IT’S THE BEST FOR BOTH WORLDS!
From the Company that was the Innovator of “Fertigation” on golf courses, comes another Break Through. Now you can have the Confidence of using Controlled release Nitrogen and a unique soil retained potash with the convenience of liquid application. Our Custom blending system allows “ENVIRO-GREEN” to provide not only the Macros, but also the much needed Micros for complete plant nutrition. In addition, controlled release provides nutrition in the soil as the plant requires it. This minimizes leaching losses and run-off that may pollute the Environment.
So...maybe both of your WORLDS will be easier to live in now that there’s ENVIRO-GREEN from LIQUID AG.
If it's not a Cushman, it's not the right vehicle.

Cushman—and only Cushman—builds a complete line of turf maintenance vehicles that cover all of your needs. Like you, we demand that each vehicle be specifically designed to help you fulfill specific tasks in the most effective and cost-efficient means possible. And like you, we demand that those vehicles be backed by the most qualified service possible. As a result, only the industry's best dealers can offer you the industry's best vehicles.

**Cushman GT-1**

Cushman's new GT-1 light utility vehicle will outperform and outlast any converted golf cart on the market. It's the only light utility vehicle specifically designed for work instead of one that's been converted from play.

**Cushman Runabout**

When a light utility vehicle isn't enough, nothing else can match the Cushman Runabout's blend of value and performance.
The powerful Cushman 222 overhead valve engine provides the muscle for handling a broad range of demanding turf applications.

**Cushman Turf-Truckster™**

Nothing fulfills as many functions with such beautiful results as the Cushman Turf-Truckster. More than a dozen attachments and implements turn a Turf-Truckster into an entire fleet of turf maintenance vehicles. An exclusive ground speed governor control lets you work with greater precision. And our new 5th Wheel Implements are further proof that no one meets your changing needs better than Cushman.

That's because we're not only dedicated to helping your turf look good, we're dedicated to helping you look good. Contact your Cushman dealer for a convincing demonstration, or call toll-free 1-800-228-4444 for more information today.
You can get more powerful mole cricket control than Chipco Mocap 5G.

But it gets lousy gas mileage.

It's also tough to putt around. Fortunately, there's an easier solution, because the best mole cricket control you can buy comes in a bag: CHIPCO® MOCAP® brand 5G pesticide. CHIPCO® MOCAP® 5G controls the two major mole cricket species—Southern and Tawny. And CHIPCO® MOCAP® brand 5G delivers this powerful control at all stages of development, from nymphs to adults. In fact, studies at a leading university show that CHIPCO® MOCAP® 5G delivers up to 96% effective control of mole crickets.

Plus, superior control of grubs and many surface-feeding insects. And, CHIPCO® MOCAP® 5G is economical, too. One application provides outstanding control for up to five full weeks. That saves time, trouble and money. So, let the Army worry about gas mileage. Get the most effective mole cricket control money can buy with CHIPCO® MOCAP® brand 5G pesticide. Available at your turfcare chemicals supplier today.

Chipco Mocap 5G
Brand Pesticide

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Municipal golf the right way

*Cape Coral built a $2.8 million golf course by a top architect at virtually no cost to the taxpayers*

BY LARRY KIEFFER

Cape Coral is a rarity among Florida developments: it gives the state's real estate industry of the 1960s a good name. It is even the subject of a book subtitled, *A Lie Come True.*

Built on 104 square miles of dredge-and-fill land, making it Florida's second-largest city after Jacksonville, Cape Coral has had the infrastructure to support a population of 325,000 for nearly three decades.

The streets are paved and signed, the utilities are in and nearly all the residential lots have been sold, mostly at "town hall" meetings across the Midwest.

Until about 10 years ago, all that was lacking was people. Then they began to arrive... in droves.

By 1985, with its exponentially growing population topping 70,000, the city council decided it was time to build Cape Coral's first municipal golf course: Coral Oaks.

