

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Illinois Department of Central Management Services – Illinois Broadband Opportunity  
Partnership, East Central Region**

**REVISED – September 2012**

**Summary**

The revised Finding of No Significant Impact (FONSI) is being reissued by NTIA to reflect minor project changes that were documented and analyzed in supplemental Environmental Assessment (EA) documentation. This FONSI is effective as of September 6, 2012, and supersedes the original FONSI issued April 22, 2011.

The Illinois Department of Central Management Services (CMS) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 1,229 miles of new fiber optic cable and construct an 80 foot monopole next to the Elementary School in the Village of Chenoa. The new middle mile infrastructure will connect approximately 3.9 million households, 285,000 businesses, and 415 community anchor institutions (CAIs) throughout a 55-county service area. The new network will include installation of fiber optic cable underground within existing rights-of-way (ROWs) along city streets. Construction of the project would occur in 45 counties throughout Illinois (allowing connections to existing infrastructure to serve the other 10 counties in the 55-county service area), and is referred to as the Illinois Broadband Opportunity Partnership – East Central Region (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to CMS, through BTOP, as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three years. This timeline will comply with the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in un-served and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act of 1969 (NEPA). Specifically, NEPA limits the types of actions that the grantee can initiate prior to completing required environmental reviews. Some actions may be categorically excluded from further NEPA analyses based on the specific types and scope of work to be conducted. For projects that are not categorically excluded from further environmental review, the grant recipient must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA, use it as the basis for finding that the project will not have a significant impact on the environment, and issue a finding of no significant impact (FONSI). Following such a finding, the BTOP grant recipient may then begin construction or other activities identified in the EA as the preferred

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alternative, in accordance with any special protocols or identified environmental protection measures.

CMS completed an EA for this Project in April 2011 and supplemental EA documentation was provided in August 2012 for minor Project changes. NTIA reviewed the original EA and supplemental documentation, determined it is sufficient, and adopted it as part of the development of this revised FONSI, which is effective as of September 6, 2012.

The Project includes:

- Installing approximately 1,229 miles of fiber along various existing state, city, or county ROWs via vibratory slit trench plow and directional drilling technologies;
- Constructing an 80 foot monopole next to the Elementary School in the Village of Chenoa; and
- Providing fiber optic connectivity to 415 CAIs from the middle mile backbone.

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/](http://www2.ntia.doc.gov/)) and the following contact:

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### **Purpose and Need**

The purpose of the Project is to bring affordable broadband service to unserved and underserved communities in Illinois. The Project will deploy fiber in areas where, to date, it has not been economically feasible to install telecommunications infrastructure. The middle mile infrastructure will provide connectivity throughout 55 counties, providing opportunities

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associated with broadband technology to 3.9 million households, 285,000 businesses, and 415 CAIs.

### **Project Description**

The Project involves installing approximately 1,229 miles of middle mile fiber throughout Illinois and constructing an 80 foot monopole next to the Elementary School in the Village of Chenoa. The network will include buried fiber installed via vibratory slit trench plow and directional drilling. Construction will take place within public highway ROWs, along established electrical distribution or telecommunication cable routes. No cable will be installed outside the public highway ROW.

The middle mile infrastructure consists of both backbone and lateral network lines and will provide connectivity throughout 55 counties in Illinois, but actual construction activities will be limited to 45 counties (allowing connections to existing infrastructure to 10 additional counties, bringing the service area up to 55 counties). The proposed project will allow for connection to existing and future service providers. Of these 45 counties in which construction will occur, 35 will have mainline (backbone) construction, while 10 will have lateral construction. The construction and fiber installation practices are the same for each type of construction route. The majority of the cable will be installed using a vibratory plow. Directional drilling will be used in locations where surface disturbances must be minimized, such as central business districts within existing communities, and near sensitive environmental locations, such as wetlands, stream crossings, or sensitive species habitats. The fiber cable backbone will run through conduit installed at a depth of three feet. The trenching of any streams, creeks, or rivers will be avoided during construction of this Project. In-line amplifiers (ILAs) will be installed at some locations and interconnected to the fiber. Typical ILAs are electronic fixtures approximately the size of a large file cabinet. Underground handholes (access points) will be installed no farther than five miles apart in rural areas and 1,000 feet apart in urban areas.

An 80 foot monopole will be constructed next to the Elementary School in the Village of Chenoa in order to connect to a CAI in the Village of Fairbury. The monopole will be installed in the parking lot 16 feet from the school building. Equipment will be mounted at approximately 80 feet high, which will use Federal Communications Commission (FCC) licensed spectrum.

In addition, the Project will connect 415 CAIs directly to the backbone or lateral network. Fiber will terminate at designated CAIs through established utility access points into the building. These access points will include some last mile installation and construction, such as splicing and building entrance construction.

