

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

**Summary**

Merit Network, Inc. (Merit) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to deploy a 1,323-mile advanced fiber optic network in three backbone corridors and ten spurs. This new network will be installed in unserved and underserved portions of 29 counties in Michigan, 8 counties in Wisconsin, and 1 county in Minnesota. Approximately 1,263 miles of new fiber optic cable will be installed as both aerial and underground infrastructure in existing road and utility rights-of-way (ROWs). Merit will also purchase approximately 60 miles of existing fiber infrastructure in Michigan to integrate into the network. In addition to installing fiber, Merit will erect 11 telecommunication huts and purchase one existing telecommunication hut to house network equipment along the network route. The new network will provide direct connections to 61 community anchor institutions (CAIs) including libraries, universities, community colleges, and community healthcare centers. The new fiber and related infrastructure will extend Merit's existing 1,600-mile network and complement Merit's BTOP Round One infrastructure project involving installation of 1,015 miles of fiber optic cable in Michigan. This BTOP Round Two effort is referred to as the Rural, Education, Anchor, Community, and Healthcare (REACH) Michigan Middle Mile Collaborative Project (Project).

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

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Merit Network, Inc.  
REACH Michigan Middle Mile Collaborative Project**

---

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

The Project includes:

- Installing 1,263 miles of aerial and underground fiber optic infrastructure in existing road and utility ROWs in Michigan, and portions of Wisconsin and Minnesota;
- Purchasing an additional 60 miles of existing fiber infrastructure in Michigan;
- Erecting 11 new telecommunications huts and purchasing 1 existing telecommunications hut to house network equipment;
- Replacing existing utility poles, if necessary, to accommodate new cabling; and
- Providing direct connection to 61 CAIs, including educational and healthcare facilities.

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

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

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, DC20230  
Tel. 202-482-4208  
Fax 202-501-8009  
Email: [FMonteferrante@ntia.doc.gov](mailto:FMonteferrante@ntia.doc.gov)

**Purpose and Need**

The purpose of this Project is to provide broadband service to unserved and underserved areas of 29 counties in Michigan, 8 counties in Wisconsin, and 1 county in Minnesota. Of the 38 counties in the Project service area, 27 are economically distressed. In many rural areas throughout the tri-state area, the high cost and lack of competition for backhaul service has limited last mile service performance, availability, and affordability. It is anticipated that this Project will foster economic development and growth; create jobs; advance technological

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

initiatives; and enable CAIs to consolidate and share resources. The Project will also enhance educational opportunities in the planned service area, with connections to 19 K-12 institutions, 22 public library systems, and 10 higher education locations. The Project also will support Michigan's Next Generation 911 plan by connecting all public safety answering points, four governmental organizations, and a major healthcare facility.

### **Project Description**

Merit will install middle mile fiber infrastructure along three backbone corridors (Middle, Northeastern, and Northern) and construct ten spurs to extend off of these backbones. Telecommunications infrastructure will be installed in large cities (e.g., Superior, Wisconsin and Duluth, Minnesota), the agriculture-dominated landscape of southern Lower Michigan and eastern Wisconsin, and the rural forest-dominated landscape of northern Lower Michigan, Michigan's Upper Peninsula, and northern Wisconsin. A total of 1,263 miles of fiber optic cable will be installed using a combination of aerial and underground construction methods. Aerial construction will be more prevalent in Michigan's Lower Peninsula where existing utility poles are more readily available than in other Project areas. Approximately 43% of the Project construction will involve hanging aerial fiber on existing utility poles within road or utility ROWs. Approximately 39% of the Project will involve installation of fiber infrastructure underground in existing road ROWs. Approximately 2% of the new fiber will be installed within existing underground conduit. Installation decisions (underground or aerial) have yet to be made for the remaining 16% of the Project corridor, referred to as "dual option areas," pending negotiations with municipalities and ROW managers. Nevertheless, Merit will use existing, previously disturbed road and utility ROWs for all new fiber installation, including in the dual option areas. In addition, Merit will purchase 54 miles of existing aerial fiber between St. Ignace and Sault Ste. Marie, and 6 miles of existing fiber and conduit on the Mackinac Bridge, bringing the total Project network to 1,323 miles.

