



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

Submitted Date: 3/26/2010 9:18:33 PM	Easygrants ID: 7523
Funding Opportunity: Broadband Technology Opportunities Program	Applicant Organization: NEXUS SYSTEMS, INC.
Task: Submit Application - BTOP	Applicant Name: Mr. Mark Lynn Stevenson

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A. General Application Information

Applicant Information	
Name and Federal ID for Applicant	
DUNS Number	165271250
CCR # (CAGE)	3Z7L5
Legal Business Name	NEXUS SYSTEMS, INC.
Point of Contact (POC)	MARK L. STEVENSON 3183400750 Ext. msteve@sendtech.net
Alternate POC	BOBBYE F. EARLE 3183400750 Ext. bearle@nls.k12.la.us
Electronic Business POC	MARK L. STEVENSON 3183400750 Ext. msteve@sendtech.net
Alternate Electronic Business POC	BOBBYE F. EARLE 3183400750 Ext. bearle@nls.k12.la.us

Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
Prefix	Mr.
First Name	Mark
Middle Name	Lynn
Last Name	Stevenson
Suffix	
Telephone Number	318-340-0750



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Fax Number	
Email	msteve@nexussystems.net
Title	President

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

Project Role	Name	Phone	Email
Secondary Point of Contact	Mrs. Bobbye F, Earle	3183400750	bearle@nexussystems.net

Environmental Point of Contact

Prefix: Mr.
Name: Stevenson, Mark
Suffix:
Telephone Number: 3183400750
Title: President

Organization Classification

Type of Organization	For-profit Entity
Is the organization a small business?	Yes
Does the organization meet the definition of a socially and economically disadvantaged small business concern?	No

Authorized Organizational Representative

AOR Name	STEVENSON, MARK L
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Result	Applicant Authorized
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Project Title and Project Description

Project Title: Louisiana “Piney Hills” Parishes Broadband Infrastructure Project

Project Description: This private/public partnership, Louisiana “Piney Hills” Parishes Broadband Infrastructure Project, will target 331 anchor institutions in 7 rural parishes including a historically black university. The project provides access and use of fiber broadband services to under & unserved areas to increase jobs, spur investments in technology & promote economic development.

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.
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.

Comprehensive Community Infrastructure Components

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

Middle Mile

Last Mile Rural



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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

Easygrants ID	Project Title
2239	Louisiana Broadband Alliance - Infrastructure Project

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

The project is an extension of the funded middle mile project by the Louisiana State Board of Regents (Easygrants ID 2239). The previous project 2239 provided for connectivity primarily in the 12 "River Parishes" of Eastern Louisiana. This project will extend the fiber network through the middle of the state and will tie 7 additional parishes to the LONI network for services as described in the previous award. This grant will utilize a combination of fiber and licensed microwave to provide a very cost effective reach into the middle and north parishes where it may not be cost effective for fiber deployment, but where the need for advanced services is critical. Nexus Systems agreed to partner with the State Board of Regents and LONI for implementation of the funded 2239 project to extend the reach of the State effort. While this project is submitted by Nexus Systems, the company will be providing a reciprocal service arrangement to the State for maximum service deployment and interoperability.

Individual Background Screening



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

- No, Applicant is subject to these requirements

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

Name	Title	Employer
Mark L. Stevenson	President	Nexus Systems Inc.

B. Executive Summary, Project Purpose and Benefits

Essay Question

Executive Summary of the proposed project:

The very rural nature of many large areas of Louisiana presents formidable obstacles to potential broadband service providers. The U. S. Census Bureau reports that only 42.9 % of Louisiana homes have Internet Broadband Access, ranking the State in the bottom 20% of the nation. At the bottom tier of that 20% are Louisiana's very rural communities, which were also the last in the nation to receive basic telephone service. That modern day life necessity was not delivered 30 or even 20 years ago; it was in 2005. Currently, there is no broadband provide to provide a Comprehensive Community Infrastructure connectivity in the 7 parishes that are the focus of this application's proposed project.

Nexus Systems, Inc., a for profit company, in partnership with the Louisiana Board of Regents, a public agency, is submitting a comprehensive community infrastructure project on behalf of vulnerable rural underserved and unserved populations in 7 "Piney Hill Parishes" along Hwy. 167 in North Central Louisiana.



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The proposed fiber route will start in Alexandria LA and go up Hwy. 167 through Grant, Winn, Jackson and Lincoln Parishes where vendor partner towers will extend service to 3 other “Piney Hills” Parishes, Union, Claiborne and Bienville, [REDACTED] Parishes include 45 incorporated towns, 177 census designated places and 76 other pop. places. Ruston, in Lincoln Parish, is the largest incorporated town with a pop. of 20,546. The other 6 rural parish seats have an avg. pop. of 3,660. The total pop. is 148,904. This project encompasses 55,562 households, 1,820 businesses, 331 anchor institutions, public safety entities, and critical community organizations..

Proposed services include a 144 count fiber link from Alexandria, LA to Grambling, LA. The objective is to provide interconnection at local school board offices. Vendors will extend broadband service via fiber or microwave to the proposed funded service areas and users. The services will be very high speed IP-based transport services along the route with multiple egress points to the Internet. Nexus will provide transport only, transport and Internet portal, or comprehensive managed service as desired by the user. Nexus will target critical agencies for direct service and will partner with the LONI State network and other peering providers at handoff points. The project will tie into existing Nexus microwave towers to extend services further off Hwy 167 into unserved areas. Nexus microwave will be utilized specifically for extension of services to Union, Claiborne, and Bienville parishes

Non-discrimination and interconnection obligations, as it relates to connectivity to the public Internet and physical interconnection for the exchange of traffic, will be addressed through adherence to the non-discrimination requirements and the interconnection requirements identified in the NOFA; by displaying interconnection policies and nondiscrimination practices prominently on the service provider web page, and by notifying customers of any changes to these policies: by committing to offer wholesale access to the fiber network components at reasonable rates and terms; by committing to binding private arbitration of disputes concerning interconnection obligations; and by implementing management practices to block access to illegal or harmful content.

