



Broadband Infrastructure Application
Submission to NTIA – Broadband Technology Opportunities Program

Submitted Date: 3/25/2010 5:49:05 PM	Easygrants ID: 7242
Funding Opportunity: Broadband Technology Opportunities Program	Applicant Organization: APPALACHIAN VALLEY FIBER NETWORK
Task: Submit Application - BTOP	Applicant Name: Mr. Jerry Shearin

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A. General Application Information

Applicant Information	
Name and Federal ID for Applicant	
DUNS Number	961720575
CCR # (CAGE)	5X5D3
Legal Business Name	APPALACHIAN VALLEY FIBER NETWORK
Point of Contact (POC)	JERRY SHEARIN 3054462623 Ext. shearinj@comcast.net
Alternate POC	JERRY SHEARIN 3054462623 Ext. shearinj@comcast.net
Electronic Business POC	JERRY SHEARIN 3054462623 Ext. shearinj@comcast.net
Alternate Electronic Business POC	JERRY SHEARIN 3054462623 Ext. shearinj@comcast.net

Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
Prefix	Mr.
First Name	Jerry
Middle Name	
Last Name	Shearin
Suffix	
Telephone Number	678-618-2489



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Fax Number	
Email	jshearin@bluestreakllc.com
Title	VP & Director of Community Relations

Additional Contact Information of Person to be Contacted on Matters Involving this Application:

Project Role	Name	Phone	Email
Secondary Point of Contact	Mr. Blaik , Ross	3054462623	bross@beauchampco.com
Other Contact	Mr. Jerry , Shearin	6786182489	shearinj@comcast.net

Environmental Point of Contact

Prefix: Mr. Name: Parker, David Suffix: Telephone Number: 7065068295 Title: Operating Manager
Prefix: Mr. Name: Carlton, Ken Suffix: Telephone Number: 7705473804 Title: VP of Network Operations

Organization Classification	
Type of Organization	For-profit Entity
Is the organization a small business?	No



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Does the organization meet the definition of a socially and economically disadvantaged small business concern?	No
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Authorized Organizational Representative	
AOR Name	SHEARIN, JERRY
Result	Notify

Project Title and Project Description

Project Title: Appalachian Valley Fiber Network (“AVFN”)

Project Description: AVFN is a public-private partnership bringing middle-mile fiber to the Lower Appalachian Valley (a persistently, economically distressed area). The network will encompass 12 counties in 2 states. AVFN allows connectivity to 180+ anchor institutions with new or enhanced broadband and facilitates a new regional E-911 system by creating connectivity to multiple public safety anchors in 2 states.

CCI Priority Checklist

The following items were selected from the CCI Priority Checklist:

1. This project will deploy Middle Mile broadband infrastructure to community anchor institutions.
2. The project will deploy Middle Mile broadband infrastructure and has incorporated a public-private partnership among government, non-profit and for-profits entities, and other key community stakeholders.
3. This project will deploy Middle Mile broadband infrastructure in economically distressed areas.
4. This project will deploy Middle Mile broadband infrastructure to community colleges.
5. This project will deploy Middle Mile broadband infrastructure to public safety entities.
6. This project will deploy Middle Mile broadband infrastructure and either includes a Last Mile infrastructure component in unserved or underserved areas or has received commitments from one or more Last Mile broadband service providers to utilize the Middle Mile components. Any Last Mile components in rural areas do not exceed 20% of the total eligible costs of the project.



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7. This project will deploy Middle Mile broadband infrastructure and the applicant has proposed to contribute 30 percent or more in non-federal cost match.

Comprehensive Community Infrastructure Components

The following items were selected from the Comprehensive Community Infrastructure Components:

Middle Mile

BIP Applicants

Have you also applied to BIP for funding in the sample proposed funded service area?

- No

If Yes, please provide the project title and Easygrants ID number:

Title of Joint BIP Application:

Easygrants ID:

Other Applications

Is this application being submitted in coordination with any other application being submitted during this round of funding?

- No

Easygrants ID	Project Title

If YES, please explain any synergies and/or dependencies between this project and any other applications.

Individual Background Screening



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Is the Applicant exempt from the Department of Commerce requirements regarding individual background screening in connection with any award resulting from this Application?

- No, Applicant is subject to these requirements

If the answer to the above question is "No," please identify each key individual associated with the Applicant who would be required to complete Form CD-346, "Applicant for Funding Assistance," in connection with any award resulting from this Application:

Name	Title	Employer
David Parker	Operating Manager	Appalachian Valley Fiber Network, LLC
James Beauchamp	Operating Manager	Appalachian Valley Fiber Network, LLC
Benjamin Walker	Operating Manager	Appalachian Valley Fiber Network, LLC
Blaik Ross	General Counsel & Corporate Secretary	Appalachian Valley Fiber Network, LLC
Maribel Hart	Chief Financial Officer	Appalachian Valley Fiber Network, LLC
Joe Cangiano	Vice President of Technology	Appalachian Valley Fiber Network, LLC
Jamie Artzt	Vice President of Construction	Appalachian Valley Fiber Network, LLC
Jerry Shearin	VP & Director of Community Relations	Appalachian Valley Fiber Network, LLC
Ken Carlton	VP of Network Operations	Appalachian Valley Fiber Network, LLC



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B. Executive Summary, Project Purpose and Benefits

Essay Question

Executive Summary of the proposed project:

The Opportunity & the Challenge

The lower Appalachian Valley is a historically impoverished area, lagging behind the rest of the country in such areas as education, healthcare, delivery of public services & job creation. During the past decade, the economy of the lower Appalachian valley was decimated by job losses in the manufacturing sector. In this primarily rural part of the country, unemployment is above the national average. For northwestern Georgia & eastern Alabama, the path towards economic recovery lies in providing a world-class infrastructure that will improve quality of life, thereby attracting new employers & fostering growth of small businesses. Providing affordable access to high-quality broadband is an important part of the solution to these long-term regional problems.

Appalachian Valley Fiber Network (AVFN) is a unique public/private partnership spanning two states that is committed to expanding & enhancing existing middle-mile fiber optic infrastructure. Building on the recommendations of a 2009 study conducted by the Georgia Tech Enterprise Innovation Institute, AVFN joins with the Northwest Georgia Regional Commission, the Northwest Georgia Joint Development Authority, the Alabama Broadband Initiative, the East Alabama Regional Planning & Development Commission, Floyd County, Citizens for a Digital Future, Georgia Institute of Technology & Trenton Telephone Company to provide high-capacity broadband throughout the proposed service area. AVFN member, Parker Systems/Fibernet (Parker), now provides middle & last mile service in the northwest Georgia portion of the proposed service area. Regional last-mile providers have agreed to subscribe to AVFN middle-mile service so community anchor institutions & businesses will be able to readily access the high-capacity broadband needed to support the widest possible variety of applications. Interest in AVFN's proposed middle mile service is strong, with 185 community anchor institutions expressing need for the broadband service. The opportunity presented by this public/private collaboration with an existing broadband provider translates into connecting the entire proposed service area to global broadband access.



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Service Area

The proposed service area is comprised of nine counties in Georgia (Bartow, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk & Walker) & three counties in Alabama (Calhoun, Clay & Cleburne). The proposed service area totals 2,653 square miles, with a combined population of 383,859. The largest city in the GA segment is Rome, population 34,980. The largest city in the AL segment is Anniston, population 24,276. The area as a whole is primarily rural. The 24-month unemployment average is 8.61%. Broadband penetration is approximately 50.5% of households. Cable modem, tailored to residential rather than high-capacity institutional use, is the primary broadband source. Other types of available broadband are DSL & Ethernet, which lack speed & flexibility to support many applications.

Households & Businesses Passed

The proposed middle-mile service will be proximate to 144,082 households & 8,327 businesses. AVFN can reach these subscribers through its last-mile service provider customers.

Community Anchor Institutions

185 community anchor institutions have expressed interest in AVFN's enhanced broadband services. Specifically, 16 schools (k-12), 11 libraries, 40 healthcare providers, 47 public safety entities, 4 community colleges, 5 institutes of higher learning, 15 community support organizations & 49 government facilities will benefit from AVFN's proposed services. Floyd County will also integrate AVFN fiber into its public safety backhaul network & initiate a regional broadband project linking 911 centers.

Proposed Services & Applications

AVFN will offer expanded & enhanced broadband connections for community anchor institutions & businesses to access new &/or improved services. Among the proposed services & applications are state-of-the-art telemedicine, e-government, distance learning & business-grade broadband. The Georgia Tech Enterprise Innovation Institute created for AVFN the Success in Education & Economic Development (SEED) program. SEED is a tele-mentoring program aimed at high school & community college students to provide economic opportunity.



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Nondiscrimination & Interconnection Obligations

AVFN commits to (1) adhere to the principles contained in the FCC’s Internet Policy Statement or any subsequent ruling/statement; (2) not favor any lawful Internet applications & content over others; (3) display any network management policies in a prominent location on its Web page & provide notice to customers of changes; (4) connect to the public Internet directly or indirectly, such that the project is not a closed network; & (5) offer interconnections, where technically feasible without exceeding current or reasonably expected capacity limitations, at reasonable rates & terms to be negotiated with requesting parties. This includes both the ability to connect to the public Internet & physical interconnection for traffic exchange.