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**Coral Oaks Golf Course**

<table>
<thead>
<tr>
<th>Developer:</th>
<th>City of Cape Coral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect:</td>
<td>Arthur Hills</td>
</tr>
<tr>
<td>Contractor:</td>
<td>Ryan Eastern and Fore Golf</td>
</tr>
<tr>
<td>Construction Cost:</td>
<td>$2.8 million exclusive of land and clubhouse</td>
</tr>
<tr>
<td>Financing:</td>
<td>Municipal bonds to be retired from operating revenues</td>
</tr>
<tr>
<td>Size:</td>
<td>168 acres</td>
</tr>
<tr>
<td>Course:</td>
<td>18 holes, 6,623 yards, par 72, Course Rating 71.7, Slope 123</td>
</tr>
<tr>
<td>Annual Play:</td>
<td>78,000 rounds</td>
</tr>
<tr>
<td>Fee range:</td>
<td>$14-$30</td>
</tr>
<tr>
<td>Maintenance Staff:</td>
<td>15</td>
</tr>
<tr>
<td>Superintendent:</td>
<td>Don Stewart</td>
</tr>
</tbody>
</table>
Number Nine
At Coral Oaks Golf Course, architect Arthur Hills achieved the City of Cape Coral's request for a golf course that truly challenges the scratch player while remaining manageable to the high handicapper. Most of the course is cut through trees, making the wind a factor to the golfer who gets the ball high while protecting those of lesser skill. Any of the par fives can be reached in two shots, but never all of them on the same day.

With only 27 bunkers, a lot of Coral Oaks' challenge comes from sidehill, uphill and downhill lies caused by swales, hollows, grass mounds and shadow cuts. Water appears on 11 holes, but groundpounders usually have safe routes.

From the 6623-yard championship tees, par of 72 is very difficult for the player who is unable to use every club. USGA Course Rating is 71.2 and Slope is 123. The 4940-yard front tee, with a Course Rating of 69.9 and Slope of 117, provide an enjoyable round without requiring a booming drive. The 168-acre facility (122 irrigated) opened in July, 1988. In our first full fiscal year, we had 78,000 rounds. Our original maintenance team of 15 remains intact.

Greens are planted to Tifdwarf and overseeded with bentgrass; tees are planted to Tifin 328 bermudagrass and overseeded with a blend of ryes; fairways are Tifin 419 bermudagrass and roughs are a combination of common bermudagrass and native vegetation.

My two favorite views are from Number 8 tee with the clubhouse in the distance, and anywhere that I can see the fountain.
How to prevent hostile take-overs.

Cushman Sprayers.

Fungi, bacteria, viruses, insects, weeds. Give them an inch and they can take over your course. But with sprayers from Cushman® standing by, they won't have a chance.

Cushman can deliver a lightning punch right on the chin. State-of-the-art accuracy is provided by the industry's most advanced electronic computer controls. A wide range of nozzles are available for all applications and requirements. Linear actuated boom lifts and foam markers complete the package, putting you in absolute control over a precise application process.

Nothing is better at meeting your application requirements. For a single source of outstanding sprayer equipment and service, contact your Cushman dealer today. Or call toll-free 1-800-228-4444 for more information.
By all accounts, they did it right. "I think the city wrote the book on how to build a municipal golf course the right way," says Don Stewart who has been golf course superintendent at Coral Oaks since it was nothing more than a set of preliminary plans by architect Arthur Hills (page 44).

Last year Golfweek called it "quite possibly the best new municipal golf course in the country" and, after less than a year of operation, the readers of The Florida Golf Reporter voted it into the Top 20 of the state's more than 800 golf courses.

What is even more impressive, the city built the course at a total cost to its taxpayers of only $10 — the price charged by the developer for the 168 acres on which it stands. The $2.8 million construction cost ($4.2 million counting the clubhouse and other facilities at the site not related to the golf operation) was financed entirely with municipal bonds that are being retired from golf-course operating revenues.