Merit will install aerial fiber by hanging the cable on existing or replacement utility poles. Construction crews will access the poles from existing public roads and utility ROWs. Timber mats will be used to support construction equipment in wetland areas where saturated conditions create the potential for rutting. Construction equipment will not cross streams or rivers during aerial installation of fiber infrastructure. Waterway spans will be accessed via road and utility ROWs on both sides of the water feature and fiber will be strung across from bank to bank by hand or by boat and then pulled into place. Existing poles that are unable to accommodate new fiber will be replaced by the utility companies that own the poles. New poles will be mounted on a concrete footing or directly buried in the ground within 15-30 feet of the existing poles to be replaced. After the existing aerial utilities are installed on the new pole, the existing pole will be pulled from the ground or cut off near the surface, removed from the utility or road ROW, and properly disposed, recycled, or reused, as appropriate. After replacement, the area around the new pole will be restored to preconstruction grades. Any excess material generated during pole

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Merit Network, Inc.  
REACH Michigan Middle Mile Collaborative Project**

---

replacement will be placed in upland areas and stabilized. Although some poles may be replaced to accommodate the new cabling, no new pole runs are planned.

Plowing will be used for the majority of underground construction. This installation method uses a plow blade approximately six inches wide to install fiber and flexible conduit into the ground, at least four feet deep. Original soil displaced during plowing will be compacted into the plow slot immediately after fiber placement. Directional boring will be used to install fiber in environmentally sensitive areas, developed sites with extensive paved areas, and areas where this method is specifically required by regulatory agencies. Directional boring involves excavation of boring access pits in upland areas set back at least 25 feet from the surface feature being protected. After fiber installation, these bore pits will be restored to their original grade, using the original soil materials, and seeded. Merit will install new fiber in existing underground conduit along approximately 28.4 miles, or 2.2%, of the total project length. These conduits will be accessed via manholes or portals. Handholes will be installed at intervals between 1,800 and 2,500 feet to provide storage space for fiber slack and maintenance access. Each handhole will involve excavation of an area approximately three feet long, three feet wide, and four feet deep.

Merit will also construct 11 telecommunications huts along the route to house network equipment. Eight huts will be erected in Michigan's Upper Peninsula, and three will be erected in Wisconsin. In addition, Merit will purchase one existing hut in St. Ignace. Each 10-foot by 20-foot hut will be placed on a concrete building pad set approximately 50 feet from the edge of the adjacent road. Although the planned construction sites will have been previously developed, some brush and small trees may need to be cleared prior to pouring the concrete foundation and constructing a 50-foot long, 20-foot wide, gravel driveway from the nearest road to the hut. An area as large as 80 feet by 80 feet may be cleared and graded to accommodate each hut. With 11 new hut sites anticipated, this activity will result in a cumulative disturbance of less than 2 acres in Michigan and Wisconsin. Each hut will be connected to local power service and will be provided with a generator for emergency backup power.

In addition to constructing network backbone and spur fiber, Merit will install fiber laterals in existing ROWs to connect 61 identified CAIs to the new network. Most of these building connections will be shorter than 250-500 feet in length, but some may be as long as 2,500 feet. Connections to CAIs will be made through existing utility conduits. If no existing conduits are present, Merit will coordinate with the building owner to identify the preferred location and method of connection. No new buildings or structures will be constructed to house new infrastructure at the CAIs.

### **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.

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

*Aerial and Underground Fiber Network (Preferred Alternative).* This alternative involves installing 1,263 miles of fiber in existing road and utility ROWs in Michigan, and portions of Wisconsin and Minnesota; purchasing an additional 60 miles of existing fiber infrastructure in Michigan; erecting 11 new telecommunications huts; purchasing one existing telecommunications hut; replacing existing utility poles if necessary; and providing direct connection to 61 CAIs. This alternative builds on Merit's existing telecommunications network and complements Merit's BTOP Round One infrastructure project to create a statewide network in Michigan and neighboring portions of Wisconsin and Minnesota. Under this alternative, new fiber optic cable will be constructed in existing, previously disturbed road and utility ROWs using a combination of aerial and underground installation techniques. A portion of the new fiber will be installed in existing underground conduit across the tri-state area.

