT installation and Materials, and Final Speed Testing
- ZiTTEL will ensure a representative is available monthly for progress meetings

Board of Supervisors Reporting

The project team will make a report and project update to the Carroll County Board of Supervisors semi-annually, on a timeframe coordinated with the County's project lead.

Public Events / Media Availability

A minimum of two public events will be held, with Carroll County selecting the public events most appropriate for their communities and stakeholders.

- Commencement of Construction / Groundbreaking
- Lighting of First Fiber Distribution Area / Initial Customer Access
- Completion of Utility Middle-Mile Fiber, Completion of Distribution Network,
- Other County Selected Events

Once engaged in Carroll County, ZiTTEL will become an active member in most business-focused organizations like the Chamber of Commerce, Rotary Club, County Cooperative Extensions, and other local organizations.

General Public Inquiries

ZiTTEL has a well-established reputation for quality service within the Commonwealth of Virginia and will assist Carroll County in engendering the same trust with its Citizens within the project area. ZiTTEL plans to communicate with new and existing members through the following:

- Direct Mailers- Zip Code Targeted USPS
- MRPDC and ZiTTEL E-Newsletter
- ZiTTEL and County Broadband Website
- Social Media (including ad purchasing)
- Local Newspaper, broadcast TV, and radio commercials

ZiTTEL will continue to provide friendly, high-quality direct interactions with the general public through in-person interactions, Local office placement, and neighbor-to-neighbor customer service focus by hiring locally. They will provide indirect updates as needed through means of the local newspaper, social media, and e-newsletter updates. ZiTTEL utilizes a local marketing firm and has geofenced marketing campaigns via social media, streaming television, and over-the-air television commercials.

B. Direct marketing has proven to be a successful tactic to promote customer take rates on past projects.

ZiTTEL's past grant projects have had an average over 60% to 70% take rate using this method of outreach. Using publicly available data on residents and addresses, ZiTTEL sends letters to every house and business within the project service area explaining the work that will be undertaken in the area. We also send out a follow-up letter when pre-sales begins, included in these letters is ZiTTEL's contact information and encouragement to contact them and reach out personally via phone to ensure service area residents are aware of the option to have ZiTTEL broadband. ZiTTEL also utilizes other various communication mediums, including Billboard advertisements, social media and broadcast TV and radio commercials to announce our arrival to the community and when services are available. While our communications and marketing efforts are extensive, we also rely on grassroots marketing, for example, the scheduled speaking events with local HOAs as needed or setting up an information table at the local Volunteer EMS department fundraiser. When a customer contacts the ZiTTEL offices, friendly, knowledgeable local employees provide quality customer service and assist each community member. All potential customers will be able to notify ZiTTEL of interest in service at the ZiTTEL office or website, where they can also find project information and new customer pre-registration for service. The projected take rate for this project area is also 60% to 70% within one year of project completion. This projection is based on ZiTTEL's experience in providing broadband in unserved localities across the Commonwealth, as well as our experience in

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other states. That projection is also supported by ZITEL's experience in its 2020 Cares Act-funded project with Bedford County, where the overall take rate is currently at 64%. The actions the co-applicants will take to reach the identified potential customers include frequent notices from both Carroll County and ZITEL indicating this upcoming project supported by the Virginia Telecommunication Initiative and DHCD. Public meetings facilitated by Carroll County will be held in or near each of the designated major sections of the project area to inform the residents about the upcoming work and answer questions. Nearer to the completion of the project, we will hold additional meetings in the major areas, place signage, and deliver bulk mailings to the residents to encourage sign-ups and answer questions.

C.

During the public meetings, the project team will have a presentation showing route maps and footprint along with various slides explaining how fiber to the premises or home is offered. The team will also allocate ample time to answer questions and concerns of citizens. As a part of the project's digital literacy efforts, the project team will spend time explaining to the public the difference in bandwidth, Speeds, and latency, and use real-world examples to describe them. The County and the ISP will coordinate outreach efforts and promote program opportunities with public schools, local libraries, and other county offices that routinely correspond with the general public, including the Cooperative Extension, Parks and Recreation Departments, Social Services Department, and select non-profits. The Galax-Carroll Regional Library (GCRL) is a key partner in advancing digital literacy for the residents of Carroll County. The Strategic Priorities for GCRL include investing in more programs and services that advance digital literacy so that customers use technology to enrich their lives.

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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.

Answer:

Key Individuals

- Brandon Camden, President/CEO: Overall project design, budget management and overall operational control
- Rodney Gray, COO: Daily operations of installations and outside plant construction. Material procurement, inventory, Project Reporting, marketing, and public relations
- Erik Happs / Manager of Construction: Outside plant construction and mainline design
- Adam Bowyer, Director of Engineering: Point of presence design, equipment design configuration and installation, overall system architecture
- Justice Camden, Quality Assurance Manager: Daily inspections of mainline construction and drops.
- Justin Martin, Finance Director: Provide financial oversight, and assist with grant reporting.
- Crystal Adams, Administrative Assistant: Assists with grant reporting.
- Stephen Durbin, County Attorney: Will draft and review agreements with ISPs and provide legal direction as needed.
- Michael Watson, County Administrator: POC, liaison with Zitel, prepares reports to VATI, assists with project logistics, will provide general oversight, coordination, and direction to the project team
- Brian Reed, Mount Rogers Planning District Commission, Deputy Director: Assist in Communications and Grant Administration.

If awarded, Carroll County will either hire a new staff member to serve as the project lead or solicit a consultant to manage the project.

Zitel Experience:

Zitel has its largest and most recent footprint in the Bedford County area of the Commonwealth, we have executed service passing to 2600 residents and businesses in underserved rural areas of Bedford County utilizing Care's Act funding in a partnership with the County Broadband Authority starting in October of 2020 and continuing throughout our VATI award. There has been expansion underway and planned future builds. Bedford County has reached back out to amend, expand, and continue our current contract twice with them for an additional area and those projects are completed and active. All Care's Act locally funded projects were completed on time within scope and under budget. Zitel was the 2022 VATI award winner for Bedford County and has begun that 417-mile build with expectations to be completed in March 2024. This will increase our current footprint to over 12,000 serviceable passings. Zitel is in the final stages of that build and we are proud to say that we are within the top percentage of all 2022 VATI partner providers for completion status.

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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:

Carroll County consists of 478 square miles in the Southwest portion of Virginia known as Mount Rogers. The Town of Hillsville, the county seat, is located in the heart of the county on U.S. Route 221 and Interstate 77. The County's settled in the heart of the Blue Ridge Mountains and the New River on the northeast. The area has a rolling to hilly terrain with elevations from a low of 800 feet above sea level, with some mountainous areas reaching an elevation of 4,200 feet. The County's 2020 population was estimated at approximately 29,911. Carroll County exemplifies the Digital Divide that the Federal Communications Commission (FCC) has taken on.

Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates are completed and included in the Attachment Section. A detailed budget itemizes fiber plant construction costs as proposed expenses.

The total project cost is \$51,908,700.00. ZITEL is contributing 50%, \$25,967,306.00. Carroll County is contributing \$2,000,000 (\$1,000,000 from ARPA funds and \$1,000,000 from General Fund), 4%, plus \$582,479.00 from an ARC grant award, for a combined "Other Funding" total of \$2,582,479.00. The remaining 45%, \$23,358,915.00, is being requested from DHCD. Carroll County will contract with the Mount Rogers Planning District Commission to administer the grant and oversee the project. The funding will be utilized for advertising the opportunity, as well as covering costs for individuals. Additionally, Carroll County contracts with a GIS firm. However, for this project, Carroll County is utilizing ZITEL's GIS team for mapping needs. Additional costs may be incurred from either GIS team.

ZITEL's costs include their 50% of the total cost including labor (design and engineering, etc.); equipment, and approximately 862.5 miles of fiber cable. Enabling Fiber Gigabit+ for the unserved and underserved areas of the County.

