Michigan Homestead gets go-ahead

By Peter Blais
GLENARBOR, Mich. — The four-year battle apparently isn’t over for the Homestead Resort’s golf course project.

The national office of the Environmental Protection Agency May 8 approved the controversial northern Michigan course, including the filling in of 3 1/2 acres of wetlands.

EPA Director William Reilly’s decision upheld the Michigan Natural Resources Commission’s 1990 approval and the wishes of Republican Gov. John Engler. But it conflicted with the recommendations of the regional EPA office and four other government agencies.

Three days later, project opponents—including Friends of the Crystal River, Sierra Club, Michigan United Conservation Clubs, National Wildlife Federation and Trout Unlimited—filed a lawsuit in U.S. District Court seeking to overturn the EPA ruling. A decision whether to issue a permit to the resort course near Sleeping Bear Dunes National Lakeshore isn’t due until June 8.

“It’s still a hot topic around here,” said John Tune, editor of the Record Eagle in nearby Traverse City.

Homestead developer Bob Kuras is unsure when he will start construction,

Continued on page 43

Erosion control blankets fast proving their worth

By Mark Leslie
Erosion control has become a byword in the construction industry, transforming erosion control blankets from a secondary to a major tool of the trade.

“We used to only use them (blankets) from an engineering standpoint when you normally had a problem,” said Ron Boyd, president of Williamsburg Environmental Group, Inc. in Williamsburg, Va. “Now you’ve got more regulations — such as laws on cutting: tilling on steep slopes — so that their use is sometimes mandatory.”

Ken Starrett, vice president of marketing for American Excelsior Co. of Arlington, Texas, said over the last few years strong laws regulated by the Soil Conservation Service, Corps of Engineering Engineers and highway departments have been adopted by communities.

“The number increases

Continued on page 37

Equal access: A tall order

By Hal Phillips
Equal access and fair hiring practices for the disabled used to be goals; now they’re the law of the land.

With regard to accessibility for handicapped citizens, the Americans with Disabilities Act (ADA) took effect in February, 1992. Come July 26 of this year, golf clubs with more than 24 employees will be subject to the ADA’s employment provisions.

While tax-paying clubs with 15 to 24 employees needn’t comply for another two years, golfing establishments nationwide — tax-paying or not, public or private — should study the ADA provisions. The law will

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Village with a $45 million lawsuit

The project, then placed restrictions on a $200 million golf project, former Denver posted Colorado Biltmore development. causing $150,000 damage. Hardest hit were

More than a decade after denial of a plan to pond. He was cited for inattentive driving.

and his vehicle came to rest in a course through two holes of the Blackfoot golf course

driver lost control of his semi-truck and plowed and his vehicle came to rest in a course

development under the original terms of ap-

that Tucker could proceed with the 1990
cation for the large housing development.

Creed and sons David, Donald and Richard

had proposed to build 264 housing units on the farm site with a 27-hole golf course.

Some residents had opposed the plan, saying the atmosphere didn't blend with Rhinebeck's historic heritage.

• • •

CHERRY HILLS VILLAGE, Colo. — More than a decade after denial of a plan to build a $20 million golf project, former Denver developer Steve Tucker has hit Cherry Hills Village with a $45 million lawsuit.

In 1981, Cherry Hills Village approved the project, then placed restrictions on approval after neighbors objected to the proposed Colorado Biltmore development.

The 18-hole project was to include a 600-

room luxury hotel, golf course and 200 condominums. The Colorado Supreme Court ruled in 1990 that Tucker could proceed with the development under the original terms of approval, but no development has begun.

• • •

BLACKFOOT, Idaho — A Montana driver lost control of his semi-truck and plowed through two holes of the Blackfoot golf course causing $150,000 damage. Hardest hit were the 10th and 11th greens.

Charles Chester Pluid of Belgrade, Mont., and his vehicle came to rest in a course pond. He was cited for inattentive driving.

High Road leads to satisfaction in Scotland

American designers Jay Morrish and Tom Weiskopf elated with Scottish effort

By Mark Leslie

Developers have taken a bumpy road to finish the The High Road course at Loch Lomond Golf Course, but co-architect Jay Morrish feels it will be awhile before he is involved in another project of extraordinary and with as much emotional attachment for him.

Morrish and partner Tom Weiskopf were put under a microscope when they were selected as the first Americans to design a course in Scotland. Jack Nicklaus has since designed a course, Gleneagles in Perthshire, scheduled to open in 1993.) Financial troubles put the half-built Loch Lomond project on hold.

Yet, Morrish and Weiskopf withstood the pressures, and in mid-May Weiskopf put his blessings on the project. The course was complete, except for the final green, which had been shaped but not top-soiled.

The Nagelcoo construction crew from Oregon needed one month of good weather to put finishing touches on the course, Weiskopf said. It should open next spring.

"It's the best course we've ever done anywhere," said Morrish, a former designer for both Nicklaus and Tom Fazio. "It's better than anything I've been involved in. It's a combination of the right site, the tradition, no housing, beautiful trees, ideal terrain. It's slightly above sea level and we're on the lake, nestled right up against the foothills of a mountain.

"All the chemistry was right for this golf course."

The project was "inspiring — almost an emotional thing," Morrish said. "It is Scotland and it is the birthplace of golf. Everything is so tradition-oriented over there. Plus the mystique of working in Scotland meant a lot to Tom and me."

Bruce Graham, joint administrator for Cork Gully, the consultant handling the project for the Bank of Scotland, said Loch Lomond Golf Course is unique in the region.

He said that after a second course is built at Loch Lomond: "They'll never be able to build another golf course there. It is an area of scenic beauty, and government planners will not let it be built on further."

He said the second course on the Loch Lomond land will be a "completely different concept — not so demanding, more of a holiday course than The High Road, which is not for high-handicap golfers."

Graham said the original developer, Sterling Investments Ltd., had spent $7 million on the project by November 1990 when it became insolvent. The Bank of Scotland appointed Cork Gully the administrator and has since spent $1 million to $2 million to complete it.

The facility sits on land being leased from Luss Estates Ltd. — the bar

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Lofts Seed Inc.
USGA funds $4.15 million in new research over 5 years

By Peter Blais

Turfgrass breeding will be the main focus of the $4.15 million in research money the United States Golf Association (USGA) Green Section will award over the next five years.

The USGA Executive Committee approved 19 projects totaling $2.36 million at its spring meeting, according to Green Section National Director Jim Snow. The remaining $1.79 million will be awarded over the next five years as projects progress and the need for additional research in other areas materializes.

The five-year funding program covers the years 1993-97 and coincides with the end of the USGA’s 10-year research program that concludes this year, Snow said. Turfgrass breeding was by far the single biggest recipient of funding in the initial round, the USGA national director said. “We’re looking for grasses that use less water and fewer chemicals. Those projects received $1.63 million of the $2.36 million awarded so far. Most projects are funded for five years.”

But Snow expects the bulk of the remaining money to eventually find its way to research in the other three areas: alternative pest management programs, turfgrass stress resistance through biotechnological methods, and cultural practices (the effects of using effluent irrigation water, for example).

Researchers receiving funding and their projects were:

- Dr. Peter Day, Cook College, Rutgers University, “Development of improved turfgrass with herbicide resistance and enhanced disease resistance through transformation.
- Dr. Milton Engelke, Texas A&M University, “1. Breeding and development of bentgrass, and 2. Breeding and development of zoysiagrass.”
- Dr. Jeannie Grow, Cook College, Rutgers, “Breeding and evaluation of Kentucky bluegrass, tall fescue, perennial ryegrass and bentgrass for golf turf.”
- Dr. Glenn Burton, University of Georgia, United States Department of Agriculture, “Bermudagrass breeding — vegetative.”
- Dr. Charles Taliaferro, Oklahoma State University, “Bermudagrass breeding and evaluation of improved turf Bermudagrass varieties.”
- Dr. James Read, Texas A&M University, “Identification: Poa pratensis (Kentucky bluegrass) and P. arachnifera (Texas bluegrass) for development of heat and drought tolerant blue-grasses.”
- Dr. Terrance Riordan, University of Nebraska, “Buffalograss: breeding and management for water and energy efficient golf course turf.”
- Dr. Bridge Rueemmele, University of Rhode Island, “Colonial bentgrass (Agrostis tenuis) breeding and cultivar development.”
- Dr. Ron Duncan, Georgia Experiment Station, “Development of stress tolerant sea-shore paspalum for golf course usage.”
- Dr. Donald White, University of Minnesota, “Improvement of poa reptans for golf turf.”
- Dr. Donald Kobayashi, Rutgers, “Identification of parasitic bacteria as biological control agents against summer patch disease.”
- Dr. Jeffrey Kranz, Mississippi State University, “The Recovery of Rhizoctonia solani resistant creeping bentgrass germplasm using the host-pathogen interaction system.”
- Dr. Sam Ha, Virginia Polytechnic Institute, “Development of genetically engineered creeping bentgrass resistant to fungal disease.”
- Dr. Daniel Bowman, University of Nevada, Reno, “Characterization of water-use requirements and gas exchange of buffalograss turf.”
- Dr. Robert Carrow, Georgia Experiment Station, “Seeded Bermudagrass water use, rooting, and shoot growth under soil stresses.”
- Dr. Charles Manzino, University of Arizona, “Turfgrass irrigation with municipal effluent, organic contaminants, nitrogen fate, turf Kc values and water requirements.”
- Dr. William Vance Baird, Clemson University, “Low temperature and drought-related gene expression in Bermudagrass.”
- Dr. Richard White, North Carolina State University, “Physiological basis for selection and maintenance of bentgrass with superior drought resistance.”
- Dr. Noel Jackson, University of Rhode Island, “Use of VA Mychorrizae in establishment and maintenance of greens turf.”

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Ala. Retirement system may build eighth golf facility
By Peter Blais
ORANGE BEACH, Ala. — This coastal community will likely be the site of the eighth golf complex financed by the Retirement Systems of Alabama.

A land swap between the town and state Department of Conservation and Natural Resources is paving the way for the 36- or possibly 54-hole facility.

The newest project means the Retirement System and developer Sunbelt Golf Corp. will add at least 360 new golf holes to the state, all designed by Robert Trent Jones, Sr.

The first course opened last month in Oxmoor Valley, south of Birmingham.

All the courses are being built on donated land, which was a problem at Orange Beach.

Retirement System Executive Director David Bronner wanted the Conservation Department to provide land at nearby Gulf Shores State Park for the Retirement System's eighth and final project.

Conservation Department officials were hesitant to give the land away without something in return. Agency officials also feared for the site's many wetlands.

But Bronner believed in the property and reportedly suggested he'd build the course across the border in Florida if the land wasn't made available.

Wanting the economic boost the course could provide, local officials offered to trade 588 acres of town-owned land for the state-owned property.

The Conservation Department finally agreed to lease 585 acres of state land to the city, which Orange Beach will in turn lease to the developers.

"We're evaluating the land now," Sunbelt Vice President Bob Barrett said. "There are more wetlands than we thought and some endangered species involved. We might have to get more adjacent land. We want to do a minimum of 36 holes. If we can't, we won't do the project." Barrett said he believes details can be worked out and the project will get underway this summer.

Starting the Orange Beach facility soon is important since Philips & Jordan's (Knoxville, Tenn.) heavy earth-moving equipment and Jones' shaping crews are still in the state working on the other projects, he added.

"We benefit from economies of scale," Barrett said. "Once they move out, relocating them back here again would present problems. We have more strength now than we would later."