Type of Broadband System to be Deployed

AVFN will build a middle-mile fiber optic broadband network that expands the infrastructure of a pre-existing middle-mile network owned by Parker. The network will consist of a fiber ring spanning the Georgia portion of the network, seven nodes located in the most populous areas & terminal points in Atlanta & Chattanooga. The nodes will be supplemented by POPs and SPOPs to satisfy demand for connectivity. Additional network redundancies & bandwidth will be created through three sub-loops. An existing data center in Rome will become a fiber hotel/collocation facility for northwest Georgia & northeast Alabama.

AVFN will use SONET connectivity & Wave Division Multiplexing. Border Gateway Protocol will be the core Internet product, peered with multiple tier 1 Internet providers. Telephony will be supported by three independent switch providers & multiple connections to AT&T. These technology solutions promote extremely high speed, scalable & dependable broadband.

AVFN also provides for future expansion and network security. With a regional data center in Rome interconnected to facilities in Atlanta and Chicago, there is back up in the event of system failure. The build into Alabama provides a major step towards interconnection with Birmingham, which then links to Central and South America.

Qualifications of Applicant



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AVFN LLC is an alliance of Blue Streak Cable & Telecommunications (Blue Streak) & Parker.

Blue Streak was formed when two leaders in their respective fields decided to combine resources to create a national leader in telecommunications. Founded in 1936, Beauchamp Construction Co., Inc. (BCC) has a decorated & trusted reputation as a proven industry leader. BCC has been a premier commercial construction company for decades. From its roots in Washington D.C., to its current home base in Coral Gables, Florida, BCC brings financial strength (over \$200M in bonding capacity), extensive government contracting experience & skilled managers to the partnership. Cable Connections & Utilities (CCU), was founded in 1985 as a provider of cable infrastructure. CCU is a leading contractor for, among others, Comcast, A.T.& T, the Department of Defense, Level 3 and Sprint. CCU has installed 3,200+ miles of aerial & 8,500+ miles of broadband fiber.

Parker was founded in 1985 by David Parker & is a leading broadband technology provider in northwest Georgia. Parker received its CLEC & OCC status in 1998. Parker has installed 2,000+ miles of fiber & 700+ miles of aerial.

Combining the financial & institutional power of Blue Streak with the intimate local knowledge of Parker Systems gives AVFN complete confidence it can deliver results. Parker's long-term experience as a regional broadband operator provides a sound basis for long-term network sustainability.

Overall Infrastructure Cost

Construction of system infrastructure will involve installation of 960,701 feet of cable & ducts, 72,072 feet of aerial, 200 hand holes, plus boring, trenching & splicing. Materials & labor costs are estimated at \$17,702,862.00.

Subscriber Projections

AVFN is providing a middle-mile only service. AVFN subscribers will thus be last-mile & middle-mile providers. While community anchor institutions have already expressed interest in benefiting from AVFN, access will come through a last-mile provider. Note that AVFN



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member Parker is also a last-mile provider & will be an AVFN subscriber. By the end of year 8, AVFN projects that it will serve █████ subscribers.

Number of Jobs Created or Saved

Relying on the Council of Economic Advisors formula, we estimate creation of 75 direct jobs, 74 indirect jobs & 83 induced jobs.

Project purpose:

The AVFN proposed service area spans a 9-county area in northwestern Georgia and a 3-county area in eastern Alabama that is primarily unserved by high-capacity, redundant broadband. AVFN member partner, Parker Systems/Fibernet ("Parker"), currently provides the most populous areas within the northwestern Georgia portion of the proposed service area with this grade of broadband service. Parker has used the Norfolk Southern dark fiber resource in the western portion of the proposed service area and the Georgia Public Web resource in the eastern portion of the service area to form a large fiber ring connecting the more populous areas to terminal fiber hotels in Atlanta and Chattanooga, achieving a global level of quality broadband connectivity. AVFN proposes to build on what Parker has accomplished, and extend the existing fiber infrastructure into the more rural portions of the counties already served, as well as to the economically-related eastern Alabama. The new construction will form three new fiber rings, providing expanded high-capacity broadband coverage to areas that, without federal funding, would not economically support this grade of service. Arrangements are in place with locally-based last-mile providers to offer community anchor institutions and businesses the high-quality global connectivity they have been denied. Expanding and improving a pre-existing high-capacity broadband network to unserved areas is an economic, highly effective and replicable solution to the identified problem of bringing broadband to rural portions of counties that have broadband capabilities in more populous areas.

The AVFN project supports all the statutory objectives of the BTOP program. The proposed service area is economically distressed, with a 24-month average unemployment for the region of 8.61% as compared to 7.52% nationally. In 2009, Georgia Tech completed a study of the 9-county Georgia segment, concluding that enhanced access to broadband would stimulate economic growth through supporting small business formation and providing educational/job training opportunities. Approximately 185 community anchor institutions, including schools, libraries, healthcare providers, community colleges, other institutions of higher learning and



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governmental facilities, have expressed interest in either becoming AVFN customers or, as current Parker customers, enhancing their grade of service. Through these community anchor institutions, consumers in unserved and underserved areas will have access to high-capacity, quality broadband. These community anchor institutions will also serve such vulnerable populations as the unemployed through enhanced job training opportunities at technical colleges and job training centers that will be AVFN customers. AVFN proposes to serve 47 public safety facilities, and, in addition, through an alliance with Floyd County, will build infrastructure to be used for linking 911 centers throughout the region. Healthcare providers eager to expand into more rural areas of the counties, and small businesses seeking to leverage the regional growth in the auto manufacturing industry have already expressed interest in taking service from AVFN. Municipalities throughout the region will rely on AVFN to initiate and expand e-government. All of these factors will combine to stimulate demand for broadband, economic growth and job creation.

Recovery Act and Other Governmental Collaboration:

The proposed Appalachian Valley Fiber Network is located in the 15-county Northwest Georgia Regional Commission. The regional commission is an Economic Development District as designated by the Economic Development Administration and is a Local Development District as designated by the Appalachian Regional Commission.

In the last 10 years, the Economic Development Administration has provided \$1,596,244 in public works grant assistance to three local governments in the 15-county region; City of Tallapoosa (\$237,244), Haralson County (\$859,000) and the City of Chatsworth. Since 1966, the Appalachian Regional Commission has invested \$97,537,313 in a variety of projects in the 15-county Northwest Georgia region. When matching funds from local governments are included this investment approaches \$200 million. Many of these investments were for public infrastructure projects directly supporting economic development. Recent projects include \$300,000 in 2008 for the Floyd County Airport North Terminal Expansion and \$1,000,000 in 2006 for the Paulding County Business and Technology Park Local Access Road that also serves a new airport. Both of these projects will be served with high-speed broadband fiber through the proposed BTOP grant thus leveraging previous federal and local investments.

In 2007, Paulding County was awarded an Economic Development Administration Award for Excellence in Innovation for the adoption of a unique, internationally competitive model for economic development and self-sustainable development by maintaining large areas of the



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county as an unspoiled natural area while at the same time creating jobs through the aforementioned new airport and adjacent business and technology park.

Through the years there has been a substantial public investment in job creation projects in the region. These investments include federal assistance from EDA and ARC as well as substantial local contributions and private sector investments. The proposed BTOP fiber project will greatly enhance these investments at a critical time of high unemployment by creating a modern telecommunications network that positions the region to be globally economically competitive.

Fit with BTOP CCI Priorities:

We believe that AVFN meets all of the criteria:

1. This project is a middle-mile broadband infrastructure that will ultimately serve more than 180 community anchors institutions, including schools, libraries, local governments, community colleges, other institutes of higher learning, medical facilities and public safety entities. The middle-mile infrastructure will be used by Floyd County public safety agencies for enhanced wireless communications backhaul. Five last-mile providers have agreed to become AVFN customers should the AVFN project receive funding.
2. This project will deploy middle-mile broadband and has incorporated a public-private partnership among government, non-profit, and for-profits and other key community stakeholders. AVFN is a Georgia limited liability corporation combining the talents of two companies, Blue Streak Cable and Telecommunications and Parker Systems/Fibernet. Parker is a pre-existing middle-mile & last-mile provider serving portions of the proposed service area. AVFN has as key partners five governmental entities (the Northwest Georgia Regional Commission, the East Alabama Regional Development Commission, the Alabama Broadband Initiative, the Northwest Georgia Joint Development Authority, and the Floyd County Board of Commissioners), one university (Georgia Tech), one non-profit (Citizens for a Digital Future), and one additional private for-profit entity, that is also a last mile provider (Trenton Telephone).
3. This project will deploy middle-mile broadband in economically distressed areas. The 24 month average unemployment for the proposed service area is 8.61% as compared to the national average of 7.52%.



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4. This project will deploy middle-mile infrastructure to community/technical colleges. We are not only deploying directly to community/technical colleges, but we are also enhancing connectivity for an entire group of technical colleges(Coosa Technical College, Northwest Technical College, Walker Technical College and Chattahoochee Technical College).

5. This project will deploy middle-mile broadband infrastructure to at least 47 public safety entities in 12 counties spread across 2 states.

6. This project will deploy middle-mile infrastructure and includes a last-mile component through agreements with last-mile provider(Trenton Telephone, Calhoun Utilities, Cartersville Utilities,Parker Fibernet and Anniston Fiber) to utilize the middle-mile component. The last-mile component is not included in the requested grant funding, therefore it does not exceed 20% of the eligible costs of the project.

