

**-National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Nelson County of Virginia, Nelson County Broadband Network**

**Summary**

Nelson County of Virginia (Nelson County) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 33 miles of new fiber, including both middle mile and last mile fiber, and three communication towers. While the new network will be a hybrid of aerial and buried fiber, most of the fiber will be installed aerially on existing poles. The new network will connect directly to 13 community anchor institutions (CAIs). The proposed action passes through Nelson County in Virginia, and is referred to as the Nelson County Broadband Network (Project).

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

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

The Project includes:

- Installing a hybrid broadband network of aerial fiber, buried fiber and wireless towers throughout Nelson County, Virginia;
- Installing the 33 miles of fiber, including both middle mile and last mile fiber, in existing rights-of-way (ROWs) or previously disturbed areas;
- Installing fiber aerially by attaching to existing poles;
- Installing buried fiber in the historic town of Lovingston by pulling it through existing conduit, directional drilling, missile boring, or plowing;

- Directly connecting 13 CAIs by bringing fiber aerially on existing poles or installing fiber underground by missile boring;
- Constructing three wireless communication towers at three locations in Nelson County;
- Connecting the new towers to existing power utility service;
- Establishing or improving access roads at two tower sites; and
- Connecting to a tower established by the Central Virginia Electric Cooperative to the network for wireless connectivity.

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 Nelson County, Virginia. The Project will deploy fiber in areas where, to date, it has not been economically feasible to install telecommunications infrastructure. The new middle and last mile infrastructure will pass through one county, providing opportunities associated with broadband technology to homes, businesses, and 13 CAIs in Nelson County.

### **Project Description**

The Project involves installing approximately 33 miles of fiber, including both middle mile and last mile fiber, that will connect 13 CAIs. Fiber will be installed primarily on existing utility poles, in the utility corridor along public ROW and previously disturbed roadway. Fiber will be placed underground within the town of Lovingston. Where existing conduit is available, fiber will be pulled through it utilizing conduit access points. If conduit is not available, fiber will be buried via directional drilling, missile boring, or plowing. In addition, the Project will construct

three new towers; two towers will be connected directly to the fiber. The third tower will provide wireless support to the fiber network.

With the exception of the historic district of downtown Lovington, fiber will be placed aerially on existing utility poles using the stranding or lashing technique. This method involves drilling and framing the poles with strand hardware. The strand is then placed into the hardware and is pulled from pole to pole, framing each pole as needed. Once the strand is in place, the fiber is strung. After the fiber is pulled to the end of the run, a lashing machine is then set up and pulled back over the strand and fiber, and straps and spacers are added to complete the process. All aerial construction will occur on existing pole lines within previously disturbed ground. Construction crews will restore any tire ruts from driving in the ROW.

Fiber will be placed underground within the historic district of downtown Lovington in transportation ROWs. All fiber will be installed at the required depth of 36 inches. Fiber will transition from aerial to underground at a utility pole located on the east side of Highway 29 within the downtown district. Hand-holes will be placed approximately every 150 feet. Underground installation may consist of directional drilling, missile boring, and plowing. Cable will be run through existing conduit, when it is available.

Directional drilling will be used in Lovington where obstacles to plowing or missile boring exist – such obstacles are primarily sidewalks, driveways, or road crossings. Directional drilling involves setting up a small mobile drill unit on one side of a specific feature and drilling under the feature to the opposite side. This method involves drilling a two to four inch 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.

Missile boring will be used in areas where landscaping exists and restoration to landscaped vegetation will be necessary, as well as to connect fiber to CAIs. The missile boring technique requires that pits be dug by hand or using a mini-excavator; the fiber will be pulled through pits that will be approximately 15 to 20 feet apart. An air hammer missile is inserted into the pit fitted with a pull wire, which is hammered through the pits and terminated in a vault. Once the fiber is pulled through, the pits are restored by placing soil and vegetation back into the pit, tamping, and weaving grass or other materials together.

Plowing will be used in ROWs where no obstacles exist. When plowing, a one-inch wide trench is opened by a vibratory plow. The fiber is spooled off of an attached reel, travels down through an adapter connected to the plow blade, and is placed in the slit trench at a depth of 36 inches. Restoration is immediate by physically walking the center and sides of the cut to replace the soil and vegetation which then may be covered by straw or other erosion control material if necessary.