The broadband technology will be a 144 count fiber [REDACTED]

[REDACTED] Internet egress points will be in Lincoln Parish where it will connect to the LONI network at 10 GBits and in



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Alexandria, which is also an interconnection to the LONI State network [REDACTED]

The applicant has demonstrated that the company possesses the traits needed to be a sustainable broadband service provider. Nexus systems has been providing high speed Internet services for over 10 years and already serves the school districts in 86% of the affected area with over 5000 active users on the network. The company has constructed and operates over 120 microwave towers utilizing very high speed Dragonwave licensed band transmission services for schools, universities, public safety agencies, local governments, fire and police departments, medical services, local businesses, and residents. The company is very active in fiber as an aggregation tool linking distant towers together. It employs in-house fiber construction crews and in-house tower construction crews. Nexus just completed construction of a 192 count fiber ring around the local City of Ruston in a joint partnership with the city. The working management of the company is also the original founding owners, each with over 25 years experience in the technology arena.

Overall infrastructure cost of the broadband system is \$9,343,983 in grant funds with \$3,180,600 in capital and in-kind matching funds.

Overall number of expected subscribers for the project is in excess of 150 anchor institutions and businesses, and many thousands of households drawn from a pool of 1,850 businesses, 55,562 households, 331 anchor institutions that include 79 public, private and charter schools, 18 public libraries, 25 medical service entities, 3 two-year colleges, 86 public safety agencies, 2 four year universities (1 historically black) and 35 community support organizations.

The jobs estimated to be created or saved as a result of this project is the greatest opportunity provided by the program. Based on information from the industry, we expect over 250 direct and indirect jobs to be created by initial construction and ongoing support of the network. Economic development is tied to the availability of high speed Internet access. This project will extend opportunities in the 7 targeted parishes that have an unemployment rate ranging from 10.5% to 8.6%. The long term job impact from this project will be in excess of 4,000 jobs.

Project purpose:



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The purposes of this broadband application is to align Louisiana’s efforts with the vision of the President, conform to the guidelines set forward by the Congress in the Recovery Act, adhere to the rules established by the Department of Commerce and follows the leadership of Louisiana’s Governor Bobby Jindal. The broadband vision of the President is his belief in the transformative power of broadband. The Obama Administration is committed to harnessing the power of broadband technology to stimulate economic growth, create jobs, and help lay the foundation for long-term prosperity for all Americans. This application was developed within Congress’s guidelines of creating jobs, closing the broadband gap, combining broadband investments with other Recovery Act funds, providing high-speed connection to community anchor institutions and stimulating the demand for broadband service.

This application integrates with the Governor’s view of a 5-yr. regional economic development plan. Goal 1 of the plan is to advance the productivity and economic competitiveness of the LA workforce by way of tying the curriculum and its delivery of community and technical colleges with real business workforce needs. Goal 2 is to strengthen LA’s physical and digital connections to the global economy by expanding broadband technologies to improve the development of LA’s workforce. Goal 3 is to create critical mass within LA communities focusing on growth through jobs and investments by promotion of innovation through advanced processes and technologies like the use of broadband infrastructure. This project will improve education, enhance business ownership, improve health care, and improve public safety communications through the use of information technology.

This CCI Project will offer the ability for interconnection point throughout the route to accommodate last-mile providers. Providing high-speed broadband connectivity to public safety agencies, educational entities (4 yr, 2 yr colleges, public, private and charter schools), libraries, medical services, social service organizations and local governments is the major focus of this project. Five parishes to be served are classified by USDA/RUS as Persistent Poverty Parishes. The largest town is Ruston with a pop. of 20,546 which accounts for 13.8% of the total pop. in the 7 parishes. The average size of the other 6 parish seats is 3,660 people. Of the 148,904 people in the 7 parishes, 86.2% live in a very rural environment that is either under or unserved. A goal of this project is to create the infrastructure needed by last-mile service providers to make available high quality broadband service to 1,820 businesses and 55,562 households in these 7 parishes. In most cases, cell phone service is very limited and has poor quality or is not available in these parishes.



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To enable this private/public CCI project to meet identified goals, it will provide a fiber interconnect to each middle mile and last mile provider’s main service points along Hwy 167 in North Central Louisiana. This effort will be able to connect to the existing LA Optical Network Initiative (LONI) statewide backbone at the existing interconnection point in Alexandria, LA and the LA Board of Regents Round 1 BTOP Easygrants ID: 2239 project. The design of this project will enable quick deployment of significant new jobs. The design is expected to generate over 250 jobs over a 3 year period. This project will address LA’s 2005 Broadband Analysis that documented the proposed service area has a broadband adoption rate of no more than 40% with rural regions at or below 25%. This technical solution will represent a significant portion of the underserved pop. in this rural region. The solution is easily replicated in other rural regions through the technical design that incorporates the use of the multiple interconnect points located throughout the state. The project addresses the following BTOP statutory purposes: provide or improve access to broadband service to unserved or underserved consumers residing in rural areas; provide access that will support broadband education provided through regional educational entities and public libraries; provide bandwidth needed to support the use of telemedicine in these rural parishes where doctor are in very short supply and specialist are nonexistent; provide distance learning opportunities to residents who are geographically isolated from 2 and 4 year colleges; meet the unique needs of senior citizens, disabled people and isolated minority populations; provide improved communications for all public safety agencies, which in turn will create a much safer environment for everyone; stimulate job creations; and promote economic development through the opportunities made available via the Internet and worldwide connectivity. This proposal goes beyond simply providing access to broadband to building and sustaining a healthcare and education services network that improves lives in rural Louisiana.