### **Alternatives**

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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.

*Underground Fiber Installation (Preferred Alternative).* As noted in the Project Description, above, this effort will include installation of approximately 1,229 miles of underground cable and construction of an 80 foot monopole next to the Elementary School in the Village of Chenoa.

*No Action Alternative.* No action was also considered. This alternative represents conditions as they currently exist in Illinois. Under the no action alternative, new middle mile infrastructure would not be constructed. Many rural communities would continue to be unserved or underserved with respect to broadband internet access. Additionally, broadband services would not be provided to CAIs in the Project area. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

*Alternatives Considered But Not Carried Forward.* CMS considered the alternative of installing an all-aerial network. However, an all-aerial network would be too susceptible to severe weather conditions, such as icing, that can break the cable and render the system ineffective. Also, an all-aerial network, and associated operation, was found to not be economical to maintain. This alternative would also increase the total cost of the Project's construction. For these reasons, this alternative was therefore eliminated from further consideration. CMS also considered an all-wireless telecommunications network. However, wireless technology is not a viable alternative because of the high cost and limited internet connection speeds offered by that technology.

## **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, Infrastructure, Socioeconomic Resources, and Human Health and Safety.

### ***Noise***

This Project will have no impacts on noise during long-term operation. However, short-term increases in ambient noise levels are expected during the construction period. Noise created by machinery used during installation will be temporary and localized in nature. To reduce noise impacts, construction activities will occur during weekday daylight hours. Based on these considerations, no significant impacts on noise are expected to occur as a result of Project implementation.

### ***Air Quality***

Potential impacts to air quality associated with this Project will be limited to the construction period. Because plowing and directional drilling techniques result in only minor disturbance of the ground surface, fiber optic cable installation will generate negligible fugitive dust emissions.

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A short-term minor increase in the use of fossil fuels and associated greenhouse gas (GHG) emissions will occur as a result of Project construction. BMPs will be implemented to control fugitive dust during the construction phase of the Project. Additionally, all construction equipment and vehicles will be maintained in good operating condition to minimize exhaust emissions. Based on implementation of these BMPs, construction of the planned network is not expected to have significant adverse impacts on air quality.

***Geology and Soils***

The Project will be installed in previously disturbed public ROWs. The cable will be installed in these locations to, among other considerations, minimize impacts on geologic and soil resources. Both vibratory plowing and directional drilling techniques result in very minor, temporary disruption of the soils. Erosion control measures and BMPs, such as down slope siltation fences, hay bales, straw mats, and reseeded will be implemented before, during, and after construction activities. With these measures in place, the Project is not expected to result in significant adverse impacts on geology or soils.

***Water Resources***

Project construction activities could result in short-term, minor impacts on water resources within the Project area. The Project's fiber route will cross several streams, creeks, and rivers. Where fiber alignments cross waterways and rivers, construction activities will be confined to existing highway, road, and street ROWs. All waterway and river crossings will be accomplished via directional drilling that will extend under the floodways and fringe areas. There are five waterway or river crossings considered navigable "Section 10" waterways, where either directional drilling will occur or fiber will be attached to the bridge structure. Consultation with the U.S. Army Corps of Engineers (USACE) has been initiated regarding these avoidance measures at the Cal-Sag Canal, Little Calumet River (two locations), Kankakee River, and the Illinois River. Illinois Department of CMS will continue to consult with the USACE on the planned crossings of the waterways. Construction plans require directional drilling to start and end at least 50 feet outside the limits of any wetland or riparian environment, as regulated by the USACE. To the extent possible, wetlands will be avoided; however, if wetland crossings are encountered, then the vibratory plow and directional drill will both be evaluated and the technique that most minimizes surface disturbance will be used. By avoiding construction in waterways, implementing erosion and sediment control BMPs, and continuing consultation with the USACE, CMS will be able to construct the network with no significant impacts on water resources in the Project area.

***Biological Resources***

The preferred alternative will result in minor impacts on biological resources. Noise and human activity associated with fiber installation are expected to disturb some wildlife species, but these effects will be minor and temporary. Some disturbance to the ground surface and vegetation will also occur during construction activities. This disturbance will be limited to previously disturbed ROWs. In Lake County, the Karner blue butterfly is listed as endangered and was evaluated further. Within Lake County, the proposed action will install approximately 2.5 miles of fiber optic cable within a highway ROW and around the campus of the College of Lake County. This

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area is suburban, including residential subdivisions and commercial strip malls, with little open or agricultural land. The Lake County Forest Preserve Specialist noted that the Karner blue butterfly has not been sighted anywhere in the county for many years. Therefore, it was determined that this species would not be affected by the proposed action in this area of the project. In correspondence dated January 4, 2011, the USFWS concurred with the “No Effect Determination” for this project, although the USFWS in this particular region does not usually review determinations of no effect.

