

Draft Environmental Assessment (EA)
For The Page County Fiber Network Project

*Broadband Technology Opportunities Program
(BTOP)
&
National Telecommunications &
Information Administration
(NTIA)*

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Prepared By:
Page County Broadband Authority
16 South Court Street
Luray, VA 22835
(540) 843-4261
(540) 743-4806 Fax

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Executive Summary

Page County, Virginia has been awarded American Reinvestment and Recovery Act (ARRA) grant funding via the Federal Broadband Technology Opportunities Program (BTOP) of the National Telecommunications and Information Administration (NTIA).

The Page County Broadband Network project will be a public/private partnership between the Page County Broadband Authority (PCBA), a Virginia non-profit authority; and Shenandoah Telecommunications Company, a provider of telecommunications services; under a partnership agreement approved by the NTIA.

The purpose of the project is the construction and operation of a 39- mile fiber optic backbone from Rileyville, the northernmost community in the county, to Shenandoah, the southernmost community in the county. This includes 37 linear miles of deployed fiber for the network plus additional fiber laterals to connect 29 anchor institutions. The network will also pass within 500 feet of 24 other anchor institutions to be served by last mile providers. The fiber cable is primarily to be hung aerially on existing utility poles, and one (1) new wireless communication tower will be constructed backhaul connectivity to the fiber infrastructure, providing a capability for wireless providers to offer high speed wireless services. Three existing communication towers within the county will also be connected to the fiber utilizing aerial or already-installed underground conduit.

This project will meet the need to have last-mile broadband service providers extend digital wired, wireless and cellular services to rural sections of the county, 75 percent of which are unserved or underserved. It will use ARRA funds to place open access infrastructure in areas where private providers have not invested in the past due to poor economic feasibility (i.e. low density). In addition, it will provide for essential high-speed Internet services for community anchor facilities that currently have little or no access to such services. The network will

provide direct benefits in the form of economic development; enhanced medical services; enhanced first responder and law enforcement services; enhanced education and distance learning opportunities; and improved access to government information and services.

The Preferred Alternative is the construction of an aerial fiber optic network on existing utility poles in previously-disturbed lands in designated rights of way. The project will occur within proximity of designated Scenic Byways within the proposed project area include the following, from north to south: Three miles (3) of backbone fiber will be deployed from the area of Springfield Elementary School in Rileyville, in the northern part of the county, to Luray. Nine miles (9) will be deployed from the County Complex on Court Street in Luray and extending into the Town of Stanley. From Court Street the network follows Highway 638 south to Highway 629 east, turning south on Highway 340, turning back northwest on Highway 631 to west on Highway 632 (Goodrich Road) passing the Page County Technical School, continuing into the Town of Stanley where it becomes Highway T-638, turning south on Aylor Grubbs then east on Main Street ending at the Stanley Fire Department. Five (5) miles of fiber will be deployed throughout the Town of Luray and interconnecting with the backbone at the Emergency Communications Center on Court Street. Twelve (12) miles of backbone fiber continues from Stanley to the Page County High School north of Shenandoah. Eight (8) miles of backbone fiber continues to the Town of Shenandoah, connecting to the town offices, fire department, police department and other core community tenants.

An evaluation of the existing environmental characteristics and the proposed construction has determined that the project may impact environmental components of the proposed project property, particularly with respect to new construction at the proposed tower location. However, these impacts are minor inasmuch as the tower is to be constructed on previously disturbed ground. The primary environmental effects of the proposed project include standard construction impacts to topography, soils, visual and aesthetic resources, and off-site water resources. Mitigation of topography, soils, and off-site water resources impacts will be

implemented through strict adherence to Virginia erosion and sediment control and storm water management regulations during the design and construction of the project.

The no-action alternative does not meet the needs of the county and its communities. A formal Strategic Planning process conducted by the Page County Broadband Authority in 2009 -2010 identified a strong need for high-speed broadband Internet to serve the county's schools, medical facilities, law enforcement and first-responder agencies, government bodies and businesses. Without such high-speed services, the county and its residents will be at a severe disadvantage for medical, education and economic development services.

Potential alternatives to the aerial fiber deployment were considered but not adopted. These included the use of an underground fiber cable system, rejected due to the number of rivers, runs and other bodies of water to be crossed as well as the soil composition of the route; and the use of wireless technologies, which can offer neither the capacity requirements nor the topology of the county without the backhaul capabilities of a fiber network. These alternatives were therefore eliminated from further discussion.

