



**Broadband Infrastructure Application**  
**Submission to NTIA – Broadband Technology Opportunities Program**

<b>Submitted Date:</b> 3/26/2010 9:06:43 PM	<b>Easygrants ID:</b> 7380
<b>Funding Opportunity:</b> Broadband Technology Opportunities Program	<b>Applicant Organization:</b>
<b>Task:</b> Submit Application - BTOP	<b>Applicant Name:</b> Mr. Patrick Lien

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## A. General Application Information

Applicant Information	
Name and Federal ID for Applicant	
<b>DUNS Number</b>	961960122
<b>CCR # (CAGE)</b>	
<b>Legal Business Name</b>	
<b>Point of Contact (POC)</b>	Ext.
<b>Alternate POC</b>	Ext.
<b>Electronic Business POC</b>	Ext.
<b>Alternate Electronic Business POC</b>	Ext.

Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
<b>Prefix</b>	Mr.
<b>First Name</b>	Patrick
<b>Middle Name</b>	
<b>Last Name</b>	Lien
<b>Suffix</b>	
<b>Telephone Number</b>	407-701-9037



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<b>Fax Number</b>	
<b>Email</b>	plien@lst-enterprises.com
<b>Title</b>	General Manager

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

Project Role	Name	Phone	Email
Secondary Point of Contact	Mr. Robert , Sheets	8506813717	rsheets@govserv.com

**Environmental Point of Contact**

Prefix: Mr. Name: Lien, Patrick Suffix: Telephone Number: 8506813717 Title: General Manager
Prefix: Mr. Name: Stevens, Scott Suffix: Telephone Number: 9702743070 Title: Project engineer

**Organization Classification**

<b>Type of Organization</b>	Non-profit Corporation
<b>Is the organization a small business?</b>	No
<b>Does the organization meet the definition of a socially and economically disadvantaged</b>	No



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<b>small business concern?</b>	
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<b>Authorized Organizational Representative</b>	
<b>AOR Name</b>	
<b>Result</b>	

**Project Title and Project Description**

**Project Title:** Florida Rural Middle Mile Networks - Northwest and South Central Regions

**Project Description:** The Florida Rural Broadband Alliance (FRBA) is a coalition of rural and economically disadvantaged communities in 15 counties and tribal lands, designated by the Governor as 2 Rural Areas of Critical Economic Concern (RACEC). The proposed FRBA networks will deploy Middle Mile infrastructure and capacity to advance economic opportunity, and serve anchor institutions and Last Mile providers.

**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.
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.



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**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?

- Yes

<b>Easygrants ID</b>	<b>Project Title</b>
7121	Northeast Florida Broadband Initiative
2259	Ubiquitous Middle Mile
7195	Main Street Broadband - North Florida Project

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

The Florida Rural Broadband Authority (FRBA) application will serve two areas designated by the Governor as Rural Areas of Critical Economic Concern (RACEC), in South Central and Northwest Florida. The third RACEC, in North Central Florida, represented by the North



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Florida Broadband Authority (NFBA), is a Round 1 BTOP Infrastructure Awardee (ez grants 2259; award number NT10BIX5570023). The network architecture, approach, technology and Management Team are identical and will deliver the direct experience and efficiency necessary to cost-effectively deploy these networks. Contracts developed through open and public procurements by the NFBA, may also be utilized where appropriate to accelerate deployment and assure transparency and accountability.

In addition, through the interconnection of the three RACEC networks, the autonomous network cloud created by the NFBA in working with the Northeast Florida Broadband Initiative (easy grants number 7121) can be shared, literally opening up direct worldwide access through Tier 1 peering relationships. The rural and economically depressed regions would be on par with the largest metro areas in their ability to offer direct Tier 1 access to Europe, South America and the Pacific Rim, creating an enticing package for new business opportunities.

**Individual Background Screening**

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:

<b>Name</b>	<b>Title</b>	<b>Employer</b>
Lynn Topel	Executive Director	Florida Heartland REDI, Inc.
Rick Marcum	Executive Director	Opportunity Florida
Robert Sheets	CEO	Government Services Group, Inc.
Patrick Lien	Senior Project Manager	Government Services Group, Inc.
Jack Miller	Executive Vice President	Xiocom
Dustin Jurman	CEO	Rapid Systems, Inc.



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William Lambert	Executive Director	Hardee County IDA
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## B. Executive Summary, Project Purpose and Benefits

### Essay Question

#### Executive Summary of the proposed project:

#### EXECUTIVE SUMMARY

The Florida Rural Broadband Alliance, LLC (FRBA) is applying for project funding under the Broadband Technology Opportunities Program (BTOP) as part of the 2009 American Recovery and Reinvestment Act (ARRA). The FRBA is a regional collaboration of local and tribal governments, community activists and economic development agencies from rural and economically disadvantaged communities located throughout 15 counties within the State's Northwest Rural Area of Critical Economic Concern (NWRACEC) and the South Central Rural Area of Critical Economic Concern (SCRACEC). The FRBA project will build a new Middle Mile broadband infrastructure, which will link together providers of vital public sector commercial services with private sector non-profit entities for the first time in these two struggling regions of the State. Support for this new middle mile infrastructure is unanimous across government, incumbents and new entrants alike. Attached to this application are 127 letters of support from elected officials, private businesses, last mile providers and community anchor institutions. The FRBA project has been initiated through the cooperation of public and private entities, as a true public-private partnership to provide much needed assistance to these communities; however, the project cannot be constructed without federal assistance.

The FRBA service area is composed of two of the three Rural Areas of Critical Economic Concern (RACECs) established by the Governor of the State of Florida. The South Central RACEC is comprised of DeSoto, Glades, Hardee, Hendry, Highlands and Okeechobee Counties as well as the unincorporated area of Immokalee in Collier County and tribal lands of the Seminole Tribe of Florida (collectively the "SCRACEC"). The Northwest RACEC includes Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Liberty and Washington Counties. A 2008



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study conducted by the Florida House of Representatives determined that expanded access to broadband facilities was one of the critical infrastructure needs of Florida’s rural communities. On June 29, 2009, Florida Governor Charlie Crist signed into law Chapter 2009-226, Laws of Florida, providing that broadband internet service is critical to the rural communities of the State, including the 3 RACECs. In the State’s review of Round 1 BTOP applications, the applications submitted for all 3 of the RACECs were granted the Governor’s highest priority for broadband deployment. These counties are endeavoring daily to provide essential public services within their communities. Despite the incredible need for broadband infrastructure in these communities, these counties simply do not have the financial resources to invest in the deployment of broadband in these tough economic times.

These communities are struggling to overcome the effects of persistent poverty, under education, limited access to medical care and above average unemployment. The FRBA project will address the very compelling problem of the lack of availability of broadband infrastructure throughout these disadvantaged rural counties in Florida. While meeting all 5 of the statutory goals of the BTOP Program and all 7 of the Comprehensive Community Infrastructure Priorities identified in the NOFA, the FRBA project will for the first time provide ubiquitous Middle Mile Broadband Internet access to residents, private entities, public institutions and the business community in unserved, underserved and remote areas of the NWRACEC and the SCRACEC regions. At this time, only 39% of the FRBA region has broadband service.

The FRBA project will be able to deliver up to 1,000 times (1Gbps) the Federal definition of Broadband to the services areas. The FRBA has worked cooperatively with last mile providers throughout the development of the project. The commitments from Main Street Broadband for the NWRACEC and Rapid Systems, Inc. for the SCRACEC to provide 100% last mile coverage within these regions indicates that the FRBA project can be a solution to the problem of limited broadband availability for all of the residents and businesses in the RACEC's. According to Main Street Broadband, the availability of FRBA’s middle mile network in the NWRACEC would enable them to roll out last mile services 50 to 75% faster.

The FRBA was organized as a limited liability company on March 16, 2010 by two non-profit economic development corporations representing the 2 RACEC regions. In order to promote the involvement of the local governments within the 2 regions, the non-profit agencies structured the Operating Agreement of the FRBA to include the creation of a Board of Governors. The Board of Governors will be composed of one representative from each county, a representative from the





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unincorporated area of Immokalee and one member on behalf of the Seminole Tribe of Florida. The Board of Governors will make all critical decisions relating to the expenditure of grant funds by the FRBA and the deployment of the middle mile infrastructure throughout the two regions. This unique governance structure will allow the local governments to participate in the project. In addition, to the cooperative efforts of the government and non-profit communities, the FRBA project also incorporates partnerships with for-profit entities, for deployment and contract operations of the entity - all of whom have substantial "skin" in the project.