Nelson County will establish tower sites in Afton, Avon, and Massie's Mill. A 60-by-60 foot area will be cleared at each site to accommodate an unlit, self-supporting tower that is less than 150 feet tall. The tower will be placed within the compound on a 20-foot square concrete reinforced pad. The compound will be enclosed by a chain link fence. An equipment shelter approximately 10-feet by 12-feet will also be placed within the fenced compound. Fiber will be

brought from the nearest aerial pole and placed underground either by plow or missile bore construction methods. The Afton tower site will be constructed on previously disturbed ground with minimal further disruption. The Avon and Massie's Mill sites will be established in undeveloped areas. The Massie's Mill site can be accessed via a logging road. This road will be improved to 20 feet wide to accommodate construction vehicles and occasional limited access. Access to the Avon site will require a new 20-foot wide access road.

## **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.

*Hybrid Fiber and Wireless Installation (Preferred Alternative).* As noted in the Project Description, this effort will include installation of approximately 33 miles of new fiber and three tower sites. The network will directly connect to 13 CAIs. The new fiber optic cable will be installed aerially on existing pole lines, pulled through existing conduit, and buried via directional drilling, missile boring, and plowing.

*No Action Alternative.* No action was also considered. This alternative represents conditions as they currently exist in Nelson County, Virginia. Under the no action alternative, new fiber and wireless infrastructure would not be constructed. The Nelson County community 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.* Nelson County considered the alternative of installing the Project's entire fiber route aerially. This alternative was eliminated from further consideration to minimize impacts on the historic character of downtown Lovingston. This alternative was also eliminated because it would have resulted in scheduling delays and increased costs to install or replace utility poles. Nelson County also considered installing the Project's entire fiber route underground. This alternative was eliminated because it would significantly increase ground disturbance and fail to use existing infrastructure along the Project route. Nelson County originally planned to construct a fourth tower and network operations support center. Ultimately, these construction activities were not necessary because the network could be completed by collocating one tower site and placing equipment at an existing facilities, thereby allowing Nelson County to reduce potential environmental impacts, while maintaining the same coverage critical to the Project objectives.

## **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 (including greenhouse gases [GHG]), 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 limited work 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. Fiber optic cable installation will result in negligible fugitive dust emissions because the primary method of installation is aerial on existing poles. Where the fiber will be installed underground, missile boring, directional drilling, and plowing techniques will result in only minor disturbance of the ground surface. Negligible fugitive dust emissions will result from the installation of three new tower sites. Activities associated with Project construction will also degrade the air quality for a short period of time due to fugitive dust emissions generated during access road improvements at two of the three tower sites. 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, but will be below established thresholds. Construction of the planned network is not expected to have significant adverse impacts on air quality.

### ***Geology and Soils***

The Project's fiber route will be installed primarily aerially on existing poles in utility ROWs. The cable will be installed in these locations to, among other considerations, minimize impacts to geologic and soil resources. Through the historic town of Lovingston, fiber will be installed underground using missile boring, directional drilling, and plowing resulting in very minor, temporary disruption of the soils. Less than half an acre of soil will be disturbed at each tower site compound, including access road construction or improvements. Appropriate BMPs will be implemented to prevent sedimentation and erosion impacts to the Project area. These BMPs may include installing silt fences and spraying down exposed surfaces. 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 fiber route will cross water bodies at 31 locations. These water crossings will be aerial, and fiber will be attached to existing infrastructure, such as bridges. Project implementation will not result in any filling of wetlands or create impediments to navigation. There are no aquatic or wetland resources located within proximity of the underground installation areas or the three telecommunications tower sites. Therefore, direct impacts to surface water resources or wetlands are not expected to occur during the construction or operation of the Project. There is potential for a temporary increase in stormwater discharge during construction, but appropriate BMPs will minimize erosion, sedimentation, and turbidity in receiving waters. Nelson County consulted with the U.S. Army Corps of Engineers (USACE) and Virginia Department of Environmental Quality (VDEQ) regarding potential impacts of the Project on water resources. Both agencies confirmed that there are no anticipated state or federal

wetland permits required for this Project. By avoiding construction in waterways, and implementing erosion and sediment control BMPs, Nelson County will be able to construct the network with no significant adverse impacts on water resources.

### ***Biological Resources***

Nelson County consulted with the Virginia Department of Conservation and Recreation (VDCR) and the U.S. Fish and Wildlife Service (USFWS) regarding 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 primarily limited to ROWs and previously disturbed areas. The installation of three telecommunications towers will disturb less than half an acre at each new tower sites, including access road construction or improvements.

