Summary

ENMR – Plateau (ENMR) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install approximately 194 miles of new fiber optic cable and three pre-fabricated buildings with on-site backup generators. The new network will connect with, expand, and leverage other ENMR networks to connect fiber to approximately 426 community anchor institutions (CAIs) in 28 new service areas. The new infrastructure also will connect approximately 3,936 businesses and 49,970 homes. The new network will include installation of fiber optic cable underground within existing utility and roadway rights-of-way (ROWs). The Project spans 11 counties, including Bernalillo, Curry, De Baca, Guadalupe, Harding, Lincoln, Quay, San Miguel, Santa Fe, Torrance and Valencia, and is known as the Telecommunications Round II Broadband Project (Project).

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

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

The Project includes:

- Installing approximately 194 miles of fiber along various existing state, city, or county ROWs via plowing, trenching, sawing, and boring, including:
 - o Installing approximately 80 miles of backbone fiber cable to allow for additional protection of the Dense Wavelength Division Multiplexing (DWDM) ring.

- o Installing approximately 114 miles of distribution fiber optic cable and connecting it to the 426 anchor institutions.
- Creating 39 new points of interconnection, which will enable local internet service providers to utilize the project's open network; and
- Constructing three pre-fabricated buildings with on-site backup generators (in Edgewood, Mountainair, and Belen).

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

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The purpose of the Project is to bring affordable broadband service to unserved and underserved communities in New Mexico. The Project will help facilitate distance learning and education for thousands of residents by significantly improving broadband connections at public schools, libraries, community colleges and branches, hospitals and medical centers, police departments, fire departments, university campuses, and city, county, and state offices. In total, this project will connect fiber to 426 anchor institutions and will address several distinct needs related to deficient infrastructure in the service areas, including:

- Increasing network rates to 1 Gbps at anchor tenant locations, upgrading from copper facilities delivering ADSL2+ or T1 services;
- Providing symmetrical service, which allows 10 Mbps speeds when uploading and downing data, and developing symmetrical connectivity to provide advance services;
- Addressing backhaul bottlenecks by adding DWDM notes in strategic locations;

- Consolidating technological resources, sharing costs, and finding efficiencies across agencies through a statewide core network;
- Providing middle-mile infrastructure into rural communities to create opportunities for last mile customers and other service providers to connect at a later date; and
- Address the need for more bandwidth and computer access in schools, colleges, and universities (including branch locations), as well as establishing such access in remote, rural schools.

Project Description

The Project was selected for comprehensive analysis as the preferred alternative and final design because it will have fewer existing infrastructure constraints and best satisfy the financial and temporal constraints of the BTOP award. It is based on the understanding that a very robust core network will be needed to provide the amount of aggregated bandwidth required in the next three years and beyond. The core network is the key to ensuring that long-term bandwidth needs are met. ENMR is proposing additional DWDM optical equipment across much of New Mexico to provide very high bandwidth Points of Presence (POPs) in the major communities along the fiber routes.

The Project is designed to work in complement with the network being built under a related grant awarded to ENMR during Round One of the BTOP grant program. It will extend that network to incorporate another 28 markets in its regional New Mexico ring. The Project includes installation of approximately 194 miles of new fiber optic cable, and can be viewed in two parts: (1) DWDM network, and (2) fiber to anchor institutions, as follows:

- In the first part of the Project, 80 miles of backbone fiber cable will be constructed to allow for additional protection of the DWDM ring. A number of communities will be served with DWDM nodes that will enable connectivity of either existing or proposed infrastructure from ENMR or another provider in the community. This will complement the core network that exists in those areas.
- The second part of the Project consists of building 114 miles of distribution fiber optic cable and connecting it to the 426 anchor institutions. Most of the affected communities are considered underserved markets based on having less than 40 percent broadband subscribership. As a result of constructing this project, broadband service will be adjacent and consequently available to approximately 3,936 businesses and 49,970 homes, in addition to the anchor institutions that will be served. Table 1 lists the project locations and the length of fiber in each area.

