

**National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Maryland Department of Information Technology
One Maryland Broadband Network**

The Maryland Department of Information Technology (DoIT) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 1,300 miles of new fiber. The new fiber will provide service to 1,006 community anchor institutions (CAIs) and facilitate last mile connections for up to 600,000 underserved residents in the more rural portions of the service area. These CAIs will be directly connected to the network.

Approximately one-third of the new fiber network will be installed aerially and the remaining two-thirds will be installed in new underground conduit. In addition, 18 telecommunication huts will be constructed along the Project route. The proposed action passes through 25 jurisdictions in Maryland, including the cities of Annapolis and Baltimore, and is referred to as the One Maryland Broadband Network (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to DoIT, 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 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.

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

The Project includes:

- Installing approximately 1,300 miles of aerial and buried fiber in existing public rights-of-way (ROWS) and private easements throughout 25 jurisdictions in Maryland, including the cities of Annapolis and Baltimore;
- Attaching fiber to bridges at certain water crossings;
- Installing approximately 860 miles of buried fiber by plowing, trenching, or directional boring;

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- Installing handholes along the underground portion of the fiber route;
- Installing approximately 430 miles of fiber aerially on existing utility poles;
- Directly connecting 1,006 CAIs by bringing fiber underground or attaching aerially to existing utility connections; and
- Constructing 18 telecommunication huts in previously disturbed areas along the Project route.

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

Throughout the State of Maryland, many of the schools, libraries, public safety facilities, and rural communities have traditionally been served by telecommunications carriers through low-speed dial-up or limited-range DSL. In addition, community anchors are currently forced to spend millions of local government dollars every year for leased telecommunications circuits and Internet access that does not meet their needs. Inadequate infrastructure also creates a significant barrier to diversification of the rural economy and inhibits development and recruitment of new industries. The purpose of the Project is to bring affordable broadband service to unserved and underserved communities in Maryland. The Project will provide affordable fiber-optic broadband connectivity to the CAIs and install middle-mile infrastructure throughout Maryland. The new fiber will facilitate affordable, commercial, last-mile connectivity in unserved and underserved neighborhoods. Specifically, the new fiber network will connect 1,006 anchor institutions, including 475 schools (K-12), 248 public safety facilities, 52 libraries, 22 community colleges and institutions of higher education, and 209 governmental and other

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community support entities (e.g. medical facilities, senior centers). Without the new fiber, affordable broadband options at the needed bandwidth would not be available to many of the CAIs.

Project Description

The Project involves installing approximately 1,300 miles of new fiber, constructing 18 telecommunication huts, and connecting 1,006 CAIs throughout Maryland. The majority of the fiber network will be buried via plowing, trenching, or directional boring, while the remaining portion of the route will be installed aurally. The proposed route for the project has been chosen to minimize the length of the lateral fiber construction that is needed to connect to all 1,006 anchor institutions. At certain water crossings, the fiber will be attached or hung from bridges. Construction will take place primarily within existing public ROWs and occasionally over private commercial or residential easements.

Approximately 430 miles of aerial fiber optic cable will be installed along the Project route. Fiber will be installed aurally on existing poles where agreements for long-term pole attachments can be readily and favorably negotiated. DoIT will not own or manage any utility poles, and therefore, will not replace or install any poles during project construction.

Approximately 860 miles of buried fiber optic cable will be installed along the Project route. Buried cable will be installed primarily through direction boring or pulling through existing ducts. However, plowing, trenching, or directional boring may be more appropriate or required along particular sections along the route (e.g., water crossings, rural locations). When plowing, a 4 inch wide trench is opened by the plow. Directional boring will be used to cross major roads and other existing infrastructure that requires avoidance. This method involves drilling a horizontal cable pathway from one access point along the route to another, installing conduit to house the cable, and then pulling the cable back through the conduit. Boring pits required for equipment access will be approximately 2 feet by 3 feet and located at intervals of at least 700 feet, when necessary. Where water crossings are encountered, fiber will be either bored or attached to existing poles or bridges.

DoIT will install hand holes approximately every 500 to 750 feet along the entire route to allow for routine system maintenance. Hand holes will typically be 2 feet long by 3 feet wide by 3 feet deep, and will be installed in previously disturbed land, either in public ROWs or in government-owned areas.

In addition, 18 telecommunication huts will be constructed near major communications points of presence, and in some cases, at the end of lateral runs. The huts will be placed approximately 30 to 40 miles apart in existing ROWs, preferably located on State and local government property near other, similar structures. Each hut will measure approximately 10 feet long by 20 feet wide by 9 feet 2 inches tall and disturb approximately 200 square feet of ground. These pre-fabricated equipment shelters will be placed on concrete slabs. Generators will be used to power each site

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and a wire fence will be installed around the perimeter for security purposes. No access roads will be constructed.