This project provides for the placement of at least eighteen (18) Fiber Distribution Huts; 1386 Fiber Distribution Points; 47 FTTP/GPON OLTs and approximately 862.5 miles of fiber cable in Carroll County to bring fiber-based broadband services to 10,271 serviceable units. With the Carroll County contribution, our calculations indicate a cost to VATI of \$2,274.26 per serviceable unit. As is industry standard, customers subscribing to Fiber Gigabit will be able to get speeds up to 1000Mbps+ while uploading or downloading data in the unserved and underserved project areas noted.

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:
- Total VATI funding request
 - Number of serviceable units (up to 125 points)

Answer:

- The Total VATI Funding requested is 45% (\$23,358,915.00) of the total project cost (\$51,908,700.00)
- There are 10,271 serviceable units total in the project area.

19.

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Commonwealth Priorities (Up to 50 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 100/20 mbps, include information regarding the internet service provider's participation in the Affordable Connectivity Program
- d. The co-applicant's efforts to mitigate supply chain constraints, including labor shortages and order-to-delivery delays on telecommunications materials required to construct broadband networks.
- e. The applicant's and co-applicant's efforts to promote broadband adoption, including, but not limited to: telehealth, smart farming, e-entrepreneurship, and distance learning.

Answer:

A.

The project will result in 7,267 residential units, 1,972 business units, 1,002 non-residential units, an unknown number of in-home business units, and 30 new community anchor units. When attracting businesses to the county, broadband is a critical part of the infrastructure companies expect to have readily available. Carroll County is one of the fastest growing agricultural localities in Virginia, yet only certain small pockets are available to be developed for business due to a lack of quality, high-speed internet. The project will also connect a significant number of farms, forest product operations, and agricultural facilities, which will not only enhance existing operations but also position the region's producers and growers to implement new technologies and processes.

B.

ZiTEL leverages a unique partnership with the local Volunteer Fire Department and Local Volunteer Rescue Squads. In Bedford County and Campbell County ZiTEL has placed PoPs (Points of Presence) inside these facilities in a locked and separated location like a utility closet or storage room. In exchange for the use of the space, ZiTEL provides the highest small business speed internet service to these facilities free of charge. These agreements are written contracts with an IRU agreement between ZiTEL and the FD or EMS organizations. We feel this approach to a true public-private partnership is unique in the industry and gives ZiTEL the ability to actively participate with and in the communities we serve.

ZiTEL has a great working relationship with VDOT and its local district offices. ZiTEL worked closely with VDOT in developing the "new standard" for submitting permits for the Salem VDOT District. All prints and engineering documents are submitted per the VDOT recommendations to facilitate an expedited turnaround so that we experience little to no delays in construction. ZiTEL employees receive all necessary VDOT training and certifications for roadway construction and safety so that we meet and exceed all necessary and recommended levels of competency to perform work within the VDOT right of way. ZiTEL also has a pole attachment agreement with AEP to facilitate all engineering and make ready during the installation.

C.

The project will have a significant benefit by making high-quality broadband available to a community that is considered distressed and with a population that is primarily low to moderate income. Carroll County's median household income is \$44,835. Of the 12,000 households in Carroll County,

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approximately 7,800 households are considered low to moderate income. The broadband digital equity and inclusion programs made available to LMI households would not be limited to the estimated number of households at the time of application; instead, LMI households would be deemed eligible on a rolling basis throughout the project.

To ensure that all members of the community can benefit from the service, ZiTTEL has low-income discounts through the FCC Lifeline Program, ACP, and plans on participating in the EBB program. Additionally, ZiTTEL offers a free drop length of 1000' with a very low cost for additional footage above the 1000' length at only \$1.00 per foot and that cost can either be paid upfront to remain a month-to-month customer or the customer can take advantage of a 25% discount on the long drop cost and have the cost spread across 24 /36 / 48 months.

All service offerings made available through this project will be eligible for the federal affordability connectivity programs (ACP) available to LMI households. For the life of the project, ZiTTEL will provide service drops to all locations within the project area, up to 1000', for no charge and will provide no charge for service installation. For drops lengths above 1000', we offer the ability to contract to a 24/36/48-month contract to gain a free drop installation with a small cost to cover a percentage of the drop cost per month, meaning there will never be any upfront costs to any household, including LMI households at the time of installation. To ensure that high-quality broadband is available for free to all LMI households that qualify for the ACP, we have a \$29.99 service that is available to ACP-qualified customers. This service is a 50/50mbs drop with free equipment and installation that will ensure, with the \$30 ACP reimbursement, all qualified households will have access to free broadband.

D.

ZiTTEL has engaged with a national vendor for direct contracts and warehousing of fiber materials. ZiTTEL has executed a special agreement with Millenium Infrastructure for fiber to be delivered as needed as a means of ensuring the fiber for all projects is available and will continue to be so for any future builds. ZiTTEL has engaged with Meers Group, a national company for outside plant construction for when we need to supplement our in-house crews with sub-contracted labor. By proactively engaging these entities, ZiTTEL is making significant strides to mitigate both material and labor supply chain constraints.

E.

Face-to-face marketing teams will be available to engage and educate prospects on ZiTTEL internet product details and ordering processes. These include direct mail, a prelaunch website, a dedicated and or County website for the service area, yard signs, door hangers, press releases, and/or mobile marketing. In addition to working with our school division and Chamber of Commerce to get the word out to students/parents and businesses, the County will work with the Carroll County Farm Bureau and Cooperative extension to ensure that farm businesses in the County are aware of the benefit of broadband connection. ZiTTEL will also work with local medical offices, Urgent care facilities, and Hospice facilities to ensure that they are aware of telehealth options that will now be available to their patients who are within the ZiTTEL service footprint.

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20. Additional Information

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 14 – Letters of Support.

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 15 – Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 16 - Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area
- c. Attachment 17 - For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area
- d. Attachment 18 – XXXXXXXX
- e. Attachment 19 – XXXXXXXX
- f. Attachment 20 – XXXXXXXX

Answer:

N/A

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap1217202373724.pdf

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

Attachment2DocumentationofFederalFundingArea1217202373731.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment3DocumentationUnservedAreaVATICriteria1217202373738.pdf

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Timeline/Project Management Plan

Attachment7TimelineProjectManagementPlan1217202373947.pdf

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

2023CarrollZitelMOU00011217202374056.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates1217202373902.pdf

Letters of Support

VATI2024LOS12192023114416.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment15TwomostrecentForm4771217202373855.pdf

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

Attachment16PointandPolygonShapefiles12192023123202.zip

Optional

SupplementalApplicationQuestionVATI2024CarrollCounty1219202312553.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFunding1217202373939.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts1217202373817.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTable1217202373926.pdf

Passings Form (Use template provided)

Attachment4PassingsForm1217202373833.pdf

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Supplemental Application Question

Applicant: Carroll County

Project Name: Carroll County VATI 2024

The question below is question e. from the Commonwealth Priorities section of the 2024 Virginia Telecommunication Initiative (VATI) Guidelines. Please answer the question using this form and email to VATI@dhcd.virginia.gov.

Commonwealth Priorities

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

e. The co-applicant's effort to mitigate costs and delays that may be associated with make-ready and other permitting requirements anticipated for network deployment.

As a means of mitigating supply chain constraints ZITEL has engaged with a national vendor for direct contract and warehousing of fiber materials. Specifically, ZITEL has executed a special agreement Millenium Infrastructure for fiber to be delivered as needed as a means of ensuring the fiber for all projects is available, this partnership has work well with our 2021 cares act projects and 2022 VATI projects, even during the COVID caused supply chain issue, and will continue for any future builds. From the labor perspective, ZITEL has engaged with Meers Group, a national company for outside plant construction for when we need to supplement our in-house crews with sub-contracted labor. ZITEL, in our efforts to stay involved in our local communities, has partnered with the National Center for Healthy Veterans in Campbell County, VA. This organization assists our veterans in making a healthy and prosperous transition back to civilian life. Not only did ZITEL donate millions of dollars in Fiber infrastructure to bring internet services to the tiny home villages in their facility. ZITEL also partners with the NCHV to have a jobs training partnership to develop a trained veteran labor force for ZITEL to secure for future staffing. By proactively engaging these entities, ZITEL is making significant strides to mitigate both material and labor supply chain constraints.