*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, no new fiber would be constructed and Merit's existing backbone fiber network would not be expanded into unserved and underserved portions of Michigan, Wisconsin, and Minnesota. The planned Project service area would continue to suffer from a lack of adequate broadband services. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

*Alternatives Considered But Not Carried Forward.* In addition to the preferred alternative, Merit considered constructing an all-buried, all-aerial, or wireless network to meet Project needs. The all-buried option would be more invasive and costly than the preferred alternative and would require a significant amount of installation time, jeopardizing the Project's statutory deadline. Based on these risks, construction of the network entirely underground was eliminated from consideration. The all-aerial construction method cannot be used in areas where utility poles are not available or are not able to support additional utility attachment, and where local ordinances prohibit the aerial installation of new utilities. Additionally, an all-aerial installation would not leverage existing conduit through which fiber may be installed with relative ease. Accordingly, the all-aerial option was also eliminated from further consideration. The wireless alternative would require construction of approximately 55 radio towers with 100 microwave dishes and radios throughout the Project area. Construction of these towers and related infrastructure would involve significant ground disturbance, visual and aesthetic impacts, and greater potential for significant adverse impacts to natural, cultural, and historical resources as compared to a wired project restricted to construction in disturbed and regularly maintained road and utility ROWs. Tower construction would also be cost-prohibitive and could jeopardize Merit's ability to complete Project implementation within the statutory deadline. Furthermore, microwave radio technology is not as reliable as fiber optic technology and does not currently support broadband capacities needed to meet Project objectives. Based on these assessments, only the preferred and no action alternatives were retained for full evaluation in the EA.

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Merit Network, Inc.  
REACH Michigan Middle Mile Collaborative Project**

---

## **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. Cumulative impacts were also evaluated.

### ***Noise***

Use of heavy equipment during the construction phase of this Project will result in short-term, temporary increases in ambient noise. This noise is expected to be comparable to that associated with regular maintenance activities along the existing ROWs. Operation of the network for data transmission will not increase long-term ambient noise levels. However, the use of generators to provide back-up power for the new towers will result in minor, long-term, but intermittent, increases in ambient noise. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

### ***Air Quality***

During the construction phase of the Project, emissions will be generated by construction equipment, including plows and directional drilling equipment. Emissions from this construction equipment will be temporary, minor, and transitory as construction activities move along the installation route. Minor amounts of dust may also be generated during construction operations. Use of the network for data transmission will not create any new, long-term sources of air emissions in the Project area. However, generators used for back-up power at the hut sites will result in minor and intermittent air emissions over the long-term. The Project will also result in minor increases in the use of fossil fuel and associated greenhouse (GHG) emissions during construction. Merit estimates that the Project will result in the release of approximately 36 metric tons of carbon dioxide equivalent emissions. Thus, GHG emissions are expected to be well under the Council on Environmental Quality's presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emissions from an action. Based on these assessments, no significant impacts to air quality are expected.

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

Under this Project, fiber optic lines will be installed in existing, previously disturbed, road and utility ROWs. Underground installation of fiber and replacement of a limited number of utility poles will involve only temporary disturbance of soil during the construction phase of the Project. Merit will return all areas to pre-construction grade and stabilize disturbed soil after installation is complete. In accordance with direction provided by the U.S. Fish and Wildlife Service (USFWS) on June 23, 2011, Merit will develop and implement a frac-out contingency plan for directional drilling components of the Project. Merit will also comply with all required local and/or state soil erosion and sedimentation control (SESC) permits. Adverse impacts to

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

geology and soil will be minor, short-term, and limited to the construction phase. The 11 new telecommunication hut sites will also be installed on areas of previously disturbed soil. Based on these assessments, the Project is not expected to result in significant adverse impacts on the geology or soil in the area.

***Water Resources***

The Project route will cross numerous surface water features such as waterways and wetlands. The majority of surface water features along the Project route (approximately 53%) will be crossed via aerial installation or through existing underground conduit. In addition, 73 water crossings (approximately 38%) will be crossed via directional boring. The remaining 18 crossings (9% of the total) are located in dual-option areas where the specific method of crossing (i.e., aerial installation or directional drilling) will be determined based on governmental preferences, land use constraints, or the accessibility of existing poles and/or conduit.

To complete aerial crossings, Merit will access both sides of the waterway via road and utility ROWs and string fiber over the watercourse by hand or by boat. Underground fiber will be directionally drilled at least four feet beneath the bottom of the surface water feature, and no trenching will be conducted within the channel or banks. Directional boring pits and equipment staging areas will be located in upland areas set back a minimum of 25 feet from existing streambanks and associated wetlands. After construction is complete, bore pits and staging areas will be restored to their original grade, using the original soil materials, and seeded.

