CharMeck Connect is a middle-mile project, designed to deploy critical, middle-mile infrastructure in an effort to provide wireless, broadband access to the area’s community anchor institutions, community colleges, libraries, housing entities, governing bodies and public safety agencies. The CharMeck network provides major benefits for public safety including increased bandwidth and anticipated lower monthly recurring costs. The additional bandwidth will allow public safety agencies a new ability to stream live video from first responders and provide situational awareness to our Communications Facilities, and command centers. With this network, designed to meet public safety needs during in even the most critical circumstances, public safety entities will always have priority. The project will be executed in cooperation with a commercial business partner, who will deploy LTE technology, provide system operation, maintenance support, provisioning, billing, and customer support. In addition, the project will address the sharing of networks, roaming, public safety priority of service, and provide a low cost tier of service for community colleges, schools, medical providers, community anchor institutions and libraries.

The 526 square-mile service area of Mecklenburg County has a population of 890,515 with 273,416 households and 28,305 businesses with an unemployment rate of over 12 percent. Over 62,000 area residents have lost their since the recession began. The service area includes 346 community anchor institutions including 3 community colleges, 176 K-12 schools, 24 libraries, 4 medical providers, 10 public safety entities and 75 other government facilities. Each of the municipalities in the county Charlotte, Cornelius, Huntersville, Davidson, Matthews, Mint Hill, and Pineville will be provided service as part of the project with an estimated government subscriber rate of more than 9,000. Public safety organizations will have access to video streaming, the eventual integration into seamless command in a controlled environment with mapping, integrated CAD, and reporting. In addition the two state colleges covered by the services area, the University of North Carolina Charlotte and Central Piedmont Community College, will have a potential subscriber rate of 77,000. Students at these institutions of higher learning will have increased access to online learning environments, the fastest growing service at each of the colleges and critical to the future success of our educational institutions and the marketability of our students in the job market. A number of key institutions and organizations are partners in the CharMeck Connect project to provide support or access to future network subscribers. For example, Mecklenburg County is providing a trained and certified project manager to assist in project oversight, as well as being an anchor tenant that brings more than 4,800 subscribers. Other partners, who together will bring up to 70,000 subscribers include Central Piedmont Community College; Charlotte Housing Authority; Mecklenburg County Public Library, the University of North Carolina Charlotte, the Town of Cornelius, the Town of Matthews and Matthews Police Department, the
Town of Davidson, and the Town of Huntersville. The architecture of the proposed CharMeck Connect network is engineered to carry multiple applications simultaneously in complete security. This multi-service network provides critical communication circuits for schools, public safety backbones, government, SCADA, telemetry, video surveillance and broadband for residential and commercial users. This network will allow internet service providers and their residential customers, commercial customers, government, public safety, education and medical facilities to acquire broadband services. Our proposed network provides a level playing field for all. Previously, public safety demanded its own network for control and reliability. Schools had a separate set of criteria to make sure they could receive e-Rate subsidies. There was no way dedicated and encrypted government connections could co-exist with residential broadband services. The proposed network and supporting architecture expansion and buildout allows the community to build and share one network that solves each of their connectivity needs. The design utilizes 30 total sites; 29 Fire Station sites and the North Site of the P25 Overlay. All sites have 80' monopole towers except for the North site which would be located at the 120' height. The system provides on-street and in-car portable coverage, 95% reliability (30 sites) modeling a 250mw in vehicle modem with external antenna. These system parameters are derived using a generic traffic model includes the following public safety applications: Text Messaging, Database Inquiries, Computer Aided Dispatch (CAD), Automatic Vehicle Location (AVL), Image Transfer (Mug-shots & Finger prints), and Field Based Reporting (FBR). Additionally, the traffic model also includes light usage of the following broadband applications: Email, Web Browsing (Intranet/Internet), and Streaming Video. The City of Charlotte has managed its finances carefully and conservatively throughout the current economic crisis. Each year has seen a significant decrease in expected revenue, yet the City has not had to lay off employees of significantly impact citizen services. In addition to being fiscally responsible, their experience, coupled with the experience of the commercial partner, ensures their ability to manage the implementation and ongoing operations of this project. The CharMeck Connect project is requesting $16,996,490 in broadband stimulus funds and will provide a 25.8% match of $5,896,200 for a total project cost of $22,892,690. Without the support of these stimulus funds, financial constraints will prohibit the implementation of this project and will leave the public safety entities and institutions of higher learning in our services area without the benefits associated with the project. It is expected that the construction component of the CharMeck Connect project will create 10 jobs immediately, but the ongoing impact will be the jobs created by the services provider for the continued operations of the project. Jobs involved in the ongoing operations will include customer service reps, provisioning technicians, and system support technologists for a total of 14 newly created, long-term jobs.