The County permitting office will fast-track all ISP permitting submissions and will create a protocol to facilitate this process to ensure success with not only the County procedures but also any required coordination with VDOT. The goal will be to avoid lengthy processing delays with the understanding there may be a large volume of mapping and permitting data submitted.

ZITEL currently has a pole attachment agreement with AEP to facilitate all engineering and make ready during the installation. AEP and ZITEL have already worked very closely with Bedford County during Care Act Funding project starting in 2020 throughout our existing VATI awards with minimalistic delays incurred. This established relationship will further leverage the Carroll County project.

Currently ZITEL utilizes internal organic employees to facilitate make-ready and engineering decisions for determining when and where we will complete infrastructure aerially, so we can utilize our local knowledge of the area to decide when an area is not "right" or will be an extensive permitting process for aerial or below ground deployment and can adjust as needed.

2024 Virginia Telecommunication Initiative (VATI) Passing Form

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 25/3 or below in Project Area ⁴
Residential	7,267			6,268
Businesses (non-home based)	1,972			1,770
Businesses (home-based)				
Community Anchors	30			22
Non-residential	1,002			834
Total	10,271			8,894

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 25 mbps download and 3 mbps 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.

ATTACHMENT 7 (Question 11 Project Readiness)

<i>Project Timeline</i>																									
Month 1 = Contract Award Notification and Contract Fully Executed																									
Project Deadline = July, 2026 (24 months)																									
<i>FTTx</i>																									
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	
Performance Milestones	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	
Field Engineering - Phased	█	█	█	█	█																				
Design Engineering - Phased			█	█	█	█	█																		
Search Ring Release - Phased				█	█	█	█	█																	
Site Acquisition - Phased					█	█	█	█	█	█	█	█	█	█	█	█	█	█							
Permitting - Phased						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█					
Final Project Review - Phased							█	█	█	█	█	█	█	█	█	█	█	█	█	█	█				
Construction - Phased								█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Customer Installation Commencement - Phased															█	█	█	█	█	█	█	█	█	█	█
Project Close-out - Phased																	█	█	█	█	█	█	█	█	█

Performance Milestones – Fiber to the Home

Field Engineering – Phased

- Outside Plant:
 - ZITEL shall complete a full review of the planned fiber route to determine feasibility, costs, and challenges for construction. This review shall consist of ZITEL personnel visually inspecting the entire planned fiber route. ZITEL typically follows utility routes such as power or telephone, with those utilities for new pole attachments.
 - ZITEL shall decide to go underground if the utility routes are deemed favorable or contain challenges that would result in high costs to construct for pole placement.
 - ZITEL shall collect all pole information and route information and prepare the proper permits for pole owners and VDOT.

Design Engineering – Phased

- Outside Plant:
 - ZiTTEL shall complete a detailed Engineering Package that includes the entire defined fiber build route, as well as a complete list of all required materials to complete the fiber build.
 - Engineering Package shall consist of geospatial drawings of the physical route (aerial versus buried), list all physical structures and other possible obstructions, provide required materials and their physical placement, and note key requirements that construction is required to follow to complete the project.
- Inside Plant:
 - ZiTTEL shall complete a full design and procure all required equipment and ancillary hardware to support all planned services.

Permitting – Phased

- Outside Plant:
 - ZiTTEL shall permit all utility pole owners for any new pole attachments.
 - For any new permitted utility pole that is located on private property, ZiTTEL shall follow the Virginia and Federal code that would allow ZiTTEL to utilize existing like-kind utility easements. ZiTTEL shall engage the County to aid in any dispute that would arise from a landowner denying ZiTTEL access to utility easements.
 - ZiTTEL shall submit all other permits such as city, town, railroad, or VMRC permits as required.

Construction – Phased

- Outside Plant:
 - ZiTTEL shall complete all construction requirements as outlined and defined in the Engineering Package once all permits have been approved.
 - Required changes during construction shall be communicated and approved before construction can be completed.
 - ZiTTEL shall complete end-to-end fiber characterization and testing of fiber to determine if fiber passes all defined criteria. Any noted problems are corrected at the time of testing.
- Inside Plant:
 - ZiTTEL shall configure, deploy, and install all equipment and ancillary hardware.
 - ZiTTEL shall complete end-to-end testing and certification to validate the service.

Customer Installation Commencement – Phased

- Operations:
 - Release of addresses to sales database
 - ZiTEL shall complete the installation, test, and turn-up of all customer CPE (Customer Premise Equipment) at the home/business to support the service.

Project Close-Out – Phased

- ZiTEL shall complete a full review of the completed construction against the Engineering Package to verify that all requirements have been completed.
- ZiTEL shall complete a full review of all received equipment and ancillary hardware to verify that all materials have been received and placed into service.
- ZiTEL shall complete a full review of all vendor invoices against their completed work and materials to verify billing accuracy.
- ZiTEL shall complete all financial true-ups and closeouts to complete the project.

MEMORANDUM OF UNDERSTANDING

The parties to this Memorandum of Understanding (“MOU”) are Carroll County, Virginia (“Carroll County”) and ZiTEL, LLC (“ZiTEL”). The purpose of this MOU is to establish a commitment by the parties to enter into a partnership, as that term is defined by the Virginia Technology Initiative (“VATI”) program established by the Virginia Department of Housing and Community Development (“DHCD”). Although a partnership between Carroll County and ZiTEL has not yet been formalized for the VATI 2024 Broadband Project (“Project”), which Project is described more specifically below, both parties anticipate collaboration on a contract (“Contract”) to be executed if DHCD awards a VATI Grant to ZiTEL for the Project during the round of applications due on December 19, 2023. The Contract would require ZiTEL to complete the Project and would require Carroll County to contribute a portion of the costs associated with the Project. Neither party would be under any obligation to the other: (1) if ZiTEL is not awarded the Project by DHCD; or (2) if, in ZiTEL’s sole discretion, ZiTEL chooses not to submit an application to DHCD for the Project. The various obligations in the Contract contemplated by the parties are summarized below:

If Carroll County is awarded the Project by DHCD, ZiTEL would commit to:

- a. Execute a service agreement with The County for the Project, which will deploy fiber-to-the-home service to approximately 9,069 eligible locations with a total estimated Project cost of approximately \$49,892,536.00;
- b. Work with Carroll County to create a draft Contract once advised by DHCD of a successful application and anticipated award.
- c. Execute a Contract with Carroll County to formalize a partnership whereby ZiTEL will complete the Project, and Carroll County will pay a portion of the Project costs as estimated below and finalized in the Contract;
- d. Complete all Grant Activities to be described in the Contract;
- e. Provide a copy of any required Progress Report to Carroll County and DHCD on the status of the Project;
- f. Notify Carroll County if its assistance is needed with the Project;
- g. Submit requests for payment to Carroll County at specific project milestones as

- defines in the contract, or at the request of Carroll County;
- h. Complete all Project work within the required timeframe;
 - i. Provide Carroll County information on the locations where broadband had been enabled as part of the Project;
 - j. Prepare and execute any required nondisclosure agreements related to the Project; and
 - k. If Carroll County will fund its financial participation with American Rescue Plan Act/Coronavirus State and Local Fiscal Recovery Funds (ARPA/CSLFRF), ZiTEL will familiarize itself with and be prepared to comply with all applicable federal rules, regulations, procedures and directives related to subawards and subrecipients under that federal grant program.
 - l. Include this MOU in its application to DHCD for the Project.