The project addresses these statutory purposes of BTOP: provide access or improved access to broadband service to consumers residing in underserved or unserved “Piney Hills” Parishes in North Central LA; provide broadband education, awareness, training access, equipment and support to schools, libraries, medical and healthcare providers, community colleges, and other community anchor institutions; improve access to, and use of, broadband by public safety agencies; and stimulate demand for broadband, economic growth, and job creation. This project will support the applications funded in Round 1 that include the LA Broadband Alliance Infrastructure Project and the LA Public Computer Center Project.

Recovery Act and Other Governmental Collaboration:



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The La Broadband Alliance-Infrastructure Project, a round 1 BTOP middle-mile project that targeted 21 rural under and unserved Louisiana parishes was funded. This “Piney Hills” Parishes project will replicate and extend the broadband access to 7 additional parishes in North Central Louisiana that have a high percentage of vulnerable populations. The project will be able to extend support the FCC grant funded for \$15,925,270 over 3 years that is administered by the LA DHH to provide broadband connectivity to health care facilities in the region. This project will have an opportunity to build on infrastructure provided through the FCC grant. This project is committed to expanding the existing infrastructure to serve the LA Health Care Quality Forum efforts that support health care providers who are “meaningful users” of certified health records. The project will enable the LA Dept. of Education to expand upon critical state and federal initiatives. Federal education has traditionally supplemented state educational endeavors to accelerate student improvement for at-risk students across the country. In Louisiana this supplemental funding has become increasingly important due to the high incidence of poverty, 23 % in the 7 targeted parishes, and the large number of students identified with disabilities, 20.2% in the 7 targeted parishes. The comprehensive plan to enhance education in Data Program, Teacher Incentives Program, National School Lunch Program, Invest in What Works and Innovations, Race to the Top, Education for Homeless Children and Youth, as well as Entitlement Funds, many of which are dependent upon a reliable statewide broadband infrastructure. LONI, under the LA Board of Regents a key partner in this application, is requesting about 2 million dollars from the NSF’s ARI-R2 program to integrate LONI’s optical network into the nation’s research-supportive cyber-infrastructure. This project proposes an achievable, scalable, and sustainable approach to expanding broadband infrastructure and services in Louisiana. Funding for this application will expand the foundation needed for significantly improving the quality of life for all of Louisiana.

Fit with BTOP CCI Priorities:

This CCI project meets or exceeds the objectives of each of the 5 BTOP Statutory Purposes. The project goes beyond providing access to broadband – this proposal builds and sustains: a public safety communications network that will be invaluable in times of natural and man-made disaster; a health care network to support the use of telemedicine and continuing medical education for health care providers in rural areas that have very limited access to medical care; a library network that received Round 1 funding for computer centers; an enhanced robust educational network to support distance learning, research, academic growth, continuing education and accountability for public, private and charter schools, 2 universities (one historically black), and 3 Technical College campuses; a network for all state agencies to expand



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their services to residents and businesses: a network that last mile vendors can continue to expand the reach of this project to local governments, 1,820 businesses, and community support organizations that meet the unique needs of the vulnerable populations that include 32,348 people living in poverty, 13,401 veterans, 21,133 senior citizens, 30,304 disabled, 53,002 minority residents, and the 82,519 over the age of 25 years who have not graduated high school; and creates access to a virtual world that will simulate demand for broadband access, will provide new alternatives for economic development and thereby create new jobs in an area that has an average unemployment rate of 9.4%. It is our intention to build a usable, sustainable, life-improving network that positively impacts the health, education, public safety, economic opportunities and social well-being of all of the citizens in the 7 “Piney Hills” Parishes that incorporate renewal communities, economic development districts, 71 Enterprise Zones and 5 USDA Persistent Poverty Parishes.

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?

- Yes

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



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Name: Clausen, Sally
Phone: 2253424253
Email: sally.clausen@regents.la.gov
Address 1: 1201 North Third Street
Address 2:
Address 3:
City: Baton Rouge
State: Louisiana
Zip Code: 70802
Organization: Louisiana Board of Regents
Organization Type: State or State Agency
Small business: No
Socially and economically disadvantaged small business concern: No

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

The Board of Regents is providing access for community anchor institutions into the LONI network via interconnections at Alexandria/Pineville and Monroe. This partner is also providing a cooperative endeavor agreement with Nexus for sharing fiber obtained in the Round 1 Board of Regents funded application in order to facilitate community anchor institutions in that region direct access to the organizations in the Piney Hills application. The interconnection of the two projects will extend services to almost one third of the State of Louisiana.

D. Congressional Districts

Applicant Headquarters

- Louisiana

Project Service States

Louisiana

Project Service Areas

Louisiana - 5



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

- No

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

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

- No

E. Service Area Details

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

- No

Project Details

Service Area Type: Middle Mile
Service Area Name: Piney Hills Middle Mile
Rural Classification of the Last Mile Service Area: Rural
Service Status of the Last Mile Service Area: Underserved

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

Total Square Miles in Service Area: 5,077
Total Population in Proposed Service Area: 148,904
Total Number of Households in Service Area: 55,562
Total Number of Businesses in Service Area: 1,820



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Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area: 331
Unemployment Rate in the Service Area: 9
Median Income in the Service Area: 26,926
Estimated Percentage of Households with Access to Broadband: 40
Estimated Percentage of Households Subscribing to Broadband: 25

F. Community Anchor Summary

Community Anchor Summary	
Schools (k-12)	79
Libraries	18
Medical and Healthcare Providers	25
Public Safety Entities	8
Community Colleges	3
Public Housing	7
Other Institutions of Higher Education	2
Other Community Support Organization	35
Other Government Facilities	76
TOTAL COMMUNITY ANCHOR INSTITUTIONS	253
Historically Black colleges and Universities	1
Tribal Colleges and	0