The Illinois Department of Natural Resources (INDR) oversees the Illinois Nature Preserves Commission (INPC) lands and the Illinois Natural Areas Inventory (INAI) sites; these areas were evaluated as part of the project area. In an e-mail correspondence dated March 25, 2011, INPC staff requested the following requirements for project implementation: (1) that no work occur within the boundaries of any INAI, Nature Preserve, or land and water preserve; (2) no impact occur to any threatened and endangered (T&E) species; (3) no impact occur to any nature area, including no changes to the sedimentation or hydrology; and (4) construction equipment be power washed to prevent the spread of undesirable invasive plant species. Since all project construction will be within the existing ROW in any of the affected areas, there will be no impacts. Impacts to terrestrial wildlife and their habitats in general are negligible. Based on this analysis and following the guidance of the USFWS, CMS will be able to construct the fiber network with no significant adverse impacts on biological resources.

***Historic and Cultural Resources***

In December 2010, NTIA initiated consultation with the Illinois Historical Preservation Agency (SHPO). In a letter dated December 17, 2010, the IL SHPO confirmed receipt of the project proposal and recommended an archeological literature review for the project area. In January 2011, Archaeology & Geomorphology Services (A&GS) sent to the IL SHPO the results of the literature search identifying archeological and historical resources that may be affected by the proposed undertaking. In a letter dated January 19, 2011, the IL SHPO confirmed receipt of the literature review, but also asked for additional information, in tabular format, identifying potential resources in ROWs. The IL SHPO also requested surveys in areas where historic properties have been previously identified, including cemetery locations. On March 4, 2011, A&GS provided additional summaries of site information and areas to be surveyed further in each route section, as requested by the IL SHPO. In a letter dated March 11, 2011, IL SHPO confirmed receipt of the A&GS results and recommendations regarding archaeological concerns and areas along the proposed project needing further survey and study. The IL SHPO stated that the recommendations are consistent with the approaches of the Illinois Standards and Guidelines. The IL SHPO concurred with the finding of no adverse effect, provided that CMS provided them results of the Phase I field work and agree to consult the office further to ensure avoidance of all archaeological resources. The SHPO also stipulated conditions limiting construction in the vicinity of the Cahokia National Historic Landmark (NHL) and implementation of Best Management Practices for connections to 10 National Register of Historic Place-listed CAI buildings. CMS committed to implement these requirements in a letter to NTIA, dated April 14, 2011. NTIA requested final IL SHPO concurrence in an e-mail dated April 15, 2011 and the IL SHPO provided a final summary concurrence to NTIA (via email) dated April 21, 2011.

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In 2012, the IL SHPO subsequently reviewed 29 proposed segment fiber reroutes provided by CMS, including three additional CAIs. Three of the segments (Danville, Kankakee, and Kinderhook) are within the existing transportation rights-of-way, which do not require IL SHPO approval based on their letter dated August 19, 2011 stating no objection to the use of previously disturbed rights-of-way. Four segments (Godfrey, Griggsville, McHenry, Spoon River) were included in the July 4, 2012 letter to IL SHPO. CMS received SHPO concurrence on August 8, 2012, based on the requirements that CMS conduct an archaeological survey and geomorphic testing for the Big Creek crossing located along the Spoon River College reroute; revisit site 11MS1957 to determine if it extends into the ROW and conduct posthole testing of the ROW near the cemetery to verify the absence of any graves within the ROW; and conduct an archaeological survey and geomorphic testing of the portions of the ROW along the Godfrey South reroute that are not Orthents or Urban Land soils and where meander ridges are located. Twenty segments (Arrowsmith, Atlanta, Bloomington, Chenoa, Colfax, Danvers, Downs, El Paso, Eureka, Fairbury, Farmer City, Gridley, Heyworth, Hudson, LeRoy, Lexington, Mansfield, Normal, Pontiac, and Towanda) were included in the March 20, 2012 letter to SHPO and the IL SHPO provided a corresponding concurrence response dated March 29, 2012. CMS sent a letter to IL SHPO on July 31, 2012 describing the route change and results of the literature search for the Lincoln segment, and the SHPO provided a corresponding concurrence response dated August 24, 2012. In addition, CMS is required to complete Section 106 consultation under the FCC's National Programmatic Agreement (NPA) for the monopole to be installed in the Village of Chenoa prior to construction. CMS must contact the FCC to determine how to proceed, which may include completion of a 621 Form (submitted to SHPO) and TCNS notification to the tribes.