Carroll County would commit to:

- a. Execute a Contract with ZiTEL, if ZiTEL is awarded the Project by DHCD. The Contract will formalize a partnership whereby ZiTEL will complete the Project and Carroll County will remit an amount equal to 10% to 20% of the total Project costs, to ZiTEL upon milestones of the Project, as addressed in this MOU and the Contract, it being understood that remittance in full must occur no later than December 31, 2027, under ARPA/CSLFRF grant requirements;
- b. Fund its financial participation with ARPA/CSLFRF or other grant funding or from the general fund of Carroll County;
- c. Obtain all necessary approvals to enter into the Contract;
- d. Process requests for payment for the Project pursuant to the Contract in a timely manner;
- e. Provide assistance with the Project in accordance with the Contract within the scope of Carroll County's authority;
- f. Execute any necessary non-disclosure agreement related to the Project;
- g. Provide information about the Project on the Carroll County website if applicable;
- h. Assist in publicizing the Project to Carroll County residents; and

- i. Allow ZiTEL to include this MOU in its application to DHCD for the Project.

ZiTEL, LLC

CARROLL COUNTY

Name (printed): Rodney Gray

Name (printed): Michael Watson

Title: Chief Operating Officer

Title: County Administrator

Signature: 

Signature: 

Date: 12/12/2023

Date: 12/12/23

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	\$23,358,915	45%	Pending
LOCAL CARROLL	\$2,000,000	4%	SECURED
FEDERAL ARC	\$582,479	1%	SECURED
PRIVATE ZITEL	\$25,967,306	50%	SECURED
TOTAL	\$51,908,700	100%	

Attachment 10 –Documentation of Match Funding

ZiTEL will be providing all the planning, engineering, materials, and labor for the installation of the fiber plant necessary for this project. The value of the ZiTEL contribution that is not reimbursed by VATI is **\$25,967,306.00**. ZiTEL has committed to provide the 50% amount of match funding.

Carroll County Board of Supervisors on August 22nd, 2022 committed to a 4% match of the overall cost of the project and will encumber **\$2,000,000.00** in support of the project.

Carroll County was awarded Federal ARC funding in the amount of \$582,479.00 that will be allocated to this project committed to a 1% match of the overall project.



CARROLL COUNTY, VIRGINIA
County Administration Building
605 Pine Street,
Hillsville, Virginia 24343
Tel: (276) 730-3001

MICHAEL WATSON
COUNTY ADMINISTRATOR

OFFICE OF THE COUNTY ADMINISTRATOR

September 8, 2021

Virginia DHCD
600 E. Main Street, Suite 300
Richmond, VA 23210

RE: VATI 2023 Application - Attachment 10 Documentation of Matching Funding

DHCD Staff:

During a special called meeting on August 22, 2022, the Carroll County Board of Supervisors (the "BOS") appropriated the full local match in the amount of **\$2,000,000.00** for our VATI 2023 Application in conjunction with Zitel. The funds will be made available as required by Zitel to pay for the construction of the fiber to the home (FTTH) project. These funds will be considered appropriated by the Board for once the grant is approved and awarded.

We are very pleased to be associated with this application and feel that it will help us reach our goal of ubiquitous broadband service in our County.

Thank you for your consideration and potential partnership with Zitel and Bedford County.

Regards,

MICHAEL WATSON
County Administrator

Resolution Here

CDBG Derivation of Cost

Product	Total	VATI	Non-VATI	Source of Estimate	Date
EXAMPLE					
<u>Construction</u>					
<i>200 LF of fiber @\$150/LF</i>	\$30,000	\$15,000	\$15,000	Company A	9/5/2016
<i>Tower</i>	\$100,000	\$80,000	\$20,000	Company B	9/5/2016
<i>Engineering</i>	\$20,000	\$0	\$20,000	ABC Engineering Firm	9/5/2016

Product	Total	VATI	Non-VATI	Source of Estimate	Date
CO/POP Electronics	\$ 2,283,534	\$ 392,196	\$ 1,891,338	Current Quotes	
Buried Construction	\$ 28,638,297	\$ 16,338,650	\$ 12,299,647	Current Ongoing Construction Cost	
Aerial Construction	\$ 6,773,883	\$ 4,704,509	\$ 2,069,374	Current Ongoing Construction Cost	
Service Construction	\$ 10,326,343	\$ -	\$ 10,326,343	Current Ongoing Construction Cost	
Construction Soft Cost	\$ 3,886,643	\$ 1,923,560	\$ 1,963,083	Previous Construction Cost	
Totals	\$ 51,908,700	\$ 23,358,915	\$ 28,549,785		
	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -		
	\$ -	\$ -	\$ -		

Attachment 13 - Documentation of Supporting Cost Estimates

The cost for this project includes logistics of planning and engineering, the equipment electronics necessary for broadband service, along with materials and labor of the installation of the fiber plant necessary to complete the build. These cost estimates are based on ZITEL's previous experience in building similar plants throughout our current footprint. ZITEL and the County has thoroughly reviewed the passing, the build footprint, and the need for service throughout the County. This cost projection has been based on a FTTx distributed split solution for rural Carroll County.

The following charts, quotes, and SLAs have already been received and accepted from ZITEL and have been used to create our budget for the build.

	GPON Materials	GPON Labor	Total Cost
Aerial	\$ 4,592,134.72	\$ 5,334,297.92	\$ 9,926,432.64
Buried	\$ 10,481,834.39	\$ 20,398,425.44	\$ 30,880,259.83
Splicing	\$ 3,130,984.35	\$ 3478889.95	\$ 6,609,874.30
Electronics	\$ 1,710,683.95	\$ 2,781,449.28	\$ 4,492,133.23
Totals:	\$ 19,915,637.41	\$ 31,993,062.59	\$ 51,908,700.00

OSP Vendor Rate Sheet, Unit Pricing

SML Siteworks LLC

1123 Nolans Dr.
Bedford, VA. 24523



Phone: 540-871-9139
Email: smlsiteworks@yahoo.com

Unit #	Unit of Measurement	Unit Description	Virginia
101	EA	Anchor - all types and sizes	\$ 137.50
102	EA	Rock anchor - all types and sizes	\$ 331.25
103	EA	Sidewalk anchor - all types and sizes	\$ 225.00
104	EA	Bust anchor- all types and sizes	\$ 281.25
105	EA	Place riser & u-guard - wood pole	\$ 81.25
106	EA	Place riser & u-guard - concrete pole	\$ 140.63
107	EA	Place riser & u-guard - metal pole	\$ 151.25
108	FT	Aerial strand/messenger - all sizes	\$ 1.00
109	FT	Lash copper < 600 pair	\$ 1.63
110	FT	Lash copper > 600 pair	\$ 2.63
111	FT	Additional lashed cable - all types and sizes	\$ 1.75
112	FT	Self-support cable - all types and sizes	\$ 2.38
113	FT	Additional self-support copper cable - all sizes	\$ 2.38
114	FT	Self-support flexible duct	\$ 1.88
115	FT	Additional self-support flexible pipe	\$ 1.31
116	FT	Over-lash copper cable - all types and sizes	\$ 2.00
117	FT	Lash coax up to two (2) cables - all sizes	\$ 1.44
118	FT	Over-lash coax cable up to two (2) cables - all sizes	\$ 1.44
119	FT	Additional lashed/over lashed coax cable - all sizes	\$ 0.94
120	FT	Lash aerial fiber optic cable - all types and sizes	\$ 1.88
121	FT	Over-lash fiber cable - all types and sizes	\$ 2.00
122	FT	De-lash/re-lash - all types and sizes	\$ 2.31
123	FT	Additional lashed/over lashed fiber optic cable - all sizes	\$ 0.94
124	FT	Aerial copper service wire - up to 12 pair	\$ 1.19
125	FT	Aerial fiber optic service wire - up to 12 strands	\$ 1.19
126	FT	Aerial Coax service wire - all types and sizes	\$ 1.19
127	FT	Handle and/or create fiber slack loops	\$ 1.38
128	EA	Place snow shoe - all types and sizes	\$ 87.50
129	FT	Aerial placing-all methods & cable sizes - Copper	\$ 4.19
130	FT	Aerial placing-all methods & cable sizes - Fiber	\$ 4.19
131	FT	Aerial placing-all methods & cable sizes - Coax	\$ 4.19
132	EA	Transfer Attachment - all sizes	\$ 131.25
133	EA	Transfer Aerial service wire-pole or strand mounted	\$ 68.75
134	EA	Transfer Aerial riser & U-guard - all types and sizes	\$ 168.75
135	EA	Make ready without down guy - all types and sizes of cables	\$ 131.25
136	EA	Make ready with down guy - all types and sizes of cables and anchors	\$ 168.75
137	EA	Remove top of pole and remove from work site	\$ 168.75
138	FT	Removal Copper cables - all sizes and types	\$ 1.06
139	FT	Remove COAX and fiber optic - all sizes and types	\$ 1.06
140	FT	Removal Strand/messenger - all types and sizes	\$ 1.06
141	EA	Removal Guys - all types and sizes	\$ 46.88
142	EA	Removal Cabinets - all types and sizes	\$ 184.38
143	FT	De-lash/re-lash - all types and sizes	\$ 2.31