All eight projects have progressed pretty much according to plan, Barrett said. Wetland concerns at Mobile and Huntsville slowed construction, as did water quality issues in Opelika regarding a neighboring 600-acre lake that is the region's major drinking water source.

The first 18 at 54-hole Oxmoor Valley opened May 8. Huntsville, Opelika-Auburn, Mobile and Dothan will have parts or all of their facilities opening in 1992 with Greenville and Calhoun coming on line in 1993.

Sandridge Golf Course attorneys hope for quick legal resolution
VERO BEACH, Fla. — Attorneys hope for quick court action even though no hearing date has been set on a lawsuit linked to expansion of the local Sandridge Golf Course from 18 to 36 holes.

Prince Contracting Co. of Palmetto is suing the Indian River County Commission, Commissioner Doug Scurlock and Guettler & Sons of Ft. Pierce over the commission's 3-2 vote Feb. 18 to award Guettler the $1.95 million project.

Prince, through Tallahassee attorney F. Alan Cummings, alleges the vote was illegal because Scurlock failed to discuss his business relationship with Guettler.

"It amounted to a hometown decision," charged Cummings. He contends that Prince, the low bidder by about $50,000, was "very highly qualified to do the job and worked hard to be the low bidder. It was a political decision."

He bases that charge on Scurlock's association with Guettler last summer on a golf course project in Ocoee. Scurlock said he wasn't paid for his part in the project, and denied associating with Guettler on any other project.

Several county officials have testified Scurlock was paid, and that he was involved in other projects.

In addition to voiding the contract, Prince seeks to be declared the lowest responsible bidder and awarded the contract.

Guettler, through attorney Gene O'Neill, has joined defendants asking the lawsuit be dismissed. Prince alleges no wrongdoing by Guettler, and its complaint states no cause of action against its firm, O'Neill noted.

O'Neill said Prince is trying to cast doubt on the contract by alleging a conflict of interest and asking the court to "simply pass judgment in its favor." Circuit Judge Charles Smith in mid-March denied a temporary injunction to halt construction of the second 18 holes.

Di Giacomo constructs Art/Rock formations that communicate time, force and motion inherent in the rock.
Representative Projects: Dove Canyon Country Club, Orange County, CA; A Jack Nicklaus Signature Course • Tornillo Golf Club, Nara, Japan and Green Hill Seki Golf Club, Nagoya, Japan; J. Michael Pestel Golf Design Group • Kinoji Country Club, Okayama, Japan • Robert Trent Jones II • Wood Ranch Country Club, Simi Valley, CA; Theodosia G. Robinson, P.C. • Art Lake Golf Club, Osaka, Japan; Golf Plan incorporated • Rotary Golf Club, Kobe, Japan
Fazio courses come out on top in architects survey

Continued from page 1

Stan Olson at Black Diamond, a Steve Williams creation, and William McKee (at Wade Hampton), a Mick Humphreys (at Village Club)... We get recognition that we design all these courses, but there are many people involved, and the owners are the key guys who deserve a lot more credit for the input and commitments they make.

The same might also be said for the developers of the other courses that received support in the voting. Spanish Bay Golf Links on the Monterey Peninsula of California, designed by Robert Trent Jones Jr., finished second in the balloting for the best public course.

Roger Packard-designed Cantigny in Wheaton, Ill., placed third, followed by the Kiawah Island (S.C.) Ocean Course, designed by Pete Dye, in fourth. Three courses tied for fifth place — Mark McCumber and Associates' Osprey Cove in St. Mary's, Ga., Fazio's Pelican's Nest in Bonita Springs, Fla., and Arthur Hills' Walking Stick in Pueblo, Colo.

In the voting for best private course, Black Diamond was followed by another Fazio creation, Shadow Creek, in Las Vegas. The Golf Club of Georgia outside Atlanta, designed by Hills, and Sherwood Country Club in Thousand Oaks, Calif., designed by Jack Nicklaus, tied for third.

Fifth place was a tie between Fazio's Eagle's Landing in Stockbridge, Ga., and the P.B. Dye-designed Loblolly Pines in Hobe Sound, Fla.

EMERALD DUNES — BEST PUBLIC

Ray Finch III, president and co-owner of Emerald Dunes with his father Raymon Jr., said the course "has exceeded our expectations."

"We retain the course equal to any private course," Finch said. "Quite a few golfers come from private courses and say they'll send their superintendent here to see what their club ought to look like."

Speaking of Emerald Dunes superintendent Chip Fowkes, Fazio said: "Chip makes the difference. He's done a tremendous job."

"Everything is maintained at the highest-grade private-course setting, from the service at the clubhouse, to the pro shop, food and beverage operation, to maintenance of the course. This Emerald Dunes experience is the best you can get. It doesn't matter if you call it public or private."

Fazio said the major design challenge was "to create a world-class, low-handicap course that is dramatic, sensational, strong, challenging, and fun to play and not make it too difficult, because you need to create a lot of land forms and movement. Usually in south Florida you have to do that with lakes, digging out the quarry holes."

Fazio said speed of play was "paramount" in the design.

"When you have people who don't know the golf course and you're in a tourist environment, to have a reputation of having five-hour rounds is death. We maintain play at under 4-1/2 hours, even in peak season."

He said the course has no hidden hazards or unfair rough, and water is placed where it is not penal.

The course is structured for the higher-handicap player but is still a challenge for low-handicappers, Finch said.

That statement was supported by Gary Player, who called Emerald Dunes "challenging and playable" when he picked it number one.

Others agree. Finch said, "Since October we've been just about full."

BLACK DIAMOND — BEST PRIVATE

Black Diamond, a gem constructed partly through an abandoned rock quarry, won immediate acclaim when it opened in 1988.

"Great design in totally unique site conditions."

Golf course builder Paul Clute of Clute and Associates alluded to the course's "contrast of colors," while architect Lester George singled out Fazio's "excellent use of terrain."

Fazio said when he first walked the Black Diamond site, with its rolling terrain, big oak trees and abandoned quarry, "I thought this could be tremendous or the worst thing we'd ever done."

The result is a course that "could be ringing cash registers all day and all night," Fazio said, "but that's not the type of person (owner) Stan Olson is."

Olson, co-founder of Digital Equipment Co. with brother Ken, said: "I told Tom he was not to worry about locations of houses, but to build the best golf course possible. As a result there are no houses at all on 100 acres where the quarry holes are."

Continued on page 7

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The 17th hole at Black Diamond in Lecanto, Fla., voted the best private course built in the last five years in a recent architect's survey.

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Fazio's gems shine in poll

Continued from page 6

Fazio, who is building a second 18 holes at Black Diamond, said: "If you were to come to the course: the first time, you're in shock with the quarry — the five holes (13th to 17th) around the quarry are so dramatic, sensational, bizarre and tremendous in terms of playability, they have so much individual character, the angles, the variety in the way they play, the wind direction.

"But when you talk to someone who has played the course a couple of times, they say the front nine may be as good or better than the back nine. And I always thought that. "We had a wonderful piece of land to work with in terms of being able to place the course on the land and flow the course through the contours. With the sand-base soil conditions, we were able to sculpture the golf holes into the ground and create some very interesting forms and features and a tremendous amount of variety in the land forms on the front nine."

Fazio said that when they knew the course would turn out well, they located the entry road along the edge of the quarry so visitors would see it as they drove in.

"What looked like the most negative thing on the site, something you'd want to hide, worked out to be the most positive," he said.

Asked to equate building Black Diamond to designing the world's first interactive, or personal computer, Olson said: "We had a vision of what the future of computing would be. We knew we really had hold of something. We knew it. We felt it. And it was our drive to accomplish it. "The same thing with the golf course. We wanted an experience that appeals to the greatest number of senses. That's probably what we've accomplished."

Olson said golfing is "more than a sporting experience. It's a landscape experience. The more you can do to enhance the landscape part of the experience, the better the project will be."

ASGCA elects new officers and members

SOUTHAMPTON, N.Y. — The American Society of Golf Architects voted in Mark McCumber and five other designers as associate members at the society's annual meeting here in May.

McCumber joined Jack Nicklaus as the only touring pros in the 112-member association.

Also accepted were Bobby Weed of Ponte Vedra, Fla., well known for his design work on Tournament Players Courses for the PGA Tour; McCumber associate J. Christopher Commins of Orange Park, Fla.; Dana Fry, a designer for Hurdzan Design Group in Columbus, Ohio; Brian Huntley of Arthur Hills and Associates in Toledo, Ohio; and John Harbole III, who owns his own company in Greenbrae, Calif.

Arthur Hills was elected the president of the association, succeeding Tom Clark. Joining Hills for the 1992 term are Vice President Gerald Matthews of Lansing, Mich.; Secretary Donald Knott of Palo Alto, Calif.; and Treasurer Jeff Brauer of Arlington, Texas.

The board of governors includes Clark and Brian Ault, both of Kensington, Md.; John LaVoy of Greenville, S.C.; David Rainsville, Tustin, Calif.; Bob Lohnmann, Marengo, Ill.; Denis Griffiths of Braselton, Ga.; Alice Dye of Delray Beach, Fla.; Willard Byrd of Atlanta, Ga.; and Bob Moore of Brampton, Ontario, Canada.
The course was a challenging joy to play; deftly carved from rolling (sometimes sharply) farmland in the Hamptons. But the day we played, a shifting 30-mph wind blew throughout. With the gale in our faces for 15 of the 18 holes, my playing partners — Tom Johnson, Bill Love, Roger Rulewich — and I felt like a school of salmon looking for a place to spawn.

Later that week I traveled to Minnesota for 18 at Hazeltine National, one year removed from its second U.S. Open stint but still in magnificent fettle. My hosts — superintendent Patty Knaiges and pro Mike Schultz — could have been more accommodating. However, they overdid it on the weather. Two days removed from a raw, windy day in the Hamptons didn’t prepare me for 39-degree temperatures in Minnesota.

Mind you, this was early May in the nation’s coldest urban area. Well, better to have played Hazeltine and pouted criminally than never to have played at all.

The course had the opportunity to play a pair of fine golf courses in May — one brand spanking new, the other firmly established. While both tracks provided excellent playing conditions, Mother Nature was not so cooperative.

During the annual American Society of Golf Course Architects’ meeting on Long Island, attendees played The Atlantic Club, Rees Jones’ newest creation. Jones must have known his cohorts were coming because the pins were in championship spots all the way around.

All actions have an effect...sometimes deadly.

Everything, without exception, has an “afterward.”

Sometimes that “afterwards” is likable, laughable, fun. Sometimes it is distasteful, disastrous, or devastating.

The Environmental Protection Agency has released its National Home and Garden Pesticide Use Survey, a “one-time snapshot” of the non-agricultural use of pesticides in and around urban and rural homes in the U.S. It reeks of the dangerous-poisonous-deadly variety of “afterwards.”

Among the findings:

• Of the American households that disposed of concentrated pesticides, 67 percent used the regular trash, 15 percent used special collections, and 17 percent either gave it away, poured it down the sink or toilet, on the street, in the gutter or sewer or on the ground.

• Of those disposing of left-over pesticides, 99 percent mixed from concentrates, 36 percent poured the mixture down the toilet, 39 percent used the regular trash and 35 percent either burned it, gave it away, poured on the ground, in the gutter or sewer, or engaged it elsewhere.

• In households with children under 5 years old, 47 percent stored at least one pesticide within reach of children.

