

**National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project**

Summary

Sho-Me Technologies, LLC (Sho-Me), a subsidiary of Sho-Me Power Electric Cooperative, applied to the Broadband Technology Opportunities Program (BTOP) for a grant to provide open-access, middle mile broadband infrastructure to rural, unserved, and underserved areas of central and southern Missouri. To create the proposed network across 31 Missouri counties, Sho-Me will light 880 miles of existing dark fiber and install 500 miles of new fiber optic cable. Approximately 300 miles of cable will be installed underground using vibratory plow-in, horizontal directional drill, and open-cut trench methods. Approximately 200 miles of cable will be installed aerially on existing distribution and transmission structures, with approximately 125 new wooden utility poles installed to replace existing, deficient poles. All new cable will be placed within existing roadway and utility rights-of-way (ROW) and easements along a ring route designed and located to provide network redundancy. Access vaults will be installed to assist with fiber optic cable installation and maintenance. Sho-Me will also install switching, routing, and data transmission equipment in numerous existing and 15 new point-of-presence (POP) shelter sites. Concrete pads and prefabricated equipment shelters will be erected at the 15 new POP sites to house data-transmission equipment, air conditioning units, and propane generators for backup power. Primary power will be provided via existing utility service in the area of each site. This network will offer new or enhanced broadband service opportunities to more than 100 community anchor institutions (CAIs), and is referred to as the MoBroadbandNow “Sho-Me MO” Middle Mile Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to Sho-Me 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

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

construction or other activities identified in the EA as the preferred alternative, in accordance with any special protocols or identified environmental protection measures.

Sho-Me 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:

- Lighting 880 miles of existing dark fiber in the Project area and installing splice boxes to facilitate connection with new fiber;
- Installing approximately 300 miles of buried cable using vibratory plow-in, horizontal directional drill, and open-cut trench methods;
- Installing approximately 200 miles of cable aerially on existing utility structures;
- Installing approximately 125 new wooden utility poles to replace deficient poles along the route and approximately 300 utility pole anchors;
- Installing access vaults at approximate intervals of 2,000 feet in rural areas and 1,000 feet in urban areas to facilitate fiber optic cable installation and maintenance;
- Installing data transmission equipment in existing POP shelter sites;
- Installing concrete pads and prefabricated equipment shelters at 15 new POP sites;
- Installing data transmission equipment, air conditioning units, and propane-fueled generators for backup power at each new POP shelter site; and
- Providing connections between the new network and more than 100 CAIs, and installing new broadband/Ethernet equipment within the data room at each institution.

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:

Frank J. Monteferrante, Ph.D.
Environmental Compliance Specialist
Broadband Technology Opportunities Program
National Telecommunications and Information Administration
U.S. Department of Commerce
Room 2830B
1401 Constitution Avenue, NW
Washington, DC 20230
Tel. 202-482-4208

May 2011

Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project FONSI

**National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project**

Fax 202-501-8009

Email FMonteferrante@ntia.doc.gov

Purpose and Need

The purpose of the Project is to provide open-access, middle mile broadband infrastructure to rural, unserved, and underserved areas of central and southern Missouri. The Project will install fiber optic cable to more than 100 CAIs. These institutions include schools (grades K-12), higher education facilities, libraries, healthcare facilities, courthouses, public safety entities, and other government facilities. These institutions currently lack access to broadband services or the existing broadband widths are not sufficient to meet existing needs. Presently, less than 50 percent of households in the Project area have access to high-speed broadband service. This Project will also provide broadband infrastructure to support other ARRA initiatives such as SmartGrid, Title XIII health information technology, and Title VIII education programs. The network’s ring design will increase reliability of the network by providing redundancy.

Project Description

The proposed broadband network includes a total of 1,380 miles of fiber optic cable within 31 counties in central and southern Missouri. Sho-Me Technologies will light 880 miles of existing dark fiber with dense wave division multiplexing (DWDM) and Ethernet technologies. To make the existing dark fibers available, Sho-Me will splice the cable at approximately 30 key locations. The spliced cable will be enclosed in a splice box, which can either be buried or attached to a utility pole. This work will be conducted in previously disturbed areas.