The Project includes mostly underground (buried) fiber, with several exceptions where fiber will be placed in existing conduits across existing bridges. Construction will involve placing fiber optic cables a minimum of 36 inches below the surface, along previously disturbed existing ROWs, established streets, roadways, or travel routes. Buried cable will be placed using a variety of methods, including plowing, trenching, sawing, and boring. Plowing will be the

primary construction method and involves plowing of the cable with a ripper attachment which opens a narrow slot, inserts the cable, and covers it in one operation. This method will used in areas where rock contents are minimal and construction paths are free of obstructions. In obstructed areas, a trencher will be used to make a trench. The cable will be placed and the trench backfilled and compacted to restore the ground to its original condition. This method is primarily used in towns and is not used to cross waterways. In areas of heavy rock content, a rock saw will be used to cut a narrow trench into which cable is placed inside an inner-duct. Where paved roadways, streams, or water crossings are encountered, boring will be the primary method of construction. A boring machine will be used to make the bore under streams or water crossings. The bore extends beyond the high water marks for the distance needed to bore to a depth of four to five feet below the bottom of the waterway. Typically this amounts to at least 25 feet from waterways. The bore is 1.25 inches in diameter and can extend 600 feet in a single session. Once the bore surfaces, the fiber optic cable is attached and pulled through the bore leaving minimal surface disturbances at the entrance and exit boring locations only. In one location, at the NM 309 Rio Grande bridge in Belen, cable will be placed within existing or new conduit. Ideally, the cable will be located in a PVC conduit currently located on the bridge. If the New Mexico Department of Transportation (NMDOT) will not permit this use, then a new PVC conduit will be attached to the bridge.

The anchor institutions to be served will require new buried fiber service drops and either a fiber termination box, located on the exterior of the building, or a cable entrance to a designated interior termination room.

The Project also will include construction of three pre-fabricated buildings with on-site backup generators (in Edgewood, Mountainair, and Belen). The buildings will be located on fenced parcels, each less than 0.3 acres in size. Two equipment cabinets would be located in Estancia and Moriarty within existing ROWs. In all other service areas, equipment will be installed in existing buildings and cabinets owned by ENMR.

Installation of the fiber optic cable would be accomplished using standard utility vehicles, such as front end loaders and fiber spool trailers, as wells as cable boring machines and plows with ripper attachments. These would operate primarily in public ROW. Construction would take place in readily accessible paths for installing the fiber optic cable to the anchor institutions. Except for the three new pre-fabricated buildings, all work is anticipated to be within existing ROWs. No new roadways will need to be constructed for installation or operation of the fiber optic network.

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.

Underground Fiber Installation (Preferred Alternative). As noted in the Project Description, this effort will include installation of approximately 194 miles of cable and three pre-fabricated buildings with on-site backup generators.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in New Mexico. Under the no action alternative, new 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 relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. ENMR considered three other alternatives to implement the Project, but eliminated each from detailed analysis for a variety of reasons. ENMR considered an overhead cable alternative, but it was ruled out because it would have potentially involved modifying existing poles or constructing new poles to accommodate the fiber optic cable above ground. It would require negotiating user agreements with the utility companies that currently own the utility lines, which in some cases would jeopardize the timing constraints of the award. ENMR also considered the combined overhead cable and buried cable alternative, but ruled it out for similar reasons as the exclusive overhead cable alternative. It would likely involved modifying existing poles or constructing new poles to accommodate the fiber optic cable above ground. It would also require negotiating user agreements with the utility companies that currently own the utility lines, which in some cases would jeopardize the timing constraints of the award. Lastly, ENMR considered the wireless alternative, but ruled it out because it would not provide the network architecture necessary for supporting the bandwidth needs in the project areas, and therefore would not serve as the proper foundation for middlemile network investment in east central New Mexico. Furthermore, this alternative would require the construction of a significant number of radio towers, microwave dishes on the towers, shelters with communications equipment, and diesel generator backups. Microwave radio technology is not as reliable as fiber optics, and would likely require redundancy wired projects on existing poles.