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Universities	
Alaska Native Serving Institutions	0
Hispanic Serving Institutions	331
Native Hawaiian Serving Institutions	0
TOTAL MINORITY SERVING INSTITUTIONS	332

G. Project Benefits

Demographics

Jobs	
How many direct jobs-years will be created from this project?	134
How many indirect jobs will be created from this project?	1000
How many jobs will be induced from this project?	4750

Methodology used to estimate jobs:

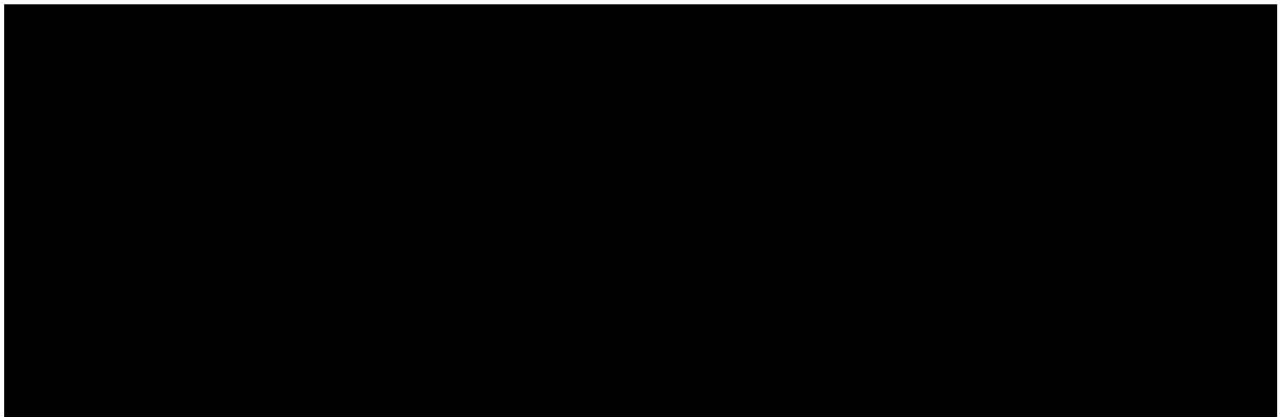
Reference was made to the Council of Economic Advisor’s guide to job creation that stated estimates for job creation can be derived from the type of stimulus and the amount of spending. Their estimate of spending needed to create 1 Job-Year for a government spending fiscal stimulus is \$92,136 per job-year. It is projected \$12,343,983 in stimulus monies will be spent on the Louisiana “Piney Hills” Parishes Infrastructure Project and approximately 134 direct jobs will be created. From a North Louisiana regional prospective, the jobs estimated to be created or saved as a result of this project is the greatest opportunity provided by the program. Based on information from the industry, we expect 134 direct indirect jobs to be created by initial construction and ongoing support on the network. Over the life of the project, it is anticipated this broadband infrastructure will result in a growth of 4,750 induced jobs in the region. This number is based on projections for job creations in anticipated plant openings in North Louisiana where it was projected a car plant would bring 1,400 jobs, a sweet potato processing plant would bring 400 jobs and a chicken processing plant would bring 1,400 jobs. The indirect job impact is the factor that will economically stimulate the entire region. Employment



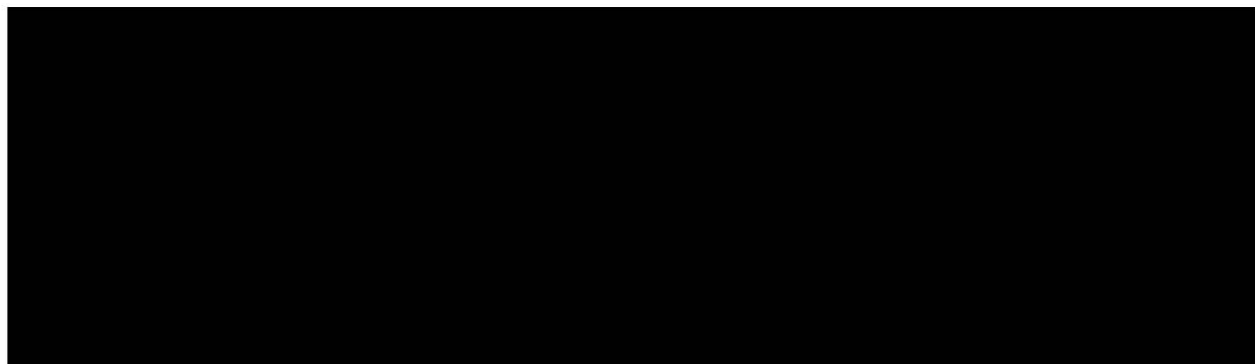
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opportunities are coming to North Louisiana, each relates to the availability of a high speed network and related infrastructure. We expect this project will extend the same support
Project Impact:



Though highly protective of their proprietary data, several potential broadband providers explained that the major impediment to delivering broadband to rural areas is the fact that 42% of the costs lie in the requirements of the middle-mile portion of the project. After careful analysis and leveraging on prior experience, Nexus has developed a unique mode for inducing broadband service to this rural area in North Central Louisiana.



This project is designed to comprehensively meet, whether directly or indirectly the broadband needs of the communities within the 7 parishes of Lincoln, Jackson, Winn, Grant, Union,



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Claiborne, and Bienville that are with-in the proposed funded service area. It has been designed to address the unique broadband service needs of households, businesses, education, medical, public safety, local government, social organizations, libraries and vulnerable populations. This CCI project will meet the access, transport and wholesale services needs of the providers in this region.

It is projected that the capital investment made by this stimulus money will reduce the overall broadband services pricing in our proposed service area when compared to the standing LA State contract price. There is no reason to not expect a 25% reduction to households and businesses.