• An estimated 85 percent of all households have at least one pesticide storage in and around the home; most families have between one and five pesticide products present, and 27 percent of single-family households have more than six.

• Those well-educated, certified and licensed pesticide applicators in the golf industry are far different from their neighbors—right? Superinsecticide is the word on the golf course has rigid rules by which he and his crew handle chemicals.

• Hopefully, they do the same at home.

I have to plead guilty to malice in disposal. It was the “I’m only one person; what harm can it do?” syndrome. It won’t happen again.

I knew dumping old engine oil was never a brilliant idea. It was convenient. Now people aren’t stupid. But they lean toward convenience.

Our entire society needs a major attitude readjustment.

Here’s the bottom line: The Golden Rule applies to all areas of life, including how we deal with the environment. Let’s do unto the earth as we would have others do unto us: Be kind to it. (And let’s fill the neighbors in on this attitude as well.)

Because, for every action there is an effect.

Many improvements necessary in the industry

By Eliot Roberts

Eliot Roberts is the retiring executive director of the Turfgrass Stam-

In the past 40 years, great improvements have been made in turfgrass. Stanford Merion Kentucky blue- 

growth and insect resistance have been incorporated, and weeds have been controlled. But this progress is limited and at times becomes patho- 
nic. In more natural or moderately amended soils, biological systems are active in forming humic acids and humates in the presence of iron roots of grass plants. These micro-

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Muirhead busy in Asia

To the editor:

It was great to see the series of articles on golf in Asia in your recent issue. It was also wonderful to see the article about our Korean project, Long Lake Hill Country Club, on page 32.

In the March issue of your magazine, an article entitled "Suppliers see boom in Southeast Asia" and written by Bob Spilwak quoted Frank Dolan of golf car maker EZ-GO, who expressed unhappiness over alleged inducements the state of Georgia offered Yamaha to build our factory there. The writer further quoted Mr. Dolan as saying that no welding, no molding and no designing of Yamaha golf cars takes place in the United States.

These statements are incorrect. No attempt was made to confirm or clarify any of these issues with Yamaha. In fact, Yamaha golf cars are made only in the U.S. at our state-of-the-art manufacturing facility in Newnan, Georgia.

The plant, managed by Americans, represents the company's commitment to the nation's golf industry, and our golf cars are exported to many other countries worldwide from this Georgia facility.

Although Yamaha's gas engine is made in Japan, it's fair to point out that both EZ-GO and Club Car vehicles also are powered by engines produced in Japan and imported to the U.S. In fact, more and more U.S. companies are relying on components from overseas, while at the same time U.S. exports have reached record highs. Our economic future depends upon a strong world economic base.

In the April issue of Golf Course News, which included a significant section on developments in the Asian golf market, a cartoon depicts the Japanese flag as a flag marking a golf hole, while the caption refers to the flags being a concession to obtain financing which one must assume is from Japan. Why the satire?

On the contrary, Japanese investments are improving golf in the United States. A case in point is venerable Pebble Beach, now enjoying the benefits of extensive Japanese-funded refurbishment to be ready for the U.S. Open, despite severe losses by now former owner Minoru Isutani.

In a macro sense, non-U.S. companies have been contributing to the betterment of the game of golf for many years, improving clubs and other equipment.

Golf is a world-class sport and a major industry in the global economy. We think your readers deserve well-rounded, unbiased reporting that will help them make important decisions that affect their courses and careers.

It is, after all, a small world. Too small, we think, for your magazine to promote misguided, nationalistic feelings which might prevent golf industry professionals from selecting products and services on their merits, rather than based on who provides them or where they're from.

I would imagine the U.S. architects listed on page 40 of your April issue are pleased with the professional opportunities associated with the growth of golf in Asia!

As an advertiser, we have seen the benefit of Golf Course News to our present and prospective customers.

Sincerely,

Joseph J. Stahl, vice president
Golf Car Division
Yamaha Motor Corp.

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If you're concerned about the impact fuel storage can have on the environment, look at the above ground advantages of Lube Cube Vaults. Lube Cube Vaults provide safe storage for flammable and combustible liquids, and are also safe for the environment.

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Howard Watson dead at 84

Howard Watson, 84, a former president of the American Society of Golf Course Architects, died April 25 at his home in Lachute, Quebec.

Watson began designing golf courses in 1939, laying out more than 150 throughout North America. Among his projects are Carling Hill in Pine Hill, Que.; Lachute Nos. 1 and 2, in Lachute, Que.; Pinegrove Country Club in St. Luc, Que.; Toronto Board of Trade in Woodbridge, Ont.; and the Players Club in Pickering, Ont.

The Canadian architect was elected to the ASGCA in 1954 and served as president in 1959. He was elected a Fellow in 1977.

Watson earned a bachelor's degree in architecture from the University of Toronto in 1929. He had been retired since 1987. His company, Canadian Golf Landscaping Ltd., remains active and is headed by son John, also an ASGCA member and past association president.

Watson is survived by his wife, Elizabeth; son John; and two grandchildren, Mark and Scott.

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Briefs

EPA Publishes Safety Brochure
A brochure designed to improve chemical safety management of businesses that use hazardous chemicals has been published by the Environmental Protection Agency in cooperation with the Occupational Safety and Health Administration and nine co-sponsors. The illustrated brochure, Managing Chemicals Safety: Putting It All Together, defines good prevention practices, describes how applying this approach can benefit, suggests how to start a chemical process safety management program, and recommends additional information resources.

The brochure also may help businesses prepare to comply with new EPA and OSHA regulations that address chemical process safety management.

For single copies or further information, contact the EPA Emergency Planning and Community-Right-to-Know Information Hotline at 800-424-9346.

Pebble Beach's Miller Honored
Pebble Beach, Calif. — Ed Miller, superintendent of courses for the Pebble Beach Co. here, has been recognized as Superintendent of the Year by Seed Research of Oregon.

Miller was presented this award in recognition of his accomplishments and proven leadership in the turf industry.

Miller set the program in motion to eradicate the kikuyugrass on the Pebble Beach Golf Links, part of an extensive program to restore Pebble Beach to its original 1919 Jack Nellest and Douglas Grant design. Pebble Beach Golf Links is home of the U.S. Open scheduled in June.

Steichen Super at Orlando Course
ORLANDO, Fla. — Alan Steichen, assistant superintendent at Laurel Oak Country Club in Sarasota, has been named superintendent of the Year by Seed Research of Oregon.

Steichen has been at Laurel Oak since July 1989. Prior to joining Laurel Oak, he was assistant superintendent at Longboat Key Club, a resort in Longboat Key, Fla., operated by Arvida Corp. The Wisconsin native has been involved in the golf industry since earning a turf management degree from John-Jonathan College in 1975.

PGM's Creation on TV
The Professional Golfers Management Society has created a garden at AmeriFlora '92 which has been chosen as a backdrop for a Bob Hope television special to be filmed later this year. The theme of the PGM's 4,000-square-foot garden is an "Old English Garden." Tom Riccard of the PGM's board estimated the garden's value at $70,000.

A Tale of Two Turfs
Scotland's Native Fescues Face a Tough Test
By Doug Sanders
The Links at Spanish Bay opened for play in January, 1988, and was immediately acclaimed as a marvel of modern golf architecture.

At a time when course design seemed bent on building outstandingly difficult, contrived courses, the intent at Spanish Bay was to create a course true to the origins of the game, both in links style and grass type.

Spanish Bay is the product of a three-man design team: architect Robert Trent Jones Jr., Professional Golfers Association player Tom Watson and former U.S. Golf Association President Sandy Tatum. While approaching the project from different perspectives, all agreed there was a certain charm to the old style of golf one way to bring to America.

The key to recreating the Scottish experience was the decision to use fescue grass on the golf course.

Zoysia Tee to Green? Shute Intends to Make It Work in New Jersey
By Hal Phillips
BARNESBORO, N.J. — Tom Shute didn't buy the farm; far from it.

Truth is, he sort of inherited an abandoned zoysia farm, and now he plans to build a nine-hole course using the yield from his newest agricultural windfall.

Zoysia fairways, zoysia tees, even zoysia greens.

"It's something different," said Shute. "You tell the superintendents about this and they say 'it can't be done.' That makes it interesting for me.

Besides, with zoysia, you don't have to use as many fungicides, herbicides and pesticides, things of that nature. And zoysia doesn't need as much water. Environmentally, it's a good idea.

There's more...Shute has never designed, built or maintained a golf course before. He's worked in landscaping and studied horticulturists at college. He even owned his own seed machines for a while. But fate intervened and sent him down his current path.

"A friend of mine, his mother owned this zoysia grass farm," he explained. "They had let it go because it wasn't a popular turf. The first time my friend showed it to me I said, 'That hay field out there?' " That "hay field" turned out to be Meyer Z-52 zoysia.

"After that, a bunch of my buddies decided we should build our own golf course," he said.

Shute has two silent partners, it's mainly his baby. An environmental impact study is underway at the 52-acre south-Jersey site, and according to Shute, the Barnesboro native's fathers have supported the appropriate zoning change. "The permit is just around the corner," he said.

Shute isn't completely novice when it comes to turf maintenance. He grew up on a farm and worked at several golf courses in his younger days. He's also been conducting his own research, attending various turf shows and consulting with area superintendents.

Rumors of Methyl Bromide Ban Set Aside
By Terry Buchen
Contending that methyl bromide caused depletion of the earth's stratospheric ozone layer, the California-based National Resources Defense Council last December petitioned the EPA under the Clean Air Act to take the chemical off the market and stop further production immediately.

Response to the environmental group's charge was sharp.

"Rumors that methyl bromide has been banned and that there is a timetable to phase it out in the next few years are totally false," declared turfgrass industry leader Carroll McLawhorn.

McLawhorn is vice president and director of Hendrickson and Dall, Inc., a major supplier of methyl bromide, with corporate offices in Greenville, N.C.

McLawhorn is prominent in the Methyl Bromide Working Group, comprising industry personnel who manufacture and apply nationwide what they view as a valuable chemical.

"Our first object is to insure that methyl bromide not be placed on any phase-out list," said McLawhorn. "My company will help provide an in-depth study if the EPA asks for it."

"Up to 90 percent of methyl bromide found in the stratosphere comes from naturally occurring chemicals that are in algae in the oceans of the world," McLawhorn pointed out. "All man-made methyl bromide manufactured worldwide in one year could easily fit on a mid-sized ship capable of holding 60,000 tons of material. There is no proof that methyl bromide is a potential ozone-depletor."

"Golf superintendents, architects, builders and owners have used methyl bromide for more than 40 years. Turf experts feel that what would happen without this pesticide could be devastating."

"Superintendents have renovated their greens when they were infested with the bacterial wilt causing Toronto C-15 Decline in the 1980s. Architects and builders frequently fumigate new greens prior to grassing, making sure they are completely sterile. And greens renovation has been made more successful when superintendents fumigate, whether or not they strip the sod, prior to totally killing you annua on older greens."

"An odorless, tasteless gas, methyl bromide has a fragrance added for safety reasons when injected; then is covered with a plastic tarp. This is the one pesticide that can provide instant sterilization of the soil. After 48 hours, the tarp is removed to let the soil breathe for 48 hours. Planting of any crop then can commence."

"There are no alternative chemicals in place of methyl bromide. If there were, we certainly would be using them," McLawhorn said. "It is the product of choice."

Other soil sterilants are not as effective, McLawhorn said. Different products would have to be used, and their residual action would prohibit grazing of any given area for weeks or even months. Methyl bromide is the only chemical that totally sterilizes the soil instead of using nematocides, insecticides, herbicides, fungicides, and other products during renovation or new construction.