7. This project will deploy middle-mile broadband and the applicant proposes to contribute 30.5% of in-kind contributions. (Over \$6 million in revenues from infrastructure and associated land rights contributed by Floyd County and over \$3 million in fiber and related infrastructure contributed by Parker).

Is the applicant seeking a waiver of the Buy American provision pursuant to section x.Q of the NOFA?

- No

Is the applicant delinquent on any federal debt?

- No

If Yes, justification for delinquency:

Are you seeking a waiver of any requirement set forth in the NOFA that is not mandated by statute or applicable law?

- No

Is the applicant a current recipient of a grant or loan from RUS?

- No



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C. Partners

Are you partnering with any other key institutions, organizations, or other entities for this project?

- Yes

If YES, key partners are listed below:

<p>Project Role: Other Name: Howerin, David Phone: 7062956485 Email: dhowerin@nwgrc.org Address 1: P.O. Box 1798 Address 2: Address 3: City: Rome State: Georgia Zip Code: 30162 Organization: Northwest Georgia Regional Commission Organization Type: State or State Agency Small business: No Socially and economically disadvantaged small business concern: No</p>
<p>Project Role: Other Name: Laudeman, Greg Phone: 7062715521 Email: greg.laudeman@innovate.gatech.edu Address 1: Northwest Georgia Regional Office Address 2: 5 South Public Square, Suite 104 Address 3: City: Cartersville State: Georgia Zip Code: 30210 Organization: Georgia Tech Enterprise Innovation Institute Organization Type: Non-profit Institution Small business: No Socially and economically disadvantaged small business concern: No</p>
<p>Project Role: Other Name: Fathke, Donna Phone: 2562376741 Email: donna.fathke@adss.alabama.gov Address 1: 1130 Quintard Avenue, Suite 300</p>



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Address 2: Quintard Tower
 Address 3:
 City: Anniston
 State: Alabama
 Zip Code: 36202
 Organization: East Alabama Regional Planning and Development Commission
 Organization Type: State or State Agency
 Small business: No
 Socially and economically disadvantaged small business concern: No

Project Role: Other
 Name: Austin, Lionel
 Phone: 7066574367
 Email: lionela@tvn.net
 Address 1: South Industrial Blvd
 Address 2:
 Address 3:
 City: Trenton
 State: Georgia
 Zip Code: 30752
 Organization: Trenton Telephone Company of Trenton, Georgia
 Organization Type: For-profit Entity
 Small business: No
 Socially and economically disadvantaged small business concern: No

Project Role: Other
 Name: Dent, Jessica
 Phone: 3343538760
 Email: jessica.dent@adeca.alabama.gov
 Address 1: State Capitol
 Address 2:
 Address 3:
 City: Montgomery
 State: Alabama
 Zip Code: 36130
 Organization: Alabama Broadband Initiative
 Organization Type: State or State Agency
 Small business: No
 Socially and economically disadvantaged small business concern: No

Project Role: Other
 Name: Mullis, Jeff



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Phone: 7063755793
Email: [REDACTED]
Address 1: 10052 North Highway 27
Address 2:
Address 3:
City: Rock Spring
State: Georgia
Zip Code: 30739
Organization: Northwest Georgia Joint Development Authority
Organization Type: State or State Agency
Small business: No
Socially and economically disadvantaged small business concern: No

Project Role: Third party in-kind contributor
Name: Williams, Blaine
Phone: 7062915268
Email: williamsb@floydcountygga.org
Address 1: P.O. Box 946
Address 2:
Address 3:
City: Rome
State: Georgia
Zip Code: 30162
Organization: Floyd County Board of Commissioners
Organization Type: County Government
Small business: No
Socially and economically disadvantaged small business concern: No

Project Role: Other
Name: Noyes, Brian
Phone: 8777666673
Email: bnoves@brockclav.com
Address 1: P.O. Box 4658
Address 2:
Address 3:
City: Atlanta
State: Georgia
Zip Code: 30302
Organization: Citizens for a Digital Future
Organization Type: Non-profit Corporation
Small business: No
Socially and economically disadvantaged small business concern: No



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Project Role: Third party in-kind contributor Name: Carlton, Ken Phone: 8008727537 Email: ken@parkersystems.net Address 1: P.O. Box 688 Address 2: Address 3: City: Summerville State: Georgia Zip Code: 30747 Organization: Parker Fibernet, LLC Organization Type: For-profit Entity Small business: No Socially and economically disadvantaged small business concern: No

Description of the involvement of the partners listed above in the project.

Involvement of public and private partners drives the AVFN concept and approach to the project. We obtained input, support and direction from numerous sources before committing to application submittal. During the application process, these entities helped shape our project and greatly assisted in developing the application itself. AVFN has offered our partners a membership seat on our Governance Board and they have all accepted this role. Partnership letters from all are attached.

The Alabama Broadband Initiative (Public Partner) has been involved in the mapping, identifying unserved portions of the proposed service area and facilitation of regional meetings. They will hold a seat on the Governance Board and will serve to protect the public interest. They are a State Agency and can be viewed at <http://www.connectingalabama.gov/ca/default.aspx>.

East Alabama Regional Planning and Development Commission (Public Partner) has been involved in identifying community anchor institutions, project routing, facilitating community meetings and identifying stakeholders. EARPDC will promote the project as an economic development tool, serve as the representative for the Alabama cities and counties in the service area and will protect the public interest. They are a State Agency and can be viewed at <http://www.earpdc.org>. EARPDC will hold a seat on the Governance Board.

Northwest Georgia Regional Commission (Public Partner) facilitated the Georgia Tech regional broadband study that inspired the AVFN project, facilitated regional meetings, mapping, planning and collection of information. NWGRC will be involved in oversight, implementation,



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promoting the project as an economic development tool and will serve as a representative for the Georgia cities and counties. NWGRC will also protect the public interest. NWGRC will be paid a professional fee for program support on the project. NWGRC is a State Agency and can be viewed at <http://www.nwgrc.org/index.html>.

Northwest Georgia Joint Development Authority (Public Partner) is a four-county JDA and will assist in identifying broadband customers for expansion of the finished system. NWGJDA was an integral part of the original Georgia Tech feasibility study and will promote the project as an economic development tool. They are a State agency and will protect the public interest. NWGJDA can be viewed at the following website: <http://nwgajda.com/>.

The Floyd County Board of Commissioners (Public Partner and in-kind match provider) will oversee the public safety infrastructure project connections with the expanded fiber network, will serve to protect the public interest and will promote the project as a public safety communications and infrastructure development tool. They are a County Government and can be viewed at the following website: www.floydcountyga.org.

The Georgia Tech Enterprise Innovation Institute (Non-Profit Partner) participated and authored the original Techsmart Study for the Northwest Georgia region. E12 (as they are known) will also create an e-learning program for the project aimed at high school and community/technical college students that will allow distance learning and electronic mentoring. They are a University entity and can be viewed at <http://innovate.gatech.edu/>.

Citizens for a Digital Future (Non-Profit Partner) will come on board as segments of the system are completed. CDF is a non-profit entity whose mission statement reads: Citizens for a Digital Future recognizes that adoption of and access to broadband technology -- and its enhancements - - has become increasingly critical to the environment, for education, economic development and health care, among others. Our members support and advance public policies that encourage broad deployment and robust enhancement of broadband and digital technologies. CDF can be viewed at : <http://www.citizensforadigitalfuture.org/>.

Trenton Telephone Company (Private Last-Mile provider) provides connectivity to [REDACTED] residents and over [REDACTED] businesses in the region. As a prospective AVFN customer, Trenton Telephone will focus on expansion of the northern-most service areas of the project. They are a for-profit entity and can be viewed at <http://www.tvn.net/telephone/>.

Parker Fibernet LLC (Private last-mile and middle-Mmle provider & in-kind match provider) is a member of AVFN, will contribute its existing middle-mile network to AVFN and will provide last-mile connectivity to consumers along the expanded network. They can be viewed at: <http://www.parkerfibernet.com>.



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We believe this assembly of public and private partners will provide AVFN with the best input from entities whose primary purpose is to promote the well-being of the residents of the region. As the project commences and construction begins, AVFN will also welcome any other entity that can add value and assistance to our endeavor.

D. Congressional Districts

Applicant Headquarters

- Florida

Project Service States

Alabama

Georgia

Project Service Areas

Alabama - 3

Georgia - 9

Georgia - 11

Will any portion of your proposed project serve federally recognized tribal entities?

- No

Indicate each federally recognized tribal entity your proposed project will serve.



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Have you consulted with each of the federally recognized tribal entities identified above?

- No

E. Service Area Details

Is the applicant seeking a waiver for providing less than 100% coverage of a service area?

