REQUEST FOR BOARD ACTION

HENDERSON COUNTY
BOARD OF COMMISSIONERS

MEETING DATE: Monday, May 3, 2010

SUBJECT: Update on status of ARRA broadband stimulus grant application

ATTACHMENTS: Yes

1. MCNC ARRA-BIP-BTOP Facts
2. Broadband USA Connecting America's Communities
3. Golden Leaf Rural Broadband Initiative
4. MCNC map – Henderson proposed route

SUMMARY OF REQUEST:

A representative of MCNC will present information on the status of American Recovery and Reinvestment Act of 2009 broadband grant funding requests and the impact of those requests on broadband availability in Henderson County.

BOARD ACTION REQUESTED:

No specific Board Action is requested. This item is for informational purposes only.

Suggested Motion:

No motion suggested.

ARRA/BIP/BTOP Facts

What is Broadband Recovery?

How will this impact North Carolina?

How will this create jobs?

How was the match funded?

What is the first step?

Who is FRC?

Exploring Broadband Recovery with MCNC & NCREN

What is ARRA/BIP/BTOP and Broadband Recovery?

The American Recovery and Reinvestment Act of 2009 appropriated $7.2 billion and directed the U.S. Department of Agriculture's Rural Utilities Service (RUS) and the U.S. Department of Commerce's National Telecommunications Information Administration (NTIA) to expand broadband access to unserved and underserved communities across the U.S., increase jobs, spur investments in technology and infrastructure, and provide long-term economic benefits. The result was funding of the RUS Broadband Initiatives Program (BIP) and the NTIA Broadband Technology Opportunities Program (BTOP). BIP makes loans and grants for broadband infrastructure projects in rural areas. BTOP provides grants to fund broadband infrastructure, public computer centers, and sustainable broadband adoption projects. Of the $7.2 billion, $4.7 billion was allotted to the NTIA to award grants. The remaining $2.5 billion went to the U.S. Department of Agriculture to make loans and grants to companies building out broadband infrastructure in rural areas.

How will this impact North Carolina?

MCNC applied for $28.2 million in ARRA broadband economic recovery funds to expand the existing North Carolina Research and Education Network (NCREN). In its operation of NCREN, MCNC currently serves the backbone Intranet and Internet network needs of 95% of the state's K-20 education institutions (all will be migrated to NCREN by 2012). The proposal includes 480 miles of new fiber throughout the western and southeastern part of North Carolina will ensure that our K-12 schools, universities, community colleges, university hospitals and other community anchor institutions (libraries, public health) will have access to unlimited amounts of bandwidth now and into the future. Consumers and small businesses along the fiber build will be reached with enhanced broadband service through commercial telecommunications and cable providers with whom MCNC has formed partnerships. FRC/PalmettoNet, a middle mile operator and partner in MCNC's application will assist last mile service providers in reaching consumers and commercial businesses. The network has the potential to serve more than 1,500 anchor institutions, 180,000 businesses and more than 300,000 underserved families.

How will this create jobs?

The middle-mile is the sector of the network that connects last-mile facilities such as telecom company local interconnection points (central offices) with the commercial Internet and with national and global advanced research networks. Within the next 60 days, MCNC will issue several Requests for Proposal (RFP) for the design, construction and operation of the network. These RFPs have the potential to create more than 230 engineering/construction jobs. MCNC will add a few jobs to administer and oversee the build of the fiber, but most will be contracted positions with vendors handling various aspects of the project.

Package Details

MCNC's application is over 1200 pages of information that includes details about the proposed fiber build. Governor Bev Perdue and the NC delegation to the US Congress led the effort to advocate for funding of the project.

Highlights include:

- FRC/PalmettoNet plans to invest $4 million in the project in exchange for dark fiber. This is a private-sector match to the MCNC endowment's $4 million pledge.