The FRBA governance structure is modeled after that employed by the North Florida Broadband Authority which was organized by the 3rd Florida RACEC and was the State's only BTOP awardee in Round 1. In addition, the FRBA network employs the same design and management team assembled for the NFBA project. The NFBA has recently been informed that its project is the most "shovel ready" of all BTOP Round 1 awardees because the design's utilization of existing towers exempts the project from environmental assessment requirements. In addition, the FRBA project has a fully assembled project team, further escalating the shovel ready nature of the project. The approval of the FRBA's application would ensure the expanded access to broadband infrastructure throughout all 30 of Florida's rural counties contained within the 3 RACECs.

The FRBA network will utilize microwave, fixed wireless architecture and technology. Designed fundamentally to deliver high capacity and cost-effective Middle Mile infrastructure to extend the Internet backbone capacity, the network will provide 600Mbps - 1 Gbps full duplex capacity throughout the large and sparsely populated RACEC's. Following the successful model of the NFBA, the FRBA will utilize the flexible and quickly deployed microwave links to provide redundant, path-diverse bandwidth to vital anchor institutions, Government agencies and Last Mile providers. Community Colleges, schools, health care facilities, libraries, first responder agencies, will all benefit from the additional capacity as it is made available throughout the more than 11,000 square miles covered by the RACEC service areas.

The core networks of 80 microwave links are the most cost-effective and fastest means to deploy this level of bandwidth. At a total cost of roughly \$28,000 per link mile for the middle mile backbone, this network allows for flexible deployment, easy modification, rapid scalability, and is by design a route diverse, carrier class network. No other network architecture can deliver the "bang for the buck" that this one can - and the NTIA apparently agreed in awarding a round 1 BTOP grant for this same design in the other Florida RACEC.



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**Project purpose:**

Project Purpose

The FRBA service area is composed of two of the three Rural Areas of Critical Economic Concern (RACECs) established by the Governor of the State of Florida. The South Central RACEC is comprised of DeSoto, Glades, Hardee, Hendry, Highlands and Okeechobee Counties as well as the unincorporated area of Immokalee in Collier County and tribal lands of the Seminole Tribe of Florida (collectively the “SCRACEC”). The Northwest RACEC includes Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Liberty and Washington Counties. These two RACECs represent nearly 20% of the land area of the State of Florida and have a total population of 437,946.

As suggested by the RACEC designation, this 11,255-square mile area is characterized by socio-economic, economic development, and quality of life metrics that demand improvement:

- An average unemployment rate of 11.46%. The unemployment rate in 11 of the 14 counties exceeds the national unemployment rate. As of March 10, 2010, the unemployment rate in Washington, Highlands and Hardee Counties was 12.3%, Okeechobee County was 13.9% and Hendry County’s unemployment rate was at a staggering 14.9%.
- Low per capita income is also a common characteristic of these communities. The average percentage of residents living below the poverty level in these communities is 23%, well in excess of the statewide average of 13.3%. A truly glaring example is the community of Immokalee, in which 39.8% of the citizens are living below the poverty level with a per capita personal income of \$8,576 per year.
- Lower housing values compared to the state average and high incidence of foreclosures.
- Lack of volume, diversity, and access to higher wage/quality business, industry jobs and economic development.
- High school graduation rates well below the State average of 79.9%. The graduation rate in Hardee County is 58%, Hendry County at 54.2% and Glades County suffers the lowest high school graduation rate in the State of Florida at only 8.63%.

The FRBA project will address the very compelling problem of the lack of availability of broadband infrastructure throughout these struggling rural counties in Florida. While meeting all 5 of the statutory goals identified in the NOFA, the FRBA project will for the first time provide



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ubiquitous Middle Mile Broadband Internet access to residents, private entities, public institutions and the business community in unserved, underserved and remote areas of the NWRACEC and the SCRACEC regions. At this time, only 34% of the FRBA region has access to broadband service.

At the end of the three-year buildout period, the FRBA project will deliver up to 1,000 times the existing capacity within the coverage area. The FRBA has worked cooperatively with last mile providers throughout the development of the project. The commitments from Main Street Broadband for the NWRACEC and Rapid Systems, Inc. for the SCRACEC to provide last mile service within these regions indicates that the FRBA project can be a solution to the problem of limited broadband availability for the residents and businesses of these areas.

The FRBA project will enable local organizations and governments to introduce online education, training, awareness and other programs as broadband becomes available. By connecting critical strategic community anchor institutions, such as schools, libraries and community colleges, even residents who do not own a computer will have access to virtual learning resources.

With the FRBA broadband infrastructure in place, online K-12 education level courses for children, which include full access to the same resources found in any standard classroom, such as book collections, course materials, library and other research sources, can be offered.

The FRBA project will also serve as the backbone for deployment of e-government services, which are designed to interconnect government with constituents. Low-income, unemployed, aged, and otherwise vulnerable populations in these rural areas will have access to organizations and agencies that provide outreach and support services, such as the American Red Cross, Department of Education, Department of Health and Human Services, Environmental Protection Agency, and many other organizations at the Federal, State, and local level.

In addition, the FRBA project will greatly expand broadband access to public safety/first responder agencies. Specifically, the project design incorporates a secure multi-megabit connection for intranet and internet connectivity. The network will give public safety organizations the ability to leverage vertical assets while its architecture accommodates the future deployment of fleet mobile broadband connectivity.



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The FRBA’s IP-based system will lay the groundwork for the recently allocated 700 MHz spectrum data network of the future. This development will allow first responders to make voice calls and talk groups from LMR systems and new 700 MHz data systems to anywhere in the world. That means emergency relief efforts can be quickly coordinated in response to catastrophic events, such as flooding, tropical storms, hurricanes, and power outages, which are common in Florida’s violent and extreme climate.

The FRBA project will also stimulate economic growth and create jobs. During the next five years, the estimated number of direct-hire employees for this project within the 2 RACECs is more than 300. Many of these jobs require high technology network and IT engineering skills; others are management and administrative positions. The majority of these jobs will be based in the RACECs.

While some quality of life, economic and growth indicators are in need of dramatic improvement, the FRBA region is expected to grow exponentially over the next few decades. The FRBA project presents an opportunity to enhance the economic profile of every county and city in the area.

**Recovery Act and Other Governmental Collaboration:**

**Governmental Collaboration**

**The NFBA**

FRBA is poised to greatly leverage the success of the North Florida Broadband Authority and its successful Round 1 BTOP award. First, the FRBA has employed the experience of the NFBA grant development team, to assist in developing an appropriate strategy, network design, and project approach that is efficient, flexible, cost-effective and "shovel-ready". Utilizing the successful approach and fixed-wireless architecture, the FRBA was formed to combine both of the remaining Rural Areas of Critical Economic Concern (RACEC) in Florida and joined their efforts through the creation of an LLC, uniting the RACEC's both in purpose, and in coordinated action.

The FRBA structure emulates the public oversight of the NFBA. The FRBA will also be able to leverage the public and open procurements undertaken by the NFBA, piggy-backing on existing contracts, per Florida statutes. In addition to the partnerships with private firms, this allows FRBA to capture the experience and efficiency gained by the NFBA contractors in compliance,



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engineering and project management - with established processes, approved plans, architecture and schedules, all approved and tested under the strict criteria established by the ARRA and DOC guidelines. Since the engineering and protocols will be the same, specific software, operating systems, and equipment can also be leveraged to accelerate the deployment of the network.

Of particular note is the fact that the NFBA approach resulted in the only Round 1 BTOP awardee that was exempted from completing an Environmental Assessment (EA). Since only existing facilities were to be utilized, previously permitted facilities did not trigger the initiation of the EA, thereby saving six months at the outset of the project period. The NFBA, despite the process required for public hearings and open procurements, was actually the most shovel-ready infrastructure awardee in the nation. FRBA is taking precisely the same approach, and expecting the same result - without the lead time for another set of procurements.

#### FDOT

According to the Florida Department of Transportation (FDOT), a Broadband Middle Mile network would improve the opportunities for FDOT to locate Intelligent Transportation Systems along the highways, and particularly the hurricane evacuation routes, that traverse the regions. The implications for public safety and economic stability are immense.

