National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Valley Telephone Cooperative, Inc., Rio Grande Valley Fiber Network

Summary

Valley Telephone Cooperative (VTC), Inc., applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 153 miles of new fiber-optic cable. The new fiber will provide 150,000 square miles of broadband coverage to the Rio Grande Valley of Texas. The network will directly connect to 26 community anchor institutions (CAIs). An additional CAI will benefit from the increased reliability and greater broadband capacity of the network, although it will not be directly connected to it. The new fiber network will be installed underground. In addition, three telecommunication huts will be constructed along the Project route. The proposed action occurs in four counties of southeast Texas, and is referred to as the Rio Grande Valley Fiber Network (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to VTC, through BTOP, as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three years. This timeline will comply with the laws and regulations governing the use of this ARRA funding.

BTOP supports the deployment of broadband infrastructure in unserved and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act of 1969 (NEPA). Specifically, NEPA limits the types of actions that the grantee can initiate prior to completing required environmental reviews. Some actions may be categorically excluded from further NEPA analyses based on the specific types and scope of work to be conducted. For projects that are not categorically excluded from further environmental review, the grant recipient must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA, use it as the basis for finding that the project will not have a significant impact on the environment, and issue a finding of no significant impact (FONSI). Following such a finding, the BTOP grant recipient may then begin construction or other activities identified in the EA as the preferred alternative, in accordance with any special protocols or identified environmental protection measures.

VTC 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 approximately 153 miles of buried broadband network primarily in existing public rights-of-way (ROWs) throughout four counties in southeast Texas;
- Installing buried fiber-optic cable by plowing, directional boring, or pulling it through existing ducts;
- Directly connecting 26 CAIs via underground fiber, and improving service at an existing CAI;

- Installing hand holes every 10,000 feet along the entire project route, as well as at highway intersections and at access points for CAIs; and
- Constructing three telecommunication huts in cleared vacant lots along the Project route.

Based on a review of the analysis in the EA, NTIA has determined that the Project, implemented in accordance with the preferred alternative, and incorporating best management practices (BMPs) and protective measures identified in the EA, will not result in any significant environmental impacts. Therefore, the preparation of an EIS is not required. The basis for this determination is described in this FONSI.

Additional information and copies of the Executive Summary of the EA and FONSI are available to all interested persons and the public through the BTOP website (www2.ntia.doc.gov/) and the following contact:

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Purpose and Need

The purpose of the Project is to bring affordable broadband service to unserved and underserved communities in the Rio Grande Valley of Texas. The Project will install fiber-optic cable in areas where, to date, it has not been economically feasible to establish broadband telecommunications infrastructure. The new middle mile and last mile infrastructure will provide opportunities associated with broadband technology to the Rio Grande Valley and 27 CAIs.

Project Description

The Project involves installing approximately 153 miles of new fiber-optic cable, constructing three telecommunication huts, and connecting or benefitting 27 CAIs in southeast Texas. The cable will be buried via plowing, directional boring, or pulled through existing ducts. Construction will take place primarily within existing public ROWs.

Approximately 153 miles of buried fiber optic cable will be installed along the Project route. Buried cable will be installed by plowing, directional boring, or pulling through existing ducts.

Approximately five miles of cable will be pulled through existing duct owned by VTC. Approximately 100 miles of fiber will be installed by plowing. When plowing, a 1-foot wide trench is opened by the plow. The 1.25-inch plow duct and fiber are placed in the trench between 42 to 48 inches below the ground surface. The installation will occur between 5 to 10 feet of the roadside edge within the public ROW.

Approximately 48 miles of fiber will be installed using directional boring. Directional boring will be used to cross major roads, railroads, canals, wetlands, downtown areas, and where trees are present within the ROW. This method involves drilling a horizontal cable pathway from one access point along the route to another, installing conduit to house the cable, and then pulling the cable back through the conduit. Typically, the entry and exit points will be placed on the ground surface set back 100 feet from the feature's edge and bored to a depth of 60 inches below ground surface. Where the Project crosses a waterbody, the cable will be installed 5 feet below the sediment surface. All major road crossings would be directionally bored at a minimum of 60 to 72 inches below the asphalt. The Project will also have a 100-foot setback where the route passes cemeteries.

VTC will install hand holes approximately every 10,000 feet along the entire route, and at each highway intersection and CAI access point. Hand holes will be at least 42 inches deep and approximately 3 to 5 inches in diameter.

In addition, three telecommunication huts will be constructed adjacent to the ROW in cleared vacant lots. Two huts will be approximately 30-feet wide by 40-feet long, and one hut will be 50 feet wide by 50-feet long. Each of the three buildings will be on a 3-foot deep concrete pad foundation. A diesel-power generator to provide backup electrical power will be installed at the huts. No access roads or fencing will be constructed.