In a letter dated August 10, 2010, the VDCR indicated there are natural heritage resources in the Project area. However, due to the scope of the activity and the distance of the Project route from the resources, VDCR did not anticipate that the Project would adversely impact documented natural heritage resources. VDCR also noted that the Tye River – Jones Creek – Black Creek Stream Conservation Unit (SCU) is located in close proximity to the Project. SCUs contain highly significant aquatic natural heritage resources, including populations of the green floater, a rare freshwater mussel. As a result of the proximity to this resource, VDCR recommended strict adherence to erosion and sediment control measures and storm water management.

VDCR also recommended that Nelson County adhere to the USFWS guidelines for communication towers and antennae to minimize potential impacts on migratory birds. The USFWS guidance recommends towers be less than 200 feet in height, the minimal use of illumination only when necessary for FCC/FAA regulatory compliance, and the use of monopole design towers without guyed wires. Nelson County will adhere to these recommendations when designing and constructing the new telecommunications towers.

In a letter dated November 26, 2010, the USFWS determined that the Project is not likely to adversely affect threatened and endangered species or designated habitat, including the federally-endangered smooth coneflower. The potential for habitat for the smooth coneflower was determined based on the presence of maintained roadsides and power line ROW easements in the areas of aerial installation of fiber on existing utility poles. This determination was made because general maintenance activities in utility ROWs generally benefit the smooth coneflower's habitat, per the USFWS recovery plan for this species. These habitats, which usually include open spaces, low herbaceous cover, and periodic mowing or disturbance, are one of several potential habitats for the smooth coneflower. The recovery plan for smooth coneflower indicates that a key objective for this species is the maintenance of utility and roadway corridors in the appropriate habitat type, which is an ongoing objective for the current owners and operators of these corridors. In addition, the aerial installation of fiber on existing utility poles is anticipated to result in only inadvertent and minor temporary construction impacts to these roadside and power line easement habitats. The disturbances to this habitat are less intense than the existing maintenance mowing regimens for these corridors and will also not result in a permanent modification or conversion of this habitat. The use of heavy equipment for

the aerial installation of fiber within these corridors will be minimized, as much as possible, to also avoid impacts to the existing ecosystem. Also, any significant disturbances to roadside areas will be restored to the pre-construction condition, thereby further limiting the potential for long-term impacts to any potential smooth coneflower habitat. No long-term impacts to these habitats are anticipated to result from the Project; therefore, a significant impact is not anticipated to resources that may occur within the aerial installation corridor.

Based on this analysis and by implementing recommended protective measures, Nelson County will be able to construct the network with no significant adverse impacts on biological resources.

### ***Historic and Cultural Resources***

In a letter dated July 20, 2010, Nelson County submitted Project details to Virginia's Department of Historic Resources, State Historic Preservation Officer (SHPO). In a letter dated August 16, 2009, the SHPO responded with a determination that the Project's fiber installation and connection to 13 CAIs would have no adverse effect on historic properties. The SHPO noted that the communications towers would be reviewed under the Federal Communications Commission (FCC) Nationwide Programmatic Agreement for Section 106 compliance.

The three towers for which the FCC Programmatic Agreement for Section 106 would apply include the Afton, Avon, and Massie's Mill tower sites. Nelson County has confirmed that each of the new tower sites will be individually registered with the FCC. As a result, the Section 106 review of the Nelson County towers, as communications facilities funded by BTOP but subject to FCC licensing, fall under the FCC Nationwide Programmatic Agreement (NPA) for Review of Effects on Historic Properties for Certain Undertakings Approved by the FCC per the *Program Comment for Streamlining Section 106 Review for Wireless Communication Facilities Construction and Modification Subject to Review Under the FCC Nationwide Programmatic Agreement and/or the Nationwide Programmatic Agreement for the Co-location of Wireless Antennas*, issued on November 20, 2009 (74 F.R. 60280). Consequently, the FCC assumed lead agency status for consultation under the National Historic Preservation Act (NHPA).

The Afton county tower, site coordinates 78°50'7.462 W, 38°2'0.767 N, is proposed to be constructed on private commercial property. Access to the site is proposed via a new limited access road to be located along the northern edge of the commercial parcel via the existing access entryway on Critzer Shop Road (Route 151). The proposed ground disturbance at this site will include the installation of the new tower compound and the access road/utility installation from current infrastructure to the site. This tower site is located near State Route 151 and U.S. Route 6, a Virginia Scenic Byway, and more than one air mile from the Blue Ridge Parkway. The initial database review conducted for this site identified several architectural resources with the APE for visual effects and no archaeological resources within the APE for direct effects.

