

**National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
County of Carver
Carver County Open Fiber Initiative Project**

The County of Carver completed an EA for this Project in May 2011. NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Installing 89 miles of buried fiber optic cable in a ring configuration through Carver County;
- Installing 33 miles of buried lateral fiber extensions to reach 86 identified CAIs at 56 individual addresses in Carver County;
- Using plowing and directional drilling techniques to install the new fiber infrastructure as a dual duct system along existing ROWs and utility easements;
- Installing hand holes and vaults along the new fiber route, as necessary, but at intervals no greater than 5,000 feet in rural areas and 1,000 feet in urban areas;
- Erecting three equipment huts along the network route to house telecommunications equipment, including switches and routers; and
- Installing appropriate telecommunications equipment within existing structures at the identified CAI sites.

Based on a review of the analysis in the EA, NTIA has determined that the Project, implemented in accordance with the preferred alternative, and incorporating best management practices (BMPs) and protective measures identified in the EA, will not result in any significant environmental impacts. Therefore, the preparation of an EIS is not required. The basis for this determination is described in this FONSI.

Additional information and copies of the Executive Summary of the EA and FONSI are available to all interested persons and the public through the BTOP website (www2.ntia.doc.gov/) and the following contact:

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Purpose and Need

The purpose of this Project is to expand capabilities, geographic reach, and reliability of broadband services throughout Carver County, Minnesota. Current broadband options within the county vary by location, but existing networks are unable to accommodate vital education,

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healthcare, and business applications. The Project will bring broadband service to a large, rural farming area where only dial-up services are currently available. Installation of new fiber infrastructure, as planned, will provide connection to 30 schools, 11 municipalities, E-911 services, a hospital, and 6 libraries. Furthermore, this Project will provide system reliability, which is critical to providing emergency responder services throughout the county.

Project Description

Under this Project, the County of Carver will install 122 miles of buried fiber optic cable. Approximately 89 miles of fiber will be installed in a ring configuration passing through each town and most townships in the county. Another 33 miles will be installed as lateral extensions running from the ring to 86 CAIs at 56 individual addresses around the county. Installation will occur along existing roadway ROWs and utility easements.

Underground cable will be installed via plowing and directional drilling. The vibratory plow creates a slit trench and inserts the fiber duct at a depth of approximately three to four feet below the ground surface. Plowing requires no excavation of soil. Directional drilling techniques will be used for fiber installation at stream crossings, in urban areas to minimize disturbance of surface features such as roadways and sidewalks, at utility crossings, and at locations where sensitive wetland features have been identified. This method of fiber installation involves drilling a borehole beneath the feature of concern and passing fiber through the completed boring. Entry and excavation pits will be installed to accommodate the necessary drilling equipment. When installed via directional drilling, the depth of cable duct will vary, as needed, to provide adequate separation from the surface feature being avoided. A specialty crew will install hand holes and vaults, and repair field tiles damaged during operations. Hand holes will be installed as dictated by the system design, but at intervals no greater than 5,000 feet in rural areas and 1,000 feet in urban areas. Through the Gopher One Call System, the County of Carver will work with local utility companies to identify and mark locations of existing utilities in advance of subsurface fiber installation activity. The planned fiber cable depth will be adjusted, as required, to avoid conflicts. Where utility crossings are unavoidable, the existing utilities will be hand excavated to determine the depth of crossing.

Three equipment huts will also be erected in the towns of Cologne, Victoria, and Mayer. Because these concrete huts will be placed in developed areas, minimal site preparation will be required. These sites should only require leveling of the base area with sand and installing conduit for hookups to local utility services and fiber optic cables. One of the huts will be surrounded by naturally occurring trees, and all three huts will be constructed to blend into the surrounding locale as much as possible. Specifically, siding will be coordinated to blend with existing structures and screens or shrubs will be planted. The County of Carver will install telecommunications equipment (e.g., switches, routers, and carrier equipment) in each hut, along with propane-powered generators for backup electrical service. Appropriate telecommunications equipment will also be placed within existing structures at the identified CAI sites. Fiber

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connections to CAI buildings will be below grade or will enter at existing building penetration locations.