Boring and plowing will be used to install the fiber that crosses private property to connect CAIs. Fiber will be brought from the public ROW to a new hand hole outside the CAI. The length of the 26 CAI installation routes is between 50 and 1000 feet. The easements from the ROW to the CAIs are being coordinated with the Texas Department of Transportation.

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 – Buried Fiber Installation (Preferred Alternative). As noted in the Project Description, this effort will include installation of approximately 153 miles of new fiber, and connections to 26 CAIs and 3 telecommunications huts. The new fiber will be installed underground via plowing, directional boring, or through existing duct along the Project route.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the Rio Grande Valley of Texas. Under the no action alternative, new

fiber infrastructure would not be constructed. Many rural communities 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 related to other alternatives being considered.

Alternatives Considered But Not Carried Forward. VTC considered installing the network along alternative routes; these routes were eliminated from further consideration because they lacked substantial engineering or economic project improvements. These alternative routes were also eliminated because they would not be able to use the existing duct crossing the Arroyo Colorado and a new crossing would need to be constructed. VTC also considered the alternative of installing an all-aerial network. This alternative was eliminated because installing thousands of poles along the Project route was determined to be considerably more costly and have greater environmental impact than the preferred alternative. VTC also considered an all-wireless telecommunications network. However, wireless technology is not a viable alternative because of limited internet connection speeds and the significant ground disturbance and visual impacts associated with constructing a wireless network.

Findings and Conclusions

The EA analyzed existing conditions and environmental consequences of the preferred alternative and the no action alternative in 11 major resource areas, including Noise, Air Quality, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Human Health and Safety.

Noise

Short-term increases in ambient noise levels are expected during the Project's construction period. Noise created by machinery used during installation will be temporary and localized in nature. To lessen noise impacts, VTC will implement protective measures, such as limiting construction activities to daylight hours, notifying nearby residents of construction activities, installing acoustic barriers, turning off idling equipment and placing loud equipment as far from sensitive receptors as possible. The Project will also have minimal long-term noise impacts due to the operation of the backup diesel-power generators installed at the three telecommunication huts. The generators will only be activated in the event of a power loss, which is estimated to occur 36 days per year. Based on these considerations, no significant noise impacts are expected from Project construction or operation.

Air Quality

Potential impacts to air quality will be both short-term related to construction and long-term related to operation of this Project. Fiber will be installed underground via plowing, directional boring, or by pulling it through existing duct. These techniques will result in minor disturbance of the ground surface. There will also be negligible fugitive dust emissions resulting from construction of three telecommunication huts. Fugitive dust emissions will be minimized by applying water to exposed soils, installing wind fences, covering removed soils prior to

backfilling, and halting work during periods of high wind. A short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions will occur as a result of Project construction. Emissions will be minimized through implementation of BMPs, such as placing limits on idling, using fuel-efficient vehicles and machinery, and installing advanced pollution control equipment on exhaust systems. There will also be long-term impacts to air quality from the diesel-powered generators installed at the three telecommunication huts. The generators will only run during power outages, which are estimated to occur 36 days per year. Based on implementation of these BMPs, construction and operation 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 by plowing and directional boring in existing public ROWs. Plowing and directional boring techniques result in minor, temporary disruption of the soils. All disturbed areas will be backfilled, compacted, and returned to its original condition. The three telecommunication huts will be constructed on cleared vacant lots adjacent to the public ROW. No more than 2,500 square feet of soil will be disturbed to construct each telecommunications hut. Appropriate erosion and sediment control BMPs will be implemented during construction to minimize soil erosion and dust migration. BMPs include avoiding areas with unstable slopes, minimizing land disturbance and vegetation removal, installing silt fences or hay bales, and re-vegetating disturbed areas with native seeds. 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. There are approximately 158 water crossings associated with the Project, which include irrigation canals and tributaries associated with the Rio Grande, the Arroyo, and Colorado Rivers, Llano Grande Lake, and Hackney Lake Inlet. Using horizontal direction drilling will avoid potential impacts to streams, rivers, and adjacent wetlands. VTC provided the U.S. Army Corps of Engineers (USACE) an assessment of water resources along the Project route. In a letter dated February 28, 2011, the USACE confirmed that this Project would not involve activities subject to the requirements of Section 404 or Section 10, because directional boring will be used to avoid impacts to water resources. Trenching activities are expected to be conducted approximately three to 4 feet below surface, well above the depth of the regional aquifers. Additionally, directional bores and telecommunication hut foundations will be a maximum depth of five feet below surface, and will not impact the groundwater resources. During construction, there may be a temporary minor disturbance of floodplain areas, but no long-term impacts are anticipated.