#### Florida DMS

Another benefit to building an identical network to the NFBA, is that the NFBA has committed to meeting the stringent quality of service and reliability standards set by the State for providing transport and DIA services to State agencies. By designing the FRBA network to the same exacting standards, the FRBA networks will be pre-qualified to serve State offices, Community Colleges, and their network partners upon network deployment - without delay.

#### Fit with BTOP CCI Priorities:

##### FIT WITH BTOP CCI PRIORITIES

The proposed FRBA project satisfies or exceeds all seven of the BTOP Comprehensive Community Infrastructure Priorities.

##### 1. Community Anchor Institutions

The FRBA service area includes 865 Community Anchor Institutions. These include 185 Schools (K-12), 7 Community Colleges, 19 other institutions of higher education, 29 libraries and 131 government facilities. The FRBA has been working with these institutions throughout



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the development of the project. Included in Supplemental Information are 127 Letters of Support in favor of this project, including numerous letters provided on behalf of Community Anchor Institutions.

### 2. Public Private Partnership

The FRBA project is the ideal example of a public-private partnership. The FRBA was created as a limited liability company on March 16, 2010 by two non-profit economic development corporations representing the 2 RACEC regions. In order to promote the involvement of the local governments within the 2 regions, the non-profit agencies structured the Operating Agreement of the FRBA to include the creation of a Board of Governors. The Board of Governors will be composed of one representative from each county, a representative from the unincorporated area of Immokalee and one member on behalf of the Seminole Tribe of Florida. The Board of Governors will make all critical decisions relating to the expenditure of grant funds by the FRBA and the deployment of the middle mile infrastructure throughout the two regions. This unique governance structure will allow the local governments to participate in the project. In addition, to the cooperative efforts of the government and non-profit communities, the FRBA project also incorporates partnerships with for-profit entities. The FRBA has contracted with Government Services Group, Inc. and Nabors, Giblin & Nickerson, P.A. to serve as the management and legal staff of the FRBA. These two firms have extensive experience with managing utilities for governmental and private entities, including the North Florida Broadband Authority—a successful Round 1 BTOP awardee that will be constructing a middle mile network to serve 14 rural counties in North Central Florida. Finally, the FRBA has partnered with Rapid Systems, Inc. and Xiocom Wireless, Inc. to act as system integrators and operators of the regional networks in exchange for in-kind contributions to help FRBA reach its required matching level for the BTOP program. The FRBA is truly an alliance of governmental, non-profit and for-profit entities seeking to address the problems of these regions relating to limited broadband availability.

### 3. Economically Distressed Areas

The FRBA service area is composed of rural and disadvantaged communities located throughout 15 counties in two of Florida’s Rural Areas of Critical Economic Concern. Each of these communities is classified as an “economically distressed area.” The average unemployment rate in the service area is 11.46%. As of March 10, 2010, Hendry County’s unemployment rate was at a staggering 14.9%. Low per capita income is also a common characteristic of these communities. The average percentage of residents living below the poverty level in these





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communities is 23%, well in excess of the statewide average of 13.3%. A truly glaring example is the community of Immokalee, in which 39.8% of the citizens are living below the poverty level with a per capita personal income of \$8,576 per year.

**4. Community Colleges**

The FRBA service area includes the campuses of 7 community colleges. FRBA will make it a priority to provide service to these community colleges as soon as possible. Letters of support from Chipola College, Indian River State College and South Florida Community College are included within the Supplemental Information attached to the application demonstrating the support of these institutions for the FRBA project.

**5. Public Safety Entities**

There are 50 public safety entities located within the 2 RACECs. FRBA will make it a priority to provide service to the law enforcement, emergency medical systems and fire departments throughout its service area. Letters of support from 9 public safety entities are included in the Supplemental Information attached to this application demonstrating the support of these institutions for the FRBA project. The project design incorporates a secure multi-megabit connection for intranet and internet connectivity. The network will give public safety organizations the ability to leverage vertical assets while its architecture accommodates the future deployment of fleet mobile broadband connectivity. That means emergency relief efforts can be quickly coordinated in response to catastrophic events, such as flooding, tropical storms, hurricanes, and power outages, which are common in Florida's violent and extreme climate.

**6. Last Mile Commitment**

The FRBA has been working cooperatively with potential last mile providers in its region during the development of the project. Main Street Broadband and QuincyNet have expressed a commitment to serve the communities of the NWRACEC and Rapid Systems, Inc. has agreed to serve as a last mile solution throughout the communities of the SCRACEC.

**7. Cost Match**

The FRBA project includes a 30% cost match in the form of cash and in kind assets and services. The cost match is being provided by the benefited communities, the Hardee County Industrial Development Authority and the Project Partners, Xicom Wireless, Inc. and Rapid Systems, Inc. The enthusiastic commitment of these partners in providing assistance with reaching the required



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cost match demonstrates the level of commitment of government and private businesses within these regions to solving the problem of limited availability of broadband service.

**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

## **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:

Project Role: Third party in-kind contributor Name: Jurman, Dustin Phone: 8132324887 Email: Dustin@rseng.net Address 1: 1211 Westshore Blvd Address 2: Suite 711 Address 3: City: Tampa State: Florida Zip Code: 33607 Organization: Rapid Systems, Inc. Organization Type: For-profit Entity Small business: Yes
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**Broadband Infrastructure Application  
Submission to NTIA – Broadband Technology Opportunities Program**

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<b>Funding Opportunity:</b> Broadband Technology Opportunities Program	<b>Applicant Organization:</b>
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Socially and economically disadvantaged small business concern: No
<p>Project Role: Third party in-kind contributor          Name: Lambert, William          Phone: 8637733030          Email: directorbill@embarqmail.com          Address 1: 107 East Main Street          Address 2:          Address 3:          City: Wauchula          State: Florida          Zip Code: 33873          Organization: Hardee County Industrial Development Authority          Organization Type: County Government          Small business: No          Socially and economically disadvantaged small business concern: No</p>
<p>Project Role: Third party in-kind contributor          Name: Miller, Jack          Phone: 6782185600          Email: jmiller@xiocom.com          Address 1: 3505 Koger Blvd          Address 2: Suite 400          Address 3:          City: Duluth          State: Georgia          Zip Code: 30096          Organization: Xiocom Wireless, Inc.          Organization Type: For-profit Entity          Small business: No          Socially and economically disadvantaged small business concern: No</p>
<p>Project Role: Contractor          Name: Sheets, Robert          Phone: 8506813717          Email: rsheets@govserv.com          Address 1: 1500 Mahan Drive          Address 2: Suite 250          Address 3:          City: Tallahassee          State: Florida          Zip Code: 32308</p>



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Organization: Government Services Group Organization Type: For-profit Entity Small business: No Socially and economically disadvantaged small business concern: No
Project Role: Other Name: Carey, Crystie Phone: 8502244070 Email: ccarey@ngnlaw.com Address 1: 1500 Mahan Drive Address 2: Suite 200 Address 3: City: Tallahassee State: Florida Zip Code: 32308 Organization: Nabors, Giblin, Nickerson 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.**

The Florida Rural Broadband Alliance (FRBA) is submitting an application for Middle Mile networks in 2 non-contiguous regions, and as a result, has partnerships that apply to both regions and some partnerships that are region specific.

Government Services Group, Inc. (GSG) has been contracted to provide all staff and organizational functions of the FRBA. Specializing in outsourced utility management, GSG has more than 15 years of highly successful utility management experience in managing the functions and operations of the Florida Government Utility Authority (FGUA). GSG will provide expert services which include planning, procurement, contract negotiation, contract administration, construction inspection, compliance, and organizational administration. GSG provides similar services to the North Florida Broadband Authority (NFBA) a Round 1 BTOP infrastructure awardee, and will have fully adopted all of the accountability, reporting and compliance processes that are required under the ARRA Broadband Stimulus program.



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Another FRBA partner, is Nabors, Giblin & Nickerson (NGN). NGN is a Florida law firm that counts a great number of Florida Municipal and County governments as clients, including the recently formed NFBA and the FGUA. Their experience in assisting local governments, utilities and non-profits develop organizational constructs and processes that successfully operate with the total transparency and accountability required by the Florida Sunshine laws. Established from the outset as an public private partnership, NGN developed the FRBA's organizational documents and operating agreement and outlined the Board of Governors functions that enable the benefiting communities to participate in governance of the FRBA while also ensuring adherence to all statutory grant objectives and compliance requirements. NGN will perform all functions of General Counsel to the FRBA.