Sho-Me will also install 500 miles of new fiber optic cable within existing roadway and utility ROW and easements to complete the planned network. Approximately 300 miles of cable will be installed underground. In addition to the buried fiber, approximately 146 miles of cable will be hung from existing electric distribution utility poles, and approximately 54 miles will be placed aerially along electric transmission lines. Two of the planned route segments (Rolla to Roby, and Good Hope to Sparta) pass through the Mark Twain National Forest, managed by the U.S. Forest Service (USFS).

Three installation methods are planned for installation of buried fiber optic cable: vibratory plowing, open-cut trenching, and directional drilling. In all three cases, the cable containing the glass optical fibers will be placed within a 1.25- to 2-inch diameter, flexible plastic duct to protect the cable and reduce accidental damage from future construction work. The vibratory plow creates a slit trench and inserts the duct at a depth between 30 and 36 inches below the ground surface. No soil is excavated using this method, and seed and straw is placed on the ground after duct installation to minimize soil erosion. After the duct is installed in the slit trench, fiber optic cable is either blown into the duct with an air compressor or pulled through the duct with guidelines. Where the vibratory plow cannot be used due to shallow bedrock conditions, the duct and cable will be installed via open-cut trenching or directional drilling. Open-cut trenching involves the use of a rock saw or vibratory equipment to break the rock. The

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

trench is excavated to 30-36 inches below the ground surface, and the duct is placed at the bottom of the trench. The trench is then backfilled with the excavated materials. After backfilling, seed and straw is placed on top of the trench to minimize soil erosion. Directional drilling will be used to cross under roads, rivers, streams, wetlands, and wooded areas. Directional drilling may also be used in shallow bedrock areas. Directional drilling creates a borehole, which is filled with bentonite slurry to prevent cave-in of the hole. The duct and fiber are then pulled through the bored pathway. Because directional drilling is typically used at locations where there is an obstacle, the depth of installation will vary to provide adequate separation from the impediment. There will be some ground disturbance at the drill insertion and extraction areas, but these pits will be backfilled with the excavated materials, graded to match existing topography, and covered with seed and straw to minimize soil erosion.

All dielectric self-supporting (ADSS) cable will be hung on utility poles in accordance with requirements and safety protocols outlined by the pole owner. Along transmission lines, the existing ground/static wire will be removed and replaced with optical ground wire (OPGW), which is a combination of fiber optics and grounding wires. Construction crews will coordinate work-safety protocols (e.g., clearance and de-energizing procedures) with Sho-Me Power. Approximately 125 new wooden utility poles will be needed to replace existing poles. These poles are needed to replace short poles that do not provide enough clearance from sagging utility lines across roadways and to replace structurally unsafe poles expected to be encountered during construction. Utility pole replacement will include the excavation of an approximately 5-foot deep hole, placement of the new pole in the hole, removal and disposal of the old pole, and backfilling the old hole with materials excavated from the new hole. In addition, approximately 300 anchors are needed to support the existing wood pole infrastructure due to the additional tension caused by the ADSS. Installation will involve minor soil disturbance as helical screws are twisted into the ground. Anchors will be attached to these screws. For all aerial fiber construction, crews will access sites using existing access roads and easements used by electric companies' maintenance crews. This work will require minor vegetation cutting to enable equipment and worker access to some existing utility poles.

Access vaults will be installed approximately every 2,000 feet in rural areas and 1,000 feet in urban areas to facilitate fiber optic cable installation and maintenance. The vaults are 24 inches by 30 inches by 36 inches deep and will be buried with only a few inches of the vault remaining above the ground surface. During construction, the vaults will be used as a location to pull cable and perform the necessary splices. Post-construction, the vault will be used for inspection, maintenance, repair, testing, and additional splicing purposes. Prior to construction, the contractor will also coordinate with the various utility companies, including the use of the Missouri One Call System, to mark the locations of their facilities. Where the new fiber will cross existing utility infrastructure, Sho-Me will hand-excavate shallow inspection pits to determine an appropriate depth of crossing. The Project will also include repair of any field tiles inadvertently damaged during construction.

