

Phases of Fiber Construction

From start to finish, building fiber can take a year or longer



Make Ready Engineering

Field engineers and contractors go to each pole to determine if any modifications are required in order to support the fiber and its associated steel strand. These engineers create design sheets showing where to move items at the pole to create more space, as well as where poles need to be changed out to add height or strength. During this time, inspectors will “ride out” the build to ensure every member will be included in the fiber build. This phase can take two to four weeks.



Make Ready Construction

Contractors will change poles, move transformers from one side of the pole to another, move wires on the pole, add new anchors to the poles, and perform other work to allow the fiber to be placed later. The make ready construction phase can take four to twelve weeks as a rule of thumb. This work has the widest variance in time of all construction phases.



Fiber Construction

Fiber crews place steel strand along the pole line and return to place the fiber optic cable against the steel strand. A lashing machine is used to secure the fiber to the strand. In locations where the electric is underground, the fiber optic cable will be placed in a small plastic pipe underground by either boring or plowing. Asphalt and concrete driveways will be bored under and a pedestal may be placed next to a transformer or junction box to allow for a service drop. Areas of disturbance are restored to their original state. Fiber construction can take four to eight weeks on a circuit.



Splicing

Once the strand and fiber is placed, splicers will make splices at each end and tap point. They splice the necessary cables at each point and mount the splices in enclosures secured to the distribution poles or in pedestals. The splicing work can take another three to six weeks for the main lines.



Service Drop Construction

The next step is service drop construction. This work can be done in parallel with some of the earlier work, or it might be done after the main line fiber is in place. The drop crews extend the fiber from the nearest splice point to the structure receiving service and leave coils of fiber in each location.



Drop Splicing

The final outdoor step in fiber construction is the splicing of the drop. The splicer connects the last length of fiber at the tap point and also mounts a network interface device (NID) at the structure with the final splice inside the NID. The service is now ready to turn over to Firefly for installation.