- No

Project Details

Service Area Type: Middle Mile
Service Area Name: Georgia and Alabama
Rural Classification of the Last Mile Service Area: Rural
Service Status of the Last Mile Service Area: Unserved

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

Total Square Miles in Service Area: 2,653
Total Population in Proposed Service Area: 383,859
Total Number of Households in Service Area: 144,082
Total Number of Businesses in Service Area: 8,327
Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area: 429
Unemployment Rate in the Service Area: 9
Median Income in the Service Area: 30,435
Estimated Percentage of Households with Access to Broadband: 50
Estimated Percentage of Households Subscribing to Broadband: 50

F. Community Anchor Summary

Community Anchor Summary	
Schools (k-12)	16
Libraries	11



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Medical and Healthcare Providers	40
Public Safety Entities	47
Community Colleges	4
Public Housing	0
Other Institutions of Higher Education	5
Other Community Support Organization	14
Other Government Facilities	48
TOTAL COMMUNITY ANCHOR INSTITUTIONS	185
Historically Black colleges and Universities	0
Tribal Colleges and Universities	0
Alaska Native Serving Institutions	0
Hispanic Serving Institutions	0
Native Hawaiian Serving Institutions	0
TOTAL MINORITY SERVING INSTITUTIONS	0

G. Project Benefits

Demographics

Jobs



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How many direct jobs-years will be created from this project?	75
How many indirect jobs will be created from this project?	74
How many jobs will be induced from this project?	83

Methodology used to estimate jobs:

Appalachian Valley Fiber Network construction will create jobs & income for the region. The fiber network will provide more job opportunities as it is placed into operation & utilized for years to come. We feel usage of the Executive Office’s Council of Economic Advisors calculations presented in the application guidelines provide a fair & standardized assessment of job creation and we utilize them herein:

AVFN Direct Government Spending:	21,386,914
Job-Year Divisor from Guidelines	92,000
Total Estimated Jobs (Direct/Indirect & Induced)	232 each
Direct & Indirect Jobs @ 64% per Guidelines	149 each
Induced Jobs @ 36% per Guidelines	83 each

The guidelines did not provide a further breakdown between direct & indirect jobs, for purposes of the application we have estimated them to be 50/50.

Direct Jobs	75 each
Indirect Jobs	74 each
Induced Jobs	83 each
Total Estimated Jobs	232 each



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For construction purposes, this figure seems reasonable. Our self-performance construction activities will include architects, engineers, superintendents, foreman, supporting various skilled trade & laborer positions. Indirect jobs supporting the project also seems reasonable & would include County Inspectors, material suppliers, material manufacturers, general requirement support activities such as temporary toilets, safety & printing vendors, as well as surveyors & others.

Project Impact:

Appalachian Valley Fiber Network will span 2 states, and provide a connectivity link with a third state. In planning the project and determining needs of the areas, AVFN worked closely with its Alabama and Georgia partners. The final network expansion will provide the largest impact from the proposed investment.

According to recent data from the Census Bureau, Alabama has the second highest percentage of households in the country without Internet access. The Alabama Broadband Initiative advises that the proposed service area is severely lacking in broadband coverage. Cleburne County, Alabama for instance has almost no broadband coverage at all. While the industrial areas of Calhoun County (specifically in and around Anniston) do have broadband, most of the rest of the county does not. Our middle-mile fiber backbone should help solve this problem in the proposed service area.

Through an agreement with Norfolk-Southern Railroad, the AVFN project will extend the present west Georgia fiber backbone toward Birmingham. We anticipate a POP in Anniston, Alabama [REDACTED]. This will create a major fiber connection from Anniston, through many small unserved and under-served rural communities into the major fiber hub, 56 Marietta in Atlanta. Numerous community anchor institutions along these routes will be served.

The 2009 Georgia Tech Techsmart Project analyzed the broadband needs of northwest Georgia. The study relied on numerous public meetings and interviews. AVFN used this study and input from its Georgia public partners to plan the network expansion in the critical areas of business, education, government, healthcare and public safety.

Business: This area of Appalachia has been devastated by the recent collapse of the housing and construction markets. Local business leaders and elected officials acknowledged that excessive reliance had been placed on this industry for local employment. Carpet mills, hardwood flooring,



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lumber suppliers and the like have seen severe job losses. The Techsmart study, in conjunction with Georgia Economic Development Officials, looked at these challenges and attempted to find solutions.

The findings noted that major manufacturing investments have been made to the fringes of the AVFN project area in the last decade. Volkswagen is investing \$1.1 billion in a new auto plant directly to the north of the project area. Kia and Honda also made significant plant investments in the nearby region. Local stakeholders were asked how to leverage these investments into ancillary local jobs.

The study identified lack of affordable broadband as a barrier to job creation. Interestingly, much of the area has a tremendous resource in the major fiber backbone that traverses the Norfolk Southern Railroad right-of-way. To date national carriers have been reluctant to extend this fiber capacity into the surrounding areas. Applicant partner Parker is one of the only entities to serve the area through accessing this resource.

The AVFN project will be able to bring much needed fiber to obvious commercial and industrial sites by expanding Parker's middle-mile construction. Additional marketing efforts by local governments, the States of Alabama and Georgia, and AVFN, should result in immediate large industry results. Simultaneously, small business growth that has been stymied should accelerate.

Education: AVFN recognizes the need for extensive broadband coverage to enhance educational opportunities. Both states in our project area are ranked in the bottom third of the nation in school test scores. Any broadband enhancements to this area must contain a critical education component. The AVFN will provide broadband availability to over 30 education related anchor institutions, including schools, libraries, community colleges and technical institutes.

AVFN partner Georgia Tech has created a new program specifically for AVFN called Success in Education and Economic Development (SEED). SEED will be designed to have a dual impact. It will be a tele-mentoring program whereby teachers, mentors and key industry personnel will be available to provide practical information relating to local economic opportunities.

The students simultaneously will be available for community service projects on behalf of the mentoring organizations. The SEED program will also be available to all the teachers in the 12



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county project areas as a resource. Virtual field trips can be arranged and partner-in-education programs will be enhanced.

Another major component of the AVFN plan, is significant enhancement of fiber [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] AVFN plans to add a dedicated “core router system.” With this dedicated core router, distance learning and study islands can become common teaching tools.

Government: Since the inception of the AVFN project, local governments have been involved. With limited broadband in the area, local governments cannot fund needed broadband expansion individually much less regionally.

AVFN believes the proposed network can solve these problems. The network was designed to connect diverse governmental entities. Using the anchor institution model devised by NTIA, most government buildings will now be connected. Allowing and encouraging regional connectivity can create efficiencies that don’t exist today by promoting e-government and reducing future staffing needs.

Healthcare: Healthcare has specific and extensive bandwidth needs for telemedicine, and to create, transport and store patient files. With the present lack of available bandwidth, local healthcare has been challenged. AVFN partner, Parker has served many hospital groups for years. Some of the rural locations of these existing customers have not been reached. AVFN proposes to close that gap and bring quality broadband to rural medical facilities. Literally dozens of health care facilities have been identified and will be connected as anchor institutions by AVFN.

AVFN is also concentrating on County Health Departments. Officials in both Alabama and Georgia mentioned these facilities and their importance.

AVFN's network begins its easternmost point at the new Wellstar Paulding Hospital. Construction of this facility is scheduled to commence in fall 2010. Presently this site does not have broadband coverage with sufficient bandwidth. AVFN's fiber deployment will serve this facility.



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AVFN will create enhanced redundancies for numerous hospitals and health care centers in-



Public Safety: AVFN has identified at least 47 public safety agency facilities in the service area that will have the opportunity to use the improved fiber network. AVFN further proposes to provide broadband connectivity among 911 centers throughout the proposed service area.

In fall 2009 the voters of Floyd County Georgia took the unprecedented step of passing a Special Purpose Local Option Sales Tax (SPLOST) for public safety. This was a \$6M commitment by the voters to enhance the public safety communications system of the County. Seizing on this opportunity, the founders of AVFN approached Floyd County Officials about partnering with their project. We will be connecting 6 of 7 of their new 800 MHz towers to the main fiber backbone, resulting in high-capacity, redundant backhaul. This will dramatically expand the scope and abilities of their system and provide an additional revenue source to AVFN.

Vulnerable Populations:

The Appalachian Valley Fiber Network project has the potential to reach several vulnerable population segments in both the Georgia & Eastern Alabama regions. According to the year 2000 census data, the total population of the 12 county area is 735,293 persons. Included in that group were: 191,078 youth, 86,616 seniors age 65+ years, 150,307 persons over 5 with a disability, 99,331 minorities, & 86,146 persons below the poverty level. Looking at national averages, the region has a higher percentage of youths, disabled & those living below the poverty level.

Looking at level of education numbers, the region falls even further behind national averages. In the year 2000, only 11.6 percent of persons age 25+ had completed four years or more of college as compared with 24.3 percent in Georgia and 24.4 percent in the United States. The project's Eastern Alabama region had an even lower percentage of persons with a college degree.

While the project will not immediately connect each person to a broadband network, the project will lay a regional fiber foundation for community anchor institutions & other broadband providers to serve vulnerable citizens. There are numerous community anchor institutions in the service area that provide critical services to vulnerable persons. This includes 17 post secondary schools, 154 secondary schools, 16 libraries, & 27 medical facilities. Health care opportunities such as exchange of high speed medical imaging between medical centers & physicians &



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electronic medical record systems exchange would become more available. The service area contains two regional hospitals. Floyd Medical Center & Redmond Regional Medical Center serve these parts of Alabama and Georgia. The Harbin Clinic in Rome is the largest privately owned multi-specialty physician group in Georgia & operates 21 regional offices through 140 doctors. The Harbin Clinic is a leader in electronic medical record systems. All three medical centers are served by Parker.