144	EA	Removal Strand or pole mounted electronic equipment	\$ 78.13
145	EA	Remove riser cable to include the u-guard and all hardware - all types and sizes	\$ 57.50
146	EA	Straighten pole	\$ 234.38
147	EA	Repair/replace lashing wire (each span)	\$ 104.38
148	EA	Place/replace u-guard	\$ 131.25
149	EA	Place/replace pole steps per pole	\$ 100.00
150	EA	Resag/tension strand or messenger per span	\$ 135.00
151	EA	Aerial Minimum Charge	\$ 625.00
152	FT	Plow up to 2 inches < or = to 36 inches	\$ 5.31
153	FT	Trench up to 4 inches < or = to 36 inches	\$ 6.56
154	FT	Backhoe greater than 4 inches	\$ 7.19
155	FT	Additional depth > 36 inches in 6 inch increments	\$ 1.19
156	FT	Additional cable or conduit in same trench while on site - all sizes and types	\$ 1.06
157	FT	Hand digging	\$ 11.88
158	FT	Additional depth > 36 inches in 6 inch increments (Hand Dig)	\$ 2.38
159	FT	Pull through cable or duct in Supplier placed conduit- primary cable or pipe	\$ 1.50
160	FT	Pull through cable or duct in Supplier placed conduit- secondary cable or pipe	\$ 0.81
161	FT	Place cable or duct in a open conduit - primary	\$ 2.09
162	FT	Place cable or duct in a occupied conduit - primary	\$ 2.63
163	FT	Place additional cable in conduit or pipe - secondary	\$ 0.94
164	FT	Place pull line - primary function	\$ 1.38
165	FT	Handle and/or create slack loops	\$ 1.56
166	FT	Install buried copper drop - all methods & sizes	\$ 2.63
167	FT	Install buried fiber drop - all methods & sizes	\$ 2.63
168	FT	Additional service wire in same trench - all types & sizes	\$ 0.94
169	FT	Install buried coax drop 0'-150'- all methods & sizes	\$ 2.31
170	FT	Install buried coax drop 151'-300'-all methods & sizes	\$ 2.31
171	FT	Additional CIC in same trench while on site	\$ 1.25
172	FT	Replace coax drop in existing conduit	\$ 1.38
173	EA	Cut-over copper service wire	\$ 66.25
174	EA	Cut-over COAX service wire	\$ 47.50
175	EA	Pedestal - all types and sizes	\$ 109.38
176	EA	Pedestal install node	\$ 183.75
177	EA	Pedestal install line extender/amplifier	\$ 156.25
178	EA	Pedestal install tap/splitter	\$ 175.00
179	EA	Drop wire terminal - all types and sizes	\$ 56.25
180	EA	Hand hole less than or equal to 2' X 3' X 3'	\$ 343.75
181	EA	Hand hole > 2' X 3' X 3'	\$ 443.75
182	EA	Stub pole	\$ 243.75
183	EA	6 X 6 post	\$ 193.75
184	FT	Bore - directional - 2 inch in diameter	\$ 20.00
185	FT	Bore - directional - 4 inch in diameter	\$ 22.50
186	FT	Bore - directional - 6 inch in diameter	\$ 25.00
187	FT	Bore- directional - over 6 inches in diameter	\$ 28.13
188	FT	Adder - Rock bore - Rail head	\$ 60.00
189	FT	Adder- Rock bore - Air hammer	\$ 81.25
190	FT	Removal rock buried - Ram Hoe	\$ 60.00
191	FT	Removal rock buried - Rock Saw	\$ 93.75

192	FT	Place buried locate wire in trench (primary function)	\$ 1.38
193	FT	Place buried locate wire in duct (primary function)	\$ 2.19
194	FT	Place direct buried locate wire (primary function)	\$ 2.81
195	FT	Place buried locate wire in trench (secondary function)	\$ 0.50
196	FT	Place buried locate wire in duct (secondary function)	\$ 0.50
197	FT	Place direct buried locate wire (secondary function)	\$ 0.38
198	EA	Place ground rod	\$ 43.75
199	FT	Place ground wire	\$ 1.81
200	CU.FT.	Select backfill	\$ 5.44
201	FT	Buried placing all methods - Copper (including solid rock)	\$ 83.75
202	FT	Buried placing all methods - Fiber (including solid rock)	\$ 83.75
203	FT	Buried placing all methods - Coax (including solid rock)	\$ 83.75
204	FT	Bundles in excess of the 2" diameter in 2" increments	\$ 18.75
205	FT	Additional cover in excess of 36" in 6" increments	\$ 15.00
206	FT	Buried placing all methods - Copper (excluding solid rock)	\$ 18.44
207	FT	Buried placing all methods - Fiber (excluding solid rock)	\$ 18.44
208	FT	Buried placing all methods - Coax (excluding solid rock)	\$ 17.81
209	FT	Bundles in excess of the 2" diameter in 2" increments	\$ 2.88
210	FT	Additional cover in excess of 36" in 6" increments	\$ 2.88
211	CU.FT.	Remove/replace concrete	\$ 68.93
212	CU.FT.	Remove/replace asphalt	\$ 147.71
213	FT	Remove cable or duct from conduit system - all sizes and types	\$ 1.84
214	FT	Remove direct buried cable - all sizes and types	\$ 1.56
215	FT	Remove additional cable or duct - removed simultaneously	\$ 1.19
216	EA	Locate buried conduit end(s)	\$ 106.25
217	EA	Intercept existing conduit = or < than 4 feet	\$ 981.25
218	EA	Intercept existing conduit > than 4 feet	\$2,093.75
219	FT	Rod/slug conduit and provide measurements	\$ 2.88
220	FT	Flush conduit or duct - primary function	\$ 2.88
221	FT	Rod and provide measurements - secondary function	\$ 1.50
222	EA	Replace cable route markers	\$ 56.25
223	EA	Replace pedestal - all sizes	\$ 206.25
224	EA	Replace hand hole & lid - all sizes	\$ 331.25
225	EA	Replace hand hole lid - all sizes	\$ 53.06
226	EA	Straighten, raise, or lower pedestal - all sizes	\$ 306.25
227	EA	Straighten, raise, or lower hand hole - all sizes	\$ 306.25
228	EA	Dig and backfill splice pit up to 30 cu. ft.	\$ 731.25
229	EA	Dig and backfill splice pit over 30 to 60 cu. ft.	\$ 981.25
230	EA	Pothole existing buried facilities in dirt	\$ 162.50
231	EA	Pothole existing buried facilities in concrete	\$ 834.38
232	EA	Pothole existing buried facilities in asphalt	\$ 500.00
233	FT	Rod/slug conduit and provide measurements	\$ 2.88
234	FT	Flush conduit or duct - primary function	\$ 2.88
235	FT	Rod and provide measurements - secondary function	\$ 1.50
236	EA	Buried Minimum Charge	\$ 625.00
237	FT	Place all types cables on the customers building	\$ 45.00
238	FT	Place all types cable in customer building	\$ 2.06
239	FT	Place additional cable in customer building	\$ 0.63
240	FT	Place rigged EMT in customer building, up to 2"	\$ 17.50
241	FT	Place rigged EMT in customer building, up to 4"	\$ 20.00
242	FT	Place plenum rated roll pipe in customer building, up to 2"	\$ 2.06
243	FT	Place plenum rated roll pipe in customer building, up to 4"	\$ 2.06