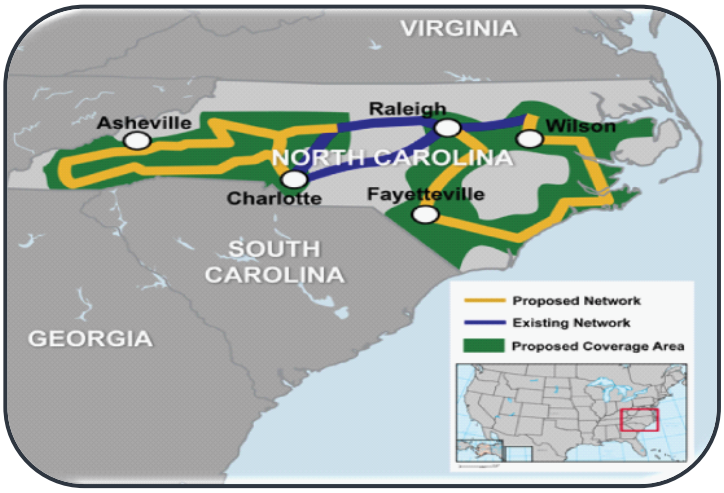
- Letters of endorsement from five last-mile providers: Spirit Telecom, Norland, ClearTalk Wireless, ERC Broadband and Balsam West – will use the proposed middle-mile build to reach underserved consumers in regions along the build.

- The North Carolina Office of Economic Recovery and Investment and eNC, the state's broadband authority, were instrumental in reviewing MCNC's application.

For More Information

www.mcnc.org

www.broadbandrecovery.gov



Service Area Map

What is the first step?

MCNC will begin immediately to undertake the work of planning and building the new middle-mile fiber. MCNC raised $11.7 million in matching funds for its successful application through private sources, including $4 million from the MCNC endowment, making the total project a $40 million investment in North Carolina's broadband infrastructure. Construction is expected to last up to three years. Community anchor institutions, small businesses and private citizens in the following counties have the potential to be served by the new middle-mile network. Counties traversed by the network in eastern N.C. are Beaufort, Bladen, Carteret, Columbus, Craven, Cumberland, Edgecombe, Greene, Harnett, Johnston, Nash, New Hanover, Onslow, Pender, Pitt, Robeson, Wake, Wilson; in western N.C. – Alexander, Buncombe, Burke, Caldwell, Catawba, Cleveland, Davidson, Davie, Gaston, Haywood, Henderson, Iredell, Jackson, Lincoln, McDowell, Mecklenburg, Polk, Rutherford, and Transylvania.

The network build-out will:

- Serve as a robust middle-mile network through rural North Carolina.
- Traverse all 13 of North Carolina's congressional districts and touch 37 counties.
- Have the potential to serve 300,000 families that reside in underserved census blocks
- Improve broadband service to 1,232 K-12 schools, 55 higher education institutions. It also has the potential to serve 183 public libraries and 63 hospitals.

States had to rank order of applications and send their rankings back to the NTIA. Where did MCNC's application rank?

The North Carolina Office of Economic Recovery and Investment and eNC, the state's broadband authority, organized a group of experts to review North Carolina's broadband recovery applications. MCNC's application was ranked the number one priority by this review team for funding. Governor Perdue sent a formal letter to the NTIA recommending MCNC's application for funding.

Who is FRC?

FRC, LLC, a subsidiary of PalmettoNet and SCANA Communications, is an experienced, fiber-based network provider and management company committed to wholesaling lit capacity to last-mile providers and will allow wholesale interconnection with any party interested in serving consumers, commercial entities, private healthcare, and energy distributors. "FRC is pleased to be one of MCNC's key private partners in this project and can think of no better organization than MCNC to lead the expansion of North Carolina's middle-mile broadband infrastructure," according to John Dudley, Senior Director of Public Policy and External Affairs for FRC. "We are extremely pleased that the NTIA has recognized the intended benefits of this project and we look forward to building a network which will extend the depth and breadth of broadband within the state of North Carolina."

