

# Application to DHCD Submitted through CAMS

Greensville County

Greensville County Telecommunications Project

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**Application ID:** 39712122016094840  
**Application Status:** Pending  
**Program Name:** Virginia Telecommunications Initiative  
**Organization Name:** Greensville County  
**Organization Address:** 1781 Greensville County Circle  
Emporia, VA 23847-6347  
**Profile Manager Name:** Linwood Pope  
**Profile Manager Phone:** (434) 348-4232  
**Profile Manager Email:** lpope@greensvillecountyva.gov

**Project Name:** Greensville County Telecommunications Project  
**Project Contact Name:** Linwood Pope  
**Project Contact Phone:** (434) 348-4232  
**Project Contact Email:** lpope@greensvillecountyva.gov  
**Project Location:** 1781 Greensville County Circle  
Emporia, Virginia, VA 23847-0631  
**Project Service Area:** Brunswick County, Greensville County, Sussex County, Jarratt Town

**Total Requested Amount:** \$162,334.00  
**Required Annual Audit Status:** Accepted

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## Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
<b>Telecommunications</b>	<b>\$162,334.00</b>	<b>\$43,825.00</b>	<b>\$206,159.00</b>
Other: 6-Cambium PTP650 BackHauls	\$26,910.00	\$0.00	\$26,910.00
Other: 3-3' Side Mounts	\$1,050.00	\$0.00	\$1,050.00
Other: 6 -MA30-2 Magnet Mounts	\$18,350.00	\$0.00	\$18,350.00
Other: 7-Radio Waves Dish Dual Pol	\$8,708.00	\$0.00	\$8,708.00
Other: 1-Commscope 12' Sector Frame K	\$4,630.00	\$0.00	\$4,630.00
Other: 7-5' Pole Mounts w/clamp kits	\$896.00	\$0.00	\$896.00
Other: 3-22 KW LP Generator	\$34,500.00	\$0.00	\$34,500.00
Other: 3-CMM4 Timing Modules	\$10,035.00	\$0.00	\$10,035.00
Other: 1-CTM-2M Timing Module	\$2,600.00	\$0.00	\$2,600.00
Other: 12-Cambium PMP 450i 900 MHz AP	\$34,740.00	\$0.00	\$34,740.00
Other: 12-90 degree sector antennas	\$4,200.00	\$0.00	\$4,200.00
Other: 24-PMP 450i ground kits	\$2,040.00	\$0.00	\$2,040.00
Other: 440' Cat 5 cable	\$1,375.00	\$0.00	\$1,375.00
Other: Tower Labor	\$9,000.00	\$0.00	\$9,000.00
Other: Data Tech Labor	\$3,300.00	\$0.00	\$3,300.00
Other: Mid Atlantic Tower - Annual Re	\$0.00	\$7,200.00	\$7,200.00
Other: Subscriber Equipment 125 units	\$0.00	\$36,625.00	\$36,625.00
<b>Total:</b>	<b>\$162,334.00</b>	<b>\$43,825.00</b>	<b>\$206,159.00</b>

## Budget Narrative:

The above budget itemizes the equipment costs for the project. Greensville County and Telpage are seeking VATI funds to purchase the necessary equipment that will need to be installed at each site plus the equipment that will have to be installed on the towers owned by Mid Atlantic tower Company. The co-applicant Telpage will have to pay tower rent to Mid Atlantic for the location of equipment on towers owned by Mid Atlantic. In addition Telpage will incur the costs of the Subscriber equipment that is necessary to provide service to individual households and businesses. The County of Greensville normally charges \$300 per month to service providers who install equipment on water supply structures and county owned buildings..Greensville County will wave the \$300 per month rent fee for a period of three years. After the three year period has ended, Telpage will pay Greensville County monthly rent for equipment installed on County owned properties. The county nor Telpage are seeking grant funds to cover the cost of any in kind labor for the administration of the project. the labor costs shown in the above budget is for sub-contracted labor.

