



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

---

## Table of Contents

- A. General Application Information
- B. Eligibility Factors
- C. Executive Summary
- D. Proposed Funded Service
- E. Proposed Service Offering
- F. Technology Strategy
- G. Project Milestones Completion Factors
- H. Project Budget
- I. Self Scoring
- J. BTOP Certification Requirements
- K. BIP Certification Requirements
- L. Schedules
- M. BIP – BTOP Service Area Details
- N. Uploads



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

## A. General Application Information

1. Applicant Information	
1-A. Name, Address, and Federal ID for Applicant	
<b>i. Legal Name:</b>	Nelson County Virginia
<b>ii. Employer/Taxpayer Identification Number (EIN/TIN):</b>	546001441
<b>Street 1:</b>	84 Courthouse Square
<b>Street 2:</b>	P.O. Box 336
<b>City:</b>	Lovingston
<b>County:</b>	Nelson
<b>State:</b>	VA
<b>Country</b>	United States
<b>Zip/Postal Code:</b>	22949

1-B. Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
<b>Prefix:</b>	Mr.
<b>First Name:</b>	Stephen
<b>Middle Name:</b>	A.
<b>Last Name:</b>	Carter
<b>Suffix:</b>	
<b>Telephone Number:</b>	434-263-7000
<b>Fax Number:</b>	
<b>Email:</b>	scarter@nelsoncounty.org
<b>Title:</b>	County Administrator



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

<b>1-C. Other Required Identification Numbers</b>	
<b>i. Organizational DUNS:</b>	052551322
<b>ii. CCR # (CAGE):</b>	4UH55
<b>iii. Funding Opportunity Number:</b>	1
<b>iv. Catalog of Federal Domestic Assistance Number:</b>	<b>BTOP CFDA Number:</b> 11.557 <b>BIP CFDA Number:</b> 10.787 <b>BTOP CFDA Title:</b> Broadband Technology Opportunities Program <b>BIP CFDA Title:</b> Broadband Initiatives Program

**1-D Eligible Entities**  
Please classify your organization. (Note: If there are multiple organizations involved in the project, designate the lead applicant that would enter into a Loan or Grant agreement with the Agency and assume operational and financial responsibility should an award be made). **Local, State, or Other Government Entity**

**1-E. RUS Borrower Status**  
No

**1-F. Applicant Federal Debt Delinquency Explanation**  
Is the Applicant Delinquent On Any Federal Debt? **No**  
**Federal debt delinquency Explanation:**

**2. Project Description & Project Title**

**2-A. Project Title:** Nelson County Virginia Broadband Project

**2-B. Project Description:** Installation of a fiber optic backbone from Afton to Colleen in Nelson County will enable the provision of affordable broadband communications serving middle mile tenants, providing for the provision of last mile services, encouraging competition and economic development, growing existing business, attracting new business and enabling home based business, telework and telemedicine.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**3. Application ID for Multiple Submissions for Identified Service Areas:**

**4. Rural Area Determination**

At least 75 percent of the proposed service area to be funded falls within rural areas that are unserved or underserved.

**Yes**

**5. Applications for Rural Areas:** Please choose the funding program(s) to which you are submitting this application.

a) BIP broadband infrastructure category to which you are applying:

**BIP - Middle Mile Project**

b) Would you like this Application for Rural Areas to also be considered for BTOP funding?

**Yes**

c) BTOP Infrastructure category for which you are applying.

**Middle Mile**

**6. Applications for All Other Areas: Per the NOFA, all applications to fund broadband infrastructure projects in areas that are less than 75% rural must be submitted to NTIA for consideration under BTOP.**

BTOP broadband infrastructure category to which you are applying:

## **B. Eligibility Factors**

**7. Application Submission**

**BIP and BTOP Factors Selected By Applicant:**

**Applicant has submitted a completed application and provided all supporting documentation required for the application.**

**The Project will be substantially complete within 2nd year from the award date, and the project will be fully**



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

complete by the end of the 3rd year from the award date.
For projects seeking more than \$1 million funding, the Applicant agrees to submit a certification, from a Professional Engineer, that attests that a) the system will deliver the stated performance; and b) the projected project will be substantially completed within two years, and fully completed within three years.
The Applicant provides two-way data transmission with advertised speeds of at least 768 kbps downstream and 200 kbps upstream.
Applicant understands and agrees to comply with the nondiscrimination and interconnection obligations outlined in the NOFA.
If applying for a last mile Broadband Infrastructure project, applicant understands and agrees to comply with the last mile coverage obligations as outlined in the NOFA.

<b>Additional Factors for BIP Selected By Applicant</b>
At least 75 percent of the proposed funded service area qualifies as unserved and underserved rural areas in accordance with the NOFA.
Applicant understands and agrees that the project will be fully funded in accordance with the requirements of the NOFA.
Applicant understands and agrees that only projects that RUS determines to be financially feasible and/or economically sustainable will be eligible under this NOFA.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**Additional BTOP Factors Selected By Applicant**

- **Conformity with Statutory Purposes**
- **Cost Sharing/Matching**
- **Reasonableness of Project Budget**

The project advances at least one of the statutory purposes for BTOP

Applicant has provided documentation that the project would not have been implemented during the grant period without federal grant assistance.

Applicant has provided a budget that is appropriate to the proposed technical solution and only includes eligible costs.

- **Demonstration the Project Could not be Implemented But For Federal Grant Assistance**  
Applicant is providing matching funds of at least 20 percent towards the total eligible project costs?  
**Yes**

**7-k. Cost Sharing/Matching Fund Explanation**

## C. Executive Summary

### Executive Summary of Project for BIP and BTOP:

#### 8. Infrastructure Projects Executive Summary

Nelson County is a rural Virginia community located between the cities of Charlottesville and Lynchburg. The County was the setting for the 70's television show The Waltons, written by County native Earl Hamner, Jr. While Walton's Mountain itself was fictional, the County still bears a striking resemblance to the rural community depicted on TV. There are no incorporated towns or cities in this County of 14,445 persons spread over 471 square miles of mountainous terrain. While the County does not meet the RUS definition of "remote," the absence of broadband services to the majority of residents and businesses forces Nelson County to struggle to attract new businesses and jobs. Market survey results show that over 60% of



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

residents rely on dial-up for Internet access, limiting opportunities for telecommuting and distance learning. There is no higher education facility to support the transition from high school to college, or for adult continuing education. The broadband network will allow the County to compete for new businesses, support and grow existing businesses, ensure the future sustainability of County growth, and allow “remote” businesses to increase visibility beyond County borders through eCommerce and web marketing. Access to high speed services will enable home-based business to start up, will attract higher wage jobs and new businesses, and enable access to distance learning content to augment higher education and training gaps, as well as decrease the 60% out-commute rate.

