

40 MEGABYTES OF DONALD ROSS

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WHY HAS the process of golf course renovation become the most sensitive subject since Leona Helmsley filed her last Form 1040?

It seems that each time an architect sets foot on an old Donald Ross golf course, he feels this presence peeking over his shoulder. His reputation is on the line against one who is beyond criticism, and the best he can hope for is to emerge with his reputation intact. If he does a superb job of imitating Ross, very few will even notice the improvement. Why risk so much for so little gain?

Let's review a list of high-profile renovations of the past few years, beginning with Rees Jones's highly acclaimed work at Brookline (Mass.) for the 1988 U.S. Open Championship, to the more radical treatment given the Country Club of Birmingham (Mich.) by Pete Dye, to "The villains of Oak Hill (N.Y.)," the Fazios. Can't we assume in each case the designer worked in consort with and satisfied the demands of his client?

Besides, what makes a modest piece of earth sculpture so sacrosanct in the first place? Half of the features attributed to Donald Ross today probably were built without Ross's direct involvement, and half the remainder have probably been altered beyond recognition by wind, weather, and the heavy hand of a green committee.

Golf Digest recently published a list of about 50 examples of Donald Ross golf courses in the U.S. that they felt represented the best preserved works of the prolific builder. With minor exceptions, such as the omission of the Sedgfield Club in Greensboro, N.C., the list is fair and comprehensive.

Ross himself admitted he was stretched far too thin during the height of his popularity in the 1920s, and many on the list of 50 were built primarily by Ross's capable assistants Walter Hatch and J. B. McGovern.

His greatest remaining work, Pinehurst No. 2, took more than 30 years of



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tinkering to produce in its present form. In the early years it contained several undistinguished holes, by his own admission. Obviously, those golf courses which saw less of his time contain some less-distinguished holes as well.

Such criticism will undoubtedly be leveled at many of the future classics being constructed today by the Nicklauses, Joneses, Fazios, and Dyes. The plain fact is that no course is ever complete. Each alteration, particularly if done by the original designer, brings the picture a little closer to perfect focus. If we accept the posture that the ecosystem represented by a golf course is never truly static, but rather is in a continual state of flux from the elements and man, then we must agree with the conclusion of architect Desmond Muirhead, who said, "... all golf courses are either improving or getting worse . . . or both at the same time."

Pete Dye stated in a 1987 article, "Ross, Tillinghast, and MacKenzie were great architects, and everything possible should be done to preserve their ideals and their actual layouts . . . it may be

possible to add length by relocation of teeing areas, but in no event should any changes in the greens or greenside bunkering be attempted. Where such alteration has been tried, it has been to the detriment of the design."

It was precisely in this spirit of preservation that the renovation of the putting surfaces of Pinehurst No. 2 was approached in the spring of 1987.

In 1895, New England merchant James Tufts, seeking a winter refuge from Northeastern winters, settled upon a site in the Sandhills of North Carolina. Attracted by the climate and the \$1 per acre price of land, he made an initial purchase of 5,000 acres and laid out a beautiful small New England style village complete with shops and resort hotels designed by Frederic Law Olmstead, whose credits included New York City's Central Park.

Although not a part of the original plan, he discovered the increasing popularity of a game called golf which seemed to be finding favor with his upper-class clients. In 1897, he laid out a nine-hole facility, increasing this to a full 18 holes the following year.

In 1900, he enticed a young Scottish professional, Donald James Ross, to the Sandhills.

Ross had apprenticed under Old Tom Morris at St. Andrews before serving as head professional and greenkeeper at Royal Dornoch, located on the dramatic Scottish coast overlooking the North Sea. Today we know of Donald Ross as the prolific designer whose name is associated with over 600 golf courses in the eastern United States.

Before he began mass producing designs, however, he established a presence at Pinehurst that forever altered the face of American golf course architecture.