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

Network data and electronic equipment will be installed in numerous existing and 15 new POP shelters located at key fiber optic network intersections and populous areas. Each new POP shelter site will occupy a 50-foot-by-50-foot lot, typically located near existing communication or electric substation facilities. The lot will be graded for vehicle access, parking, and building needs. No soil material is expected to be removed from the site. Gravel will be placed on the vehicle access and parking areas. A concrete pad will be poured to support the approximately 12-foot by 20-foot prefabricated, reinforced concrete shelter. The contractor will follow State and local building codes to control soil erosion, control concrete washout materials, and stabilize soils. Each new shelter will be provided with power via connection to existing electrical infrastructure at the site. A backup 30-kW generator and propane tank will be installed in each new POP location. Air handling units will also be installed in each building to control the temperature and humidity and protect the sensitive electronic equipment.

The Project also includes connection of the fiber optic network to more than 100 CAIs. These institutions include schools (K-12 and higher education), libraries, healthcare providers, courthouses, public safety entities, and other government facilities. The fiber optic network connection will be either aerial or underground, based on site conditions and CAI preferences. Physical connection will be established within the institution’s data room and will include provision of new broadband/Ethernet equipment connection to the CAIs.

The planned fiber optic network infrastructure and POP sites will be routinely inspected and maintained to ensure functionality. The cable routes will be inspected at least annually by field personnel to identify factors that may affect cable integrity. No environmental impacts are anticipated to occur as a result of these inspection and maintenance activities because the sites are readily accessible via existing roads and the vaults will provide easy access to underground portions of the new route.

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 Underground and Aerial Fiber Network Installation (Preferred Alternative). As noted in the Project Description, this effort will include lighting of 880 miles of existing dark fiber; installing approximately 300 miles of new buried fiber; installing approximately 200 miles of new aerial fiber; replacing approximately 125 existing utility poles; installing approximately 300 pole anchors; erecting 15 new POP shelter sites; placing network equipment in these new and numerous existing telecommunications shelter; and connecting the network to more than 100 CAIs.

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the Project area. Under the no action alternative, the proposed broadband infrastructure would not be constructed, and most of the Project area would remain underserved. Sections of the network would remain susceptible to disruption of services if something malfunctioned (i.e., the ring design would not be completed). The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. Additional alternatives that would meet the purpose and need of this Project were also evaluated by Sho-Me. Alternative routes were assessed, with the final planned routes preferred based on the need for broadband services, cost, distance, availability of existing roadway ROW or utility easements, and ease of construction. Alternative methods for installation of the route segments were also considered. The final preferred installation type (i.e., underground installation versus aerial installation) for each route was selected based on constructability factors, such as terrain, bedrock constraints, large river crossings, and available easements from Sho-Me Power Electric Cooperative and its Rural Electric Cooperative members. Wireless technologies were also considered against the preferred hybrid of buried and aerial fiber optic cable. Although wireless technologies can be used to transmit limited broadband capabilities across the Project area, this technology would require the construction of numerous towers and placement of wireless infrastructure on existing telecommunication towers. The current capacity and speed of this technology cannot match the capacity and speeds of fiber optics. Existing users, such as educational and health care facilities, would not access such a wireless network due to insufficient data capabilities. In addition, a wireless network does not have the built-in expansion capacity that the proposed fiber optic network has. The level of service that a wireless network can provide is insufficient to address the purpose and needs of this project. Therefore, it does not represent a viable alternative and was eliminated from further consideration in the Environmental Assessment.

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 and Recreation, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts were also evaluated.

Noise

The Project will add noise to the environment during construction and operation phases. Construction of the network requires the use of heavy machinery such as vibratory plows, directional drilling equipment, small excavators, and bucket trucks. However, noise associated with construction equipment will be localized and limited to brief periods along any particular section of the Project route. Although some of the CAIs have been identified as sensitive noise receptors, Project-related noise generated will be temporary and similar to other light

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

construction work experienced daily within the Project area. Noise associated with maintenance of the network will be similar to existing noise conditions for utility maintenance. Noise from backup power generators at the new POP sites will be low and intermittent, including periodic testing of the equipment. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

Air Quality

This Project requires the use of construction equipment and, thus, will result in emissions of ozone precursors and other air pollutants. Missouri has a State Implementation Plan for the control of ozone, and Franklin County is designated as a nonattainment area for ozone. Accordingly, work in this county must comply with requirements of the State Implementation Plan including a vehicle inspection/maintenance program; Tier II federal motor vehicle controls; nitrous oxide controls; and use of reformulated gasoline products. In addition, the federal Clean Air Interstate Rules address emissions from work vehicles for other parts of the Project area. Operation of the fiber optic network will require occasional use of backup generators, vehicles, and maintenance/repair equipment. Additional air pollutant emissions generated during the network’s operational lifetime are not expected to be significant.