The Archaeological Survey of the Proposed Afton Telecommunications Tower (CRI, 2011) investigated the APE for direct effects, defined as the limits of proposed ground disturbance including the proposed tower compound and access road. The investigation was conducted on March 16, 2011 and did not identify any prior documented or new historic resources within the APE for direct effects. The conclusion of the investigation was that no archaeological sites will be adversely affected by the tower construction.

The Architectural Visual Effects Survey for the proposed Afton Telecommunications Tower (CRI, 2011) identified three (3) known historic architecture resources located within the one-half mile Area of Potential Effects for Visual Effects. Additional resources located outside the APE, including the Greenwood-Afton Historic District and the Blue Ridge Parkway Historic District, were evaluated at the request of VDHR and the National Park Service, which were consulted by Icon Engineering, Inc. on behalf of Nelson County. The districts are also included within the APE in order to evaluate potential visual impacts to those resources.

Cultural Resources, Inc. conducted a visibility evaluation on March 16, 2011, including an overall visual assessment, a balloon test to simulate the height and location of proposed Afton tower, and photography from several locations. The purpose of the study was to determine potential visual impacts to the NRHP-eligible Greenwood-Afton Rural Historic District, its contributing resources in the vicinity, and the NRHP-eligible Blue Ridge Parkway Historic District. Several locations were chosen within the two districts to determine the potential for visual impacts from the proposed tower. The evaluation concluded that the Afton tower would not be visible from the Greenwood-Afton Rural Historic District and would be minimally and seasonally visible from two overlooks along the Blue Ridge Parkway. Based on the results of the evaluation, the conclusion of the report is that the proposed tower will have no adverse effect on historic resources within the Area of Potential Effects for visual effects.

Correspondence was received via VDHR from the National Park Service on March 8, 2011 requesting an analysis of visual effects to the Blue Ridge Parkway from the proposed project, which was conducted by CRI during the visibility evaluation. The results of the visibility evaluation will be provided to the National Park Service to conclude this consultation. Public notice was posted on March 10, 2011 requesting citizen comment on potential historic resource impacts from the proposed project. No responses were received for the Afton site. The Nelson County Historical Society was consulted on March 4, 2011 to request feedback on the proposed tower site. Correspondence on March 14, 2011 from the Nelson County Historical Society indicated that no adverse effect to historic resources are anticipated from the Afton site. Final concurrence of no adverse effect from the SHPO for the Afton site is required.

The Avon tower, site coordinates 78°50'7.914 W, 37°56'42.508 N, is proposed to be constructed on private commercial property. The subject tower site is previously undisturbed forestland on an overall electrical substation site operated by the local electrical service provider. Access to the site is proposed across the property via an extension of an existing access road. The proposed ground disturbance at this site will include the installation of the new tower compound and the access road/utility installation from current infrastructure to the site. This tower site is located less than one air mile from U.S. Route 6, a Virginia Scenic Byway, and more than one mile air miles from the Blue Ridge Parkway. The initial database review conducted for this site identified several architectural resources within the APE for visual effects and no archaeological resources within the APE for direct effects.

The Archaeological Survey of the Proposed Avon Telecommunications Tower (CRI, 2011) investigated the APE for direct effects, defined as the limits of proposed ground disturbance including the proposed tower compound and access road. The investigation was conducted on March 16, 2011 and did not identify any prior documented or new historic resources within the APE for direct effects. The conclusion of the investigation was that no archaeological sites will be adversely affected by the tower construction.

The Architectural Visual Effects Survey for the proposed Afton Telecommunications Tower (CRI, 2011) identified four known historic architecture resources located within a one-half mile Area of Potential Visual Effects, including the South Rockfish Rural Historic District.

Cultural Resources, Inc. conducted a visibility evaluation on March 16, 2011, including an overall visual assessment, a balloon test to simulate the height and location of proposed Avon tower, and photography from several locations. The purpose of the study was to determine potential visual impacts to the NRHP-eligible South Rockfish Rural Historic District, its contributing resources in the vicinity, and the Rockfish



Valley School. Several locations were chosen within the districts to determine the potential for visual impacts from the proposed tower. The evaluation concluded that the Avon tower would not be visible from a large majority of the locations with the district nor from contributing resources within the ½-mile radius for the project. The conclusion of the report is that the proposed tower will have no adverse effect on the evaluated historic resources within the Area of Potential Effects for visual effects.