In the South Central RACEC, FRBA has two partners that have collaborated to ensure that the overall matching funds/in-kind asset contribution thresholds were met. Taking the lead in initiating Broadband deployment in the region was the Hardee County Industrial Development Authority (IDA). Using Local Economic Development funding, the IDA teamed up in 2009 with Rapid Systems, Inc. (Rapid), to design, deploy and operate a fixed wireless Middle Mile network for Hardee County. The Hardee County IDA/Rapid network is designed to the same standards and uses the same architecture and approach as that utilized by the FRBA. The IDA and Rapid have each signed a Memorandum of Understanding (in uploaded documents), contributing the full use and availability of the network to the FRBA, in the form of a prospective indefeasible right of use agreement, the value of which is \$4 million, the equivalent cost of the construction of the IDA/Rapid network.

In return, the IDA achieves the goal of broader economic development opportunities in the region. Having the first portion of the network constructed in advance of the other 5 counties in the region enables an accelerated growth and development model. Additionally, the FRBA will provide the first three years of upstream connectivity and capacity for the entire SCRACEC. Rapid, for its contribution in funding and constructing the network, will partner to deploy and operate the entire RACEC network. Rapid has built several fixed wireless Middle Mile and Last Mile networks and owns and operates a similar network in counties to the North and West of the SCRACEC. Maximum operational and maintenance efficiency will be gained by having the SCRACEC network operate seamlessly and with complete operational synergy through this arrangement.



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In the Northwest Florida RACEC, FRBA has partnered with Xiocom Wireless, Inc (Xiocom) who has executed a Memorandum of Understanding that provides for up to \$6 million in matching funds for the FRBA project. This contribution enables the total project to achieve a 30% total match meeting the threshold set out in the Round 2 NOFA. In return, Xiocom, a builder and operator of fixed wireless Middle Mile networks, will act as the deployment contractor and contract operator of the NWRACEC network. Xiocom has network experience throughout the US and built and operates a Middle Mile network along the Gulf Coast of Florida.

These partners create tremendous synergy and benefit in the public private partnership with the FRBA. Public oversight, private investment, deployment efficiency and sustainable operations, meet every statutory goal set out in the NOFA. In addition, this model was precisely the one used by the NFBA in their successful Round 1 application, and distinguished the NFBA project as the only BTOP infrastructure awardee in the nation that was exempted from having to complete an Environmental Assessment, making their project the most "shovel-ready" project in the country. This would accelerate the deployment and thus the completion of the project by some 6 months over every other awardee.

Finally, the NFBA and the FRBA both received enthusiastic letters of support from the Florida Department of Management Services (DMS). The DMS has now laid a clear path for qualification for the NFBA network to meet all service level and quality of service agreements necessary for the NFBA network to provide service to any eligible DMS customer (this includes all State agencies, community colleges, etc). The process now undertaken by the NFBA will PRE-QUALIFY the FRBA network for providing service to all State, educational, and local government agencies that now are connected through the DMS contract. This is a tremendous benefit to both the RACEC regions and to the State, as it will substantially increase the amount of bandwidth available to those anchor institutions, but also ensure the quality of services that can be delivered by those institutions.

## **D. Congressional Districts**

### **Applicant Headquarters**

- Florida

### **Project Service States**



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Florida

**Project Service Areas**

Florida - 1

Florida - 13

Florida - 2

Florida - 16

Florida - 23

Florida - 25

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

- Yes

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

Seminole Indian Tribe

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

- Yes

## **E. Service Area Details**

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

- No



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**Project Details**

**Service Area Type:** Middle Mile  
**Service Area Name:** Florida Rural Broadband Alliance, LLC  
**Rural Classification of the Last Mile Service Area:** Rural  
**Service Status of the Last Mile Service Area:** Underserved

<b>If Service Status is "Underserved" please select at least one applicable option from this list.</b>
No more than 50% of the households in the proposed funded service area have access to facilities-based, terrestrial broadband service at greater than the minimum broadband transmission speed;
The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

**Total Square Miles in Service Area:** 11,255  
**Total Population in Proposed Service Area:** 453,926  
**Total Number of Households in Service Area:** 174,472  
**Total Number of Businesses in Service Area:** 16,440  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 865  
**Unemployment Rate in the Service Area:** 12  
**Median Income in the Service Area:** 35,693  
**Estimated Percentage of Households with Access to Broadband:** 64  
**Estimated Percentage of Households Subscribing to Broadband:** 34

**F. Community Anchor Summary**

<b>Community Anchor Summary</b>	
<b>Schools (k-12)</b>	185
<b>Libraries</b>	29
<b>Medical and Healthcare Providers</b>	75
<b>Public Safety Entities</b>	107



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<b>Community Colleges</b>	7
<b>Public Housing</b>	11
<b>Other Institutions of Higher Education</b>	19
<b>Other Community Support Organization</b>	301
<b>Other Government Facilities</b>	131
<b>TOTAL COMMUNITY ANCHOR INSTITUTIONS</b>	<b>865</b>
<b>Historically Black colleges and Universities</b>	0
<b>Tribal Colleges and Universities</b>	0
<b>Alaska Native Serving Institutions</b>	0
<b>Hispanic Serving Institutions</b>	0
<b>Native Hawaiian Serving Institutions</b>	0
<b>TOTAL MINORITY SERVING INSTITUTIONS</b>	<b>0</b>

## G. Project Benefits

<b>Demographics</b>	
<b>Jobs</b>	
How many direct jobs-years will be created from this project?	122
How many indirect jobs will be created from this project?	76



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<b>How many jobs will be induced from this project?</b>	112
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**Methodology used to estimate jobs:**

Utilizing the guidelines referred to in the application at whitehouse.gov, we calculated the total job-years based upon the total expenditures and the formulas and ratios provided.

Total grant expenditure	\$22,780,465
Matching cash funds	\$ 5,729,000
Total expenditure	\$28,509,465

Using the formula provided

(the spending of every \$92,000 creates one job-year)

we divided by \$92,000 to get total job-years created = 310 job-years

64% of the total is Direct and Indirect job creation = 198 job-years

36% of the total is the Induced job creation effect = 112 job-years

Of the 198 direct/indirect job-years created, the direct jobs are those created by spending on direct labor and services; indirect would be that created through spending on equipment.

The result:

Direct job creation from spending on labor of \$11,000,000 = 76 job-years

Indirect job creation from spending on equipment of \$17,000,000 = 122 job-years

**Project Impact:**

Project Impact

The benefits of the FRBA project will be widespread throughout the 2 RACEC regions. These communities are struggling to overcome the effects of persistent poverty, under education, limited access to medical care and above average unemployment. While meeting all 5 of the statutory goals of the BTOP program and the 7 enumerated CCI priorities identified in the NOFA, the FRBA project will for the first time provide ubiquitous Middle Mile Broadband Internet access to residents, private entities, public institutions and the business community in unserved, underserved and remote areas of the NWRACEC and the SCRACEC regions. At this time, only 39% of the FRBA region has broadband service. At the end of the three-year buildout





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period, the FRBA project will deliver up to 1,000 times the existing capacity within the coverage area which includes 174,472 households and 16,440 existing businesses. It is important to note that the newest models of computers are no longer equipped with dial-up capability. E-commerce, distance learning, telecommuting and telemedicine require high-speed connectivity, and few (if any) low speed alternatives are available. As a result, without access to broadband many residents and businesses will be left behind in the global economy.

#### Education

With the increased bandwidth provided by the FRBA project, K-12 schools can offer computer-based learning, web-based learning, virtual classrooms and digital collaboration. Parents would be able to confer with teachers using video conferencing, study groups can form with members working on projects together from multiple locations, and home bound students can continue to participate in classes. The State of Florida offers online assistance with preparation for the FCAT exam. The FCAT is a required test that all public school students within the State must pass in order to graduate from high school. Within these regions, that already suffer from extraordinarily low high school graduation rates, including Glades County with a graduation rate of only 60.63%, many students are unable to take advantage of assistance to prepare for the test unless they are at school or a library because high speed connections are not available to their homes. At this time the Okeechobee Campus of Indian River State College has less than 5% of the network capacity available to the College's other campuses because the cost of broadband capacity in Okeechobee is too high. The FRBA project will enable these educational institutions to provide the same level of distance learning and other web-based programs as schools and colleges within the State's urban centers.