The Project will constitute a short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions during construction. It is estimated that this Project will result in the release of approximately 2,075 metric tons equivalent of carbon dioxide emissions. This estimate is well below the Council on Environmental Quality’s presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emission from an action.

Soil disturbed during Project construction will also generate dust. Trenching operations will generate the most dust due to excavation and soil stockpiling, but this method will only be used on a limited basis. Vibratory plowing will not generate much dust because the root structure and soil strata remain substantially unchanged. To minimize dust, dry soils in the active work zone will be wetted to reduce fugitive dust, and temporary soil stockpiles will be removed the same day they are created.

Based on these assessments, no significant impacts to air quality are expected to result from this Project.

Geology and Soils

Vibratory plowing is the primary underground installation technique for this Project. Compared to open-trenching, this method of cable installation minimizes ground disturbance and maintains the in-situ soil profile. Horizontal directional drilling will be used to cross wetlands, rivers, roadways, or utility corridors. This method requires no surface disruption of sensitive areas, but will result in soil disturbance at the drill insertion and extraction pits. Directional drilling in karst areas will be monitored closely to ensure that Project activities do not result in accidental filling or pollution of a karst void. The open-cut trench method will be used in areas with

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

shallow bedrock areas. Small excavators will be used in areas requiring vaults for fiber optic splices or transmitting equipment. After duct/fiber and vault installation, all excavated areas will be backfilled with the excavated soil and rock, and graded to match existing topography. The topsoil will be replaced, and appropriate erosion control procedures, such as placing seed and straw on the exposed soil, will be implemented. Replacement of existing utility poles will require excavation of an approximately 5-foot deep hole, placement of the new pole in the hole, removal and disposal of the old pole, and backfilling the old hole with materials excavated from the new hole. The area will be graded to match existing topography, and seed and straw placed to minimize soil erosion. Minor soil disturbance will also be necessary to place the anchors in the ground with helical screws. All work for the fiber optic cable will occur within existing, previously disturbed road ROW, or existing utility easements. Construction at the 15 POP sites will require grading an area of approximately 50 feet by 50 feet for vehicle access, parking, and building pad. This grading will disturb the near surface soils to create a buildable parcel. With the possible exception of the Reeds Spring location (exact site to be determined), these shelter sites will be located on previously disturbed sites next to existing communication or electric substation facilities. Proper erosion control methods would be used to keep the soil from migrating off-site. Based on these assessments, the Project is not expected to result in significant adverse impacts on geology or soils.

Water Resources

The planned Project routes cross numerous streams and rivers, wetlands, and floodplains. Sho-Me has submitted a joint permit application to the Missouri Department of Natural Resources (MDNR) and U.S. Army Corps of Engineers (USACE) pursuant to Sections 401 and 404 of the Clean Water Act, USACE Nationwide Permit No. 12 for utility crossings, and Rivers and Harbors Act Section 10 for large river crossings. The underground installation method will use horizontal directional drilling techniques to place the fiber optic cable several feet under perennial watercourses and intermittent streams that have flowing water at time of construction. The insertion and extraction points would be a minimum of 30 feet beyond the stream channel. If the stream channel or wetland is dry and is able to be crossed by construction equipment, the vibratory plowing method will be used. Although this method will cause some disturbance, channel bottom materials and elevation will not change. No access vaults will be placed in water bodies, wetlands, or floodplains.

Aerial crossing streams and rivers will require construction crews to transport the fiber optic cable over the water bodies. At Osage Beach, the ADSS will be attached to an existing bridge. There is also the possibility that a new utility pole will have to be placed within a floodplain or wetland area. For example, to cross the Osage River at Warsaw, it is likely that a new utility pole will need to be placed in a wetland on the north side of the river. However, this minor fill will not appreciably impact the wetlands or flood levels.