For 4 years, a committed team of stakeholders comprised of representatives from local government, private businesses, residents, healthcare providers, the school district, the local electric cooperative and incumbent cable and wireless providers have worked to improve the County’s communication infrastructure. Funding by a grant from the Virginia Department of Housing and Community Development has resulted in extensive community outreach to develop a fiscally responsible implementation plan. Nelson County proposes to invest in open access infrastructure to enable private provider expansion of last mile services to new areas, higher speeds of services and a choice of providers. The project is designed to provide a fiber optic network and towers from the north to the south end of the County, linking the communities of Afton, Avon, Lovingston, Colleen, Tyro and Massies Mill. Backhaul will be augmented in the more difficult to reach areas by microwave. The network would initially pass approximately 170 businesses and 805 residences directly with fiber and wireless, and enable an additional 92 businesses and 750 residences to be served via wireless technologies. The network will facilitate the delivery of more cost effective bandwidth to schools, municipal and state facilities (22 total community anchor facilities) within reach of the proposed infrastructure. Total critical community facilities to be served via fiber and or wireless include: 14 municipal/education facilities; 6 public safety facilities; 3 healthcare providers; 4 community centers and a library, and 3 private provider facilities for interconnection. The project proposes to deliver increased bandwidth to the key institutions located along the fiber optic backbone through direct fiber connections, offering bandwidth of 100 Mbps per facility; delivering greater amounts of bandwidth at a much lower cost. Current community facilities, public safety included, are connected via leased T1 (1.5 Mbps) loops creating a municipal network. Current costs for T1 connectivity range from \$800-\$1100 per month; many of the County’s major employers are subscribing to multiple T1s to achieve the needed bandwidth.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

By connecting community facilities directly with fiber, each end point on the network will result in higher bandwidth at lower cost, with inter-county network transport at speeds of approximately 2 Gbps. A significant portion of current transport costs will be eliminated by keeping local traffic within the County. The Blue Ridge Medical Center actively supports this project with the intent to utilize the high bandwidth of fiber to access telemedicine resources through the University of Virginia hospital system to provide services to their rural clients (see letter of support).

The County does not intend to compete with private providers, seeking instead to enable access to a greater number of areas for last mile service delivery. Local providers have been active participants in the planning project and have agreed to utilize the County-built open access network. The County is mandated by the Virginia Public Procurement Act to utilize a competitive procurement process to ensure that all contracts are bid, awarded, and completed on a fair and impartial basis. The County issued a Request for Interest to identify provider participants and will finalize the procurement process and agreements immediately upon award of grant funding. The businesses and residents have supported the planning process, including participation as members of the Broadband Management Team, which includes skilled IT professionals and executives of the County's key employers. The County's administrative/legal staff has extensive experience with multi-million dollar capital projects and has established the Nelson County Broadband Authority charged with implementation and network oversight. The County currently manages water and waste treatment facilities through a Service Authority with a similar governance structure. The private provider stakeholders bring network management experience with a variety of technologies, and the established governance structure assures non-discrimination and a network open to all on an equal basis. The County will establish a defined set of access guidelines and a uniform rate structure based on the amount of bandwidth for transport that will not discriminate on the information being carried on the network to or from subscribers, nor give priority to any service provider. Such policies and procedures will be included in all contracts for services and posted on the Authority's website and service literature. Network interconnections will occur in neutral collocation facilities placed at the County Courthouse, separated from the Emergency Communications Center, and at the proposed towers. Fiber loops will be placed appropriately every 3,000 to 5,000 feet along the network to enable future extensions and private provider interconnection.





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

The components of the system design and technology to be deployed include: fiber optic network from Afton Mountain to Avon, continuing down Highway 6 through Woods Mill to Highway 29, through Lovingson, and ending in the Colleen Business Park next to the Central Virginia Electric Cooperative Headquarters and substation. Fiber will connect communities on the north with those on the south. Towers (4) will be deployed on Afton Mountain, at the Rockfish School at Chapel Hollow (Avon area), in the Colleen Business Park and between Tyro and Massies Mill. The Tyro/Massies Mill tower will house microwave equipment to provide backhaul to the Colleen tower and for hosting wireless last mile serving equipment. The other 3 towers will be connected to the fiber network for robust wireless backhaul and host wireless last mile serving equipment, as will a tower located in Lovingson, owned by the County and utilized for public safety interoperability and radio equipment. Point of Presence (POP) space will be located in neutral facilities outside of the new courthouse and Emergency Communication Center in Lovingson. Fiber would be deployed aurally on Central Virginia Electric Cooperative utility poles wherever possible to defray higher underground construction costs; a pole attachment agreement is in place. At least three local private providers have expressed their intent to interconnect with the County's proposed fiber to provide last mile services via broadband over powerline, WiMax wireless, cable modem and 802.11 wireless. Wireless service delivery in the southern area of the County is initially to be an expansion of 802.11 services currently available in limited areas in the far southeastern corner of the County. Overall infrastructure cost of the middle mile network and towers is \$2,283,308. The County's engineering consultants relied on their experience with similar projects and actual deployment costs for those projects in developing costs for Nelson County. A field make ready assessment has been completed and incumbent infrastructure owners included in the planning; thus the County is confident that the budget provided is a reasonable and accurate estimate of project costs. Based upon local market survey results, subscriber estimates for last mile were conservatively established at 25% beginning penetration for underserved areas (all entities) and 40% for unserved locations (all entities). Total projected subscribers are 480 households and 74 businesses, which will receive last mile wireless service, and 18 Critical Community Facilities which will have a direct fiber connection to the middle mile network.

The current recession challenges the County's ability to sustain its small but vitally important local economy. As of June 2009, the County's unemployment rate is 6.8% (549 persons), representing a one-year increase of 241%, more than doubling those unemployed in June 08 (228). Using the ARRA job creation and retention estimating procedures as issued by the



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

President’s Council of Economic Advisors in May 2009, at least 10 direct jobs will be created over the two-year deployment period attributed to labor in deploying the network (no indirect benefit from equipment purchases calculated). Two additional direct jobs will be created to service new subscribers in the last mile service areas and it is realistic to project that the deployment of broadband will result in additional employment growth beyond these estimates.

**Description of BTOP Project Purpose (BTOP Applicants Only Next Three Questions)**

**9. BTOP Statutory Purpose:**

Provide access to broadband service to consumers residing in “unserved” areas of the United States.
Provide improved access to broadband service to consumers residing in “underserved” areas of the United States.
Provide broadband education, awareness, training, access, equipment, and support to schools, libraries, medical and healthcare providers, community colleges and other institutions of higher education, and other community support organizations by or through these organizations.
Provide broadband education, awareness, training, access, equipment, and support to organizations and agencies that provide outreach, access, equipment and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations.
Provide broadband education, awareness, training, access, equipment, and support to job-creating strategic facilities located within a defined economic zone, or community as designated by a State authority, Department of Commerce , HUD or USDA.
Improve access to, and use of, broadband service by public safety agencies.
Stimulate the demand for broadband, economic growth, and job creation.

**10. Description of BTOP Project Purpose:**

To provide a fiber optic broadband backbone in rural, unserved and underserved areas of the county, which will facilitate a public/private partnership to provide an open access broadband network. The network will enhance broadband services or improve access to these



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

services for residential consumers, schools, local government, emergency operations, medical and healthcare providers, and public safety agencies. Additionally, the project is expected to stimulate economic growth and job creation for the many existing home-based businesses as well as serving to attract businesses to locate within the County; thus meeting multiple statutory purposes of the BTOP program.