The planned Project route will cross seven federally-designated Wild and Scenic Rivers, all of which are located on the Northern backbone corridor in Michigan. Crossings of Middle Branch of the Ontonagon, Sturgeon, and Whitefish Rivers will be completed through aerial installation on existing utility poles. Crossings of Carp Creek, the South Branch of the Paint River, the Presque Isle River, Tenderfoot Creek, and a second crossing of the Middle Branch of the Ontonagon River will be completed via directional drilling. Merit will also install aerial fiber on existing utility poles across 21 state-designated Natural Rivers in Michigan, one state-designated Outstanding Resource Waters (ORW) river in Wisconsin, and two Exceptional Resource Waters (ERW) rivers in Wisconsin. Finally, Merit will install underground conduit and fiber in existing ROWs to cross four Natural Rivers in Michigan and four ORW rivers in Wisconsin. The Project does not cross any State-designated rivers in Minnesota.

To minimize impacts on wetlands, Merit will avoid crossing wet, unstable ground with trucks and heavy equipment where possible; use timber mats to provide a stable surface and remove the mats when the crossing is completed; limit wetlands crossing to the drier summer months or frozen winter conditions; cross wetlands at their narrowest width; minimize the number of times the wetland is crossed; and smooth out any ruts with the bucket of a backhoe or using hand tools, such as shovels and rakes. No wetland fill is proposed. Merit will also implement appropriate soil erosion and sedimentation control BMPs, such as silt fencing, in accordance with requirements stipulated by the U.S. Army Corps of Engineers (USACE), the Michigan

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

Department of Natural Resources and Environment (MDNRE), the Wisconsin Department of Natural Resources (WDNR), and the Minnesota Department of Natural Resources (MDNR).

The Project will not involve changes in floodplain elevation, as all disturbed soils will be returned to their original grades. No new structures or telecommunication huts are planned within floodplains. Telecommunication huts will be installed on 10-foot by 20-foot concrete pads, and a gravel driveway approximately 20 feet wide and 50 feet long will be constructed at each hut site to provide vehicular access. The amount of impervious surface associated with each hut is minor and will not appreciably increase stormwater runoff. Similarly, the Project will not contaminate drinking water sources or result in permanent drawdown of the groundwater table. Hut foundations will be situated at least three feet above the water table. No wetlands will be impacted by the planned hut sites or access roads.

In Michigan and Wisconsin, USACE permitting is the primary mechanism for ensuring that the Project conforms to the applicable Coastal Management Plans. Accordingly, separate coastal zone permits or consistency determinations are not required in these states. In an e-mail dated January 28, 2011, the Federal Consistency Coordinator from Minnesota's Lake Superior Coastal Program (MLSCP) stated that the proposed Project is consistent with the state-enforceable policies of the MLSCP. Fiber infrastructure will be installed within existing road and utility ROWs in these coastal zones. Hut placements will also occur within existing developed and disturbed areas, compatible with existing land uses in designated coastal zones. No adverse impacts will occur in critical dune areas.

Based on these assessments, any impacts to surface water features will be minor, short-term, and temporary. The Project is not anticipated to result in significant adverse impacts on water resources in the tri-state area.

***Biological Resources***

During the Project planning process, Merit reviewed the federal lists of threatened and endangered species and critical habitats for all 38 counties crossed by the Project. Based on this review, Merit identified ten species of concern and one designated critical habitat in Michigan, nine species of concern in Wisconsin, and three species of concern in Minnesota. Merit concluded that aquatic species will not be adversely impacted by the Project because waterways will be crossed aerially, by boring under, or by pulling fiber through existing conduit.

The Project will be constructed in regularly maintained road and utility ROWs, and previously disturbed areas. Quality habitat for terrestrial species of concern is typically not present within these areas. These terrestrial species are much more likely to occur in higher quality habitats beyond the limits of the ROWs. Although areas beyond the ROW may be temporarily disturbed by construction crews, Merit will protect species of concern by implementing BMPs to avoid permanent disturbance of habitat, establish spatial restrictions to avoid critical habitats, and



**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Merit Network, Inc.  
REACH Michigan Middle Mile Collaborative Project**

---

define seasonal restrictions to ensure that construction occurs outside nesting periods and other sensitive times of the year.