Jeff Hill, Midwest representative for Hendrick and Dall's office in Frankfurt, Ky., has been working closely with superintendents in a 13-state region on their renovation projects.

Hill stressed, "We provide the utmost safety precautions during the fumigation process, whether for the superintendents' staff or the homeowner/members living on one of the fairways. We post warnings signs within a golf course development, store methyl bromide in steel containers and have the proper licensing needed, as it is restricted use pesticide that a homeowner can't purchase, and the chemical is a toxic, potent pesticide."
Latini mastered a new language and game

By Vern Putney

Ennio Latini never saw a golf course until he was 20, and that was on the business end of a shovel. He never even took a swipe at a golf ball until he was 21 (1954), and that was with a rake. But he has more than made up for lost youth. The game, in all its facets, has been Latini's way of life for 36 years.

Deeply involved in daily down-to-earth course operations, Latini reserves his deepest bows to the early "greenkeeper" pioneers and their hands-on experience. "They were the backbone of the industry," he said. "They learned from their mistakes, errors they pointed out as red flags in the field of experience. They emphasized that the game and the course should be made as attractive as possible, and that there always are ways to improve things. I've tried to follow these guidelines."

The game of golf was a complete mystery when the native of Italy landed in New York City at the age of 17, a farm boy unable to speak a word of English and whose contact with sports was limited to an infrequent boot of a soccer ball.

Now 58, the superintendent of Cold Spring Harbor on Long Island, N.Y., has missed only one or two national course superintendent championship tournaments since 1989. He captured the title in 1974 and has finished second, third and fourth. Latini was third in the Senior Division at two Sawgrass courses in Jacksonville, Fla., in February.

Latini met and married Marie Antonucci in 1953 and they moved to California. He jumped at a golf course job offer, strange as it was, and learned about golf the hard way, from the bottom up.

Early in 1954, Latini and a fellow crewman found some golf balls while raking traps and decided to take a few awkward swings with the rakes. Latini was hooked. He bought a set of four worn irons and two woods.

Lunch hours were spent on the driving range, hitting balls endlessly. He decided that he was only following orders of superintendent Bill Eaton, who said, "Learn to play golf, then you'll know what your members want." He was so intent on pursuit of par that an errant shot produced a display of temper. Latini quit in frustration and then returned six to eight months later, vowing he would henceforth play the game as it should be played, like a gentleman. In control, Latini succeeded.

In 1956, a tournament called Pomona Valley Open at Los Serenas Country Club in Chino, Calif., Latini won his amateur flight. He converted a $75 merchandise award into a major. "I've tried to follow these guidelines."

In 1967, he returned to New York with his family and landed at Hauppauge Country Club in Smithtown. He switched to Brookville layout and former Boston Red Sox player Lind Storl, whose superintendent duties meant shuttling from California to Butte. Mont. taught Latini how to test soil and check drainage on greens.

Perhaps Latini's biggest break came when a bulldozer operator failed to show to finish the green. The machine lay idle. Latini thinks larger machinery meant shuttling from California to Butte, Mont. "They were the backbone of the industry," he said.

In 1973, and then moved to Cold Spring. Upon his arrival there, the course was a 'hole in one" to Latini. Though he moved to new job heights on every time he built or designed a green or tee, it was a new challenge. He also acquired the idea. Latini climbed aboard and dove into a new field, building greens and tees, so many that every time he built or designed a green or tee, it was a new challenge. He also acquired a "green thumb" in evident in the 500 varieties of trees he has planted at Cold Spring. Upon his arrival there, the course was virtually wide open.

He concluded: "Whether trying to stay close to par as a competitor, an increasingly difficult task, or adding an extra touch to the course, I owe the game of golf a world of thanks. There is no other sport like it."

GCSAA opens Asian extension

LAWRENCE, Kan. — Saying it's worldwide position as a leader for golf course superintendents will give it "a competitive edge," the Golf Course Superintendents Association of America (GCSAA) will open an extension office in Singapore to serve Pacific Rim countries.

GCSAA's Pacific operations will offer education/training, certification, publications, conferences, trade shows and research.

"Because golf is booming in this area of the world, a window of opportunity exists for GCSAA to provide these services to ensure the standards of world-class golf are being met," said GCSAA President William R. Roberts.

The Pacific operations will cover Japan, Guam, Taiwan, Hong Kong, China, Korea, the Philippines, Thailand, Malaysia, Singapore, Indonesia, Australia, New Zealand and India.

Roberts said emerging government interest and concern over environmental and development issues are driving the need for long-term education and quality control throughout this region.

"No other single organization exists anywhere in this area with the resources to provide the services that GCSAA does," he said. "Our long-extended position throughout the world as a leader and standard-bearer for golf course superintendents will give us a competitive edge."

GCSAA has a growing number of members in the area. Nearly 4,000 golf courses are in operation, with hundreds more under construction or planned.

GCSAA's Pacific operations will be under direction from the headquarters in Singapore, working with coordinators from the various countries to ensure educational demands and specific language translation needs are met.
Spanish Bay’s fescue experiment termed a success

Continued from page 10

"We decided to use fescue for a number of reasons," said Don Knott, project manager for the Robert Trent Jones Jr. Design Group. "First of all, fescue is the native grass of Scottish courses and our main goal was to create that feeling. Secondly, fescue is a grass that can be maintained with less fertilizer than bentgrass."

"It was also important that fescue was used to recreate the old-style golf course. Fescue is the predominant natural grass in Scotland. When the game was brought to this country, the Scottish professionals and course designers brought fescue with them and used it on many of the early golf courses in this country."

"After World War II, course architects began to use different grasses, especially bent, and the use of fescue declined. But in recent years, the use of fescue because of maintenance cost considerations has increased 100 percent."

"The decision to use fescue became all-inclusive because we're not as concerned with the things that tend to attack bentgrass," Marion explained. "You're not throwing around a lot of pesticides. It's durable and low-maintenance."

"And in hot weather, you don't worry about it. It is 100 degrees outside, the zoysia loves it."

Shute and Marion both cited low-maintenance as a zoysia's main selling point. Marion cuts the greens twice a week during non-growing season and thrice weekly during the prime growing season, May 1 to Sept. 1.
Mountains

ROCKY MOUNTAIN DONATES
Five Colorado State University professors have received $24,700 for research from the Rocky Mountain Turfgrass Research Foundation.

Drs. Tony Koski, assistant professor, and Harrison Hughes, associate professor, will research a drought-resistant and salt-tolerant turf alternative to grasses that requires less water.

Dr. Robin L. Curry of the Agronomy Department will, with researcher Gary L. Thor, study management practices to maintain native grasses.

Dr. Whitney Cranshaw, associate professor and Extension entomologist, will study natural control on turfgrass mites and insects. He also is developing training materials to help turfgrass professionals identify and manage arthropod pests.

Dr. William M. Brown Jr., of the Department of Plant Pathology and Weed Science, will research necrotic ring spot disease.

CLARK ELECTED PRESIDENT OF CACTUS & PINE GCSA
Mark Clark, Country Club of Green Valley, is the new president of Cactus & Pine Golf Course Superintendents Association of Arizona. He succeeds Jerry Zillow of Papago Golf Course in Phoenix.

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ORTHE
South Central

IRRIGATION EXPO A MAJOR DRAW

The Irrigation Association is planning its annual four-day International Irrigation Exposition and Technical Conference, Nov. 14, at the New Orleans (La.) Convention Center.

The IA expects more than 4,000 people to visit and more than 400 booths to feature the latest innovations in irrigation technology and equipment.

More information is available from the IA in Arlington, Va., at 703-524-1200.

North Central

MILLER DEAD

Johnny Miller, former member of the Central Florida Chapter of the Florida Golf Course Superintendents Association, died April 11 after a long illness.

The former superintendent at Oceanside Country Club in Ormond Beach also was a member of the FGA and the GCSAA.

Miller was buried in his home state of Ohio.

Southeast

GEORGIA CHANGES DATES

Due to a conflict with the Georgia-Florida football game in Jacksonville, Fla., there has been a change in the dates for the Georgia Golf Course Superintendents Association annual meeting.

The meeting has been moved from Nov. 1-3 to Nov. 8-10. It will take place at the King & Prince Hotel at St. Simons Island, with golf on Sunday and Monday at Hampton Club.

Further information is available from Karen White at 404-769-4076.

ALABAMA JOINING GEORGIA

Members of the Alabama Golf Course Superintendents Association will be adding an additional date to their calendar this year. They will join the Georgia GCSA at their summer meeting at Callaway Gardens Resort, Aug. 2-4.

The educational session, held Monday morning and all day Tuesday, will include topics such as golf course renovation and construction, negotiating, preparing for the Southern Buick Open, recovering from summer stress, using pre-emergent herbicides and governmental regulations.

Attendees will have the opportunity to play the Mountain View Course on Monday afternoon under conditions similar to the Southern Buick Open, thanks to superintendent Gary Wiler.

For further information, contact Karen White at 404-769-4076.

FLORIDA TURFGRASS SHOW SET

The Florida Turfgrass Association's annual conference and show is due Sept. 20-23 at the Prime Osborn III Convention Center here.

The gathering, largest of its kind in the Southeast, will include educational sessions, workshops, research reports, golf tournament and a spouse program.

For details, call 407-898-6721.

GROUNDS MANAGEMENT CONCLAVE SET

The first Midwest Grounds Management Conference will target topics ranging from government regulations to use of computer design for landscapes, integrated pest management, maintenance by design, and recycling.

Set for June 17-18 at Miami University in Oxford, Ohio, the conference is co-sponsored by the Professional Grounds Management Society and Midwest Association of Physical Plant Administrators.

More information is available from PGMS at 301-667-1833.

VIDEO PROMOTES LANDSCAPE ORDINANCE

The Ohio Nurserymen's Association has produced a 12-minute videotape, Landscape Laws That Work, to encourage city leaders to consider adopting a landscape ordinance in their communities.

Eleven other Ohio green industry organizations financially supported the project.

The video is intended for presentations to city councils and other government agencies, chambers of commerce and social and civic organizations.

Along with accompanying written material, it illustrates the benefits of sound land management through effective landscape design.

RESIDUAL EFFECTS OF TURF WETTING AGENTS

TESTS CONDUCTED BY MICHIGAN STATE UNIVERSITY

<table>
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<th>Wetting Agent</th>
<th>% Soil Moisture 14 months after application</th>
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CIRCLE #118
Roberts speaks out

Continued from page 10

of products and by-products, the concept of "organic" has been latched onto as a way to save individuals as well as the planet. This is not supported by fact; it is, in fact, pure fiction.

"Organic" gardening or "organic" turf management has nothing whatsoever to do with elimination of pesticides or chemical fertilizers. It is concerned with the biological activity of the root zone and with the formation of humus by 45 quadrillion microbes per 1,000 square feet of soil to a six-inch depth.

- Reduce pesticide use. Most turfgrass scientists agree pesticide use is greater than need be most of the time. The concept of Integrated Pest Management, better termed Total Plant Health, is indeed valid. Although the emphasis should be placed on plant health rather than pests, the net result is the same: less use of pesticides.

- Grasscycling's day has come. Sanitary landfills in many communities are already out of space. In others, old landfills are closing each month. We...
Firms developing rotary mowers to meet diverse needs

Golf course superintendents use rotary mowers more often — and for increasingly diverse tasks — than ever before, according to an industry poll conducted by Golf Course News. The same survey also indicates that manufacturers are working overtime to increase the versatility of these once-specialized machines.