The fiber optic backbone is proposed to span a central area of the county, traversing it from North to South passing the Rockfish Valley Volunteer Fire & Rescue Department, Rockfish River Elementary School, Afton Family Medicine, the Nelson Center; which houses: the Jefferson Area Board for Aging and the Monticello Area Community Action Agency that both offer services to the aging population, the Nelson County Community Development Foundation, which offers housing services and administers the County's Low-Income Housing Voucher Program (Section 8) and Housing Rehabilitation Funds, the Lovingson (Nelson) Volunteer Fire & Rescue Department, the local government offices (including the Emergency Communications Center) and courts, the Nelson County Middle School and High School Complex, Tye River Elementary School, Blue Ridge Medical Center; which administers a Rural Health Outreach Program and operates on a sliding scale to serve low-income families, and the Colleen Business Park.

**11. BTOP Enhanced Services for Health Care Delivery, Education, and Children:**

The proposed project would provide the opportunity for enhanced health care delivery by delivering or improving access to broadband services in order to enable the provision of telemedicine services through local healthcare providers from surrounding area hospitals and specialists. Residential consumers would also have the ability to exchange data through transmissions with their doctors from their homes. There are no hospitals in the county; as the county's critical healthcare provider, the Blue Ridge Medical Center intends to utilize a direct fiber connection to the community network to take advantage of the telemedicine opportunities that provide direct connections with healthcare specialists at the University of Virginia.

Additionally, the project would enhance the ability of Emergency Service (Rescue Squad) personnel to communicate and transmit vital patient data enroute to the hospital, thus improving their service delivery and that of the emergency room personnel.

Educational opportunities will also be enhanced by this project through the improved broadband connection opportunities of the schools in the county. Teachers will be able to



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

provide a more robust multimedia learning experience and enhanced interconnectivity with higher learning institutions. In particular, the online learning services offered will be expanded to a greater number of students that are in very remote areas of the county. There are no higher education facilities in the county; residential consumers will have enhanced educational opportunities by having greater access to online courses, and the volumes of educational information available via the internet. The affordability of the proposed network will enable consumers at all points of the economic spectrum access to the same information, thus closing the socio-economic gap that can exist in a rural county.

If approved, this project will benefit the greatest population of users because of the proposed location of the fiber optic network and the access it will provide to the intended end users as described in Question 10.

## D. Proposed Funded Service Area

### 12. Proposed Funded Service Area Maps:

**12-A.** Service Area Map (Reference Number): **AB41-EFE9-49FA-AF2C**

**12-B.** Is the applicant is seeking a waiver for providing less than 100% coverage of a census block. **No**

### 13. Proposed Funded Service Area (BIP - Last Mile Projects):

Please refer to section M at the end of document.

### 14. Proposed Funded Service Area (BTOP - Middle Mile Project):

Please refer to section M at the end of document.

### 15. Non-Funded Service Area( BIP Only):

Not Applicable - all areas of the applicant's service area are anticipated to be funded by BIP or BTOP

### 16. Coverage Waiver:

Applicant is seeking a waiver for providing less than 100% coverage of a census block.

**No**

For Response of "Yes" please refer to upload section for additional supporting documentation.

### 17. Methodology for Area Status:

All of Nelson County is rural as defined by the U.S. Census with a total county



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

population of 14,445 spread out over 474 square miles. There are no cities or incorporated towns in the county.

The County has been actively involved in seeking broadband solutions for over three years. Market surveys of businesses and residents confirm the availability of broadband services (DSL, cable modem and wireless) in only some of the more populated areas. DSL service has not been extended beyond roughly 12,000 feet of the serving office and the incumbent provider has denied requests to extend service to additional areas. The incumbent cable provider has invested in upgrades to cable plant in one higher income area of the county that is not included in this planning for middle mile infrastructure. The cable provider serves TV subscribers in the southern half of the county, but the cable plant is outdated and cannot support two-way services such as Internet. Wireless is available in a limited area in the far southern reach of the county in an area not included in this planning. Broadband over power line (BPL) is available in two limited areas of the county, but at prices much higher than residents can afford - 1Mbps at \$50 per month. The majority of the county's residents (63%) are using dial up for Internet access because no other options are available or affordable. The incumbent cable and wireless providers are working with the County to deploy additional services over the proposed open access fiber network connecting both ends of the county. The BPL provider seeks to use the proposed middle mile fiber network to seek lower costs for Internet transport and potentially lowering costs for BPL service to subscribers.

### **18. Middle Mile Benefits**

The project is designed to provide fiber optic infrastructure from the north to south end of the county, facilitating the delivery of more cost effective bandwidth to schools, municipal and state facilities along the fiber path. These include: 14 municipal/education facilities, 6 public safety facilities, 3 health care providers, 4 community centers, a library, 170 employers, 3 private provider facilities and 11 communication towers. Further, the fiber path will pass 805 residences.

The towers will enable service providers to reach additional subscribers. During the planning process, a request for interest was distributed to service providers. Eight service provider's responded and private interviews were conducted to assess further interest. Most agree in principle to utilize the network. Nelson Cable, Inc., Stewart Computer Systems and Virginia Broadband are among those interested in utilizing the network.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

It is estimated that of the approximately 1000 potential customers located within the service areas, that a very conservative 25% is would immediately take advantage of the broadband network.

## E. Proposed Service Offering

### 19. Broadband Service Offerings for Last Mile Project:

Please refer to upload section at the end of the document.

### 20. Service Offerings for Middle Mile Project:

Please refer to upload section at the end of the document.

## Competing Service Providers

### 21. Existing Broadband Service Providers and Services Offered:

Please refer to upload section at the end of the document.

## Non-Discrimination, Interconnection

### 22. Description of Network Openness:

Nelson County seeks to encourage broadband service availability to businesses and residents by investing in the middle mile fiber optic infrastructure that will allow private providers to reach additional areas of the county and potential subscribers. The county does not intend to compete with private providers and the broadband planning completed over the past three years has clearly stated this intention. As such, local providers have been active participants in the planning project and have agreed to utilize the open access network the County seeks to build. As a Virginia local government entity, the County is mandated by the Virginia Public Procurement Act, to utilize a competitive procurement process to ensure all contracts are bid, awarded and completed on a fair and impartial basis. The County will establish a defined set of access guidelines and a uniform rate structure based on the amount of bandwidth for transport that will not discriminate on the information being carried on the network to or from subscribers, nor give priority to any service provider. Network interconnections will occur in neutral collocation facilities placed at the County Courthouse





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

and separated from the Emergency Communications Center, and at the towers proposed. The County has also established a Broadband Authority as authorized under Virginia statute to oversee governance and network operations in a non discriminatory fashion.

**Non-Discrimination and Interconnection (BTOP applicants only for next three questions)**

**23. Non-Discrimination Obligations (applicable to Last Mile and Middle Mile Applicants):**

Adhere to the minimum non-discrimination requirements as set forth in the NOFA.
Display the nondiscrimination practices in a prominent location on the service provider's web page, and provide notice to customers of changes to these policies.

