National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Mid-Atlantic Broadband Cooperative, Fiber Optic Network Infrastructure Project

REVISED – August 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 August 1, 2012, and supersedes the original FONSI issued December 7, 2010.

Mid-Atlantic Broadband Cooperative (MBC) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 452 miles of fiber optic cable in 20 counties in Virginia. The network will consist primarily of buried fiber, supplemented by aerial fiber where needed, due to terrain, environmentally sensitive areas, or traffic congestion. The new infrastructure will complement an existing 800-mile fiber network and provide direct connections to 116 schools in unserved and underserved areas of rural Virginia. The proposed action is called the Fiber Optic Network Infrastructure Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to MBC, 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 is driven by the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in unserved 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 alternative, in accordance with any special protocols or identified environmental protection measures.

MBC completed an EA for this Project in October 2010 and supplemental EA documentation was provided in July 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 August 1, 2012.

The Project includes:

- Installing approximately 452 miles of fiber optic cable network backbone and extending laterals to 116 community anchor institutions;
- Installing buried fiber optic cable, via horizontal directional drilling and direct bury (plowing), in existing roadway rights-of-way (ROWs);
- Installing aerial fiber optic cable on existing poles within existing ROWs;
- Installing hand holes at road crossings and other locations to facilitate access for last mile provider connections and lateral fiber builds; and
- Pouring aboveground concrete foundations, erecting six prefabricated concrete node buildings on publicly owned land, and installing security fencing around each building.

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 meet the needs for broadband information technology infrastructure of the unserved and underserved public, learning institutions, and public safety and service agencies in 20 counties in rural Virginia. The expanded fiber network will significantly improve connection speeds and accessibility for more than 58,000 elementary and high school students; enable more than 30 internet service providers to connect to the Project's open network; and, provide public safety agencies with access to improved emergency coordination and services. The network will operate at speeds of at least 10 Mbps, which will allow schools to take advantage of distance learning and virtual classroom opportunities.

Project Description

The Project will install over 452 route miles of new aerial and buried fiber optic cable to complement 800 miles of existing network infrastructure. Buried cable will be installed via horizontal directional drilling (HDD) or direct bury within existing Virginia Department of Transportation (VDOT) ROWs. Aerial fiber will be installed, where necessary, due to terrain, environmentally sensitive areas, or traffic congestion. Detailed network design and engineering efforts are in progress; the exact percentages of aerial cable and buried cable miles have not yet been determined. Aerial fiber will be hung in the communications zone on existing poles. MBC has an extended, ongoing Memorandum of Understanding (MOU) with VDOT for use of their existing ROW throughout the entire state of Virginia. Installation of new poles is not anticipated under this Project. Hand holes will be installed at road crossings and other locations to facilitate access for last mile provider connections and lateral fiber builds. The planned middle mile expansion route crosses 20 counties in southern Virginia and includes the cities of Lynchburg, Petersburg, Emporia, and Martinsville.

MBC will also build six new node facilities (shelter buildings) along the route. These buildings will be sited on four 30 foot square parcels of land currently owned by municipalities or other public entities. Above ground concrete foundations will be installed at each site, and no excavation will be required. Each node building will consist of a 12-ft by 20-ft precast concrete structure equipped with a low-emission diesel backup power generator. MBC will secure land leases for long-term easements from publically owned land where the node facilities will be constructed.

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 – Hybrid Fiber Installation (Preferred Alternative). This alternative will include installation of approximately 452 miles of fiber optic cable. The cable will be installed both underground and aerially, which will allow MBC to leverage existing ROWs and utility infrastructure. This alternative allows MBC to select the most appropriate fiber installation methodology along the planned route based on differing site conditions and requirements.

No Action Alternative. No action was also considered. The No Action alternative represents current broadband access capabilities and service areas. Under this alternative, MBC would not expand the existing network. The EA examined this alternative as the baseline for evaluating impacts related to other alternatives being considered.

Alternatives Considered But Not Carried Forward. During Project development, MBC considered an alternative network route near Petersburg that would have followed Flank Road to the intersection with Church Road, near Dinwiddie Memorial Park. This route was not selected due to its proximity to, and potential adverse impacts on, a historic park and Civil War battlefield. In addition, an alternative using wireless connections was considered but deemed impracticable due to the lack of available wireless resources in the Project area. Similarly, aerial-only installation was considered but found to be infeasible due to the lack of poles along some portions of the preferred route. A fully underground network was not considered based on the U.S. Fish and Wildlife Service (USFWS) requirement that aerial cable be used for nine specific stream crossings (stipulated in their letter dated August 20, 2010).