MCNC is an independent, non-profit organization that employs advanced networking technologies and systems to continuously improve learning and collaboration throughout North Carolina's K-20 education community. MCNC provides advanced communications technologies and support services that enable access to 21st century learning applications and offers the opportunity to improve teaching, learning, research and collaboration among North Carolina's education community. For a quarter century, the 501©3 non-profit organization, MCNC, has operated a robust, secure, exclusive communications network that has connected the institutions of the University of North Carolina System, Duke University and Wake Forest University to each other, and through advanced research networks such as Internet2 and National Lambda Rail, to the world.

MCNC
Connecting North Carolina's Future Today

Benefits & Comparative Analysis for Our State

- Reach Rural North Carolina Citizens in Underserved areas. MCNC worked closely to make certain letters of intent with private sector, experienced middle-mile network operators and wholesalers were in place prior to submitting the application. This will drop access prices substantially for last-mile providers and allow operators to deploy broadband service to underserved areas along the route.

- MCNC raised 30% matching funds $11.7 Million for this proposal from private sources. This exceeded the 20% match requirement and requires no state funding. MCNC's money comes from the MCNC endowment and from investors such as FRC/PalmettoNet.

- Last-mile. For a middle-mile application, MCNC has an evolved last-mile solution with a private wholesaler already committed to invest and pledging to use the capacity to reach underserved markets.

For those vendors interested in potential opportunities related to this project, please visit www.mcnc.org/btop/vendors.html for frequent updates related to the release of requests for proposals.

BROADBANDUSA
CONNECTING AMERICA'S COMMUNITIES

FOR MORE INFORMATION

www.recovery.gov
www.broadbandusa.gov

Organization:	**MCNC**
Project Name:	**Building a Sustainable Middle Mile Network for Underserved Rural North Carolina**
Project Type:	**Infrastructure**
State(s):	**North Carolina**
Federal Award:	**$28,225,520**

ABOUT THE PROJECT

Building a Sustainable Middle-Mile Network for Underserved Rural North Carolina proposes to build a 494-mile, middle-mile broadband network serving almost one half the population of North Carolina in 37 counties. The new fiber network proposes to increase the existing bandwidth by 10 to 20 times in underserved areas and will connect to 685 miles of existing infrastructure in the urbanized central region of the state, expanding the reach of the North Carolina Research and Education Network (NCERN). Currently, NCREN provides backbone and ISP services to community anchor institutions including the entire public University of North Carolina system, all public K-12 schools in the state, a majority of the independent colleges and universities and 20 of the 58 institutions in the North Carolina Community College System. This project will both provide better and more reliable connections for rural education and community support organizations already on NCREN, and create better connectivity for anchor institutions that are not part of NCREN, such as rural libraries, not-for-profit hospitals, and county-operated free health-care clinics. This would allow for expanded use of distance learning, telehealth services, electronic medical-records sharing, and smart-grid technology.

The Building a Sustainable Middle Mile Network for Underserved Rural North Carolina project also proposes to:

- Connect all 58 community colleges, the remaining independent colleges, the State's charter schools, 50 free healthcare clinics, 179 county health agencies and hospitals, 181 libraries and their public computer centers, and the three largest state museums.
- The open design of the proposed expansion enables all service providers to directly connect to the network to make broadband more easily available to approximately 1.8 million households, 139,000 businesses, and more than 2,400 anchor institutions with connection speeds from 10Mbps to 10Gpbs.
- Create higher capacity public middle-mile connectivity for libraries, medical and public health service providers.
- Include one middle-mile operator, FRC, which has letters of intent from last-mile service providers to expand service into unserved and underserved areas. .

ORGANIZATION'S HISTORY

MCNC, established in 1980 as a catalyst for technology-based economic development, is an independent not-for-profit broadband provider that has operated the North Carolina Research and Education Network operations center and business support systems for more than 25 years. The network provides backbone and ISP services to community anchor institutions, including almost all public and private education institutions in the state. MCNC has experience designing and building middle-mile networks with public and private partners experienced in design, build, and permits that are ready to assist in the project as soon as funds are awarded. North Carolina mounted a coordinated effort with Governor Beverly Perdue, the state's Office of Economic Recovery and Investment, North Carolina's chief information officer, the Golden LEAF Foundation, and the state's community anchor institutions including schools, health care, universities, and libraries, to strengthen MCNC's proposal.