With 78,000 rounds in its first fiscal year at anywhere from $14 to $30 each, the course has been operating ahead of the financial plan since it opened two years ago this month. The plan requires the course to be completely self-supporting by the third year.

Furthermore, Stewart has had zero turnover since he began assembling his maintenance team of 13 permanent employees (he also is permitted two contract laborers) in January, 1988.

"If you have a ranked golf course that's operating according to the financial plan and no staff turnover, what more could you ask?" notes Stewart.

"We had some problems — still do — but the city gave us the best possible chance to solve those problems by setting things up right in the first place," he says.

The city planned and built the golf course through a blue-ribbon committee which included one city councilman. The committee submitted its key decisions, such as selection of the architect, for council approval.

Stewart was hired Dec. 6, 1986, shortly after one of four designs submitted by Hills was selected. From that day on, he was the city's point man on the construction project, reporting first to the assistant city manager and, during the final construction period, directly to City Manager Ellis Shapiro.

"When the assistant city manager took a job on the other coast, Shapiro just took over the project," Stewart noted. "Because I had direct access to the man at the top, I was able to cut through the bureaucracy and get the golf course open on schedule and on budget."

Stewart's first duty was a pre-bid conference with all interested con-
The Facility

Site: 168 acres inside city limits dredged and filled in early 1960s

Greens: 2.8 acres Tiftdwarf, overseeded with bentgrass

Tees: 3.5 acres Tifton 328 bermudagrass overseeded with ryegrass

Fairways: 62 acres Tifton 419 bermudagrass

Water: 11 bodies comprising 15 acres

Woodlands: 17 acres, mostly oak

Practice Facility: 10.5 acres including double-ended range, 6 target greens, practice green and practice bunker.

Irrigation: Multi-row covering 122 acres of playing surface only. Rain Bird electric controller.

Source: Drainage canal 4 feet above sea level and protected by 2 weirs.

earth-moving firm with no golf course experience, won the bid. Ryan subcontracted most of the work to Fore Golf, a construction firm specializing in golf courses, notably those designed by Joe Lee. Work began “on the Ides of March,” notes Stewart, whose college major was speech and drama.

“There were some communication problems with the shapers in the beginning,” Stewart said. “We had to explain that we didn’t want flashy bunkers and the like.”

The only contingency in the construction budget was $42,000 for greensmix if suitable soils could not be found on site. They had to spend the money.

“Arthur Hills was very particular about using USGA specifications for the greens, except for the intermediate layer, and the construction committee backed him up,” Stewart says. “They wanted to do this golf course right.”

Two major problems arose during construction: the site contained considerably more rock than indicated by the pre-construction borings, and a beautiful stand of oak trees, not noticed when the course was staked, barred the route to the 14th green.

The unforeseen rock proved costly for the contractor — “He told me last year that Coral Oaks was his first and last golf project,” Stewart notes — but the oak trees required artistic concessions from Hills.

“I really have to hand it to the man,” Stewart says. “I didn’t think he would go along, but once he accepted the fact that we really wanted to save those trees, he shortened the hole and then had some fun tricking it up.”

Sprigging of the back nine was completed the day before Thanksgiving and the front nine was done on Christmas Eve. By the third week of January, 1988, Stewart and his carefully assembled crew had a golf course to grow in by July. He also had a new boss, Bill Noonan, the newly-hired assistant city manager. Noonan has since become city manager.

“Seven months might seem a long time to grow in a course but you’ve got to remember that the rains in Southwest Florida normally don’t start until June and they didn’t start at all that year. We grew the course in under Phase I water restrictions without a variance.”

Not seeking a variance was Stewart’s idea, although he had the blessing of his superiors.

“I believe in water management,” he says.

