

Tee Construction with Laser Technology

by **PATRICK M. O'BRIEN**

Director, Southeastern Region, USGA Green Section

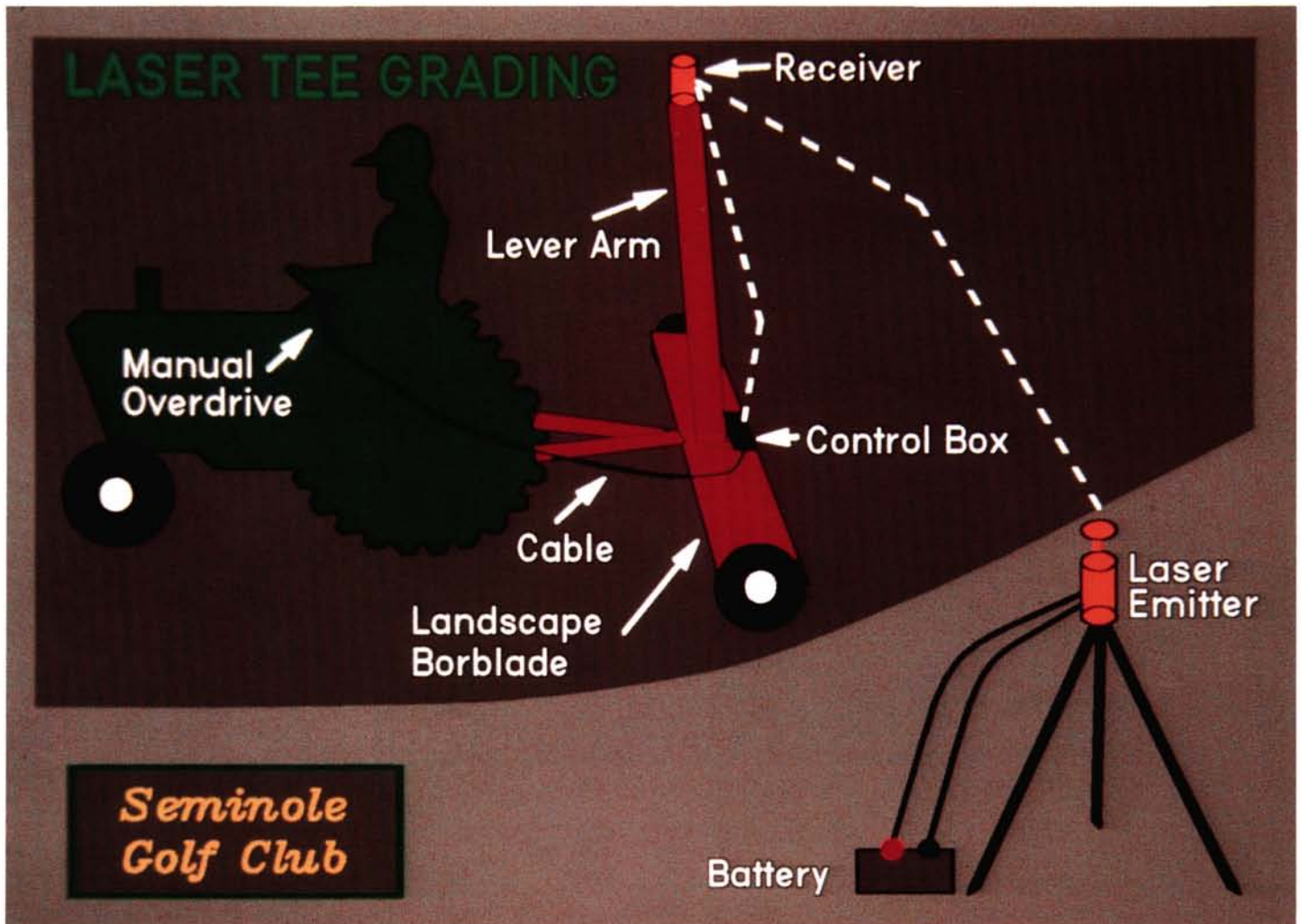
CONSTRUCTING level tees is a big challenge for golf course builders and golf superintendents. Traditional grading techniques many times result in surface irregularities. A new laser grading technology, however, is a faster and more efficient method for tee construction today.

The Seminole Golf Club, in Florida, recently rebuilt its tees using the new laser tee-grading operation. The essential equipment includes a tractor, a landscape boxblade, and the laser apparatus. A laser emitter is stationed adjacent to the tee and is programmed for the amount of slope associated with the

nearby terrain. The laser emitter rotates and sends a signal to a receiver mounted on the lever arm of the landscape blade. The receiver relays this signal to the control box on the boxblade itself. The control box connects to the hydraulic lift, which commands the rise and fall of the boxblade based on the laser beam

The laser tee-grading equipment is stationed adjacent to the tee and sends a signal to a receiver mounted on the boxblade.





Laser grading technology aids in the construction of level tees.

signal to the receiver. A manual override also exists, which allows the tractor operator to make soil adjustments, if necessary.

"A golf superintendent can spend two to three days leveling a tee with a transit, and I'll take a laser-guided boxblade over that tee and discover inaccuracies with just one pass," says Hal Hicks, Seminole's golf superintendent. The boxblade produces a flawless surface as long as the rootzone mixture is free of debris and old roots.

The laser method is also faster than using a transit, according to Superintendent Hicks. All tees on a golf

course are easily constructed in 7 to 10 days with the laser grader method, compared to 40 to 50 days with other methods. Golf course renovator Ed Connor, who uses this technology, did the Seminole project.

For smaller tees, a modification of this laser technology is possible. The Honors Club, in Tennessee, didn't have enough room for the tractor and boxblade to operate on their smaller pod-type tees. Instead, a method similar to laying a concrete foundation was selected by golf superintendent David Stone. However, the laser emitter, rather than a transit, determined all

perimeter stake elevations. A unique wooden border, set one inch above the grade with a laser emitter, allowed for accurate placement of the rootzone mixture over the subsurface. Once the new rootzone was compacted through vibration with a concrete finisher, a flat board was pulled across the foundation border for final grading.

The new laser tee-grading operation has helped these two golf courses. For new golf courses or older tees that have become unlevel, consider using this technology for the most level tees ever at your golf course.