PROJECT PARTNERS

- Energy United
- North Carolina Department of Transportation
- North Carolina Health Information Technology Strategic Planning Task Force
- North Carolina Research and Education Network
- The State Library of North Carolina
- University of North Carolina system

Data provided in the project description is based on information supplied by the applicant. An executive summary of this application can be found on *www.broadbandusa.gov*.

For press-related inquiries, contact 202-482-7002 or press@ntia.doc.gov. For the general public, contact BTOP@ntia.doc.gov.

Made possible by the Broadband Technology Opportunities Program
Funded by the American Recovery and Reinvestment Act of 2009

Broadband Technology Opportunities Program

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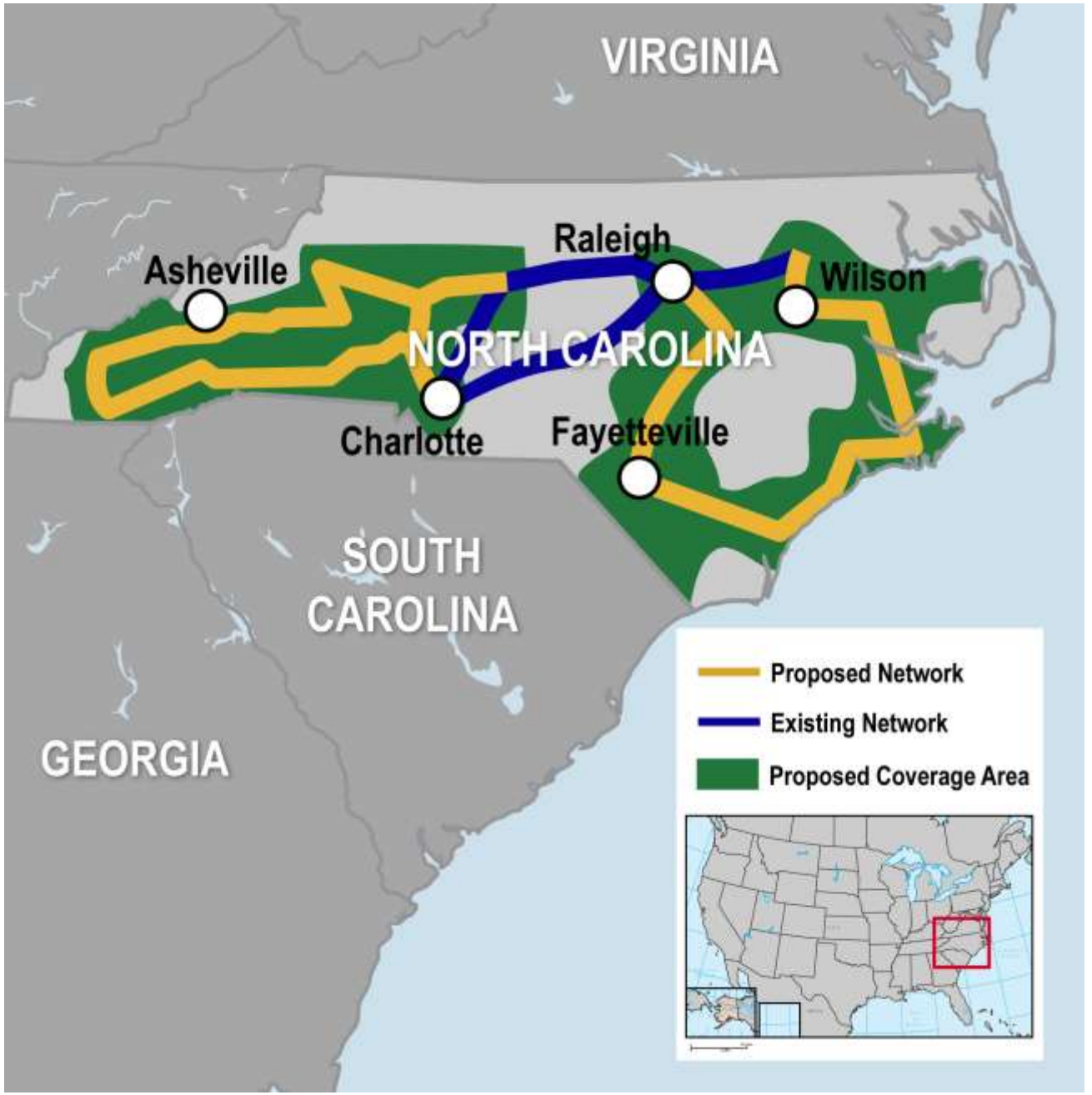
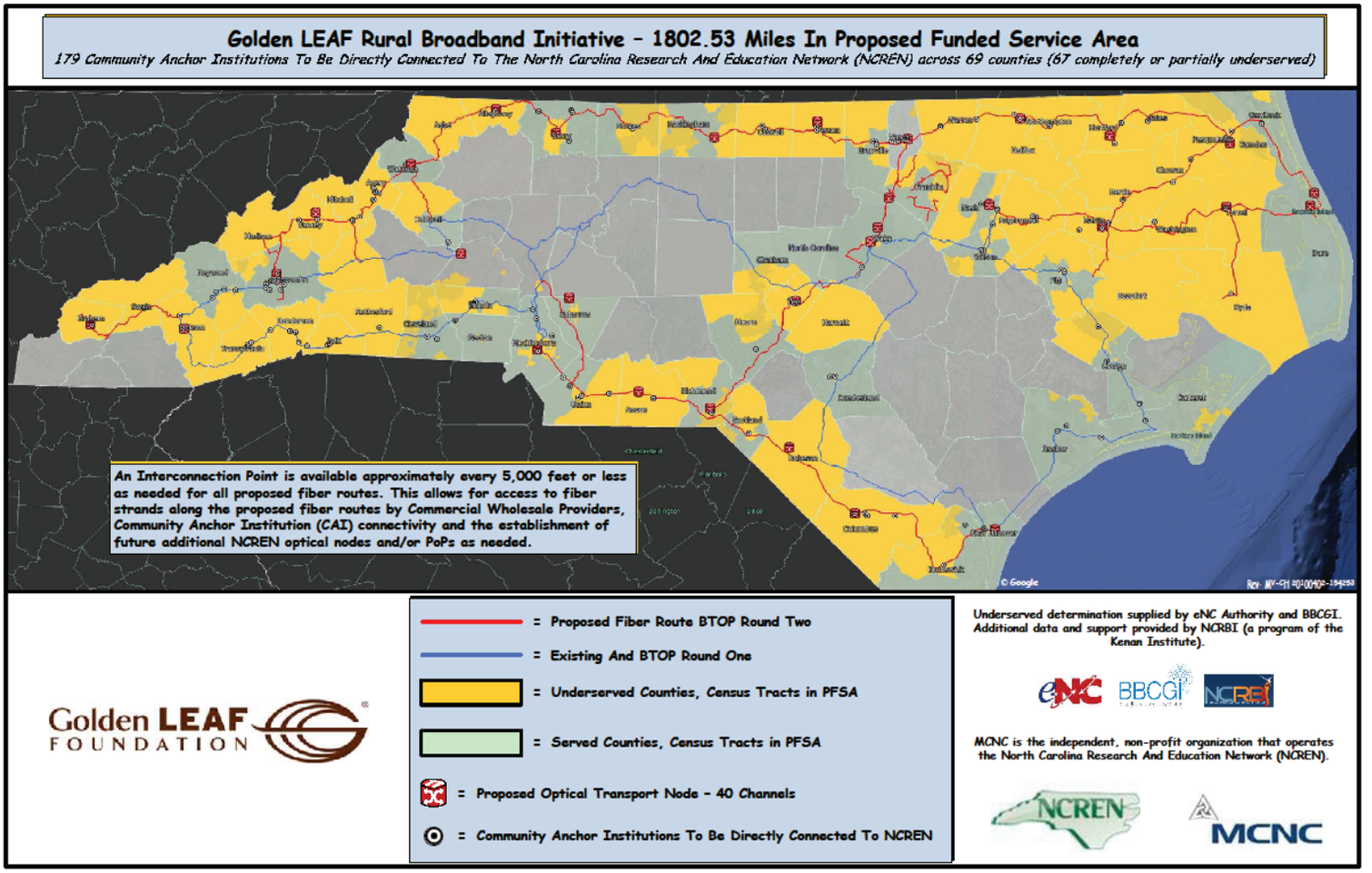
DISCLAIMER
This map serves for illustrative purposes only and does not reflect precise coverage areas or network lines.

