

Irrigation System Modernization Poplar Creek Country Club

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Poplar Creek Country Club

In January 1984, James Young Construction Company purchased Moon Lake Golf Club, changing the name to Poplar Creek Country Club. The new owners brought in a new superintendent, and visions of transforming Poplar Creek into a top public facility. Fortunately, they are aware that it is a time consuming and costly venture. However, it did not take us long to realize the irrigation system would not be adequate to accomplish what is expected from it.

We are extremely lucky to have an owner who is committed to upgrading the operation. Very little persuasion was necessary in convincing them about our needs: with bentgrass fairways in the near future, we knew we would need a state-of-the-art system.

It was not financially feasible to replace everything. This was a major problem, because the entire system was a total loss. It was different than the usual hydraulic designs in that it was normally closed. Acuator valves, located at each head, were controlled by pressure in the 1/8" control lines. The controllers were useless and the pipes leaked everywhere. The heads were allowing water to pass through them, but the nozzles were not the same on any two heads, and most of the bodies were cracked.

We had to evaluate how much money was available and what those funds could purchase. The big question was — would a partial renovation work? (It should be noted that in the winter of 1985, we had our three pumps rebuilt, and our pneumatic control panel updated. We have budgeted for a new electronic panel for the winter of 1986). With this in mind we concentrated on modernizing the most important components: heads, swing joints, and controllers. Later three isolation valves were added to the contract, and it was decided to keep Toro Model 690 heads on the fairways, and 650's on the greens. We had 630's on the tees, but they were changed over to 650's also.

We reviewed several makes of field clocks and decided on the brand new Toro VT-4's. For a central controller, we also went with their latest model, implementing an IBM personal computer.

THE CONTRACTOR MAKES THE DIFFERENCE

Following the decision concerning what to purchase, our next step was who would install it. The most important factor in installing a new system is the selection of the right contractor. An incompetent installation can defeat the advantages of even the best hardware. After careful consideration, we chose Midwest Irrigation, out of Dubuque, Iowa.

Soon after January 1, 1986, the contract was signed and work was scheduled to begin in the spring. It was April 30 when they were finally underway. The first priority was to put in two of three isolation valves. These 6 inch valves are situated so in the event of a leak, we can isolate all but one fairway from the pumphouse — naturally we have had several leaks there.

Replacing the swing joints was found to be quite a task. Most connections and service tees in the fairways were on the verge of failure, and the pipes under the greens and tees were in such bad shape, Midwest decided to pull new two inch pipe. (They felt they could better guarantee their work, as well as save labor hours). We calculated a price that both parties thought was fair.

There were several other problems that slowed progress.

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(Irrigation System cont'd.)

Aside from parts availability, weather and mechanical breakdown, we observed many PVC swing joint leaks. Midwest replaced up to fifteen defective nipples.

On May 21, we had one section of greens and tees complete. (The fairways would come later). On June 2, we watered several zones with the central computer for the first time; and by the last week of June, we were totally automated. Midwest returned several weeks later to replace 240 feet of a six inch main that was giving us problems. Their service representative makes regular return trips to repair minor leaks or deal with any other problems which arise.

NEWEST CONTROLLERS AVAILABLE

Although the system was bid to include new VT-4 controllers, they were not ready at the time of installation. VT-3's were put in the field until July 9, when the VT-4's were finally ready.

We are, obviously, very happy with our new system. The most valuable item is the computer, as we can run our regular watering cycle; and at the same time, computer labor statistics or fertilizer applications. We have drastically cut down on run times, while watering much more efficiently. We do have some kinks inherent with any new system:

—Chronic swing joint leaks — (It might be advisable to use galvanized swing joints in fairways, or incorporate block valves to eliminate constant swing joint pressure).

—Dirty valves — occasionally causing heads to stick on.

Except for inferior pipe, we now employ the most efficient up-to-date irrigation system available. The difference is night and day. We can now focus our energies toward capital improvements instead of wasting valuable hours keeping up with a dilapidated system!

PROJECT SUMMARY

TOTAL COST — \$163,000

—\$158,000 bid & \$5,000 for 2" pipe on greens and tees.

—\$38,500 for controllers — \$1,100 per clock, 35 clocks

—\$5,100 for computer

—\$118,800 for swing joints, heads, wire, etc.

START DATE — April 30, 1986

COMPLETION DATE — July 2, 1986

VT-4 Clocks installed — July 9, 1986

**The following are pictures from the GCSAA
Convention held in Phoenix.**



Owen C. Carr, speaker at the Prayer Breakfast along with John Ebel, the moderator.