#### Libraries

Libraries serve as computer centers for residents who do not have computers or access to broadband. However, many are struggling to obtain adequate connectivity. The rural libraries are unable to provide functional video streaming due to lack of bandwidth. The Blountstown Public Library has 60 work stations and a laptop wireless lab operating on a single T1 connection. The rural libraries will benefit greatly from the availability of affordable high speed connections within their communities making it possible for citizens to access online research materials, e-government, online commerce and other resources.

#### Health Care

Given the large elderly population in these communities, access to quality health care is a critical need of the RACEC communities. Highlands County has the highest percentage of elderly residents within the entire State of Florida. Patients are required to travel long distances to major medical centers to obtain basic health care services at a substantial cost. Few hospitals



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throughout these areas have electronic records systems. At this time, a single physician is serving the entire area of Glades and Hendry counties. Telemedicine can improve rural patients' access to quality care and reduce the costs of health care delivery. However, these benefits cannot be realized without access to a high speed internet connection. The FRBA project would create access to telemedicine and electronic medical records capabilities throughout the RACECs. Without access to broadband facilities, these regions will continue to suffer from limited access to quality health care. Numerous hospitals and medical providers have endorsed the FRBA project with letters of support contained in Supplemental Information.

#### Public Safety

The FRBA project will enable more than 107 public safety agencies throughout the RACEC regions to obtain high speed internet connectivity. Currently, many of these agencies suffer from limited access. The Okechobee County Sheriff's Office substation on Lake Okeechobee has only a dial-up connection. The Highlands County Sheriff's Office operates on six T1 lines. The City of Clewiston was entirely out of business twice in one month due to cable cuts in the area, leaving the city without emergency phone, internet, police or fire communications. For 24 hours there was no ability to take emergency calls or conduct the business of the City. Further, the ability of emergency management agencies within these regions to communicate during disaster conditions is limited due to lack of availability of infrastructure. Following the disastrous 2004 hurricane season in which four named storms caused damage throughout these counties, several communities developed plans to enhance the deployment of emergency management in a storm by expanding access to broadband facilities. As a part of Hardee County's recovery plan, the County initiated efforts to design and construct its own Middle Mile network, which will be incorporated into the design of the FRBA network.

Further, the project design incorporates a secure multi-megabit connection for intranet and internet connectivity for public safety agencies. The FRBA's IP-based system will lay the groundwork for the recently allocated 700 MHz spectrum data network of the future. This development will allow first responders to make voice calls and talk groups from LMR systems and new 700 MHz data systems to anywhere in the world. That means emergency relief efforts can be quickly coordinated in response to catastrophic events, like hurricanes, which are common in Florida's violent and extreme climate.

#### Business Development

For economic development to occur in the RACEC regions, access to high speed internet connections is essential. In 2008, the NWRACEC region lost a project that was poised to bring



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2,900 jobs with an average salary of \$40,000 (twice the existing per capita income) to the region because of the lack of sufficient broadband access.

Examples of potential new opportunities include:

- Glades and Hendry Counties have submitted sites for an in-land port project designed to move distribution away from the metro areas of the coast. Potential job creation is over 1,000 and the economic impact is estimated at more than \$500 million.
- Port St. Joe is Florida's newest deep water port. As the expansion of the Panama Canal is completed in 2014, and considering that Port St Joe is closer to the Panama Canal than Miami and will have a general aviation airport only 22 miles away there is great potential for increased commerce in the region.
- The construction of the new Bay County International Airport only 6 miles outside of the NWRACEC will attract new aviation and other businesses to the region. The construction of the airport has already drawn corporate headquarters to the area, including Southwest Airlines. Without enhanced broadband infrastructure facilities, these and other such opportunities will continue to pass these struggling communities by in favor of areas with adequate capacity to serve their communication needs.

#### Last Mile Solutions

FRBA will seek to maximize the usage of its network by as many carriers and last mile service providers as possible. The FRBA will allow its infrastructure to be accessed by all carriers on a non-discriminatory basis. The FRBA has been working with last mile providers throughout the development of the network design. A key component of the success of the network will be the delivery of last mile service for transport and direct internet access to last mile providers throughout 100% of the FRBA service area. Rapid Systems, as the Project Partner for the SCRACEC, intends to build out the remainder of the SCRACEC with last mile facilities consistent with its existing last mile operations in Hardee County. A committed partner to the region, Rapid Systems has committed \$2 million in equipment, cash and services to the project as an in kind contribution. Within the NWRACEC, Main Street Broadband as a subsidiary of Project Partner, Xicom Wireless, will deliver last mile service to communities within the NWRACEC region. To evidence their commitment to the project, Xicom has offered a cash cost match to FRBA in an amount up to \$6 million.

#### Vulnerable Populations:

The Florida Rural Broadband Alliance, LLC's proposed project service area is overrepresented by groups such as low-income, the unemployed, children, minorities, seniors and people with disabilities. This vulnerable population within FRBA's service area is located throughout both RACEC regions which have long suffered from high unemployment, low per capita income and



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extreme instances of poverty. Statistics as reported by the 2000 U.S. Census and the Florida Legislature Office of Economic & Demographic Research clearly reveal the extreme conditions within the project's service area. The following October statistics relate to poverty within the project area:

- All 14 counties within the project area have higher poverty rates than the state average (12.5%):

- Hardee – 24.6%
- Hendry – 24.1%
- DeSoto – 23.6%
- Calhoun – 20.0%
- Gadsden & Liberty – 19.9%
- Washington – 19.2%
- Holmes – 19.1%
- Franklin – 17.7%
- Jackson – 17.2%
- Gulf – 16.7%
- Okeechobee – 16.0%
- Glades & Highlands – 15.2%

- The average statewide percentage of households living below the federal defined level of poverty totals 13.3%. For the FRBA service area the percentage of households living below poverty totals 22.99%.

- The percentage of households in poverty that includes persons under age 5 is also overrepresented by the project area as compared to the state average (18.8%):

- DeSoto – 36.5%
- Hendry – 35.0%
- Hardee – 34.9%
- Gadsden – 33.3%
- Washington – 32.8%
- Calhoun – 30.2%
- Franklin & Highlands – 29.2%
- Jackson – 29.1%
- Holmes – 26.2%
- Okeechobee – 23.9%
- Liberty – 21.6%
- Gulf – 21.2%



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Glades – 19.7%

· The percentage of households in poverty that includes persons age 65 and older is significantly overrepresented by 12 counties within the project area as compared to the state average (9.1%)

Liberty –24.3%

Jackson – 21.0%

Calhoun – 20.4%

Washington – 19.4%

Holmes –17.9%

Gadsden –16.9%

Hardee – 16.1%

Hendry – 15.0%

Gulf –14.1%

Franklin – 13.9%

Glades – 11.2%

Okeechobee –10.3%

Other factors exist that relate to the vulnerable populations within the FRBA project area. These communities include large migrant worker populations to serve the agricultural businesses throughout the region. In addition, the tribal lands of the Seminole Indian Tribe of Florida are located within the South Central RACEC. The State of Florida experiences a large number of hurricanes and tropical storms, which creates increased hardship on elderly and disabled populations. Four major storms struck in 2004, and after each event, parts of the FRBA region were declared a Federal disaster area. Considering that 20.6% of this region’s population is disabled (US Census Bureau 2008), and 14.6% elderly, it makes reliable service a necessity.

**Level of Need:**

**DEMONSTRATION OF NEED**

The FRBA project is not economically feasible without Federal grant funding. The FRBA regions have each been designated as RACECs by the Governor, as “fiscally constrained counties” pursuant to Florida Statutes and all of the counties are classified as “economically distressed areas.” These counties are struggling daily to provide essential public services within their communities. Despite the incredible need for broadband infrastructure, these counties simply do not have the financial resources to invest in the deployment of broadband without grant funding.