An executive summary of this application can be found in the Application Database on *www.broadbandusa.gov*.



Golden LEAF Rural Broadband Initiative



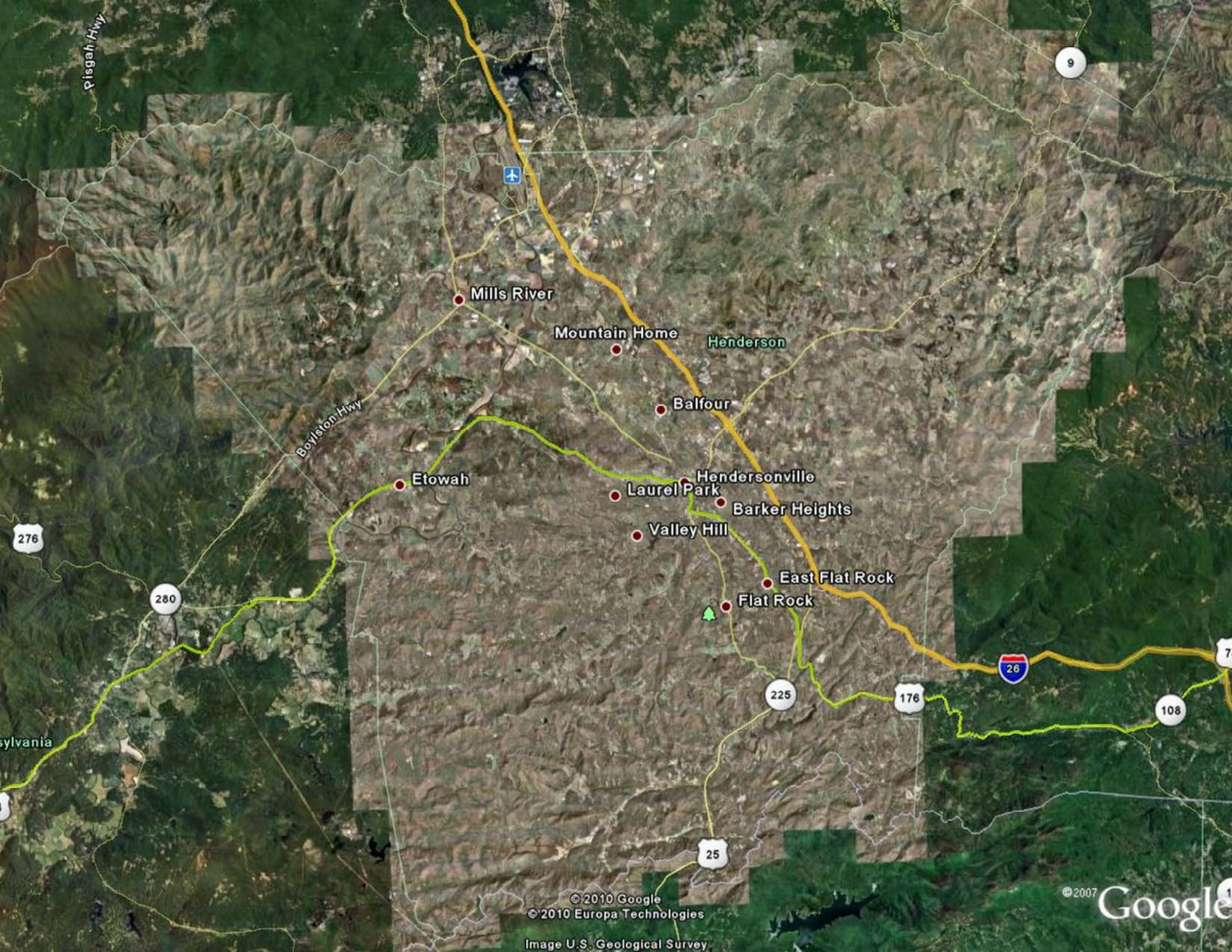
Golden LEAF FOUNDATION

Market Territory	
Geographic Area(s): The proposed funded geographic area is comprised by 69 of North Carolina's 100 counties, which encompass 32,597 square miles or 67% of NC's total square miles.	Specifically, this geographic area includes Alleghany, Anson, Ashe, Avery, Beaufort, Bertie, Brunswick, Buncombe, Cabarrus, Caldwell, Camden, Carteret, Caswell, Chatham, Chowan, Cleveland, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gaston, Gates, Graham, Granville, Halifax, Harnett, Haywood, Henderson, Hertford, Hyde, Jackson, Lee, Lincoln, Madison, Martin, McDowell, Mecklenburg, Mitchell, Moore, Nash, New Hanover, Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Stokes, Surry, Swain, Transylvania, Tyrrell, Union, Vance, Wake, Warren, Washington, Watauga, Wilson, and Yancey counties.
Middle Mile Network Composition	
Total Proposed Network Miles (MM only)	• Total Miles: 1802 • Backbone Miles: **1558** • Lateral Miles: **184**
Underserved/Unserved	• Backbone Miles in Underserved/Unserved Areas: **Approx. 65%** • Lateral Miles in Underserved/Unserved Areas: **Approx. 48%**
Potential Customer Base	
Market Potential Households (within PFSA)	• Total HH's: **2,320,485** • Located in Underserved/Unserved Areas: **Approximately 34%**
Market Potential Businesses (within PFSA)	• Total Businesses: **159,914** • Located in Underserved/Unserved Areas: **Approximately 30%**