Public safety is a major focus of this project. Working with the sheriff in each of the parishes, Nexus seeks to provide the means to establish much improved broadband communication between all public safety agencies. This alone will improve the lives of the people. In times of natural and man-made disasters, during acts of terrorism that so often occur in our educational setting and when traumatic accidents occur, effective high-speed communications means the difference in many cases between life and death. This alone makes this CCI project a critical necessity for the 7 targeted parishes.

Vulnerable Populations:

The vulnerability level is high within Louisiana and critical when compared to the rest of the nation. The U.S. Census shows that these parishes are among some of the poorest in the nation. The poverty rate in these 7 parishes is 22.9% or basically 1 in 4 people. Five of the 7 parishes are designated as Persistent Poverty Parishes by the USDA. These parishes have a dropout rate of 55.4%.

Statistically out of a combined 7 parish population of 148,904, the following vulnerable populations were documented by the U.S. Census: 21,133 for 14.2% are age 65-plus; 75,879 for 51% are female; 50,110 for 33.7% are black; 479 for 0.32% are American Indian; 729 for 0.49% are Asian; 1,684 for 1.13% are Hispanic; 66,385 for 44.6% graduated high school; 13,401 for 9.0% are veterans; 30,034 for 20.2% are disabled; and 32,348 for 22.9% live in poverty.

The average MHI for the 7 parishes is 26,925.86. The average PCI is 13,855.14. The 7 parishes have 71 Enterprise Zone Listings. Each parish has designated Renewal Communities. The parishes are sparsely populated. The average population per square mile is 33.1 people. The 7 parishes incorporate 5,079.62 square miles



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Level of Need:

The served region has no available dark fiber for expansion by any provider other than ILEC and limited cable service. The ILEC offers some high speed service via Metro-E, but this service is limited in deployment to the local town and CO infrastructure, provided at very high cost, and, in many cases, with high build out cost. It is impractical for other than high profile customers. The random cable providers have a completely closed network. The provider(s) offer no dark fiber, no DSL beyond the initial CO reach, and limited competitive access to pole and copper rights. For these reasons, we selected the Metro-E and published ILEC tariff pricing as the model for this grant to overcome. We established a simple model for measurement of the level of needs by taking the total population of the region and subtracting the populations of the various towns that show at least minimal DSL service. The level of need in the customer base is also evidenced by the Town Hall meetings with State PSC and Legislative representatives, one of which occurred last week in Quitman. As network and Internet providers for the schools in this area, we receive petitions weekly from frustrated parents and students who cannot receive service at their homes or businesses. The key to provisioning such service is effective middle mile support for service out of the region. Our proposal is to provide connectivity to anchor institutions and utilize those breakout points to provide extensions to the local last mile communities. We will utilize hard line connections where possible, but will employ connections to a number of microwave towers to extend the reach into the rural areas where fiber or copper facilities will not be available.

H. Technology

Technology Type

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

Wireline - Fiber-optic Cable

Wireless - Terrestrial Fixed

Other:

Technology Questions

Methodology for Area Status:



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Using data from the 2000 U.S. Census, USDA, Louisiana Broadband Commission, and other local economic development resources, it is apparent the 7 “Piney Hills” Parishes targeted in this application is one of the most challenged regions of Louisiana for broadband infrastructure. One in four people live in poverty. In 2007, the LA State Legislature, through Act 347, called for universities and public and private corporations to work together in a new network of partnership to provide a dynamic and comprehensive approach to planning and implementing solutions to address problems related to poverty, education, health care, economic development, jobs, housing, agricultural business development and culture. Improving connectivity to broadband technology was the number one short-term goal.

The “underserved” reasoning came from a number of sources. The latest U.S. Census Bureau reports that only 42.9% of Louisiana homes have Internet broadband access. This ranks Louisiana at the bottom 20% of the nation. The poverty rate in rural Louisiana is 24.2% with more than one-half of the parishes defined by USDA as Persistent Poverty Parishes. Five of the targeted parishes are Persistent poverty Parishes. DOE statistics show these parishes have a high school dropout rate of 55.4%. According to the Pew Internet report, “Home Broadband Adoption 2009,” barriers to broadband adoption included income level (32,348 people living in poverty), not having graduated from high school (82,519 people), living in rural America (128,358 people) and being African American (50,110 people) constitutes a large percentage of the population to be served through this BTOP project. The at least 75% definition for rural is met when 86.2% of the 148,904 population live in these 7 very rural, sparsely populated parishes that have approximately 25 people per sq. mile. The total square miles of the 7 parishes is 5,079.62. Research clearly documents the parishes are rural and are either unserved or underserved.

Description of Network Openness:

The FCC Internet Policy calls for a mutually beneficial broadband network to be deployed to support the cause of the advancement of educational and information resources to all citizens. Nexus agrees that broadband networks that are widely deployed, open, affordable and openly accessible help insure the sustainability of the CCI project. This design will support any existing last-mile provider in the proposed service area, thereby providing consumers with a choice of which last-mile provider they choose to contract with for services. The infrastructure design will offer the ability for interconnection points at incorporated places along the fiber route to accommodate as many last-mile providers as possible. This design envisions the ability to connect to the Louisiana Broadband alliance Infrastructure-Infrastructure Project that was funded