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## Questions and Responses:

### 1. Project Area

A map and description of the proposed geographic area including specific boundaries of the project area e.g.; street names, local and regional boundaries, etc. Explain why and how the project area(s) was selected. Attach a copy of your Map(s)

#### Answer:

The County of Greensville and its co-applicant Telpage are looking at three areas in Greensville County that broadband can be provided by utilizing existing infrastructure to mount the telecommunication equipment. These areas include: 1) Horseshoe Road area. The Horseshoe Road area is located in the northeastern part of Greensville County near the Town of Jarratt. If successful in obtaining VATI grant funds the County will utilize the elevated water tank located on Horseshoe Road to mount the necessary equipment to provide everyone within a one mile radius an adequate broadband signal. By locating equipment at this location a number of Sussex County residents will also have broadband service available. In Greensville County residents who live along Allen Road, South Allen Road, Perkins Lane, Leeds Lane, Gray Street, Park St., Grigg Ave, Horseshoe Rd., Susan St., Ivey St., S. Braxton Ave., Braxton Ave., Corrections Way, Susan St., Park Ave., and Pine Place will now have adequate broadband service made available to them. In Sussex County residents who live on N Halifax Road, First Street, Harvell St., Mayes St., Macklin Ave., Marion Ave., Carver Ave., Mangum Ln., and Blue Star Highway will now have adequate broadband service made available to them. The second area Greensville County and Telpage are looking to provide adequate broadband service is in the Jarratt Ave area of the Town of Jarratt. If successful in obtaining VATI grant funds the County will utilize the out of service elevated water tank located in the Town of Jarratt to mount the necessary equipment to provide everyone within a one mile radius an adequate broadband signal. Residents who live along in the Town of Jarratt and outlying areas will now have adequate broadband service made available to them. The third area that Greensville County wishes to provide broadband coverage is located in the western part of Greensville County near the community of Pleasant Shade. The co-applicant Telpage owns a telecommunication tower near the Brunswick Co. Greensville Co line near Pleasant Shade. If successful in obtaining VATI grant funds residents located within a three mile radius of this site could be served broadband. Greensville residents who along Spanglers lane, Grassy Pond Road, Pleasant Shade Drive, Radium Road, Chapmans Ford Road and Brunswick Road will now have adequate broadband services made available to them. Residents in Brunswick County who live along Five Forks Road, Pocohantas Road, Deerfield Road, Reedy Creek Road, Gov. Harrison Pkwy., Walton Road, Old Church Drive, Lewis Drive, Windmill Hill Dr., Glendale Mill Road and Belfield Road will now have adequate broadband service available to them. Attached are copies of maps showing the three service areas that are a part of this application. The Co-applicant Telpage will have to rent tower space from Mid Atlantic Towers to install telecommunications equipment that will provide signals to the

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equipment located at the three sites outlined above.

2. Describe population both in terms of absolute numbers within the project area and the likely users that will be served by the proposed project. Indicate the numbers of residential, businesses and community anchor institutions the proposed project will pass in the project area. Estimate the overall expected subscriber projections for the project and the basis for the projections.

**Answer:**

If successful in obtaining Grant funds broadband service will now be made available to approximately 500 households throughout Greensville County, Brunswick County, Sussex County and the Town of Jarratt. Service can also be provided to the Virginia Department of Corrections Greensville Correctional Facility which employees approximately 1200 employees and houses 3000 inmates. There are numerous businesses that will benefit from the availability of broadband service. These include, Buckwoods Mulch, Realtree Timber Cor., REMAC Paving, Woodruffs Store, Jarratt hardware, Jarratt Vol. Fire Dept., Family Dollar, BSV Bank, etc. We expect a 15% subscriber rate based on historical data for the surrounding area.

3. Has the locality where the proposed project area is located been designated to receive funding through Connect America? The applicant must provide supporting documentation proving the VATI project area is NOT to be served by Connect America Funding.

**Answer:**

No. Greensville County, Virginia is not an area designated to receive funding through Connect America. Please see the attached map showing areas that are eligible to receive Connect America funding.

4. Discuss the benefits to the community. For example, the applicant should discuss how broadband availability will help foster economic development and how the use of broadband applications is relevant to residents, businesses, telemedicine, teleworking/telecommuting, public schools, distance learning, e-commerce, e-government, public safety, tourism, entertainment, etc.