**24. Interconnection Obligations (applicable to Last Mile Applicants):**

--

**25. Interconnection Obligations Middle Mile Applicants:**

Adhere to the minimum interconnection requirements as set forth in the NOFA.
Display the interconnection policies in a prominent location on the service provider's web page, and provide notice to customers of changes to these policies.
Commit to offering wholesale access to network components and services such as wavelength or fibers at reasonable rates and terms.
Commit to binding private arbitration of disputes concerning interconnection obligations.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

### Cost Effectiveness and Affordability

**26. Cost per Household (BTOP only):**

Not Applicable; Middle Mile project application

**27. Affordability**

The proposed Nelson County middle mile project will provide cost effective broadband service access to community facilities served by the fiber optic backbone. All facilities served by the network will realize significant cost savings compared to current broadband access rates. Currently broadband access is available only through the use of leased T-1 lines delivering 1.5 Mbps at a cost of \$700 plus per month. The proposed network will be capable of providing 100 – 1000 Mbps within the network. It is estimated that services delivered via the proposed network will cost between \$50 and \$150 per Mbps thus significantly reducing the cost of bandwidth. These cost savings will in turn allow last mile providers to offer affordable services comparable to those found in other areas to new and existing customers.

### F. Technology Strategy

**28. Technology Type:**

Wireline - Coaxial Cable
Wireline - Fiber-optic Cable
Wireline - Broadband Over Power Line
Wireless - Terrestrial Fixed





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**Other:**

### **29. System Design**

The proposed middle mile network provides a solution for both Nelson County and the service providers who responded during the Request for Information (RFI) process through partnering within a solution that reduces the cost for providing both wired (fiber optic) and wireless services. To date nationwide there has been little cooperation between incumbent or private service providers and public entities in the realm of broadband planning and deployment. Indeed if Return on Investment (ROI) criteria is used, no truly open access network has been financially viable when funded by loans or other capital funding. The BTOP and BIP Federal programs of funding infrastructure are the best opportunity to finally break that pattern.

The Nelson County system is a middle mile fiber infrastructure deployment, designed to transport data to and from the North and South ends of the County and interconnect with private provider facilities. In the Tyro/Massie's Mill area where it is not feasible to deploy fiber due to terrain and distance from community facilities, a 160 ft tower will be utilized for both wireless last mile services and microwave backhaul between towers.

The County network will connect to private providers for Internet transport data over a fiber optic cable network utilizing a Standards based GPON (Passive Optical Network) system to distribute Internet and other data traffic. The network is fully capable of handling both video and voice traffic in addition to Internet access. Because this is a middle mile network, Nelson will rely on private provider partners to provide such additional services in an open access environment. Several providers are interested in providing Internet access or network operation, and the local cable provider seeks to transport digital television programming from their Wintergreen headend to their Lovingson facility and subscribers.

In addition to the fiber optic network, four towers will be constructed; at Afton Mountain, in Avon at the Rockfish School, in the Colleen Business Park, and the Tyro/Massie's Mill area. Additionally, a public safety tower in Lovingson will be leveraged for last mile service delivery. Attachment space on all five towers will be leased to private providers on an open access basis to make high bandwidth (typically 1-2 Mbps) wireless services available to a high percentage of the county. Under ARRA guidelines, towers are considered middle mile



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

infrastructure. The preliminary design anticipates that in addition to the towers, approximately 21 community anchor facilities would also receive high bandwidth data services served directly from fiber connections. Eighty percent (80%) of the estimated capital cost of the infrastructure will be paid for with ARRA funding with the other 20% of capital expenses paid for with other funding as described in the funding section of this application.

This fiber network when coupled with wireless towers would result in broadband service availability to 1,555 households and 262 businesses within the County. The fiber bandwidth is limited only by the electronics deployed with some current fiber networks capable of delivering symmetrical terabit speeds. The current generation GPON electronics, delivers a maximum of from 1 to 2 Gbps usually distributed among 32 customers. The bandwidth delivered to any specific customer can be set by the network management software to meet the bandwidth requirements of the end user. The underlying fiber infrastructure is secure, scalable, robust, not susceptible to interference, has a minimum 25 year lifetime and requires little or no maintenance. It is good for everything except mobility. The wireless component has some drawbacks inherent to the technology although delivery speed will be set by the private provider partners. On the positive side wireless is relatively inexpensive, easily deployed and great for mobility. Private providers have indicated interest in deploying last mile wireless services using frequency spectrum in the 2.4 GHz to 2.6 GHz range with appropriate power levels. All specifications are not currently known for all service providers and will not be determined until the project is funded and agreements are negotiated. In all cases the minimum advertised speeds will be far greater than the ARRA requirements.

This combination of wireline and wireless technologies will deliver the best cost and coverage architecture for Nelson County at the current time. The County will not be delivering end user services over this network except for their own internal network and some anchor businesses and facilities. The core backbone fiber is priced and the preliminary design reflects scalability for any future last mile deployment by the private service providers should they at some time choose to deliver data, voice and video (the triple play). The potential end users for this project consist of governmental agencies within the county, the general public at their home and work, educational facilities, public safety and the health services community.

For a middle mile transport network all specific technical components cannot be determined until agreements with service providers are finalized and their current and future equipment is



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

fully known. That process will commence as soon as the funding is received.

**30. Network Diagram:**

Please refer to upload section at the end of document.

**31. Certification by Professional Engineer:**

Please refer to upload section at the end of document.

**32. Buy American Waiver Request:**

Is the applicant seeking an individual waiver of the Buy American provision? **No**

**Buy American Waiver Request – Legal Justification**

**33. Choice of Service Provider:**

Does the project’s Infrastructure and the Company’s business plan allow more than one provider to serve end users in the proposed funded service area?

**Yes**

## G. Project Milestones and Completion Factors

### Timeline & Milestones

**34. Infrastructure Build-out Timeline:**

Please refer to upload section at the end of the document.

**35. Licenses, Regulatory Approvals and Agreements:**

The business planning has been completed, but this middle mile project deployment is contingent upon federal funding assistance. As such licenses, regulatory approvals and agreements are not in place. The business plan has identified those approvals that are needed and have been incorporated into both the costing and deployment processes. The pole



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

attachment agreement with Central Virginia Electric Cooperative is already in place. Nelson County established its Broadband Authority (which received its Certificate of Incorporation from the SCC on July 29, 2009) to contract with last mile providers. A local incumbent cable service provider has video agreements in place. The local permit process requires necessary FCC, phase 1 NEPA, and historic preliminary reviews. Depending upon the height of the tower, there can be administrative approval, or planning commission and/or board approvals necessary. No towers over 200 ft are proposed, eliminating FCC licensing. Right of way agreements will be negotiated during the permitting process once funding is secured. This project is ready to start deployment upon notice of award.