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Further, as a newly formed entity composed of two non-profit corporations, without any assets, no documented revenues or demonstrated financial history, the FRBA fails traditional underwriting guidelines and is incapable of obtaining conventional financing. The letters included as attachments in “Supplemental Information” from Capital City Bank and Seacoast Bank provide that neither bank was able to approve the project for traditional financing. Existing carriers have little incentive to open up existing access and build middle mile infrastructure due to the poor economy within the RACECs. The stagnancy of the local economy is exacerbated by the inability to attract new businesses due to the lack of broadband access. Further, the broad and diverse geographic area and terrain of the two regions and seasonal weather conditions create serious obstacles for a project of this nature, but then taking into consideration the limited population in the municipalities, there is not a large enough customer base, over which to allocate the costs of such an investment for a private carrier to receive an adequate return on their investment while providing affordable services in these areas. The need for the project is further demonstrated by the enthusiastic commitment of the Project Partners. The Hardee County Industrial Development Authority, Rapid Systems, Inc. and Xicom Wireless, Inc. have all committed cash or in kind contributions to help the FRBA satisfy its matching funds requirement. These commitments from government and private partners demonstrate the widespread support this project has earned and the commitment within the region to solving this problem.

An analysis of the cash inflows and outflows projected over an eight year period, using a required rate of return of 10%, indicates that the Net Present Value (NPV) without BTOP Funding is (\$7,145,891). However, with BTOP funding the NPV is \$16,279,750. Since the NPV with BTOP is greater than zero, it would be better to invest in the project with BTOP funding. Additionally, the Internal Rate of Return for the project without BTOP Funding is much lower than the required rate of return. The Internal Rate of Return for the project with BTOP Funding is much higher than the required rate of return.

This project is necessary if the region is to have the same opportunities as the rest of America. However, neither the Members of the LLC, the benefiting communities nor any existing incumbent can obtain financing to build this much needed infrastructure. Through the cooperation of local and tribal governments, economic development agencies and the Project Partners, this project has been initiated to provide much needed assistance to these communities; however, the project cannot be constructed without federal assistance.

## **H. Technology**

**Technology Type**





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

Wireless - Terrestrial Fixed

Other:

**Technology Questions**

**Methodology for Area Status:**

Methodology for Area Status

Data Collection

To determine the existence of broadband availability and extent of adoption we leveraged multiple sources of data, including; survey data from Mediamark, Pew, Gadberry and Demographics Now, publicly available (but not obvious) carrier-reported data and more obvious data like FCC Form 477. Each provides differing metrics, granularity and a level of overlap that allows comparative result verification.

Rurality and Borders

We identified municipal boundaries of incorporated areas with over 20,000 population as well as urbanized areas contiguous and adjacent to cities of 50,000 and above, as defined by the US Census Bureau to create the NON-RURAL classification areas. GIS mapping tools were used in this analysis, but did not include the 50-mile buffer for the Remote definition that no longer exists from Round One. Additional borders, places and boundaries recognized by the Census Bureau were also layered.

Broadband Indication

After significant data analysis and comparison against the Program definitions, a final comprehensive methodology was established to determine availability and uptake. In analyzing the definitions, it was determined the 50% penetration metric would simultaneously and most accurately identify the location and adoption of broadband.

Broadband uptake was calculated using the following method; count of (2008) FCC Form 477 Residential "Broadband" Lines (200Kbps Symmetrical) divided by 2008 Census estimated total



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Households (“HH”) on a state-by-state basis to create a state average uptake %. This uptake is then applied to the Census 2000 Total HH count at the block level where the survey data reported a broadband subscriber. This calculated number of “Served” HH is then tabulated at the "CDP and/or Other Area" and "Proposed Funded Service Area" levels to determine if that area's "Status" is "SERVED" (> 50% of HH) or "Underserved" (< 50%). We also calculate a ratio between served and underserved at both CDP/Other Area as well as Land Area to relate to both perceptions for the "25%" determination for served area classification limits.

#### STAGE 4 – Compile and Build

We find the survey data to be reliable and our method conservative and cautious, especially considering this method leverages the current FCC 200/200Kbps definition versus the Program’s definition of 768/200Kbps and therefore should be considered maximum uptake in an area. Broadband uptake at 768K may be substantially lower. We believe Broadband Mapping is incredibly vital therefore we have made a concerted effort to be detailed and accurate to allow the broadband availability and uptake data to have a useful life outside this application.

We are confident our methodologies meet or exceed the requirements set forth in the NOFA.

#### Description of Network Openness:

Regarding non-discrimination, our project will apply and enforce all NOFA non-discrimination and network interconnection obligations. Our approach adheres to all the non-discrimination requirements as set forth in the NOFA. We will display all non-discrimination practices in a prominent location on our web site and we will provide notice to customers of any changes to these policies. We are fully committed to offering wholesale access to the project facilities at reasonable rates and terms. We are also committed to binding private arbitration for any disputes concerning these interconnection obligations. Our network management practices and policies will:

- Adhere to the principles contained in the FCC’s Internet Policy Statement.
- Not show favoritism to any lawful Internet applications and content over others.
- Display any network management policies in a prominent location on the service provider’s web page and providing notice to customers on any changes to these policies.
- Connect to the public Internet directly, so that the Florida Rural Broadband Alliance projects are not private closed networks, but open to accessing all Internet resources.





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- Offer interconnection, where technically feasible without exceeding current or reasonably anticipated capacity limitations, on reasonable rates and terms to be negotiated with requesting parties.

**System Design:**

**Key Components**

The key network components involved in this project are Mid-stage Access, the Microwave Ring Backbone and the Microwave Point To Point (PTP) Customer Premise. This is a Greenfield deployment to areas which currently don't have public high capacity bandwidth options. Funding is required for Mid-Stage Access, Microwave Ring Backbone and some Microwave PTP customer premises. The Fiber huts and Fiber routes through the counties already exist and do not require funding.

**Mid-Stage Access**

The backbone of the worldwide web is primarily comprised of a fiber network of which a section runs thru our fourteen county service area. Along this route there are fiber regeneration facilities that were initially designed to regenerate light transmission along the routes. Our design will tap into these facilities and place a core router capable of delivering at least 5.9Gbps. It is designed for ultra reliable operation with a meantime between failures of over 110,000 hours. We have also engineered redundancy in the power supply and a tertiary redundancy with a secondary router using the same configuration in standby mode. The facilities will include both battery back up and diesel generators in case of prolonged power failures. These units are housed in a hardened concrete structure with vandal resistant features. We will use existing towers that are located adjacent to fiber huts in a process we call Mid-Stage Access. On the tower is where we will mount the microwave radios. The design utilizes seven of these Mid-Stage Access sites capable of injecting a gross aggregate of 7Gbps into the Microwave Backbone Ring.

**Diagram of Mid-Stage Access Facility**

**Microwave Backbone Ring**

The Microwave Backbone Rings use the licensed frequencies of 11, 18 and 23 GHz, which are determined by the distances of each link and the bandwidth requirements. Frequency and Spectrum availability is readily available at these frequencies. These radios will distribute the bandwidth among the fourteen counties using a ring topology. This topology creates a highly available bandwidth because if one link goes down for some reason, the network will



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automatically switch to the other link. At these microwave tower sites we have engineered battery backup for a minimum of eight hours without power as well as the vandal resistant and hardened concrete features mentioned in the POP. After evaluating the morphology clutter data, the FCC tower sites with clear line of site, ability to look over tall trees and other obstructions were selected to create an unobstructed fresnel zone. We have used the industry standard tool, Pathloss, to engineer 99.999% availability at a minimum of 600Mbps full duplex.

#### Customer Premise (end user)

The microwave PTP customer premise will vary based on customers data rate requirements but we have engineered the spacing of the tower sites to create high availability to any site within the fourteen county footprint as depicted in figure 2. As we are a middle mile project, our focus is providing a robust, reliable infrastructure for which the client can tap into. Our CPE meets the critical needs demanded by carrier class customers delivering a wireless GigE/100bT connection of up to 600 Mbps full duplex over licensed or unlicensed frequency allocation in an indoor or all-outdoor environment. The equipment can scale from 10 to 600 Mbps in 10 Mbps increments via a simple software configuration. Typical transmit power of these devices will not exceed 26dBm. This is a fixed broadband wireless Internet access system designed to deliver Ethernet speeds.

