



Nakoma Golf Club Report

GOLF COURSE CONSTRUCTION

by
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In 1980, Nakoma Golf Club which is one of the private Country Clubs in Madison, Wisconsin decided to update its 50+ year old golf course and to do so, wanted to proceed in an organized manner. One of our first steps was to create a Master Plan by which we could improve on various aspects of our course as funds, time, and membership desire permits. The firm of Killian and Nugent Golf Course Architects was selected to produce the Master Plan, hole by hole drawings, and detailed drawings and plans for specific areas as they are approved.

Priorities were established by need and

membership desire which lead us into one of the first major projects which included the construction of a small pond in front of the second green, a par 3 hole at Nakoma. The mens yardage from the white tees is 191 yards, with the ladies yardage being 116 from the red tee markers, a new tee also constructed in this project. A small 10 foot wide, 6 inch deep stagnant creek had been the water hazard for this green previously. The new hazard was designed as a somewhat free-formed shaped pond of approximately 4100 square feet and ranging in depth from 3 to 6 feet. The back shoreline along the green was to be

constructed with railroad ties with the remainder of the shoreline consisting of rock.

Once the completed plans were received following several meetings with the architects, the greens committee, and myself, the plans were submitted to the Board of Directors of Nakoma Golf Club for approval. Funds were allocated for the project and a permit was applied for from the Department of Natural Resources. A 30 day waiting period was required after a public notice with our intentions being published in our local newspaper. With no objections, our permit was issued.

We procured most of the supplies and materials for the project during the 30 day waiting period. Also during this period, we arranged for the contractors to come in to dig the pond and start the r.r. tie wall. The remainder of the work was to be accomplished by our own maintenance staff. A small temporary green was established in front of the proposed construction.

On May 1st, 1982 our project began when we moved in a wide tracked backhoe to begin digging the pond. On this part of our golf course there exists about 2 feet of peat layered over an organic clay which is basically the water table. This causes some unique problems in that there is little support for equipment to move over the terrain. This is why we had selected the wide tracked backhoe as well as a wide tracked dozer later in the construction to do the land forms.

The first part of the excavation was completed in a manner to erect the wall along the front of the green. A decision was made to use the more esthetic maxi-tie instead of used rail road ties. These ties were placed vertically in a large trench, each one fastened to the adjacent one with at least 3-10" barn spikes and with every 10th tie being secured with a threaded rod back into a concrete "deadman" located about 6 feet back into the bank. Approximately 200 maxi-ties were used for this part of the shoreline. Once in place, about 4 feet of clay was

formed in front of the ties and the rest of the 600 cubic yards of material was removed to form the pond. The water was continu-



ously pumped from the pond site for visibility and workability. The bottom and banks were carefully shaped to conform to the architects and D.N.R. specifications. This portion of the construction took about a week to accomplish.

The pond at this point was basically formed with a stockpile of about 600 yards of material setting next to the site to dry out. Our staff then placed Mirafi filter fabric along the remainder of the shoreline not constructed with the maxi-ties. The filter cloth covers the bank from the surface of the surrounding ground down into the pond — 15 feet — which is the width of the fabric. This material is used to stabilize the bank for erosion control and is also used to "float" the rocks (the rocks being more dense would normally sink into the less dense organic peat) which are used to establish the shoreline. A layer of 3-6" of 3" limestone (roadbed grade) was moved into place using cushman trucksters running on temporary plywood roads. This rock material was intended to be the shore but a sample of field stone 3"-10" was brought in as an example and a decision was made to use the field stone for the top layer and esthetics.

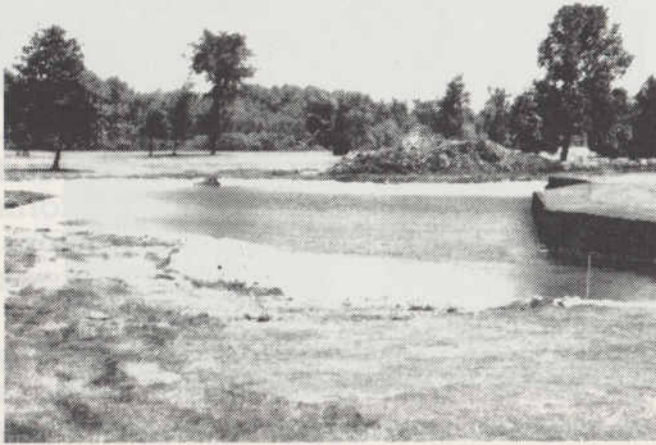
The field stones were unable to be purchased economically so we arranged to hand pick them from nearby farms. An

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Golf Course Construction

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estimated 110-140 tons of hand picked rocks were brought in and transferred to small vehicles again running on plywood roads and delivered to the site. Once dumped, the rocks were hand laid into place. Most of the rocks were in place by Memorial Day, however due to much rain we were allowed to use the temporary green until the 4th of July tournaments to



afford us the additional time to complete the project.

A dozer was brought in to rough grade the bank of the green and around the pond, while we were installing a steel edging to designate specifically the water hazard edge rather than using colored stakes. Our staff then fine graded the area and sodded the entire construction site around the pond and green utilizing both our own sod and some purchased sod.

With the completion of the construction, the hole was reopened for the 4th of July tournaments. The cost of the project was close to \$11,000 which was twice the original estimate. This was due to a number of factors: using maxi-ties instead of used rail road ties, using field stone in

addition to the 3" limestone for shoreline, extra contracted equipment due to time restraints and wet conditions, and additional labor and materials beyond the original specifications.

The finished project met some opposition especially when 3 of the first 4 members were in the water after the hole was open. Similar results occurred throughout the tournaments and the following weeks. As golfers have learned to play the hole according to their abilities, however, we have been hearing much more satisfying comments.



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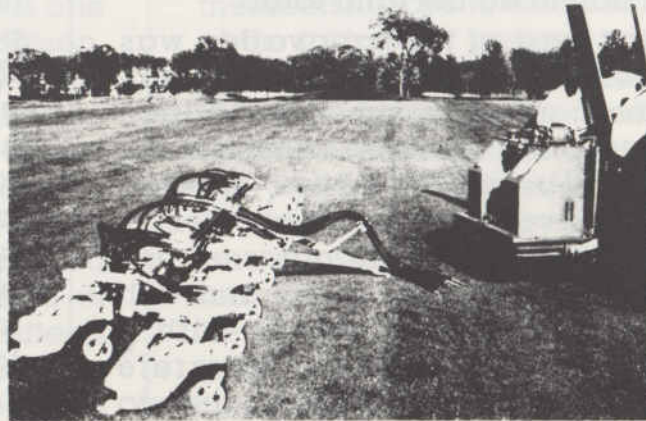
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