Applicant Name: LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM AUTHORITY

Project Title: The Los Angeles Public Safety Broadband Network: LA-SafetyNet

Project Type: Comprehensive Community Infrastructure

_______________________ Executive Summary ____________________________

LA-SafetyNet will deliver instant, mission-critical information to 34,000 first responders who protect the lives and property of 10,000,000 residents throughout the Los Angeles region. Problem Statement The existing mobile data systems used by public safety first responders in the Los Angeles Region severely limit the amount and type of information that can be accessed and generated by field users. Access to a highly reliable broadband data system is necessary to support the modern, data-intensive, situational awareness applications that are needed by fire and law enforcement personnel. Background The Los Angeles area is one of the most demographically and geographically diverse areas in the country. Our region is home to 10 million residents from more than 140 countries who speak over 200 different languages. Our geography includes mountains, deserts, valleys and 70 miles of ocean coastline. The elevation of our land varies from sea level at the coast to 10,000 foot high mountains. The region is home to the second largest city in the United States and two national forests. Throughout this diverse land, the lives and property of our residents are protected by 50 law enforcement and 31 fire service agencies that use a variety of voice and mobile data communications technologies. Unfortunately, due to the variations in voice radio technology and spectrum, the ability of public safety agencies in Los Angeles County to talk to each other during routine or emergency incidents is limited. Additionally, many of our departments have deployed traditional public safety mobile data systems, but their limited bandwidth has restricted our users to simple character-based messaging and database queries.

Partnerships To address these challenges, the Los Angeles Regional Interoperable Communications System (LA-RICS) Authority was formed to explore the development of a single, shared voice and data communications system for all public safety agencies within the greater Los Angeles region. Initial feasibility studies indicated that by leveraging the various independent agency efforts currently underway, a shared regional communications system would not only be possible, but would best meet the needs of the entire regional public safety community. Consequently, the City of Los Angeles, the County of Los Angeles, the Los Angeles Unified School District and 82 other municipalities and public sector entities within the greater Los Angeles region joined the Authority. The purpose of the Authority is to construct, own, operate and maintain public safety mobile voice and data systems. A 17-member Board of Directors, comprised of first responder stakeholders from the greater Los Angeles region, governs the Authority. Based on the 700 MHz broadband waiver we received, LA-RICS has put together a comprehensive plan to develop a robust LTE network that provides advanced mobile data features with the reliability of a traditional public safety system. Within the LA-RICS region, this system will directly impact 1,483 Community Anchor Institutions (CAI), including 422 public safety sites. System Design LA-SafetyNet will provide LTE broadband services to first and second responders. The network will enable...
'desktop extensions' for users' allowing all of the applications currently used on existing wired networks to be delivered in the field. Computer-aided dispatch, law enforcement queries, real-time streaming video, medical telemetry, patient information and tracking, geographical information systems and a host of other applications will be supported by the network. In the event of regional event requiring mutual aid from outside Los Angeles County, responding agencies will be provided broadband network access on LA-SafetyNet. Additionally, we will provide middle mile broadband services via the fiber and microwave network that connects LTE base stations to the Core switching elements. Middle mile access will be offered to fire, EMS, law enforcement, hospitals and other community anchor institutions throughout the Los Angeles County wireless service area. LA-SafetyNet includes 290 LTE base station locations distributed to provide service throughout Los Angeles County. The base stations are interconnected via existing or new fiber or microwave links. To achieve highly reliable service, three redundant core network elements (Evolved Packet Cores) will be deployed at existing data centers. Each LTE base station will be deployed with existing or new backup UPS and generator power and redundant HVAC systems. LA-SafetyNet is designed as a scalable wireless network architecture that can be seamlessly expanded to support increased capacity wherever needed. Our network is also designed to be integrated into any future regional and national LTE efforts, such as the proposed Border Broadband Initiative. Costs: The overall cost of the project is estimated to be $245M. Of this amount, nearly $73.5M is cash and in-kind contributions, which results in a request for funding of $171.5M. Of the total budget, $216M will be used towards the Last Mile system and $29M towards the Middle Mile system. Deployment: LA-SafetyNet will be deployed in three years. The first year will be spent procuring equipment and services, securing sites and initiating the zoning, permitting, and environmental compliance process. In the second year, we will build new towers and develop additional sites as needed for broadband equipment, as well as deploy sites that are ready for implementation. In the third year, the base stations and ancillary equipment (microwave, generators, UPS) will be deployed to complete the system. Initially, it is expected that more than 34,000 LTE modems will be deployed for use in laptop computers. However, it is anticipated that the number of modems could double over the eight year operational period. Additionally, if affordable handheld devices become available during that period, the user base could exceed 100,000. Regional Impact: It is estimated that this project will generate 292 direct job years, 1,100 indirect job years, and 789 induced job years. In addition, LA-SafetyNet will create a large, new market for public safety broadband software applications, which could result in substantial innovation and additional jobs that have not been quantified. Overall Benefits to the Region and Nation: LA SafetyNet will provide the highly reliable broadband wireless services required by the 34,000 public safety personnel throughout Los Angeles County. It will enable first responders to instantly access mission critical information that can dramatically improve the outcomes of our emergency responses as well as provide access to new applications that will revolutionize and enhance public services and community protection. We will also work to implement LTE broadcast voice over IP (VOIP) push-to-talk capabilities that meet the demands of public safety users. Additionally, if funded, LA-SafetyNet will be a national incubator for public safety wireless infrastructure and data application innovations. Our region’s large geographic size, tremendous diversity and broad user base will be an attractive test-bed for innovative public safety applications. Our system will become a national model and we will commit to sharing and providing guidance, implementation and operational insights as well as lessons-learned to the PSST and other regional initiatives. Development of LA-SafetyNet will not only significantly
improve the abilities of first responders in the LA region, it will provide a wealth of information that will improve broadband deployments throughout the nation.