Alternatives

The EA includes an analysis of the alternatives for implementing the Project to meet the purpose and need. NTIA also requires that an EA include a discussion of the no action alternative. The following summarizes the alternatives analyzed in the EA.

Alternative 1 – Underground Fiber Installation (Preferred Alternative). This alternative will involve installing 122 miles of new buried fiber optic cable in a dual duct system with a network ring configuration and lateral extensions to 86 CAIs. Telecommunications equipment will be installed in existing buildings at the identified CAIs and in three equipment huts to be constructed in Cologne, Victoria, and Mayer. Each hut will be connected to local electricity and gas, but will also be provided with a propane-powered generator for emergency backup power.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the Project area. Under the no action alternative, the County of Carver network ring and laterals would not be constructed, and telecommunications needs in the county will continue to be unmet. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. The County of Carver examined the possibility of aerial fiber installation, in whole or in part. However, aerial cable is susceptible to outages during storm events due to falling tree limbs and branches, excessive ice buildup, or wind gusts. In addition, portions of the planned Project corridor have no existing poles or would require pole replacement due to age or substandard structural integrity. For these reasons, aerial fiber optic cable installation was eliminated from further consideration for this Project. The County of Carver also evaluated the use of wireless technologies as an alternative to the planned fiber optic network. Several of the educational facilities that will be served by this Project currently use wireless technologies to gain internet access. However, internet connection speeds provided by wireless technology are insufficient to meet the existing demands of these institutions. Because wireless systems are not capable of providing a level of service that is sufficient to address the purpose and needs of this Project, this alternative was also eliminated from further consideration.

Findings and Conclusions

The EA analyzed existing conditions and environmental consequences of the preferred alternative and the no action alternative in 11 major resource areas, including Noise, Air Quality, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use and Recreation, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts were also evaluated.

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Noise

The Project will result in minor, temporary increases in ambient noise levels during the construction phase. Construction noise will be generated by heavy machinery such as vibratory plows, directional drilling equipment, and small excavators. However, increases in noise will be limited to the construction phase of the Project. Moreover, because construction will move along the Project route, these sources of noise will not be located adjacent to any receptor for more than one or two days. Some impact on sensitive receptors is unavoidable because many of the CAIs to be served are classified as sensitive receptors. Impacts associated with construction noise will be mitigated by restricted work hours. Long-term operation of the new fiber network for data transmission will not result in elevated ambient noise levels. Furthermore, noise associated with intermittent use of propane-powered generators at the three equipment huts will be minimal as the generators will be placed inside the concrete structure in a separate enclosed area. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

Air Quality

Construction of the proposed improvements will require equipment such as vibratory plows, directional drilling equipment, and small excavators, which will produce airborne dust and greenhouse gas (GHG) emissions. However, these impacts will be of short duration and distributed along the entire Project corridor. Moreover, the planned installation methods require minimal soil disturbance, which will limit the potential for dust generation. Construction of the network as planned will result in the release of approximately 216 metric tons of carbon dioxide-equivalent GHG emissions. This estimate is well below the Council on Environmental Quality's presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emissions from an action. Based on these assessments, no significant impacts to air quality are expected.