Ross immediately set about incorporating proper design strategy and shot value into the existing course at Pinehurst, and proceeded to accommodate the growing interest in golf by laying out and building three more 18-hole courses over the next decade, creating what was

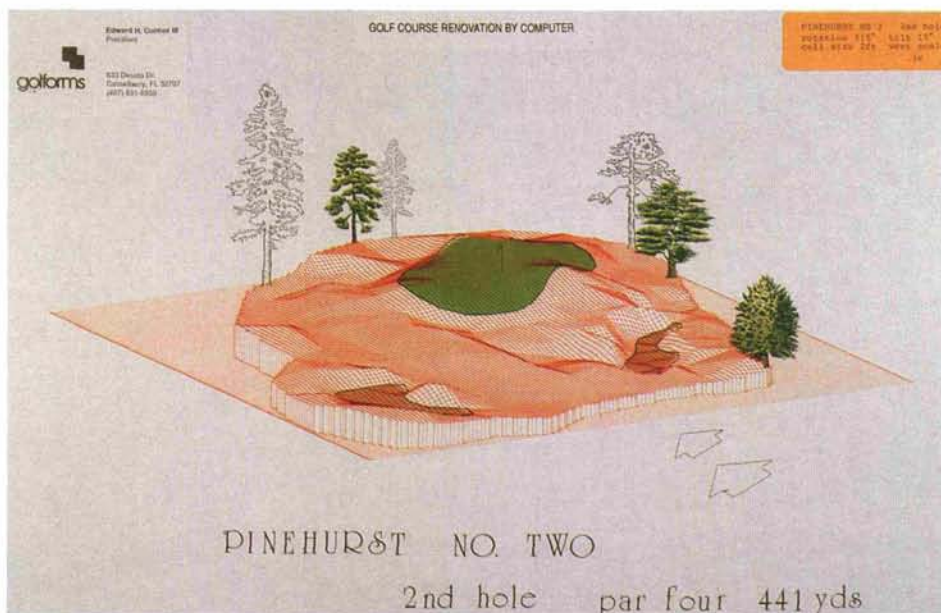
in all likelihood the first 72-hole golf complex in the world.

The second course (No. 2 as it is called today) became his abiding passion. It opened for play in 1907, but Ross never finished tinkering with it, honing and polishing details until his death in 1948.

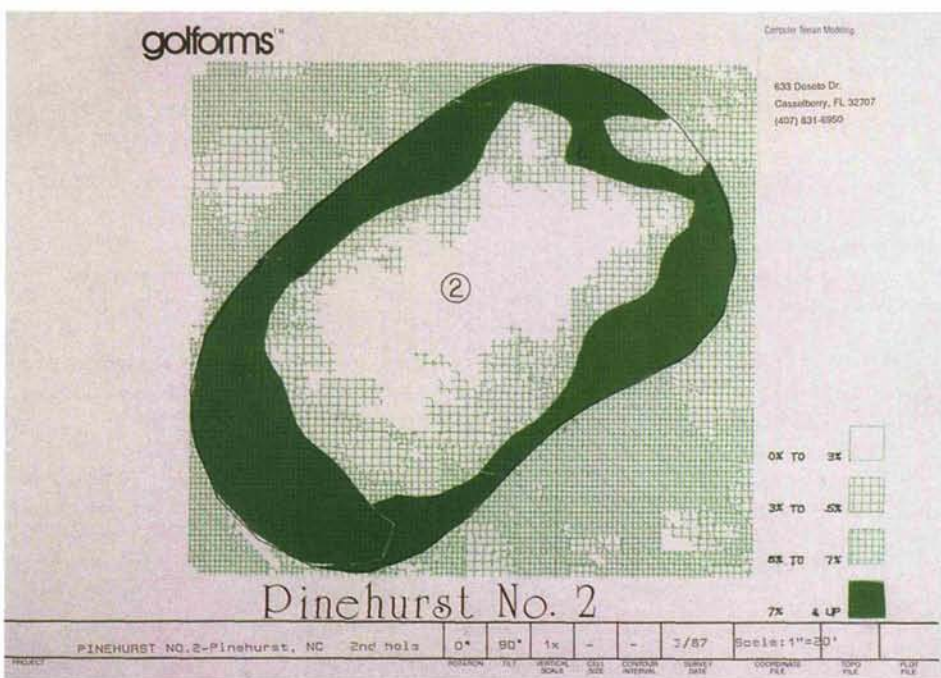
But what is the factor which sets No. 2 apart as a world-class test of golf to today's players? What qualities did Ross weave into this particular 120 acres of Mother Nature's canvas that have made it stand apart over such a long period of time? After all, Pinehurst No. 2 is not a golf course of singular drama or spectacular seacliff vistas like Pebble Beach. Its landing areas are quite receptive, and the rough is not overly severe in nature. Escape from the pines is quite feasible after an errant drive, and the hazards are generally visible and fairly proportioned. The length of the course is not intimidating, either. Originally constructed at a modest 5,600 yards, it has been stretched to near the 7,000-yard mark, but only from the tips of the tees. Instead, the measure of greatness at Pinehurst No. 2 is the approach shots. Donald Ross considered the long iron shots to be the ultimate test of a great player. The humpbacked putting surfaces seem to shed all but the most perfectly struck long or mid iron, leaving a delicate chip "to the hood of an automobile," as one professional was heard to comment.