In a letter dated June 23, 2011, the USFWS East Lansing Field Office made several determinations with regard to potential impacts on federal species of concern and critical habitats in Michigan and Wisconsin. In addition to detailing appropriate protective measures from the Project, the East Lansing USFWS made the following state-specific determinations:

- Michigan – no effect on the Snuffbox mussel (*Epioblasma triquetra*), Kirtland’s warbler (*Dendroica kirtlandii*), and Houghton’s goldenrod (*Solidago houghtenii*);
- Michigan – may affect, but is not likely to adversely affect, the Karner blue butterfly (*Lycaedes melissa samuelis*), the Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), the Dwarf lake iris (*Iris lacustris*), the Gray wolf (*Canus lupis*), Hine’s emerald dragonfly (*Somatochlora hineana*) and its critical habitat (Michigan Unit 1), the Canada lynx (*Lynx canadensis*), or the Bald eagle (*Haliaeetus leucocephalus*);
- Wisconsin – no effect on the Piping plover (*Charadrius melodus*), Fassett’s locoweed (*Oxytropiscampestris var. chartacea*), the Dwarf lake iris, Kirtland’s warbler, the Whooping crane (*Grusamericanus*), and the Karner blue butterfly;
- Wisconsin – may affect, but is not likely to adversely affect, the Gray wolf, Canada lynx, or the Bald eagle.

In an e-mail dated April 7, 2011, the USFWS Twin Cities Field Office concurred with Merit’s conclusion that Project activity in Minnesota will have no effect on the Piping plover, Gray wolf, and Canada lynx.

In addition to federal consultations with the USFWS, Merit consulted with various state agencies with regard to state-listed species of concern. As a result of these consultations, BMPs and other precautions were identified to minimize adverse impacts on rare species that are known to occur within road and utility ROWs, and at planned hut sites. Based on these consultations and BMPs, Merit determined that potential adverse impacts to listed species will be minor and limited to the construction phase. Merit received clearance for the Project from MDNRE (Michigan) on May 3, 2011, with the condition that Merit will cross the Thunder Bay River in Montmorency County via directional drilling to avoid impacts on Pugnose shiners (*Notropis anogenus*) known to occur in the waterway. Merit also received clearance letters from the Michigan Department of Transportation on June 27, 2011; WDNR on April 18, 2011 and June 20, 2011; and MDNR (Minnesota) on April 7, 2011.

Based on these assessments, no significant adverse impacts on biological resources are anticipated to result from Project implementation.

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Merit Network, Inc.  
REACH Michigan Middle Mile Collaborative Project**

---

***Historic and Cultural Resources***

NTIA initiated consultation with the Michigan State Historic Preservation Office (SHPO) on September 24, 2010. In a letter dated March 15, 2011, the Michigan SHPO indicated that no historic properties will be affected within the Project's area of potential effect (APE). However, Merit subsequently determined that some planned aerial construction would have to be substituted with underground fiber installation. The Michigan SHPO was notified of this Project design change in a letter dated March 29, 2011. In a response letter dated May 9, 2011, the Michigan SHPO noted that numerous archaeological sites have been recorded in and around St. Ignace, indicating high archaeological sensitivity in that area. Nevertheless, the Michigan SHPO concluded that the Project will have "no adverse effect on historic properties within the APE" as long as fiber installation is monitored by a professional archaeologist beginning at the Chambers Street-Business Route 75 intersection, continuing northward through St. Ignace and Evergreen Shores, to the north section line of Section 36 of Moran Township (T41N-R4W). If archaeological deposits are encountered during cable installation, Merit must stop work to give the monitoring archaeologist ample opportunity to evaluate the deposits, contact the State Archaeologist and other parties, as appropriate, and determine steps to be taken to minimize the effect of the Project on those deposits. Merit submitted minor route changes to the Michigan SHPO on June 30, 2011. A subsequent clearance letter from the Michigan SHPO, indicating no adverse effect, was issued on July 13, 2011.