The proposed work will disturb the soil, especially at the POP sites, so there is a chance for soil to erode and enter waterways. Consistent with DNR’s General Permit (MO-R101000/MO-

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

R10A000), soil erosion control methods will be employed to minimize soil erosion. These methods include minimizing the area to be disturbed; installing a silt fence where appropriate; placing straw or erosion control blankets on disturbed areas; and seeding disturbed areas. To minimize other pollutants from entering water bodies, equipment will not be staged near streams or rivers, and fueling will only occur at regulated diesel/gasoline fueling sites. Concrete washout at POP sites would meet the DNR General Permit. Based on the limited depth of underground installation, groundwater is not expected to be adversely impacted by Project construction.

Based on these considerations, and through implementation of appropriate construction methods and best management practices (BMPs), the Project is not expected to have significant impacts on water resources in the region.

Biological Resources

On October 28, 2010, the U.S. Fish and Wildlife Service (USFWS) determined that no federally listed species, candidate species, or designated critical habitat is located within the Project area. The USFWS also determined that the Project will have negligible impact on wetlands, migratory birds, or other priority fish and wildlife species. However, in an assessment dated November 23, 2010, The Missouri Department of Conservation (MDC) identified more than 40 species and natural areas of concern in the Project area, including the Greater prairie-chicken (*Tympanuchus cupido*), Indiana bat (*Myotis sodalis*), Gray bat (*Myotis grisescens*), Ozark cavefish (*Amblyopsis rosae*), Mead’s milkweed (*Asclepias meadii*), and Missouri bladderpod (*Lesquerella filiformis*). BMPs outlined by MDC to avoid adverse impacts to these sensitive resources include keeping equipment out of streams; using appropriate soil erosion and sediment control methods; avoiding clearing during the breeding seasons; revegetating disturbed areas with native plants; avoiding work in caves; avoiding use of herbicides next to prairies; and avoiding known populations of species of concern. If these BMPs are followed, the Project will not adversely impact Federal- or State-listed threatened or endangered species.

Large birds can be injured or killed by accidentally striking an electric or telecommunication aerial cable. Installation of aerial fiber for this Project will either replace an existing cable or add a single cable to existing poles on which other lines are currently in place. Accordingly, any increases in bird strikes are expected to be minimal. In addition, avian protection guidelines established by the USFWS will be implemented during Project construction. Occasionally, birds nest on power poles or within vegetation that needs to be cleared ahead of the underground work. If workers encounter a bird nest during construction, they will follow avian protection guidelines, minimizing disturbance to birds and nests and complying with the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the Endangered Species Act.

Vegetation will be cleared for construction equipment access. Any vegetation cleared for the Project would be similar to existing roadway and utility maintenance work, and the cut vegetation is expected to grow back to existing conditions. All of the POP sites being considered are on previously developed properties, with the exception of one potential location near Reeds

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

Spring. Mature trees would have to be removed if this Reeds Spring alternative site is selected. If this site is selected, the building will be placed to preserve as many trees as possible. In addition, tree removal will occur between October and March to minimize disturbance to avian resources during nesting and breeding periods. Land adjoining the POP site has been previously cleared for a driveway and electric distribution lines.

By limiting ground disturbance and vegetation removal, and by implementing appropriate BMPs to prevent erosion and protect migratory birds, the Project will have no significant adverse impacts on biological resources.

Historic and Cultural Resources

NTIA initiated consultation with the Missouri State Historic Preservation Office (SHPO) in a letter dated October 14, 2010. SHPO responded on December 7, 2010, requesting additional information on the project and expressing agreement that aerial construction of fiber cable over existing lines will not adversely affect historic districts listed on the National Register of Historic Places and requires no further coordination.

On February 15, 2011, the SHPO accepted the Project’s archaeological report and concurred that the Project will have no adverse effect on historic properties provided that installation remains in disturbed road rights-of-way as planned, with no pole replacement. The SHPO stipulated that Sho-Me must resume Section 106 consultation in the event of changes to the plan, and that Project modifications within areas of “high cultural resource potential” (as identified in the report) would require archaeological survey in advance of ground disturbing activities.

In a letter dated April 27, 2011, the SHPO provided additional comments clarifying that a survey is not warranted for the 15 POP locations since these areas have been previous disturbed. The SHPO requested that they be contacted in the event that Project plans change or if cultural materials are encountered during Project activities.

On October 22, 2010, NTIA notified 25 Native American Tribes and nations of the Project through the Tower Construction Notification System (TCNS). Of these Tribes, 24 expressed no objection to the Project.

