Nebraska Broadband Bridge Program

Business Plan narrative on behalf of Joint Applicant

Diller Telephone / Diode Cable Co

West Ellis Project

Diode Cable Co (dba Diode Communications) will be marketing our Diode Fiber Edge service in the proposed project areas west of Beatrice, northwest of Ellis in Gage County as well as areas adjacent to Diller Telephone facilities in Gage County Nebraska. Areas being served west of Beatrice are adjacent to areas recently completed in phase one of the Nebraska Broadband Bridge Grant program.

The project area today is classified as unserved, as verified by RVW engineering. Broadband service that is available is primarily served by Diode’s fixed wireless product with a maximum capability of 25/3 speeds (most homes receive 12/2). Homes not subscribing to Diode wireless are served by Windstream DSL capable of 10/1. While some 477 data may suggest slightly higher speeds, upon information and belief, service at such speeds is not being provided in the project area. The Diode Fiber Edge service will be a dramatic improvement for 43 rural residents/farms in the project area that include much of Lincoln and Blakely Townships of western Gage County. Speed packages offered will be 50/50 Mbps, 100/100 Mbps, 500/500 Mbps, and 1 Gig/100 Mbps as being currently advertised on our website. 13 miles of buried fiber optic facilities will be placed (see Attachments A and B).

The estimated cost of the West Ellis Project is $431,000. DTC/Diode is pursuing a 70/30 match arrangement with NBBP grant funds (NBBP $301,700 and Diode $129,300).

The expected useful life of electronics used in our fiber network range between 5-15 years and the optical fiber is between 20-25 years. We currently utilize GPON in our fiber deployments.  We have a 10GIG ring Diode utilizes for their middle mile.  We utilize Cisco’s ASR platform to deliver this around the service territories.  This equipment is scalable to grow with network needs.  Last mile connectivity at each edge network connects through the backhaul to the core over the fiber network.  We use Adtran’s TA5000 in our central office. It is the most widely deployed multi-service platform in North America. 10G PON, 100G/slot backplane, and 100G uplinks give it the capacity and performance to meet needs through this decade and beyond.

Diode Communications anticipates no issues with zoning, rights of way or county construction permits. We have a long-standing positive relationship with Gage County officials. In fact, we have been encouraged by county officials to continue fiber builds that expand broadband improvements made in the 2020 Remote Access Broadband Grant (CARES Act) and first round of Nebraska Broadband Bridge Grant buildouts. Areas served in the West Ellis project will not include any areas covered by Nextlink’s proposed Gage County fiber project.

Diode will utilize its seasoned managerial, technical and customer service staff as well as established billing processes to operate the Diode Fiber Edge services in the project areas. Diode will achieve profitability through realizing efficiencies of shared resources, economies of scale and user subscription fees. Financial forecasts result in a return on our investment in 5 years (see Attachment G\_2) and sustainable positive cash flow the next 20 years providing the means to support and maintain the network, resulting in a financially viable and sustainable project that will serve the educational, healthcare and business needs of the community.