

## Broadband USA Applications Database

**Applicant Name:** AMERICAN FIBER SYSTEMS, INC.

**Project Title:** MO & KS Comm Broadband Network in Platte, Leavenworth, Wyandotte, Johnson, Clay & Jackson Counties

**Project Type:** Comprehensive Community Infrastructure

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### Executive Summary

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Opening Statement American Fiber Systems, Inc. ('AFS') in partnership with the Missouri Research and Educational Network (MOREnet), Leavenworth County, Clay County, Platte County, and the Mid-America Regional Council seeks \$10,573,085 in BTOP Middle Mile Infrastructure funding from the ARRA to complete a fiber-based network in the states of Kansas and Missouri. The 'shovel ready' build out of the Missouri and Kansas Community Broadband Network ('MO/KS-Net') will connect 44 community anchor institutions ('CAIs') in MO and KS. In addition, MO/KS-Net will provide advanced fiber-based broadband services to the communities, CAIs, and businesses along and near the project route. The project is a collaborative public-private effort establishing partnerships between multiple municipal, community organizations, and AFS, an industry leading fiber service carrier, to provide reliable, scalable, and cost-effective high-speed middle mile broadband connectivity. Problem Statement Kansas City and the surrounding communities have been hit hard by the deep recession. The five counties comprising the proposed service area have lost over 15,000 net jobs from December 2008 to January 2010. In fact, Jackson County, MO and Wyandotte County, KS were designated economically distressed areas based on high unemployment and low median income. While other larger metropolitan areas throughout the US have extensive fiber networks forming the basis of a digital economy, Kansas City has fallen behind. The Kansas City MSA ranks 68th among U.S. MSAs in terms of total middle mile fiber mileage. The Kansas City metropolitan region is in dire need of a major upgrade to the ramps to the information superhighway to foster rapid economic development. The Kansas City metropolitan region needs to replace these lost jobs with higher paying jobs predicated on the information-based economy, which has gone underdeveloped relative to other areas. Additionally, Missouri and Kansas' government facilities and public safety entities are exposed to potential connectivity failures given current limited points of access as well as bandwidth constraints on the existing network. These critical facilities need a high-speed communications network with route diversity available at a reasonable cost to communicate, coordinate, and respond more effectively. In fact, Missouri and Kansas' public safety agencies are facing the daunting challenge of adhering to regional interoperability mandates from the Federal government by 2012 while saddled with the handicap of having far less core fiber network than other parts of the USA. Proposed Solution MO/KS-Net will provide a fiber-optic platform that provides the proposed funded service area with a future-proofed, technology-agnostic platform with a lifespan of well over 40 years. It will build 105 miles of new fiber utilizing the local labor force connecting 44 CAIs. In addition, MO/KS-Net will connect with 5 interconnection points along the fiber route ensuring middle mile fiber is available to other communities, CAIs, and businesses. The CAIs connected initially are the highest

bandwidth and greatest need facilities defined by project partners. More CAIs will be connected after the funding period as the needs arise. It is expected that that the project will be complete within 30 months and create 144 jobs. Proof of Readiness Since 2000 AFS has successfully designed and deployed middle mile fiber-based networks in 9 metro markets across the USA, including over 1,110 route miles and 1,764 on-net locations including customer facilities, carrier hotels, central offices, data centers and cell towers. Over the last 5 years AFS has significantly and successfully expanded the networks in all of its markets and completed over 100 fiber projects of varying scale and complexity. For example, AFS and its partners successfully implemented a project for the State of Nevada to connect all of its critical facilities with intercity connectivity between Reno and Carson City. The company's core competency is the successful design, implementation, and operation of fiber networks, which it has demonstrated continuously since its inception. Project Impact The project will connect 29 government facilities and public safety sites in the proposed service area, providing these institutions reliable and route-diversified access to the critical data that they require. The fiber connectivity will enhance planning, coordination, and responsiveness of first responders across all communities and enable more coordinated and efficient law enforcement and emergency response. It will also connect 5 MOREnet community colleges providing these institutions access to broadband capacity needed to drive innovation. The project will create immediate jobs and the bandwidth capacity will enable the creation high-paying 'knowledge jobs' in years to come. MO/KS-Net will dramatically improve last mile broadband access particularly for underserved communities along the fiber route (8 communities within the service area are underserved). To accomplish this, MO/KS-Net will enable further competition and investment for Fiber-To-The-Home (FTTH) companies. It will make available 24 strands of dark fiber from its existing backbone along with 24 strands from this proposal to FTTH providers at a lease cost of \$1 for 40 years of use. This will make available, at virtually no cost, more than 125 route miles of backbone fiber to FTTH providers, thus eliminating millions of dollars of costs typically incurred in a network build. This proposal will enable and encourage competition to enter the market, resulting in lower prices, better choices, and increased service reliability. Proposed Funded Service Area & Project Budget The project application contains one proposed funded service area consisting of 105 miles of new fiber build in Kansas City, Liberty, Excelsior Springs, Platte City, Leavenworth, and Lansing. The new fiber build passes communities that include 316,439 households, 26,804 businesses, and 2,168 CAIs. The project includes existing AFS fiber miles and equipment as in-kind contributions, but these figures are associated only with the new fiber build. AFS will be providing a cash match equal to 14% of the Total Project Cost build cost plus an in-kind contribution of existing fiber facilities and equipment equal to 30%; therefore, the total AFS match is 44%. The Federal BTOP grant request is for \$10,575,085, 56% of the total project cost. Network Components & Service Availability The project will use fiber-optic network cables and equipment from manufactures including Nokia-Siemens and Ciena, which were selected based on quality and reliability. For CAIs and businesses along the fiber, AFS will make the following transport services available: Ethernet private line, virtual private line, virtual LAN, internet access; managed wavelength service; TDM / SONET transport; dark fiber. Bandwidth available ranges from 10Mb to 10Gb and soon 100Gb. AFS is a non-discriminatory open access provider of wholesale transport services to any party interested in purchasing capacity, including carriers, last mile providers, businesses, and institutions. AFS does not discriminate against potential customers and makes available dark fiber strand leases on a non-discriminatory basis to any party. AFS' approach to selling bandwidth

adheres to the non-discrimination and interconnection requirements of the BTOP NOFA. Partners & Community Support The project is a public-private partnership with MOREnet, Leavenworth County, Clay County, Platte County, the Mid-America Regional Council, and AFS. The project has received overwhelming support from state, county, and city agencies and community anchor institutions. The attached letters of support highlight the key benefits of the project. Below is short sampling of quotes from project partners and supporters. For example, MO/KS-Net will: ' Support needs of underserved residents: the project will 'facilitate the development of expanded Internet options to many of our rural residents.' Leavenworth County Chairman ' Provide higher bandwidth services at lower cost to community anchor institutions: the project 'will greatly help MOREnet keep up with the increasing demand for bandwidth while working with substantially less funding.' MOREnet Executive Director ' Spur job creation: the project will 'enhance economic development opportunities and provide an infrastructure that promotes growth of residential and commercial ventures.' Leavenworth County Commissioner ' Enable better security and reliability: the project will 'allow us to future-proof connections to Missouri's research and education fiber backbone for decades to come.' MOREnet Executive Director