Located in East Central Florida, the Research Coast encompasses four counties that are economically distressed including Indian River, St. Lucie, Okeechobee, and Martin counties. The paramount problem in the area is that there are few communications service providers that offer reliable, low-cost broadband services with high bandwidth. We propose to unite the Research Coast of Florida by deploying both Middle Mile (MM) and Last Mile (LM) broadband connections. By increasing broadband connections, our MM project will allow innovation institutions located in Florida's Research Coast area, such as Torrey Pines Institute for Molecular Studies, Oregon Health & Science University Vaccine & Gene Therapy Institute, Mann Research Center, Martin Memorial Healthcare Systems, Harbor Branch Oceanographic Institution, Smithsonian Marine Station, U.S. Department of Agriculture Research Service, Kight Center at Indian River State College (IRSC) and the University of Florida Institute of Food and Agricultural Sciences, to strengthen their research innovation-value chain benefiting Florida's economic future and enabling the state to become a leader in the global innovation economy. This project will enhance broadband service for healthcare delivery, education, children, and the elderly to include connections to 479 Community Anchor Institutions in the four county Research Coast Region. These anchor institutions include 83 Schools (k-12), 16 Libraries, 37 Medical and Healthcare Providers, 73 Public Safety Entities, 8 Community Colleges, 2 Public Housing, 3 Other Institutions of Higher Education, 39 Other Community Support Organizations, and 218 Other Government Facilities. We will provide connections to the underserved population of 106,370 people in addition to another 344,731 people who are not located in underserved areas. This project will pass 187,439 households and 23,749 businesses. We propose to provide wireless connections to our Last Mile portion of the project and dark fiber connections to the Middle Mile portion. FPUA adheres to all of the guidelines of the FCC's broadband policy, provides neutral traffic routing and has implemented network management policies that ensure its Internet services are available to all consumers and other entities in its service area. All of the policies and terms of service for FPUA's Internet services are posted on a website, www.fpuanet.com, and e-mailed directly to customers when there are modifications to the service agreements or network use policies. These network management policies include a Dedicated Internet Access Services Agreement, Bandwidth Connectivity Services Agreement, Acceptable Use Policy, Privacy Information and a section on all policies and services available for government agencies. The Connecting the Research Coast of Florida project consists of Middle Mile fiber cable in six Proposed Funded Service Areas (PFSA) and a Last Mile PFSA, which contains both fiber and WiMAX. The Garden City Last Mile includes WiMAX Base Stations using 802.11e connecting into new or existing fiber infrastructure. The existing fiber consists of over 50 miles of strategically-placed aerial and underground 24/-48/-96- count
single-mode fiber optic cable. The entire system is designed as a multi-layered hierarchy with each layer of the system providing communication up and down the network from one layer of the hierarchy to the next. Using a distributive network design, the system uploads and downloads data to and from end devices located throughout the PFSAs. The backhaul communications network infrastructure is a hybrid of existing Gigabit fiber optics network components and wireless mesh routers. The key feature of the system is the use of a distributed mesh architecture design to improve reliability and achieve system redundancy. Distributing the transmission over multiple paths allows the system to combat single or multiple points of failure. FPUA was created in 1972 by the citizens of Fort Pierce and continues to be a community owned utility providing electricity, water, wastewater, natural gas and broadband communication services to over 28,000 customers. In 2009, we had revenues of $108.9 million with expenses of $99.3 million. FPUA has been offering reasonably priced and highly reliable Internet/communication services to customers since 2000. As a result, we have technical, operational and financial departments which have approximately 10 years of experience in this field. In 2004, FPUA started providing fiber optic cable into premises for broadband services including dedicated Internet access, bandwidth connections, and dark fiber links. FPUA has served customers with wireless broadband since 2001. FPUA"s existing customer base includes such anchor institutions as Fort Pierce Police Department, St. Lucie County Sheriff"s Office, St. Lucie County School District which includes their administration office and fourteen schools and Lawnwood Regional Medical Center. As a regional leader in broadband services on the Research Coast, FPUA organized the Research Coast Broadband Coalition to create synergy among the four counties in solving broadband problems. The overall infrastructure cost will be $7,906,772. The Last Mile cost is $667,063 while the Middle Mile cost will be $7,239,699. In our Last Mile component, we expect 1,262 residential and 487 business subscribers. In our Middle Mile project we estimate connecting 479 Community Anchor Institutions, 7,065 households, and 1,400 businesses. This project will create 86 direct jobs, 55 indirect jobs and 31 induced jobs.