Equipment

(All Jacobsen unless otherwise noted)

2 tractors
7-gang Ranger for roughs
F10 11-wheel fairway mower
HF5 for slopes
Tri-King slope mower
5 triplex mowers for greens and tees
2 Flymos
4 Cushman Trucksters
3 Club Car personnel carriers
3 aerifiers (Ryan Coremaster and GreensAire, Jacobsen fairway)
2 topdressers

Note: All maintenance equipment is charged to the golf course but is available to other city departments if needed.
The course was opened in July and the construction committee was dissolved.

Stewart has had three bosses since the course opened, starting with Ted Kaklis, who succeeded Noonan when he was promoted. As the government workforce grew ("I'd say it has doubled in the three years I have been here," he says), golf operations were placed first under Parks and Recreation Director Bill Potter and then, in May, under Potter's assistant, Bob Goff.

"I have job security, something that is rare for superintendents and getting rarer. So long as I do my job correctly, I would probably have to get arrested to lose it.

"This is an excellent city to work for. They have an enlightened attitude and they like to make an example of good employees. Just last month I accompanied my mechanic to a little ceremony where they honored him for being a 10-year employee. He got a nice bonus and an extra week of vacation.

"There are so many advantages to being part of a larger organization... you just wouldn't believe the resources," says the 40-year-old Michigan native. "If I need a crane, I can get it... in four hours, probably, if it's an emergency.

"When we finish the cart paths, we'll probably do it with city equipment and city employees as they can fit it into their schedule. And if I need extra help for a special project, I can usually get it."

There are some difficulties with a bureaucracy, he notes, particularly with its inability to adapt to fluid situations. "Every bureaucrat has to protect his territory and you've got to get all your visas stamped before you make a move," he says.

And the city's work rules impose an unusual structure on his staff. Instead of an assistant superintendent, he has a foreman who is strong in personnel skills but has no agronomic training.
“It’s different,” Stewart notes, “but I’ve learned to work with it. And we’re trying to get him some training. He recently took a short course at Abraham Baldwin Agricultural College in Tifton, Ga.”

It is ironic that Stewart would look to government work for job security. Before turning to golf course maintenance, he started two other careers in public service and lost both because of failed bond referenda.

After attending junior college in St. Joe, Mich., Stewart transferred to Manchester College in North Manchester, Ind., where he completed his B.A. in communication with a major in speech and drama and a minor in radio and television.

Upon graduation, he taught school in Marion, Ind., for one year and then served as a juvenile probation officer in the same city for another.

After losing his second job in as many years, Stewart returned to St. Joe to apply for the job of assistant superintendent at Wyndwicke GC, where he had worked as a laborer during summer vacations.

He got the job and, 18 months later, moved into the top post when the superintendent was forced to retire following a heart attack.

Wyndwicke went belly up in 1980 and Stewart knocked around Oklahoma and Texas before landing the superintendent’s job at The Glades in Naples in 1982 while visiting his children in Sarasota.

“I tossed resumes at every clubhouse I saw on both sides of the Interstate on the way,” he recalls.

In 1984, he moved from the Glades to Alden Pines in St. James City, where he worked with a very unusual turfgrass: *adalayd paspalum vaginatum*, a salt-tolerant plant that can withstand irrigation with water containing as much as 1,600 ppm salt.

“Every time I watered, I was putting down herbicide,” he says.

Two years later he “moved across the water to Cape Coral.”

Stewart plays to a 13 handicap that is coming down, he says. His best round on his home course is 77 from the championship tees.

When he’s not on the golf course, Stewart likes working on the landscaping around his house and exploring Lee County’s coastal waters, particularly those around Upper Captiva Island, which can be reached only by boat.

His ambition?

“I want to build another golf course. Just one more and I’ll have it out of my system.

“They’re beginning to talk now about putting a second course into the five-year plan. It should be a completely different kind of course from this one and I understand that Arthur Hills wants to build a Scottish links course.

“Wouldn’t it be great if he built it here?

“I’d like nothing better than to take care of Cape Coral’s golf courses until I retire. I look forward to the day.”