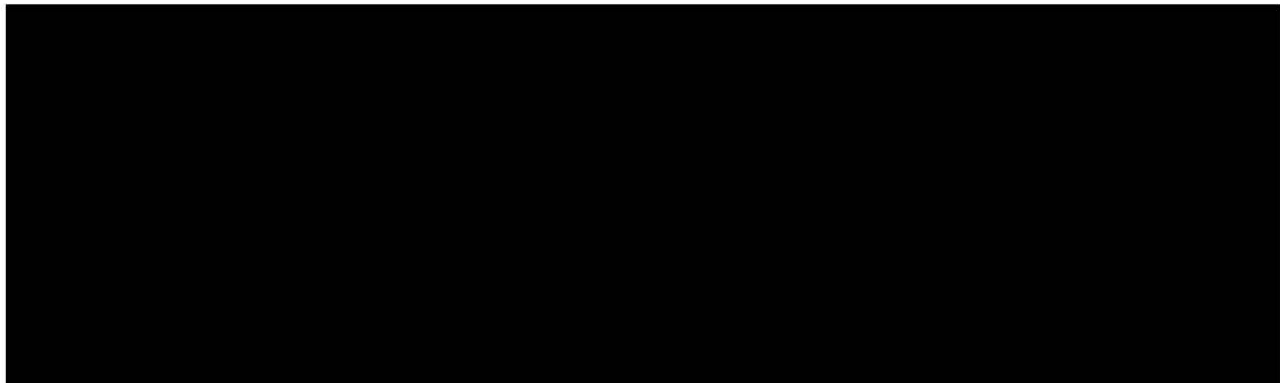


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through a Round 1 BTOP grant. This Nexus design openly accepts any consumer's transmission via a last -mile provider to the Internet from any IP-enabled devices. It will comply with the Communications Assistance to Law Enforcement. Nexus will incorporate management practices that will enable users to make informed decisions regarding their Internet usage. The CCI project facilities will be open to each and every last-mile provider that can serve the proposed service area and every reasonable attempt will be made to negotiate with all interested parties for the ability to interconnect at every available point in the fiber route. The project will display any network management policies in a prominent location on the service provider's web page and provide notice to customers of any changes to these policies that include the standard best efforts Internet delivery, to allocate capacity; differentiate among applications, providers, or sources; limit usage; and manage illegal or harmful content as provided by the Children' Internet Protection Act. The project will connect to the public Internet directly or indirectly, such that the project is not an entirely private closed network. The project will offer interconnection, where technically feasible without exceeding current or reasonably anticipated capacity limitations, on reasonable rates and terms to be negotiated with requesting parties for connection to the public Internet and physical interconnection for the exchange of traffic. All requirements will be subject to the needs of law enforcement and reasonable network management. Generally accepted technical measures to ensure acceptable service level to all customers through caching and application-neutral allocation of bandwidth will be incorporated. Measures will be implemented to address span, denial of service attacks, illegal content and other harmful activities. Managed services that require a private network connection for enhanced quality of service, such as telemedicine, public safety, communications and distance learning will be implemented as needed

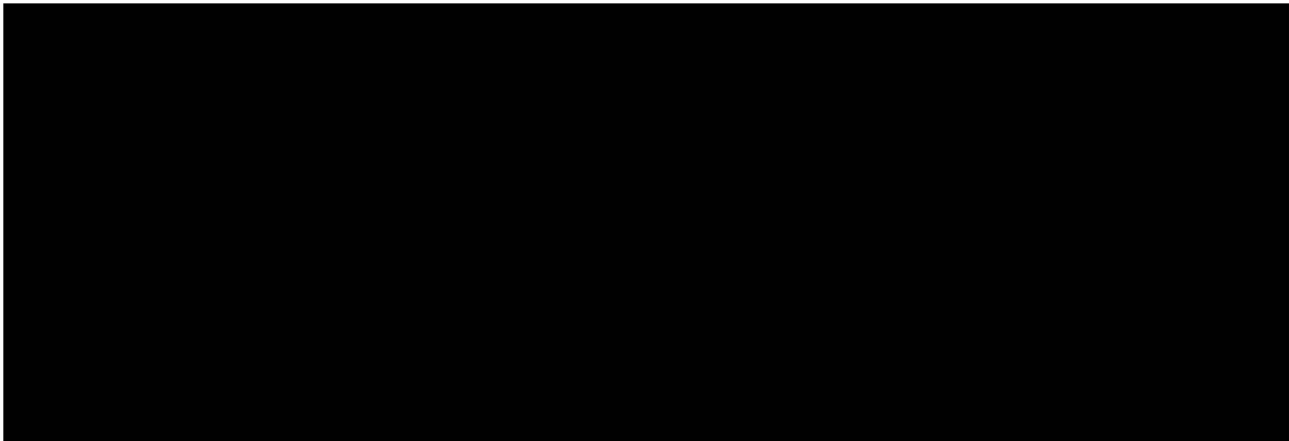
System Design:





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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	150,170	1,530,600
Middle Mile	9,013,214	1,650,000
Total	9,163,384	3,180,600

Project Budget Total: \$12,343,984

Match Percent: 25.8%

Projects Outside Recommended Funding Range:

- This project is within the funding range of the NOFA.

Outside Leverage	
Applicant is providing matching funds of at least	Yes



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20% towards the total eligible project costs?	
Unjust enrichment	This project is not receiving any Federal support for non-recurring costs in the area for which we are seeking the award
Disclosure of federal and/or state funding sources	
Budget reasonableness	



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Demonstration of need	



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Funds to States/Territories

States	Amount of Federal Grant Request
Louisiana	9,163,384

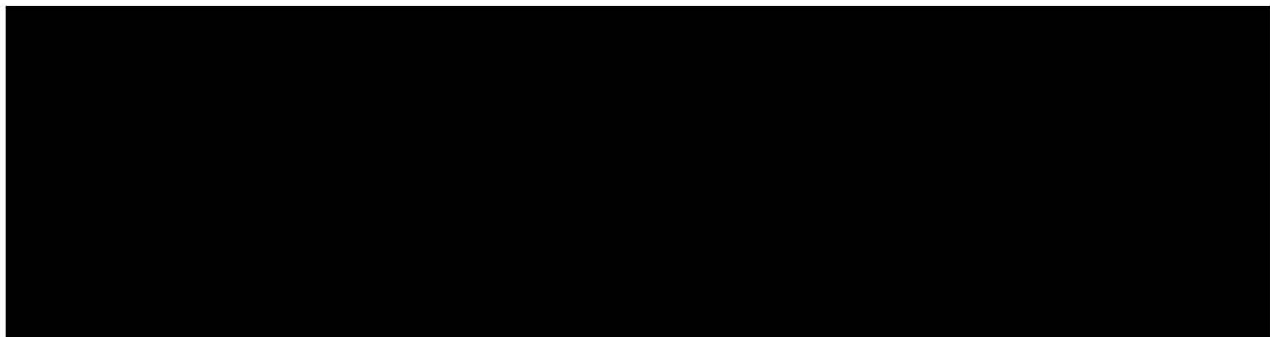
Funds to States/Territories Total: \$9,163,384