NTIA initiated consultation with the Wisconsin SHPO on September 24, 2010. After completing a cultural resources literature review, Merit's consultant informed the Wisconsin SHPO of two catalogued burial sites within the Project's APE: the Blueberry Cemetery in Douglas County and the Peshtigo Fire Cemetery in Marinette County. In a letter dated April 7, 2011, the Wisconsin SHPO noted that the Oconto National Historic Landmark (archaeological site 47-OC-0045/BOC-0046) is also located within the Project's APE. Accordingly, the Wisconsin SHPO stipulated that route be redesigned to avoid impacts on this site. Other than these concerns, the Wisconsin SHPO indicated that the Project will have no adverse effect on archaeological sites in the APE. On June 10, 2011, Merit's consultant informed the Wisconsin SHPO that the Project alignment had been rerouted to avoid impacts on NRHP-listed or eligible archaeological sites, including the Oconto site, and catalogued and uncatalogued burial sites in the Project vicinity. The Wisconsin SHPO issued a letter on June 23, 2011 stating that the proposed Project had been adequately redesigned to avoid the Oconto site, and all catalogued and uncatalogued burial sites will be avoided by at least 100 feet. Therefore, protective fencing will not be necessary. However, if human bone is discovered during subsurface investigations, Merit must stop work immediately and notify the Burial Sites Preservation Officer to ensure protection of human burial sites. The June 23, 2011 letter also indicated that no historic properties will be affected by installation of the three telecommunications huts in Wisconsin.

NTIA initiated consultation with the Minnesota SHPO on September 24, 2010. The Minnesota SHPO requested maps and additional Project information on October 21, 2010; supplemental detail was provided to the SHPO on December 7, 2010. On December 29, 2010, the Minnesota

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

SHPO issued a determination that no properties listed or eligible for listing on the National Register of Historic Places (NRHP) will be affected by the Project. On February 16, 2011, the SHPO was informed of minor modifications to the fiber crossing of St. Louis Bay. After review of this supplemental information, the Minnesota SHPO issued a letter on March 22, 2011 confirming that no properties listed or eligible for listing on the National Register of Historic Places will be affected.

Consultations conducted to date with identified CAIs have not indicated that these sites are listed or eligible for listing on the NRHP. If architectural resources that are listed or eligible for listing are identified during the process of finalizing negotiations with CAIs, Merit will comply with NTIA guidance for attaching broadband equipment to historic buildings.

On October 1, 2010, NTIA notified 48 Native American tribes of the Project through the Tower Construction Notification System (TCNS). To date, no formal response has been received from a total of 40 tribes originally notified through TCNS, and Merit has consulted with the remaining 8 tribes. The Shawnee Tribe, Miami Tribe of Oklahoma, and Wyandotte Nation requested additional information about the Project through TCNS. Additional information was provided to these three tribes on December 7, 2010. On December 10, 2010, the Miami Tribe and Wyandotte Nation issued correspondence indicating that no further consultation is required. The Shawnee Tribe issued a similar determination on December 16, 2010. However, all three tribes requested inadvertent discovery notification. Merit made additional attempts to contact 12 of the original 48 tribes on March 11, 2011. No response has been received from nine of the 12 tribes, but three of the 12 tribes (the Ottawa Tribe of Oklahoma, Lac du Flambeau Band of Lake Superior Chippewa Indians, and Sault Ste. Marie Tribe of Chippewa Indians of Michigan) requested additional information on the Project. After reviewing the additional materials, the Ottawa and Sault Ste. Marie tribes both expressed no concerns about the Project in correspondence dated March 17, 2011. The Lac du Flambeau Band requested copies of archaeological reports for the Project and recommended monitoring of activities where uncatalogued sites exist. This requirement was incorporated into Project plans, and the Lac du Flambeau Band expressed no further concerns about the Project on April 21, 2011.

Following up on the original TCNS notification, Merit contacted 2 additional tribes to discuss the Project – the Lac Vieux Desert Band (LVD Band) of Lake Superior Chippewa Indians and the Bad River Band of Lake Superior Tribe of Chippewa Indians. The LVD Band was contacted to continue relationships developed during the BTOP Round One project. The LVD Band provided a letter on January 28, 2011 stating that they have no objections to the Project. However, they requested to be contacted immediately if the scope of the Project changes or if artifacts or human remains are discovered. The Bad River Band was contacted because the Project route is planned to cross the Bad River Indian Reservation in Ashland County, Wisconsin. Merit and NTIA staff consulted with the Bad River Band to identify a project route that minimizes adverse impacts to historic and cultural resources within the Reservation. Avoidance will be accomplished through the use of existing utility poles for aerial fiber