On March 22, 2011, the Osage Nation requested that the scope of the archaeological study be expanded and that they be considered a consulting party in any agreements developed for the project. In a letter dated April 5, 2011, NTIA responded that the SHPO had concurred with the limits of the archaeological study, and on its negative findings, and while the Osage would be welcomed as a consulting party, no agreements are anticipated for the project. NTIA requested notification of any specific cultural resource concerns of the Osage within the Project area. To date, the Osage Nation has not responded to this request.

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

In the event of unanticipated discovery of cultural materials (e.g., structural remains, historic artifacts, or prehistoric artifacts), construction work will cease and Sho-Me will notify interested Tribes, the SHPO, and NTIA immediately. If earth-disturbing activities uncover human remains, all work will cease immediately, in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) and relevant State statutes. The area around the discovery will be secured and appropriate law enforcement personnel and NTIA will be notified immediately.

Based on completed cultural resources reviews and consultations, the Project is not expected to have significant adverse impacts on historic or cultural resources.

Aesthetic and Visual Resources

The Project will involve construction within a number of different surroundings including rural roadways adjacent to agricultural fields, natural areas, urban streetscapes, and commercial districts. All new cable will be placed with existing ROWs or easements. In general, aesthetic disruptions for most areas will be limited to the duration of construction and primarily in the form of the short-term presence of construction equipment. Because cable will be placed on existing utility poles with existing wires, the additional cable is expected to blend into the visual landscape and will not adversely impact area aesthetics. Construction at each of the 15 new POP sites will include a driveway, parking area, and 12-foot by 20-foot prefabricated shelter building. The one-story building will typically include a gravel-faced exterior that enhances the shelter’s appearance. The POP sites would be located in urban areas or near existing facilities and will blend into the existing visual landscape. Two proposed routes pass through the Mark Twain National Forest. On the Roby to Roby section, aerial cable will be hung along existing transmission lines, replacing the existing ground/static wire with the OPGW. Consequently, there will be no change to the existing visual resource of the transmission line. For the Good Hope to Sparta section, ADSS will be placed on existing utility poles. This additional cable will blend with the existing cables. Although some vegetation within the easement will need to be cut to access the poles, this vegetation would normally be cut as part of the utility owner’s routine maintenance work. Based on these assessments, this Project will not negatively affect aesthetic or visual qualities in the region.

Land Use

The infrastructure necessary to complete this Project will be installed within existing roadway ROW and existing utility easements. These improvements are consistent with normal uses of right-of-ways and easements. As stated previously, the Rolla to Roby and Good Hope to Sparta routes pass through portions of Mark Twain National Forest. An Application for Transportation and Utility Systems and Facilities on Federal Lands (Form SF-299) has been sent to the USFS. Work will not commence in these areas until the application has been approved. Based on these provisions, the Project will have no significant impact on land uses.

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

Infrastructure

Fiber optic cable will be installed underground and on existing utility poles in a manner that will not damage existing utilities. Electric power service is not expected to be disrupted during construction of the Project. Sho-Me will coordinate with utility owners and local governments, including the City of Ozark, to properly manage utility conflicts. Utility coordination work will require the marking of existing utilities prior to the start of subsurface construction and identifying a safe route for the fiber duct construction. Where utility crossings are unavoidable, the existing utilities will be hand-excavated to determine the depth of the crossing. Adjustments to the proposed fiber cable depth will be made, as required, to avoid conflicts. The proposed action may also cross buried field tiles that are not apparent from surface features or markings. The fiber optic cable installer will notify local authorities prior to construction so that they are able to mark the locations of known field tiles. If an unmarked tile is broken, the fiber optic cable contractor will repair the damage to reinstate drainage. Based on these assessments, the Project is not expected to adversely affect existing infrastructure. Conversely, by providing equipment and connections to enable enhanced internet connectivity, this Project is expected to have a positive overall impact on infrastructure in central and southern Missouri.

Socioeconomic Resources

This Project will allow rural residents, businesses, and institutions in central and southern Missouri to access high-speed internet, communications, and other broadband applications. The Project will have positive direct and indirect economic benefits. Sho-Me estimates that the Project will create 288 job-years of employment, including direct opportunities in the engineering, construction, and fiber optic supply industries. Indirect economic benefits include new jobs for last-mile providers; new jobs for rural industries that need broadband infrastructure to remain competitive; enhanced opportunities for telecommuting and online collaboration; and educational opportunities via online education and connected classrooms. Overall, the Project will have a positive impact on socioeconomic resources in the region.