### **36. Construction and Vendor Contracts**

Nelson County has established a Broadband Authority to oversee the operations and governance of the broadband network. During the planning process, the County issued a Request for Information generated sufficient interest by multiple providers who indicated their interest to operate a county-owned network, as well as their support for providing services over an open access network that would be available to more than one entity for use on a level playing field. These private providers have provided agreement in principle to use the open access network to deploy additional services. The County is ready to issue a request for proposal to solicit formal agreements with service providers upon notice of funding award. As a local government entity, we will follow Virginia Procurement procedures to ensure an open and competitive process. In addition, we have already identified a number of fiber optic construction firms and equipment vendors for the construction bid process and will utilize the Commonwealth of Virginia's electronic procurement portal to reach the greatest numbers of vendors and competitive bids. The engineering resources used to develop this business plan have identified the network design components required, are intimately familiar with the County's topology and construction requirements, and can be utilized to develop the formal design for construction bidding moving the project forward quickly.

### **Qualification of Management Team and Organizational Readiness**



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**37. Management Team Resumes:**

Please refer to upload section at the end of the document.

**38. Organizational Readiness:**

Nelson County has worked for the past three years to complete its telecommunications broadband network implementation plan. The businesses and residents of Nelson County have supported the planning process and consistently requested the local government's assistance in bringing broadband services to the County, including participating as members of the Broadband Management. The County's administrative/legal staff has extensive experience with similar multi-million dollar capital projects and under the auspices of the Nelson County Board of Supervisors (and the recently established Nelson County Broadband Authority) will implement the project as follows:

Execution of ARRA Award - County administrative/legal staff will complete the obligations required for acceptance and use of ARRA funding for the locality's middle mile (fiber optic backbone) project. This staff has previously facilitated similar undertakings related to Community Develop Block Grant (CDBG) awards (community facilities/infrastructure), State and Tribal Assistance Grants (water/sewer infrastructure), USDA-RUS & RD loan/grant programs (water/sewer infrastructure, government facilities), VA Resources Authority loan funding (solid waste service centers), VA Public School Authority loan program (construction of 2 elementary, 1 middle school, high school expansion/renovation), VA Housing Development Authority loan/tax credit program (elderly apartments), municipal bond offering (school construction).

Project Final Design Construction – Final design and construction documents will be completed by a third party, professional services provider (firm) with expertise in the design and construction of fiber optic backbone installations. The design entity will be either the incumbent professional firm presently under contract with the locality or retained through the issuance in conformance with public procurement requirements of a Request for Proposals to secure the services of a professional consultant with expertise, including engineering, in the disciplines required for the network's design and construction, inclusive of construction drawings, specifications and contract documents.. County staff and the professional consultant will manage the ensuing construction project, which will be accomplished through a public



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

sealed bid solicitation in accordance with public procurement requirements. As noted, County staff has significant experience with similar capital projects.

Operation of Broadband Services Network - The County does not propose (plan) to operate its network. Rather, County staff, legal counsel and the professional consultant will develop and issue in accordance with public procurement requirements a Request for Proposals (RFP) to secure the services of an operational entity (private or public non-profit) to operate the network. The RFP will encompass all organization and operational requirements necessary for the successful operation of the network. The County will contract with, including, as applicable, a network lease agreement, with the respondent service provider (entity) deemed best qualified to operate the broadband services network. The contractual/lease agreement(s) will adhere to best (industry) practices and standards and endeavor to provide for operational success.

Last Mile Services – The County will establish an open access, multi-service provider network to provide for the deployment of last mile broadband services to business, educational, residential subscribers. To do so, the County’s operational/lease agreement with the BSN’s operational entity will include minimum standards for last mile service providers’ contractual use of the network through the network’s operational entity. The minimum standards will endeavor to insure last mile service providers have the financial, operational and organizational capacities necessary to successfully deploy and maintain their services.

**Other**

**39. Organizational Chart:**

Please refer to upload section at the end of document.

**40. Legal Opinion:**

Please refer to upload section at the end of document

**41. Government and other Key Partnerships:**

Nelson County has built a strong partnership network. Partners include the school system, medical facilities, service providers, including the electric cooperative and their broadband





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

over powerline service provider, as well as public safety and emergency services.

Local service providers supporting the County in its efforts to provide Broadband Internet are Stewart Computers - also applying for ARRA Broadband funding under EasyGrant ID #2264 and Nelson Cable, Inc. also applying for ARRA Broadband funding under EasyGrant ID #1424.

The County has completed the due diligence research and planning for this project with the assistance of the Virginia Department of Housing and Community Development's Community Broadband Study, meeting the specific goals and objectives in line with Community Development Block Grant objectives and the Virginia Department of Housing and Community Development guidelines. The project was part of the Virginia Rural Broadband Planning Initiative.

Please see attached letters of support.

**42. Recovery Act and Other Governmental Collaboration.**

Nelson County has completed the due diligence research and planning for this project with the assistance of the Virginia Department of Housing and Community Development's Community Broadband Study. The project was part of the Virginia Rural Broadband Planning Initiative. The County received a total of \$115,000 for three phases of planning, culminating in this application.

The county is serving as lead agency in a regional Public Safety Interoperable Communications project that will provide for implementation of a regional microwave network and installation of mutual aid repeaters. The network will provide infrastructure to enhance public safety communications for Nelson County. Our regional partners include Albemarle County, Augusta County and the Cities of Charlottesville, Waynesboro and Staunton as well as the Virginia State Police. All partners will benefit from the interoperability and regional data sharing that will be provided through this microwave network. Funds (\$1,300,000) for this project are provided by the US Dept of Homeland Security through the Federal Emergency Management Agency (FEMA). The BTOP application project would support this critical public safety project by providing a redundant path in the event that public safety microwave towers were disabled. A tower in Lovingston funded by the public safety project will be leveraged by accommodating private provider wireless equipment to serve the Lovingston last mile service



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

area. Furthermore, the proposed microwave tower in the Tyro/Massie's Mill last mile service area can be used to deliver redundancy for the public safety radio project.

The Blue Ridge Medical Center, a non-profit federally qualified community health center serving Nelson County (designated as a medically underserved area-MUA), is an important stakeholder in the broadband initiative. They have received a \$25,000 CDBG planning grant through the Virginia Department of Housing and Community Development for preliminary architectural design and cost estimates relative to the expansion of their facility. The center receives 330e funding for Federally Qualified Health Centers (FQHC) through both competitive and non-competitive processes to provide health care for low income underserved individuals. An application is currently pending for \$1,014,759. Additionally, the center has been awarded \$813,644 in ARRA funding through the Health Resources and Services Administration (HRSA) and the Bureau of Primary Health Care (BPHC) to provide new jobs, renovate existing buildings, and provide technology upgrades that support the increased demand for services. The medical center has a pending competitive application in the amount of \$5 million from the ARRA Facility Investment Program (HRSA/BPHC) to provide construction of an addition to their existing facility. The BTOP application project would enhance these federal dollars for the medical center's expansion and renovations by improving access to broadband services in order to provide telemedicine services from the local healthcare provider to surrounding area hospitals and specialists. The BTOP project would also enhance health service delivery by allowing patients, without leaving their homes, to send and receive data transmissions to and from their doctors.

