

Executive Summary

1 Project Overview

Webster-Calhoun Cooperative Telephone Association's (Webster-Calhoun) Fraser Broadband Expansion project will provide fiber-based Gig capable broadband and communications services to households, businesses and key community organizations within the target service area. Located just across the river and adjacent to Webster-Calhoun's service area, this small scenic community continues to struggle to attract new residents and businesses due to lack of broadband and reliable communications. This broadband connectivity will create the potential for increased business growth, public services, public safety, telehealth, telework, and distance learning. These capabilities are urgently needed by residents of the project area due to the ongoing COVID-19 pandemic.

For this project, Webster-Calhoun is proposing to construct a Fiber to the Home (FTTH) outside plant and electronics infrastructure. This engineering extends what Webster-Calhoun is already providing their subscribers today to this underserved area.

Webster-Calhoun has a proven reputation of quality and reliable service and is led by experienced key staff that can manage the established organization to successfully implement and operate the project. This reputation has resulted in numerous calls from residents of Fraser asking for help based on the poor quality and choice of communications providers. This project would significantly impact the quality of life for these locations.

Webster-Calhoun will utilize existing back office equipment as well as middle mile transport and redundancy to support the buildout and operation of this remote setting. Only with grant funding will it be financially feasible for Webster-Calhoun to expand, construct fiber from the existing Pilot Mound central office, cross the Des Moines River, and provide drops to end users in the target area.

The overall total cost of the project is \$1,149,000 with \$861,750 requested in grant funding.

2 Geographic Area

The proposed broadband project will include the construction of FTTP infrastructure in Boone County. This particular area is very difficult to construct to due to its close proximity to the Des Moines River. The terrain consists of steep and rolling hills throughout this river valley and dense trees. It is difficult for any technology other than FTTH to work here because of these geographic features. Due to these factors, construction to the residents of Fraser is expensive and would not be feasible to build to without financial assistance.

As shown in Exhibit B, the target service area includes 32 census blocks which cover 3.38 square miles and passes 81 broadband units.

3 Deployment Model

Webster-Calhoun intends to build a FTTP architecture using Gigabit passive optical network (GPON) technologies to serve the subscribers within the target service area. The proposed FTTP electronics enables the provision of peak data speeds up to a 1 Gbps data service. The management system utilized for the proposed network provides Webster-Calhoun with visibility into the total bandwidth utilization on each PON and Webster-Calhoun will have the ability to easily update the network to ensure that the end users do not experience congestion.

4 Timeline

Webster-Calhoun has completed preliminary planning of project. However, no construction has been initiated on the project, therefore it is “shovel ready” upon award of funds. Webster-Calhoun has explored building out this area; however, the high cost to deploy broadband due to its rurality has been a deterrent. With the proposed grant funding, Webster-Calhoun believes it feasible to complete this expansion. The following is an overview of the preliminary timeline milestones.

Project Objectives and Activities	2021			
	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4
OSP Engineering	X	X	X	X
Fiber Construction (Mainline & Drops)		X	X	X
FTTP Electronics (CO & ONT)			X	X