

Broadband USA Applications Database

Applicant Name: Communications Infrastructure Group, LLC

Project Title: Dickson Broadband Network

Project Type: Middle Mile

Executive Summary

a) Opportunity the proposed system seeks to address. The Dickson Broadband Network will consist of a network of 6 telecommunications towers in rural Dickson County, Tennessee which are classified by the state of Tennessee as underserved. The construction will be arranged by the Communications Infrastructure Group LLC (CIG), an Atlanta-based developer of multi-provider communications infrastructure, in coordination with strategic partner, WFI, a premier network infrastructure design, deployment and maintenance service provider. Pinpoint Engineering LLC, another applicant for a regional system, has committed to provide interconnection services to this tower project with annual service availability of 99.99%. It has been concluded that construction of the planned tower network will encourage not just the one tower tenant committed to provide enhanced services in the area but up to a total of 6 service offerings at each tower location. These services will provide faster, more robust and more widely available data transmission and voice services to the residents, businesses, critical community facilities and anchor institutions in this underserved rural area, including vulnerable population. It is widely recognized that the installation of these towers will result in improvement in delivery of healthcare, public safety, local government services and educational offerings. It will also provide a crucial economic development tool to an area in need of stimulus and will facilitate modern-day job searching. b) General description of the proposed funded services areas. The immediate proposed funded service areas are 6 rings 1.75 miles in diameter located in rural and underserved Dickson County, Tennessee. Within each ring's 1.75 mile radius, the average population is 332 households (average population per ring is 876) and an average of 20 businesses are passed. Please see the responses to questions 12 and 14 for demographic and economic detail regarding tower network coverage. The benefits of the project are also accurately understood in the context of the demographics and economics of the individual county and regional populations they would serve. Vulnerable rural populations in this underserved county in Tennessee would benefit from the resulting improvement in delivery of healthcare, public safety, educational and local government services. c) Number of households and businesses passed. The number of households and businesses located within the service area of each of the 6 rings and their location by census block(s) are detailed in the response to questions 12 and 14 respectively. In aggregate, 1,997 households (5,257 population) and 122 businesses are located within the 6 tower rings proposed for construction in Dickson County. d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project. The 6 towers in Dickson County will serve 18 critical community facilities, community anchor institutions and public safety entities. e) Proposed services and applications. The proposed tower network will provide data transmission and voice services on a broader and faster basis to underserved

areas in Dickson County, Tennessee and the critical community facilities and anchor institutions located therein. Installation of these 6 additional towers would benefit underserved vulnerable rural populations through improvement in delivery of healthcare, public safety, local government and educational services, and stimulate economic development and job creation and skill-building. f) Non-discrimination and interconnection. CIG's proposed Tennessee tower network will offer an open and technologically neutral telecommunications network for all "for profit" and "not for profit" broadband providers to use to offer service to unserved and underserved rural areas. This system meets all interconnection, non-discrimination, and network management practice obligations established by the Notice of Funds Availability (NOFA) and the supporting Grant Guidelines for the BIP and BTOP programs. CIG proposes multi-tenant towers through which consumers can access lawful internet content through their choice of providers in compliance with the guidelines of the FCC's Internet Principles. These towers will be capable of maximizing the number of carriers per tower, though still complying with all structural and zoning requirements. By proposing multi-tenant towers, CIG provides competition among network providers and servicers and gives the end user a variety of internet applications and devices to choose from. By offering an agnostic shared platform, CIG would reduce the cost for all competitors to deploy their services. g) Broadband system to be deployed. Enhanced breadth and speed of existing area broadband systems will be facilitated by the erection of 6 telecommunications towers that are 250 feet tall with collocation sites for up to six providers. These facilities will be enhanced by fully upgradable and IP capable attendant interconnection from Pinpoint. The Dickson Broadband Network provided by Pinpoint will utilize Level 3's Giga POPs for Tier 1 Internet access. The initial system will have one common carrier channel active with the ability to provide 150Mb of IP connectivity per channel and each common carrier microwave system is capable of delivering 6 channels for an ultimate internet capacity of 900Mb. The backbone will consist of 7 hops using multiple 18 and 6 Gigahertz common carrier microwave systems and layer 3 IP routing technology for subscriber connections. The proposed system will interconnect with the Level 3 Gigabit internet backbone at their POP sites in Nashville, Tennessee. Each serving area is connected to the backbone via a ring network of microwave tower sites so that all sites will maintain connectivity to the upstream Tier 1 internet provider should a microwave system fail. h) Applicant qualifications. The proposed project would be realized through the financial and technical collaboration of Communications Infrastructure Group LLC (CIG) and WFI. CIG is an Atlanta-based developer of multi-provider communications infrastructure focused on telecommunications tower design, construction, acquisition and management throughout the Southeast. WFI is a broadly experienced network infrastructure design, deployment, program management, quality assurance and maintenance service provider. WFI has engineered and successfully, rapidly and cost-effectively developed more than \$2 billion in telecommunications infrastructure since 1994. Pinpoint Engineering LLC, which will make broadband services available to providers, is in the process of building a national broadband network with data centers and has expertise and experience in all manner of engineering for outside plant, switch, transport, and project and operations management. i) Overall infrastructure costs of the broadband system. The anticipated infrastructure costs of the design and construction of the towers and the Pinpoint Engineering LLC interconnection services needed to provision broadband are \$273,754 per tower site for a total of \$1,642,524. This amount includes Pinpoint's average cost per site of approximately \$45,000 for radio equipment, shelter and battery backup. j) Overall expected subscriber projections for the project. It is anticipated that initial subscriber uptake will be 20% for the

first year and reach 80% of the total population of the service area by the end of year 5 after deployment. This conclusion reflects an industry-standard and is consistent with estimates made by other proposed broadband service providers. k) Number of jobs estimated to be created or saved as a result of this project. This tower project will have direct and indirect impact on jobs in the area. It will directly create jobs involving the manufacture of 6 towers and the equipment associated with their operation, including the transport and installation of the towers and components, clearing the land and providing access and utilities to the site and tower erection and equipment installation. Further, CIG estimates that each of the 6 towers to be constructed and installed will create or sustain numerous jobs per year in each of the two years of the projects' first two phases. This includes work for road grading, fencing, electrical lines, site preparation, landscaping, and equipment rental. The project will also directly create demand for ongoing maintenance and expansion by Pinpoint and other service providers. The infrastructure program proposed by CIG with services to be provided by its carrier partner will bring all broadband services within the reach of Dickson County citizens and institutions, and indirectly create jobs. The availability of broadband will immediately stimulate demand for all internet-based services which are currently not possible. These broadband services will immediately make the area more attractive for economic development and create an opportunity for personal professional skills development. The unemployed will have distance learning, training and retraining opportunities, and can use the internet to perform job searches, or even start their own business. Broadband will quickly bring the world to the door of the Dickson County and job creation and economic growth will come with it.