Executive Summary

Southern Net NM is a middle-mile fiber optic broadband network in Dona Ana County that will directly serve 81 community anchor institutions, with a total market of 58,361 homes and 4,172 businesses. Through partnerships with one or more last-mile providers, Southern Net NM expects to reach 10% of the total market by year 3. The project will serve communities where little to no investment has been made in high-speed broadband to date. These include 37-HUD designated colonias, the rural community of Hatch, and the high-growth area between Las Cruces and El Paso/Juarez. As an open access network, Southern Net NM will operate on a nondiscriminatory basis, allowing competitive service providers to interconnect under competitively neutral terms and conditions. This $15,967,356 network is estimated to directly create 168 jobs. Problem Statement: Dona Ana County is a classic example of how the free market can leave behind geographic areas with low profit potential. While the City of Las Cruces is relatively well-served by the local incumbent carrier, the level of service drops precipitously in the smaller communities that border Las Cruces to the north and south. Southern Dona Ana County, the high-growth area between Las Cruces and El Paso/Juarez, also has low levels of service in the range of 1.5 mbps, and the Village of Hatch, in rural northern Dona Ana County, relies mainly on dial-up at the residential level. While sufficient population density exists in many areas to support higher levels of service, it is likely the demographics of these communities that discourage investment. Dona Ana County is an extremely economically distressed area. Median household income in 2000 was $29,808, 70% of the US average of $41,994. Individuals below poverty made up 25% of the population, more than twice the national average. Fourteen of the county’s 32 census tracts have even poorer indicators than the county as a whole, and are characterized by high percentages of Hispanic/Latino residents and Spanish-language speakers. The entire region lacks affordable, high-bandwidth services for community anchor institutions and businesses. Outside of Las Cruces, business-level services are currently provided by the incumbent carrier primarily in the form of T1 lines, which range from $350 to $1200 per line in monthly service charges alone. In addition to the fact that T1 pricing remains out of reach for many, T1 lines are increasingly inadequate for today’s web based and high-technology applications. Community anchor institutions in Dona Ana County, notably the schools, colleges, health providers and public safety entities, are struggling to obtain adequate bandwidth to support current needs. Finally, competition and affordability remain obstacles to broadband adoption. According to FCC data, broadband subscribership is 39.5% within the Southern Net NM service area. The lowest rates, expectedly, fall outside of the City of Las Cruces in the rural and poorer areas of the County. Low incomes, high poverty rates and low educational attainment contribute to this statistic, as do high prices for services. With a single incumbent controlling middle-mile infrastructure and transport costs, very little competition exists for
last-mile services. Prices are unlikely to decrease in the absence of meaningful competition, stifling broadband adoption in this economically-distressed area. Proposed Solution: Southern Net NM's fiber routes travel through, but extend far beyond the City of Las Cruces, into areas that have seen little investment in high-speed broadband. The network will stretch from Hatch in the north to Santa Teresa in the south, and includes east-west laterals to serve colonia communities such as Chaparral and Organ. This essential backbone will enable higher levels of service in the poorer and more remote areas of the County, through middle mile services provided by Southern Net NM, and through last-mile partners who will reach end users. By employing fiber optic technology, Southern Net NM will provide an abundance of capacity that overcomes the 'bottleneck' to enable uses currently not supported by T1/T3 lines. The proposed network will consist of a Fiber Optic based Metropolitan Area Network (MAN) using Layer 3 MPLS over Ethernet technology. The main network backbone is 36-strand fiber with core nodes connected to seven aggregation points with 1GE links. This network will enable distance learning and advanced technology applications at the region's schools and community colleges, high-bandwidth services for economic development and technology transfer, and computer and internet access for colonia populations. In addition, Southern Net NM will offer extremely high levels of security and reliability for next generation public safety applications and for telemedicine and Electronic Medical Records at hospitals and rural health clinics. The project will interconnect 81 community anchor institutions, including 4 community college campuses, 1 Hispanic-serving state university, 27 schools, 4 libraries, 7 health care facilities, and 23 public safety entities, including the County's primary 9-1-1 Public Safety Answering Point (PSAP) Southern Net NM will also provide an affordable and more robust option for transport and wholesale services, which will be open to any qualified service provider. By providing more bandwidth at lower prices, last-mile providers can grow their customer bases and service areas, and through reduced costs and increased competition, help create a more affordable last-mile environment for all. Southern Net NM includes a last-mile strategy with a reputable last-mile service provider, reaching a last mile customer base of 5,836 homes and 417 businesses in 3 years. Qualifications and Partnerships: The Southern Net NM organizational model is based on County ownership of the infrastructure, with guidance provided through a Steering Committee comprised of key project partners. The Dona Ana County Information Technology and Finance Departments will oversee and ensure proper monitoring and compliance of the project. The County will be advised and assisted by its broadband consultant, Crestino Telecommunications, a highly experienced New Mexico firm that plans and designs networks. Dona Ana County will rely on the expertise of private sector partners to oversee Project Management, Asset Management, Marketing and Public Relations and Service Provider Management. While final selection of private sector partners will be subject to federal, state and local procurement guidelines, Dona Ana County has identified qualified partners for these functions, including Plateau Communications, a Round 1 BTOP awardee, which has expressed interest in providing Asset Management, outside plant maintenance and wholesale internet bandwidth for Southern Net NM.