Both underground and aerial construction methods will be used to install the fiber to CAIs. Existing underground communications conduit will be utilized to enter the buildings, when available. In cases where conduit is not available, a new 2-inch wall penetration will be made to the facility. Aerial installation will only be used when existing aerial infrastructure is available. In this case, a new building attachment will be made at the same location as the existing aerial utilities that enter the building. Of the anchor institutions, two buildings were identified as being on the National Register of Historic Places (NRHP). In both locations, existing conduit will be used; no new construction will be required on the exterior of these buildings.

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.

Preferred Alternative – Combined Aerial and Underground Construction. As noted in the Project Description, this effort will include installing approximately 1,300 miles of new fiber, connecting 1,006 CAIs, and constructing 18 telecommunications huts. The new fiber optic cable will be installed aerially on existing poles and buried via plowing, trenching, and directional boring along the Project route. Where water crossings are encountered, fiber will be either bored or attached to existing poles or bridges.

Alternative B – Aerial Alternative. In contrast to the Preferred Alternative, this alternative would install fiber on new and existing utility poles. New poles would need to be installed along the route. Due to the limited availability of existing poles, Alternative B would be substantially more expensive due to the cost of improving and expanding existing utility pole infrastructure. Additionally, installing new poles would be time-consuming and new poles may not be permitted by many urban jurisdictions due to zoning regulations. Based on this, it was determined that Alternative B does not satisfactorily meet the purpose and need of this Project.

Alternative C – Underground Alternative. In contrast to the Preferred Alternative, fiber lines would not be hung from existing poles or bridge structures and fiber would be buried along the entire proposed route. Water resources would be crossed using directional boring, and additional permitting and consultation may be required for sensitive habitats (e.g., wetlands and stream crossings). After evaluation against the EA resource areas, Alternative C was eliminated due to increased potential impacts to waters, wetlands, and other surface and subsurface features, and substantially greater noise and air impacts in portions of western Maryland (e.g., Garrett County) that are characterized by steep, rocky terrain.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in Maryland. Under the no action alternative, new fiber infrastructure would

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not be constructed. Many rural communities would continue to be unserved or underserved with respect to broadband internet access. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. DoIT considered installing a wireless network consisting of several hundred radio towers, each reaching a height of 40 to 400 feet. These tower sites would require installing multiple large antennas, as well as equipment huts and diesel generators. The necessary infrastructure would likely have significant visual impacts on the surrounding area. Additional permitting would also be required, which could result in potential project delays. Furthermore, it was determined that wireless technology is not a viable alternative because it would not support the proposed bandwidths.

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 increases in ambient noise levels are expected during the Project's construction period. Noise created by machinery used during installation will be temporary and localized in nature. Construction activities will occur primarily along State and County roads in existing rights-of-way, that routinely experience vehicular noise and construction during road maintenance. Based on these considerations, no significant impacts on noise are expected to occur as a result of Project implementation.

Air Quality

Potential impacts on air quality will be both short-term related to construction and long-term related to operation of this Project. Fiber installed underground via plowing, trenching, and directional boring will result in minor disturbance of the ground surface. Negligible fugitive dust emissions will also be generated during construction of the 18 telecommunication huts. A short-term, minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions will occur as a result of Project construction. Emissions will be minimized through implementation of best management practices (BMPs), such as regularly maintaining truck and equipment engines, and limiting the speed limit to 40 miles per hour on unpaved roads. There will also be long-term impacts on air quality from the generators, which are used as the primary power source for the 18 telecommunication huts. The Project will comply with applicable State Implementation Plans to reduce potential impacts to air quality. Based on implementation of these BMPs, construction and operation of the planned network is not expected to have significant adverse impacts on air quality.

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Geology and Soils

New fiber will be installed primarily within existing public ROWs and occasionally over private commercial or residential easements when existing public roads are too rocky for underground construction. The majority of underground construction will be completed using directional boring. Trenching, plowing, and directional boring activities to be completed under this Project will result in minor and temporary disruption of the soils. All disturbed areas will be compacted and returned to the original conditions. Aerial fiber installation will not require the installation of new poles, and therefore, will not disturb any soil. Although installation of telecommunications huts will require minor grading for pad construction, these buildings will be located on previously developed lands. Construction of each telecommunication hut will disturb approximately 200 square feet of soil. Potential impacts will be minimized through the use of BMPs outlined in ROW permits, which mandate proper soil compacting after plowing and prior to any site restoration work. Consequently, 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 will intersect streams and rivers, as well as adjacent wetlands, during installation. Impacts to streams and rivers and adjacent wetlands will be avoided with the use of horizontal directional boring or by hanging the fiber optic line on an existing bridge or conduit. DoIT has alerted the U.S. Army Corps of Engineers (USACE) and Maryland Department of the Environment (MDE) of all planned water crossings and is consulting with both agencies to obtain applicable Section 404 permits for all river and stream crossings.