#### Advantages of this Technology

Wireless Ethernet is the lowest cost transport mechanism per linear mile to deliver the speeds required for middle mile. This technology with two routes minimum at every tower site provides great redundancy and for some a secondary backup link to their primary in case of an emergency. Another advantage of using an Ethernet packet based delivery mechanism is the flexibility, it is easy to operate and maintain and low cost, especially when compared to a traditional Telco TDM based solution.

#### Upgrades

There are numerous paths to upgrade this system. One is to add more Mid-Stage Access injection points. This would be as simple as adding a PTP link to the Backbone Ring. The Backbone Radios are software license upgradeable to higher speeds as well as are routing technology in the core of each site can also allow additional links between towers to aggregate the bandwidth.



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**Is the applicant seeking a waiver pursuant to section IX.C of the NOFA so as to sell or lease portions of the award-funded broadband facilities during their life?**

No

## I. Project Budget

Project Budget		
	Federal Grant Request	Match
Last Mile	0	0
Middle Mile	23,693,665	10,456,000
<b>Total</b>	<b>23,693,665</b>	<b>10,456,000</b>

**Project Budget Total:** \$34,149,665

**Match Percent:** 30.6%

**Projects Outside Recommended Funding Range:**

➤ N/A

Outside Leverage	
<b>Applicant is providing matching funds of at least 20% towards the total eligible project costs?</b>	Yes
<b>Matching cost detail</b>	Cash Matches 1. XIOCOM 2. \$5,729,000 (17.55% of total budget) 3. Cash grant match 4. Cash match will be used to fund infrastructure (network & access equipment) 5. N/A  In Kind Matches 1. Hendry County Board of County Commissioners 2. \$306,000



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	<ol style="list-style-type: none"> <li>3. Three tower structures</li> <li>4. Contributed structure to be incorporated into final network design for the provision of service within the service area</li> <li>5. Contributor will receive free or discounted access to the network at this location</li> </ol> <p>In Kind Matches</p> <ol style="list-style-type: none"> <li>1. South Florida Community College</li> <li>2. \$150,000</li> <li>3. Three building point of presence locations</li> <li>4. Contributed structure to be incorporated into final network design for the provision of service within the service area</li> <li>5. Contributor will receive free or discounted access to the network at this location</li> </ol> <p>In Kind Matches</p> <ol style="list-style-type: none"> <li>1. Hardee County IDA IRU/Capacity</li> <li>2. \$4,000,000</li> <li>3. IRU Capacity</li> <li>4. Contributed IRU to be incorporated into final network design for the provision of service within the service area</li> <li>5. Contributor will receive upstream access to the network for the first three years</li> </ol>
<b>Unjust enrichment</b>	The Florida Rural Broadband Alliance LLC will not receive, nor has it applied for any Federal support for non-recurring costs in the areas for which they seek an award.
<b>Disclosure of federal and/or state funding sources</b>	The Florida Rural Broadband Alliance has no other sources of State or Federal Funding for this project. All contributing funds are from private investment.
<b>Budget reasonableness</b>	The Florida Rural Broadband Alliance (FRBA) will be relying on the several decades of combined experience of the team that designed and will be deploying the fixed wireless network for the North Florida Broadband Authority. The network design, the architecture, the



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	<p>project approach are all being modeled as closely as possible to the successful NFBA application.</p> <p>Based on the flexibility, capacity and most – importantly – the cost-effectiveness of bringing reliable, high-speed Middle Mile capacity to the reaches of the two service areas, the decision to adopt the approach of the other NFBA RACEC, we are able to deploy a core fixed wireless network for approx. \$28,000/link-mile. Once the network is fully deployed that number will drop to approx. \$18,000/link-mile.</p> <p>The actual pricing and hard quotes are being negotiated for the equipment and services necessary for the NFBA and the final negotiated pricing will be available for the FRBA project as well. The advantage of leveraging the economies of scale are obvious and the field performance of the NFBA project will prove invaluable in ensuring that every contingency and cost performance will be accounted for. As contained in the network diagram and system design, we have already identified the specific equipment and vendors that will provide the highest level quality of service and equipment, and through which vendors will offer NFBA the most competitive prices.</p> <p>Judging the actual field performance and performing the detailed field engineering is also invaluable in determining the best value, reliability and capacity trade-offs. Some metrics by which we have determined this to be an exceptionally cost-effective project are listed below:</p> <p>Total project cost \$34,149,665 Total link-miles 1200 Total HH passed 174,472 Total businesses in service area 16,440 Total Anchor institutions (currently identified) 865 (not including critical infrastructure monitoring)</p> <p>Cost per Link-mile (backbone) \$28,000 (approx) \$18,000 fully deployed</p>
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	<p>Cost per anchor institution \$ 39,300          Cost per HH passed \$195          Cost per business passed \$ 2,068</p> <p>FRBA has established our monthly subscriber per megabit price at \$100 per month, compared to the limited cable and incumbent local exchange carrier broadband providers in the area, which currently charges \$200-2000 per month for above T-1 Middle Mile transport. FRBA has also conservatively estimated a subscriber take rate of the total estimated public and private sector middle mile subscriber entities in the service area of just 15%. Our letters of interest have been overwhelming and beyond our anticipated interest so we anticipate 20-25% of critical infrastructure either directly or via our commercial last mile providers to whom we provide the critical middle mile.</p>
<b>Demonstration of need</b>	<p><b>DEMONSTRATION OF NEED</b></p> <p>The FRBA project is not economically feasible without Federal grant funding. The FRBA regions have each been designated as RACECs by the Governor, as “fiscally constrained counties” pursuant to Florida Statutes and all of the counties are classified as “economically distressed areas.” These counties are struggling daily to provide essential public services within their communities. Despite the incredible need for broadband infrastructure, these counties simply do not have the financial resources to invest in the deployment of broadband without grant funding.</p> <p>Further, as a newly formed entity composed of two non-profit corporations, without any assets, no documented revenues or demonstrated financial history, the FRBA fails traditional underwriting guidelines and is incapable of obtaining conventional financing. The letters included as attachments in “Supplemental Information” from Capital City Bank and Seacoast Bank provide that neither bank was able to approve the project for traditional financing. Existing carriers have little incentive to open up existing access and build middle mile infrastructure due to the poor economy within the RACECs. The stagnancy of the local economy is exacerbated by the</p>



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	<p>inability to attract new businesses due to the lack of broadband access. Further, there is not a large enough customer base, over which to allocate the costs of such an investment for a private carrier to receive an adequate return on their investment while providing affordable services in these areas.</p> <p>The need for the project is further demonstrated by the enthusiastic commitment of the Project Partners. The Hardee County Industrial Development Authority, Rapid Systems, Inc. and Xiocom Wireless, Inc. have all committed cash or in kind contributions to help the FRBA satisfy its matching funds requirement. These commitments from government and private partners demonstrate the widespread commitment within the region to solving this problem.</p> <p>An analysis of the cash inflows and outflows projected over an eight year period, using a required rate of return of 10%, indicates that the Net Present Value (NPV) without BTOP Funding is (\$7,145,891). However, with BTOP funding the NPV is \$16,279,750. The Internal Rate of Return for the project without BTOP Funding is much lower than required. The IRR for the project with BTOP Funding is much higher than that required for investment.</p> <p>This project is necessary if the region is to have the same opportunities as the rest of America. However, traditional financing is not available. Through the efforts of local and tribal governments, economic development agencies and the Project Partners, this project will provide much needed assistance to these communities; however, the project must have federal assistance.</p>
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**Funds to States/Territories**

States	Amount of Federal Grant Request
Florida	23,693,665

**Funds to States/Territories Total:** \$23,693,665





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## J. Historical Financials

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

## K. Project Readiness

### BTOP Organizational Readiness

The Florida Rural Broadband Alliance (FRBA) was formed as an LLC to bring together two of the three Florida Rural Areas of Critical Economic Concern (RACEC), in a joint application for BTOP CCI grant funding. Following the successful Round 1 application of the other RACEC in Florida, the North Florida Broadband Authority (NFBA). The three RACEC's share a legacy of persistent poverty, unemployment, and under education as well as a depressed regional economy. As a result of the NFBA's successful approach, use of technology and organizational structure, the newly formed FRBA is proposing a near duplicate application, with the addition of elements that improve efficiency, lower cost, and accelerate the learning curve, by utilizing many of the same team members and processes refined through the NFBA's due diligence process.