Public notice was posted on March 10, 2011 requesting citizen comment on potential historic resource impacts from the proposed project. Correspondence from a local citizen, Mr. Steve Kephart, was received by CRI on March 16, 2011 in response to the public notice. Mr. Kephart did not object to the project and was inquiring about the details of the project and the opinion of the Nelson County Historical Society. The information was provided to Mr. Kephart on March 16, 2011 by CRI. The Nelson County Historical Society was consulted on December 14, 2010 to request feedback on the proposed tower site. Correspondence from the Nelson County Historical Society dated January 25, 2011 indicated that no adverse impacts to historic resources are anticipated from the Avon site. Final concurrence of no adverse effect from the SHPO for the Avon site is required.

The Massie's Mill tower, site location 79°12.405 W, 37°45'51.572 N is proposed to be constructed on private property with agricultural and residential uses. This site has been logged as late as approximately 2006. The route to be utilized for access currently consists of all-terrain vehicle and fire trails. Site preparation required includes grading to improve the access route and extension of utilities approximately 6,000 feet. The proposed ground disturbance at this site will include the installation of the new tower compound and the access road/utility installation from current infrastructure to the site. This tower site is located more than one air mile from U.S. Route 56, a Virginia Scenic Byway. The tower will not exceed 150 feet in above ground height. There are no recorded resources located within the Area of Direct Effects, and no known historic resources located within a one-half mile Area of Potential Visual Effects. One (1) recorded archeological site exists within one mile of the proposed site; however, the proposed site is atop a small mountain and the archeological resource in the valley near the river as follows:

The project review request report submitted to VDHR by Icon Engineering, Inc. on July 20, 2010 concluded that there is no anticipated adverse effect to historic architectural resources as a result of the Nelson County Broadband Network project. VDHR responded on August 16, 2010 requesting that the proposed tower sites follow the FCC Section 106 consultation procedures to evaluate for potential impacts to historic resources. Additional investigations and consultations for the proposed Massie's Mill tower site, including archaeological surveys and visual effects determinations, will be conducted by Nelson County to support FCC tower registration and the FCC's Section 106 review process.

At this time, Nelson County has formally submitted information regarding the Afton and Avon tower sites through the FCC's E-106 process. For the Massie's tower site, additional studies, including balloon tests to determine potential visual effects, and archaeological studies to determine potential direct effects, will be conducted. . Construction activities at the Project's tower sites will not commence until the FCC's Section 106 review process is complete and adverse effects, if identified, resolved through a Memorandum of Agreement such that the project will have no significant adverse impacts to historic or cultural resources.

Through the Tower Construction Notification System, NTIA provided Project details to four tribes interested in the Project's geographical location (Nelson County, Virginia). Nelson County received responses from all four tribes that were notified of the Project. Of the four tribes, two requested additional information regarding the Project. Nelson County provided the two interested tribes with the requested information and those tribes responded that they had no further interest in the Project. The other two tribes stated they had no interest in consultation. All four tribes requested 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. TCNS notifications for specific tower coordinates were also provided to tribes in conjunction with the associated FCC NPA consultations.

Most 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 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 studies to be completed by Nelson County, the Project is not expected to have significant adverse impacts on historic and cultural resources.

