Broadband USA Applications Database

Applicant Name: Upper Peninsula Telephone Company

Project Title: Provide Broadband service to unserved remote Village of Daggett

Project Type: Last Mile Remote

_______________________Executive Summary_______________________

An Executive Summary of the Project The applicant supporting the application is Upper Peninsula Telephone Company (UPTC). UPTC currently serves approximately 6,100 customers across Upper and Lower Michigan. UPTC owns and operates nineteen telephone exchanges. Long distance telecommunications services and Internet access services are provided through non-regulated affiliate companies. Broadband delivery, Internet architectures and the services that are delivered remain a significant focus of the UPTC business. UPTC has served telecommunications customers in the region since the 1960’s. Upper Peninsula Telephone Company is a wholly-owned subsidiary of Lynch Interactive Corporation of Rye, New York. Lynch Interactive Corporation holds and operates a variety of telecommunication interests. In support of UPTC’s efforts to extend broadband and Internet access services to population in Michigan, UPTC owns and operates a retail computer and networking sales business, produces Internet content, and offers end-user support for both the computer systems and broadband services sold. Education is recognized as a significant component of broadband proficiency. Accordingly, UPTC works daily to educate existing and potential users on Internet access services and the Internet. UPTC maintains a headquarters in Carney, Michigan, approximately 8.5 miles to the north of Daggett. Though UPTC does not service Daggett with local exchange services or broadband today, the Village is within the community of interest of UPTC and other UPTC customers.

Explanation of Total Project Cost The cost of this project and use of grant and matching funds can be summarized as follows. The costs are represented for the first two years of operation and development. Use of Funds ITEM COST CATEGORY 2-YEAR COST 1. Capital Expenditures $ 452,866 Total Funds Requested $ 452,866 Total project costs do not include the costs associated with the revenue producing operational activities of UPTC. It is assumed that the on-going operation of this plant will be incremental in respect to the remainder of the UPTC operation.

Overview of the Telecommunications System The technical design proposed to deliver broadband services to the Village of Daggett, Michigan is comprised of three main components. 1. Daggett Community Center 2. Fiber-connected 900 MHz broadband radio infrastructure 3. Intra-area transport and ISP connectivity The Village of Daggett currently has no basic broadband transmission services. The Village is located in a heavily foliated location and subject to wide swings in temperature, heavy rains, severe lightning, strong winds and heavy snowfall. The criteria established by the community connectivity plan centers on a broadband infrastructure that will make basic broadband transmission service available to every residential and small business location in the Village. Because of economic considerations, and need for prompt deployment, the design criteria dictated that a mix of fiber and broadband wireless technologies be used to accomplish the goals of deploying services in the Village in a rapid and economical way and establishing a high capacity base to serve the Community.
Center and provide capacity for advanced services as they are required. Ethernet is recognized as the world’s most widely deployed communications technology in North America, if not the entire world. Ethernet transport technology is widely deployed from computer networking core routing of traffic through existing backbone networks. The design proposed for the Village of Daggett allows Ethernet traffic to flow, without unnecessary protocol conversion, between the customer premise and the network core. This primary Ethernet path ensures uninhibited data flow and superior bandwidth management capabilities. Internet access service and the delivery of future content will be accomplished via Internet Protocols (IP). No voice services are proposed or planned for this infrastructure. The UPTC Point-of-Presence (POP) cabinet will be located on Village property near the Volunteer Fire Department and Daggett township building. A 150-foot radio tower will be located at the POP to serve the community with wireless broadband service. The Village of Daggett has agreed to provide rights-of-way for the cable and tower location. Due to the foliage, 900 MHz spectrum was chosen to provide broadband to the businesses and residents of the Village. The 900 spectrum is unencumbered in the Village as there are no broadband providers in the vicinity and it has the best propagation characteristic available for penetration of the foliage, snow, and rain. UPTC is aware of the risks of using unlicensed spectrum, but also understands that interference can be mitigated in a variety of ways as it arises. A frequency propagation study has been performed on five potential tower locations, and a site with excellent coverage was selected. The site is located in an unobtrusive location at the rear of a Village-owned parcel near the Fire Department. The study shows that 100% of the potential subscribers can be served with 99.9% reliability within a two-mile radius, which encompasses all of the residents of the Village of Daggett from a 150-foot tower. Ethernet-based radios are proposed to allow full IP function and connectivity, and allow the best use of bandwidth. Fiber will be used to connect the radio facilities to UPTC's ISP center in Carney, Michigan. All fiber optic facilities will use dual-window, low-water peak cables. Strand count will be designed to ensure adequate spare fibers for near-term growth and maintenance needs. All cables will be spliced using low-loss splicing techniques. All cables in the Village of Daggett will be buried. Means of locating all buried fiber cables will be included in the design and construction. The fiber plant facility will be constructed using current RUS cable plant design and construction specifications and in compliance with the requirements of the National Electric Code (NFPA-70). Several Community Critical Facilities will receive broadband access as proposed in the grant for the duration of the grant period. 5. Procedures for Verifying Unavailability of Broadband The following methods were used to unequivocally determine the absence of affordable broadband services in the community of Daggett: ? A general Internet search was used by using Google and MSN search engines on-line to find possible providers of broadband services to Daggett, Michigan. ? Direct contact and an online inquiry were made with the incumbent local exchange provider, AT&T (formerly SBC Communications) to determine the availability at no less than two locations in the Village of Daggett. ? Contact was made with a local wireless broadband provider located in the community of Stephenson to determine the availability of wireless broadband in the community of Daggett. ? Contacted several businesses in the community of Daggett and inquired about their experiences relating to obtaining broadband for their businesses. ? A notice of intentions to provide broadband and apply for a grant was posted in the local newspapers in May 2006 with a thirty-day response window. No objections were noted. A notice was posted in August of 2007 and no objections are noted to-date. Attached to this section is a verification of the posted notice. In all cases, we found that affordable broadband services
were not available to the community of Daggett, Michigan. One business was using a high-cost satellite broadband service, while two businesses stated that they were forced to use high-cost private line alternatives due to the lack of affordable broadband. 6. Participating Community Organizations The following community organizations have offered input into the planning and grant application and will be participating in the community-connect plan: Village of Daggett is a critical community facility that wishes to use broadband for economic development and to sustain the Village of Daggett. Specific uses for the broadband services include e-government filings and election administration. Village of Daggett Volunteer Fire Department is a critical community facility that, as a volunteer organization, has significant budget constraints, but is still required to participate in e-government to maintain their certifications. On-line filings are required by both State and national organizations. This capability has not been available to the volunteer fire fighters in the past. There is also a sense that affordable broadband will facilitate various educational opportunities that will further help conserve the limited resources of this volunteer organization and maintain an environment that will sustain recruitment potential for this organization. Daggett Township Board is a critical community facility and local government entity that maintains offices in the Village of Daggett. The township board will also benefit from affordable broadband for the purpose of conducting business in the electronic age. NorthReach Healthcare is a medical clinic that has been designated as a critical community facility. The absence of affordable broadband has, in the past, raised the cost of healthcare and lowered the level of patient care by requiring patient information and test results to be sent by courier. Affordable broadband in Daggett will allow the clinic to improve the quality of health care to the residents, while managing the costs of health care. There are many other entities and individuals in Daggett that have shown their support for this project and believe that there will be a direct benefit to the community. These entities have shown support through a petition to purchase affordable broadband when it is made available. Nearly twenty-five percent of the households in Daggett have thus far s