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

construction and crossing of the Bad River by directional drilling. On May 27, 2011, the Bad River Band Tribal Historic Preservation Officer (THPO) issued a letter stating that the Project will have no adverse effects to historic properties present in the APE provided the following requirements are met:

- Merit will provide for tribal monitoring in sensitive areas along the route, as identified and described by the THPO, during project excavations;
- Merit will develop and implement a post-installment maintenance agreement with the Bad River Tribal Natural Resources Department;
- Merit will avoid impacts to White Cedar trees and roots within or adjacent to intended areas of excavation;
- Merit will install fiber aerially from the intersection of U.S. Highway 2 and Dock Road to the intersection of U.S. Highway 2 and Caville Road;
- Any required replacement utility poles will be erected in the same location as the current pole being replaced;
- Merit will clean all equipment used in the excavation and installation process prior to transport onto the Bad River Reservation;
- Merit will use silt fencing in Reservation areas adjacent to waterways;
- Any borrow pits used for backfill soil will be inspected by qualified Bad River Natural Resource staff to ensure that they are not subject to invasive plant species; and
- Merit will provide for periodic water quality inspections by qualified Bad River Natural Resource Department staff during the fiber installation period.

Merit agreed to comply with these conditions and efforts are underway to finalize a Post-Maintenance Agreement as soon as possible. In addition, Merit will ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors ground disturbance in the vicinity of known archaeological sites and suspected or known burials. If earth-disturbing activities uncover cultural materials (i.e., structural remains, historic artifacts, or prehistoric artifacts), Merit will cease all work and immediately notify interested Tribes, the SHPOs, and NTIA. If earth-disturbing activities uncover human remains, Merit will cease all work immediately in accordance with applicable regulations and statutes. The area around the discovery will be secured and the relevant law enforcement personnel (e.g., local police or County Coroner) 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***

Along most of the Project route, aesthetic and visual disruptions will primarily be related to the short-term presence of construction equipment. These impacts will be temporary, minor, and comparable to those associated with regular maintenance activities along the ROWs. Placement of an additional aerial cable on existing utility poles represents a long-term, but minor, visual

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

impact. The new aerial fiber is expected to blend in with other cabling on the poles. Underground installation of new fiber optic cable, and operation of that cable for data transmission, will not result in long-term impacts on visual aesthetics. Although the Project route crosses the Chequamegon, Ottawa, Hiawatha, and Huron National Forests, most fiber installation in these areas will be located underground in existing road ROWs. In the limited areas where aerial construction will occur in National Forests, the fiber optic cable will be placed on existing utility poles in existing regularly-maintained utility ROWs. No new utility pole runs are planned. The new telecommunication huts will be installed on previously disturbed lands in developed areas, and the appearance of these huts will be compatible with the surrounding landscape. No telecommunication huts will be constructed on National Forest land. Based on these assessments, this Project will not significantly affect aesthetic or visual qualities in the tri-state area.

***Land Use***

Fiber will be installed in previously disturbed utility and roadway ROWs. The planned improvements are consistent with normal uses of ROWs and utility corridors. No changes to existing land uses are planned, and the Project does not involve the conversion of prime or unique farmland to other uses. The Project crosses public land in four National Forests (Huron, Hiawatha, Ottawa, and Chequamegon). Installation of cable within existing road and utility ROWs will minimize the potential for conflicts with existing and future land uses within each Forest. Merit will work with the U.S. Forest Service to secure the Special Use Permits needed to cross each Forest. The Project route also crosses the Bad River Indian Reservation in Ashland County, Wisconsin. As stated previously, Merit has consulted with the Bad River Band of the Lake Superior Tribe of the Chippewa to identify a project route that maximizes the use of existing utility poles for aerial construction and will not require land use changes. The telecommunications huts will be located within existing developed areas and will be compatible with existing land uses adjacent to each site. The location of each hut has been determined, in part, by the willingness of the current land owner to have their land used for this purpose. No telecommunication huts will be erected on National Forest or tribal lands. Based on these considerations, this Project will not significantly affect land use in the region.

