



### **Approach and Understanding**

Fiber to the home refers to a deployment of a broadband telecommunications system based on fiber-optic cables laid from a central office to homes or businesses.

- 1) The first task is to validate the route to ensure connectivity and to select the most cost effective path. To do this you must:
  - Determine pole spacing and span lengths
  - Validate and verify the number of fiber strands counts and span measurements
  - Determine construction methods such as lash/strand/self-support
  - Assess potential high-voltage proximity effects on cable selection, cable position and attachments
  - Determine Cable hardware, attachment clearance requirements at pole and mid-span, anchor/guying and termination enclosures
- 2) Utilizing provided GIS data, Collins will consult with the MBI Grant Oversight Committee to incorporate the design for the fiber to the home. Collins will address any concerns with access, terrain, wetlands, utilities and/or any other conditions. Collins will determine permitting, pole agreements, right away access and project budget cost associated with installation of the fiber to the home network.
- 3) Collins will provide design and layout cable placement, splicing location/distribution, fiber optic cable information and hardware. We will advise the Town on Central Office placement to eliminate any inconvenience for future service providers. Collins will incorporate the design to plans and the provided GIS database. We will highlight areas of ready to connect areas or parcels and establish budget costs associated with private roads, extensions and neighboring town roads and streets.
- 4) Collins will review the draft plan with the Committee and incorporate or adjust any collective input responses that are agreed upon. We will assemble a final draft with revised drawings and documents for the fiber to the home design and provide tools for managing the new system internally or options for the Town to out source firms to maintain and manage the OSP backbone. Collins will supply the Town with direct avenues for additional grant funding and potential revenue that the Town of Leverett can obtain to assist in completion of the final build out.