J. Historical Financials

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

K. Project Readiness

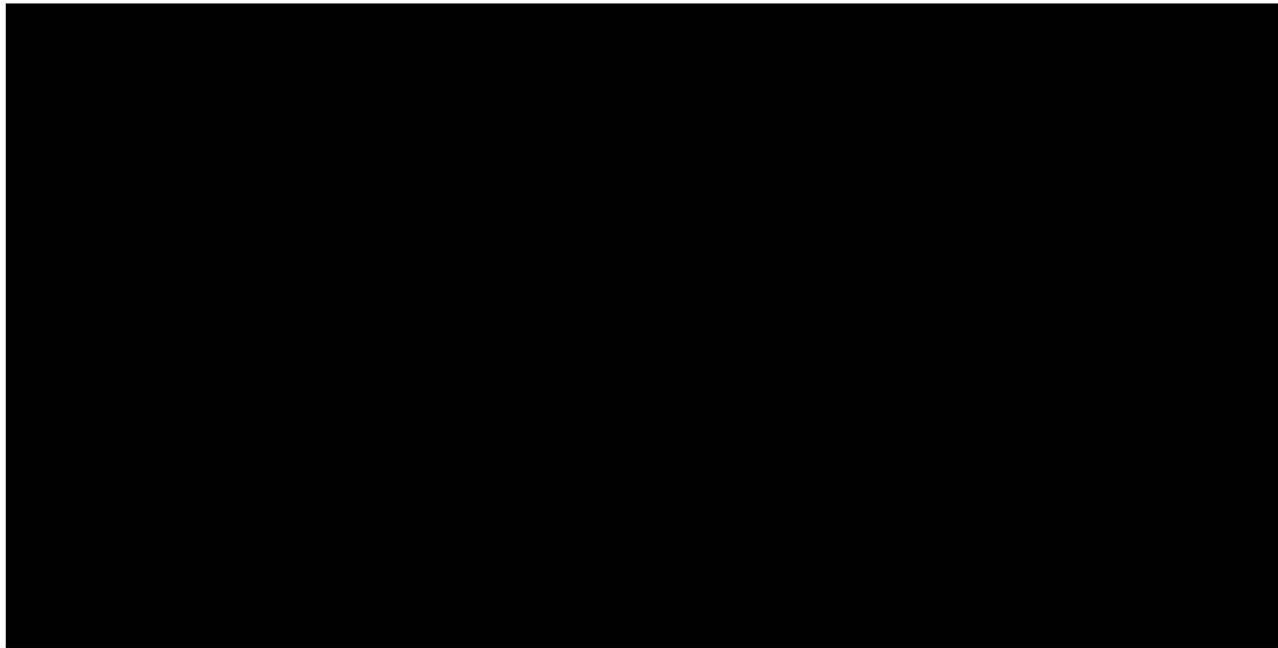
BTOP Organizational Readiness



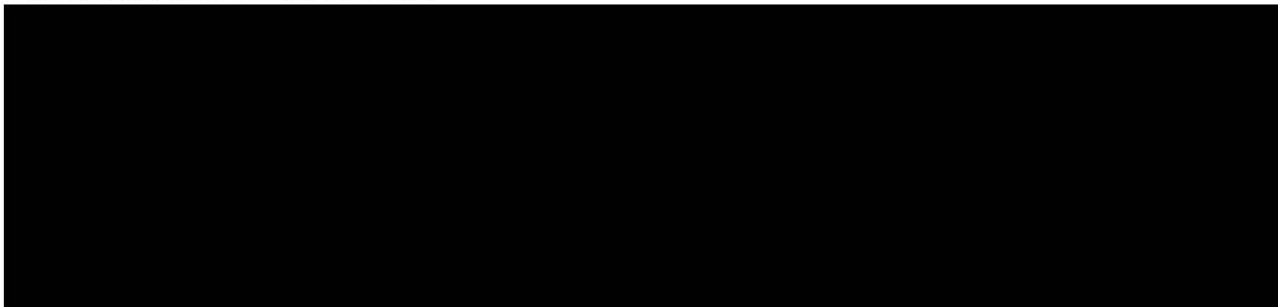


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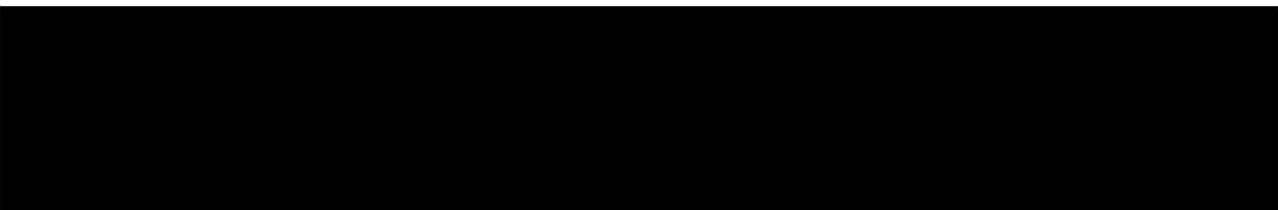
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Construction and Vendor Contracts