The Virginia Office of Emergency Medical Services (OEMS) has awarded Nelson County \$65,700 to purchase eighteen laptop computers through its Financial Assistance for Emergency Medical Services (FAEMS) Grant Program. These computers will provide Nelson County volunteer rescue agencies the ability to transmit patient information electronically thereby enhancing health service delivery to the patient. The broadband infrastructure that would be constructed with BTOP funding is essential to maximize the use of these computers to improve communication to health facilities while patients are in transport and also for state reporting purposes.

**Community Involvement (BTOP Applicants Only)**





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

---

**43. Partnering with Disadvantaged Businesses**

At this stage of the proposed project Nelson County has not established agreements with designated socially or economically disadvantaged small businesses; as defined by the Small Business Act section 8 (a).

Should this project go forward to deployment and during the further planning process, local and regional SBA 8(a) certified businesses will be identified where possible. Should these businesses exhibit core competencies that include tasks or equipment germane to the project, those businesses will be asked to submit a proposal and enter into agreements. The USDA will be queried when appropriate.

Nelson County understands the NTIA intent and also the competency requirements to fulfill the network launch.

**H. Project Budget**

**44. General Overall Budget**



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

Budget	Loan Request	Grant Request	Equity	Debt	Bond	Other
Network & Access Equipment (switching, routing, transport, access)		210,520	52,630			
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)		1,052,754	263,188			
Buildings and Land – (new construction, improvements, renovations, lease)		67,200	16,800			
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)		14,940	3,735			
Billing and Operational Support Systems (IT systems, software, etc.)		20,000	5,000			
Operating Equipment						



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

(vehicles, office equipment, other)						
Engineering/ Professional Services (engineering design, project management, consulting, etc.)		434,232	108,559			
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)		27,000	6,750			
Site Preparation						
Other						
<b>TOTAL BROADBAND SYSTEM</b>		<b>1,826,646</b>	<b>456,662</b>			



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**Total Budget:** \$ 2,283,308

**45. Detailed Budget:**

Please refer to upload section at the end of the document.

**Sustainability**

**46. Reasonableness**

Nelson County has been formally studying the deployment of Broadband for well over two years. Because they have been focusing on this issue costs have been honed to the degree possible without an actual deployment design. The number of units and the price of the units are reasonable, necessary, and appropriate for the project. Cost budgets and breakdowns are provided in the tables by category with support notations. The costs of this project are well targeted to a middle mile backbone infrastructure for providing high speed bandwidth to underserved areas of Virginia. Only with funding can the planning of this project be continued to deployment. All potential costs include pricing that reflects the best management practices including inspections and prevailing wage where appropriate.

Nelson has contracted with Icon Broadband Technologies (IBT) over the course of the past year to study, survey and develop cost models based on unit pricing for typical backbone capital equipment costs; ongoing operational costs; labor costs; right of way and permitting costs along with all the associated miscellaneous costs (such as maintenance). This section also specifically asks for units per household or institution served and those include a population of 3837 and 1155 residences passed by the network (21 community facilities, 262 businesses). In a middle mile deployment such as Nelson these units represent the backbone design and construction labor and materials and the tower design and construction both labor and materials. All costs are normal, usual and customary for this geographical area and deployment assumptions. A last mile fiber deployment by the Nelson is not envisioned at this time (private providers, however, have expressed their interest in providing wireless services by way of an RFI process conducted by the County).

To achieve a preliminary cost analysis IBT relied on their experience with other similar projects, and actual deployment costs for similar projects. A field make ready assessment was made of the study area. The following example demonstrates the degree of detail used to provide cost and revenue projections for this application. Because IBT understands all aspects of this project they considered costs and revenue over the life of the project as demonstrated by the following



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

example: A special cost and revenue concern requires the understanding of issues between capital expense (CAPEX) and ongoing operating expense (OPEX) in a middle mile deployment. When aerial construction on foreign pole lines is considered, you ignore the ongoing OPEX at your financial peril. Because Nelson County does not own a pole line to connect the fiber plant, they must pay utilities an annual fee per pole per year. Many utilities in these hard times are using their infrastructure as revenue generating sources and typically increase their pole attachment agreements annually. In the general area of this project those agreements run from a low of \$15 per pole to a high of \$35 per pole per year. For financial modeling purposes the assumptions used an average cost of \$16 per pole per and an average number of poles per mile of 20. Examination of the costs in Nelson and the difficulty in dealing with one of the pole owners led the consultants to decide that a mixture of aerial and underground deployment was the most economical method over the lifetime of the fiber. Increases in pole attachments are likely to increase continually over time. Nelson does not have a reliable funding source for those OPEX costs over time and therefore the use of UG fiber in some areas was justified. That is an increased CAPEX cost but one time only. This provides for a more secure, more robust and more attractive network, leaving revenue sources to be used in other ways.

**47. Historical Financial Statements:**

Please refer to upload section at the end of the document.

**48. Broadband Subscriber Estimates:**

Please refer to upload section at the end of the document.

**49. Other Services:**

Please refer to upload section at the end of the document.

**50. Pro Forma 5-Year Financial Forecast and Assumptions:**

Please refer to upload section at the end of the document.

**51. Commitment of Capital Funding Support**

Nelson County:

Funding Amount \$456,662 (20% of project cost)

Type of Funding-Equity

Use of Funding-Capital Infrastructure cost

Central Virginia Electric Cooperative:



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

Funding Amount To Be Determined subject to final approval (Estimate \$25,000)  
Type of Funding-Waiver of all or portion of pole attachment fees for 5 years  
Use of Funding-Pole attachments  
\*\*Pole Attachment Agreement in Principle is attached (Attachment 14)Q41 Pole Attachment Letter-CVEC.pdf)

## BTOP Requirements

### 52. Matching Funds:

- a. Cash: \$ 456,662.00
- b. In-Kind: \$ .00
- c. Percent of Total Project Cost: 20

### 53. Demonstration of Financial Need:

In fiscal year 2009-2010, the county's local revenue is expected to decline by \$197,000 from the previous year. State revenue for county operations and education are projected to decline by \$949,779 in the current year. Approximately \$686,458 in stimulus funds partially offset this state revenue shortfall. However, the Governor's office has advised localities to prepare for additional reductions in state aid beginning in the current budget year to make up an expected \$377 million shortfall in the state's anticipated revenue. State funding formulas to localities for K-12 education, including permanent support position reductions and other proposals to reduce education funding are imminent. The county's current year budget contains only \$414,598 in contingency funding which is currently held in reserve pending anticipated reductions in state funding. Current year expenditures provide for level operational funding with no new positions, reductions in teaching positions and no salary adjustments for employees. The county maintains an operational fund balance equal to about a 60 day cash requirement based on the current budget.

The County has applied for and received Virginia Rural Broadband Planning Initiative grant funds (\$115,000) from the Virginia Department of Housing and Community Development for a community telecommunications implementation assessment inclusive of a business plan to address broadband needs and ensuring sustainability in the marketplace. The completion of



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

this planning project has positioned the county to implement the project.