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 [GHGs]), 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

During fiber installation, there would be minor and temporary increases in ambient noise along the project routes due to the operation of construction equipment and work crews. However, the noise would be temporary and transient, and would end when construction activities are concluded. To minimize noise impacts during construction of the project, all equipment will be

equipped with muffling devices approved by the Occupational Safety and Health Administration (OSHA) and maintained in good order. Operation of the fiber network to transmit broadband data would not generate noise. However, there would be one source of noise during general operation of the network associated with the propane-powered backup generators installed at the equipment buildings in Edgewood, Mountainair, and Belen. These backup generators would run through a monthly exercise cycle lasting approximately ten minutes and will also activate whenever the equipment buildings experience a power outage. During normal operation, the backup generators will produce noise levels of approximately 63 dBA at distances of 100 feet from the generator. Because the backup generators are located in urbanized, mix use (commercial, industrial, and residential) neighborhoods and operate very infrequently, these impacts are not anticipated to be significant and no mitigation is proposed. With these measures, construction of the Preferred Alternative is not expected to have significant noise impacts on noise.

Air Quality

There will be temporary and minor impacts to air quality during project construction, including equipment and vehicle exhaust emissions, as well as dust from excavation and related activities. After construction, there will be intermittent, minor air quality impacts from the backup power generators at the equipment buildings in Edgewood, Mountainair, and Belen. To minimize any potential adverse impacts to air quality, all construction equipment and the three backup power generators will be maintained in good operating condition. During construction, fugitive dust will be limited by control measures, such as watering of disturbed areas, as specified by local ordinances and standard management specifications of agencies such as NMDOT. The Project also would constitute a short-term minor increase in the use of fossil fuel and associated GHG emissions during construction. The Project would result in the release of approximately 40 metric tons of equivalent CO2 emissions during construction and 0.1 metric ton of equivalent CO2 emissions annually from the operation of the backup power generators. The Council on Environmental Quality (CEQ) has issued draft guidance on GHGs that includes a presumptive effects threshold of 25,000 metric tons of CO2 equivalent emissions from an action. The GHG emissions associated with the Project are well below the CEQ threshold. Therefore, GHG emissions from the Preferred Alternative are not expected to contribute appreciably to climate change or global warming. Overall, with these measures in place, the Project is not expected to have significant impacts on air quality.

Geology and Soils

The Project would result in minimal disturbance to soils and geologic resources in areas where trenching, boring, and placement of construction machinery will occur. It is estimated that approximately 14 acres of soil would be disturbed from trenching and perhaps another acre would be disturbed from boring points. The Project is located within existing roadway and/or utility easements that have been previously disturbed and not currently in agriculture. However, of the approximately 15 acres, approximately 2.5 acres is in ROW adjacent to land classified as prime farmland and another ten acres is adjacent to farmland of statewide importance. In a letter dated February 22, 2011, the U.S. Natural Resource Conservation Service (NRCS) concurred that there will be no impacts to prime or unique farmland, or farmland of statewide importance.

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Minimal cut and fill activities will be needed for trenching and boring, and backfill will typically occur immediately following excavation and cable placement. Trenches will typically remain open unless work is ongoing. Nevertheless, soils disturbed during construction will experience increased erosion potential. To minimize erosion and because the proposed project would disturb more than one acre of land, a storm water pollution prevention plan (SWPPP) under the National Pollutant Discharge Elimination System (NPDES) of the CWA will be prepared. The SWPPP will establish best management practices to control soil erosion and siltation of waterways. Typically, the contractor prepares and implements the SWPPP but the permittee is also responsible for following the SWPPP requirements. Some of the methods to implement the SWPPP and prevent erosion of soils during and after construction include hydro seeding, dry seeding, use of straw wattles, draining inlet filters, and use of silt fencing. Through these measures, the project is not expected to have a significant impact on geology or soils.