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

Short-term minor adverse effects on the noise environment are expected during trenching, cable installation, and node facility construction. These effects will be temporary, ending when cable installation and construction are complete. Minor long-term noise impacts will result from operation of backup generators at the node facilities, but these impacts will be intermittent and limited to periods of temporary power outages. No significant impacts on noise are expected to occur as a result of Project implementation.

Air Quality

Short-term increases in air pollutant emissions are expected to occur during the construction period due to the use of heavy equipment, worker commutes, and deliveries to the sites. Minor and temporary increases in air pollutant emissions are also expected to occur during intermittent periods when backup power generators are in operation at the node facilities. The Project will also result in minor increases in the use of fossil fuel and associated greenhouse gas emissions. Fugitive dust generated during ground disturbing construction activities will be minimized through the use of appropriate BMPs (e.g., water suppression, prompt removal of tracked dirt). Based on this analysis, the Proposed Action is not expected to have significant adverse impacts on air quality.

Geology and Soils

Minor impacts to geology and soils are expected to occur during direct plowing and HDD along the underground cable route. Both installation methods limit the width of ground disturbance and protect the integrity of surface resources. All cable installation work will occur within existing transportation ROWs and is anticipated to be confined to previously disturbed road

shoulders (e.g., between edge-of-pavement and existing road ditches). Surface soil disturbance caused by the use of heavy machinery will be minor and temporary. BMPs such as soil stabilization, bank stabilization along water bodies, and proper management of water used during HDD will be implemented to control erosion. Because the concrete foundations for the node buildings will be installed aboveground, no excavation, and only a small amount of site preparation (e.g., grass, weed, and light woody brush removal) will be required. The Project is not expected to have significant impacts on this resource area.

Water Resources

Aquifers in the Project area occur at shallow depths and may experience minor, temporary disturbance due to HDD activities, soil compaction caused by heavy equipment, and changes in overland water flow during construction. These minor impacts will not significantly affect groundwater resources or groundwater quality. Furthermore, BMPs will be implemented to avoid impacts associated with parking and refueling vehicles, contact with drilling fluids, accidental spills, and impacts to wetlands that are hydraulically connected to groundwater.

The principal impact of construction on surface waters will be an increase in the suspended sediment loads. However, based on the relatively limited amount of construction activities planned on or near water bodies, the overall Project effect on regional water quality will be minor and short-term. As recommended by USFWS in a letter dated August 20, 2010, an erosion and sediment control plan will be implemented to manage potential impacts on surface water resources. When crossing surface water bodies wider than 100 feet, MBC will implement BMPs to minimize potential adverse impacts to streams. These BMPs include expediting construction and limiting the amount of equipment and activities in water bodies; constructing crossings perpendicular to the channel; maintaining ambient downstream flow rates; removing all construction material after construction; permanently stabilizing stream banks and adjacent upland areas after construction; and inspecting the ROW periodically during and after construction to repair any erosion controls and/or perform necessary restoration.

Through the use of mitigation measures to minimize potential disturbances, the Project is not expected to result in significant adverse impacts on water resources.

Biological Resources

The Project may result in some loss of habitat due to construction activities and the increased use of land (four 30 foot square parcels) within the Project area. However, potential impacts are expected to be negligible because of available adjacent habitat. On August 20, 2010, the USFWS indicated that aerial cable must be installed at nine specific river and stream crossings to avoid possible impacts to the federally listed endangered Roanoke logperch (*Percina rex*) and its habitat. These crossings are associated with the Smith River and its tributaries, Big Chestnut Creek, Big Otter Creek, Nottoway River, and an unnamed creek in Franklin County. No other threatened or endangered species are expected to be impacted by the Project. MBC will implement procedures to ensure that adequate bank protection is provided during the cable

installation (e.g., no use of heavy equipment) and that methods to be used in crossing the span (e.g., hand-pulling by boat) will adequately protect identified water bodies and species.

A variety of wetlands crossing techniques will be used during cable installation to ensure minimal impacts on wetlands resources along the Project route. After construction in or around a wetland is complete, MBC will ensure that surface contours are returned to pre-construction conditions so as not to alter surface hydrology and wetlands function.

MBC will complete water body and wetlands crossings in accordance with U.S. Army Corps of Engineers (USACE) Nationwide Permit 12 (NWP 12) for placing utility lines in the Waters of the United States. MBC has filed a Pre-Construction Notification letter and initiated pre-construction conferences with the USACE for this Project.

Based on these analyses, the Project is not expected to have significant adverse impacts on water resources.