This environmental Assessment considered the impact of the Preferred Alternative on a broad array of Resource Areas, with the following assessments:

- **Noise** – Neither the placement of the aerial fiber optic cable nor the operation of the cable to provide data transmission would create any new permanent sources of noise, in the same manner as the no action alternative.
- **Air Quality** – Neither the placement of the buried fiber optic cable nor the operation of the cable to provide data transmission would create any permanent new sources of emissions into the air, similar to the no action alternative.

- **Geology and Soils** – No long term differences between the no action alternative and Preferred Alternative were found during the review. Monitoring will be required for Karst geological features and soil erosion, and any disturbed grounds will need to be filled and replanted with native vegetation.
- **Water Resources** – The map available at the US Fish and Wildlife Service National Wetlands Inventory indicates that that no wetlands are directly affected or will be impacted. Construction underground, in the minimal areas proposed, do not affect wetlands or other water resources. Aerial construction on existing poles does not affect water resources, though care will be taken to assure no significant impact during the six river and creek crossing on the plan route.
- **Biological Resources** – The project area falls within Ecoregion 67a of the EPA Region 3. The primary endangered species in the project area is the Loggerhead Shrike, which is not found within four miles of the project route. It is not anticipated that activities of this project will impact any of the identified endangered or threatened species, though monitoring of the project will be undertaken to ensure this.
- **Historic and Cultural Resources** – All facets of this project will occur on previously disturbed ground. Based on the results of an Archeological Cultural Resources Record Search and Assessment Report, it was determined that the proposed project would not have an adverse effect on archaeological sites or historic properties within the project area. The Virginia SHPO concurred with this determination that the proposed project would not have an adverse effect on archaeological and historical property. Further, a consultation was requested with the Shawnee Tribe’s Tribal Historic Preservation Officer, which concurs that no known historic properties will be negatively impacted by the Project.
- **Aesthetic and Visual Resources** – Martha C. Bogle, Superintendent of the Shenandoah National Park of the US Department of the Interior National Park Service, has provided

instructions to mitigate the impact of the construction of the Rileyville Tower, the sole portion of the project that might create an impact on aesthetic or visual resources.

- **Land Use** – The existing land use in the construction corridor consists of previously disturbed utility corridors and public right-of-way. The existing land use in the locations of the prefabricated buildings is commercial / industrial. No farmlands will be impacted or converted.
- **Socioeconomic Resources** – The proposed project serves an area of the state that has significant low income and minority populations. This is also one of the more sparsely populated areas of the state where broadband access availability is limited or lacks sufficient bandwidth to the network core. The population in Page County is more than 96% White, 3% African American and less than one percent other races. Page County has a poverty rate of approximately 13%, an unemployment rate of 10%, and 15% of the population is over the age of 55. Another 13% of the population is disabled. The availability of broadband will have a significant impact on economic development, jobs, education and eGovernment.
- **Human Health and Safety** – – The one known Brownfield site located within the county is more than 1,000 feet from the project route and has been deemed not harmful by the US Environmental Protection Agency. The proposed project will result in immediate positive impacts on human health within Page County. The system will provide new broadband infrastructure to support rural, disadvantaged, and low-income areas within Page County. The new broadband services will contribute to the health and safety of the County by increasing the communications capacity of the County’s emergency and first responders, thus improving the ability to provide these services throughout the County. The new system will also improve the ability to provide time-sensitive transmission of critical information during emergencies. Access to healthcare for low income residents will be improved

through the use of telemedicine technology and video conferencing to connect patients with health specialists at the University of Virginia Medical System.

The Page County Broadband Authority has contacted interested heritage, environmental and government agencies for consultation on this project. Each interested entity was provided with full color USGS maps depicting the areas of proposed construction along with the results of research showing potentially affected resources. Each entity was given an opportunity to comment on the proposed project and its potential effect, and requests for additional information received an immediate response.

The following agencies have submitted responses related to the project:

- Shenandoah National Park, National Park Service, US Department of the Interior
- Virginia Department of Historic Resources (SHPO)
- Shawnee Tribe (THPO)
- The US Army Corps of Engineers
- US Fish and Wildlife Service
- Virginia Department of Game and Inland Fisheries
- Virginia Department of Conservation and Recreation

Their responses are included in this assessment.