Detailing is the hallmark of Pinehurst No. 2. There is simply more intentional contouring outside the putting surface at this golf course than almost any other course of this era.

Ross employed a device he called a drag pan, which looked like a flattened sugar scoop with two handles extending off the back. Even toward the end of his career, when mechanized equipment became available, Ross preferred working with the more meticulous pace of the mule-drawn drag pans. By raising or lowering the handles to alter the depth of cut, he sliced small portions of sandy soil here and there to create the humps and hollows for which the course is justly famous. When the pan was full, the handles were lowered all the way and the soil was dragged to where it was to be dumped. At this stage the handles could be raised rapidly to dump the soil into a pile or raised slowly to feather it over a wider area.



Second green at Pinehurst No. 2 showing a 3-D view of a finished computer terrain model.



Plan view of second green at Pinehurst No. 2 showing a slope shading program to highlight cupping area.

The porous nature of the soil, so unsuitable for the nutrient retention demands of regional agriculture, gave Ross the ideal medium to develop the intricate chipping terrain seen time and again collecting errant approach shots. Even after a heavy thundershower these grass pockets collect and absorb runoff as though engineered by a mightier hand. The links-type nature of the terrain, reminiscent of Ross's past home at Royal Dornoch, captures the flavor of a coastal environment far from the shore.

The Pinehurst management assembled a talented team to cope with the challenges presented by the renovation. The current membership had come to accept the existing contours as representative of the course design, with the realization that 60 years of topdressing and exposure to the elements had undoubtedly wrought some visible alterations.

We collectively established an agenda which focused on conversion of the putting surfaces to bentgrass without altering the contouring. Due to the climatic conditions in this part of the transition zone, this meant full-depth USGA specifications for the subsoil profile beneath the fragile "dance floors." We needed to develop a method of establishing uniformity in the USGA layering structure to a degree not yet practiced anywhere, starting with a replica of the original surface in the subgrade after excavation of the old mix.

Extensive research and field tests over a period of a full year led to a computerized terrain modeling system which captures an "electronic image" of the surface, however irregular in nature, and stores it for permanent reference on a disk. From here the image can be selectively extracted or displayed in a multitude of formats, ranging from topographic to three-dimensional to slope-shaded diagrams. The accuracy of these diagrams is well within the tenth of an inch tolerance we sought, and the numbers on the disk represent a permanent record of the shape of the complex.

After searching through hundreds of sketches and drawings of old golf courses stored in vaults, safes, and archives around the country, at last we had a tool which would remove the subjectivity of interpretation. The



Setting up the laser and data collector.

imprecise nature of old sketches often leads to more controversy than it solves when it comes to rebuilding.

I have a strong belief that 400 years from now the distinction between the importance of a classic Ross course, or a Jones or Fazio, will be blurred by time. One may be 50 years older than another, but the value of a permanent record of the original shape of all of them will be similar.

Donald James Ross may be having a huge laugh at our expense right now, at the expenditure of time and money to preserve those humble little mounds of soil he built with mules and sweat in the remote hills of North Carolina. He might be the first to exclaim, "Preservation be damned! You modern designers have to contend with graphite shafts, metal woods, designer dimples, and Greg Norman. Furthermore, what

is this instrument called a Stimpmeter, and whoever heard of grass mowed at $\frac{3}{32}$ of an inch?

"Apply your own vigor and talent to keeping the courses in line with the needs of the game. Don't for a minute assume we had all the answers in 1920 to cope with the phenomenal changes in the game and in the science of turfgrass technology.

"After all, it took me 30 years of tinkering to produce the work you now see as Pinehurst No. 2."

On the other hand, remembering his tutelage at Dornoch and St. Andrews, he may well have glowed with pride to see the effort expended on technology to preserve his most cherished labor of love at Pinehurst, a project which today represents one of the best examples of Donald Ross's contributions to the sport.