

Broadband USA Applications Database

Applicant Name: Lane Council of Governments

Project Title: Oregon South Central Regional Fiber Consortium Lighting the Fiber Middle Mile Project

Project Type: Middle Mile

Executive Summary

The Lane Council of Governments' Rural Fiber Consortium Lighting the Fiber middle mile project is designed to bring broadband at needed speeds to community anchor institutions in unserved and underserved portions of Lane, Douglas and Klamath counties in Oregon. The combined area of the three counties is 15,990 square miles, larger than at least eight states. The total area served by the Consortium project will be approximately the size of New Jersey or Vermont. While some of the areas to be served have available the minimal broadband services defined by the Recovery Act, the community anchor, public safety and critical community organizational users of the area lack the broadband services that they need to operate efficiently. The area hospitals need a direct Ethernet service to allow them to establish a centralized record system with their branch offices. The medical clinics in the entire area need better connections so that they can better serve their patients. The emergency first responders need a secure, reliable broadband service system that allows them to communicate with each other. Libraries and community centers cannot provide the broadband connectivity they need to bring in patrons, or to provide the services for their users. Fiber optics systems consist of four general elements. This project brings with it the first, and in some ways, most difficult to obtain element: the long haul connectivity. The Lane Council of Governments has obtained commitments for developing a fiber network that runs through the metropolitan area of Eugene and Springfield and into the rural areas of Lane, Douglas and Klamath Counties. But by itself this backbone is not enough. With BTOP funding to provide support for the construction of lateral fiber connections and the installation of the optronics, this project will provide necessary services to the three county region. LCOG has also investigated the fourth and final element; the service provider. LCOG does not intend to provide that service itself, but to contract for it. While final arrangements cannot be made until the project is underway, LCOG has secured commitments for major portions of the routes and has expressions of interest from multiple providers for the other segments of the project. When completed this project will add to the service opportunities in 16 cities in the three county area, and also to four unincorporated communities or areas within the three counties. Because of the nature of the backbone infrastructure available for this project, the communities radiate out to the north, west, south and southeast of the Eugene Springfield area. Using the 2000 US Census data, the project will pass a population of over 250,910. The largest city in the area to be served, Eugene, has a population of 137,893. No other community except Springfield (52,864) has a population of more than 20,000. The smallest reported city is Chiloquin, with a population of 716. Nine of the communities are under 5,000 in population. The unincorporated communities of Chemult and Tricity, and Days Creek and the Willamette Pass area have no reported population because they are not large enough to appear as communities in the census data. In the same

way, the census does not report the number of households for these communities, so to say that there are 104,354 households within the project area, according to the 2000 census is to underestimate the number of households by at least several dozen, perhaps a hundred or so. The reports on the number of businesses is also limited by the data at hand. Ten of the cities and unincorporated communities are too small to report to the census on the number of businesses. Again, therefore, the accumulated census estimate of 6,786 businesses is underreporting the actual number, because there are businesses in all these areas, even if they are too small to appear in the census reports. While this project will pass a number of households and thus open the possibility of improved broadband services to all those households, this is a middle mile project, not proposing to provide direct service to any residences of businesses other than medical facilities. This middle mile project does propose to bring broadband services to 111 community anchor institutions, public safety entities and critical community organizations. These range from the Klamath Tribal Medical clinic in Chiloquin to the new police headquarters in the City of Eugene. They include school buildings, entire schools districts, libraries, community service centers housing social service agencies, hospitals and fire districts (which provide ambulance services). None of the community anchors, public safety agencies and critical community organizations that this project proposes to connect now have adequate broadband services. These target users lack broadband because the cost to obtain the services they need is too high. In many cases the problem is that the service just does not exist. This project will address that problem. When completed, the project will bring a minimum level of service of 100 megabit Ethernet to each direct connection. For most of the service area the optronics will be installed to handle 10 gigabit Ethernet on the backbone to the Eugene consolidated interconnection point, and nowhere will the service be less than two gigabit Ethernet service at the time of first operation. All of the system will be designed to accommodate faster speeds through the addition of additional wave division lasers. The Lane Council of Governments has extensive experience in the development, design and implementation of broadband infrastructure projects. LCOG was responsible for developing the Public Agency Network in the Eugene and Springfield area. The PAN is a multi agency network involving multiple agencies at the local and state level, using dense wave division multiplexing equipment to support a network across perhaps a hundred miles of fiber within the area. LCOG has also worked with the University of Oregon and the Oregon Department of Transportation to establish long distance networks that cover the 100 miles from Eugene to Portland. LCOG has also negotiated IRUs and service agreements with multiple private and public agencies to create and oversee the operation of broadband networks ranging across the three county area. The total project costs will be \$10,488,504.80. LCOG will provide a match with a total value of \$ 2,113,505.00 a match of 20.20 percent. The construction of the network will create approximately 50 jobs over the just over two years of construction, with a maximum employment of approximately 30 persons at any one time. There may well be other long term jobs created as schools, libraries and medical facilities are connected. The LCOG business plan, which has worked well for the Regional Fiber Consortium, (the entity on whose behalf LCOG is applying) is not to take on operational responsibilities for the network. Instead LCOG will work with broadband providers in the area to make a range of services available. LCOG has ascertained that there will be either a natural service provider in the area who is already committed to providing service using the fiber and equipment to be installed by LCOG, or that there are several competitive providers who are interested in bidding on the right to become the service provider. The Consortium experience has shown that when the capital investment necessary to

provide services is lowered through other means, then it is possible to bring economical broadband services to rural areas and to users in metropolitan areas that are not served adequately by existing providers. The Lane Council of Governments subscribes to and supports the Recovery Act policies of non-discrimination and open interconnection. Each end user point will be a point of potential additional connection and all the fiber paths will be constructed with additional fiber to allow additional users to connect. A key element in the project is the development of an interconnection point in Eugene that will allow all interested carriers to locate in one space, with the opportunities for cross connection and peering that this provides. Some of the sub-grantee partners that LCOG has brought into this project already have policies of non-discrimination. All businesses contracting to provide services will have to subscribe to non-discrimination and interconnection policies similar to those in the federal guidelines. While this project is not designed to bring broadband to businesses or households, the bandwidth installed will be available to others who do want to bring service to those users. LCOG has been approached by at least one telecommunications company who has developed fiber to the premises infrastructure in several smaller Oregon cities. They indicated that several of the communities to be served by this project are on their list for development, and several others may be added to the list. Therefore, while the projects overall subscribers will be the 111 institutions served, the project will open the potential for thousands more to gain access to true broadband services.