

Broadband USA Applications Database

Applicant Name: City of El Paso

Project Title: Digital El Paso City Infrastructure

Project Type: Middle Mile

Executive Summary

a) The U.S. Department of Commerce National Telecommunications and Information Administration Recovery Act Broadband Technology Opportunity Program (BTOP) gives the City of El Paso to implement the infrastructure to help bridge the digital divide and address the endemic and chronic poverty along the U.S./Mexico border. The proposed infrastructure will give partner agencies the ability to provide broadband access to populations residing in underserved areas of the City. We are submitting this request in tandem with the Digital El Paso Expansion Initiative Infrastructure and Sustainable Broadband Adoption requests and the Virtual Village: Digital El Paso's Pathway to Success PCC request. This multi-agency collaboration leverages, El Paso Community College and El Paso County to provide broadband access to underserved middle mile communities in the City and facilitate broadband transport to critical health and safety anchor institutions throughout the City and the County's underserved middle and last mile communities such as Vinton, Anthony, Clint, Horizon City, Socorro, Canutillo, San Elizario, Fabens, Canutillo and the Tigua Nation. The proposed City fiber optic transport will provide critical and effective backhaul for wireless broadband end-points. We propose to align with the Digital El Paso model, a multi-agency pilot project successfully launched and implemented in 2007 to provide wireless internet access to over 5,000 residents in 1.5 square miles of downtown El Paso in the 79901 zip code. This area is one of the lowest per capita income neighborhoods in the US. The project's mission is to "Bridge the Digital Divide to Achieve Efficient Government, Social Inclusion and Economic Development" and provide usage and adoption rates to study the feasibility of a citywide project. It gave us opportunity to test wireless applications that could improve government efficiencies, increase productivity, and use mobility to extend delivery of services into the community. After the successful implementation of the project, the City is ready to expand on the model by laying the foundation necessary to enhance the community's understanding and value of IT as it pertains to economic growth, education, health and safety. b) The COEP is located on the westernmost tip of Texas, bordered by Chihuahua, Mexico to the south and New Mexico to the north. It is the sixth largest city in Texas and is the 23rd largest city in the United States, with an estimated population of 613,190 (U.S. Census Bureau: 2008). Its sister city to the south, Ciudad Juárez, has an estimated population of 1,217,818. Together, these two (2) cities comprise the largest urban area along the U.S.-Mexico border. El Paso is ranked 4th highest in the U.S. in percentage of families living at or below the poverty level. Approximately 24.9 percent of adult El Pasoans live below the Federal Poverty Level with a per capita income of \$16,465 (U.S. Census Bureau, 2007). The unemployment rate for the El Paso area for June 2009 was 9.6% compared to 7.5% for Texas and 9.5% for the U.S. (Bureau of Labor Statistics: June 2009) Demographic distribution for El Paso is 81% Hispanic/Latino, 14.9% Caucasian, 7.8% Black or African America and 1.1% Asian (U.S. Census Bureau

