Applicant Name: ORANGE, COUNTY OF

Project Title: Connected OC (Orange County Regional Wireless)

Project Type: Comprehensive Community Infrastructure

Opportunity: The Connected OC Project builds upon the findings of Orange County's 2008-09 Wireless Broadband Feasibility Study (see attached, CIO Regional Wireless Business Case (Exec Summary Final, 03-10-09).pdf). The study concluded that the need existed for a regional, interoperable, high-speed data communications network for first responder operations. Before the Recovery Act, a key piece necessary for a regional strategy to public safety broadband was missing "how to interconnect all of the individual jurisdiction's current and future public safety networks into a larger, interoperable, and better network. The study also identified economic benefits that could be derived directly from deploying broadband to areas where it was underutilized. At the core of Connected OC are two core broadband components designed to leverage ARRA funding to address these needs. 1. Connected OC " Middle Mile Interconnection of Public Safety, Medical and Healthcare Provider Anchor Institutions: For this component of the Connected OC project, the County of Orange will build and maintain a wireless, middle mile, broadband backhaul network that will interconnect the County's public safety agencies to each other, and to local, State of California or Federal computer systems and the Internet. The project aims to substantially upgrade service and bring County public-safety institutions into the next era of networking. Public Safety " Service Areas: - 16 County Sheriff facilities servicing unincorporated areas and - 31 City police departments - 3 County Probation offices - 6 County Jail facilities - Orange County Airport - Orange County Transit Authority police - Orange County fairgrounds - Orange County Fire Authority (serves unincorporated areas and contract cities) - 1 University of California police department - 1 Community college police department - 1 School district police department - 2 neighboring county police departments (Los Angeles) - 6 State community anchor institutions - 10 Federal justice agencies (FBI, DEA, INS, IRS, Secret Service, US Marshals, US Probation) Public Safety " Network Type: This broadband network will consist of 80 point-to-point wireless links, capable of 50 Mbps each, using licensed microwave technology. It will support two-way data transmissions with enough aggregate capacity to support the provisioning of broadband service to all public safety agencies in Orange County. Local police, fire and emergency medical services will use it as a gateway to extend the reach of their existing or planned 4.9 GHz public safety networks to neighboring cities, County, State and Federal agencies. Looking forward, this technology will lend itself to interoperable connection with future public safety technologies, such as 700 MHz networks of the type being promoted by the FCC's National Broadband Plan. 2. Connected OC - Middle Mile / Last Mile Wireless Broadband to Economically Distressed Areas (Red Zone Network): This component of Connected OC will build the necessary Middle Mile and Last Mile wireless broadband network infrastructure to provide low-cost Internet access to twenty square miles of economically distressed areas of Orange County, or so called "Red Zones". Red
Zone Network " Service Areas: The Census Tracts in 7 cities that contain significant Red Zone populations give a service area of 20 square miles and a combined population of approximately 250,000. Red Zone Network " Network Type: This broadband network will use Wi-Fi (802.11x) and/or WiMax wireless mesh technology for middle mile and last mile connectivity. At 40 AP"s per square mile (assuming Wi-Fi), up to 800 access points will be mounted on available light poles, buildings and towers. Final design will be determined as part of the RFP process. A combination of wireless mesh wireless and wireline circuits will provide the backhaul network. Red Zone Network " Partnering with Community College and Educational Anchor Institutions: North Orange County Community College District, School of Continuing Education, Orange County Digital Media Center (NOCCCD), and Orange County Department of Education (OCDE) serve as connecting agencies to Orange County school districts and community college districts. They have applied for BTOP grants for Sustainable Broadband Adoption and Public Computing to support their many educational and workforce development programs. The County has agreed to partner with these anchor institutions by giving them access to the wireless broadband network we will build, extending the reach of their public computing centers into homes within distressed areas. This would further leverage Stimulus funds to improve the economic prospects of these vulnerable populations in Orange County. Programs would include Alternative and Correctional Education, Outdoor Science, Regional Occupational Programs, Special Education, Child Care Services and Student Programs. Public-Private Partnerships: These projects will deploy broadband infrastructure by incorporating public-private partnerships. Government partners will include the County of Orange, Orange County Sheriff, City of Santa Ana, North Orange County Community College District Digital Media Center and the Orange County Department of Education. One or more private network partners will be contracted to build the networks by competitive bid process. Orange County Sheriff will operate and maintain the Public Safety Network, while a private network partner will operate and maintain the Network for Economically Distressed areas. Ability to Implement and Operate Network: During the course of completing its 2008-09 Wireless Broadband Feasibility Study, the County has become well educated on wireless business models, revenue and costs, conceptual architectures and operational models based upon research with wired cities and industry-leading network providers. This information served to form the County"s proposed strategies for deploying broadband in this project, including government and private sector drivers, governance structures, cost and operational assumptions. In operating a broadband network, the County would take a combined approach. The Office of the County CIO has a fully staffed Project Management Office with expertise in leading large scale IT programs using PMBOK methodology and portfolio tracking tools to manage budget and resources. For subject matter expertise, would rely upon professional wireless network systems integrators for design, RFP development and deployment of the network. The County would select companies with at least 20 years of combined experience in designing and implementing large scale wireless broadband networks for government and commercial clients for this purpose. The County Sheriff"s Communications division will also assist the network provider in design and deployment. For ongoing operations and maintenance of the network, the Sheriff Communications division would maintain the public safety network and the County would subcontract operations of the Wi-Fi network to a qualified network provider. Costs: Overall infrastructure costs of the network are $11 million, itemized as follows: Microwave infrastructure for Countywide Public Safety Network: $7.7 million Wi-Fi infrastructure for Red Zone Network: $3.3 million Program Sustainability: The County can commit to meeting the match requirements of the infrastructure, and pay for its
ongoing operations and maintenance costs, based on two basic premises: Public Safety (Microwave infrastructure): Sheriff will cover the cost of the one-time $2.1 million match requirement out of operational budget. Operational costs expect to be offset by costs avoided for not having to pay recurring charges for wireline circuits that would otherwise be necessary. The Sheriff will consider chargeback models for recouping costs long term from cities and other municipalities. Red Zone Network (Wi-Fi infrastructure): County will pay up-front costs associated with the $900,000 match requirement, but expects this and operational costs to be offset by charging residents a low-cost "connect" fee of $15/month per household for Internet access. The County expects it could recoup out-of-pocket costs by signing just 5,000 subscribers. In-kind support would be sought for a low-cost computer program so subscriber households could take advantage of the low-cost Internet service. Job Creation: Based on the methodology suggested by President's Council Of Economic Advisors ("Estimates Of Job Creation From ARRA, 2009"), we will create the following jobs as a result of this project: - 11 Direct Job-Years created. - 109 Indirect Job-Years created.