Water Resources

Although the preferred alternative crosses over or is adjacent to five perennial streams or rivers. at least 50 ephemeral arroyos, numerous irrigation features, several wetlands, and three lakes, the project is expected to have no significant impacts on surface water resources. A boring machine will be used to bore under streams or water crossings. The bore will extend beyond the high water marks for the distance needed to reach a depth of four to five feet below the bottom of each waterway. Once the bore surfaces, the fiber optic cable is pulled through the hole leaving minimal surface disturbances. In a letter dated April 4, 2011, the U.S. Army Corps of Engineers (USACE) indicated that if these methods are followed, the project will have no effects on waters of the United States and Section 404 Permits will not be required. In one location, at the NM 309 Rio Grande bridge in Belen, cable will be placed within existing or new conduit. Ideally, the cable will be located in a PVC conduit currently located on the bridge. If the NMDOT will not permit this use, then a new PVC conduit will be attached to the bridge. The NM 309 bridge is not a historic resource. No groundwater impacts are expected as the trenching and boring would occur above groundwater levels in most locations. In the isolated wetland areas in Santa Rosa, where there is a combination of groundwater and surface water that creates saturated soils, a contingency plan has been developed to monitor and address any changes in groundwater levels. According to FEMA maps, the proposed fiber optic line cross and are within several designated Special Flood Hazard Areas, which are areas inundated by 100-year flood events. The fiber optics cable will be placed within existing utility or road easements, and will not modify the topography or the existing floodplains. The building structures, in Edgewood, Mountainair, and Belen are not located within floodplains. The Project will have no impacts on coastal zones or Wild and Scenic Rivers, as these are not present in the project area.

Biological Resources

The Project will disturb an estimated 15 acres of native and non-native vegetation, which serves as habitat to a variety of wildlife species. The impacts to vegetation will be minor and all areas of disturbed vegetation within state and federal highway ROWs along the Project routes will be regraded and reseeded with a local seed mix, native to the area, and approved by the NMDOT.

Potential impacts to wildlife from the proposed project are expected to be minimal because of the relatively small scale of disturbance. The majority of wildlife usage within the project area consists of transient activity. Construction activities may cause minor disruption to foraging or localized migrating movement of certain species, but most animals would be expected to return to the area once project construction has been completed. Potential disturbances to wildlife will cease upon completion of construction activities and no direct losses of large mammals or birds are expected as a result of this project. The use of open trenches can pose a risk to wildlife such as reptiles, amphibians, and small mammals. Therefore the New Mexico Department of Game and Fish (NMDGF) recommends implementation of the following guidelines to minimize the loss of wildlife: (1) keep trenching and back-filling crews close together, (2) trench during cooler months (October – March), and (3) avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 300 feet. These ramps are short lateral trenches or wooden planks sloping to the surface. In the event that a trench has been left open overnight it should be inspected and animals removed prior to back filling.

Prairie dogs were observed within the median of St Francis Drive and shoulder of Rodeo Road in Santa Fe. In order to comply with the City of Santa Fe's ordinance protecting prairie dogs, the fiber optic cable will be directionally bored through these locations, thus avoiding potential impacts on prairie dogs in the area. The Rio Grande, Pecos River, Canadian River, and other riparian corridors in the project area provide important migratory routes and nesting habitat for a variety of birds and migrating flocks. Because the fiber optic cable will be bored under riparian areas, it is not anticipated that important habitat will be impacted. If active bird nests are to be affected by construction, then coordination with the U.S. Fish and Wildlife Service (USFWS) is required and a permit must be obtained in order to move or disturb active nest. If these measures are implemented, the Preferred Alternative is not expected to have significant impacts on migratory birds or result in a trend toward loss of viability of any species.

