The Network New Hampshire Now project has completed utility pole surveys across the network route. Each pole we use to string fiber optic cable will require a license that is requested from the pole owners. In New Hampshire, generally there is dual pole ownership between the telephone companies and electric companies.

New Hampshire Optical Systems has visited each pole with a device called a Trimble to collect data required on the license applications. The technician wears a backpack with a GPS antenna which transmits the exact coordinates to a handheld Trimble device. The technician also manually captures additional data into the handheld device. The data collected includes latitude and longitude of the pole location, the town and street address, the electric company route number and pole number, and the telephone company route number and pole number. This process has been repeated thousands of times as each pole requires a unique license.

### Anatomy of a Utility Pole

1. **Grounding Conductor**
2. **Static Wire**
3. **A Phase**
4. **B Phase**
5. **C Phase**
6. **Primary**
7. **Step Down Transformer**
8. **Multi-Grounded Neutral**
9. **Communication Worker Safety Zone**
10. **Communication Lines**
11. **Secondary Service Dir**
12. **Communications Space**
13. **Communication Lines**
14. **Ground Rod**

1. **Electric Company Supply wiring space**

11. **Communication Worker Safety Zone** This safety zone is the space between the lowest supply conductor or equipment and the highest communication cables or equipment. In addition to separating the high voltage lines and communications wires, the safety zone provides maneuvering room for linemen and communication workers.

12. **Communications Space** Usually the lowest area on the pole, the communications space is used for cable television, broadband, and telephone wires. All attachments require the pole owner's permission.

13. **Communication Lines** Cable television and broadband wires are usually the uppermost communication lines. Telephone cables are often lashed to a steel strand in the lower area of the communications space. A true telephone pole supports only telephone wires, while a joint use utility pole has both electric and communications cables attached.

*Credit Graphic: Florida Public Service Commission*