A portion of the fiber route will run along SR 355 from Ridge Road in Montgomery County north through the Piedmont Sole Source Aquifer (SSA) and along SR 808 to Mount Airy along the edge of the aquifer. In addition, 10 proposed anchor sites are located in the aquifer area. Construction in the SSA area will be limited to fiber installation with directional boring, hanging aerial fiber on existing utility poles, or pulling fiber through existing conduits, where available, for building entry to the anchor sites. No new construction of telecommunication huts will occur in the SSA area. Fiber optic cables will be placed primarily along roads within existing utility ROWs. Therefore, the Project will not differ from normal maintenance, repair, and installation activities and is not anticipated to disrupt groundwater flows or pose a threat to groundwater quality in the SSA. DoIT initiated consultation with the EPA on March 30, 2011 requesting a Phase 1 Preliminary Assessment under the EPA Sole Source Aquifer Program. Concurrence from the EPA must be received before construction activities may begin within the vicinity of the SSA.

There are no coastal management zones within the Project area. Therefore, no impacts to coastal management zones are anticipated. During construction, there may be a temporary, minor disturbance of floodplain areas, but no long-term impacts are anticipated. No National Wild and Scenic Rivers are located within the Project area. There is potential for a temporary increase in stormwater discharge during construction, but appropriate BMPs will minimize erosion,

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sedimentation, and turbidity in receiving waters. During construction, DoIT will use BMPs outlined in the 2010 Maryland Standards and Specifications for Soil Erosion and Sediment Control and 2000 Maryland Stormwater Design Manual. By avoiding construction through waterways, and implementing erosion and sediment control BMPs, DoIT will be able to construct the network with no significant adverse impacts on water resources.

Biological Resources

DoIT consulted with the U.S. Fish and Wildlife Service (USFWS) and Maryland Department of Natural Resources (MDNR) regarding potential impacts of the Project 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. Disturbance of the ground surface and vegetation associated with the Project will be primarily limited to public ROWs and other previously disturbed areas. However, the Project will not require tree clearing or result in permanent changes in the natural environment and species habitats.

Two federally threatened or endangered species, the bog turtle (*Clemmys muhlenbergii*) and Delmarva fox squirrel (*Sciurus niger cinereus*), were identified through consultation with the USFWS as potentially occurring in the Project area. In a letter dated February 7, 2011, the USFWS requested that DoIT conduct a survey of the project area for bog turtles and bog turtle habitat, in cooperation with the Maryland Wildlife and Heritage Division. DoIT conducted a review of the route maps with overlays of known habitats for this species to identify potential areas of concern. DoIT provided the Maryland Department of Natural Resources (MDNR) with their findings and suggested that a bog turtle survey is not necessary. The MDNR provided a response in a letter dated February 17, 2011 concluding that the proposed project would not likely create adverse impacts on known bog turtle habitat and that no further action is required. USFWS also noted that the Delmarva fox squirrel could be affected by activities occurring within 150 feet of mature forests. Because the Project will be limited to existing ROWs and easements, and tree cutting will be avoided along the route, the USFWS determined that it does not have any further comments. The USFWS also requested additional consultation if the project footprint changes.

In a separate letter dated February 17, 2011, the MDNR provided information on listed rare, state threatened or endangered species within the project area. MDNR confirmed that adverse impacts to these state species would not be anticipated unless ground disturbance (i.e. trenching or plowing methods) is to occur at the identified sensitive areas along the project route. DoIT will avoid any anticipated adverse impacts to the areas identified in the February 17, 2011 letter by using installation methods other than trenching or plowing.

DoIT will follow best practices to minimize impacts to adjacent wetlands and habitats or, where applicable, adopt alternative measures identified by the USACE, MDNR and/or MDE during consultation. Based on this analysis, DoIT will be able to construct the fiber network with no significant adverse impacts on biological resources.

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Historic and Cultural Resources

On November 16, 2010, a consultation initiation letter, including a detailed Project description, was sent by NTIA to the State Historic Preservation Officer (SHPO) at the Maryland Historic Trust (MHT). Following the initiation letter, DoIT engaged qualified staff at Columbia Telecommunications Corporation (CTC) to analyze the archeological and architectural resources within the Project's area of potential effect (APE). A records check identified two of the 1,006 anchor sites (the Garrett County Courthouse and the Warfield Complex) listed on the NRHP and 45 additional sites that appear on the Maryland Inventory of Historic Properties (MIHP). Both the Garrett County Courthouse and the Warfield Complex are public safety buildings with existing communications infrastructure.

