Environmental Assessment (EA) For Iowa Communications Network

Bridging the Digital Divide for Iowa's Communities Project

Broadband Technology Opportunities Program (BTOP)
&
National Telecommunications & Information Administration (NTIA)

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Executive Summary

ICN's Bridging the Digital Divide for Iowa's Communities project proposes to upgrade its existing 3,000-mile network to provide 10 Gbps-capable points of presence in each county, while enabling a system upgrade for as many as 1,000 community anchor institutions statewide to 1 Gbps Ethernet service. Community anchors served by this project will include over 50 libraries, 800 educational institutions, and 1,000 government facilities. ICN's partnership with non-profit Iowa Health System will allow for a comprehensive statewide fiber network that serves public sector, private sector, and non-profit entities.

In three counties in Iowa outside work will be conducted.

> **Decatur County:** The ICN will install a 72 count, underground fiber optics cable in Decatur County, Iowa primarily along US Highway 69 between Lamoni and Leon. The fiber route is 16.2 miles and is all underground on previously disturbed right-of-way.
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> **Tama County:** The ICN and its BTOP sub-recipient, the Sac and Fox Tribe of the Mississippi in Iowa, will build a fiber route of 4.2 miles that will support an underground fiber build to create middle mile access network for a Fiber to the Home (FTTH) project. In addition to the backbone access route, 13.0 miles of distribution cable and approximately 196 fiber drops will be installed to create last mile access paths to the head end, which will be terminated on the backbone access fiber.
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> **Winneshiek County**: In Decorah Iowa, a new fiber route of 7.9 miles will be constructed to connect the backbone of the network to community anchor institutions in town. Where possible, this construction will consist of attachments to existing poles with suitable strand and lashing to support 72 count cables. In those areas that poles do not exist, and in areas where entrances need to be built to buildings, underground construction will be completed, consisting of boring in conduit using directional boring. Directional boring, commonly called horizontal directional drilling or HDD, is a steerable trenchless method of installing underground pipes, conduits and cables in a shallow arc along a prescribed bore path by using a surface launched drilling rig, with minimal impact on the surrounding area. Directional boring is used when trenching or excavating is not practical.

The no-action alternative does not meet the needs for the project, and wireless and/or 100 percent aerial construction options pose significant operational challenges for the proposed network.

The proposed new construction routes for the ICN have potential impacts to environmental, historical and cultural resources. ICN has contacted interested environmental and governmental agencies and consulted with NTIA's National Environmental Policy Act

(NEPA) coordinator and the Office of the State (Iowa) Archaeologist on overall project guidance. Each agency was provided with a description and maps of the proposed project showing the area that could be affected by the proposed routing of new fiber optic cable in the three affected counties. Each agency was given the opportunity to comment on the proposed project and its potential effect on the environment. Agencies include Historical Preservation Office Tribal, and State (Iowa), Tribal Entities, US Fish and Wildlife Service and the Iowa Department of Natural Resources. After contacting the commenting agencies and reviewing the proposed construction routes, no significant impacts to the existing environment were found.

Chapter 1 – Purpose and Need

The portion of the project involving construction will bring fiber optic connectivity to community anchor institutions where such connectivity currently does not exist. A sub-recipient's separate construction projects will also deliver fiber to the home to a currently underserved tribal community.

With the ever expanding capabilities of technology, the need for expanding bandwidth to help community anchor institutions has grown. This project will allow ICN to build a scalable platform to deliver higher bandwidth speeds, now and into the future, to underserved community anchor institutions and a traditionally underserved community in Iowa.

Chapter 2 – Proposed Action

Construction activities in this project are limited to three geographic areas in which new fiber construction will be executed. Construction activities are designed to be built on previously disturbed routes minimizing environmental impact issues.

The ICN will install a 72 count, underground fiber optics cable in Decatur County, Iowa primarily along US Highway 69 between Lamoni and Leon. The fiber route is 16.2 miles and is all underground on previously disturbed right-of-way.

The second area of construction is on the tribal lands of the Sac and Fox Tribe of the Mississippi in Iowa, located in Tama County, where a fiber route of 4.2 miles will be built underground to create middle mile access for a Fiber to the Home (FTTH) project. In addition to the backbone access route, 13.0 miles of distribution cable and approximately 196 fiber drops will be installed to create last mile access paths to the head end, which will be terminated on the backbone access fiber.

In Decorah, Iowa a new fiber route of 7.9 miles will be constructed to connect the backbone of the network to community anchor institutions in town. Where possible, this construction