

## Broadband USA Applications Database

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

**Project Title:** Metro Boise/AFS Community & State of Idaho Broadband Network serving Ada & Canyon Counties

**Project Type:** Comprehensive Community Infrastructure

---

### Executive Summary

---

Project Introduction American Fiber Systems, Inc. ('AFS') in partnership with the Governor of Idaho, Boise, Garden City, Meridian, and Idaho's Bureau of Homeland Security seeks \$14,257,171 in BTOP Middle Mile Infrastructure funding from the ARRA to complete a fiber-based network in the state of Idaho. The 'shovel ready' build-out of the Metro Boise/AFS Community & State Broadband Network ('Boise/AFS-Net') will connect 255 government facilities, 30 public safety entities, and 11 other community anchor institutions ('CAIs') in Ada and Canyon Counties. In addition, Boise/AFS-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 Idaho, Boise, and surrounding communities have been hit hard by the deep recession. Idaho's unemployment rate jumped from 6.5% in December 2008 to 10.7% in January 2010 as the state lost 30,000+ net jobs. Ada and Canyon counties have been hit particularly hard. In fact, Canyon County was designated an economically distressed area 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 Boise has been left behind, In fact, the Boise MSA ranks 218th among US MSAs in terms of total middle mile fiber mileage. Idaho and the metro Boise region, which is a key engine of Idaho's economy, are in dire need of a major upgrade to the ramps to the information superhighway to foster rapid economic development. Idaho and the metro Boise region need to replace these lost jobs with higher paying jobs predicated on the information-based economy, which is underdeveloped in Idaho relative to other states. Additionally, Idaho's 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, Idaho's 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 US. Proposed Solution Boise/AFS-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 219 miles of new fiber utilizing the local labor force connecting 296 CAIs. In addition, Boise/AFS-Net will connect with 8 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 18 months and create 149 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 ~50% of all government facilities and ~30% of public safety sites in the proposed service area, providing institutions reliable and route-diversified access to critical data. 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. The project will create immediate jobs and the bandwidth capacity will enable the creation of high-paying 'knowledge jobs' in years to come. Boise/AFS-Net will dramatically improve last mile broadband access particularly for underserved communities along the fiber route (over half of the communities within the service area are underserved). To accomplish this, Boise/AFS-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 300 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 219 miles of new fiber build in Boise, Garden City, Meridian, Eagle, Caldwell, and Nampa. The new fiber build passes communities that include 149,426 households, 18,601 businesses, and 1,420 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 29%; therefore, the AFS total match is 43%. The Federal BTOP grant request is for \$13,672,918, 57% 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 the City of Boise, Boise State University, Idaho's Bureau of Homeland Security, and AFS. The project has received overwhelming support from state, county, and city agencies and CAIs. 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, Boise/AFS-Net will: ' Spur job creation: the project "will enable the community to create high-paying 'knowledge jobs' in years to come as the global internet continues to grow as an economic driver." Boise Mayor ' Support needs of vulnerable populations: the project will support 'low income families to use Library's public computers to access the Internet for job searches and school work.' Garden City Mayor ' Support educational institutions and enable distance learning: 'Working with the City of Boise and AFS, Boise State would be able to improve communications with Idaho Public Television, which will be used to deliver expanded programming to distance education students.' Boise State University ' Enable better security and public safety: the project would eliminate 'the potential of a single point of failure and increase the bandwidth capacity in our networking scheme.' Idaho Bureau of Homeland Security ' Provide higher bandwidth services at lower cost to community anchor institutions: 'Prices charged for community anchors such as ours utilizing AFS-lit services will be 60-70% less than current market rates.' Garden City Mayor