Ergonomic design, fuel-efficiency and easier maintenance have all been factored into the new breed of rotary mowers. Yet the basic appeal of rotary mowers has not changed. The inherent vacuum action, for example, allows rotary machines to float over an area, stand the grass up, and cut it without tracking.

When the rough is moist, the vacuum feature also stands superintendents in good stead. Whereas the old seven-gang machine can. But rotary mowers are generally rear-wheel driven, making riding models quite maneuverable. In general, rotaries are lighter and trim closer to delicate course features.

THE CUTTING EDGE
Judging from surveyed responses, the industry is not content to sit on its technological laurels. Here’s a sampling of what’s new:

Manufacturers have taken numerous steps — many of them hydraulic — to make maintenance simpler. For example, Walker Manufacturing Co. now offers a sealed hydraulic wheel drive, tilt-up body for access to the drive train. Snapper is in the process of standardizing models to a common frame, and has a hydrostatic walk mower in the making.

At Jacobsen, the HR-5111 motor has lifetime lubricated spindles that never need lubricating. Encore Manufacturing Co. has addressed traction concerns with hydro-wheel motors and double-grooved, wheel-drive belts, while Excel features an hydraulic drive clutch. Kubota has concentrated on maneuverability by combining zero diameter turn and auto assist differential four-wheel drive.

Ergonomics have also been prioritized. This will come as good news to those crew members who spend eight hours combing the bentgrass byways. Howard Price Turf Equipment, for example, offers tilt-wheel, cruise control and air conditioning as optional equipment on its 1260 Turf Blazer.

If there’s one universal complaint regarding rotary mowers, it involves cleaning the mowing deck. Yet, virtually all surveyed producers have addressed the situation via flip-up decks. "Just flip it up and hose it down," advises one manufacturer.

THE RIGHT CHOICE
There are a few things to consider when purchasing a rotary mower. Traditional thinking says "dedicated mowers" — large tractors used solely to cut grass — offer maximum productivity and are best suited for wide-open courses with unfettered roughs and fewer trees.

For productivity and a higher degree of maneuverability, a riding mower with a front-mounted deck may be the optimal choice. A cutting width of 72 inches is the most popular, but decks from 44 to 88-inches wide are available. When choosing a cutting deck, take into account contours and landscaping. If the terrain in question features distinct undulations, the benefit of greater productivity from a larger deck will be negated by its inability to follow contours.

Smaller decks — 50 to 60 inches — may be better here. An experienced driver can use a rotary on fairly severe hills and dales, thus eliminating the scalping often associated with band mowers. However, such activity requires the traction offered by a four-wheel drive model.

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### The Cutting Edge

<table>
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<tr>
<th>Company</th>
<th>Model</th>
<th>Width of cut (in.)</th>
<th>Height of cut (in.)</th>
<th>Weight (lbs)</th>
<th>Mowing speed (mph)</th>
<th>Grass-cutting capacity (bush.)</th>
<th>Horsepower</th>
<th>Fuel</th>
<th>Tank capacity (gal)</th>
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**June 1992 17**


**MACON TAKES ON PROJECTS**

LAS VEGAS, Nev. — Plans are being made for Cupp Design of Atlanta, Ga., to revise Angel Park Golf Club here. Designed by Arnold Palmer, the public resort features two 18-hole, par-71 courses, an 18-hole putting course and a night driving range.

John Fought, design associate at Cupp Design, and Bob Cupp will reorganize the existing range and a few strategically placed holes to accommodate a larger driving range and add a par-3 course.

**CARTON JOINS BURNS DESIGN**

FERNANDINA BEACH, Fla. — Edward L. Carton has joined Burns Golf Design. Carton has been in golf course design for six years, including a short time with Hurdzan Design Group, and 5-1/2 years with Tom Fazio. With Fazio, he was involved in the design of more than 30 golf courses, including Emerald Dunes in West Palm Beach, Osprey Ridge at Disney World, Caves Valley Golf Club in Baltimore, the town of Oyster Bay (N.Y.) Golf Course and Black Diamond Ranch in Lecanto.

He graduated from North Technical Education Center in 1986 with honors in architectural design and drafting.

**CUPP SIGNS ANGEL PARK REMAKE**

LAS VEGAS, Nev. — Plans are being made for Cupp Design of Atlanta, Ga., to revise Angel Park Golf Club here.

**BRIEFS**

**Ross lives!**

Kay keen to keep lasting influences

By Mark Leslie

If Stephen Kay had never read that feature article on golf course architecture 20 years ago, he might be a teacher of English classics today. Instead, he is a keeper of the classics — golf courses, that is.

"When I was 13 or 14 I read a two-part article in Golf Digest about golf course architecture. I was on the school golf team, and I read that article and thought it was the greatest thing in the world. And I said, 'God, please let me be a golf course architect,'" Kay recalls.

The Lord apparently heard. Following the advice of architects Robert Trent Jones Sr. and Bill Mitchell, Kay followed a well-designed plan that led to a landscape architecture degree from Syracuse University, a turfgrass degree from Michigan State University, and work as both a course and construction superintendent. The result: a six-year hitch as a designer with architect Bill Newcomb of Ann Arbor, Mich., and the launching of Kay's own business in 1983.

Since then, he has gained increasing fame and respect as a champion for the masters of golf course architecture, especially Donald Ross and A.W. Tillinghast.

"I'm glad my career has gone this way," Kay said. "I turned down a chance to do a course in Florida in 1983. I wanted to come back East and renovate some of the old golf courses because I thought they were the best. It's taken me some years to really learn what their techniques and styles were, to the point where I feel I can go in and do Tillinghast or Ross or Seth Raynor and do them so well people won't know that I did it.

"This is exactly what I wanted to do and I continued on page 24

... while super restores greens to original form

By Frances G. Trimble

Tommy Grisham vividly recalls his first interview with the greens committee at Highland Country Club in Fayetteville, N.C. It was obvious to the 17-year agronomy veteran that Highland's vintage mid-40s course was in distressed condition. Yet the committee members were not of a mind to consider major renovation.

Said Grisham, "They wanted to know what to do, but at the same time they said, 'Don't do it.'"

Continued on page 28

... and Crenshaw views classic as player/designer

By Bradley S. Klein

Hidden gems. That is what professional golfer Ben Crenshaw sees in his travels around the world. Once in a while he happens upon a priceless diamond — a golf course with character and memorability, a classic.

Such a discovery occurred last summer when Crenshaw visited The Orchards in South Hadley, Mass. Having signed up to play the Canon Greater Boston Open, Crenshaw was charmed by the Hidden Ponds resort that had been built on the site of an 18th-century New England farm.

A bunker on the 18th hole at Oyster Harbor had lost the shape Donald Ross first gave it. Above is the deteriorated bunker; below, the bunker as Stephen Kay renovated it.

Continued on page 19

**The ‘ins’ and ‘outs’ of the ASGCA**

Hills takes over as president

By Peter Blais

Art Hills can thank the Yellow Pages for launching his career.

The newly elected president of the American Society of Golf Course Architects was a struggling, 33-year-old landscape architect trying to raise five children when he placed an ad in the Toledo, Ohio, phone book. Buried in the space were the words: "Looking for part-time work with character and memorability, a classic."

"I was on the school golf team, and I read that article and thought it was the..." says Kay.

Continued on page 26

Clark leaves strong legacy

By Mark Leslie

His term as president of the American Society of Golf Course Architects was "a tremendous year, a transitional year in the development of golf courses," according to Tom Clark.

A partner in Ault, Clark & Associates, Ltd. of Kensington, Md., Clark reflected on the challenges and successes after stepping down as president of the ASGCA in May.

"We opened a record number of courses the year before (1990)," he said. "But, with this recession a lot of the developers — through environmental issues and financing — are finding it more difficult to develop courses. Consequently, we directed everything this year at improving that situation.

The major accomplishment in aiding development is a publication Clark hopes will be printed in July.

Continued on page 19

**INDONESIAN RESORT INKS NICKLAUS**

BEND, Ore. — Golf designer Bunny Mason, who April 1 bid a fond farewell to Black Butte Ranch after a 23-year connection, is now director of golf at Bintan Lagoon Beach & Golf Resort.

"We are excited to be the first to build a resort for Nicklaus," said Hills. "It's taken me some years to really learn what their techniques and styles were, to the point where I feel I can go in and do Tillinghast or Ross or Seth Raynor and do them so well people won't know that I did it.

This is exactly what I wanted to do and I continued on page 24

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Continued on page 19
...as Hills takes over
Continued from page 18

Other well-known Hills designs include Eagle Trace in Coral Springs, Fla.; Champions in Lexington, Ky.; Big Horn Golf Club in Palm Desert, Calif.; Arthur Hills Golf Course in Hilton Head Island, S.C.; The Champions in Lexington, Ky.; Bighorn Golf Club in Palm Desert in Paradise Valley, Ariz. He has designed more than 100 courses and renovated 70 others.

"I didn't think I'd get into course design, even though I played on my college golf team," said the Michigan State University graduate. "I really didn't do that many courses until I was in my 50s.

"We've built many top-notch courses that haven't received a lot of exposure. We feel very fortunate and are very happy for our clients."

Hills is equally happy with the work of outgoing ASGCA President Tom Clark. Clark has spearheaded the development of an architect's report explaining the benefits of golf courses. It will soon be available to local, state and federal government bodies reviewing golf course projects.

"Like Clark, Hills said his primary goal will be carrying golf's positive environmental message.

"The environment is the biggest impediment to new development," he said.

He will also advocate standardizing the distance a golf ball can fly and moderating green speeds in the 9 1/2 to 10-stimpmeter range.

"There is no advantage to having a 10 or 11 green speed. The average guy who plays once a week just can't hold the ball on something that fast. And, the faster speeds are making it so that we are making some of the older courses obsolete," Hills said.

The idea is to make courses more playable, but not at the expense of diversity. Hills said. Hills was very complimentary of Pete Dye and Jack Nicklaus, who have been criticized by others.

"If you just worry about playability, you end up with a lot of mundane courses," Hills said. "You need to create situations and a good recreational facility. If people like it, so what if it's difficult?"

Hills said banks and other financial institutions are beginning to loosen their purse strings and more projects should receive funding in the next year. The ASGCA is developing a report on financing sources that will soon be available.

"Communities are asking us (architects) more and more just how they can finance their projects," Hills said. "This should help."

Hills' ten-person office is located in Toledo, Ohio. The new ASGCA president received a degree in horticulture from Michigan State and a bachelor's of landscape architecture from the University of Michigan.

Clark looks back...
Continued from page 18

Clark and his colleagues hope the 35-page, four-color book will clear the path for future golf course developments. Whereas the United States Golf Association's new Golf Course Management and Construction Environmental Issues is a technical manual, the ASGCA has simplified the issues in layman's terms, Clark said.

"I don't expect someone on a planning commission to read through that (USGA) book. I would expect them to read this, or go to certain sections of it, and to enjoy it," he said.

The ASGCA booklet will include a section on case histories, a checklist for development, a history for the layperson "to get a feel for what a golf course architect does," and a technical section on products used on golf courses, Clark said. He added: "It's a publication that will never be completed. It will be added to. Sections will be taken from it."

A six-page bibliography will lead readers to other publications for technical data.

Clark said the first printing will be about 25,000 copies and may be sold to ASGCA members to pass on to developers, planning commissions, engineering firms and others.