244	EA	Cabinet - small = <10 square feet	\$1,009.38
245	EA	Patch panel - all sizes	\$ 118.75
246	EA	Cabinet and pad - small	\$1,484.38
247	EA	Cabinet and pad - large	\$2,078.13
248	EA	Cabinet over vault - small	\$1,062.50
249	EA	Cabinet over vault - large	\$1,812.50
250	EA	Join individual fibers 1-12	\$ 57.50
251	EA	Join individual fibers 13-48	\$ 43.13
252	EA	Join individual fibers 49-96	\$ 34.38
253	EA	Join individual fibers 97+	\$ 32.81
254	EA	Hot splice individual fibers 1-12	\$ 209.38
255	EA	Hot splice individual fibers 13-48	\$ 70.94
256	EA	Hot splice individual fibers 49-96	\$ 61.56
257	EA	Hot splice individual fibers 97+	\$ 51.25
258	EA	Place fiber optic closure w/two cable ends	\$ 257.81
259	EA	Additional cables entering the same closure	\$ 68.75
260	EA	Ring cut fiber optic closure w/ three cable ends	\$ 326.49
261	EA	Additional cables entering the same closure	\$ 137.50
262	EA	OTDR unidirectional testing	\$ 26.88
263	EA	OTDR Bi-directional testing	\$ 41.88
264	EA	Chromatic Dispersion testing	\$4,664.18
265	EA	OTDR unidirectional testing - stand alone unit	\$ 52.50
266	EA	OTDR bi-directional testing - stand alone unit	\$ 71.25
267	EA	Chromatic Dispersion testing - stand alone unit	
268	EA	Maintenance case replacement - like for like	\$ 378.12
269	EA	Fiber audit - case only; inside and out	\$ 584.37
270	EA	Fiber audit - inspecting the case and gathering splice	\$ 653.12
271	EA	Fiber audit - splice schematic w/ photos	\$ 240.63
272	EA	Re-enter fiber splice closure; aerial - all types and sizes	\$ 206.25
273	EA	Re-enter fiber splice closure; underground - all types and sizes	\$ 206.25
274	HR	Services	\$ 45.00
275	HR	Services - Manual labor	\$ 32.00
276	HR	Services - Snow removal	\$ 119.00
277	HR	Large vehicle with tools	\$ 55.00
278	HR	Medium vehicle with tools	\$ 29.50
279	HR	Small vehicle with tools	\$ 20.50
280	HR	Large equipment & trailer	\$ 55.00
281	HR	Medium equipment & trailer	\$ 45.00
282	HR	Small equipment & trailer	\$ 30.00
283	HR	Generator	\$ 9.00
284	HR	Light tower	\$ 22.00
285	HR	Crash cushion	\$ 52.00
286	HR	Flashing arrow board	\$ 9.50
287	HR	Lighted barricade	\$ 21.00
288	HR	Traffic barrel - per 10 barrels	\$ 17.00
289	HR	Work zone sign - all types	\$ 0.95
290	HR	Traffic cone - per 10 cones	\$ 0.65
291	HR	Lane closure with crash cushion	\$ 0.65
292	FT	Aerial line clearing - all methods	\$ 0.65
293	FT	Buried line clearing - all methods	\$ 0.65
294	FT	Additional width and height - all methods	\$ 0.65
295	FT	Clearing and grubbing - 6" trunk diameter and less	\$ 0.65

296	EA	Tree removal <= 6" in diameter	\$ 0.65
297	EA	Tree removal > 6" to 12" in diameter	\$ 0.65
298	EA	Tree removal > 12" to 24" in diameter	\$ 0.65
299	EA	Tree removal > 24" in diameter	\$ 0.65
300	EA	Existing brush removal - per round trip	\$ 0.65
301	%	Material Mark-up	\$ 0.65
302	%	Urban Adder - Aerial	\$ 0.65

Materials Project Estimate
Estimate # 0039864
Carroll County GPON Build 2023

10/26/2023 — Valid for 30days – subject to change without Notice – not valid for ordering

<u>Quantity</u>	<u>Item #</u>	<u>Description</u>	<u>Price Each</u>	<u>Price</u>
875	3106407	Grommet Kit	\$62.21	\$54,433.75
75	3106406	End of Line Grommet Kit	\$57.28	\$4,296.00
5158	20567	Splice Trays	\$82.82	\$427,185.56
6585	310000240	Cable Coil Storage Bracket	\$35.42	\$233,240.7
6875	6018090	Closure Mounting Bracket	\$87.12	\$598,950.00
7235	18110000	Splice Enclosures	\$326.21	\$2,360,129.35
1		Special Handle Shipping	\$6,585.16	\$6,585.16
<i>Sub</i>				\$3,684,820.52
85	12587-OLT	OLT Terminal	\$2,289.75	\$171,731.25
26	12592-RTR	Edge Router	\$1,776.25	\$62,168.75
35	18536-UPS	Battery UPS	\$650.25	\$16,256.25
26	12514-WT	Edge 10G Switch	\$1,150.49	\$29,912.74
1576	12526-TRS	Point to MultiPoint Transceiver	\$89.77	\$241,032.45
<i>Sub</i>				\$521,101.44
5684	243624	{TIER 22} Handhold	\$1,126.13	\$10,095,755.45
<i>Sub</i>				\$10,095,755.45
369,600		1 ¼" Ridgid Duct – with tape	\$0.77	\$ 284,592.00
1,386,000		Aerial Strand/attachment parts - Composite	\$0.36	\$ 498,960.00
4,514,400		Fiber Average Composite STR SJSA All Counts	\$1.06	\$4,830,408.00

Total
\$19,915,637.41

BLUERIDGECROSSROADS
economic development authority

Carroll – Galax – Grayson VIRGINIA

December 11, 2023

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: Letter of Support for Carroll County 2024 VATI Application

Dear Dr. Holmes:

We are writing in support of Carroll County's VATI application and their joint grant application with Zitel for building improved internet in rural areas of Carroll County, Virginia. This build-out would include approximately 9,000 passings and would allow the County to achieve universal coverage.

The citizens of Carroll County have long suffered with little to no internet service in many of our rural areas. This especially came to light during COVID-19 pandemic when teleworking became more prominent, and students were trying to continue their classwork virtually rather than be in a classroom.

Carroll County is home to Wildwood Commerce Park, a business-ready industrial park managed by the Blue Ridge Crossroads Economic Development Authority (BRCEDA), which includes the only two Tier 5 sites in Southwest Virginia. One area that needs focus to attract business to the park is the availability of reliable internet throughout Carroll County, especially for residential use. While Wildwood Commerce Park is served by internet adequate broadband is needed throughout Carroll County for potential new residents.

We recognize the importance of broadband to existing citizens and future citizens in Carroll County. Such improvements will increase educational opportunities and economic growth in the area. Their proposed investment in broadband infrastructure utilizing a VATI Grant would bring our community into the 21st century.

Please consider their application and know we will stand in support of their efforts.

Sincerely,



Ashlyn Shrewsbury
Executive Director

The Blue Ridge Crossroads Region is Virginia's "Entrepreneurial Region."

Larry Edwards
Chairman

Kaye Carter

Marty Hall

Michael Watson
Executive Director



Martin Slate
Vice Chairman

Terry Russell

Richard Sowers

Greg Hawks

**Carroll County Economic Development Authority
Board of Supervisors Chambers**

605-1 Pine St.
Hillsville, VA 24343

December 11, 2023

To Whom it may concern,

On behalf of the Carroll County Economic Development Authority, I am writing to express my strong support for Carroll County's 2024 VATI Broadband Grant application. I am well aware of the critical need for improved broadband infrastructure in our community and the significant positive impact that the proposed project will have.

