

Broadband USA Applications Database

Applicant Name: City of Philadelphia

Project Title: Digital Philadelphia Broadband Initiative

Project Type: Middle Mile

Executive Summary

The economic outlook for the nation's sixth largest city is bleak. Like most other areas across the country, Philadelphia is in a recession. But unlike most other areas, Philadelphia—once the manufacturing capital of the nation—has seen a prolonged decline in its traditional industrial base, affecting a disproportionate per cent of its population. The numbers are staggering. Until the 1980s, the city's port and petroleum-refining plants contributed substantially to the economy, but since that time, manufacturing, which used to account for 50 percent of the city's employment, now accounts for only about ten percent. EconomyWatch.com, the leading provider of economy, economics and investing reports recently released data by Federal Reserve Bank of Philadelphia. It revealed that as of May 2009, the city's factory gauge index had reached minus 18. This reading signifies that Philadelphia's economy continues to contract. As the manufacturing jobs go, so goes the standard of living of its citizens. At the time of the 2000 census, the per capita income in Philadelphia was \$16,509, compared with \$21,587 nationally. However, Philadelphians are determined. Rather than a hand-out they want a hand-up in partnering with the Federal government. Philadelphia is ready. On July 1, Mayor Michael Nutter stated that future job development will focus on high-growth industries including: clean energy, healthcare, construction, logistics and transportation. High-growth requires high-tech. In response, the city has developed a broadband strategy, the Digital Philadelphia Broadband Initiative (DPBI), in collaboration with institutional, community-based, and quasi-governmental partners that builds upon existing infrastructure and momentum in the areas of adoption and accessibility. Although the primary goal of the Digital Philadelphia Broadband Initiative is economic development through a computer-savvy workforce, the community itself needs to feel a sense of well-being. The DPBI will expand broadband adoption in underserved areas of Philadelphia; offer sustainable affordable broadband access to anchor municipal agencies, community institutions and organizations; expand the public safety capabilities of municipal public safety agency programs; support adoption programs, public computer center initiatives, and job creation by community-based organizations and small businesses; and support the development of future projects working to meet Philadelphia's dynamic broadband needs. Digital Philadelphia is supported by a coalition of project partners including: Free Library of Philadelphia, Philadelphia School District, Philadelphia Housing Authority, Department of Public Health, Philadelphia Recreation Department, Philadelphia Department of Police, and Philadelphia Department of Fire. Further, this project is coalescing with the following local community organizations: People's Emergency Center, Lutheran Settlement House, Mantua Community Improvement Committee, Pennrose, Red Cross House, The Partnership CDC, Media Mobilizing Project, Project HOME, Asociación de Puertorriqueños en Marcha, Drueding Center/Project Rainbow, FACTS Charter School, ACHIEVEability, The Enterprise

Center, Traveler's Aid Society, Mantua Haverford Community Center, WPEB 88.1FM Community Radio, Philadelphia Student Union, and Dignity Housing. In total, 74 community groups and city agencies, and integrated citywide Public Computer Centers program will be connected. This broadband infrastructure proposal is both ambitious and holistic. It will efficiently cover a community site comprised of 144 census tracts with 401 block groups that include more than 444,000 residents (nearly a third of the city). The broadband adoption is below 40 percent, meeting the NTIA's definition of underserved. DPBI has engaged local stakeholders and residents to determine the best strategy to meet the needs of residents in the proposed target service areas. DPBI's proposed network will connect over 150 public computer center locations that will offer essential training programs. DPBI harnesses the power and effectiveness of long-standing local organizations to best meet the needs of local residents, bringing together many organizations with strong local ties to constituencies living in the target areas. In preparation for this proposal, the City and its partners conducted an extensive engineering analysis and determined that a hybrid \$22,000,000 fiber/wireless system would be the most cost-effective solution, leveraging each federal dollar for maximum on-the-ground impact. With funds from the National Telecommunications and Information Administration (NTIA), the City of Philadelphia will be able to construct a middle mile fiber broadband infrastructure network consisting of three neighborhood fiber rings with neighborhood spines connected by a core spine backhaul. The system will use numerous strands of fiber optic cabling to form a fully redundant, self-healing fiber optic ring. The Philadelphia network will incorporate both direct fiber optic middle mile conduit to key municipal and community sites within the target area (thus providing a high-capacity backhaul for the system) as well as a wireless overlay supporting last mile public access to this broadband infrastructure. The network will be engineered for the long term, so that extensions can be added on as other agencies and community groups can connect. The integrated and coordinated strategy of Digital Philadelphia focuses on three main areas:

- Infrastructure: The City of Philadelphia's Digital Philadelphia network will connect 20 community anchor locations, 22 public housing developments, 7 police precincts, 17 fire houses, and 13 wireless aggregation facilities using numerous strands of fiber optic cabling to form a fully redundant, self-healing fiber optic ring. Digital Philadelphia's infrastructure plan builds on the City's fledgling broadband network, stabilizing and strategically growing it. This network will be used to bridge the digital divide, improve public safety (through connectivity to surveillance networks), and facilitate better public services by enabling the deployment of handheld technology and better field-to-home and field-to-field communication between City employees and others.
- Public Computer Centers: Digital Philadelphia aims to increase the availability of Internet-enabled computers to the general public in various locations throughout the City, in terms of number of sites/workstations and hours of availability. Also key are training and education programs taught by qualified staff. Public computer centers will be improved or expanded in libraries, recreation centers, Philadelphia Housing Authority facilities, and other institutional partners.
- Adoption: Digital Philadelphia will engage vulnerable populations and Small Disadvantaged Businesses. Through marketing, education, and provision of technology and technical support, Digital Philadelphia will open up Internet accessibility and functionality to previously unserved or underserved individuals, businesses, and areas of the City. Technology will be provided via the "tech pack" concept (mini laptop, relevant software, broadband subscription, training, and technical support) and education will involve connecting unserved and underserved populations with content (and encourage creation of content) that is relevant and that is presented in a way that enmeshes the Internet with their daily social and

educational lives. In the context of pursuit of the Broadband Technology Opportunities Program grants under the American Recovery and Reinvestment Act (ARRA), Digital Philadelphia is supported by three related proposals. This proposal – for broadband infrastructure – is being advanced by the City of Philadelphia. The other two proposals, for adoption and public computer centers, are being submitted by the Free Library of Philadelphia and a round 2 public computer center proposal from the City of Philadelphia, respectively. The three proposals together include a digital adoption and inclusion program developed from the ground up by no fewer than 74 community groups and city agencies, and an integrated city-wide CTC program. The strategic goals of the Digital Philadelphia Broadband Initiative will greatly benefit from favorable review of the three related applications (submitted separately but in coordination by the City of Philadelphia’s Division of Technology, the Free Library of Philadelphia, and the many organizational partners). None of this work would be possible but for NTIA funds. With support from the NTIA, the Digital Philadelphia Broadband Initiative will provide a solid foundation for Philadelphia's 21st Century telecommunications needs.