Customer Base



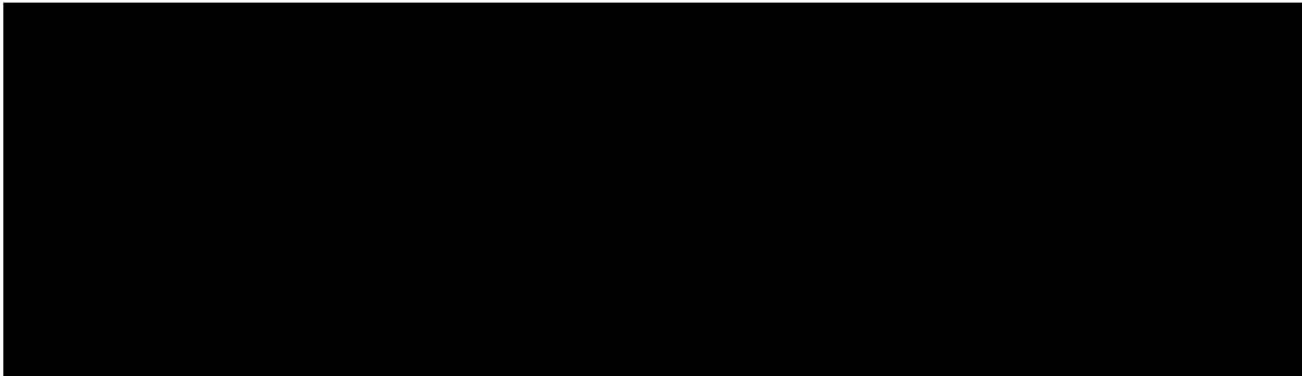


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Licenses, Regulatory Approvals and Agreements



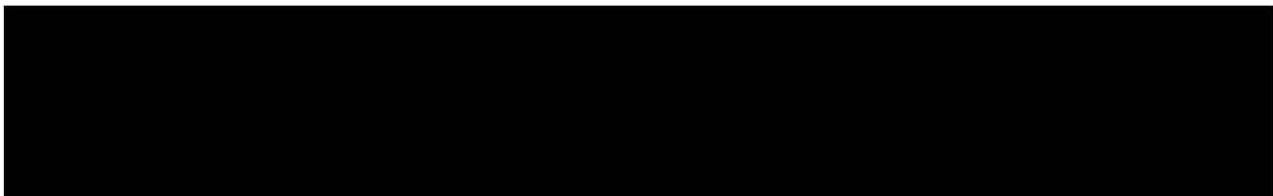
SPIN Number

Applicant
Nexus Systems Inc.
2904 Evangeline Street
Monroe LA 71201

SPIN 143027251

L. Environmental Questionnaire

Project Description



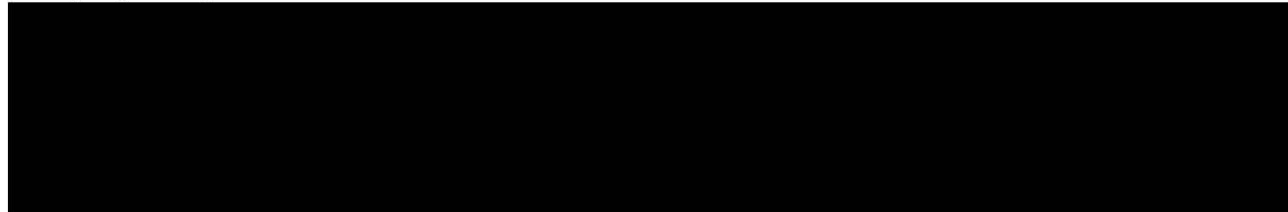


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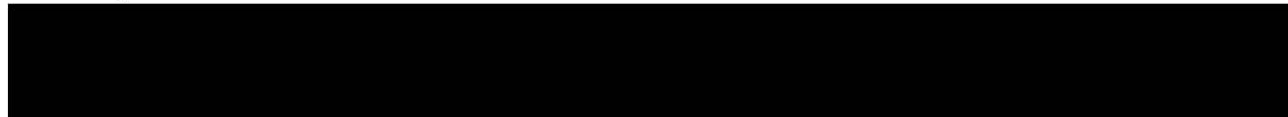
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Property Changes



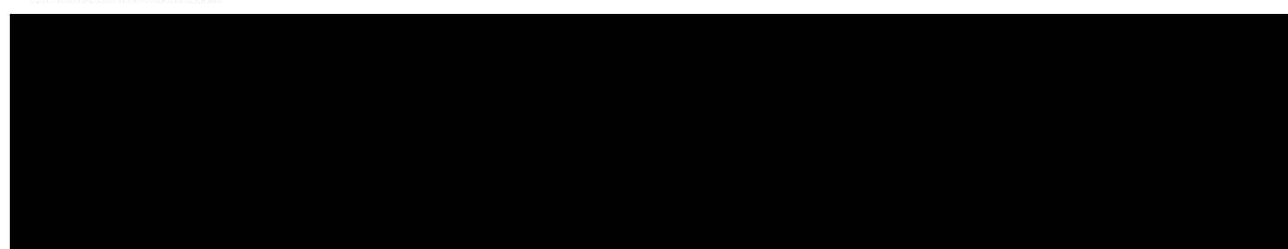
Buildings



Wetlands



Critical Habitats



Floodplain

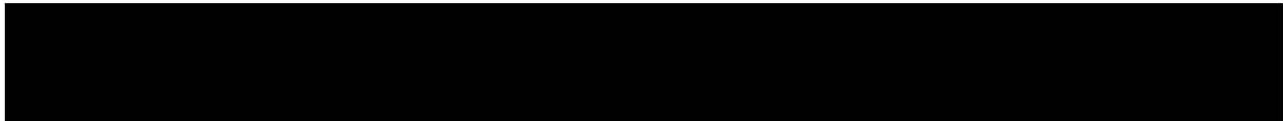


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Protected Land



Coastal Area



Brownfield





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