This project aims to address the current digital divide in our community by expanding broadband access. This initiative is particularly crucial given the growing importance of digital connectivity in various aspects of our daily lives, including education, healthcare, business and community development.

Moreover, this project aligns with the broader economic development goals of our region. Enhanced broadband connectivity will attract new business, stimulate job creation, and empower local entrepreneurs. Additionally, it will contribute to educational advancements by providing students with equal access to online resources and opportunities.

Thank you for your attention to this matter, and I appreciate your consideration of Carroll County's application.

Respectfully,

A handwritten signature in black ink, appearing to read "Larry Edwards", with a long horizontal flourish extending to the right.

Larry Edwards
Chairman
Carroll County EDA

SENATE OF VIRGINIA

WILLIAM M. STANLEY

20TH SENATORIAL DISTRICT
ALL OF HENRY AND PATRICK COUNTIES; ALL OF THE
CITIES OF GALAX AND MARTINSVILLE; PART OF CARROLL,
FRANKLIN, HALIFAX, AND PITTSYLVANIA COUNTIES;
AND PART OF THE CITY OF DANVILLE



COMMITTEE ASSIGNMENTS:
AGRICULTURE, CONSERVATION AND
NATURAL RESOURCES
JUDICIARY
LOCAL GOVERNMENT

December 12, 2023

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, Virginia 23219

RE: Letter of Support for VATI Application

Dear Dr. Holmes,

I am writing to express my strong support for Carroll County's application for the Virginia Telecommunications Initiative (VATI) grant, and their joint grant application with Zitel, LLC, to bring improved internet access to rural areas of Carroll County, Virginia.

For too long, residents of our rural communities have struggled with limited or non-existent internet services. This lack of connectivity has been further exacerbated by the recent COVID-19 pandemic, impacting students who have relied on virtual learning in the absence of classroom instruction.

I believe that access to reliable broadband is essential for our citizens in the 21st century. It is a key driver of educational opportunities, economic growth, and overall quality of life. The proposed investment in broadband infrastructure through the VATI grant will bring our rural communities into the digital age, ensuring that they are not left behind in the ever-evolving technological landscape.

By investing in Zitel's broadband project, the DHCD can help ensure that all Carroll County residents, regardless of their location, have equal access to high-speed internet services. This will level the playing field for our students, businesses, and families, allowing them to fully participate in the global economy and access the vital resources and opportunities available online.

Therefore, I urge the DHCD to grant the VATI funding to Carroll County and Zitel, LLC. This investment will not only improve our community's access to technology but also pave the way for a brighter future for generations to come.

I strongly support this project and believe it will significantly enhance the lives of all Carroll County residents. If you have any questions, or need anything further, please do not hesitate to contact my office. Until then, I remain,

Very truly yours,

A handwritten signature in blue ink, appearing to read 'W. Stanley', with a stylized flourish at the end.

Senator William M. Stanley

Carroll County Public Schools

Fax: (276) 730-3210

605-9 Pine Street
Hillsville, VA 24343

Telephone: (276) 730-3200
(276) 236-8145

Office of the Superintendent



12/11/23

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, Virginia 23219

Letter of Support for 2024 VATI Application

Dear Dr. Holmes:

We are writing in support of Carroll County's VATI application for building improved internet in rural areas of Carroll County, Virginia.

The citizens of Carroll County have long suffered with little to no internet service in many of our rural areas. This especially came to light during the recent COVID-19 pandemic when students were trying to continue their classwork virtually rather than be in a classroom.

During school closures it was determined through contact with families, surveys and participation in online learning activities approximately 30% of our students and their families either had no affordable internet options, no access to internet services in their community, or slow dial up service. For us to be effective as a school system in the 21st century reliable internet service is a requirement not a luxury.

We recognize the importance of broadband to citizens in our County. Such improvements will increase educational opportunities and economic growth in the area. Their proposed investment in broadband infrastructure utilizing a VATI Grant would bring our community into the 21st century. The citizens of Carroll County in the covered region will have access to broadband equal to citizens in larger cities and more populated areas.

Please consider this application and know Carroll County Public Schools will stand in support of their efforts.

Sincerely,

A handwritten signature in cursive script that reads 'Mark A. Burnette'.

Mark A. Burnette, Ed.D.

Galax-Carroll Regional Library

Galax Public Library
610 West Stuart Drive
Galax, Virginia 24333
276-236-2351
FAX 276-236-5153

610 WEST STUART DRIVE
GALAX, VIRGINIA 24333
276-236-2042
FAX 276-236-5153
<http://galaxcarroll.lib.va.us>

Carroll County Public Library
101 Beaver Dam Road • PO Box 1629
Hillsville, Virginia 24343
276-728-3334
FAX 276-728-3830

December 12, 2023

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, Virginia 23219

Letter of Support for 2024 VATI Application

Dear Dr. Holmes:

We are writing in support of Carroll County's VATI application for building and providing improved internet services in rural areas of Carroll County, Virginia.

The citizens of Carroll County have long suffered with little to no internet service in many of our rural areas—and where some internet service is available, the quality is poor. This especially came to light during the COVID-19 pandemic when students were trying to continue their classwork virtually, rather than in a classroom.

Due to the lack of reliable and affordable internet access, the digital divide persists in Carroll County. In order for citizens to have and develop needed digital literacy skills, the internet must be readily available for use. Every day, Carroll County Public Library staff observe how digital literacy has become one of the most important lifelong learning skills citizens need to navigate modern life. For example, submitting homework assignments, ordering items online, printing a shipping label, creating an e-mail address, and submitting job applications all require a certain degree of digital literacy.

Digital equity is a need in Carroll County. For citizens to possess and develop digital literacy skills the internet must be available in all sections of the County. Students of all ages and grade levels need internet access available at home to aid their success in the classroom, whether they attend in-person or online; job seekers need internet access to apply for positions and research areas for advancement in their careers; the elderly need internet access to research and sign up for Medicare; and, everyone needs internet to stay connected with family, friends, and the world at large. Over the past three years Carroll County Public Library staff have noticed many new people to the area applying for library cards. Having widespread, reliable internet access in Carroll County facilitates opportunities for people to work remotely from home with companies all over the world. Folks who are new to the area often cite the slower pace of life and natural beauty of the area as factors that helped attract them to Carroll County; reliable internet access will help bring people to Carroll County, too.

Galax-Carroll Regional Library

Galax Public Library
610 West Stuart Drive
Galax, Virginia 24333
276-236-2351
FAX 276-236-5153

610 WEST STUART DRIVE
GALAX, VIRGINIA 24333
276-236-2042
FAX 276-236-5153
<http://galaxcarroll.lib.va.us>

Carroll County Public Library
101 Beaver Dam Road • PO Box 1629
Hillsville, Virginia 24343
276-728-3334
FAX 276-728-3830

The lack of internet in Carroll County poses challenges to citizens, making it harder for them to succeed. Carroll County Public Library staff regularly observe and hear stories from patrons about the obstacles encountered. Currently, there are two Carroll County citizens who utilize internet access inside the Carroll County Public Library for their work because they lack reliable internet access at their homes. One of these persons does tutoring via Zoom two to three days a week at the library. While the Carroll County Public Library is happy to be able to provide reliable internet access for patrons, wi-fi internet users express the difficulty of leaving home and driving to the library parking lot to access the internet to do research for a school assignment. What if the internet users have to drive 20 miles to get a folder they forgot at home? Not having broadband internet access in the home definitely makes life more difficult and success substantially harder to achieve.

As Carroll County Public Library staff plan for future library services, citizens need reliable internet access to make use of the resources the library will most likely offer. Due to the lack of broadband internet access in our communities, we have not invested in popular library streaming services such as Hoopla and Kanopy. Lack of broadband internet access limits people's access to information, including online state-wide library resources like Find It VA, provided by the Library of Virginia. Having access to this resource, and local library resources, will support lifelong learning and enrich lives.

Having improved internet service means having access to information that Carroll Countians need to make the best choices and create opportunities for advancement in their lives. Using the internet to research possible options in personal and professional endeavors will provide citizens with the information to make smarter choices empowering their own informed decision-making skills.

