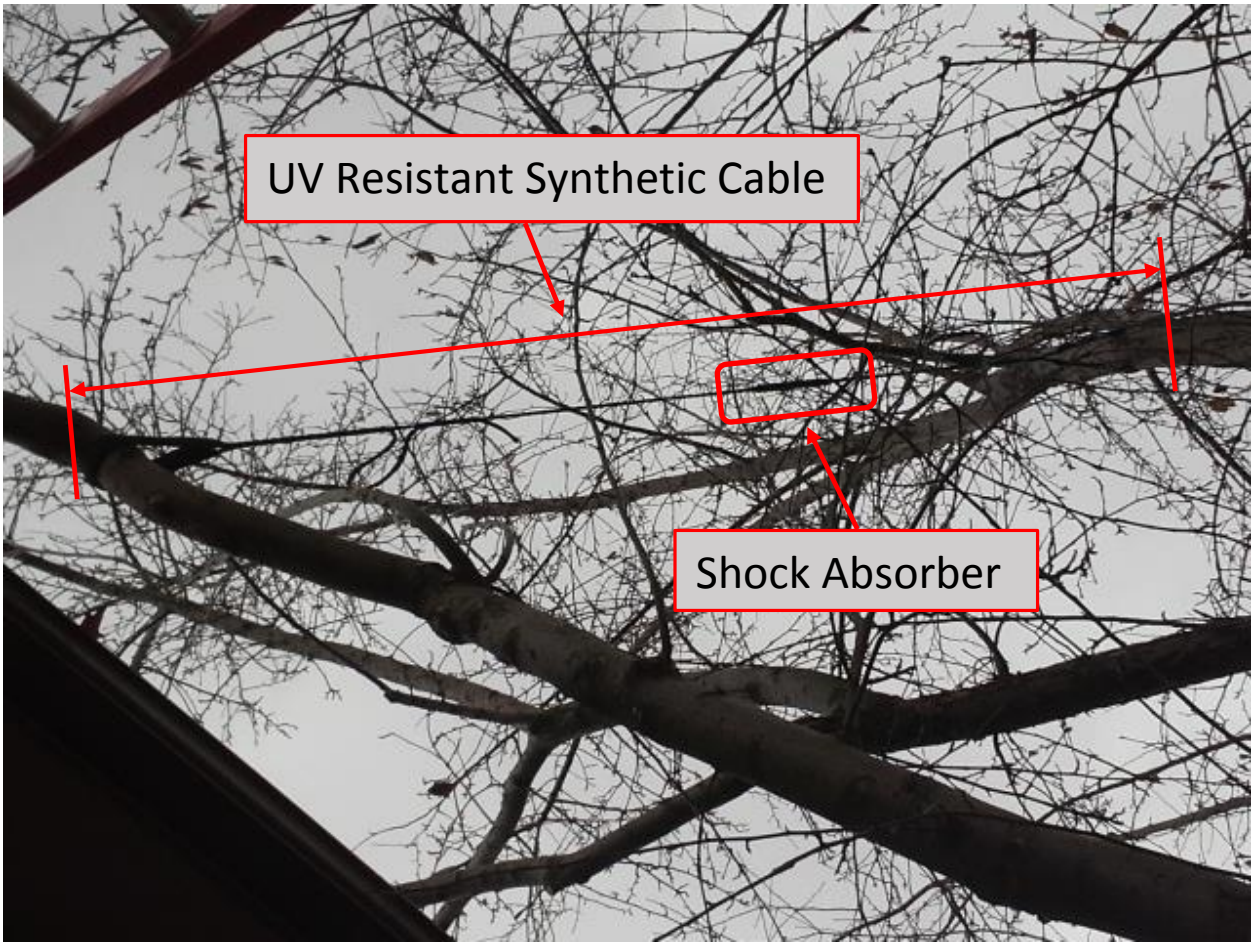
A simple dynamic cabling system installed in a crabapple tree



In this photograph, a crabapple tree has a leader, or large vertical trunk section, that was resting on the gutter of the home. This leader is shown diagonally left to right, bottom up in the photo. Removing it would leave a significant void in the canopy. The leader to the right is larger and growing vertically is used to tether the leaning leader and pull it away from the gutter, providing approximately one foot of clearance from the roof. A solid rubber shock absorber installed in the hollow core of the cable reduces shock forces due to wind loading, by increasing the rope's diameter along the length of the shock absorber. As the canopy is wind loaded, the cable tension changes. A decrease in tension followed by an increase in tension would cause an abrupt snap in an inelastic, or steel cable system. However, using a hollow core synthetic cable with a solid rubber shock absorber installed reduces the shock load by resisting the constricting effect of increased cable tension, thereby dampening the forces of wind loading.

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Advantages and Disadvantages

There are advantages and disadvantages to using dynamic cabling versus steel cabling. The dynamic cabling systems tend to have a slightly higher parts cost, per installation than traditional steel cabling, between 10-20%. Longevity: Dynamic cabling materials are constructed with synthetic materials such as polyethylene, or polyester. Consequently, they have approximately 10-15 year service life. Steel cable systems, properly designed and installed will usually outlast the trees in which they are installed, although it is arguable whether or not the system as originally installed, will still be viable after 15 years of tree growth. Dynamic cabling systems are non-invasive (no drilling), require fewer tools to install, and usually can be installed much faster than traditional cabling systems. Through product development it has been shown that dynamic cabling systems perform optimally when installed at approximately two thirds the height of the tree, this provides a balance between the size of the wood captivated by the cable anchors and the leverage provided by being past half the leader length above the leader/trunk connection. The shock absorption provided by dynamic cabling systems cannot be achieved using traditional static cable.

The Bottom Line

In most cases dynamic cabling systems can be installed at a lower cost and offer improved performance over static steel cable system.