Through the Tower Construction Notification System (TCNS), NTIA provided Project details to 23 tribes interested in the Project's geographical location (Illinois). CMS received direct responses from eleven tribes that were notified of the Project. Five of the 11 tribes responded via TCNS and indicated no further interest in the project. CMS followed up with the remaining six of the 11 tribes, and those tribes determined that there would be no impact to religious, cultural, or historical assets as the project occurs in previously disturbed areas. Also, of the 23 interested tribes, fifteen requested via TCNS that if any human skeletal remains or any protected Native objects are uncovered during construction, construction should stop immediately, and state and tribal representatives should be contacted.

All construction will be restricted to previously disturbed areas. If any cultural material is discovered during construction, the SHPO will be notified immediately and all activities halted until a qualified archaeologist assesses the cultural materials. If any human skeletal remains or protected Native objects are uncovered during construction, construction will stop immediately, and all consulting parties will be contacted. Based on these consultations, guidance from the regulatory agencies, and additional protective measures to be implemented by CMS, the Project is not expected to have significant adverse impacts on historic and cultural resources.

### *Aesthetic and Visual Resources*

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The Project primarily involves installing underground fiber optic cable via vibratory plowing along major roadways. No cable will be installed outside of the public highway ROW. Fiber installation will have a short-term, minor, and temporary impact on aesthetic and visual resources due to the presence of construction equipment and limited soil disturbance. To minimize aesthetic and visual impacts, all construction equipment will be removed at the end of the workday. Visual quality of INAI and INPC areas will not be significantly impacted by the project in these resource areas. Further consultation with INDR and INPC will occur during the design phase of the project. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

***Land Use***

The fiber will be installed in previously disturbed ROWs. The Interstate and other highway and road ROWs are owned by the State of Illinois or by local governments. Some portions of the fiber route may be installed along railroad and utility ROWs or within institutional and government properties. In all cases, CMS will obtain permission from the ROW owners before work begins. Installation of the new fiber will not change the current land use. Therefore, the Project will have no significant impacts on land use.

***Infrastructure***

Project construction activities will not interrupt the traffic flow along the Project route. The Project will improve communications infrastructure and is expected to result in improved transfer of information between CAIs, businesses, and individuals residing within the communities along the Project route. Overall, the Project will have a positive impact on infrastructure in Illinois, and will not result in significant impacts on infrastructure.

***Socioeconomic Resources***

The Project will provide improved communications infrastructure to residents who do not have access to broadband services in Illinois. The middle mile fiber backbone will also benefit these communities by providing broadband capabilities to 415 CAIs. An increase in both short-term and long-term employment opportunities are also anticipated as a result of the Project. The Project will have positive impacts on socioeconomic resources, and will not result in significant impacts on socioeconomic resources.

***Human Health and Safety***

It is unlikely that hazardous wastes will be directly encountered during Project installation, because most construction will be completed within existing and previously disturbed ROWs. In areas where there are known contaminants, they are contained and are currently in various stages of continuous clean-up and remediation. There are two Superfund NPL sites located in the Project area; however no fiber optic cable will be constructed near either NPL-listed site. There are a large number of LUST sites in the 45-county Project area. LUST sites within or adjacent to the fiber alignment ROWs will be identified as part of the design phase and where required, appropriate remediation measures will be implemented. A plan will be implemented for hazardous materials management, waste management spill prevention and response, stormwater management, and pesticide management. Employees will be trained to promptly contain, report,



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and/or clean up any oil or hazardous material spill. All vehicles will contain portable spill containment and clean up equipment, and will be kept in good working order to prevent oil and fuel leaks.

All construction activities will be conducted by qualified, licensed contractors who will follow specific safety regulations, including the Illinois Department of Transportation (IDOT) safety and traffic control standards. Workers will be required to meet OSHA standards for worker visibility, equipment signage, and licensing requirements. Work within urban areas shall maintain safe pedestrian routes. Work conducted in or around school zones will be coordinated with school district officials to ensure safe passage for pedestrian and bus traffic. With implementation of these protocols, the Project will not generate any significant adverse worker or traffic-related health or safety issues. Further, the new fiber will provide broadband service and directly connect medical facilities. The Project will enhance emergency and medical services and improve human health and safety throughout the Project area.

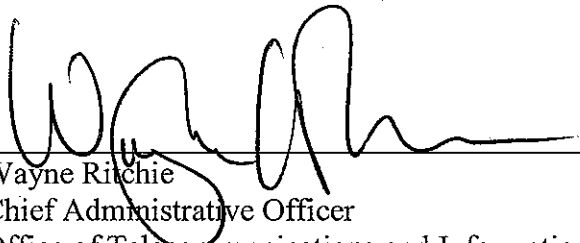
***Cumulative Impacts***

As described above, the Project will not have significant adverse impacts on any of the environmental resource areas evaluated in the EA. As such, no cumulative impacts on the environment are anticipated.

**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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Wayne Ritchie  
Chief Administrative Officer  
Office of Telecommunications and Information Applications  
National Telecommunications and Information Administration

Date 9/06/12