He hopes it will be well received that others in the industry will donate funds to finance a second printing. "Every manager, superintendent, pro, every person in construction and irrigation will benefit from this," he said. "But expedite the printing, we are looking among ourselves to finance the first printing."

Clark said he has received inquiries from abroad about the document. "I'm sure it will be used worldwide, adapted for other nations," he said.

Clark's advice to his successor, Art Hills of Toledo, Ohio, was: "Do as much as you can. You're going to constantly get requests. Attend as many functions as you can. The idea is getting the word out. When you do attend things and are responsive, people appreciate that. In some golf circles you're looked at as gods. But the public sees us with a whole different eye. We need to show the public that we are responsible and professional individuals."

While about 75 percent of his duties centered on the environment, Clark said that may change for Hills.

"Two years ago we were the global bed of architecture. We were the source of the finest architects in the world. Although Americans are still doing a lot of work overseas, now Japan has its own good architects. Europe and France have new architects associations," he said.

While the environment dominated ASGCA attention the past year, the big issue this year may be water," he said.

"Communities are asking us for development, a history for the layperson, a section on products used on golf courses, Clark said.

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THE PRODUCTION MACHINE
"HIGH CAPACITY, EXCEPTIONAL TRIMMING CAPABILITY"

TURF BLAZER 1260

That's how this machine has been designed! The mammoth 126" appetite affords you 75% higher capacity than a standard 72" unit. With a combination of a 60" mower out front and two 38" hydraulically operated wings, you are assured of picture perfect floatation over berms and undulations. With wings strategically located in line with drive wheel pivot point, you can achieve maximum trimming capabilities far superior to a 72" even under trees and bushes.

Add to this a field tested, 4-cylinder water-cooled, 40 HP diesel engine in conjunction with hydrostatic transmission and you have a machine which will maximize your return on cost of acre cut.

Contact your local HOWARD PRICE distributor for a demonstration on your turf.
Norton: Gold rush days of golf financing are over

By Peter Blais

Golf course architects and developers need to be more realistic about obtaining financing in today’s economy, according to a National Golf Foundation official.

A good concept and a nice piece of property alone won’t attract 95 percent financing, NGF Vice President Richard Norton said during May’s American Society of Golf Course Architects annual conference on Long Island, N.Y.

“Investors must get value for their dollar. The days of the Japanese rushing in with $20 million or $30 million to totally finance a golf course are gone,” he said.

Competition for financing is fierce, according to Norton. Getting money requires extensive homework and an understanding of what lenders are requesting.

The key concept is risk versus return. Lenders want assurances the amount borrowed can be repaid, Norton said.

The rate of return to attract private dollars must be high enough to compete with other investments, including the stock market. Municipalities may require a lower return because their goals are different, such as providing recreation, he said.

Availability of other types of recreation must also be considered in proposing a golf project. The course must provide enough value to compete with other recreation options to attract investors.

The challenge is to develop golf courses that serve an identifiable demand and provide enough income to cover debt and operations,” Norton said.

Golf was largely real-estate driven through the 1980s. Part of the reason was that real estate spread the risk between different components of a project. But with the downturn in the real estate market, that has changed, Norton said.

While 70 percent of new courses were associated with real estate during the last decade, only 34 percent of 1991 course openings were real estate oriented.

“If we are going to base our future on real estate driven golf, then we will have a very rude awakening. Real estate will still be a part of what’s going on, but not like it has been historically,” Norton said.

The amount of debt a new project can carry is dropping. Most projects can only get 60 percent or less of their financing through debt. The remainder, 40 percent or more, must come from equity. Lenders view golf as risky, so developers must invest a large amount of their own money in a project, according to Norton.

While non-traditional funding sources are becoming more popular, local banks still provided a significant amount of the money to finance the 300 courses that opened in the United States last year, Norton said.

In working with lenders, developers have learned that:

- Loan terms and equity requirements are relaxed somewhat if the borrower has a track record.
- Lending institutions prefer personal property and income from unrelated businesses over land as collateral.
- An established relationship with a lender is often key to obtaining a loan.
- Limited partnerships are important sources of equity.

Active golf course lenders, Norton explained, claim the Federal Deposit and Insurance Corp. has no specific underwriting guidelines for golf course credits. They are treated as conventional real estate credits. Creditors are concerned bank examiners will not look favorably at golf course loans. Burned by the savings and loan crisis, they are reluctant to lend.

Cash flow from property and borrower reserves are the primary concerns of bank examiners. Their secondary interest is the property’s auction value, Norton said.

Lenders, who are generally uninformed about golf courses, have several problems financing them, he said. Course improvements have a low residual value, giving lenders, in their eyes, no fall-back position if the project fails.

“They look at it and see a clubhouse and 18 holes. That doesn’t have a lot of residual value, except for the land, for some of these people,” the NGF executive said.

Lenders also see golf as a service business, with the loan’s success dependent on uncertain projected cash flows.

It is easier to lend on existing golf courses with a cash flow track record than it is on new projects. That’s why much of the current financing is being done on acquisitions and expansions, Norton said.

Informed lenders are willing to lend to golf courses. They have overcome obstacles by creating loan structures that accommodate potential negative cash flows in the early years of operation by capitalizing working capital requirements and shortfalls; requiring cash reserves to

Continued on page 21
Anyone doubting that golf course financing is hard to come by ought to speak with Tom Clark.

"Our firm has 23 projects completed, sitting there with plans and specs waiting for financing. That's quite a dilemma," the immediate past president of the American Society of Golf Course Architects said during the association's annual conference on Long Island, N.Y.

Financing became an acute problem about two years ago, Clark said. Last year the ASGCA identified funding sources for golf projects that is researching funding sources.

Financing, according to Clark, is quite a dilemma, "the immediate past president of the American Society of Golf Course Architects said during the association's annual conference on Long Island, N.Y.

Golf Course Architects said during the association’s annual conference on Long Island, N.Y. that is researching funding sources. Among those identified so far are:

- Blue T Golf (Tel. 800-621-9199) - funding and development services for municipal facilities.
- Club Corp. of America (615-523-3837) - limited new course development.
- Commonwealth Brokerage (804-329-2222) - arranges financing through an Immigration and Naturalization Service program allowing foreign investors to invest in the United States in return for citizenship.
- Daiki Kobusai Co. Inc. (803-626-2400) - arranging financing from international lenders, especially for resort properties.
- FFG Consultants Inc. (213-624-6226) - provides Japanese clients with consulting services.
- First Golf Corp. (800-618-4540) - financing and turnkey construction of municipal and privately owned daily-fee courses.
- First Golf Inc. (916-362-0165) - funding and construction of municipal and privately owned daily-fee courses.
- Forrest/Crookes/Associates (415-392-0301) - banking and real estate firm providing investment and consulting services.
- GATX Golf Capital (415-653-2000) - arranging financing on a fee basis.
- Golf Investment Advisers (407-624-0300) - providing feasibility studies and investors for private, equity courses.
- Golf West Co. (209-423-1346) - financing and turnkey construction for public, semi-private and private facilities.
- Greyhound Financial (800-525-4532) - acquisitions and refinancings of existing courses.
- HJM Corp. (212-663-1300) - finances privately owned, daily-fee courses.
- InterAmerican Holding Co. (619-237-0430) - finances Mexican projects.
- Municipal Golf Inc. (800-627-GOLF) - builds and finances municipal courses.
- Naito Financial Corp. (205-837-4130) - commercial loan broker on a fee basis.
- New Golf Enterprises (415-284-7100) - finds joint venture partners for golf projects.
- Prestwick Group (708-501-5110) - acquisition and development deals.
- Southeastern Club Management (803-600-2088) - provides management, financial and sales services.
- Stewart Financial Co. (619-625-1141) - international limited partner for golf course funding.
- Suzik Finance (710-638-1400) - loans for golf course projects against corporate bonds.
- Textron Financial Services (800-345-0053) - financing for all sectors of golf.
- United Realty Advisers (714-222-0283) - provides construction, joint venture and permanent financing working with insurance firms, banks, pension funds, savings institutions and other lenders.
- VP Venture Partners (803-428-1803) - venture capital company.

Norton claims

Continued from page 20

Norton claims to have the best shot at obtaining financing, a loan proposal should include an objective feasibility study that focuses on the existing course supply: a detailed investigation of all site and environmental issues, resources and history of the project; principal and business plan. "Frankly, we don't see enough of this type of detailed planning going on out there today," he said.

While a 40 percent equity position is common, private developers can get that down to 10 to 15 percent with experience, a proven track record and good lender relationships, he said. The primary sources of equity are the developer/owner, limited partnerships and syndications. Debt sources can include banks and S&Ls, insurance companies, pension funds, credit companies and investment banks. The public sector can also turn to bond issues, certificates of participation and lease/purchase agreements. Combination debt/equity arrangements are becoming increasingly popular with credit companies or investment banks taking an equity position, Norton said.

While the financing picture may appear gloomy, the golf industry is doing far better than most segments of the economy, noted Norton, who is a member of the Urban Land Institute.

"The gloom in that group is profound because there is so little going on," he said. "They look at golf as one of their seniors. Golf courses are being financed. It may be difficult. There may be severe barriers to entry. But we opened 350 courses last year. Someone is financing all courses."

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Ross Award winner Fullmer applauds diversity in design

By Mark Leslie

If architects can design and build public golf courses at low cost, the industry will "truly enter a golden age as millions of new golfers flock to the nation's courses," Paul Fullmer told the American Society of Golf Course Architects at its annual meeting on Long Island, N.Y., in May.

Accepting the Donald Ross Award from the society, which he has led for 22 years as executive secretary, Fullmer said golf courses in the next decade "may well be designed for different publics... We all know there is a tremendous demand for public golf courses. Now we have to adapt our thinking so that we can design and build them for realistic prices."

Fullmer said golf — and architects in particular — must overcome environmental and financial obstacles in order to meet the demand for new courses.

"We must achieve a balance not only with the environment, but with the environmentalists," he said. "We have made great strides in this area during (outgoing ASGCA President) Tom Clark's administration as he has focused on building relationships with all interested parties. We also should have our new "how-to-build-a-golf-course" environmental planning booklet ready for distribution in the near future."

Fullmer said that never before have golf architects attempted so many technically demanding projects, had to work with such poor sites, had to spend years working their way through the permitting process, or had to wear "so many hats — from salesman to environmental consultant."

As evidence of innovation and quality work in course design he cited the many changes in the media's listing of the country's greatest golf courses. Golf Digest's most recent list of America's 100 best courses contained a record 12 new courses. It also included seven courses that were added in 1989, five in 1987 and seven in 1985.

"Nearly half the courses from the original list of 1969 have been replaced," he said. "To me, that means you're doing something right — something very right. I applaud you for it.

"From my humble perch, it's great to see so many different styles, so many different philosophies. I think that's good for the market because owners have an opportunity to make decisions based on philosophy, track record, budget and chemistry. One thing I have learned from you is that the final product definitely is the result of a real marriage between you and the owner."

Presenting the award, Clark said: "Paul has been at the helm during one of the most dramatic growth periods in the history of golf course architecture. His steady hand has enabled the society and its members to receive recognition throughout the world as the premier design group.

"The society has experienced rapid growth in the past decade and has become a high-profile member of the Allied Associations of Golf. We want to recognize his counsel and proactive programs by awarding Paul Fullmer the Ross Award, the highest honor we can bestow."