A report summarizing the findings of the cultural resources review was submitted to MHT on December 21, 2010. Following their review, the SHPO scheduled a meeting for January 20, 2011 with CTC to discuss project details and address questions. The SHPO requested further information on the Garrett County Courthouse and the Warfield Complex and notified DoIT that it would initiate an easement review of the Warfield complex with the MHT Easement committee. CTC sent a follow-up letter dated January 28, 2011 to the SHPO with additional materials on the telecommunication huts, as requested. In a letter dated February 16, 2011, the SHPO provided concurrence with DoIT's determination that construction of the project, including the 18 proposed hut locations and Warfield Complex easement review, will have no adverse effect on historic properties, including archaeological sites. The SHPO concluded that given the nature of construction and installation techniques, the proposed work has little to no potential affect on historic buildings, districts, and archeological sites if the following two conditions are met. The Chestertown and Cumberland equipment hut architecture should complement and not detract from the historic districts in which they are located. The SHPO has requested that a set of evaluation/site plans be submitted to the MHT for review and comment for these two hut locations. DoIT will need to consult with the MHT to consider and address any effects on historic properties should there be any substantive modifications to the hut locations or other action that may affect historic properties during project implementation. Thus, the Project will not have significant adverse impact on historic properties or archeological resources.

Through the Tower Construction Notification System, NTIA provided Project details to four tribes interested in the Project's geographical location (Maryland). Of the four tribes notified, three requested additional information on the Project. DoIT provided additional information to these tribes, as requested. After review of the additional detail, one tribe requested that, in the event of inadvertent discovery of human remains and/or archaeological artifacts, DoIT cease all activity in proximity to the discovery location and notify the Tribe's Tribal Historic Preservation Office (THPO). To date, no response has been received from the other two tribes to which DoIT sent additional information. The remaining tribe originally notified of the Project through TCNS has not yet responded.

All construction will be restricted to previously disturbed areas. In accordance with NTIA requirements, DoIT has secured the services of an archaeologist who satisfies the Secretary of the Interior's Professional Qualification Standards to monitor all ground-disturbing activities that

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occur during project implementation in the vicinity of known archaeological sites or suspected or known burials. 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 remains. 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 commenting agencies, and additional mitigation measures to be implemented by DoIT, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The Project involves installation of fiber optic cable along major roadways or private easements by burying it underground or attaching it overhead to existing utility poles. Neither of these fiber installation methods will result in a long-term effect on aesthetics of the Project area. The Project will have a short-term, minor impact on aesthetic and visual resources due to the presence of construction equipment and limited soil disturbance. In addition, 18 telecommunication huts will be placed in previously developed areas in close proximity to existing structures (e.g. existing water towers), where possible, and are sized appropriately to minimize the aesthetic impacts to the surrounding areas. The Chestertown and Cumberland equipment hut architecture will complement and not detract from the historic districts in which they are located. At stream and river crossings, cables may alternatively be attached to bridges. Bridge attachments are also expected to have minimal aesthetic impacts. Some limited construction may occur within 150 feet of mature forest, but the impact of construction in existing rights-of way should be minimal. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

Land Use

The Project's fiber route will be installed in existing ROWs or along private easements in already disturbed areas. The 18 telecommunication huts will be constructed in previously developed areas. Implementation of this Project will not modify the current land use. Therefore, the Project will have no significant adverse impact on land use.

Infrastructure

The Project will improve communications infrastructure and is expected to improve the 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 Maryland, 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 Maryland. The network will also benefit these communities by establishing broadband connections at 1,006 CAIs. The Project will have positive impacts on socioeconomic resources, and will not result in significant impacts on socioeconomic resources.

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Human Health and Safety

Potentially hazardous materials or waste sites were not identified in the study area. Therefore, no impacts are anticipated along the fiber route. BMPs for workplace safety will be implemented to protect workers and the public along the Project route. Workers will be qualified and adequately trained in proper personal protective equipment (PPE); worker safety and visibility; and traffic awareness and driver safety in the work zone. With implementation of the protective measures, the Project will not generate any significant adverse worker or traffic-related health or safety issues.

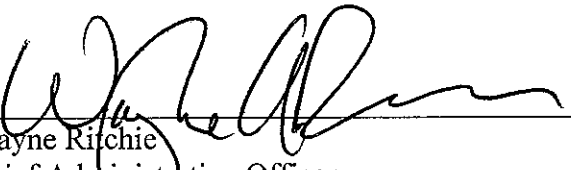
Cumulative Impacts

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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Date 4/15/2011