

## Broadband USA Applications Database

**Applicant Name:** VIKING Broadband, Inc.

**Project Title:** VIKING'S East of Billings Fiber Future

**Project Type:** Last Mile Non-Remote

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### Executive Summary

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VIKING Broadband, Inc. VIKING's East of Billings Fiber Future Executive Summary Introduction VIKING's East of Billings Fiber Future project is uniquely suited to address multiple opportunities critical to the Broadband Stimulus program and the American Recovery and Reinvestment Act. The proposed service area is along the Yellowstone River Valley, just east of Billings, Montana. It includes Shepherd, Huntley, Worden, Ballantine, Pompeys Pillar and surrounding rural areas and is vastly unserved. The area, although rapidly growing, contains some vulnerable populations, (low-income, unemployed, migrants, children and elderly living in poverty - U.S. Census 2000). The western part of this service area includes the planned Billings Bypass ([billingsbypass.com](http://billingsbypass.com)), greatly enhancing its connection to Billings and facilitating the growth of Billings eastward, as western growth reaches a saturation point. Billings is the four-state hub for a 500-mile radius, the regional leader for healthcare and energy and, geographically, the largest trade area in the USA. Montana's Growth Policy Resource Book, April 2009, (Montana Department of Commerce), rates the population growth in Yellowstone County, which includes the VIKING service area, as among the highest in Montana with an 11.5% increase between 1998 and 2008 (see map in Supplemental Information 3). Our in-house demographic study reveals that this figure is low. Additionally, the Billings Bypass will become part of the Camino-Real International Trade Corridor from Mexico to Canada. All these factors, along with VIKING's proven ability to build and sustain a broadband system, create a unique opportunity to stimulate the economy not only of an unserved rural area, but also of a neighboring city and regional hub of commerce. With a foundation of services in place serving the towns of Huntley, Worden, and Ballantine, VIKING Broadband is poised to extend our network into Shepherd and the other rural neighborhoods surrounding our existing communities. We are proposing extending our existing system implementing a fiber-to-the-home (FTTH) architecture making available high speed internet access, cable television, and voice over IP (VOIP) telephone service to unserved homes and businesses. Our project has merited generous community support and has the full backing of the Yellowstone County Board of Commissioners. VIKING is committed to the principles of openness and fairness regarding access to the internet and will adhere to the FCC's Internet Policy Statement (FCC 05-151) and the Nondiscrimination and Interconnection Obligations in the NOFA. The funding requested is \$4,875,000 and is expected to create over 4000 broadband home passes which, at the expected penetration rate of 60%, translates to about 2500 subscribers. The overall cost then is about \$2000 per subscriber and about \$1200 per home pass. These subscribers are expected to include almost 400 businesses and at least 12 strategic community institutions after 3 years. Job Creation In February 2009, Columbia Business School Professor Dr. Raul Katz, presented "Estimating the Economic Impact of the Broadband Stimulus Plan." The paper estimated that, nationally, 128,000 jobs would be