A 1955 Notre Dame graduate, Fullmer has been affiliated with the Chicago-based public relations firm of Selz, Seabolt & Associates since 1957. He is married to ASGCA Fellow Percy Clifford's daughter Sandra, whom he recognized as his "sounding board and guiding light."
IRS determination could cost architects plenty, Phelps says

**By Peter Blais**

Golf course architect Richard Phelps has a warning for any of his peers organized as a standard or C-Corporation for income tax purposes.

"The Internal Revenue Service has determined after 25 years that I am not a C-Corporation but a professional service corporation," the Colorado-based Phelps said. That means 5 to 6 percent higher taxes and the IRS can go back at least three years for taxes owed, Phelps said. That's not much fun to any company watching its cash flow, he added.

"If you are a C-Corporation, you better begin talking very seriously with your accountant," added Phelps.

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**Jones sees Atlantic Club as a ‘model’ for environmentally sensitive designs**

**By Mark Leslie**

SOUTHAMPTON, N.Y. — The Atlantic Club has opened for play and designer Rees Jones is convinced the project has not only helped, but enhanced, the environment on the 204-acre site on the eastern tip of Long Island.

"It is a true example of a course designed in harmony with nature," Jones told the annual meeting of the American Society of Golf Course Architects (ASGCA) here. "It is my sincere hope that this course will become a model for other projects planned for environmentally sensitive sites."

Designing The Atlantic Club, Jones’ staff worked closely with the Nature Conservancy and the Group for the South Fork as well as course developer Lowell Schulman, project manager Tom Julius of the Legacy Group and superintendent Bob Ranum.

A major goal, Jones said, was to ensure the site was designed "to be more attractive to the wildlife while incorporating the requirements of a superb golf course."

Consultants prepared impact reports on vegetation, ornithology, wildlife, soils, hydrogeology, archeology, turf management, herpetology and traffic.

The experts discovered two endangered species — the Northern harrier hawk and Eastern tiger salamander — as well as non-native trees and grasses growing on the property.

Jones said: "One clear advantage was our ability to show that the maintenance of golf turf requires less fertilization and other chemical applications than was required by the farm crops previously grown on the property..."

"Through the controlled use of fertilizer and other chemicals, we were able to demonstrate that we would enhance the ground water quality as well. Crops had been traditionally grown right to the edge of the wetlands, but in our design, 100- and selective 200-foot buffers were established to protect the wetlands."

The developers took steps to protect and enhance the environment for the endangered species. A herpetologist prepared a habitat plan for a major kettle hole where the salamander hibernates. Builders maintained a 200-foot buffer, installed tree trunks and rocks in the deep grasses, and kept a path open to the kettle hole during construction.

Because the site had been farmed for more than 100 years, native grasses had been lost and replaced by such non-native grasses as ryegrass.

Sand was incorporated into the topsoil to prepare these areas for the native grasses.

The native species, Jones said, "are basically 'poverty' grasses that grow best in sandy soil and drought conditions. Because the maritime grasses survive better with poor soil and little water, they also require less consumption of water from the aquifer — another example of incorporating an environmental concern into a golf course design benefit."

With the help of environmentalists, Jones selected seven or eight native grasses to plant.

A number of non-native trees were also removed, most notably those in a grove of black willows between the 18th tee and fairway.

Developers also used a variety of erosion control methods — from netting hydromulching to planting grasses.

Native shrubs were also planted. Jones said, providing "a wonderful habitat for bird life since most of the shrubs in these out-of-play areas have berries, a food supply for existing birds and other birds we have endeavored to attract to the site."

Jones said the project "will prove to many how well a golf course can be designed with the environment in mind, to create a better habitat for wildlife."
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Original and complete Ross plans inspired Gresham's greens renovation.

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complete Donald Ross plans. The Highlanders were leaning toward change, though they weren't totally convinced. "They decided if the bentgrass lived through the summer, they would consider redoing the greens in bentgrass on the entire course."

The practice surface thrived. "The actual Donald Ross plans had been located for the club's 40th anniversary," said Gresham. "They were rolled up in the locker of a deceased member and were intact."

Gresham said the plans include several views of fairways and greens, Ross' agronomic plan, and written descriptions of the land areas where greens were to be constructed. There was other information — but Gresham said he did not immediately know how to use it. "Ross gives you a view facing the green, one from above, the side view, and, in some cases, a diagonal view. There were marks to indicate rises and falls in elevation, too," added Gresham. "But in the beginning, I didn't know what all this meant."

The superintendent contacted Pete Jones of the Donald Ross Society and Jones began a long-distance short course in Ross style and methods. "Jeff and I started out just working from the drawings and we realized we were doing everything right, but things weren't coming out as drawn on the plan," said Gresham.

Suddenly it dawned on Gresham that he was not using all the tools Ross had provided. "The written paragraphs were actually instructions for blending everything so that the bunkers, mounding, and putting surface came together." Whereas modern architects use

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Ross Society’s Ferron helped Highland CC

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minute measurements to arrive at precise elevational changes, Ross used words to create visual formulas.

The Ross plans do have elevational readings, but Gresham thinks Ross intended for construction teams to trust their eyesight and rely on his written instructions to put finishing touches on each green.

“Jeff and I started out using transits,” said Gresham. “But before long, we were visualizing things as Ross intended and only using the transits to double-check what we had done.”

The project began last Aug. 5, with the closing of holes 10 through 18. Work progressed quickly, and Gresham reported, “We were mowing grass by the end of the month.”

Highland CC members were so pleased they decided to close the entire course and finish the job at one time. On Sept. 9, the front nine was closed. On Nov. 16, Highland re-opened with a tournament.

“There was one green that wasn’t completed with the rest,” said Gresham of his only problem child, No. 4. “This green always had a problem growing grass. Tree roots had grown out under the green and it had been re-built once before with no success. Jeff and I looked at the plan and realized that the present location had no similarity to the green site Ross had chosen. The hole was shorter than on the plan.

“We looked around and found an area to the rear of the existing green which was very close to the terrain Ross had selected. We took out 30 trees and started building there in February. We mowed for the first time on March 23.”

The total cost of Gresham’s “re-Rossing” of Highland CC’s greens was $44,000 — and he hastens to add that part of the reason for the small cost was that he used Rossian green construction methods.

“We did not build to exact USGA specs, because we would have had to add extra drainage that neither I, nor our consultant from North Carolina State University, felt was absolutely necessary,” he explained.

Highland CC sits on a bed of 20 feet of sand. An hour after a one-inch rain, Highlanders are playing golf. “The Ross plans called for water to be carried off the greens in two to four different directions at once. That, plus the sand, provides plenty of drainage,” said Gresham, “although we did add some extra in some valleys.”

The superintendent feels it was attention to drainage that makes typical Ross greens so difficult to read and play. “You need to read a putt from every different angle and get all the subtlety that’s there,” he said. “And even through your ball hits a green, if you’re within 10 or 15 feet of the edge, the natural drainage pattern can carry you off once again. The handicaps around here have gone up about five strokes, but I think overall the members are very pleased.”

Gresham’s colleagues are impressed, too.

Highland CC was recently the site of the Triangle Turfgrass Association’s spring meeting. Eighty-six superintendents from the Pinehurst areas were in attendance to hear Gresham and Pinehurst No. 2’s Bob Ferron do a show-and-tell on remodeling in the Ross tradition.

“Bobby Ferron was a big help to us, especially when it came to making a decision on whether to sod or seed our bentgrass,” said Gresham. “He had restored Pinehurst No. 2, although he had to use lasers to shoot elevations and computer-enhance that information to make up for not having Ross’s actual plans.”

And what’s Gresham’s next project? According to Pete Jones of the Donald Ross Society: “It’s gotta be the bunkers. I’ll have his head if he doesn’t go ahead and do that, too!”

Gresham responded: “I would be miserable if all I had to do was mow grass. But the members need a breather from construction. They want to just play golf for a while and I don’t blame them a bit.”

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GOLF COURSE NEWS

June 1992 25
Kay feels comfortable putting himself in Ross’ or Tillinghast’s place

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thank God for it. I thank God every day.”

Kay said many courses are being renovated “because they are deteriorated, like a roof or carpet deteriorates. Most of these courses haven’t done any work in 25, 50 or 70 years, and they realize they have to start rebuilding bunkers, leveling tees, making tees larger because they aren’t big enough for the amount of play they get today.”

This often involves a master plan which Kay drafts.

“My average master plan is a five-year plan and they spend about $200,000 a year,” he said. “Seldom do you rebuild many greens. In an average master plan we will probably rebuild two greens. We will rebuild almost all the bunkers, do a lot of drainage work, enlarge and rebuild most of the tees, and oftentimes install a fair amount of bunkers.”

Kay aims for a look of authenticity in his work, whether it is renovation or an original design.

“In renovation I want to do work to the intent of the original architect, and I don’t want my fingerprint on it,” he said. “In doing my own design, I want to look like an old golf course. If it has mature trees, give it four to five years for the grass to mature and I want the golfer to think the course is 50, 60, 70 years old.”

Kay’s advocacy of the classic look is because “I’m not crazy about how the new architecture had gone. That has changed the last couple of years; people are starting to get back to the old style. But the style we had five, 10 years ago was the moonscape and the high-tech look. That’s not something Donald Ross or Tillinghast did and I think they’re the best. The old architects in the 1920s and ‘30s are the best.”

Helping those old courses stand the test of time even longer — or returning them to their original state — is Kay’s primary concern.

At his latest renovation — Oyster Harbors Club in Osterville, Mass., on Cape Cod — he followed Ross’ plans “98 percent.”

In cases like “Hempstead (by Tillinghast) on Long Island, or Oyster Harbors or Winchester (Mass.) Country Club (by Ross)” we try to get the architect’s plans, old aerial photos, and photos taken within the first 10 years after the course was built. Then we try to restore to those Tillinghast or Ross specifications. I try to keep the character or style of the golf course.”

At Oyster Harbors, Kay had Ross’ green plans, complete hole plans, old aerial photos, and old photos taken during a tournament when the course was young.

Listed by Golf Magazine as a “hidden gem,” Oyster Harbors is “a marvelous golf course. I think it has the best greens, contourwise, I’ve ever seen,” Kay said.

Those greens went untouched. Rather, Kay rebuilt the bunkers.

“They had never been touched since Ross had done work on it. But they either had eroded and gotten bigger, or grown in and gotten smaller — every part of every bunker being different. A couple of bunkers had been taken out over the years. A couple that were real big had been made into two bunkers,” Kay said. “We went in and followed the plan 98 percent and rebuilt the bunkers.”

Alluding to his scores of renovations and the slow, long process of learning how Ross and Tillinghast conceived their designs, Kay said he feels comfortable putting himself in their place, as if they were themselves revisiting one of their courses that he is renovating. Inspecting a site, Kay thinks, “What would they do if they were here today?”

That sometimes leads to minor changes to the original design. In Ross’ day, there were no golf cars. So when facing a spot at Oyster Harbors, where people were driving golf cars between a bunker and a tree, Kay enlarged the bunker so a drive-through is impossible. Sometimes, if a bunker has been eliminated, Kay will build a new one. He usually places it farther from the tee to allow for today’s longer drives.

Kay does not favor mass bunker changes to allow for distance. He said building tee boxes farther back can compensate for longer drives.

“Pinehurst No. 2 was originally under 6,000 yards, I believe. Now it’s 7,000 yards from the back tees,” he said.