**Answer:**

Broadband in rural areas is a must to facilitate economic development. Areas that have broadband availability allow citizens to create home-based and small businesses in rural areas. These businesses rely on the internet to perform tasks such as on-line banking, customer service, e-commerce transactions, market development, as well as communicate with suppliers and corporate offices. In addition to fostering economic development, the access to adequate internet allows citizens in rural areas to obtain on-line college degrees, shop online from home, telecommute from home, operate home based internet businesses, access job opportunities as well as the use of social media to connect with family and friends. Students and parents in rural communities that have access to internet are able to connect to school portals that provide educational benefits to those users.

**5. Need**

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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 <10 Mbps/1 Mbps. Provide a list of the broadband service providers, if any, currently serving the area the applicant proposes to serve and the available broadband speeds.

**Answer:**

The three project areas that we are looking to serve in Greensville County and the surrounding areas currently do not have adequate broadband service as defined by DHCD(10Mbps/1Mbps) for this grant. Attached you will see coverage maps for Verizon, Sprint, Comcast. Also attached are National Broadband Maps which shows the broadband speeds offered by all providers for the surrounding area. None of the service providers are able to provide service greater than 10Mbps/1Mbps.

## 6. Project Description

A statement whether the proposed project is targeting the “last mile,” “middle mile,” or “backbone” portion of the broadband infrastructure. This statement should also indicate whether the facilities involved would be owned, rented or leased.

**Answer:**

Greensville County is applying for VATI funds to install microwave radio equipment in three different locations that will provide broadband service to areas of the County that do not currently have service. This project will provide both middle mile and last mile infrastructure.

The first area is the Horseshoe Road area of Greensville County located near the Town of Jarratt. The equipment which will be owned by the co-applicant will be installed on the elevated water tank that is owned by the Greensville County Water and Sewer Authority. The co-applicant will lease space on the GCWSA water tank. Once installed, adequate internet service will be available to all residents and businesses located within a one mile radius of the water tank.

The second area is the Jarratt Ave area of Jarratt. The equipment which will be owned by the co-applicant will be installed on an existing water tank that is no longer in use and is owned by the Town of Jarratt. Once installed, adequate internet service will be available to all residents and businesses located within a mile radius of the water tank.

The third area is located in the Pleasant Shade area of Greensville County. The co-applicant will install telecommunication equipment on a tower that is owned by Mid Atlantic Tower Company. Once equipment is installed, adequate internet service will be available to all residents and businesses located within a three mile radius.

7. A description of the broadband service to be provided, including estimated download and upload speeds, whether that speed is based on dedicated or shared bandwidth, and the technology that will be used. This description

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should be illustrated by a map or schematic diagram, as appropriate.

- i. If the application proposes a wireless broadband service, provide a list of all broadband service providers that overlap the footprint of the proposed wireless broadband project. If known, provide an estimate of the customers within the proposed footprint that are served by competing broadband service providers.
- ii. If the application proposed a wireless broadband service, provide a list of all facilities-based landline telecommunications providers that overlap the footprint of the proposed wireless broadband project. Describe the extent to which any facilities-based landline telecommunications providers are currently offering a digital subscriber line (DSL) or cable broadband service within the footprint of the proposed wireless broadband project.

**Answer:**

With this application, Greenville County is looking to provide wireless broadband service to its citizens and businesses. New customers will have three service options or packages to choose from based on their individual needs. Estimated downloads and upload speed options include: 10M/1M ; 10M/3M; and 15M/5M. The speed to each customer will be shared bandwidth using Cambium's PMP 450i 900 MHz radios. The co-applicant will have to lease tower space on towers owned by Mid Atlantic towers to install equipment that will transmit signals to the three areas we wish to serve with this project. At the three areas in Greenville County Telpage will have to install the necessary telecommunications equipment that will deliver broadband service to the customers.

8. Provide a description of the network system design used to deliver broadband service from the network's primary Internet point(s) of presence to end users, including the network components that already exist and the ones that would be added by the proposed project. Also describe specific advantages of using this technology.

**Answer:**

The design will be a shared point to multi-point system. The system is implemented by installing 3 backhauls using Cambium PTP650's and four Cambium PMP450i 900 MHz 90 degree sectors at each of the 3 sites. Each of the 12 Access Points has a maximum throughput of 175 Mbps. Individual subscriber units will be installed at each end user's location. The 900 MHz frequency is the best for our region due to foliage and penetration.