Additional education & job training possibilities offered through the Internet would also be realized through programs offered by the Berry College & Shorter College in Rome, Georgia both of which are four year institutions that also offer post graduate programs. Georgia Highlands College, a two year college, also has the potential to reach out to vulnerable populations. Additionally, Georgia Northwestern Technical College, Chattahoochee Technical College & West Georgia Technical College provide a system of technical education, adult education, & customized business & industry training and offer easy access to lifelong education & training to the service area.

Clearly, this project has the opportunity to reach out & impact the vulnerable populations identified in the census data from the year 2000 & these populations are no doubt much larger today.

Level of Need:

The AVFN's project area of northwest Georgia & east central Alabama are either un-served or underserved with regard to the high-speed, high-capacity broadband that is required by business, industry, healthcare, education & government in a global economy. For many customers, the only choice is a cable provider whose primary focus is residential service. Other limited areas receive DSL service with "best effort-asymmetrical bandwidth," which does not serve the needs of high capacity customers.

"Best effort-asymmetrical bandwidth" offers different capacity for upload versus download & total capacity & speed based on the number of users on line at the particular time. This is not conducive to the business or governmental customer. In some limited project areas, symmetrical, high bandwidth is available through AT&T Metro E. This service is costly, lacks flexibility & is not redundant. The AVFN completed project will be able to propose better services & provide them at rates less than current AT&T established rates.

AVFN has been developed to build fiber optic rings in medium sized cities & rural areas that are underserved by larger companies who tend to focus on large, metropolitan areas. There is no comparable service which provides regional point-to-point connectivity, a regional data center &



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redundant high speed bandwidth for government, public safety, education, business, and healthcare in Northwest Georgia. There is also no comparable, middle mile fiber service along the Norfolk Southern/I-20 corridor from Bremen, Georgia to Anniston, Alabama with connection to the carrier hotel at 56 Marietta in Atlanta.

The project areas are by & large all underserved with regard to broadband & as a result are at an economic development disadvantage as well. For many of the area anchor institutions & government facilities we have identified, AVFN will provide the first available broadband service. AVFN will significantly change the broadband landscape in the project area.

The economic conditions of the project area are ripe for investment in technology & broadband in particular. The area has experienced large gains in population. According to per county census data, between 1990 and 2008 (estimate), there was a 53.0% growth in population within the Georgia portion of the proposed service area alone.

But while the area's population has grown, employment has been buffeted in recent years by troubles affecting major employers in the textile, manufacturing & apparel industries. A view of the major job losses for just the Georgia region shows the magnitude and scope of the changing employment climate. Between 2008 and 2009, some 6797 jobs were lost in the NW Georgia economic region alone. In 1970, manufacturing employment accounted for 65 percent of total employment and in 1990 it accounted for 49.5 percent of total employment. By the year 2009 manufacturing constituted 26 percent of total regional employment. The Georgia area project region is in the process of diversifying its economy. With manufacturing, services & tourism providing a foundation for future growth, reliable broadband must be a part of that solution.

Eastern Alabama Jobs

The portion of this project that lies in eastern Alabama includes Cleburne, Calhoun & a connection to Clay County. The total population of these three counties in 2008 was 142,027 persons. The largest city in this three county area is Anniston, Alabama in Calhoun County with a 2008 population of 23,662 persons.

Similar to our Georgia project region, manufacturing was East Alabama's top employer in 2007. However, the region lost over 10,000 manufacturing jobs & 78 manufacturing plants since 1999. The State of Alabama as a whole fared well between 1999 and 2007 in terms of employment.



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Alabama attracted nearly 89,000 jobs & over 5,100 businesses during that nine-year period. Average annual pay increased by almost \$8,000, to about \$34,000. Unfortunately, East Alabama did not share in the state’s success. The region experienced a net loss of over 11,000 jobs & about 50 businesses. This decline occurred in spite of the new jobs created by the Honda manufacturing plant in Lincoln & several automotive suppliers that located throughout the region. In both 1999 and 2005, statistics show that the average east Alabama worker earned about 16% less than workers statewide.

Economic Distress Indicators

Economic distress in the region can also be visualized by viewing recent national averages & regional conditions from statistics provided by the U.S. Bureaus of Census, Labor Statistics. The 24-month average unemployment rate for the Georgia project region is 8.77 percent as compared to 7.52 percent in the nation (2008 data). The 2007 regional per capita income was \$27,831 or only 72% of the national average of \$38,700. Eastern Alabama has similar income numbers & higher unemployment.

In addition to these stress indicators, the project counties are also experiencing relatively high rates of poverty. According to the Year 2000 U.S. Census, 16.1 percent of individuals in Calhoun County were below poverty, 17.1 percent of persons in Clay County were below poverty, & 13.9 percent of persons in Cleburne County were below poverty. These numbers all exceed national averages.

According to the Year 2000 U.S. Census, the Alabama region also fell below the nation in percent of college graduates. In Calhoun County, 15.2 percent of persons age 25 years & older had completed a bachelor’s degree or higher in the year 2000, in Clay County only 7.8 percent had completed college and in Cleburne County 9.2 percent of persons age 25 years & older had completed a bachelor’s degree. Nationally, in the year 2000, 24.4 percent of persons age 25 years & older had completed a bachelor’s degree. The Northwest Georgia portion of the service area also lagged behind the state & nation in educational attainment. In the year 2000, only 11.6 percent of persons age 25+ had completed four years or more of college as compared with 24.3 percent in Georgia & 24.4 percent in the United States.

The education level of the region restricts its ability to attract and retain knowledge-based industries. The AVFN regional broadband project will strengthen the ability of the area’s



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educational institutions to foster greater educational attainment providing prospective employers with a workforce with the knowledge & skills to compete in the global economy.

The region is fortunate to have several four year colleges that provide educational opportunities for the workforce. These institutions include Berry College & Shorter College in Rome/Floyd County, Dalton State College in Dalton/Whitfield County, & Covenant College in Walker County. Georgia Highlands College is a two year college and serves the region. Area technical colleges include Georgia Northwestern Technical College, Chattahoochee Technical College, & West Georgia Technical College. Broadband expansion will upgrade these facilities and promote the education level of the regions workforce to adapt to the changing job market.

Moving Forward with Appalachian Valley Fiber Network

With these factors taken into consideration, AVFN's public partner, the Northwest Georgia Regional Commission established "developing a globally competitive telecommunications system" as a regional goal in the Northwest Georgia Regional Commission, Regional Comprehensive Plan, Regional Agenda, Page II-7 (1999). This regional plan identifies "creating a partnership of telecommunications providers; business & industry, public institutions, & government to sponsor & conduct regional forums on how telecommunications technology can be used to expand economic development" as an implementation strategy. The regional plan also identifies an implementation strategy of "encouraging governmental entities to promote local area networks and wide area networks for sharing data and other information". This plan is updated annually & developing a globally competitive telecommunications system has remained a regional goal since 1999.

Similarly, another AVFN partner the East Alabama Regional Planning and Development Commission prepared a revised Comprehensive Economic Development Strategy (CEDS) in 2009. A high priority objective of the East Alabama economic development strategy is to "promote expansion of advanced telecommunications infrastructure and technology within the region" (CEDS, page 67). The proposed Appalachian Valley Fiber Network project helps the region meet this priority economic development objective.

The AVFN regional broadband project would further enhance the region's ability to attract advanced telecommunications companies & jobs acting to diversify the local and area economy.



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This point is underscored by the numerous support letters from local government agencies & officials attached to this application.

Northwest Georgia and East Alabama have quantifiable, tangible assets with developed sites, existing buildings, utilities, clean water & air, transportation corridors & labor force. A regional fiber optic broadband network provides a unique, marketable technology asset which is currently limited & in need of improvement. The AVFN provides a significant step towards that purpose.

H. Technology

Technology Type

Indicate the technology that will be used to deliver last mile services. The following items were selected:

Wireline - Fiber-optic Cable

Other:

Technology Questions

Methodology for Area Status:

AVFN used several methodologies to determine the extent to which our proposed service area was adequately served, underserved or unserved.

The first methodology used for the 3 counties in Alabama was through a State resource; Connecting Alabama. This is an exceptional website that shows the extent of broadband coverage in these counties. <http://connectingalabama.gov/ca/maps.aspx>. It identifies the proposed service area as unserved (in Cleburne County) underserved (Clay County) & a mixture of underserved & adequately served (Calhoun County).

The second methodology used for Alabama was questioning of county, city, & State officials. Actual representatives of the people of this region have a thorough knowledge of the local resources & needs that provide a valuable complement to State mapping.

The third methodology was a windshield tour of the proposed service area combined with surveying residents. This also yielded valuable information that will be used during construction



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of the project as well. Windshield tours were conducted in both Alabama & Georgia & many of the routes were ridden multiple times by multiple AVFN members.

The state of Georgia proved a little more problematic as there is not a State broadband mapping resource available (an NTIA grant is funding that effort).

AVFN relied heavily in this 9 county Georgia area on the intimate knowledge of Parker. As a leading provider of broadband in the area, its local knowledge was invaluable. Parker has been working in the area for over a decade on various broadband applications & knows Northwest Georgia & its broadband infrastructure as well as anyone.