generated over four years from network construction and, depending on critical factors, up to 270,000 jobs from “network effects.” “Network effects” include telemedicine, e-commerce, online education, optimization of supply chains and inventory, business revenue growth and growth in service industries. A critical factor maximizing network jobs created is “deployment not only in unserved areas but also in regions where the possibility of developing regional growth, in coordination with broadband deployment, could act as a magnet to stimulate relocation, firm creation, and, consequently, jobs.” Again, our proposed service area is adjacent to Billings, a growing, regional center of commerce. It is positioned at the crossroads for the Billings Bypass and an international trade corridor. The service area itself has grown 11.5% since 2000. These key factors substantiate that network jobs created by this project will likely fall in the upper range. Therefore, we estimate that 270 jobs will be created from this project, 183 from network effects and 87 from construction (proportionally by dollars). At \$50K per job, this project generates \$13.5 million in job income. Over \$9 million is sustained in local annual job income from network effects. Operations to Date VIKING became the cable provider for the Huntley Project area in June of 2000. The acquisition consisted of two cable systems, one in Huntley and the other in Worden and Ballantine. At this time there were 219 TV subscribers. Subscribers were declining and penetration was below 40% on the 19-channel cable system. However, we viewed this obviously growing market as an opportunity to bring broadband services to a completely unserved area, first to the household clusters in town and ultimately to the surrounding rural area. The first upgrade project prepared the Huntley system for internet services. Cable modems went online in January of 2001. Dialup internet service was also launched. This first internet system was an economical solution using the proprietary Zenith cable modem system and a two way VSAT, federally sponsored, satellite system for our internet connection to the world. This system evolved and was improved upon as our customer base grew. A headend consolidation was the next major step. By erecting two towers and implementing a tower to tower microwave cable antenna relay system (CARS), all customers could be served from the Huntley facility. The Worden headend was decommissioned and the equipment moved to Huntley. By 2002, two cable systems were now one carrying twice the channels. Upgrade and maintenance were cut in half. Over the next year and a half the customer base continued to grow. We converted to the DOCSIS cable modem system in Huntley. The internet backbone was moved to a T1 data connection from the LEC (local exchange carrier - local phone company). It is noteworthy that our grass roots cable system was running cable modems prior to DOCSIS becoming the accepted standard. Early in 2004 wireless internet services were launched. This service provided broadband internet access for the rural unserved areas outside the cable system, specifically the area slated for fiber. Dialup service was discontinued. A point-to-point wireless connection was established between the towers in Huntley and Worden creating a cost effective backhaul between cable systems. That summer cable modems came online in Worden and Ballantine. In 2006 and 2007 several aspects of our network were fortified. We doubled our internet backhaul capacity by adding another T1. This upgrade doubled our already expensive backhaul costs. Alternatives to this connection were explored. In 2008 and 2009 we executed several major projects, including launching digital telephone service. We reduced our costs substantially and at the same time increased our backhaul capacity by implementing a connection to our neighboring metropolitan cable operator and dropping the LEC T1's. With this new system, we are positioned for the future with the ability to easily and affordably expand as needed from our current 10mb to 20mb, 50mb, 100mb and on. We also completed our digital TV (DTV) conversion as of June 2009. We now carry both analog and

digital signals as well as the associated high definition channels. Operations Going Forward Two more projects remain for our services to rival those of a metropolitan cable company. The first is the implementation of a digital set top box system. Our solution, called Low Cost Set Top, will be capable of providing hundreds of television channels including high definition television (HDTV) and, as the name implies, will use very affordable set top boxes. This means that operator costs of under \$50 per TV will be possible rather than \$300 per TV. We intend to incrementally start this upgrade by the end of 2009. Lastly, what remains is to build fiber optic cable into our surrounding rural coverage area all the way to the home, making all these services available over state-of-the-art infrastructure. Conclusion VIKING Broadband, Inc. began with two neglected cable systems that were in decline. There was no internet and no broadband anywhere in the area even though three different phone company territories converge here. In true pioneering spirit we basically built these systems into a modern system with services rivaling that of much larger urban cable systems. Our customers enjoy much more bandwidth than our competitors deliver and at a significantly lower price. We are now poised to extend our network to surrounding unserved rural areas with FTTH. Clearly, VIKING is well qualified and has demonstrated the ability to build and sustain a telecommunications system. Although we fully expect that other providers will include piecemeal our service area in their multiple service area applications, we contend that VIKING is the only provider completely and wholly dedicated to this critical area that absolutely should be addressed as a whole. It is abundantly apparent that our proposal satisfies the spirit and intent of the American Recovery and Reinvestment Act and the Broadband Stimulus program. VIKING's East of Billings Fiber Future is uniquely suited to create jobs and stimulate long-term economic development in an unserved yet growing rural area, located so as to facilitate and incorporate the growth of Billings as a regional and international hub of commerce.