

Broadband USA Applications Database

Applicant Name: Columbia County Georgia IT

Project Title: Columbia County Community Broadband Network (CCCBN)

Project Type: Middle Mile

Executive Summary

Overview Columbia County, Georgia is a community in East Georgia that adjoins Augusta. The Northeastern portion of the county is relatively affluent, while the southern and western parts of the county are economically challenged and sparsely populated. The Northeastern section, which comprises approximately 40% of the County, has reasonable commercial broadband access while the remaining 60% is economically challenged and has very limited or no access. Due to the low subscriber densities in these areas, it is difficult for a commercial entity to justify the investment necessary to provide reasonable broadband access to these economically challenged communities. The State of Georgia has classified the county as an area in critical need of enhanced broadband connectivity. The objective of this application is to establish a network that will provide increased broadband and wireless access to the entire community, especially the economically challenged areas. The network will be used to improve the quality of life in these areas and enhance employment opportunities. The County government is proposing to channel its existing IT expenditures to support the establishment and maintenance of the new network. The network will be open to commercial users, governmental users, broadband service providers (both wireline and wireless) and anchor institutions. It will be operated for the sole benefit of the community, but it will be operated as an open network that can be used by commercial service providers to enhance and expand service, especially in areas that are economically challenged. The County has extensive project management experience with large complex projects and the operational experience necessary to help ensure continued success. It has also engaged a professional engineering firm with extensive experience designing and developing communications networks in the area, and it has the commitment of established construction firms and system integrators. Furthermore, commercial service providers, educational organizations, health care providers, public safety organizations, libraries and other anchor institutions have pledged their support and plan to use the network to improve the quality of life in the area. The Proposed Network Project

The Columbia County Government is requesting funds from the NTIA to establish the Columbia County Community Broadband Network (CCCBN). This project will enhance broadband and wireless access in the community through the use of a 200 mile fiber optic network and five wireless towers. The network will also support 60 free wireless access points in parks and other public spaces, with a focus on low income areas. The network will establish an open access broadband platform that will be open to :

1. Health Care Providers, including the Medical College of Georgia and local clinics;
2. Educational Organizations including the school system, technical college and libraries;
3. Public Service and Community Organizations;
4. Local municipalities and utilities;
5. Broadband Service Providers and Wireless Service Providers;
6. Citizens in economically challenged neighborhoods through free

community “hot spots”. In summary, the proposed network will establish an open broadband highway that will be available at a reasonable cost to commercial service providers to enable service to the underserved areas of the community for both wireline and wireless services. This broadband highway will also be available to anchor institutions such as government, public health, education, libraries, etc. at dramatically reduced rates that generally reflect the marginal cost of operation. The fiber routes will provide interconnection points for numerous areas which have been identified as both unserved and underserved according to the definitions of the NOFA. The project also includes new radio towers to improve public safety coverage and facilitate additional fixed and mobile wireless broadband services to citizens throughout the county. The network will initially be equipped with LAN and WAN networking equipment for use by anchor institutions. However, most commercial service providers prefer not to mix their traffic with traffic from other networks due to latency, system compatibility and network control concerns. To eliminate this issue, the network will provide dark fiber for the exclusive use of the users that need this capability. The network will facilitate competitive broadband services in areas with limited or no broadband availability by being an open platform available to any and all private and public service providers. The potential service providers will be responsible for the last mile connections to their customers and for operation of their equipment. Free wireless broadband access will be provided in libraries, community centers, and parks. Columbia County is estimated to contain approximately 33,000 households and 2400 businesses. The project has received overwhelming support from all county and city agencies, whose facilities will be connected as part of the project. Details on the types of facilities can be found elsewhere in the application, but there will be a total of approximately 150 facilities connected initially, including public safety entities, city and county government facilities, and critical community agencies. Additionally, the Medical College of Georgia, the State’s flagship medical school, has plans to build a data center in Columbia County. MCG has made its support known in terms of in-kind contributions and letters of support for the project. A complete list of partnering and supporting organizations is found in Question 41, “Government and Other Key Partnerships”. The CCCBN will provide redundant fiber infrastructure to service providers that will enable competitive broadband services to the unserved and underserved areas of Columbia County. The service providers will be responsible for the last mile broadband connectivity to their customers. The companies will also be responsible for providing and maintaining equipment to light-up the fiber strands leased from the County. The fiber connections will be owned, operated and maintained by Columbia County. Service providers and businesses will also be able to lease “dark fibers” from the network. The CCCBN is intended to be an open network. Its anchor tenants represent a partnership of both city and county government facilities. The fiber strands will be made available to any and all public or private service providers who desire to connect to the citizens of the County. The project will utilize a variety of technologies. To allow connectivity to the anchor tenants of the county, the project includes Cisco networking equipment to light up the new fiber strands and provide a county-wide network for governmental services. The new project will upgrade and extend the current capabilities of the County's network to public facilities throughout the county, along with public Wi-Fi spots. The school facilities will be networked together using electronic equipment provided by the Board of Education. This equipment will use the new fiber strands provided in the project and will be provided by the Board as an “in-kind” contribution toward the county’s matching funds. All the connections to the city and county facilities will be made via 100 Mbps or 1 Gbps Ethernet links. To extend broadband to unserved and underserved

county residents, the project provides fiber at interconnect points where such end-users are located. As a result there will be no electronic equipment in the initial network to provide connectivity to the end users; rather these users will be connected to the CCCBN in the future by independent service providers. Since the providers will be able to lease dark fibers to build their own networks, the technology standards will most likely consist of FTTH (fiber to the home) or HFC (hybrid fiber-coax) topologies. Wireless technology will also be deployed through the establishment of free, public Wi-Fi hot spots at city and county parks and public spaces. New towers will be constructed to improve public safety capabilities and increase opportunities for private wireless broadband service providers to connect to unserved and underserved county residents. The Columbia County IT department operates a robust network consisting of 9 sites linked to a newly completed data center. The staff holds numerous industry certifications including PMP, Cisco, N+, S+, and ITIL Foundation certifications. In the last 3 years the staff has completed over 30 projects totaling over \$7M in scope. The staff has over 260 years combined experience in IT projects. The infrastructure cost of the new broadband system is estimated at \$18,002,130. This figure includes all of the following: design, construction, and testing of the fiber optic cable; design and construction of the radio towers; electronic equipment to provide services to county and city buildings; and Wi-Fi equipment for public broadband access. This overall cost includes \$4,489,128 in matching cash and in-kind contributions (25% of the project total). Over the next five years, the CCCBN is expected to serve a potential subscriber base of approximately 9900 households throughout the county. The County has already received a commitment from an area service provider (Knology) to provide services in the Grovetown and Harlem areas as soon as fiber connections are available in these areas; as a result the construction is planned to begin in these communities. Using the guidelines published by the Council of Economic Advisors and the information posted on www.recovery.gov, it is estimated that the design, construction, and implementation of the CCCBN will create and retain the equivalent of 195 full-time jobs over the course of the project's life cycle.