AVFN also consulted with the Georgia Tech Enterprise Innovation Institute and Northwest Georgia Regional Commission as they did the original Techsmart Study for broadband needs in the service area. The Techsmart Study contacted 449 entities by phone, surveyed 160 organizations & had in excess of 9 focus group meetings. Northwest Georgia Regional Commission was a partner in the study & is an AVFN key partner.

AVFN had numerous meetings with Georgia area stakeholders to flesh out broadband needs. To date, AVFN has had over 27 face to face meetings with county & city representatives & dozens of direct phone conversations with the same group to discuss broadband availability.

AVFN has also held 8 face to face meetings with last mile providers in the area & numerous phone conversations. These conversations identified key areas to be reached by AVFN & flagged unserved & underserved areas.

AVFN had 3 face to face meetings and numerous email and phone conversations with the Norfolk Southern Railroad, a large regional dark fiber IRU provider. Norfolk Southern identified present connection points on theirs & other systems in the region, providing further validation of unserved & underserved portions of the proposed service area.

Description of Network Openness:

The Appalachian Valley Fiber Network (AVFN) commits to the following Nondiscrimination and Interconnection Obligations: (1) adhere to the principles contained in the FCC’s Internet Policy Statement (FCC 05-151, adopted August 5, 2010) or any subsequent ruling or statement; (2) not favor any lawful Internet applications and content over others;(3) display any network



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management policies in a prominent location on AVFN's Web page and provide notice to customers of changes to these policies; (4) connect to the public Internet directly or indirectly, such that the project is not an entirely privately closed network; and (5) offer interconnections, where technically feasible without exceeding current or reasonably expected capacity limitations, at reasonable rates and terms to be negotiated with requesting parties. This includes both the ability to connect to the public internet and physical interconnection for the exchange of traffic. AVFN will install pull boxes every 5,000 feet for obvious connectivity points. AVFN further agrees to provide fiber connectivity anywhere along the route between the 5,000 foot pull boxes, as the technology being deployed is not compromised by multiple connections via ring splicing. AVFN will use standards-based networking practices to manage interoperability with other wired and wireless networks and will allow for both wholesale and retail use of network facilities. New network facilities will be made available on a wholesale basis to existing or future service providers so they can offer competitive alternate services to community institutions, businesses, and residences.

System Design:

AVFN proposes to expand the network infrastructure of a pre-existing middle-mile fiber network owned by Parker, a member of AVFN. The expansion will serve the rural unserved parts of the 9 county Georgia area & 3 county eastern Alabama area. [REDACTED]

[REDACTED]

allows customers from the more populous parts of the proposed service area global connectivity through various connections north from Chattanooga & south from Atlanta.

When the new network is completed it will provide customers seamless connectivity to all points north & south, as well as, west along the I-20 corridor to Anniston, Alabama. Another long term goal of AVFN is to facilitate expansion of the nationwide fiber network, specifically the important Atlanta to Birmingham corridor. Presently, that fiber backbone west from Atlanta ends in Bremen, Ga., approximately 90 miles from Birmingham. AVFN proposes to build in excess of 40 of those miles to Anniston. Significantly, the proposed network will bring that connectivity to rural areas that would not otherwise be served, spurring educational, telemedicine, e-government & business applications.



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The proposed construction will also create additional network redundancies & bandwidth through construction of three new subloops (Bartow/Gordon/Floyd/Polk counties; Floyd/Gordon/Whitfield/Walker/Chattooga counties plus Chattanooga; Polk/Bartow/Harellson counties plus 56 Marietta). These subloops will meet the broadband demands of new & existing businesses, healthcare providers, municipal governments, technical colleges & public schools. This approach was validated by the 2009 Techsmart Study whose partners included: Northwest Georgia Joint Development Authority, Northwest Georgia Regional Commission, Georgia Tech University, One Georgia Authority & other regional economic development officials.

Technology

The Parker network currently uses [REDACTED]

AVFN proposes to maintain & expand on these technology solutions, presenting a compelling case for extremely high speed, expandable, dependable broadband capabilities.

Middle-Mile

AVFN will continue to use the 7 nodes strategically located throughout the network. These nodes will be supplemented with points of presence (POPs) along the approximately 180+ miles of planned fiber construction. The exact locations of POPs will be dictated by concentrations of business or anchor institutions in a given area. The locations on the attached map are area specific & have already been site surveyed by our engineers to promote network expansion. Several potential anchor institutions & business owners have already expressed interest in hosting a POP location. Multiple smaller SPOPs will likely be necessary to satisfy the demand for connectivity. SPOPs will be sized from small communication cabinets down to dedicated & protected hand holes ready for cabinet placement. AVFN believes that area anchor institutions & businesses will embrace the ability to access the technology they presently lack, & demand will grow for POP locations throughout the network during the construction phase. AVFN's field engineers & project managers understand the need for flexibility during construction to maximize the potential of the system.

AVFN will also be expanding & enhancing a newly purchased regional data center. Centrally located to the project in Rome, Ga., this facility will become a fiber hotel/collocation facility for



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Outside Leverage	
Applicant is providing matching funds of at least 20% towards the total eligible project costs?	Yes
Matching cost detail	<p>AVFN will provide several in-kind matches to the requested grant funds.</p> <p>Applicant partner Parker Fibernet will provide a critical in-kind match to AVFN. The value of the in-kind match is \$3.35M. A second in kind match is provided by Floyd County, GA & is valued at \$6M. Application preparation & research matches have been provided by the partners totaling \$52,882.</p> <p>Based on the requested grant amount of \$21,386,914, the in kind match represents 30.5% of the total project cost of \$30,789,796.</p> <p>Parker currently operates a network consisting of over [REDACTED] miles of dedicated fiber in the region. From this middle mile backbone customers are provided with a variety of phone, internet & data services. By expanding this existing network, AVFN will serve thousands more customers & institutions. The in-kind match provided by Parker to AVFN consists of 60 miles of owned, established & lit fiber network that will serve as both the starting point & network feed for many of the new routes. Equally important, all related supporting equipment, switching, access, & services required for operation of the new AVFN network are included in the match.</p> <p>AVFN has proposed to match the new construction of 182 miles of middle mile fiber with 60 miles of existing middle mile fiber service network. This existing fiber is fully operational & currently in use. The project would not be feasible without this existing fiber backbone & fully operational network. Specifically, the match provides infrastructure miles, POPs, Data Center/Co-location facilities, a</p>



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	<p>SONET protected ring, existing IRU leases & right of way agreements which not only provide value but allow this project to be implemented extremely expeditiously. Through this match, AVFN will literally be a plug & play network, fully operational & ready for last mile connection & users moments after construction is completed.</p> <p>The in-kind match network locations were specifically selected as being completely necessary & required for installation of the network expansion that AVFN will complete under the grant. Without tying into these specific service legs, network expansion in these areas is far more difficult.</p> <p>The value of the in-kind match has been calculated at its market rate value, based on original installation cost, current subscribers, network traffic & future value. A cost breakdown of the in-kind match is as follows:</p> <table border="0"> <tr> <td>Network & Access Equipment</td> <td align="right">\$200,000</td> </tr> <tr> <td>Fiber & Ground Installations</td> <td align="right">\$2,850,000</td> </tr> <tr> <td>Right of Way Use</td> <td align="right">\$100,000</td> </tr> <tr> <td>Existing Facility Provisions</td> <td align="right">\$50,000</td> </tr> <tr> <td>Billing & Operational Support Systems</td> <td align="right">\$150,000</td> </tr> </table> <p>Attached is a letter from AVFN co-owner Parker Fibernet outlining the agreement to provide the in-kind match as detailed above, & a project map that details the in-kind match & new network, with the AVFN match network shown in yellow & new network expansion shown in green.</p> <p>The next component of AVFN’s in-kind match comes from Floyd County, GA. Floyd Co. is currently underway with \$26.7M public safety system upgrade. This system will utilize an 800 MHz radio system to upgrade communications for first responders, public works, schools & hospitals. A major component of this system is 7 microwave towers. AVFN will be connecting fiber to 6 of the 7</p>	Network & Access Equipment	\$200,000	Fiber & Ground Installations	\$2,850,000	Right of Way Use	\$100,000	Existing Facility Provisions	\$50,000	Billing & Operational Support Systems	\$150,000
Network & Access Equipment	\$200,000										
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	<p>microwave towers under the expansion provided for in the grant.</p> <p>By providing fiber to the towers, several key project & county enhancements are realized.</p> <ol style="list-style-type: none"> 1.Floyd County is provided reliable backup for the microwave public safety system. This important public safety upgrade for the County & region & will also interconnect E-911 centers. Fiber use will be provided to the county at no cost for emergency services use. 2.Middle mile fiber bandwidth will be generated by creating a platform for wireless antennas & point to multi-point WiFi deployment. These applications will be installed on the lower portions of each tower. The towers then function in a dual role as a commercial application to provide expanded 3G & 4G cell and wireless broadband to underserved & unserved areas of the county. 3.Floyd County will be able to lease space on the towers to offset maintenance & operations cost of the public safety system. 4.AVFN will be provided with an unlimited potential of future bandwidth traffic from these sites & antenna customers, in the second most populated county in the project region. <p>For purposes of evaluating the matching funds, AVFN utilized a comparable cost & revenue projection stream analysis. From pricing & experience, turn-key towers average over one million dollars each including permitting, land acquisition & build. AVFN & Floyd County have agreed on an established fair market value of 6 million dollars for the broadband potential & land access right of way this infrastructure opportunity represents.</p> <p>The potential for revenue stream for the middle mile connectivity over the next 10 years can also be calculated. Wireless carriers that AVFN would provide internet & voice connectivity would need at least 10 megs of internet service & a Primary Rate Interface, which would average \$2250/carrier/month in revenue in today’s dollars. Expanding that analysis to 5 users at each site @ \$2250/month x 12 months x 6</p>
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	<p>towers x 10 years = \$8,100,000. Additional revenue generated by point to multi-point revenue could expand these figures.</p> <p>While the valuation of the tower use match agreement provided by Floyd County has some variables, its value to both public safety & the AVFN project are clear. Attached is a letter from Floyd County confirming & outlining the matching funds agreement.</p> <p>The final component is the AVFN matching funds is generated by in kind services provide by public partner NWGRC & Blue Streak executive management. Mapping, engineering, research & application preparation totaling \$22,882 has been provided by NWGRC, all executive level preparation & review provide by partner Blue Streak is valued at \$30,000.</p>
Unjust enrichment	<p>Appalachian Valley Fiber Network is not receiving and has not applied for any federal support for any costs in this or any other area. AVFN owner partners and sub recipients, Blue Streak Cable & Telecommunications and Parker Fibernet, are not receiving and have not applied for any federal support for any costs in this or any other area.</p>
Disclosure of federal and/or state funding sources	<p>Appalachian Valley Fiber Network is not receiving and has not applied for any federal or state funding support in this or any other area. AVFN owner partners and sub recipients, Blue Streak Cable & Telecommunications and Parker Fibernet, are not receiving and have not applied for any federal or State support in this or any other area.</p>
Budget reasonableness	<p>Appalachian Valley Fiber Network has worked diligently to prepare both the scope of work for this middle mile project and a detailed cost estimate. Before we could finalize any cost aspects, AVFN developed the network routing expansion with key government and business partners. Having a local area service provider in Parker Fibernet on the project team greatly assisted in making sure the network expansion concepts brought from various sources were coupled with a local build background. While the mapping completed at this time is preliminary and large in scale, it does provide enough information to utilize internal historic information in order to translate to a confident budget.</p>