The Project will not result in any permanent alterations that could affect drainage patterns or the flood carrying capacity of a watercourse within the 100-year floodplain. Because approximately 13 miles of fiber will be installed within a coastal zone, VTC provided Project documentation to the Texas Coastal Management Program (TCMP). In a letter dated, February 11, 2011, TCMP determined that the Project will likely not have adverse impacts on coastal natural resource areas. No aboveground facilities will be constructed within the coastal zone; as such, no long-term

impacts are anticipated for coastal resources. VTC will implement BMPs to minimize any indirect temporary impacts to coastal waters. BMPs used during construction may include backfilling trenches, silt fences, hay bales, and replacement of or reseeding existing grass. By avoiding construction through waterways, and implementing erosion and sediment control BMPs, VTC will be able to construct the network with no significant adverse impacts on water resources.

Biological Resources

VTC consulted with the Texas Parks and Wildlife Department (TPWD) and the U.S. Fish and Wildlife Service (USFWS) regarding potential impacts to biological resources by this Project. Noise and human activity associated with fiber installation are expected to disturb some wildlife species, but these effects will be minor and temporary. Disturbance to the ground surface and vegetation associated with the Project will be primarily limited to public ROWs that are previously disturbed areas. VTC conducted a review of the Texas Natural Diversity Database and a pedestrian survey of the Project corridor to identify potential species of concern. VTC provided the USFWS with their findings and suggested that the USFWS make three separate determinations regarding the Project's potential impact on identified biological resources. VTC recommended the following three determinations: the Project is not likely to adversely affect five identified species because suitable nesting, denning, or foraging habitat is not available in the ROW and impacts would be discountable, indirect and temporary due to disturbance of non-breeding adults during construction activities; the Project is not likely to adversely affect seven listed plant species due to previous disturbance and ongoing maintenance of the ROW, and lack of current presence of the species within the Project area; and, the Project will have no effect on seven identified species because the Project area does not include any suitable habitat. In addition to these recommended determinations, VTC noted that no long-term impacts are anticipated for any listed species, as the ROW will be restored to preconstruction conditions and no critical habitat of any Federally-listed species would be impacted by the Project. In a letter dated December 2, 2010, the USFWS responded and requested that VTC conduct a biological assessment to substantiate their recommended determinations. VTC conducted the biological assessment and provided results to the USFWS on January 18, 2011. The biological assessment identified specific protective measures that will be implemented to ensure that potential adverse effects to threatened and endangered species are prevented or minimized to the maximum extent practical. Specifically, VTC committed to ensuring that wildlife corridors remain intact. In a letter dated January 31, 2011, the USFWS provided concurrence with VTC's recommended determinations. Based on this analysis and the implementation of protective measures, VTC will be able to construct the fiber network with no significant adverse impacts on biological resources.

Historic and Cultural Resources

On September 17, 2010, NTIA sent a consultation initiation letter, including a detailed Project description, to the Texas Historical Commission (THC) State Historic Preservation Officer (SHPO). Following the initiation letter, VTC engaged qualified staff at AR Consultants, Inc. (ARC) to analyze the archeological and architectural resources in the Project area. Prior to receiving results of the archeological resources study conducted by ARC, the THC SHPO

responded to the consultation initiation letter with the determination that no historic properties would be affected and the Project could proceed.

As shown in a telephone memo dated October 25, 2010, ARC contacted the THC SHPO to clarify their response that no historic properties would be affected. The response the THC provided on the Project was without specific information regarding buried cultural resources, such as archaeological sites and cemeteries. ARC identified multiple cemeteries and a historic archaeological site listed on the National Register of Historic Places within the ROW during an archaeological evaluation. During this conversation, the THC stated that to ensure that there is no disturbance to the graves, the cemeteries should be bored underneath, at a depth of 10 to 12 feet below the surface, and that the bore points be 100 feet from the marked boundaries of the cemetery. If the fiber cannot be buried at the specified depth or setback limits at cemeteries, scraping or trenching should be conducted to ensure that unmarked graves will not be disturbed. Additionally, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will monitor all cable installation work at and near cemeteries and other historically or culturally important resources. If buried cultural deposits, such as foundations are encountered, work will cease in that area and the THC will be notified. The THC also commented that there is minimal potential for disturbing significant archaeological resources within the ROW, such as the Old Military Road and the Palo Alto Battlefield, because the route is passing through existing easements where extensive modification of the ditches has occurred.

In a letter dated January 28, 2011, ARC provided additional Project information to the SHPO based on updated routes, CAIs, and the three telecommunication sites. The SHPO responded in a letter dated March 11, 2011, requesting additional information from ARC regarding potential impacts on cemeteries and the historic Santa Maria Church.

