GRAFTON COUNTY MIDDLE MILE PROJECT

NTIA Funding

- Grafton County received $11,969,000 through Enabling Middle Mile funding from the National Telecommunications and Information Administration.

- Funds will be used to build out 207.9 miles of a middle mile backbone network that will enter 25 of the county's 39 municipalities.198.8 miles of this fiber run is aerial, and 9.1 miles is buried underground fiber.

- Eventually, this will allow municipalities to complete last-mile projects to bring fiber and high-speed internet into residents' homes.

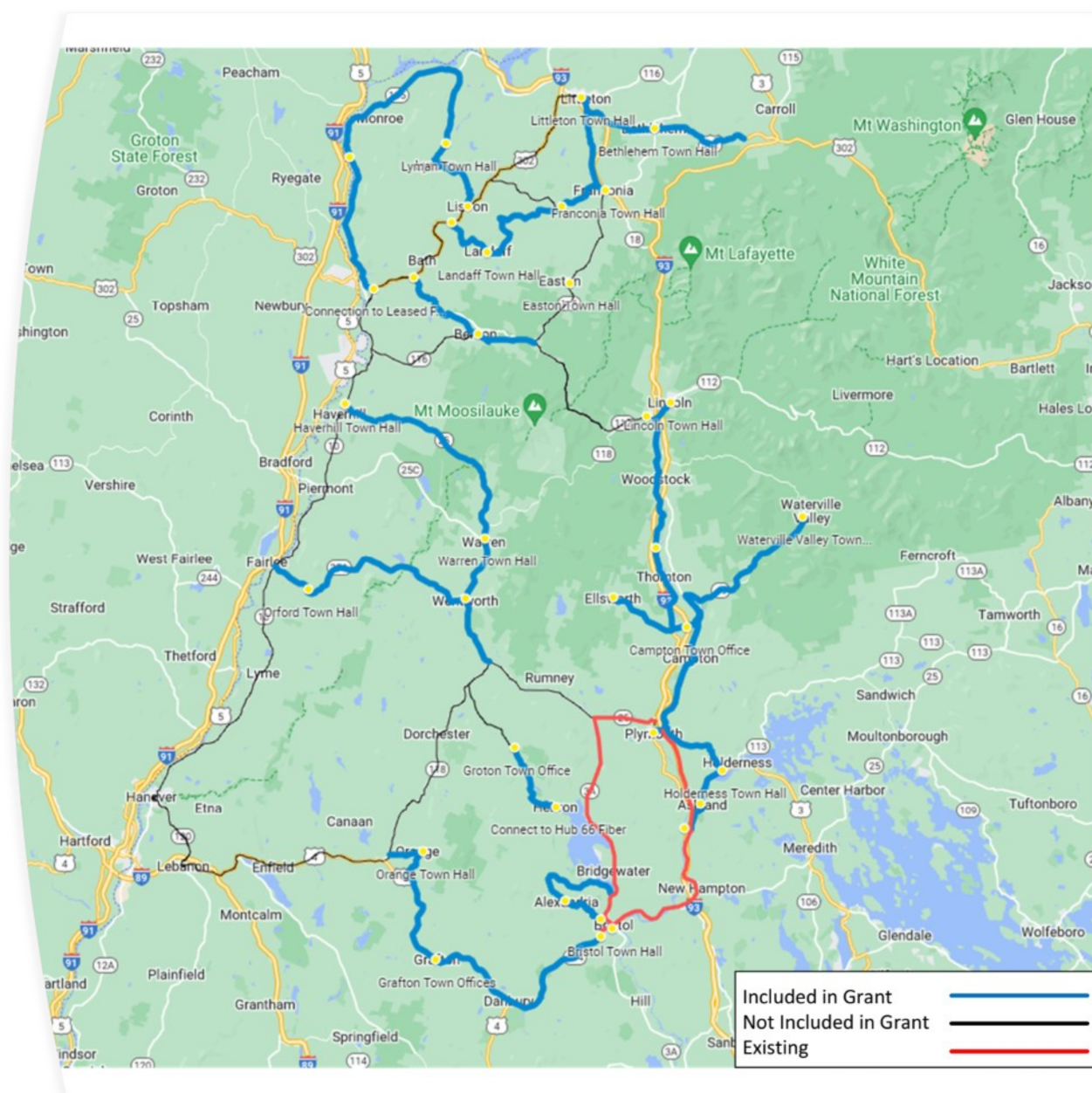- The County is funding the 30% match in full, demonstrating the importance of this project.