Market Potential Community Anchor Institutions (within PFSA)	• Total CAI's: **4,066** • Located in Underserved/Unserved Areas: **Approximately 44%**

Other	
Proposed MM Network Capacity	• Backbone: All backbone routes constructed will have two 1.25-inch conduits placed with a minimum of 48 strands of SMF-28 fiber. The optical system deployed throughout the footprint will have a minimum capacity of 40 lambdas, with current systems deployed on the NCREN backbone having roadmaps of 100G per lambda. • Laterals: All lateral routes will have a minimum of 12 strands of SMF-28 fiber installed in a single 1.25-inch conduit. Initially, lateral connections will be provisioned using 1Gbps Ethernet.
Jobs Created	• **Direct Job-years: 14** • **Indirect Job-years: 724.71** • **Induced Job-years: 415.52**

Applicant Profile	
Title	Golden LEAF Rural Broadband Initiative (GLRBI)
Headquarters	Research Triangle Park, North Carolina
Technology Type	Wireline- Fiberoptic Cable
Key Partners	The Golden LEAF Foundation, North Carolina Community College System, North Carolina State Librarian Mary Boone, North Carolina Department of Crime Control and Public Safety, University of North Carolina (UNC) System President Erskine Bowles, ERC Broadband, BalsamWest FiberNet owned by the Eastern Band of the Cherokee, CenturyLink

Budget Information	
Project Budget (%)	$111,654,323
Federal Contribution (%)	69.84%
Cash Match Amount (%)	25.28%
In Kind Match Amount (%)	4.89%
Middle Mile/Last Mile Budget Allocation	
Middle Mile Percentage (%)	100%
Last Mile Percentage (%)	0%
Rural Last Mile Percentage (%)	0%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Balfour
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