Geology and Soils

Construction of the Project will not adversely affect the geology or soils in Carver County. Fiber will be installed within existing, previously disturbed road ROWs or utility easements. Additionally, the new subsurface infrastructure will largely follow the topography of the land, with no significant grading or increases in elevation. The primary fiber installation method, vibratory plowing, minimizes ground disturbance while maintaining the in-situ soil profile. The secondary fiber installation method—horizontal directional drilling—avoids disruption of sensitive surface features, but will require excavation of entry and exit pits for the drilling equipment (located outside of the sensitive area). Small excavators and hand shovels will be used to minimize ground disturbance associated with hand holes and vaults along the Project route. Erosion control procedures will also be used during excavation. To avoid unmarked field tiles along the Project route, the County of Carver will notify township authorities prior to construction and request that they mark the locations of known field tiles. If an unmarked tile is broken during construction, the fiber optic cable contractor will repair the damage to reinstate

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drainage. The three new huts will be installed on previously developed property. As all work will take place on previously disturbed rights-of-way, there is no intrusion on prime farmland or farmland of statewide importance. Based on these assessments, the Project is not expected to result in significant adverse impacts on this geology or soil in the area.

Water Resources

The Project route includes several stream and river crossings that will be completed by directional drilling. To avoid impacts on these water features, directional drilling will begin and end at a distance of 30 feet from the edge of wetlands or riparian environments. The Project route also includes several wetlands crossings. For wetlands that are intermittently dry, a vibratory plow will be used to install the conduit. Any impacts to these wetlands will be temporary and not of a permanent or adverse nature. The County of Carver will use horizontal directional drilling to cross beneath wetlands that are normally wet or highly susceptible to damage and erosion. Although the planned Project route also includes floodplain crossings, the new infrastructure will be installed below grade and will result in no substantial fills or other grading. The potential for adverse effects on groundwater is negligible due to the shallow depth of installation (approximately 3-4 feet below the ground surface). Significant groundwater sources are not present at such limited depths and will not be impeded by the installation of the improvements.

In a letter dated January 7, 2011, the U.S. Army Corp of Engineers (USACE) indicated that there would be no permanent impacts to jurisdictional wetlands, navigable waterways, or floodplains; thus, no USACE permits are required. The Minnesota Department of Natural Resources (MNDNR) also indicated that the Project should have no impacts on waterways or sensitive areas. Nevertheless, MNDNR permits will be obtained for any jurisdictional waterway crossings within the floodplain. These permits will generally include the following stipulations: (1) the Project will not result in ground elevation increases; (2) no above ground structures will be placed in the floodway; (3) fiber will be installed at least three feet below the stream bed; and (4) disturbance of streamside vegetation will be kept to a minimum. Construction of fiber along the Project route will be conducted in accordance with permit requirements, and no huts will be located in floodplains. Therefore, the routes will have no adverse impact on floodplains.

Based on these considerations, and through compliance with applicable permit requirements, the Project is not expected to have significant impacts on water resources in Carver County or the surrounding area.

Biological Resources

As documented in correspondence from the U.S. Fish and Wildlife Service (USFWS) dated January 12, 2011, there are no Federally listed endangered or threatened species in Carver County, Minnesota. Furthermore, the USFWS found that the Project will not affect any Service-owned lands, as long as fiber will be installed on the opposite side of the road (i.e., within the west or northwest road ROWs) where the planned route passes the Minnesota Valley National

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Wildlife Refuge (MVNWR). In a letter dated April 1, 2011, MNDNR identified numerous species of special concern in the Project area, including Blanding's turtles (*Emydoidea blandingii*), the bald eagle (*Haliaeetus leucocephalus*), and several aquatic species. MNDNR indicated that Blanding's turtles should not be disturbed unless they are in imminent danger, under which conditions they may be manually moved out of the active construction zone. Both the USFWS and MNDNR recommended that active migratory bird nests be avoided during construction. Although a bald eagle nest was identified approximately 1,346 feet from the planned alignment, there is no current bird activity or nesting in this location. If nesting activity is observed during construction, the County of Carver will seek additional consultation with USFWS and MNDNR. Finally, because all waterway crossings will be completed via directional drilling, there should be no effect on these species. However, the County of Carver will implement appropriate erosion prevention and sediment control practices for the duration of the Project. Based on these assessments, no significant adverse impacts on biological resources are anticipated to result from Project implementation.