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	<p>Once the preliminary mapping of the expansion was completed, detailed pricing could be accomplished. Appalachian Valley Fiber Network benefits from having two very strong telecommunication construction partners as owners. This benefit provides a history of companies that install similar middle mile infrastructure coupled with local experience in the project area and provides AVFN with a foundation for both confidence in the budget and success of the project. With the use of internal historic pricing databases from its parent companies, a cost estimate was derived. Architectural and Engineering budgets were established from recent similar projects, and much of this work will be expedited by AVFN personnel. The project budget was then derived through a combination of historical cost information from recent projects, input from key partners, major material and equipment suppliers. Finally, right-of-way access issues were considered and appropriated along the general routing destinations.</p> <p>The AVFN budget categories and estimates provided for under the cost breakdown are all direct costs for construction of the project and we believe are reasonable and customary within the industry. Since the majority of work performed by AVFN will be completed by its owner entities, a broad level of confidence in both price and ability to perform is provided with this application. AVFN greatly believes that we can provide an efficient and cost-effective construction build by using its in house resources. Appalachian Valley Fiber Network is ready to hit the ground running and complete the project on time and within budget once awarded.</p>
Demonstration of need	<p>Appalachian Valley Fiber Network and its parent companies do not have the financial resources to expand the middle-mile fiber network in the project area without Federal assistance. While the area will be greatly enhanced by the expansion of the network, it does not currently have the customer base that would lend support to a private financing loan to undertake this endeavor. Both the area and AVFN will be grateful to accept Federal assistance to provide this upgrade</p>



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	<p>network service that will serve generations to come and untold future benefits both locally and nationally.</p> <p>We have targeted the project size to fit AVFN resources in order to successfully complete the work with the allotted time frame. The grant request amount is based on the scope of work committed by our application and is appropriate for the work being provided. AVFN and its parent companies have not applied for Federal or State funding for any project. We have always worked within the private sector and have not sought out public assistance.</p> <p>AVFN is entirely a middle-mile project. AVFN partner and owner Parker will operate the middle-mile network and provide last mile services as one of its customers. In the financial pro forma and NPV calculations, we projected operating revenues based on being a middle-mile provider. We calculated the NPV in accordance with the application instructions and noted discount rate of 15%. Because the current market rates for middle-mile service providers are not as great as last-mile providers, and the calculations are based on operating revenues, the NPV of the project (according to the guidelines) came in much less than the grant request amount. We feel the noted discount rate is too high based on current market conditions, and utilizing a more reasonable 3.25% rate (current prime), the NPV comes in at \$12,629,002. This exact analysis is one reason why private funding for middle-mile expansion in rural areas is very difficult.</p> <p>Additionally, since the project is based on expanding a network to generate new middle- mile customers, the NPV calculation with no BTOP funding cannot be provided as there is no operating revenue. The pro forma projections do show a financially viable entity operating the completed middle mile network.</p> <p>The operation of the expanded network provided by AVFN will utilize current market rates for services already in place by its parent company. No change in pricing is contemplated. Other than</p>
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	<p>providing network access for emergency communication services in Floyd County, no discounted or free services have been offered or exchanged with any other entity or provider.</p> <p>We see the BTOP broadband expansion program as an investment in both the community and country, akin to the railroads being built in the 19th century. We want to be a part of it and are proud to submit this application.</p>
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Funds to States/Territories

States	Amount of Federal Grant Request
Alabama	7,095,568
Georgia	14,291,346

Funds to States/Territories Total: \$21,386,914

J. Historical Financials

Matching Funds			
	2007	2008	2009
Revenue	0	0	0
Expenditures	0	0	0
Net Assets	0	0	0
Change in Net Assets from Prior Year	0	0	0
Bond Rating (if applicable)			

K. Project Readiness



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BTOP Organizational Readiness

Appalachian Valley Fiber Network, LLC is an alliance of Blue Streak Cable & Telecommunications and Parker Systems of Georgia.

Blue Streak Cable & Telecommunications was formed when two leaders in their respective fields decided to combine the resources of their companies to create a national leader in telecommunications.

Beauchamp Construction Company (BCC) began its work in 1936 in Washington DC and built itself into a premier commercial construction company. BCC constructed some of the most prestigious projects in the D.C. area, (including the Iwo Jima Memorial statue). In 1980 CEO Jim Beauchamp re-located the company to Coral Gables, Florida. BCC continued their successful formula of building projects in all markets and adapting to market conditions and construction trends. BCC brings financial strength (over \$200M in bonding capacity), experience and skilled managers to the partnership.

Cable Connections and Utilities (CCU), was founded in 1985 as a provider of cable television infrastructure. CCU is a leading contractor on telecommunications projects for Comcast, A.T.& T, Fujitsu, the Department of Defense, Fiberlight, Level 3, Sprint, Media One, and other well-known companies. CCU has completed projects in 10 states (Florida, Georgia, South Carolina, North Carolina, Virginia, Illinois, Ohio, New York, New Jersey and California) and internationally in Puerto Rico and Japan. CCU has installed 3,200+ miles of aerial and 8,500+ miles of underground broadband fiber.

Parker Systems/Fibernet was founded in 1985 by David Parker. Starting with no venture capital, David built Parker Systems/Fibernet into a leading technology provider in N. W. Georgia. Parker Systems received their CLEC and OCC status in 1998. Parker has installed 2,000+ miles of underground fiber and 700+ miles of aerial.

AVFNs preliminary engineering and mapping was done by Parker Systems and Northwest Georgia Regional Commission. Hundreds of hours have already been spent by teams in the field, conducting interviews, identifying anchor institutions and looking for ways to leverage the project into a real job creator for the region.

Bluestreak and Parker have an agreement to mobilize all forces necessary if the project gets funded. Upon grant, Parker will mobilize in 50+ experienced telecommunications workers



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within 30 days. Bluestreak likewise will mobilize all additional resources necessary to ensure timely completion of the project.

Project construction will be spearheaded by David Parker* and Joe Cangiano*. Together they have over 51 years of broadband infrastructure experience. Rounding out the construction management team will be Ken Carlton* of Parker Systems, and Jerry Shearin* of Bluestreak. Combining the financial and institutional power of Bluestreak with the intimate knowledge of the local terrain of Parker Systems makes AVFN have complete confidence it can deliver the project on-time and under-budget

* See resume section

Construction and Vendor Contracts

AVFN is uniquely poised to complete the construction with great confidence in efficiency, time, cost and quality. As a wholly owned alliance of two telecommunications specialists, AVFN will utilize parent company in house construction resources to build the network. Each partner will participate and provide resources that best serve the particular application. Each strategic segment of the fiber build will be set up as an individual project within the company so cost, scheduling, quality control reporting and turn-up will be tracked on a per leg basis. By utilizing in-house construction services, AVFN will complete the construction in a cost efficient and time saving manner, with direct owner control over quality and schedule.

As the AVFN build is expanding an existing network owned by one of the partner applicant, final connections to the network will be controlled by that partner to insure single source connection quality. Construction of the build will then be split between the parent companies and their respective resources.