ACS: 2007). c) Number of households and businesses passed Connecting anchor institutions, uses a buffer of 150 feet from the center conduit, and will pass 2,759 households and 1,997 businesses. d) Methodology Institution Type – Anchor Institutions COEP Northeast Regional Command (PD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Richard Burgess Library Fiber Anchor Institution, Wi-Fi Hotspot COEP Northeast Municipal Courts Fiber Anchor Institution, COEP Northeast Transit Terminal Fiber Anchor Institution, Wi-Fi Hotspot COEP Northeast Municipal Corral Fiber Anchor Institution, Wi-Fi Hotspot Bridge COEP Nolan Richardson Community Center Wi-Fi Hotspot COEP Wellington Chew Senior Center Wi-Fi Hotspot COEP Pebble Hills Regional Command (PD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Pebble Hills Municipal Court Fiber Anchor Institution, COEP Mission Valley Regional Command (PD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Mission Valley Transit Terminal Fiber Anchor Institution, Wi-Fi Hotspot COEP Judge Edward S. Marquez Mission Valley Branch Library Wi-Fi Hotspot COEP Fire Station 7 – Battalion (FD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Fire Station 11 – (FD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Fire Station 22 – Battalion (FD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Fire Station 23 – Battalion (FD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Fire Station 24 – Battalion (FD) Fiber Anchor Institution COEP Fire Station 25 – Battalion (FD) Fiber Anchor Institution COEP Fire Station 35 – Battalion (FD) Fiber Anchor Institution, Wi-Fi Hotspot COEP Zoo Fiber Anchor Institution COEP Acosta Multipurpose Center Fiber Anchor Institution, Wi-Fi Hotspot COEP Hilos De Plata Senior Center Fiber Anchor Institution, Wi-Fi Hotspot Bridge COEP Health Department HQ Fiber Anchor Institution, Wi-Fi Hotspot COEP Health Department Animal Control Fiber Anchor Institution COEP Sun Metro LIFT Facility Fiber Anchor Institution COEP Armijo Library Fiber Anchor Institution, Wi-Fi Hotspot-DE COEP Main Library Fiber Anchor Institution, Wi-Fi Hotspot COEP Dorris Van Doren Library Fiber Anchor Institution, Wi-Fi Hotspot COEP Art Museum Fiber Anchor Institution, Wi-Fi Hotspot El Paso E911 Main PSAP Fiber Anchor Institution 5 Point Transit Terminal Wi-Fi Hotspot COEP Zaragoza International Bridge Fiber Anchor Institution, Wi-Fi Hotspot El Paso Community College – Administrative Center Fiber Anchor Institution El Paso Community College – Rio Grande Campus Fiber Anchor Institution El Paso Community College – Transmountain Campus Fiber Anchor Institution Texas Tech Medical University Fiber Anchor Institution e) The services and applications proposed for the connectivity to the community anchor sites are focused in the delivery of public safety and transportation applications and will serve as the backbone for providing high speed connectivity to other non-public safety entities with emphasis on anchor institutions including community colleges, libraries, recreation centers, transportation and health institutions. f) All public access will be provisioned as an open network to operate without any restrictions to end-users. The backbone fiber-optic network will connect to the Internet through the City’s ISP. g) The proposed network will consist of two primary components. The fiber-optic component will be deployed using Gigabit Ethernet. As rings are formed, rapid spanning tree will be utilized to provide persistent and uninterrupted service. At various community anchor points wireless 802.11 b/g will be provisioned from the City’s perimeter network. Through a Wi-Fi mesh, the City will create, at a minimum, “hot spots” and “hot zones.” As underserved areas are traversed by the fiber-optic route, exit points will be provisioned to build additional hot-zones that will be open to the public. h) The City will use the two years Digital El Paso experience to expand and implement this project throughout the underserved and unserved communities through anchor institution connection. The Digital El Paso model, a collaborative program comprised of multiple agencies including El Paso Community College (EPCC) El Paso County, Upper Rio Grande Workforce

Development, Housing Authority of the COEP and the COEP, was successfully launched in 2007. The model provided the proof of concept for testing wireless applications that had the potential to improve government efficiencies, increase productivity, and use mobility to extend the delivery of services to the community. The City has participated in the deployment and functioning of Digital El Paso, and has begun addressing critical connectivity needs by to deploying a fiber-optic infrastructure that had been ignored for decades. The Digital El Paso's collaborative approach will increase the successful outcome of broadband penetration and sustainability by coordinating and leveraging BTOP goals, Sustainable Broadband Adoption (SBA) through the EPCC's response to the SBA grant and with the goals of the Public Community Computer Centers (PCC). The leadership in the City has a history of successful deployments that will reinforce this project. i) Overall infrastructure cost of the broadband system totals \$10,377,322. Network & Access Equipment, \$1,077,462; Outside Plant, \$7,271,370; Professional Services, \$1,982,200. In-kind support includes salaries and operational support, \$117,814.50. 20% (\$2,075,466) of which 52% will be allocated for professional services and 52% allocated to network and Access Equipment. j) Overall expected subscriber projections for the project. Project will create a broadband backbone connecting multiple critical anchor institutions citywide. The majority of the anchor institutions will have Wi-Fi hotspots deployed that will be completely open and available to users at no cost. 46% of the anchor institutions are located in underserved areas. Nearly 80% of the balance are adjacent to underserved areas or are in areas with households that are 20-30% below the poverty guidelines. k) Projected minimum of 16 jobs created or retained by the construction crews for a period of 18 months. Four additional positions created or retained for professional services for up to 12 months; two positions permanently hired to support this project.