The FRBA is an LLC formed by two regional economic development organizations that represent their respective RACEC's. Their operating agreement has created a Board of Governors that will be filled by appointees of each of the member Counties, a representative of the Seminole Tribe of Florida, and one representing the towns bordering the Southern RACEC. This public-private partnership is further enhanced by contracting the same team for providing all of the administrative and oversight function of the LLC; Government Services Group to provide the management services and Nabors, Giblin & Nickerson as general counsel. Both are highly experienced





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**Construction and Vendor Contracts**

The Florida Rural Broadband Authority (FRBA) has executed the following agreements:

1. Management Services Agreement with Government Services Group
2. General Counsel Services with Nabors, Giblin & Nickerson, P.A.

The FRBA intends to piggy-back on existing contracts with the Project Management and Project Engineering firms that were procured through open and public procurements by the North Florida Broadband Authority (NFBA), a local government authority, per Florida Statutes, as well as a Master Service Agreement for upstream capacity with Level 3, also procured through the NFBA.

1. Project Management Services with Airewire, Inc.
2. Project Engineering Services with Keenwire, Inc.
3. Backbone connectivity with Level 3, Inc.

Other vendor quotes

**Customer Base**

The Florida Rural Broadband Alliance is a new organization, formed as a non-profit LLC for the purposes of a joint grant application on behalf of the Counties that make up the South Central Rural Area of Critical Economic Concern (SCRACEC), and the Northwest RACEC (NWRACEC). There are no pre-existing networks of customers.

While the FRBA is partnering with the Hardee County Industrial Development Authority (IDA) in the SCRACEC, and the IDA network will be deployed before a grant funded network would be operational, there may be customers in advance of the FRBA network deployment, but there are no current customers as the network is still being planned and engineered.

**Licenses, Regulatory Approvals and Agreements**



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**State Authorizations:**

State of Florida Business License – in place, approved.

**FCC Authorizations:**

FCC Microwave Spectrum – initial pathing determined 11 and 18GHz availability. Application for licensing will commence upon project funding and typically takes between 15 and 60 days to complete processing.

**Interconnect Agreements:**

Level 3 Communications has provided a good faith estimate.

**Land Use Leases:**

Community land use and public-owned easement and assets have been verbally pledged in forum with 14 counties for specific asset analysis/coordination upon project funding.

**Equipment Leases:**

Capital Leases (5 year, non-cancellable) for commercial tower capacity will be negotiated upon award and subject to structural and field engineering analysis. Alternates are established for each location.

**Service Leases:**

Core Optical Transport Services (Lease of ILA and fiber termination negotiated and ready contingent upon grant award with Level3. Contracted through an Indefeasible Right of Use).

**Office Leases:**

Government Services Group, Inc. (existing office in place)  
District Office  
1500 Mahan Drive, Suite 250  
Tallahassee, FL 32308

**SPIN Number**

N/A



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## L. Environmental Questionnaire

### Project Description

The FRBA plans to leverage existing structures throughout the proposed wireless networks. This includes but is not limited to existing towers, monopoles and buildings. Additionally, because the proposed network is wireless, there will be no trenching or moving of dirt of any kind.

The FRBA has conducted an analysis of the brown-fields, historic sites, wetlands and wildlife habitats in relation to the existing structures, however, because these structures are already in existence there is no environmental impact. In the event that a future tower must be constructed, the FRBA will consult with an professional environmental firm to conduct the appropriate NEPA study. The FRBA does not currently contemplate having to build any towers to deploy these networks, but reserves the right to do so in the event that it is required to fulfill any grant obligations.

### Property Changes

The FRBA plans to leverage the use of existing structures and as a result there will be no property changes that involve moving dirt or construction of any kind. The only exterior property changes that will occur, are the mounting of microwave radio antennas on existing towers or buildings - a practice that is specifically and categorically exempted from further environmental study.

### Buildings

The FRBA plans to deploy their network utilizing existing structures exclusively, as a result there will be no new construction of buildings. There will not be any substantial exterior modifications to buildings either beyond the mounting of microwave radios on existing towers or buildings and the associated cabling.

### Wetlands

The FRBA will utilize existing structures exclusively for the deployment of their network. As a result, there will be no impact to wetlands of any kind.



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**Critical Habitats**

No new structures or construction of any kind are contemplated by the FRBA network deployment. Only existing structures will be utilized for this deployment - only previously investigated and permitted structures will be considered for this network.

**Floodplain**

This project does not include any construction, however the FRBA completed both GIS and manual analysis of all existing sites in relation to floodplains (manually via FEMA's MIP on-line mapper).

The FRBA will work with the structure owners of any sites that lie within or adjacent to floodplains to ensure that they are in compliance with local floodplain ordinances, although we anticipate these corporations are compliant.

**Protected Land**

Through GIS analysis, the FRBA has determined that there are no structures in the proposed network that are on the national Register of Historic Places.

This project does not include construction of any kind, only the mounting of microwave radio antennas on existing towers or buildings designed, built and permitted for that purpose.

**Coastal Area**

The FRBA will leverage existing structures exclusively for this project. Florida represents specific challenges in addressing coastal areas - highlighted by this from the Coastal Management website:

"Florida's coastal zone is the entire State, but it has two tiers. Local Governments eligible to receive coastal management funds are limited to those Gulf and Atlantic coastal cities which include or are contiguous to state water bodies where marine species of vegetation constitute the dominant plant community."

The FRBA believes that by utilizing existing sites, we negate the potential for any foreseeable coastal effects.



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**Brownfield**

This project does not include any construction - only existing structures will be utilized. The FRBA will be locating microwave radio antennas on existing towers and structures that were designed, built and permitted for that specific purpose.

This network is modeled after that of the North Flroida Broadband Authority, whose Round 1 award was the only infrastructure awardee in the nation to be exempted from having to complete an Environmental Assessment. We anticipate that this approach will result in the same determination of no environmental impact.



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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	FINAL CCI ServiceOfferings Competitor Data.xls	Lien, Patrick	03/26/2010
Network Diagram	Signal Maps.pdf	Lien, Patrick	03/26/2010
Build Out Timeline	CCI+-+Build-out+Timeline mm 03-26-10.pdf	Lien, Patrick	03/26/2010
List of Community Anchors and Points of Interest	FRBA CCI Anchor Detail and POI Attachment 03-26-10.xls	Lien, Patrick	03/26/2010
Management Team Resumes and Organization Chart	Management Team and Org Chart.pdf	Lien, Patrick	03/26/2010
Government and Key Partnerships	FRBA Agreements.pdf	Lien, Patrick	03/26/2010
Historical Financial Statements	CCI FRBA HISTORICAL FINANCIALS.pdf	Lien, Patrick	03/26/2010
Budget Narrative	CCI Budget Narrative 032610.doc	Lien, Patrick	03/26/2010



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Detailed Budget	CCI Detailed Budget 032610.xls	Lien, Patrick	03/26/2010
Pro-forma Forecast	CCI ProForma Fin Proj 032610.xls	Lien, Patrick	03/26/2010
Subscriber Estimates	CCI Subscriber Estimates 032610 mm.xls	Lien, Patrick	03/26/2010
Dashboard Metrics	CCI+- +Key+Metrics+Dashboard mm 03-26-10.doc	Lien, Patrick	03/26/2010
Service Area Data	FRBA CCI Service Areas Attachment.xls	Lien, Patrick	03/26/2010
Network Maps	System Map.pdf	Lien, Patrick	03/26/2010
BTOP Certifications	BTOP Certification Form FRBA.pdf	Lien, Patrick	03/26/2010
SF-424 C and D	CCI SF 424 C and D Forms.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Notes to Fin Stmts 03-26- 10.pdf	Lien, Patrick	03/26/2010
Supplemental Information	frba_demographic_maps.pdf	Lien, Patrick	03/26/2010





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Supplemental Information	FRBA Bank Letters.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Letters of Support.pdf.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Legal Opinion.pdf.pdf	Lien, Patrick	03/26/2010
Supplemental Information	MFN customers by RACECs 20090715 to RACEC teams.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Level of Need supplement - Florida RACECs.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Level 3 IRU estimates.pdf	Lien, Patrick	03/26/2010
Supplemental Information	Vendor Quotes.pdf	Lien, Patrick	03/26/2010