Historic and Cultural Resources

NTIA initiated Section 106 consultation with the Minnesota State Historic Preservation Office (SHPO) on October 13, 2010. On December 26, 2010, Carver County's contractors, Jaguar Communications and The 106 Group, provided a Cultural Resources Literature Review Report to the SHPO. This review assessed archeological sites and potential sites, and historic or potentially historic buildings on or near the planned network ring route and lateral extensions to CAIs. Two potential conflicts were identified where ground disturbance along the planned Project route would intersect areas that might contain human remains (sites 21CR0002 and 21CRap). To avoid potential disturbances, the County of Carver realigned the Project route by one block to bypass these areas. In addition, some of the CAIs may be of potential historical significance. Because fiber installation at CAI buildings will be below grade or through existing building penetration locations, and because there will be no structural additions or subtractions, the County of Carver concluded that these connections will have no adverse impact on historic or cultural resources. In a letter dated January 26, 2011, the SHPO acknowledged the revised Project route and indicated that no historic properties will be affected by this Project.

On October 22, 2010, NTIA notified 22 Native American Tribes of the Project through the Tower Construction Notification System (TCNS). Three Tribes (Lower Brule Sioux Tribe, Menominee Indian Tribe of Wisconsin, and Fort Peck Tribe) requested additional information on the Project. Project maps and other information were provided to the Lower Brule Sioux Tribe and the Menominee Indian Tribe of Wisconsin on April 15, 2011. An Ethnographic Study and Literature Review Report were provided to the Fort Peck Tribe on April 20, 2011. The results of this Ethnographic Study and Literature Review Report for the area surrounding the proposed Carver County Fiber Optic project indicate that the project is unlikely to affect Native American properties. None of the remaining Tribes requested further information or provided additional comment on the Project. Six other Tribes indicated no interest in the Project as planned, but requested notification in the event of inadvertent discovery of cultural resources: Keweenaw Bay

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Indian Community, Lac Vieux Desert Band of Lake Superior Chippewa Indians, Ottawa Tribe of Oklahoma, Wyandotte Nation, Red Cliff Band of Lake Superior Chippewa Indians, and Prairie Band Potawatomi Nation. No responses have yet been received from the remaining 13 Tribes notified by TCNS, including the Sisseton-Wahpeton Oyate of the Lake Traverse Reservation and the Sokaogon Chippewa Community.

If construction-related ground-disturbing activities uncover cultural materials (i.e., structural remains, historic artifacts, or prehistoric artifacts), Carver County will stop all work in the area and immediately notify interested Tribes, the SHPO, and NTIA. If ground-disturbing activities uncover human remains, Carver County will immediately stop all work in the area, secure the area around the discovery, and notify the relevant law enforcement personnel (e.g., local police or county coroner) and NTIA.

Based on completed cultural resources reviews and consultations, the Project is not expected to have significant adverse impacts on historic or cultural resources.

Aesthetic and Visual Resources

Construction will occur within existing ROWs and easements along rural roadways and agricultural fields, suburban streetscapes, and rear yards within subdivisions. Aesthetic disruptions for most areas will be limited to the short-term presence of construction equipment during fiber installation. Because the fiber will be installed underground, this portion of the Project will not result in permanent impacts on aesthetic or visual resources in Carver County, the MVNWR, or scenic byways in the area. The aesthetic and visual impact of the three huts will be minimal. These huts will be erected in previously developed areas, with minimal site preparation required. Aside from the delivery of the concrete in concrete trucks, no heavy equipment will be needed to construct the huts. One of the hut sites will be surrounded by naturally occurring trees. All three huts will be constructed to blend into the areas as much as possible by coordinating siding type with existing structures, and planting screens or shrubs to help the hut blend into the surrounding area. Based on these assessments, this Project will not significantly affect aesthetic or visual qualities in the region.

Land Use

Fiber will be located within existing roadway ROWs and utility easements adjacent to land used for residential, business, agricultural, medical, governmental, and educational purposes. The Project will not result in the permanent loss of any prime farmlands or "farmland of statewide importance" because none of the construction will occur on farmland of any sort. The planned improvements are consistent with normal uses of ROWs and easements, and no significant adverse impacts on land use are expected.