***Infrastructure***

The location of the Project within existing road and utility ROWs creates the potential for conflicts with existing infrastructure (e.g., sewer, water, electricity, natural gas, and telecommunication utilities) that are located within the same ROW. To minimize adverse impacts on existing infrastructure and accidental disruption of services, Merit will coordinate with state and local road departments and underground utility location services prior to construction. The new telecommunications huts will also be connected to local power supplies, but the additional demand for electricity created by these new connections is not expected to be significant. Additionally, the Project will enhance the availability of communication infrastructure in the tri-state area. The Project will extend Merit's existing fiber network and provide advanced services previously unavailable in many parts of rural Michigan, northern

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

Wisconsin, and northeast Minnesota. Overall, this Project is expected to have a positive impact on infrastructure, and will not result in significant impacts on infrastructure.

***Socioeconomic Resources***

The Project will bring broadband service, technology opportunities, and jobs to unserved and underserved areas of Michigan, Wisconsin, and Minnesota. The Project will have a positive impact on low-income and minority populations living in the three states to be served by the new network. No significant, adverse, disproportionate impacts on environmental justice populations are anticipated to result from implementation of this Project. Overall, this Project is expected to have a positive impact on socioeconomics in the planned service area.

***Human Health and Safety***

The Project is not expected to have direct impacts on human health and safety during normal operation. However, human health and safety concerns may arise during construction when such activities occur in close proximity to traffic along roadways. As most of the Project route is rural in nature, traffic control will be most important near anchor institutions in urban areas with higher traffic volumes. Merit will train all construction crew members on local, state, and federal traffic control and safety regulations and specifications. To minimize the potential for automobile accidents, signs will be posted in both directions to denote construction work along road shoulders and in road ROWs. It is anticipated that along the majority of the Project route, road shoulders will be large enough to accommodate construction workers and equipment, such that vehicles and other equipment will be located completely off of the road. Accordingly, frequent lane closures or complete road closures are not anticipated. In the event that traffic needs to be routed around a vehicle for aerial construction, a flagman will be posted to safely direct traffic.

Human health and safety impacts related to disturbance of contaminated soil will be limited to the construction period and will be minimized through the use of recognized construction techniques to minimize potential for exposure. Aerial installation does not typically result in soil disturbance, thereby minimizing the potential to exacerbate existing contamination or exposure to contaminants during installation. The three methods for underground installation do not require extensive soil excavation and will not significantly increase risks of exposure to environmental contamination. Because the planned telecommunication huts are pre-fabricated and the foundation is slab-on-grade, the likelihood that contaminated soil will be encountered during hut construction is minimal due to shallow intrusion of the subsurface. Nevertheless, a Phase I Environmental Site Assessment will be conducted at each hut site prior to purchasing rights to construct the huts. If contaminated soil is encountered, the soil will either be returned to its original location or located under the slab foundation. If soil cannot be handled in this manner and must be removed from the site, the soil will be characterized for appropriate disposal in a licensed landfill.

**National Telecommunications and Information Administration**  
**Broadband Technology Opportunities Program**  
**Finding of No Significant Impact**  
**Merit Network, Inc.**  
**REACH Michigan Middle Mile Collaborative Project**

---

Based on these assessments, any adverse impacts on human health and safety resulting from Project implementation will be minor and limited to the construction phase, and there will be no significant impacts on human health and safety as a result of Project implementation.

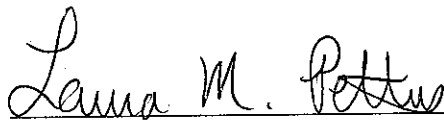
***Cumulative Impacts***

Construction of the Project is expected to result in additional fiber projects beyond the planned service area. Over 100 broadband service providers have expressed an interest in implementing follow-on projects. Most of these supplemental projects are expected to be less than 10 miles in length and associated with existing facilities and ROWs. This Project may also have a minor cumulative impact on infrastructure associated with the addition of fiber optic cable on existing utility poles. Because these poles can only accommodate a finite number of cables and associated equipment, less space will be available for future cables and lines on the poles. Likewise, installing fiber optic cable underground in road ROWs uses finite space within the ROW that may be needed for future utility and road projects. Merit will coordinate with state and local highway departments and road commissions to minimize the potential for conflicts with future projects. Therefore, the potential for adverse cumulative impacts will be minor.

**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:



\_\_\_\_\_  
Laura M. Pettus  
Senior Communications Specialist  
Office of Telecommunications and Information Applications  
National Telecommunications and Information Administration

7/29/11  
\_\_\_\_\_  
Date