Two plant species listed under the ESA were identified in Santa Rosa, the Pecos sunflower and Wright's marsh thistle. The Pecos sunflower is a federally threatened (and state endangered) plant species, and the USFWS has officially designated critical habitat within the Santa Rosa project area. Wright's marsh thistle is a state endangered plant species occurring in the same habitat with Pecos Sunflower, and it is currently a "candidate federal species." Specimens of both species were identified along NM 91 and River Road within the project area. Consultation with the USFWS and the New Mexico Forestry Division's State Botanist indicated that if the installation of the fiber optic cable in these areas is directionally bored from outside the critical habitat and the locations of the listed plants, then the project will be considered to "may affect, but not likely to adversely affect" the threatened species and their critical habitat. This determination is dependent on a commitment to bore under the listed species populations and critical habitat and the development of a contingency management plan that will monitor and address any impacts to the area's artesian groundwater hydrology resulting from boring and installation of the fiber optic cable.

Historic and Cultural Resources

In a letter dated October 22, 2010, NTIA initiated consultation with the Texas State Historic Preservation Office (SHPO) on behalf of ENMR. NTIA provided a project description and map with the submission to the SHPO. In a stamped response dated November 29, 2010, the Texas SHPO indicated that no historic properties will be affected and the project may proceed.

In a letter dated October 22, 2010, NTIA also initiated consultation with the New Mexico SHPO (NMSHPO) on behalf of ENMR. NTIA provided a project description and map with the submission to the SHPO. In a letter dated November 9, 2011, ENMR provided the New Mexico SHPO (NNSHPO) with additional information about the proposed project. During a subsequent meeting which took place on November 10, 2011, the NMSHPO determined that ENMR should conduct an intensive pedestrian cultural resources survey of the Project area. ENMR agreed to do so, and provided the preliminary reports to the NMSHPO on December 27, 2010 and January 10, 2011, respectively. The studies identified thirty-nine archaeological sites within the 28 project sub-areas. In addition to archaeological sites, the survey documented historic resources including 132 historic buildings and 12 historic structures. Of the 39 archaeological sites, two are recommended as ineligible for inclusion in the National Register of Historic Places (NRHP) under any of the applicable criteria, 23 are recommended eligible, and 11 are recommended as having undetermined eligibility as further investigation is required to determine the nature and extent of these sites. The remaining three sites could not be relocated within the project area, therefore no management recommendation is provided. Of the 132 historic buildings inventoried, 107 are recommended as ineligible for inclusion in the NRHP under any of the applicable criteria; 23 are recommended eligible; two are recommended as having undetermined eligibility as further investigation is necessary to make a recommendation regarding individual eligibility; and 30 are recommended as ineligible for listing individually but of undetermined eligibility either because they are potential contributing elements to historic districts that could be defined by future research, or because additional archival research is needed to determine whether they are individually eligible. Of the 12 historic structures, 11 are recommended eligible and one as undetermined.

In a letter dated January 13, 2011, the NMSHPO indicated that it appeared that all historic and archaeological sites and buildings will be avoided, except site LA 168900, for which the NMSHPO disagreed with the National Register of Historic Places (NRHP) determination. The NMSHPO recommended directional boring to avoid site LA 168900. Also, the NMSHPO recommended that to avoid potential impacts from vibration, all of the historic buildings and structures eligible or of undetermined eligibility be avoided by at least 50 feet, either by rerouting of fiber lines to the opposite side of the roadways involved. If this is not feasible, then the cable installation near eligible buildings should be by the boring method. Historic irrigation ditches should also be bored. ENMR also will ensure that an archaeologist monitors ground disturbance for all ground-disturbing activities that occur during project implementation within 50 feet, and on the same side of the roadway, as known archaeological sites or burials.