Subcontractor participation will be limited to specialty scopes such as asphalt restoration, landscaping, pavement markings, etc. AVFN's resources include a large historical database of both unit cost and competent specialty contractors for these limited scopes. We believe this methodology will provide a seamless transition from engineering to permitting to construction to turn-on of the fiber network.

Customer Base



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AVFN partner, Parker has a large existing customer base in & around the immediate service area. This customer base is non-residential, high speed & capacity usage. The list of customers includes a variety of county & municipal Governments, law enforcement, emergency services, healthcare providers including hospitals, urgent care & primary care, public schools, colleges, technical colleges, banking, media & a variety of manufacturing and business companies. The majority of these customers are key community anchor institutions however many more community anchors exist in the area proposed for service that would benefit from the availability of fiber optic service:

- Hospital & Healthcare locations (26)
- Emergency Services (2)
- Local Governments (multiple locations) (7)
- School Systems (multiple schools) (1)
- Private Schools (1)
- College Campuses (4)
- Technical Colleges (3)
- Financial Institutions (3)
- Attorneys and Accountants (2)
- Non-Profit organizations (2)
- Other For-Profits not categorized (6)

Total existing customer base within the service area is over 60 categorized entities, many with multiple locations. These entities serve tens of thousands of residents annually.

Licenses, Regulatory Approvals and Agreements

AVFN will need to apply to both the Georgia Public Service Commission and the Alabama Public Service Commission for authority to provide service in each state. Such applications will be filed upon notification of grant and, based on our understanding of predicted processing times, will be processed to grant before service is commenced.

AVFN member, Parker Systems has IRUs in place with Norfolk Southern Railroad and Georgia Public Web. Norfolk Southern has provided preliminary approval of an amended agreement to permit construction of the eastern Alabama project leg along its right-of-way.



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Parker System has franchise agreements with the Georgia jurisdictions of Rome, Summerville, Rockmart, Cedartown and Trion, with pending agreements in the jurisdictions of Lafayette and Rossville. Parker System partners have franchise agreement in Trenton, Cartersville and Dalton. The balance of the areas in Georgia are unincorporated and require no formal permitting for use of rights-of-way.

In Alabama, with the exception of the town of Heflin, fiber will only be laid in the right-of-way owned and controlled by the Norfolk Southern Railroad. Heflin will require negotiation of a franchise agreement for use of the rights-of-way.

Inter-local agreements among the affected cities and counties will be needed to network regional 911 facilities.

SPIN Number

143031443

L. Environmental Questionnaire

Project Description

AVFN's construction activities include installation of buried fiber optic lines in conduit over 182 miles of GA & AL. Depending on the engineering & local topography, installation is primarily accomplished by trenching or directional boring. Since the typical conduit size is 2" or less and depth of installation will average 36", the impact from installation is minimal. Full restoration of the existing conditions encountered prior to construction is included in the project scope & will be completed.

Some engineering solutions may necessitate the use of pole mounted overhead lines for parts of the project utilizing existing or new poles depending on the solution.

Supporting equipment will be located within existing buildings so no new construction of buildings is anticipated. Interior improvements to an existing telecom facility to house support equipment will be completed as needed.



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The AVFN fiber network will primarily follow alongside roads, utility easements & other existing improvements in order to minimize all construction disturbance. All construction activities will be engineered & permitted with the appropriate local authorities with an environmental review of the permit being customarily completed in the permit process.

AVFN has worked closely with its local government partners such as the NW Georgia Regional Commission both to establish the scope of the expanded network and coordinate with any local environmental needs or concerns.

Property Changes

One goal of Appalachian Valley Fiber Network’s completed installation is that the casual observer will not know we were ever there. This is not only to protect the existing conditions, but also to protect the security of the network. Our excavations and trenching will be kept to an absolute minimum and directional boring will be utilized wherever applicable to tunnel with no surface disturbance.

Our project will not involve any clearing, fencing or other heavy disturbance of existing conditions.

The final engineering that will be completed if we are successful in the application will determine the precise routes. Overlay of Federal Lands mapping from the National Integrated Land System noted no use of Federal Lands for this project.

Buildings

Appalachian Valley Fiber Network’s project will not require the construction of any new buildings. We are anticipating upgrading an existing applicant owned telecommunications facility in Rome Georgia. Upgrades to this facility may include improvements to main and back-up power, security and weather proofing.

The majority of the project will be installed along, on or within existing public and utility rights of ways.

Wetlands



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Review of mapping provided by the U.S. Fish and Wildlife Services National Wetland Inventory Web site has found no designated wetland areas within or near Appalachian Valley Fiber Network’s project.

Critical Habitats

Appalachian Valley Fiber Network has reviewed each project county’s list of endangered, threatened, candidate and under review species from the U.S. Fish and Wildlife Services website.

With our installation being limited to already improved right of ways, utility easements and roadways coupled with the limited construction disturbance anticipated, no impact to these species is likely to be encountered. Final engineering completed after award will include a cross check for possible conflicts with noted species and input from local wildlife officials.

Floodplain

Appalachian Valley Fiber Network’s project installation will traverse approximately 182 miles in length. Various individual locations may pass through both 100 and 500 year floodplains. Because of the length of the proposed network, final engineering yet to be designed and complexity of the actual flood plain maps, the final analysis of what if any segments falling into a flood plain has not yet been completed as of the application deadline.

What is important to consider in our application is that the fiber network being utilized is designed to be function even if flooded. Any equipment utilized for the project will be installed outside or above 100 & 500 year flood plains. The flood plain maps will be overlaid on construction drawings during the engineering process to identify any such concerns.

Protected Land

Review of the National Register of Historic Places has located several landmarks that will be within one mile of the Appalachian Valley Fiber Network proposed fiber network. Cherokee Nation Chief Major Ridge’s home in Rome, Georgia, the New Echota Historic Site in Calhoun, GA and Chief John Ross cabin home in Rossville all may fall within one mile of the new network. Because this project is a middle mile application no connection or entrance to these properties will be made. No impact to these or any other historic site will be made by installation of the fiber cable.

Appalachian Valley Fiber Network’s project installation will not be located on any tribal lands.



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Coastal Area

Appalachian Valley Fiber Network's project is not located within the boundaries of a coastal zone management area (CZMA).

Brownfield

At the current engineering mapping level, Appalachian Valley Fiber Network's project does not pass through any Brownfield site per 42 U.S.C. 9601. Should application be successful, final engineering will confirm this with detailed map overlay, and routing adjusted should any conflict be encountered. No fiber will be installed in a brownfield site.



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Uploads

The following pages contain the following uploads provided by the applicant:

Upload Name	File Name	Uploaded By	Uploaded Date
Service Offerings and Competitor Data	AVFN_CCI Service Offerings and Competitor Data_revised 032310.xls	Shearin, Jerry	03/23/2010
Network Diagram	AVFN_Network diagram.pdf	Shearin, Jerry	03/20/2010
Build Out Timeline	AVFN_BTOP Timeline Template_Revised 032410.DOC	Shearin, Jerry	03/25/2010
List of Community Anchors and Points of Interest	AVFN_Anchor Institution & POI Worksheet_revised 032410.xls	Shearin, Jerry	03/24/2010
Management Team Resumes and Organization Chart	AVFN_Org Chart & Resumes_032510.pdf	Shearin, Jerry	03/25/2010
Government and Key Partnerships	AVFN_Key partner letters__032410.pdf	Shearin, Jerry	03/24/2010
Historical Financial Statements	AVFN_Historical Financials__032210.pdf	Shearin, Jerry	03/22/2010
Budget Narrative	AVFN_Budget	Shearin, Jerry	03/22/2010



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	Narrative_032210.DOC		
Detailed Budget	AVFN_Detailed Budget_Revised 032210.xls	Shearin, Jerry	03/22/2010
Pro-forma Forecast	AVFN_BTOP Grant Pro forma_032510.xls	Shearin, Jerry	03/25/2010
Subscriber Estimates	AVFN_Subscriber Estimates_Revised 032410.xls	Shearin, Jerry	03/24/2010
Dashboard Metrics	AVFN_CCI Key Dashboard Metrics.pdf	Shearin, Jerry	03/25/2010
Service Area Data	AVFN_Service Area Template1.xls	Shearin, Jerry	03/23/2010
Network Maps	AVFN_Revised Map_031910.pdf	Shearin, Jerry	03/19/2010
BTOP Certifications	AVFN_BTOP Certification_032310.pdf	Shearin, Jerry	03/23/2010
SF-424 C and D	AVFN_Form SF-424C.pdf	Shearin, Jerry	03/22/2010
Supplemental Information	AVFN_Anchor Inst ltrs incl cover sheet_032510.pdf	Shearin, Jerry	03/25/2010



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Submission to NTIA – Broadband Technology Opportunities Program**

Submitted Date: 3/25/2010 5:49:05 PM		Easygrants ID: 7242	
Funding Opportunity: Broadband Technology Opportunities Program		Applicant Organization: APPALACHIAN VALLEY FIBER NETWORK	
Task: Submit Application - BTOP		Applicant Name: Mr. Jerry Shearin	

Supplemental Information	AVFN_letters of support incl cover sheet_032510.pdf	Shearin, Jerry	03/25/2010