Infrastructure

The Project is not expected to adversely affect existing infrastructure. Using the Gopher One Call System, the County of Carver will notify existing utilities of upcoming construction. Utility

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owners will mark the location of their utilities so that conflicts can be avoided. If construction within the marked areas is unavoidable, Carver County contractors will hand dig to specifically locate existing infrastructure and plan a safe crossing. Construction of this Project will have several positive impacts on the infrastructure of the County. Ongoing maintenance requirements will be reduced due to the conversion from copper to fiber optics. The fiber optic cable being deployed is expected to have a significantly longer lifespan than the current copper infrastructure. The planned ring configuration will enhance service reliability throughout the County. It is likely that there will be an increase in telecommuting and electronic transfer of data, which will reduce traffic in the County. Overall, the Project will have a positive impact on infrastructure in Arkansas.

Socioeconomic Resources

This Project will provide broadband services and associated opportunities to the currently underserved communities and rural areas in Carver County, Minnesota. Low income and minority populations will receive the same enhanced employment and educational opportunities as other populations present in the county. Installation of new fiber infrastructure will provide connections to schools, county and city governmental agencies, emergency responders, a hospital, and six libraries. This Project will also provide the system reliability needed to coordinate emergency responder services throughout the county. Overall, the Project is expected to have a positive impact on socioeconomic resources in the region.

Human Health and Safety

Because Project construction involves ground disturbance, hazardous wastes or contaminated water or soil may be encountered. A total of 18 leaking underground storage tank sites have been identified near the Project corridor. Contractors working in these areas will be briefed on the potential for encountering contaminated soils, as well as on all safety and disposal methods if such materials should be encountered. Soils will be identified as potentially contaminated if they appear visually different from surrounding soil, or if the smell of petroleum products is detected. If potentially contaminated soils are discovered, work will cease in the area of concern and a soils contamination consultant will conduct an investigation to determine the presence and extent of soil contamination. Workers will then be equipped with appropriate personal protective equipment in accordance with Occupational Safety and Health Administration (OSHA) standards and will follow the appropriate procedures for addressing the soil contamination. Nevertheless, the planned fiber installation methods will not result in exposure or redistribution of contaminated soils. Hand hole installation in areas of soil contamination is not anticipated.

Because much of the planned work will take place adjacent to high-speed traffic, worker and motorist safety is paramount. The Minnesota Department of Transportation traffic control standards will be used to establish and maintain a safe work zone. Workers are required to meet OSHA standards for worker visibility, and equipment driven on roadways must meet proper signage and licensing requirements. Construction equipment may also occasionally impede traffic flows as they enter and leave the roadway. MNDOT standards require traffic control

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signage, but do not require lane closures when work is more than two feet off the pavement. Delays to motorists are expected to be minimal as the construction will be off the roadway surface. The delays will be temporary and limited to working hours only. In accordance with Minnesota Department of Transportation (MNDOT) standards, Carver County contractors will also maintain safe pedestrian routes when conducting work within urban areas. Work in and around school zones will be coordinated with school district officials to ensure that safe, functional routes are available for pedestrian and bus traffic.

Based on these considerations, significant adverse impacts on human health and safety are not expected.

Cumulative Impacts

Because the planned Project improvements will occur along existing ROWs, there is potential for overlap between this effort and future improvements to the roadway system or other utilities. The 2011-2016 State and Carver County Plan shows only minor potential conflicts between their multi-year roadway improvement plan and the subject fiber optic plan. The conflicts focus on roadway resurfacing projects, and the County of Carver will work with appropriate agencies to ensure that work schedules do not conflict. The road construction plans do not overlap with the planned construction period for this Project. No significant adverse cumulative impacts will result from concurrent implementation of these projects.

Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, and protective measures, will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses indicate that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:



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