

Protecting your best from a bolt out of the blue

Lightning rods a cheap insurance for superintendents

By TERRY BUCHEN

Golf course superintendents have been installing lightning rod protection for years on rain shelters, maintenance buildings, halfway houses, clubhouses, indoor tennis buildings — structures of all sorts.

But there's a growing trend afoot: protecting key trees on golf courses.

If you have a landmark tree on your course, or a tree that defines a hole, one

you feel you couldn't do without, that would be perilous to lose, check out this idea.

Many lightning protection companies will install "rods" on trees using extension ladders and ropes instead of hydraulically operated snorkels to get even to the highest branches, and the cost is relatively inexpensive.

A lightning rod — or "air terminal" made of a corrosion-resistant metal such as stainless steel, lead, copper, or copper alloy — should be installed just above the highest branch, or above each highest branch on multi-trunked larger trees.

A lead-covered copper cable should be installed down from the rod to the base of the tree. From just above the base, a copper cable should be joined to the lead-covered cable.

An eight- to 10-foot-long copper grounding rod should be joined to the lightning rod with a ground rod clamp.

A viable alternative is to take the copper ground from the base of the tree at least out as far as the roots extend (the drip line).

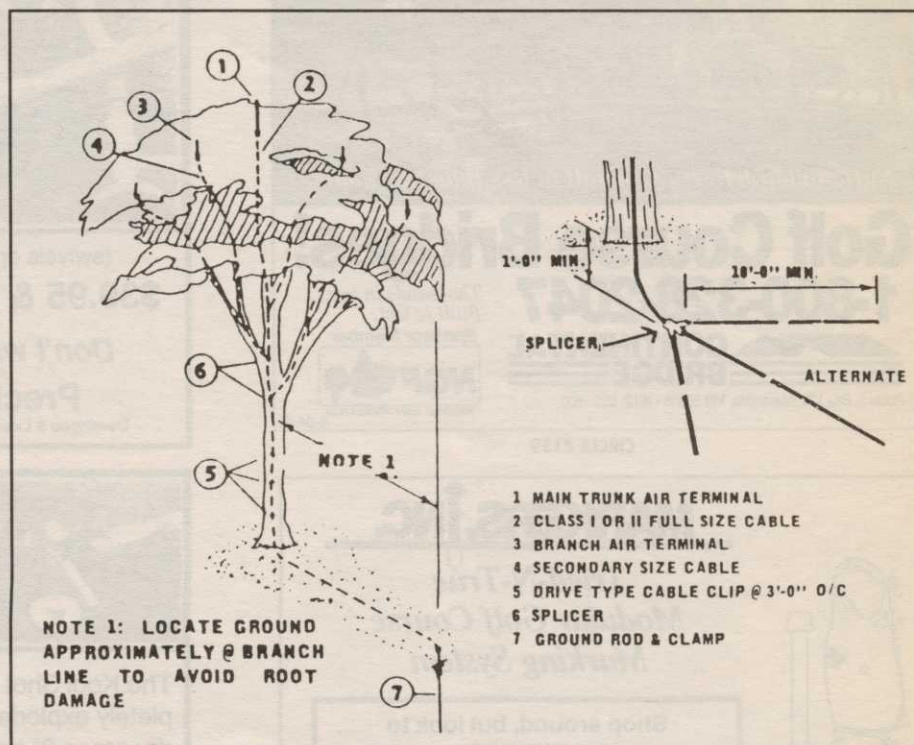
The theory here is that if lightning, it could damage the roots when it ultimately strikes the copper rod.

Cables should be installed loosely to allow for tree growth. I have tried both of these examples and have had good results.

Installed cost figures taken randomly around the country range from \$1.50 to \$5 per lineal foot, materials included.

I always demand workman's compensation and liability insurance certificates, per state minimum guidelines, before any subcontractor begins work.

In addition to protecting valuable individual or groupings of trees with rods, many superintendents "underplant" these key areas with trees to take



over in the event of disaster.

Trees located near buildings, do not afford protection from lightning and, in many instances, they should be protected, depending on their particular value to golf course officials.

The Lightning Protection Institute recommends that trees whose trunks are within 10 feet of a "protecting building," and whose branches extend above a building be equipped with lightning protection, not only to protect the tree, but also to avoid the possibility of lightning striking the tree and side flashing or grounding to the nearby structure.

Trees with trunks thicker than three feet in diameter and that have long branches should have two down conductors, on opposite sides of the tree, connected to the two ground terminals.

If there are several major trees in a row, the ground terminals of two trees not more than 80 feet apart may be interconnected by a trench conductor coursing to the base of each intermediate tree.

The down conductor of each intermediate tree may connect with the "trenched" interconnecting conductor. This practice avoids making independent groundings for each tree.

Aluminum materials will corrode and should not be used for trees.

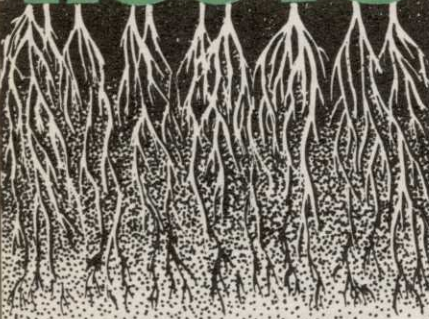
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For further information contact:

- Lighting Protection Institute at 708-255-3003 or 800-488-6864.
- National Fire Protection Association at 617-770-3000.
- Underwriters Laboratories at 708-272-8800.

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