

Broadband USA Applications Database

Applicant Name: ERF Wireless, Inc.

Project Title: ERF Wireless Louisiana and Eastern Texas Wireless Broadband Deployment

Project Type: Last Mile Non-Remote

Executive Summary

1.0 A Description of the project The proposed project seeks funding assistance to expand an existing broadband network into some of the most rural communities across Louisiana and Eastern Texas through strategically placed wireless base stations. Many of the communities proposed to receive broadband funding under this application are among the poorest and most isolated communities in the state. A major component of this project is the agreement with the Louisiana State Police Department as elaborated on below.

2.0 Opportunities To Be Addressed By This Application This application was prepared due to a multitude of needs that could be easily met through federally funded assistance as requested herein. The needs affect all of the proposed communities without prejudice and could be categorized as follows: Public Safety, Health Care, Education and Economic Impact.

Public Safety Through funding provided under this application, the community's fire and rescue personnel would have the ability to receive virtual real-time warnings of storms and be equipped with improved communication during the aftermath in addition to improved communications among law enforcement agencies. In summary, broadband funding means lives will be saved. About one third of the ERF backhaul links will be hosted on Louisiana State Police microwave towers. There are about 40 of Louisiana State Police towers located on major highways throughout the state of Louisiana. The remainder of the links will be hosted on existing radio towers located in both Louisiana and Eastern Texas with just a handful of new proposed towers required. The State Police will utilize this network to improve their communications and response times to rural Louisiana communities and Parishes all over the state. A copy of this executed Agreement with the Louisiana State Police can be found herein under the appropriate section, 35.0, Licenses, Regulatory Approvals and Agreements. This agreement also call for ERF to provide 3 Mbps to the Louisiana Department of Public Safety at all times and shall provide 20 Mbps in times of emergency as declared by the governor at no cost!

Health Care With the funding obtained through this application, broadband capability will allow for the local medical clinic/rescue squad to potentially connect to a medical specialist located in one of the major hospitals in a metropolitan area or across the country through the use of telemedicine equipment. This relatively new technology allows for the specialist at a distant location to examine the patient and make recommendations to the local physician.

Education More and more of today's college degrees are acquired through on-line courses. With the travel requirements to the nearest higher learning center from these remote rural communities, online education becomes more of a necessity than a luxury. Discussions have also taken place with our engineer, ACRS 2000 Corp., to utilize some of the facilities proposed within the grant application to offer distance learning or interactive educational video courses through a connection with a local college. This would allow anyone to take a real-time instructed college

course remotely without the cost and time constraints of commuting. Economic Impact No major business today would consider opening its doors or relocating to a community without broadband service. Funding of this application makes the opportunity of attracting major corporations to these rural communities a realistic prospect. The growing trend today among many of the major corporations is allowing its employees to work from home. Among the fastest growing businesses in the country are those started by individuals out of their homes. Neither self employed home based businesses nor working from home are viable options for these rural residents without broadband services.

3.0 A General Description of the Proposed Funded Service Areas In all the application herein proposes to cover over 50 Service Areas and rural and remote county areas consisting of the most rural and economically challenged areas of the state. Without federal assistance these communities might not ever be afforded broadband services. The majority of these communities are located in the southeastern part of the state.

4.0 Number of Households and Businesses Passed Utilizing software obtained from the US Census Bureau, we have calculated the following: Total Number of Households Passed:229,757; Total Population:591,346; Total Number of Business Passed:96,606; Total No. of Census Blocks:21,605

5.0 Number of Community Anchor Institutions A complete survey was completed of all critical community facilities located within the proposed service areas. Contact with each of these facilities was made with an overwhelming show of support. Each of these critical community facilities will be offered broadband services at a 25% discount. The total number of facilities is as follows: 44 Town Halls, 36 Schools, 52 Local Law Enforcement Agencies, 31 Hospitals & Medical, Facilities, 37 Fire Departments & First Responders, 22 Libraries & Community Centers

6.0 Proposed Services & Applications The following is a summary of the proposed services offered as part of this application. For a complete list of all service plans, please reference the Appropriate Attachment A, Proposed Broadband service Offerings (Last Mile). Residential Services 1.5Mbps-5Mbps, Business Services 1.5Mbps-3Mbps, as well as VoIP Services. The broadband services above will accommodate a variety of applications like improved communications among critical community facilities, online training of law enforcement and medical personnel, distance learning, telemedicine and working from home.

7.0 Approach to Addressing Non-Discrimination & Interconnection Obligations Training sessions will be implemented to ensure adherence to the FCC's Internet Policy Statement (FCC 05-151) and will post network management policies in a prominent location on the service provider's website and provide notice via e-mail and mail inserts to all customers of any changes to these policies. It shall be company policy not to favor any lawful internet application and content over others and such policies shall be contained within the company policy manual and part of employee orientation. The design herein calls for interconnections to the public internet avoiding a private network. ERF Wireless shall, where technically feasible, offer interconnections at reasonable rates for both public internet access and exchange traffic. ERF Wireless will work to ensure no duplication of services through interconnect requests in territories funded under the Rural Electrification Act. Trained technicians will ensure acceptable levels of service, bandwidth allocation, spam filters illegal connect and other harmful activities

8.0 Type of Broadband System to be Deployed ERF plans to build a Broadband Fixed Wireless network utilizing IEEE 802.16 WiMax standards. A centrally located wireless base station radio will provide excellent coverage throughout these communities. The fixed wireless base station will consist of six 60 degree radios operating at 900 MHz. The base station will provide full coverage throughout the towns with broadband connection speeds capable of 3Mbps and beyond. Each user will have a 900 MHz subscriber unit to transmit and receive

data via the central base station. New subscribers can easily be added to the network through installation of subscriber units on an as needed basis.

9.0 Qualifications of the Applicant ERF Wireless, Inc. ("Company" or "ERF Wireless") provides secure, high-capacity wireless products and services to a broad spectrum of customers in primarily underserved, rural and suburban parts of the United States. We provide our customers with high quality broadband services and basic communications services to residential, oil and gas, and bank customers in the areas that otherwise would not be able to receive such services. We are also a comprehensive solutions provider to other enterprise customers, providing them with a wide array of communications services including high speed broadband, voice over Internet Protocol (VOIP) telephone and facsimile service, and video security. ERF is one of the more technical savvy broadband providers providing broadband system design and implementation services, manufacturing and supply high-power infrastructure equipment to the paging and mobile industry, and own and operate a wide-area messaging service (paging retail). They also implement and construct new fiber-to-the-home broadband networks for third party customers. ERF's extensive wireless broadband system design and implementation function is a service extending beyond their own network providing such services to other outside organizations.

10.0 Overall Infrastructure Cost The total infrastructure cost for the project is \$24,470,800.00. With over 229,757 HHP this equates to a cost of \$106.51 per household passed.

11.0 Overall Subscriber Projections Residential Broadband Internet Subscribers: 10,827 Business Broadband Internet Subscribers: 316 Critical Community Facility Subscribers: 49

12.0 Estimated Number of Jobs Created or Saved Through research national studies, local research and feedback from the third parties listed below, ERF Wireless estimates the following affect on job creation and job retention over a three year timetable. New Businesses & Corporations Relocating to the Area (ave. 2 per community) 96 Work from Home Job Opportunities(0.014 per 100 households) 32 Home-based Businesses (0.0325 per 100 households) 75 ERF Wireless Long Term Positions 7 Total Long Term Jobs Created 210 Saved Existing Businesses/Jobs Du