The Project

- Grafton County will deploy a resilient, open-access, fiber-optic, middle-mile network that will enter 25 municipalities within the County and will provide a scalable, future-proof broadband network to support county, municipal, and public safety services, as well as an open-access platform to support last-mile broadband and connectivity across the underserved and unserved census blocks within the County. The network will also directly support other industry services such as education, healthcare, and economic development

- The project will utilize a combination of building new fiber optic cable where there are obvious gaps and optimizing existing infrastructure when possible. The project primarily involves installing aerial cable on existing pole infrastructure. All installed backbone cable will be 144 strand single mode fiber, and multiple internet tie points will be available for redundant internet connections. The network offers multiple "on/off" ramps for service providers interested in servicing underserved areas. It reduces the cost of entering new markets for internet service providers, which helps make rural markets more economically feasible.

Map & Towns

The blue areas on the map indicate where the middle mile network will be built. The following towns are included in this project:

- Alexandria
- Ashland
- Benton
- Bethlehem
- Campton
- Easton
- Ellsworth
- Franconia
- Grafton
- Groton
- Haverhill
- Holderness
- Landaff
- Lincoln
- Lisbon
- Littleton
- Lyman
- Monroe
- Orange
- Orford
- Sugar Hill
- Thornton
- Warren
- Wentworth
- Waterville Valley

What is Middle Mile vs. Last Mile

A middle mile network transports data over high-capacity links between the broader internet and local access networks, while a last mile network connects that local infrastructure to individual end-users, such as homes and businesses. Think of it like this: the middle mile is the highway connecting different cities, and the last mile is the local street delivering a package to your house.

Middle Mile Network

- **What it is**:
  - A high-capacity, high-speed network that links local networks and access points to the larger internet backbone.

- **Purpose**:
  - To aggregate and transport large amounts of data over long distances, acting as a crucial "on-ramp" for local networks.

- **Characteristics**:
  - Uses high-capacity fiber optic lines.
  - Designed for high bandwidth and reliability.
  - Connects different service providers and network service providers.

Last Mile Network

- **What it is**:
  - The final segment of the network that connects the service provider's network to the individual subscriber's location.

- **Purpose**:
  - To deliver internet service or goods directly to the end-user.

- **Characteristics**:
  - Often the most challenging part of the network due to its smaller scale and lack of resilience.
  - May use fiber, but can also involve older technologies like DSL, which limits speeds in some rural areas.
  - Bandwidth is typically lower and can be shared with other users, leading to fluctuations in speed.

Who are the people that you will see in your Communities?

- The County has hired eX2 – Excellence in Execution as the lead Contractor on this project. eX2 has contracted with Aucoin to do the installation both aerial and underground. You are likely to see representatives from both contractors out and about throughout the project areas in the county.

- The County has also contracted with ENTRUST Solutions for Project Management and Tom Cheski is our Project Manager. Many of town officials will be contacted by Tom.

Kick-off Celebration

Current Status

The project timeline has been delayed due to a longer than anticipated timeframe to complete the Environmental Assessment. This was in part due to the length of time for the review by the US Forest Service as 70% of the project is within towns that are in the White Mountain National Forest. Final NEPA Decision was received on March 19, 2025.

Construction began on May 21, 2025

This project includes 5,671 utility poles – we are working with seven (7) different Utility and Telcom companies to work through the Pole Licensing process. This is a significant amount of poles and is a slow process. At this point we have 800 poles fully licensed and ready to have fiber installed. There are 10,247 pole applications to be reviewed and approved (many poles require multiple licenses from both utility and telco). The licenses are spread out across the project area, and as such, construction is slower because there are not long continuous spans to be completed.

As of September 5th, 7.5 miles of aerial fiber have been installed out of 198.8 miles, and 4.6 miles of duct/conduit have been installed underground out of 9.1 miles. 40 handholes/vaults have been installed out of 95 handholes.

We have been working in various towns throughout the county: Haverhill, Waterville Valley, Thornton, Bath, Sugar Hill, Grafton, Lyman, Landaff, and Easton. Currently, crews are working in Benton, Alexandria, and Orange.

Project Reporting

As a recipient of federal funding from NTIA, we are subject to regular reporting requirements. We have a quarterly conference call with our Federal Project Officer. Those quarterly calls are documented and are an ongoing record of compliance requirements.

In addition to the quarterly conference calls, the County is required to submit bi-annual Performance Reports. The Performance Reports are a compilation of all of the activity that has occurred during the previous six (6) months and provide some forecasting regarding the progress of the project. The Performance Reports are public documents and available for review.

Who to Contact for More Information:

- Julie Libby, County Administrator – jlibby@graftoncountynh.gov
- Holly Elsholz, Assistant County Administrator – helsholz@graftoncountynh.gov
- Tom Cheski, Project Manager – tcheski@entrustsol.com