

Antenna Support Poles at N6LF

Rudy Severns N6LF

I like to experiment with antennas and my primary interest is MF (160m and 630m) wire antennas. I've recently moved to a new QTH which has several acres of clear flat farmland to play on but no trees to hang antennas from. Fortunately I happened to have several unused 50' utility poles left over from a project at my last QTH. I brought the poles with me when I moved so they were available at the new QTH. You need to plant a utility pole with about 10% of its length in the ground. This means if you start with a 50' pole the top will only be about 45' above ground level which is not really good enough for MF antennas. So I repeated a trick I'd used at my last QTH: attaching peeled and dried untreated fir poles to the top of the utility poles to make them longer. Fortunately I live in a forested area so untreated poles are readily available and economical.



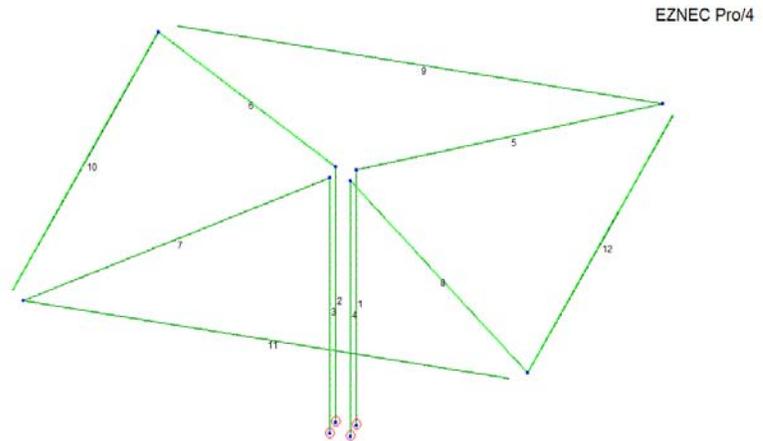
On the left is a picture of a typical pole assembly. On the bottom there's a 50' treated utility pole. Bolted to the top of the utility pole is a smaller diameter 40-50' untreated pole with 10' of 6" PVC pipe covering the top. The pipe serves several functions: it makes the pole taller, it shelters the top of the pole from the weather (the part of the pole inside the pipe is treated) and it puts an insulator at a point which is often at very high voltage in a short top-loaded vertical.



The bottom of the pole is inserted into a section of 18" diameter, 7' long corrugated steel culvert as shown above. The culvert is buried in the ground as shown above.

At the top of each pole there are from 2 to 4 blocks (pulleys) with endless halyards very much like a flag pole. This allows me to raise and lower the ends of the wire antennas at will.

The poles were assembled on the ground and erected with a crane as shown in the photo. It took about three hours to erect seven poles.



Above is a drawing my 475 kHz antenna. Four of the poles are arranged in a square about 180' apart. The corner poles are about 80' high. In the center is a fifth pole, 93' high. The antenna is just a simple "top-loaded" or "umbrella" vertical.

Two more poles are placed in line at 150' and 300' to the right of the 630m vertical. These are for other antennas.

Below is a picture of six of the seven poles in place. No antenna yet!