In a letter dated April 1, 2011, ENMR submitted to the NHSHPO additional findings from new fieldwork. In a letter dated April 20, 2011, NTIA requested the NMSHPO concur with ENMR's

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findings of No Adverse Effect on historic and cultural resources. In a letter dated May 4, 2011, the NMSHPO outlined findings from the Bureau of Reclamation (BOR), the New Mexico Department of Transportation (NMDOT), the U.S. Department of Agriculture - Forest Service (Cibola National Forest), the USACE, the Bureau of Land Management (BLM) Taos Field Office, and the New Mexico State Land Office (SLO). The NMSHPO presented in that letter a comprehensive list of management recommendations, including the following (which also includes the aforementioned measures):

- All historic buildings and structure eligible or of undetermined eligibility should be avoided by at least 50 feet either by re-routing of cable lines to the opposite of the roadways involved or cable installation should be by the boring method.
- All historic irrigation ditches should be bored under.
- All eligible or undetermined archaeological sites should be avoided by at least 50 feet. When the archaeological site extends to both sides of the roadway, the route through the site should be bored under the centerline of the roadbed to limit the disturbance to previously disturbed road areas
 - o The following sites will be treated in this manner: LA 169027, LA 109591, LA 168900, LA 105551, LA 105557, and LA 105559.
 - In addition, LA 105554 and LA 169026 should be avoided by boring under the road bed or the cable should be placed next to the ROW fence. LA 105555 should be avoided by installing the cable between the bridge and the edge of the road ROW.
- An archaeologist will monitor all ground-disturbing activities occurring during project implementation within 50 feet of known archaeological sites or suspected or known burials. Avoidance by less than 50 feet could occur in regard to the following sites, necessitating construction monitoring if it is determined unfeasible to move the cable to the opposite side of the road: LA 168965, LA 168966, LA 169025, LA 124280, LA 134911, LA 152574, LA 153574, LA 111899, LA 159409, LA 159410, LA 134865, LA 169059, LA 168961, LA 32422, LA 135157, LA 152046, LA 156920, LA 125030, LA 105550, and LA 112932.

Through the Tower Construction Notification System (TCNS), NTIA provided Project details to 6 tribes interested in the Project's geographical location (New Mexico). ENMR received direct responses from four tribes that were notified of the Project. None of the respondents indicated interest in the project area; however, these tribes stated that if cultural remains or resources are discovered during construction, the applicant should immediately stop construction and notify the appropriate federal agency and the tribe.

All 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 materials. 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 regulatory agencies, and additional protective measures to be implemented by ENMR, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The Project primarily involves infrastructure that is not visible after construction, buried fiber optic cable, but does include three pre-fabricated equipment buildings and two electronic cabinets that will be visible from adjoining areas. The above ground features are located in developed urban areas and are not expected to create adverse visual impacts. There will also be temporary construction-related vegetation clearing; however, these areas will be reseeded after construction. Overall, the Project is not expected to have significant impacts on the aesthetic resources of the project area.

Land Use

The Project is primarily located within existing utility and roadway ROWs adjacent to commercial, institutional, industrial, residential, agricultural, and vacant land. The Project will include construction of three pre-fabricated buildings with on-site backup generators (in Edgewood, Mountainair, and Belen) located on privately owned, fenced parcels. Two equipment cabinets would be located in Estancia and Moriarty within existing ROWs. During construction, some minor interference with access and circulation may occur, however, these impacts are expected to be minor and insignificant. The contractor will be required to develop a construction plan that minimizes delays, inconvenience, and access limitations. Construction impacts will be minor and temporary. No impacts are anticipated to the land-management missions of local, state, and federal agencies with responsibilities in the project area. To date, no concerns have been identified by the USACE, BLM, USDA-FS, BOR, SLO, New Mexico State Parks Division, or any of the affected counties or communities. It will be necessary to obtain permits from some of these agencies for use of their rights-of-way and comply with the regulatory procedures. The Project is not expected to have significant impacts on land use.