### ***Aesthetic and Visual Resources***

The Project primarily involves installing fiber optic cable by attaching it to existing utility poles and burying the cable underground in ROWs and previously disturbed areas. 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. The Project is in close proximity and may have visual impacts on Virginia Scenic Byways, the Blue Ridge Parkway, and the Appalachian Trail. In accordance with County land use requirements, Nelson County is responsible for determining any measures that will be necessary to appropriately minimize any minor impacts to Virginia Scenic Byways within the County. Nelson County anticipates that these sites will be visually screened from the roadways with new landscape tree plantings. The telecommunications tower sites will be developed within one mile of Virginia Scenic Byways and within five miles of the Blue Ridge Parkway and the Appalachian National Scenic Trail. Consultation with the NPS was initiated in March 2011 to address the potential visual impact of the Afton telecommunication tower, which is the closest to these resources. A response was received from the NPS on March 8, 2011, indicating that the Afton tower site will likely be visible from the Blue Ridge Parkway and possibly the Appalachian Trail. The tower heights will be less than 150 feet, are of monopole construction, and will not be lit. The NPS indicated that the Afton tower is not anticipated to be significantly visible or noticeable, particularly if the tower will not be lit, and as such will not impede views of the skyline from the resources. Although the towers are not anticipated to cause a significant adverse effect to the visual resources of the Blue Ridge Parkway or the Appalachian Trail, the SHPO requested that Nelson County conduct additional studies to confirm the extent of potential visual impacts. These additional studies were completed and submitted to the SHPO and NPS. In an e-mail dated April 1, 2011, the NPS concurred that while the tower may be visible from the Blue Ridge Parkway and the Appalachian Trail it should not have an adverse impact if it remains unlit. Based on the survey results and the NPS agreement with the survey recommendations, the towers are not anticipated to cause a significant adverse effect to the visual resources of the Blue Ridge Parkway or the Appalachian Trail. 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 ROWs and previously disturbed land. There will be no change in the existing land use due to the aerial and underground fiber installation. The land use at the three tower sites includes undeveloped lands at utility facilities (Avon), prior cleared

private residential land (Afton), and prior logged rural agricultural land (Massie's Mill). The Project will permanently alter the current land use at the tower sites. Changes in land use will impact less than half an acre of land use at each tower site. Therefore, the Project will have no significant adverse impact on land use.

### ***Infrastructure***

Electric utilities will be extended from existing locations to provide power to the tower sites. The parcels on which the towers will be constructed are already served by utility infrastructure. Therefore, only minor extensions will be required to reach individual tower locations. Access roads will also be improved or established at two of the three tower sites. The Project's aerial fiber route will be attached to existing utility poles resulting in no change to the existing utility infrastructure. There will be minor, short-term construction impacts on roadways and railways as a result of any aerial or underground utility crossings. In the downtown Lovingston area, the fiber optic cable will be placed underground in ROW and utility corridors and will not impact existing infrastructure. The construction of new telecommunications towers will introduce new broadband infrastructure to areas that are not currently served, thereby providing a positive impact to infrastructure at these locations. The Project is also anticipated to result in a long-term, positive impact on the infrastructure of Nelson County, via the incentive for wireless and broadband providers to further extend broadband and wireless networks to new areas within the county. Overall, the Project will have a positive impact on infrastructure in Nelson County, Virginia, and is not anticipated to 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 Nelson County, Virginia. The network will also benefit these communities by directly connecting to 13 CAIs, providing access to additional learning resources, job training, and improving public safety. An increase in both short-term and long-term employment opportunities are also anticipated as a result of Nelson County's Project. The Project will have positive impacts on socioeconomic resources, and is not anticipated to result in significant impacts on socioeconomic resources.

### ***Human Health and Safety***

No hazardous waste sites have been identified in the Project area. BMPs for workplace safety will be implemented to protect workers and the public. Contractors and construction activities will adhere to applicable safety regulations under the applicable Occupational Safety and Health Administration (OSHA) guidelines to ensure compliance with proper safety and installation procedures. Adherence to required installation and traffic safety procedures will be included in Project inspection activities. With implementation of the protection measures, the Project will not generate any significant adverse worker or traffic-related health or safety issues. Further, the Project will offer higher bandwidth services to critical community healthcare facilities and increase access to healthcare services. There is no hospital facility in the county, and the Blue Ridge Medical Center in Lovingston is the primary rural health services provider. The Center will implement a new telemedicine program utilizing new broadband access provided by the middle mile fiber that will enable low income citizens to access specialist services from the University of Virginia Medical System via video conferencing. The speeds at which medical images can be transferred and reviewed by specialists not located in the county will be greatly

improved. This new system will reduce the need for these patients to travel outside of the county. The availability of high bandwidth fiber services will have a positive impact on the Project's rural areas. The Project will have long-term positive impacts on the health and safety of Nelson County, Virginia.

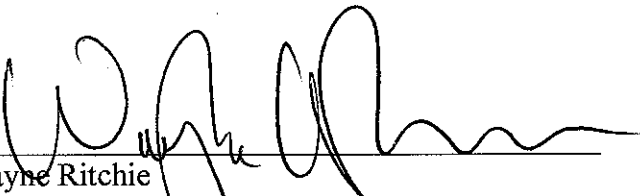
***Cumulative Impacts***

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, identified protective measures, and planned consultation studies, 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

4/15/2011  
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Date