We recognize the importance of broadband internet to citizens in our County. Such improvements will increase educational opportunities and spark economic growth in the area. Carroll County's proposed investment in broadband infrastructure utilizing a VATI Grant would bring our community into the 21st century. The award of this grant would mean that Carroll County citizens in the covered region would have access to broadband equal to citizens in larger cities and more populated areas.

Please consider their application and know we will stand in strong support of their efforts.

Sincerely,



Trish K. Fore, Director
Galax-Carroll Regional Library
101 Beaver Dam Road
PO Box 1629
Hillsville, VA 24343
276-728-3334
tfore@galaxcarroll.lib.va.us

18 December 2023

To Whom it may Concern:

It has been a great pleasure to support ZITEL, with whom we share values, in recent years.

This relationship has been a catalyst for additional investment in brick-and-mortar, human capital, and relationship development in the Southeast and Mid-Atlantic region. Our 2 most recent brick-and-mortar investments at 2020 Derita Creek Rd. Charlotte, NC 28206 and 57 W Shortcut Rd Newport, PA 17074 were developed with ZITEL in mind. We have used these locations for continued support by utilizing capacity to assist ZITEL with inventory management services and ensure materials are always available.

We at Millennium work tirelessly to achieve accurate demand planning and materials forecasting for current and future projects. We are proud to say that most of our clients, most especially ZITEL, have never felt the pressures of the supply chain issues which are common in our industry. We have historically maintained surplus stock and routinely commit inventory many months in advance to support ZITEL. It is our intention to continue to prioritize our support of ZITEL in their current and future markets.

Regards,



Joe Michael
o: 216.282.3700
c: 216-403-0051
joe.michael@mtpllc.us
mymillennium.us

 34654 Mills Rd Avon, OH 44011





MOUNT ROGERS PLANNING DISTRICT COMMISSION

RANDY PENNINGTON, Chair
STEVE GOBBLE, Vice Chair

BRENDA THOMPSON, Treasurer
AARON SIZEMORE, Executive Director

1021 Terrace Drive

Marion, Virginia 24354

Phone 276-783-5103

12/11/2023

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, Virginia 23219

Letter of Support for 2024 VATI Application

Dear Dr. Holmes:

We are writing in support of Carroll County's VATI application and their joint grant application with Zitel and Carroll County for building improved internet in rural areas of Carroll County, Virginia.

The citizens of Carroll County have long suffered with little to no internet service in many of our rural areas.

The Mount Rogers Region has been fortunate to receive VATI funding to extend broadband in five of its six counties. The Mount Rogers Planning District Commission remains committed to its support activities and is hopeful to see broadband expansion in Carroll County as well.

We recognize the importance of broadband to citizens in our County. Such improvements will increase educational opportunities and economic growth in the area. Their proposed investment in broadband infrastructure utilizing a VATI Grant would bring our community into the 21st century. The Citizens of Carroll County in the covered region will have access to broadband equal to citizens in larger cities and more populated areas.

Please consider their application and know we will stand in support of their efforts.

Sincerely,

Brian J Reed
Deputy Director
Mount Rogers Planning District Commission

*SERVING LOCAL GOVERNMENTS IN
BLAND - CARROLL - GRAYSON - SMYTH - WASHINGTON - WYTHE
BRISTOL - GALAX*

MRPDC is an equal opportunity provider and employer.



Funded in part through a cooperative agreement with U.S. Small Business Administration.

December 12, 2023

Dr. Tamarah Holmes
Director, Office of Broadband
Virginia Department of Housing & Community Development
VATI Program
600 East Main Street, Suite 300
Richmond, VA 23219

Letter of Support for 2024 VATI Application

Dear Dr. Holmes:

We are writing in support of Carroll County's VATI application and their joint grant application with Zitel, LLC and Carroll County for building improved internet in rural areas of Carroll County, Virginia.

The citizens of Carroll County have long suffered with little to no internet service in many of our rural areas. During the COVID-19 pandemic, the Blue Ridge Crossroads Small Business Development Center (SBDC) had to pivot our service model, just like all other entities, to continue servicing clients in our region. We began offering web-based counseling, online training, and hired a part-time telework employee. The SBDC continues to offer these options to clients for small business counseling because of the convenience to entrepreneurs provides flexibility for all parties. The challenge is that the internet service for our remote staff and clients is not sufficient to support video calls or training. It is common for clients or attendees to drop off or lose connection and miss part of the training. When unable to see facial expressions, we are not able to verify if the client understands us fully. We feel that better access to broadband for citizens will provide more opportunities for additional support to entrepreneurs. Please consider Carroll County's application and know we will stand in support of their efforts.

Sincerely,


April Collins

Director, Blue Ridge Crossroads SBDC

BLUERIDGECROSSROADS
economic development authority

The Blue Ridge Crossroads Region is Virginia's "Entrepreneurial Region."

1117 East Stuart Drive . Galax, Virginia 24333
Tel: 276.601.7727 www.brscsbdc.org

Submission Overview

FRN: 0029764370 | Service Provider | ZITEL LLC

SUBMISSION CERTIFIED

Data as of June 30, 2023

Biannual Filing Window

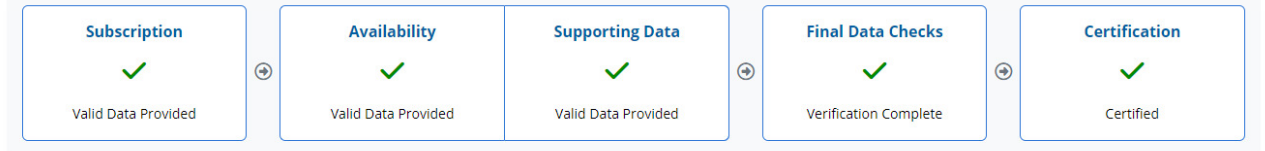
DATA AS-OF DATE	WINDOW OPEN	WINDOW STATUS
Jun 30, 2023	Jul 3, 2023	CLOSED
TODAY'S DATE	WINDOW CLOSE	FILING STATUS
Dec 15, 2023	Sep 15, 2023	Original - Certified

Fixed Data Requests

Fixed Challenges: 0

Submission Steps

[Decertify Submission](#)



Fixed Submission Data

Service	Subscription Data	Availability Data	
	Files Currently Processing (0)	Locations	Supporting Data
Fixed Broadband	938	4,029	✓ 1 of 1
Fiber to the Premises	938	4,029	✓ 1 of 1

Submission Overview

FRN: 0029764370 | Service Provider | ZITEL LLC

SUBMISSION CERTIFIED

Data as of December 31, 2022

Biannual Filing Window

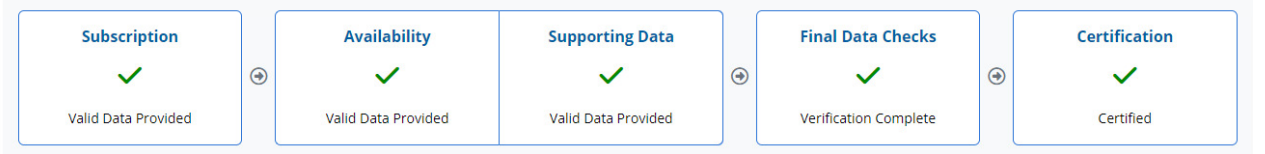
DATA AS-OF DATE	WINDOW OPEN	WINDOW STATUS
Dec 31, 2022	Jan 3, 2023	CLOSED
TODAY'S DATE	WINDOW CLOSE	FILING STATUS
Dec 15, 2023	Mar 1, 2023	Original - Certified

Fixed Data Requests

Fixed Challenges: 0

Submission Steps

[Decertify Submission](#)



Fixed Submission Data

Service	Subscription Data	Availability Data	
	Files Currently Processing (0)	Locations	Supporting Data
Fixed Broadband	498	2,210	✓ 1 of 1
Fiber to the Premises	498	2,210	✓ 1 of 1