Within the last fourteen months, the county has incurred approximately \$10 million in additional debt to build court facilities to meet currently mandated courtroom standards and to make improvements to the county's solid waste facilities. Within the current year budget, the county is unable to allocate funds to this project. Therefore, the county will be seeking applicable grant funding for this rural broadband project. The county's middle mile project is technically feasible, sustainable, and serves unserved and underserved rural areas. The project benefits education, health care and public safety making the project a viable project for funding through this BTOP application.

**54. Unjust Enrichment**

No federal funding has been received or requested to pay for costs included in this application for funding.

**55. Disclosure of Federal and/or State Funding Sources**

The county received Virginia Rural Broadband Planning Initiative (VRBPI) grant funds (\$115,000) from the Virginia Department of Housing and Community Development for a telecommunication needs assessment inclusive of the need for investment in broadband infrastructure. This funding also provided a network organization and operation study inclusive of a business plan. These planning initiatives are the basis for this BTOP application for funds.

The county is serving as lead agency in a regional Public Safety Interoperable Communications project that will provide for implementation of a regional microwave network and installation of mutual aid repeaters. The network will provide infrastructure to enhance public safety communications for Nelson County. Our regional partners include Albemarle County, Augusta County and the Cities of Charlottesville, Waynesboro and Staunton as well as the Virginia State Police. All partners will benefit from the interoperability and regional data sharing that will be provided through this microwave network. Funds (\$1,300,000) for this project are provided by the US Dept of Homeland Security through the Federal Emergency Management Agency (FEMA). The BTOP application project would support this critical public safety project by providing a redundant path in the event that public safety microwave towers were disabled. A tower in Lovingston funded by the public safety project will be leveraged to accommodate private provider wireless equipment to serve the Lovingston last mile service area. Furthermore, the proposed microwave tower in the Tyro/Massie's Mill last mile service area can be used to deliver redundancy for the public safety radio project.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

---

## I. Self Scoring – BIP Only Self Scoring

### 56. Self Scoring Sheet





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

Criteria	Method	Points	Self Scores
<b><u>PROJECT PURPOSE</u></b>			
Proportion of Rural Residents Served in Unserved Areas	1 point for every 10,000 unserved households	Up to 5	1
Rural Area Targeting	1 point for every 5% increase in the rural service area up the minimum 75% rural area requirement	Up to 5	5
Remote Area targeting	1 point for every 50 miles a service area is located from a non-rural area	Up to 5	0
Title II Borrower	If you are or were a Title II borrower	5	0
Recovery Act and other governmental collaboration	1 point will be awarded for each governmental or Recovery program the applicant is partnering with	Up to 5	4
<b><u>PROJECT BENEFITS</u></b>			
Performance of the offered services	If a last mile wireline project delivers 20M to household – if a last mile wireless projects delivers 2M to end-user – if a middle mile projects delivers 100M to end points	<b>10</b>	10
Affordable of services offered	Points awarded based on the proposed rate structure and the logistics of the proposed service area	Up to 5	5



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

Choice of service provider	If the proposed infrastructure is available to be used by multiple service providers	5	5
Critical Community Facilities	If discounted rate packages at least 25% lower than advertise rates are available to critical facilities	5	5
<b><u>PROJECT VIABILITY</u></b>			
Applicant's organizational capability	Points will be awarded on the strengths and accomplishments of key management	Up to 12	12
Community Support	If a letter of support has been received from a designated representative of the community for every community in the proposed service territory	2	2
Ability to promptly start project	If the applicant can demonstrate that all licenses and regulatory approvals have been received, contractors and vendors are ready to enter into contracts, and equity has been deposited into applicant accounts	10	10
Socially and economically disadvantaged small businesses (SDB), as defined by section 8(a) of the Small Business Act, 15 U.S.C. §637.	If the applicant is a Section 8(a) entity	1	0
<b><u>PROJECT BUDGET AND SUSTAINABILITY</u></b>			
Reasonableness of the budget	Points will be awarded based the	Up to 5	5



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

	adequacy of the proposed budget		
Leverage of outside resources (outside funding/financing requested)	(i) 10 points if this ratio is greater than 100% (ii) 7 points if this ratio is between 100% and 75% (iii) 5 points if this ratio is between 75% and 50% (iv) 3 points if this ratio is between 50% and 25% (v) 1 points if this ratio is lower than 25%	10	1
Extent of grant funding (Grant funds/loan funds)	(i) 0 points if this ratio equals 100% (ii) 1 points if this ratio is between 100% and 75% (iii) 3 points if this ratio is between 75% and 50% (iv) 5 points if this ratio is lower than 50% (v) 10 points if no grant funds are requested	10	1
<b>Total Points</b>		100	66



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

## J. BTOP Certification Requirements

### Certification (Requested for BTOP)

Please refer to upload section at the end of the document regarding following uploads.

1. U.S. Department of Commerce, Broadband Technology Opportunities Program
2. SF-424D Assurances—Construction Programs (Schedule N)
3. CD-511, Certification Regarding Lobbying (Attachment O)
4. SF-LLL, Disclosure of Lobbying Activities (Attachment P)
5. CD-512, Certification Regarding Lobbying—Lower-Tier Covered Transactions (Attachment Q) This certification will not be required until the time of the grant award, because it applies to subcontractors, etc.

## K. BIP Certification Requirements

### Certification (Requested for BIP)

Please refer to upload section at the end of the document regarding following uploads.

1. Equal Opportunity and Nondiscrimination Certification
2. Certification Regarding Architectural Barriers
3. Uniform Relocation Assistance and Real Property Acquisition - Policies Act of 1970 Certification
4. Certification Regarding Debarment, Suspension, and Other Responsibility Matters – Primary Covered Transactions
5. Certification Regarding Lobbying for Contracts, Grants, Loans, and Cooperative Agreements



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

6. Network Design and Implementation Plan Certification (to be complete for projects requesting more than \$1 million in federal assistance)

## L. Schedules

### Schedule: A-1 Congressional Districts

1. State the Congressional District of the Applicant's headquarters  
Virginia - 5
2. State the Congressional District for each area covered by the Project.  
Virginia - 5

## M. Proposed Funded Service Area Details (BIP & BTOP)

### 13. Proposed Funded Service Area (BIP - Last Mile Projects):

**Proposed Funded Service Area Name:**  
**Census Blocks in Proposed Funded Service Area:**  
**Community Name:**  
**Rural Classification of the Community:**  
**BIP - Service Status:**

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**BTOP - Service Status:**

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**Total Square Miles of Community:**



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**Total Population :**  
**Total Number of Households:**  
**Total Number of Businesses:**  
**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities:**

**14. Proposed Service Area (BTOP - Middle Mile Project):**

Middle Mile Span Name:	Afton to Avon		
Census Blocks in Middle Mile Span:	TRACT	BLOCK	
950200		1004	
950200		1017	
950200		1022	
950200		1023	
950200		1024	
950200		1025	
950200		1026	
950200		1031	
950200		1032	
950200		1033	
950200		1034	
950200		1036	
950200		1037	
950200		1038	
950200		1039	
950200		1040	
950200		1043	
950200		1044	
950200		1045	
950200		1046	
950200		1047	
950200		1048	