In a letter dated March 16, 2011, VTC identified the cemeteries located along the Project route. If it is feasible, fiber will be installed on the opposite side of the road to avoid the cemeteries. Where it is not feasible to cross on the opposite side of the road, fiber will be directionally bored that length of existing utility ROW. VTC also agreed to avoid the historic Our Lady of Visitation Catholic Church in Santa Maria, Texas. VTC will investigate the possibility of placing the fiber on the south side of Highway 281 to maximize the construction distance from the church. If the fiber cannot be placed on the south side of Highway 281 near the church, VTC will directionally bore the existing utility ROW paralleling the church at a minimum depth of 10 to 12 feet, with entry and exit points of the bore set back at least 100 feet on either edge of the church. Additionally, VTC will designate and flag the ROW between the entry and exit points immediately adjacent to the church as a "No Work Zone, where construction equipment and activities will be prohibited. These protective measures will minimize any potential damage to the church and protect its structural integrity. In a letter dated March 21, 2011, the SHPO responded and concurred with the determination that no historic properties will be affected by this Project.

Through the Tower Construction Notification System, NTIA provided Project details to five tribes interested in the Project's geographical location (southeast Texas). VTC received

responses from all five of the tribes that were notified of the Project. Three of the five tribes requested Project summary and location information; VTC provided the three tribes with the requested information and did not receive any additional contact from these tribes. Two of the five tribes expressed no issue with the Project, but 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.

Nearly all construction for the Project will occur in 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 protective measures to be implemented by VTC, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The Project involves installing fiber optic cable by burying the cable underground in ROWs. 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. In addition, three telecommunication huts will be constructed adjacent to the ROW in cleared vacant lots within developed mixed use and residential areas. The Project will be installed adjacent to the South Texas Refuge complex, which includes both the Lower Rio Grande Valley National Wildlife Refuge (LRGVNWR) and Santa Ana National Wildlife Refuge. VTC is coordinating with the USFWS for a special use permit to cross these properties. Fiber will be installed along the NWR, in the existing public ROW, which is mowed and maintained. To minimize impacts to aesthetic and visual resources on NWR properties, VTC will install fiber using directional boring techniques in areas where trees or riparian areas are present. VTC will also place the fiber on the north side of Highway 281 for crossing the LRGVNWR unit immediately west of County Road 1732 in Cameron County. Additionally, brush will not be cleared in any areas paralleling the NWR. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

Land Use

Most of the fiber-optic cable installed for the Project will be in public ROWs. The three telecommunication huts will be constructed adjacent to the ROW in cleared vacant lots. Implementation of this Project will not modify the current land use. In a letter dated February 15, 2011, the Texas Natural Resources Conservation Service stated that burying fiber within existing ROW is not considered a conversion of land use; therefore, the Project will not impact any prime or unique farmland. Accordingly, the Project will have no significant adverse impact on land use.

Infrastructure

Project construction activities may result in temporary utility outages in sections of the utility corridor undergoing fiber installation. All road crossings will be directionally bored to minimize impacts on transportation in the Project area. The three telecommunication huts will be served by existing power and no additional infrastructure is required to support them. The Project will improve communications infrastructure and is expected to improve the transfer of information among CAIs, businesses, and individuals residing within the communities along the Project route. Overall, the Project will have a positive impact on infrastructure in southeast Texas.

Socioeconomic Resources

The Project will provide improved communications infrastructure to residents who do not have access to broadband services in southeast Texas. The network will also benefit these communities by establishing or enhancing broadband connections at 27 CAIs. An increase in both short-term and long-term employment opportunities are also anticipated as a result of the new fiber network. The Project will add necessary infrastructure to improve and expand resources for enhanced educational opportunities, health care services, and business development to minority and low-income populations in the region. The Project will have positive impacts on socioeconomic resources.

Human Health and Safety

Although there are regulated hazardous waste sites in near the Project route, all of these sites are outside the ROW and other areas of Project construction work. Therefore, no impacts are anticipated. Water crossings will be directionally bored well below the sediment surface, minimizing chances of contact with contaminated sediment. Most construction activities will take place in an active utility corridor, therefore, contact with unknown contaminated water or soil is unlikely. If contamination is encountered, all work will cease and appropriate personnel will be contacted to remediate the materials before work would resume. BMPs for workplace safety will be implemented to protect workers and the public. A Project-specific health and safety plan will be developed to address construction procedures, appropriate personal protective equipment, incident reporting requirements, personnel training records, and daily safety meeting documentation. With implementation of the protection measures, the Project will not generate any significant adverse worker or traffic-related health or safety issues.

Cumulative Impacts

As described above, the Project will not have significant adverse impacts on any of the environmental resource areas evaluated in the EA. As such, no cumulative impacts on the environment are anticipated.

Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, and protective measures will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses

indicate that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:

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