The Lower Rio Grande Valley (LRGV), located in South Texas along the U.S.-Mexico border and comprised of Cameron, Hidalgo, Starr, and Willacy Counties—remains one of the fastest growing population areas and economies in the United States, with over 1.1 million residents. The focus of this proposed project includes Cameron and Hidalgo Counties, and will concentrate its efforts in the following cities: San Benito, La Feria, Mercedes, Donna, Hidalgo, Alton and Santa Rosa. Approximately 90% of LRGV residents are Hispanic—the fastest growing population group in the U.S. The rapid growth of this area has created both economic opportunities and economic strain in the region—especially in light of a un/under-educated workforce. Unfortunately, cities in the LRGV face significant challenges towards progress and development. While the region has led the state in job growth in the service sector, the region has not produced equitable economic rewards compared to the rest of the state and nation during the past decade. Rapid population growth combined with double-digit unemployment rates mark LRGV cities as economically distressed, which is further compounded by: low educational attainment; low per capita incomes; low literacy levels; mono-lingual (Spanish); migration/seasonal workers; and numerous other factors. An additional strain on the LRGV is its proximity to the Gulf of Mexico, which has been the source of some of the most disastrous hurricanes in recent history. Most recently, Hurricane Ike and Hurricane Dolly caused significant physical damage to this region, but the most glaring problems were the communication “black outs” that emergency first-responders experienced and how these “black outs” affected the residents that the first-responders were trying to serve. These “black out” periods lasted anywhere from several days to several weeks. The underlying problem was the inadequate communication infrastructure. This issue became unacceptable to the residents, which led to discussions with community leaders on how to solve this problem. The outcome of those discussions was to be better prepared for the next natural disaster. A key solution that will address the “black-out” that the first responders experienced is the availability of a PtMP broadband network, a wireless network. A PtMP network has the advantage of not having any wires/fibers destroyed or harmed during and after natural disasters, such as hurricanes. This project proposes to provide such a network to first responders and to others in the proposed area. This project, would do more than help with emergency response teams, WISER would help alleviate the other problems that the LRGV faces, access to: disposable income, transportation, and/or access to higher education. This project seeks to address the following basic demands and needs as specific to the Lower Rio Grande Valley of Texas: a) WISER seeks to deploy and maintain the wireless infrastructure currently missing, but necessary to provide reliable and secure hi-speed broadband access to municipalities, first responders, businesses, visitors, citizens and anchor institutions within our partner cities. Our proposal offers a
solution to provide broadband access to areas where true hi-speed Internet is not available, areas where broadband is not affordable, and areas where the current service, when available, does not provide adequate bandwidth to support simple web usage, such as distance learning and e-business. Our adult and young adult populations have a low subscribership of 28%. b) The proposed funded service area is located in the LRGV of South Texas, which extends along the U.S.-Mexico border. The proposed project area includes seven cities with populations from just over 10,000 to just over 25,000 residents. Each of these small cities is primarily Hispanic (average of 88 %+) and young (average median age of 29). The area has shown significant population growth over the past 10 years, but from a technological standpoint, the area has not been able to keep up with the population growth. The area is known for its low level of higher education attainment and high level of unemployment. Additionally, this area is known for its rich cultural heritage, high levels of retail trade, and large service industry. c) The proposed funded service area includes more than 1,996 businesses and 26,919 households. Our project proposes to create a wireless infrastructure that can provide each of these businesses and households an adequate amount of bandwidth for light internet use, up to a dedicated line with 3.5 Mbps for one business or household. d) There are 142 Anchor Institutions in the proposed funded service area, and among them are, 15 public safety entities, 25 K-12 schools, and 10 affordable housing localities.

e) This project will be providing the following services: dedicated Internet Service to the public, with 1MB-25MB connections available; Wireless Hotspot Internet service starting at 800Kbps/256Kbps available to the public; private PtMP connections for city use, including dedicated links between buildings, and secure Public Safety on the 4.9GHz frequencies; and dedicated Internet service to each city and participating anchor institutions. f) The network that will be constructed is a mix of public and private services. All public services will adhere to principals in FCC 05-151 and will adhere to all nondiscrimination and interconnection obligations described within this application. The applicant will detail in all sub-recipient agreements that they must comply with said rules and regulations. Additionally as part of the applicant’s compliance responsibilities, compliance monitoring will be conducted. g) WISER will deploy a dedicated, best effort Wi-Fi and private emergency response wireless using 2.4GHz, 4.9GHz, and 5.7GHz wireless frequencies. h) The RGVEZC has a successful track record in contract and grant management as evidenced by unqualified audits for the past several years. Orbit Broadband, L.L.C. is one of the applicant partners. Orbit, the private partner, owns and operates a wireless infrastructure that operates across hundreds of miles in the Lower Rio Grande Valley, and is well equipped with the IT and support personnel, experience and expertise needed to construct, deploy and maintain this type of network across the proposed funded service area. i) The overall infrastructure cost of the broadband system is $7,958,004, with the remaining amount in the budget funding the deployment and installation. j) A conservative projection of overall subscribership comes in at just under 7,000 households or businesses (an estimated 22,000 subscribers).

k) Number of jobs estimated to be created, either directly, indirectly and/or induced, is estimated at nearly 438. This includes a direct jobs creation of 52 new employees Orbit Broadband will hire,
recruiting primarily from the partner cities and exclusively from the LRGV. Further, for each partner city, any work to be accomplished by a deployment crew shall be recruited and staffed from city residents, as time and qualified applicants allows. In sum, we estimate direct job creation at 52 jobs, indirect job creation at 86 jobs and induced job creation at 300 jobs for a total of 438 jobs. For every $18,150 of federal investment there will be one job created. The PtMP technology that we propose to design, deploy and maintain has the advantage of being able to efficiently cover a wide geographic area without the prohibitively expensive deployment costs associated with deploying a fiber infrastructure. Our broadband network will be composed of various mini-networks targeted to the exact terrain, population-density, available city-owned infrastructure, critical anchor institutions, municipal buildings/services, business districts and residential areas of each partner city. In addition to the cost savings associated with our technology selection, other advantages are: the avoided detriment to the environment, because trenching of land is not required; a quicker deployment and availability of services, compared to other technologies; less overall disruption to business as usual; and there is almost no negative visual impact to a municipality’s visitors and citizens. As technology continues to evolve, we move further away from using up scarce and/or expensive-to-replace materials and natural resources, the use of which often proves to be detrimental to our environment; instead, we see an incredible utilization of the power of the web to create applications. The future holds no limit to the opportunities for use of this inexpensive, quick to deploy, efficient and effective PtMP hi-speed wireless infrastructure.