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM		<b>Easygrants ID:</b> 891	
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program		<b>Applicant Organization:</b> Nelson County Virginia	
<b>Task:</b> Submit Application - Infrastructure Programs		<b>Applicant Name:</b> Mr. Stephen A. Carter	

950200 1053  
 950200 1054  
 950200 1055  
 950200 1064  
 950200 2003  
 950200 2004  
 950200 2005  
 950200 2027  
 950200 3000  
 950200 3077  
 950200 3078

**Last Mile Service Area Name:** Afton  
**Community Name:** Afton - Other Area  
**Rural Classification of the Community:** Rural  
**BIP - Service Status:** Unserved

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**BTOP - Service Status:** Unserved

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**Total Square Miles of Service Area:** 27  
**Total Population :** 709  
**Total Number of Households:** 299  
**Total Number of Businesses:** 30  
**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities:** 1

**Middle Mile Span Name:** Afton to Avon  
**Census Blocks in Middle Mile Span:** TRACT BLOCK  
 950200 1004  
 950200 1017  
 950200 1022  
 950200 1023



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

950200 1024  
950200 1025  
950200 1026  
950200 1031  
950200 1032  
950200 1033  
950200 1034  
950200 1036  
950200 1037  
950200 1038  
950200 1039  
950200 1040  
950200 1043  
950200 1044  
950200 1045  
950200 1046  
950200 1047  
950200 1048  
950200 1053  
950200 1054  
950200 1055  
950200 1064  
950200 2003  
950200 2004  
950200 2005  
950200 2027  
950200 3000  
950200 3077  
950200 3078

**Last Mile Service Area Name:** Avon  
**Community Name:** Avon - Other Area  
**Rural Classification of the Community:** Rural  
**BIP – Service Status:** Underserved

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**





**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

The rate of broadband subscribership for the census-designated community [or other area] is 40% of households or less.

**BTOP - Service Status:** Underserved

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**  
The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

**Total Square Miles of Service Area: 27**  
**Total Population : 829**  
**Total Number of Households: 322**  
**Total Number of Businesses: 38**  
**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities: 2**

**Middle Mile Span Name:** Avon to Lovington  
**Census Blocks in Middle Mile Span:** TRACT BLOCK

950100	2048
950100	2097
950100	2098
950100	3015
950100	3018
950100	3019
950100	3020
950100	3021
950100	3022
950100	3023
950200	2024
950200	2028
950200	2031
950200	2033
950200	2034
950200	2035
950200	2036



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

- 950200 2043
- 950200 2046
- 950200 2047
- 950200 2049
- 950200 2050
- 950200 2054
- 950200 2056
- 950200 3002
- 950200 3073
- 950200 3074
- 950200 3075
- 950200 3076
- 950200 3077
- 950300 1001
- 950300 1041
- 950300 1042
- 950300 1043
- 950300 1049
- 950300 1055
- 950300 1059
- 950300 1060
- 950300 1061
- 950300 1062
- 950300 1063
- 950300 1064
- 950300 1065
- 950300 1072

**Last Mile Service Area Name:** Lovington  
**Community Name:** Lovington - Other Area  
**Rural Classification of the Community:** Rural  
**BIP – Service Status:** Underserved

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**  
 The rate of broadband subscribership for the census-designated community [or other area] is 40% of households or less.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**BTOP - Service Status:** Underserved

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**  
The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

**Total Square Miles of Service Area: 27**

**Total Population : 503**

**Total Number of Households: 210**

**Total Number of Businesses: 110**

**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities: 7**

**Middle Mile Span Name:** Lovington to Colleen  
**Census Blocks in Middle Mile Span:** TRACT BLOCK

950100	2048
950100	3014
950100	3015
950100	3017
950100	3018
950100	3021
950100	3022
950100	3023
950100	3024
950100	3025
950100	3026
950100	3027
950100	3028
950100	3029
950100	3030
950100	3031
950100	4005
950300	1072
950300	2047



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

- 950300 2056
- 950300 2058
- 950300 2059
- 950300 2061
- 950300 2085
- 950300 2086
- 950300 2087
- 950300 4000
- 950300 4002
- 950300 4003
- 950300 4004
- 950300 4005
- 950300 4006
- 950300 4083
- 950300 4085
- 950300 4086
- 950300 4087
- 950300 4088
- 950300 4089
- 950300 4090
- 950300 4091

**Last Mile Service Area Name:** Colleen  
**Community Name:** Colleen - Other Area  
**Rural Classification of the Community:** Rural  
**BIP – Service Status:** Underserved

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**  
 The rate of broadband subscribership for the census-designated community [or other area] is 40% of households or less.

**BTOP - Service Status:** Underserved

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**  
 The rate of broadband subscribership for the proposed funded service area is 40% of households or less.



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

**Total Square Miles of Service Area: 27**

**Total Population : 1,030**

**Total Number of Households: 419**

**Total Number of Businesses: 60**

**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities: 10**

**Middle Mile Span Name:**

**Lovington to Colleen**

**Census Blocks in Middle Mile Span: TRACT BLOCK**

950100 2048  
950100 3014  
950100 3015  
950100 3017  
950100 3018  
950100 3021  
950100 3022  
950100 3023  
950100 3024  
950100 3025  
950100 3026  
950100 3027  
950100 3028  
950100 3029  
950100 3030  
950100 3031  
950100 4005  
950300 1072  
950300 2047  
950300 2056  
950300 2058  
950300 2059  
950300 2061  
950300 2085  
950300 2086



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

950300 2087  
950300 4000  
950300 4002  
950300 4003  
950300 4004  
950300 4005  
950300 4006  
950300 4083  
950300 4085  
950300 4086  
950300 4087  
950300 4088  
950300 4089  
950300 4090  
950300 4091

**Last Mile Service Area Name:** Tyro - Massies Mill  
**Community Name:** Tyro-Massies Mill - Other Area  
**Rural Classification of the Community:** Rural  
**BIP - Service Status:** Unserved

**BIP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**BTOP - Service Status:** Unserved

**BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.**

**Total Square Miles of Service Area:** 27  
**Total Population :** 766  
**Total Number of Households:** 305  
**Total Number of Businesses:** 24  
**Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities:** 1



**Broadband Infrastructure Application  
Submission to RUS (BIP) and NTIA (BTOP)**

<b>Submitted Date:</b> 8/19/2009 4:23:48 PM	<b>Easygrants ID:</b> 891
<b>Funding Opportunity:</b> Broadband Initiatives Program and Broadband Technology Opportunities Program	<b>Applicant Organization:</b> Nelson County Virginia
<b>Task:</b> Submit Application - Infrastructure Programs	<b>Applicant Name:</b> Mr. Stephen A. Carter

---

## N. Uploads

In order to improve system performance and help ensure that all applicants are able to complete their applications by the deadline, we have changed the way your application PDF is created. This PDF contains all of the information you entered throughout the Easygrants data entry screens. PDF copies of all documents that have been uploaded can be viewed and printed separately from the **Main page of the application after you submit**. These will continue to be available to you in read-only format after your application has been submitted.