Human Health and Safety

Because Project construction will occur adjacent to high-speed roadway traffic, worker and motorist safety is paramount. Missouri Department of Transportation (MODOT) traffic control standards will be used to establish and maintain a safe work zone. These standards include adequate warning signage and barricades as necessary. Workers are required to meet OSHA standards for worker visibility, and equipment driven on roadways must meet proper signage and licensing requirements. In accordance with MODOT standards, work within urban areas shall maintain safe pedestrian routes. Work in and around school zones would be coordinated with school district officials to ensure that safe, functional routes are available for pedestrian and bus traffic. Construction equipment may occasionally and temporarily impede traffic flows as they enter and leave the roadway. In urban areas, the work zone may extend into a traffic lane, causing vehicles to yield to workers and oncoming traffic. Delays to motorists are expected to be minimal as most of the construction will be off the roadway surface and safe passage of

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow “Sho-Me MO” Middle Mile Project

vehicles will be incorporated into the contractor’s traffic control plan. These delays will be temporary and limited to working hours.

There are 119 hazardous/toxic sites along the planned Project that could potentially impact human health and safety during construction activities. It is anticipated that any areas of soil contamination identified within the planned route can be avoided. Vibratory plowing preserves the existing soil profile in-situ and will not result in contaminated soils being exposed. Directional drilling also minimizes soil disturbance and will not significantly redistribute contaminated soils. Open-cut trenching and installation of hand-holes and vaults in areas with soil contamination will require appropriate worker protection, appropriate handling of contaminated soils, and appropriate disposal of contaminated soils. During construction, soils will be identified as potentially contaminated if they appear visually different from surrounding soil, they smell of petroleum products, or another unusual odor is detected. Upon identification of potentially contaminated soils, work will cease in the area of concern and a soils contamination consultant will conduct an investigation to determine the presence and extent of soil contamination. Appropriately trained workers, equipped with personal protective equipment in accordance with OSHA standards, will then follow the required procedures for mitigating the soil contamination.

Some of the CAI buildings may have asbestos-containing materials, lead-based paint, or other building materials that may pose human health concerns. To protect workers and building occupants from these potential hazards, the contractor will coordinate with the building owner to identify any hazards and follow applicable environmental and OSHA rules for handling such hazards.

By adopting the safety and coordination efforts described above, it is anticipated that the Project can be constructed with no adverse impacts to human health and safety.

Cumulative Impacts

With Project construction occurring along existing ROW and easements, there is potential for overlap between the planned installation and future improvements. The current MODOT multi-year roadway improvement plan shows potential conflicts along Missouri Highway 13 near Springfield; U.S. Highway 50 near Linn and Union; and U.S. Highway 65 near Warsaw. Coordination will be required to ensure that work schedules do not conflict and that the fiber optic cable will be placed in the appropriate location. The City of Gerald also identified a potential conflict with recent resurfacing efforts. To avoid disturbance of city improvements, Sho-Me will install fiber for the affected portion of the route aerially or underground along an alley.

BlueBird Media is currently implementing a separate BTOP project to provide broadband infrastructure to the northern parts of Missouri. The Sho-Me Technologies network and

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Sho-Me Technologies, LLC
MoBroadbandNow "Sho-Me MO" Middle Mile Project

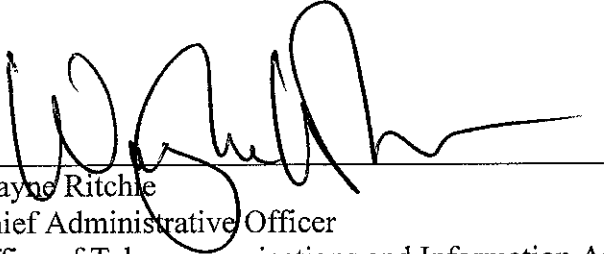
BlueBird Media network will be interconnected at key strategic locations. This will improve broadband communication speeds, reliability, and access throughout the State.

No significant adverse cumulative impacts have been identified with regard to this Project.

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:



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

5/17/2011

Date