Historic and Cultural Resources

The Project will cross 40 recorded architectural resources, 18 of which have been determined to be eligible for listing on the National Register of Historic Places, and 11 archeological sites. Of the 112 schools to be connected to the network, 42 are over 50 years old. NTIA notified federally recognized tribes of the Project via the Federal Communications Commission (FCC) Tower Construction Notification System (TCNS). On April 9, 2010, the Eastern Shawnee Tribe of Oklahoma indicated that they have no objection to the Project; however, the tribe also requested that construction be halted and they be notified immediately in the event that any human skeletal remains and/or any objects falling under Native American Graves Protection and Repatriation Act are discovered during Project construction. No other Tribes expressed interest in the Project as currently planned.

MBC and NTIA entered into a programmatic agreement (PA) with the State Historic Preservation Office on August 15, 2010. NTIA also invited VDOT, interested local governments, the Virginia Council on Indians, and the National Park Service to participate in the PA as concurring parties. This PA outlines requirements for identification, evaluation, and treatment of historic properties. It emphasizes avoidance as the preferred treatment for historic properties, and establishes alternative treatments and procedures to be implemented if avoidance is not possible. These alternative procedures are intended to mitigate impacts on cultural resources below the threshold of significance. In addition, the PA has been amended to address consultations for future modifications without requiring additional amendments. Accordingly, through implementation of and compliance with the executed PA, Project-related adverse impacts on historic and cultural resources are not expected to be significant.

Aesthetic and Visual Resources

Short- term minor adverse effects on visual and aesthetic resources will occur during construction due to the presence of heavy equipment and delivery of construction materials.

Following completion of construction, the principal visual features along the route would remain consistent with existing conditions. The new cable infrastructure will be primarily underground, and any aerial cable will visually blend in with existing utility lines and telephone poles. Post-construction revegetation efforts will further ensure that the Project does not impact visual resources. The four structures to be constructed under the Project will not contrast with the present landscape. With a variety of permanent infrastructure already in place across the Project area, the planned additions will not constitute a significant impact on the existing visual environment.

Land Use

The Project route is located along existing roadway ROWs, and installation of cable infrastructure is consistent with the current land use designation. Where aerial facilities are necessary, fiber will be placed in the communications zone of existing pole facilities. The majority of the segment corridors are located in rural areas that are primarily used for forestry, agriculture, or are currently undeveloped. In these areas, some temporary land use disruption may occur during construction, but long-term land uses will not change. Drainage tiles may be present on cultivated lands adjacent to the Project route; any Project-related damage to these features will be repaired after cable installation is complete. The node facilities will be located on land owned by, and leased from, a public utility or other public ownership, with utility service, access roads, and parking capacity already in place. Based on this analysis, the Project is not expected to result in significant impacts on land use.

Infrastructure

Short-term adverse impacts on infrastructure associated with this Project include increases in both passenger vehicle and truck traffic during installation of the cable and construction of the node facilities. The Project will not noticeably affect or disrupt the normal or routine functions of public institutions, roads, electricity, and other public utilities and services in the Project area. Aerial cable will be hung in the communications zone on existing poles, thereby limiting available space for subsequent projects using those poles. These adverse impacts are not expected to be significant, and are offset by the long-term beneficial effects of upgrading the regional fiber optic infrastructure and enhancing broadband access capability throughout southern Virginia.

Socioeconomic Resources

The Project is anticipated to create only five new permanent operational positions and will not appreciably affect unemployment in the region. The Project will not result in disproportionate adverse impacts in areas with high populations of minority and low-income individuals. In fact, improving internet access throughout southern Virginia is expected to benefit these populations. The Project is not expected to have significant adverse impacts on this resource area.

Human Health and Safety

All cable installation work is expected to occur within existing transportation ROWs and confined to existing road shoulders (e.g., between the edge of pavement and existing road

ditches) thereby limiting safety risks to workers and the traveling public. BMPs will be implemented to further minimize risks and disruptions to traffic flow. These protocols include establishing staging areas in locations least likely to interfere with traffic, planning for detours and road or lane closures, using appropriate signage, and whenever possible, having slow-moving construction equipment enter and exit the ROW area before or after peak traffic hours. With proper implementation of these BMPs, traffic-related risk to workers and the general public is not expected to be significant. Construction of node buildings will occur outside of existing transportation ROWs, and traffic-related impacts on human health and safety in these areas are not expected.

Potentially hazardous wastes sites have been identified within the vicinity of the Project area. These sites could pose a risk to construction workers performing invasive actions and maintenance activities after cable installation. Public exposures are also possible if contaminated soil becomes airborne as fugitive dust during the cable installation or if contaminated soil runoff is uncontrolled. As stated previously, BMPs will be used to mitigate fugitive dust and runoff. In these areas, site workers will be equipped with proper personal protective equipment, and decontamination procedures will be used to minimize off-site effects.

Cumulative Impacts
No cumulative impacts were identified in the EA.

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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Date 08/01/12