**9. Project Timeline**

What is the current state of project development (i.e. planning, preliminary engineering, final design, etc.). Prepare a detailed project timeline or construction schedule, which identifies specific tasks, staff, contractor responsible(s), collection of data, etc., and estimated start and completion dates. The timeline should include all activities being completed by June 20, 2017

**Answer:**

see attachment: Project Management Plan There will be no preliminary engineering required for the proposed

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project. The proposed project will utilize existing infrastructure to mount the telecommunications equipment. If successful in obtaining grant funds the County will enter into a formal agreement with Telpage. The County will administer the project and Telpage will procure the necessary telecommunications equipment and be responsible for the installation of the equipment. We can begin this project immediately and will be completed well before the June deadline.

## 10. Project Budget

Applicants shall provide a detailed budget as to how the grant funds will be utilized, including an itemization of equipment and construction costs and a justification of proposed expenses.

### Answer:

Please see project budget tab.

11. A summary showing the revenue source, including estimated VATI grant funds and matching funds, for each expenditure itemized above.

### Answer:

Once the project is completed Telpage will generate revenue by offering three internet options. These options are listed below.

Telpage will offer at a minimum 3 levels of bandwidth.

10 Mbps / 1 Mbps \$79.95

10 Mbps / 3 Mbps \$89.95

15 Mbps / 5 Mbps \$129.95

For customers or businesses that may require a different level of broadband service, Telpage can create a optional package to specifically meet their needs. Telpage is expecting to approximately 125 new customers as a result of the proposed project. At this time it is impossible to determine which plan options that new customers will decide to purchase.

12. Matching funds: A description of the matching funds the applicant and co-applicant will invest in the proposed project, (VATI funding cannot exceed 80% of total project cost)

- i. For each element of matching funds in the description, indicate the type of match (cash, salary expense, or in-kind contribution).
- ii. Identify whether the applicant or co-applicant is responsible for providing each element of the proposed matching funds.

### Answer:

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MATCHING FUNDS		
ITEM	COST	TYPE OF MATCH
Subscriber Equipment	\$36,625	Cash
Mid Atlantic Tower Rent (2 sites)	\$7,200*	Cash
Greensville Co Tank Rent	\$3,600	In kind

\*rent for co-location of equipment for 1 year period at 2 sites

13. Applicant and Co-Applicant: A description of the public-private partnership involved in the project.
- If the partnership is formalized in a written agreement provide a copy of that agreement.
  - If the partnership has not been formalized, provide a short description of the project management role, financial commitment, or other contribution to the project for the applicant and co-applicant and any additional partners.

**Answer:**

At this time a formal partnership has not been created. If successful in obtaining VATI funds a formal partnership will be entered into between the County of Greensville and Telpage. the County of Greensville will provide the project management duties for this project. Lin pope who has been employed by the County for 24 years will serve as the Project Manager. All VATI funds can be dispersed to the co-applicant through the Greensville County Accounting Department as we do with all CDBG projects that the County implements. The co-applicant Telpage will be responsible for procuring all telecommunication equipment and procuring contractors for the installation of the equipment. The co-applicant Telpage will be providing the cash match for the project. Telpage will have to purchase Subscriber units and will have to pay tower space rent for the equipment that will be colocated on towers owned by Mid Atlantic Towers. Greensville County will waive rent for equipment p[laced on the Greensville County Water tank for a period of three years.fro

14. Identify key individuals, including name and title, who will be responsible for the management of the project. Describe their role and responsibilities for the project. Present this information in table format.

**Answer:**

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NAME	JOB TITLE	ROLE
K. David Whittington	County Administrator	Mr. Whittington has 30 years of continuous employment with Greensville County. His knowledge of VDHCD would be at or near the top of any County Administrator in the State of Virginia. He has developed, written, and administered VDHCD grants for over 2 decades. His leadership will insure that the project remains on schedule, does not lose its focus, and reaches a successful conclusion.
Linwood E. Pope, Jr.	County Planning Director and will be the Program Administrator & Project Manager	He has 24 years of continuous employment with Greensville County. He has DHCD grant experience in: contract negotiation, labor standards, property acquisition, project inspections, Environmental Review, etc.
Susan D. Conwell	Secretarial support	Mrs. Conwell has been employed for 13 years as the Administrative Support Assistant II in the Building and Planning Departments.
Alice H. Whitby	County Finance Supervisor	Ms. Whitby will provide financial management/oversight to this project. She has 25 years of continuous employment with Greensville County in progressively responsible and financial roles. She has previously filled financial roles on CDBG projects and is familiar with the recordkeeping requirements, draw-down procedures and financial close-out documents.
Mr. Thad Thorpe	Account Clerk	Mr. Thorpe has been an important part of the Washington Park financial management team and will continue that role in VATI project.
Ryan Aerni	County's Information Systems Network Specialist	Mr. Aerni has been employed by the County for 5 years and will provide the technical expertise needed to apply for the VATI grant.
Charles Grigg, Jr.	President and Founder of Telpage, Inc.	Mr. Grigg will oversee the installation and administration of the wireless broadband system.