Infrastructure

The Project will have no long term effects on municipal or rural infrastructure. There may be temporary disruption in traffic flow during the construction phase; however, standard traffic control measures such as signing and advanced notice of work to emergency responders, businesses, and residents will be implemented to minimize these impacts. Except in very restricted ROW locations, installation of the fiber optic lines can take place without traffic disruption or control. There will be no effect on the pavement of roads or sidewalks. Except for the three utility buildings, construction activities will occur in existing ROWs. New ROWs or easements will be obtained from private owners for the new buildings. Existing underground utilities will be located prior to construction and avoided during the installation of the fiber optic lines. This utility location process will employ services such as New Mexico One and may involve 'pot holing' or testing at certain locations. The installation of the cable lines will affect future underground activities within the ROWs. After construction, the proposed project will provide enhanced broadband service to anchor institutions, businesses, and residents in an

underserved, rural area of New Mexico. Overall, no significant impacts on infrastructure are expected from the Project.

Socioeconomic Resources

The Project will provide enhanced broadband to telecommunications service to rural, relatively isolated communities in New Mexico that have moderately high minority and low income populations. The project will enhance telecommunication service and offer improved speed and quality of broadband access for public oriented anchor institutions. The improved service at these public institutions is intended to stimulate growth in business and economic prosperity in the targeted communities. This growth would, in turn, lead to employment opportunities for local residents, including low income and minority residents. Consequently, the proposed improvements are expected to comply with the federal Executive Order 12898 on Environmental Justice and Title VI of the Civil Rights Act. No significant impacts on socioeconomic resources are expected from the Project.

Human Health and Safety

Human health and safety impacts could occur during construction of the Project, for example if members of the public are exposed to careless operation of construction equipment or workers are exposed to unsafe traffic conditions. Potential adverse health and safety impacts related to construction will be minimized through the development of a traffic control plan that establishes procedures of care for workers and the public. This will include measures to alert the public of project activity, such as warning signs and barricades, and implementation of standard safety regulations and protocols, such as those issued by OSHA and the NMDOT. Measures that may be employed include signing, plans to keep emergency departments informed, and advance notice to property owners and businesses regarding any access change.

All contractors performing site work will be required to complete a site specific health and safety plan in compliance with state requirements and federal OSHA regulations. Specific methods and equipment used for construction will be addressed in the contractor's site specific health and safety plan.

Other concerns relate to the potential of encountering hazardous materials in the soil or groundwater during trenching. A limited information data base was developed for this EA indicating that there have been numerous gas stations and industrial land uses in some parts of project area. There is no indication of Superfund or Brownfield sites in the project area. If hazardous materials are encountered during construction, the contractor should have established procedures to prevent risks to worker or the spread of contamination. Within NMDOT right-of-way, these measures should be in accordance with the NMDOT's *Handbook of Hazardous Waste Management* (2007).

During construction hazardous materials must be properly monitored, maintained, and stored while present at the construction site. If contamination is released to soil or ground water during construction, actions will be taken immediately to protect workers and residents from exposures.

If appropriate response procedures are developed and implement, the Project is not expected to have significant impacts on health and safety.

Cumulative Impacts

The Project will result in loss of a relatively small amount of vegetation and wildlife habitat adjacent to the existing ROWs, which would constitute a cumulative effect with other development activities in the area. Some of these ROWs are regularly maintained by the highway agencies; consequently, the project would have little cumulative effect in such areas. Other minor cumulative impacts may occur in regards to noise, air quality, soils, aesthetics, biological resources, and cultural resources. These would be relatively minor given the proposed mitigation measures of the proposed project. Cumulative impacts to the Pecos sunflower have been occurring in recent times from adjacent land development in Santa Rosa. For this reason the USFWS designated the critical habitat that occurs in the project area. Every effort will be made to employ construction techniques (directional boring) that avoid adverse effects to this species. With these measures, the Project is not expected to have significant cumulative impacts to the Pecos sunflower. The proposed project is also part of a larger fiber optic network across New Mexico, each portion of which will have a cumulative effect on the operability of the overall system. Thus, each of these components has the potential to impact communication and public safety in a region larger than its own Project area. However, no significant cumulative impacts are anticipated to result from the 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:

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