Broadband USA Applications Database

**Applicant Name:**  ROCKBRIDGE, COUNTY OF

**Project Title:**  Connecting the Dots: Rockbridge Broadband Initiative

**Project Type:**  Comprehensive Community Infrastructure

_______________________ Executive Summary ______________________

The Rockbridge Broadband Initiative is an innovative public/private partnership that will bring broadband to more than 95% of the community anchor institutions (CAI), businesses, and residents in the countywide service area. Both the incumbent telephone provider and a local competitive phone/Internet provider have signed letters of intent to use the new infrastructure to deliver services. Current broadband use in the Rockbridge area is 41%, and wide areas of the county are unserved or underserved. To many people, a map of a rural area is a collection of widely scattered dots, suggesting remote areas and isolation. But to those who live there, the dots are homes, businesses and essential services that safeguard the well-being of the communities involved. Real people with real aspirations to be connected with their neighbors, their families and their safety and economic lifelines populate those dots. As new technologies have emerged, however, these lifelines are becoming more sophisticated. If an area cannot equip itself with the technologies that now drive the economy, it will inexorably decline into further isolation and distress. This project proposes to connect those dots with each other and with the wider economic world around them by constructing the backbone of a high-capacity broadband network through which a variety of private service providers can make their services accessible. To accomplish this, the three local governments (Rockbridge County and the cities of Lexington and Buena Vista), Washington and Lee University, and the two local providers have agreed to work together. The Rockbridge Area Network Authority (RANA) has been created to use broadband to accelerate job creation and business formation. This proposal will build 80+ miles of middle mile fiber connecting 53 CAIs, and a shared regional data center will be constructed in partnership with Washington & Lee University, which will be the anchor tenant for 80% of the center. The data center will be the only facility of its type in western Virginia addressing the long standing lack of backhaul and co-location facilities needed to attract and retain businesses and their associated jobs. Current broadband availability and use is too low to create an economic transformation of the community. This middle mile project will bring 'big' broadband 100 megabit symmetric fiber connectivity in the cities of Buena Vista and Lexington and Rockbridge County business and residential corridors. Located at the crossroads of Interstates 81 and 64, the area lies south of Staunton, and north of Roanoke, Virginia. Community anchor institutions consisting of public safety, primary, secondary and higher education, emergency communications, fire and rescue, federal, state and local government offices, libraries, and cultural and recreational amenities will have open network access to broadband under the non-discrimination and interconnections obligations stipulated in the NOFA. The RANA proposal of a regional fiber-optic network is a critical enabler for the transformation of the area economy from a depressed manufacturing environment to a dynamic entrepreneurial one. Developing an open-access, regional
broadband network coupled with the continued creation of a complementary economic development plan will allow the region’s economy to spawn new businesses, generate jobs, create wealth, and at the same time, protect the rural character of our region. All services to customers will be provided by private service providers and will include Internet access, video, telephone, video conferencing, business applications and multimedia advanced services. RANA’s responsibility is to build, operate and maintain the middle mile components of the network. The service-oriented approach focuses on lowering service provider costs by providing high performance two-way 100 megabit fiber connections through which services can be made accessible to all homes and businesses in the Rockbridge area. Construction of the network is ready to start in sixty days or less with an experienced partner design/build team prepared to submit a competitive proposal when a procurement request for proposals is issued. The cost of the system is $9,998,385, with a 30% match of $2,999,516. The match consists of $2,500,000 cash from local funds and $499,516 of in-kind services from Rockbridge County. The deployment of fiber in this project will pass within 500 feet of some 3,240 residences and 233 businesses. After the connections have been established for the anchor institutions, these businesses and residences will be the first candidates to subscribe to services available over the network. Based on the assumptions for take rates the project consultants have provided, we expect conservatively that at least 30% of the businesses (70) and 35% of the residences (1,026) will receive services through the RANA network within the first two years of operation. Overall, the Rockbridge area includes 1,480 businesses and 16,379 total housing units. Over a ten-year period, we expect last-mile build outs to extend the network to provide services to the entire area. Assumptions regarding take rates ten years out (80%) show that as many as 1,184 businesses and 13,103 residences will subscribe to at least one service available via the RANA network. This project addresses all five of the statutory purposes of the BTOP program: It provides middle mile connectivity to at least 95% of the anchor institutions, most of which are in unserved and underserved areas. And in so doing, it establishes the nodes from which last mile connections can be made directly to businesses and residences subscribing to private service providers that have partnered with the RANA. It provides direct access and support to schools, libraries, medical and healthcare providers, institutions of higher learning, and other community support organizations in its middle mile deployment. It includes at least 95% of the public safety agencies, solving decades-old communications difficulties in the first deployment. By providing linkages for last mile connections at relatively low cost throughout the area, it stimulates broadband usage and economic development by providing an infrastructure that will support both incumbent business growth and new business startups. In addition, the proposal addresses all seven of the comprehensive community infrastructure (CCI) priorities established by the NTIA: (1) At least 95% of the 53 community anchor institutions in this project will be linked; (2) RANA is a public/private partnership of governments, higher education and private business representatives and service providers; (3) The Rockbridge area is economically distressed; (4) Broadband services will enhance the linkages between the community college and all other community service agencies in the area; (5) At least 95% of all public safety entities in the area will be linked; (6) Four service providers have already indicated the intent to provide services on the RANA network, and this number will climb rapidly within three years; (7) And 30% of the project resources consist of local and in-kind contributions, demonstrating the community’s commitment to accomplishing the project even in these challenging economic times. Capacity, speed, reliability, universal access and cost effectiveness guide the development of the Rockbridge Area Network. The active fiber-rich design of RANA provides ample
capacity for virtually any needed bandwidth. The standard residential and business connections will be 100 megabits, using a dedicated connection between the customer and the neighborhood fiber switch. Unlike earlier passive optical networks (PON) that typically share 1 Gigabit of bandwidth among 32 users for an average capacity of 30 megabits, customers using services on the RANA network will not have to share bandwidth with neighbors. This means the network will be able to provide guaranteed quality of service for high bandwidth services like HD TV, and the standard 100 megabit connection is capable of delivering four or five HD channels simultaneously to a household -- something no PON is able to do.

The new partnerships forming as a result of this stimulus funding promise to spur both stabilization and expansion of the Rockbridge area economy. Using estimates recommended by the Council of Economic Advisors, we expect to see some 109 new jobs created, including 70 direct and indirect, and 36 induced job years. In an area with a total population of around 35,000, this is no small matter. When compared with larger and more heavily populated areas, this project will address a major proportion of the communications needs of the area, and facilitate the connection of all of the dots on our community maps.