15. A description of applicant and co-applicant's history or experience with managing grants and constructing

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broadband communications facilities in the Commonwealth of Virginia and elsewhere.

**Answer:**

The County of Greensville has a long and successful history in grant management. For over thirty years the staff at Greensville County has managed numerous DHCD Community Development Block Grants as well as Rural Development Grants, VDOT TEA Grants, VDOT TAP Grants, VDOT Industrial Access Grants, DHCD Industrial Development Grants, TIC Grants, etc. Greensville County will provide the Grant management role for this project. Greensville County is partnering with Telpage for this telecommunications project due to Telpages expertise in the telecommunication field. Telpage is a privately owned and managed, Mid Atlantic based mass communication company. Created in 1986, the company is committed to a mission of delivering effective and efficient communication solutions to the market which it serves. Telpage's Department of Information Technology offers a wide variety of solutions to address the specific needs of many distinct applications. Telpage realizes that each wireless project presents a unique set of requirements. Telpage offers the depth and breadth of wireless solutions to deliver reliable, carrier class connectivity to the markets which it serves. Currently Telpage maintains extensive carrier class wireless networks in Southeastern Virginia and Northeastern North Carolina. A combination of 900MHz, 2.4GHz, 3.65GHz, 5.3 GHz ,5.4GHz, and 5.8GHz products are used to supply both point to point and point to multi-point wireless broadband services to Telpage customers. These radios also supply backup haul links within the Telpage data network. Infrastructure hops range from 1.5 miles to 32 miles in length with tremendous reliability and performance. Telpages current wireless infrastructure includes 20 wireless POP sites from which they service Virginia and North Carolina Customers.

**16. Service**

Describe the Internet service offerings to be provided after completion of this project and your price structure for these services. The service offerings should include all relevant tiers.

**Answer:**

Telpage will offer at a minimum 3 levels of bandwidth.

10 Mbps / 1 Mbps \$79.95

10 Mbps / 3 Mbps \$89.95

15 Mbps / 5 Mbps \$129.95

**17. Any other equitable factor that the applicant desires to include.**

**Answer:**

N/A

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## **Attachments:**

Derivation of Costs

CopyofDerivationofCostsWorksheetfinal12212016114246122120161203561221201612336.xlsx

Project Management Plan

ScheduleofTimeline1220201653435.xlsx

Map(s) of project area, including proposed infrastructure

ProjectSites1220201624927.pdf

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

NationalBroadbandCoverageMaps12212016101204.pdf

Audited Financial Statement/Reviewed Financial Statement of Balance Sheet

GreensvilleCountyFY2015Audit1220201625012.pdf

Documentation of source of match funding

TelpageMatchingFunds1221201621210.xlsx

Documentation that proposed project area is unserved based on VATI criteria

NationalBroadbandCoverageMaps1221201621239.pdf

Documentation that the proposed project area is not designated for Connect American Funding (CAF) or does not have other state or federal resources for construction

ConnectAmericaEligibilityMap1219201625230.pdf

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(Optional) || System Design Layout

GreenvilleCountyTelecommunicationProject1220201654442.pdf

(Optional) || Comcast Coverage Maps

ComcastCoverage12212016101231.pdf

(Optional) || Sprint Nextel Coverage Maps

SprintNextelCoverage12212016101322.pdf

(Optional) || Verizon Coverage Maps

VerizonCoverage12212016101356.pdf

(Optional) || Non VATI Contributions by Telpage

TelpageMatchingFunds1221201634802.xlsx