



CASE STUDY

FROM FUNDING TO FIBER, BRIDGING THE DIGITAL DIVIDE

**BUILDING BROADBAND THROUGH
TRUSTED TRIBAL PARTNERSHIPS**

OVERVIEW

Supported by a nearly \$25 million federal broadband grant, a federally recognized tribal community is expanding access to reliable, high-speed internet across an underserved rural region. CCI Systems helped move the initiative from planning to construction, providing expertise and coordination to support the deployment of a gigabit-capable, open-access fiber network. Once complete, the network will connect hundreds of households, more than 1,000 residents, and local businesses, creating new opportunities for education, healthcare, economic growth, remote work, and long-term community development.

CHALLENGES

Deploying broadband infrastructure in rural and tribal communities often requires more than technical design. It demands careful coordination across jurisdictions, stakeholders, land considerations, permitting requirements, environmental review processes, utility infrastructure, and long-term operational planning. This project had to overcome complex route planning, limited broadband availability, and create long-term network sustainability that was also affordable.

SOLUTIONS

CCI Systems supported the broadband expansion effort with:

- High-capacity 288-count fiber backbone of scalable connectivity
- Distributed network architecture
- Regular access points every 2,000 feet along mainline corridor
- Open-access network model for long-term community value
- Gigabit-capable connectivity for homes and businesses
- Affordability alignment to help reduce subscriber cost barriers

*"Bringing affordable reliable broadband service to our region is central to connecting our membership to medical specialists, job opportunities, and remote learning courses."
- Tribe Vice Chairperson*

IMPLEMENTATION STRATEGY

1. Planning and Project Alignment

The project goal was to expand high-speed broadband access across underserved tribal and rural areas using federal grant funding. Early planning centered on aligning network design, grant compliance, stakeholder roles, service objectives, and construction readiness.

2. Stakeholder Coordination

Because the project involved multiple public, private, and regulatory stakeholders, coordination was essential. We worked through a range of requirements involving tribal leadership, federal funding stakeholders, environmental and historic review entities, utility infrastructure partners, and network operations planning.

3. Network Design and Construction Readiness

The fiber network was designed around a high-capacity backbone, strategically placed distribution centers. CCI Systems completed route feasibility assessments and evaluated aerial and underground construction options to determine the most effective deployment strategy. The engineering team developed detailed designs, permitting packages, and compliance documentation required to advance the project into construction.

4. Operational Sustainability

To support long-term success, the customer established an operating and maintenance model for the open-access network. The project team also worked to align engineering, permitting, and construction activities with future operational objectives, helping ensure the infrastructure remains scalable, sustainable, and capable of supporting future community needs.

RESULTS & BENEFITS

The project will deliver a future-ready, gigabit-capable fiber network that expands broadband access to hundreds of households, more than 1,000 residents, and local businesses throughout a historically underserved rural region. As the project advanced from planning to construction, CCI Systems provided engineering, permitting, compliance, and inspection expertise while fostering a collaborative approach that respected the community's cultural perspectives, and environmental priorities, while transforming funding into fiber and a vision into lasting infrastructure.

CONTACT US TODAY!



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