

## Up-to-date irrigation greens up 60-year-old club



Some 550 sprinklers on the course at Capital City CC are controlled from a master panel in Superintendent Roy Conard's office.



When Roy Conard wants to control the irrigation of the handsome tees and greens at Atlanta's venerable Capital City Country Club, all he need do is cross the floor of his office. On the wall is a sophisticated master panel that monitors water pressure, indicates how long the pump motors have been running, and warns Conard immediately if the power should fail. A digital clock displays the time of day.

Conard is the club's golf course superintendent and proper maintenance of the prestigious surroundings is one of his primary responsibilities, including constant inspection of the lush greenery. He is an old hand at maintaining golf courses. He began learning his trade back when Arnold Palmer and Jack Nicklaus were coming up through the ranks, more than 18 years ago. His father-in-law was a golf course superintendent for 40 years and Conard has been with Capital City for better than 6 years — the sixth superintendent in the institution's colorful six-decade history.

You can take his irrigation advice to the bank. "I did quite a bit of research before deciding on the present equipment," he said. "The former system was 42 years old and totally manually operated. It proved largely inadequate, especially during the difficult summer months when we could barely water three fairways per

night. That generally left the course in a state of flood or drought."

After careful consideration of its competitors, a Rain Bird irrigation system was selected by Conard and the Club's Governing Board. The system has been operating for nearly 6 months.

"I picked Rain Bird because the firm's installation expertise is top notch and because they continue to service their equipment after it's in the ground."

Ken Cloud, owner of the Foremost Construction Co., a family-oriented firm with a brother, three sons, and nephews actively employed in the installation phases, has years of experience at irrigating golf courses. Cecil, Ken's brother, oversaw the installation.

"We installed a completely new system at the Capital City site without closing the course for a single day," said Cecil. "The previous system was simply too antiquated and water wasteful to convert. Instead, we went ahead with a totally new plan, starting the job in April 1977 and completing work 90 days later."

The system installed was a conventional product, though Cloud hastened to add that there were a couple of unusual features.

"Intercoms are strategically located throughout the course inside the control cabinets, allowing for ease

of communication with maintenance personnel. The master control panel in the superintendent's office is a unique item," he said. "Watering of greens and tees can be controlled conveniently from in there. The fairways are controlled by a separate unit located on the course. Another unusual item — the pumping plant is fully automatic and will maintain a pressure of 160 pounds. That's the highest pressure we have used on a system to date."

Cloud explained that each fairway has a gate valve so that it can be shut down if there is a rupture in the main line, thereby keeping the rest of the course intact while the repair is made. In that way, each hole has its own system and can be bypassed if there is a problem — without the usual necessity of shutting down all nine holes on one main line. Additionally, there is a gate valve in front of every electrical valve to facilitate maintenance when required.

#### Problems to solve

"The terrain here was very challenging," responded Cloud. "Lots of ups and downs, heavy Georgia clay, and some rocky areas. Also county sewer lines as well as city drainage systems run directly through the course."

Cloud said 160 pounds of pressure was necessary because of the distance required to pump water and because of the steep terrain. Stopmatic valves in sprinkler heads were used everywhere it was possible because they prevent erosion and water waste.

"This course boasts a beautiful 17-acre lake," said Cloud. "In order to use it as an effective water source we had to bring in a new 10-inch line. Government experts suggested we lower the level of the lake by some 5 feet. That project was completed in three stages in order not to disturb the lake.

"First we had to dig a 13-foot ditch as a reservoir. Then we went into the lake wall about 15 feet, laid pipe and backfilled. The next step opened up another 10 feet and involved going through 12-inch-thick concrete in the wall of the dam.

"Lastly, we used scuba gear to go out about 40 feet from the shoreline to place our intake line." Cloud explained that that line is about 7 feet from the bottom of the lake and about



A 17-acre lake on the Capital City course provides much of the water for irrigation.

6 feet from the top at the lake's present depth.

#### Easy to operate and maintain

"Let's face facts," said Cloud, "all systems are going to need periodic maintenance, just like an automobile or a home. Our valves and sprinkler heads make up what is known as a short battery system with anywhere from two to four to six heads to each valve. The reason is simple. If anything were to hit one of the heads and destroy it, only that head needs to be replaced. Not an entire valve."

Cloud explained that the controllers used for the course's handsome greens and tees are Rain Bird SC-11 models. Controllers for fairways are RC-18 models. He said there are six such RC-18s to control 18 stations situated along the course. A separate 23-station system is being installed currently that will control only the grounds around the clubhouse. The reason? Late-night parties. No one wants wet clothes or cars.

What kind of a schedule does Conard keep to maintain his immaculately groomed golf course?

"With the drought conditions we have today it's hard to say," said Conard. "Right now, on the average every valve is running 6 to 8 minutes. Then it cycles all the way through again. In a normal year, we would be backing down a bit in mid-September. Hopefully we'll get a bit more rainfall.

"I may go ahead and water the entire course, but cut back on the amount of water I use every night. In January and February — our rainiest months — I probably won't need to use the system at all. Frost is a major problem, but the inside controls will

help me syringe it off efficiently by 9 a.m."

Conard's budget for the total project was about \$270,000 to completely irrigate 120 acres. He strongly feels the results have justified the expenditure. The 2,000-plus members will be pleased with the appearance of their country club.

"The new system is using less water than the former and it's covering a larger area," he said. "With the old system, I had to run each individual head for better than an hour. I had to practically flood the place. Now nearly all the water is going into the soil where it can do the most good, instead of the 60 percent runoff we used to put up with."

In all, some 550 sprinklers and nearly 325,000 feet of wire were used in the Capital City project. The pump behind the system has one 25-horsepower centrifugal jockey pump and two 100-horsepower centrifugal pumps and can pump 1,800 gallons per minute when all three units are operating.

Conard is pleased with his conveniently located master control, but doesn't want members to think he runs the golf course from behind a desk.

"You'll find me out on the course almost all of the time," he said. "During installation of the irrigation equipment, I stuck close just to keep a watchful eye on things. Not that I had to, Foremost is a very reputable firm. I know we made a good choice. Like I told the Governing Board, 'The old system is falling apart and it's going to ruin your golf course. If you improve your irrigation, you'll improve your golf course.'" □