Kay points to a major misconception of Donald Ross’ bunkers. Since a magazine article several years ago, many in the industry have stated as fact that Ross built only flat sand bunkers, always bringing the grass down the banks.

Doubling that statement, Kay researched and read George Thomas’ 1927 book ‘Golf Architecture in America.’ Among the many old photographs in the book were several donated by Ross.

Kay reported: “Photos Ross gave Thomas for the book showed flat sand all the way up to the top. I think he did it both ways.”

“From what I have seen from
Continued on page 27

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June 1992
Ross Society gaining membership, eyes regional events

PINEHURST, N.C. — Pinehurst’s No. 2 course would be a “magical” site for a U.S. Open. So said David Eger, senior director of rules and competitions for the United States Golf Association, at the Donald Ross Society’s recent annual meeting here.

Eger noted such a prestigious event would be fitting tribute to course designer Ross.

Eger cautioned that Pinehurst would have to meet several USGA stipulations, such as course conditions and greens fitness in June.

The USGA title event is booked through 1996. Eger, current North/South Amateur champion, shared the speaking spotlight with former North/South titlists Peggy Kirk Bell (1949) and Harvie Ward (1948). Eger, 40, made his first N/S title try in 1990. Eger was among prominent golf names welcomed into the Ross Society, now 3 years old and numbering 525 members.

Ian Baker-Finch sent along with his membership application a scorecard he’d used while winning the 1991 British Open. Other new members included PGA Tour standout John Cook and golf course architect Arthur Hills of Toledo, Ohio. Hills joins peers Dr. Michael Hurdzan, Jack Nicklaus, Stephen Kay, Ben Crenshaw, Ron Prichard and Tom Doak.

The Ross Society was formed to assist with restoration and preservation projects at golf courses designed by Ross and contemporaries. Barry J. Palm of Phoenix, Ariz., Donald Ross Society president and co-founder, said some day his organization hopefully will be headquartered at Pinehurst. From such a base, he declared, the society could serve the members and the game, and continue to promote Ross’ memory.

Palm, assistant executive director of the Arizona Golf Association, pointed out that Ross members are from 40 states, the United Kingdom and the Middle East.

“People who appreciate preserving classic golf courses are finding out about us,” Palm said, noting that there are members from more than 300 Ross clubs across the country.

At the suggestion of members, the society plans regional meetings and golf tournaments and outings at Ross courses such as took place last fall at Salem (Mass.) Country Club.

Kay: Keep it classic

Continued from page 26

looking at plans of Ross and from old aerial photographs, it appears he always wanted the golfer to see the sand. So if you were playing downhill, he would maybe leave the sand flat and bring the grass down the bank because you could see it. If you were playing uphill, and if you left the sand flat, you would be blind. So he would flash the sand. He says on a couple of holes at Oyster Harbors: 'I must see the sand. Flash it up the face.'"

Indeed, Kay said Oyster Harbors even has both styles in one bunker alone.

Meanwhile, although Kay’s renovation of the masters’ courses mainly involves bunkering, at Bel Air (Fla.) Country Club this year he will rebuild all the greens on the South Course to Ross specifications. When new owners bought the course in the 1970s, they built ponds on the site and raised all the greens but changed their contours.

HIS OWN WORK

Kay intends to cling closely to the classic look in two 18-hole golf courses he is designing this year—Blue Heron Pines near Atlantic City, N.J., and Stanton (N.J.) Golf Club.

Blue Heron Pines will be a mixture of fine Valley, Bethpage Black, Oyster Harbors and Pinehurst No. 2, which are all on sandy soil with pine and oak trees, similar to Blue Heron Pines.

Yet, Stanton is on a hilly site and will have a “completely different style,” Kay said. “We’re not copying holes, but I’m trying to get a classic feel and concept.”

His first full 18-hole course—Hillandale Golf Club, which opened in 1989 in Glen Falls, N.Y. — is hosting the New York State Open this year.

“I want to keep it around to around two 18-hole courses a year and a certain amount of renovation because I personally shoot the grades on every green,” Kay said.

Remaining true to his feeling for the classics (“They have stood the test of time.”), Kay said his best compliments come on holes that were completely changed over the years and that he tries to put back to their original state. If a golfer plays it and says it is one of the best holes Donald Ross ever did, that is what I’m looking for,” he said.

And has that happened? “Yes,” is the happy reply.

June 1992 27

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Crenshaw scrutinizes Ross with the special eye of pro/architect

Continued from page 18

Hartford Open in Connecticut, Crenshaw set out for Massachusetts. His trip was without fanfare. Only the host professional and course superintendent were given notice.

The Orchards was originally built in 1922 as a nine-hole course. A local textile magnate, Joseph Skinner, hired Donald Ross to create a sporting layout for his athletic daughter, Elisabeth. She enjoyed the course so much that Ross was asked back in 1927 to add another nine. In 1941, the Skinner family sold the 200-acre site to Mount Holyoke College, whose campus lay in town. The school now administers the course in conjunction with the club membership.

Whenever a golf course boasts the handiwork of Donald Ross, questions are raised as to what this means. Nearly 600 courses across North America claim the honor, though in many cases the authenticity is doubtful.

With The Orchards, however, the pride is fully merited. Ross’s original drawings for the holes are preserved in Pinehurst, N.C., and though it is not known how much time the master himself spent on site, there is no doubt that one of his two senior associates, Walter Hatch, based nearby in North Amherst, was entrusted to oversee construction. Moreover, The Orchards features enough authentic Ross touches as to leave no doubt of its pedigree.

Credit also goes to the current greenkeeper, Paul Jamrog, who combines a thorough knowledge of modern turf science with a classical appreciation of the game. When he arrived in 1984 as the only full-time member of the maintenance crew, Jamrog found a neglected course, with fairways mowed in straight lines, the greens rounded off, and many of the bunker walls in a state of collapse. Over-watering had led to the loss of native fescue grasses, while poa annua and crabgrass had proliferated from tee to green.

To overcome these problems, Jamrog began a vigorous program of upgraded maintenance designed to restore the course’s natural character. He also convinced the club to hire more full-timers and purchase improved equipment.

In all of this, he was supported by longtime head professional Bob Bontempo. As Jamrog’s maintenance program began to register its effects on the course, Bontempo convinced the membership to seek a national

Continued on page 29
Pro Crenshaw enthralled by master designer's touch

The final hole at The Orchards is an unrelenting uphill 4-par to a two-tiered green. The putting surface sits virtually under the clubhouse veranda. By this time, it was late afternoon, and word of Crenshaw's visit had gotten out to the membership—or at least to those who, having completed their rounds, were now recounting among themselves the day's golfing triumphs and tragedies.

All of a sudden, Crenshaw's comment had transformed their perception of the hole. What makes a fine golf course is that everything is by design. Features that seem so familiar one time around present themselves differently the next.

The course was in spectacular condition for the tournament, receiving rave reviews from players and officials. It was during a practice round that then-USGA Executive Director Frank Humann set history in motion. While watching play on the 4th fairway, he could barely contain his excitement. "I can't wait to tell Ben Crenshaw about this place," he said.

The second hole is a particular favorite among regulars at The Orchards. At 362 yards and straightaway, it might not at first glance seem a taxing hole. But about 250 yards down the fairway, the ground starts a steady climb to a postage stamp of a green, no more than 3,000 square feet in size.

Crenshaw hit a short iron behind the pin. As he walked up the slope to the putting green, he saw the severity of contour. The green must have sloped five percent from back to front, leaving him a vertical drop of three feet in a 60-foot putt to the front pin placement. "It's amazing," said Crenshaw to Jamrog. "Modern architects can't build this anymore. Greens speeds today would make this green obsolete. I hope you never change it!"

"No chance," replied Jamrog.

Crenshaw did not appear to be hitting the ball particularly well this day. His concern was not with playing the course but rather with looking at how certain touches enhanced it. It was his way of answering the question, "What makes a Ross course?" It isn't enough, after all, merely to proclaim that some famous person designed it long ago. The real issue is to see how the craftsmanship that made Ross so famous lives on 60 or 70 years later.

Some architects examine visibility from the tee. Others devote themselves to how the green surrounds look from the middle of the fairway. Crenshaw attended to the putting surfaces. And whatever it was he was looking for, he found it at the 5th hole. This is a downhill 157-yarder to a green that rises in the back, then falls off precipitously. The hole looks like a very relaxed inland version of the famed 11th at St. Andrews. And it was at the green that Crenshaw noticed a feature that, for him, made the hole.

"You see those sort little knobs at each end of the green, about midway back?" he asked. "That's what creates the slope, and that's the turning point of the green."

Crenshaw saw the perimeter of green extended to the edge of the fill pad. Yet the outer three or four feet of the putting surface was folded ever so slightly outward. Those two little knobs served simultaneously to steer a well-hit shot inward while redirecting a slightly miscast shot away from the center of the green. Over the years, Jamrog had been extending the green surface until it had reached its proper place, just as Ross had designed it.

Crenshaw referred to George Thomas' famous book from 1927, Course Architecture in America. "You know how Thomas says that once in a while you can landscape the green so as to suggest the contour of the distant downhill? Well, if you trace out the top of that mountain, you'll find the basic shape reproduced just below it, in the back edge of the green, right where the mounding breaks off. It just fits in so naturally here."

"And what makes a Ross course?" "That, and the basic premise of the hole," he added. "What makes a fine golf hole? What makes a Ross hole? It isn't enough merely to proclaim that some famous person designed it long ago. The real issue is to see how the craftsmanship that made Ross so famous lives on 60 or 70 years later.

Some architects examine visibility from the tee. Others devote themselves to how the green surrounds look from the middle of the fairway. Crenshaw attended to the putting surfaces. And whatever it was he was looking for, he found it at the 5th hole. This is a downhill 157-yarder to a green that rises in the back, then falls off precipitously. The hole looks like a very relaxed inland version of the famed 11th at St. Andrews. And it was at the green that Crenshaw noticed a feature that, for him, made the hole.

"You see those sort little knobs at each end of the green, about midway back?" he asked. "That's what creates the slope, and that's the turning point of the green."

Crenshaw saw the perimeter of green extended to the edge of the fill pad. Yet the outer three or four feet of the putting surface was folded ever so slightly outward. Those two little knobs served simultaneously to steer a well-hit shot inward while redirecting a slightly miscast shot away from the center of the green. Over the years, Jamrog had been extending the green surface until it had reached its proper place, just as Ross had designed it.
Courses newly approved across the U.S., Germany, Japan

Golf Course News is publishing these lists monthly from our sources and with the assistance of Forecast Golf Marketing & Financial Systems, Inc. of Richmond, Va. They include courses that have been approved in the past month. The accompanying chart contains the sites and contacts for new courses and renovations in the planning stages. When those courses are ready to begin construction they will be listed again in this "Courses newly approved in the U.S." chart.

We would appreciate your help in updating this section. To contact us call 207-846-0600 or write Golf Course News, P.O. Box 997, Yarmouth, Maine 04096.

Under "Type"—D=Daily Fee; P=Private; and M=Municipal. Under "Class"—R=Regulation; E=Executive; P=Par 3. Under "Work"—N=New; R=Renovation.

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Turf managers everywhere are spreading the word that the number one selling soil wetting agent costs less than ever before to apply. All the more reason to use the new AquaGro 20® to solve your water related problems.

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So when the heat is on, use AquaGro 20®; it helps you make the most of available water.

To find out how the new, economical AquaGro 20® can make you a better water manager, call us for a FREE copy of the User's Guide.

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Another Reason To Use AquaGro.
American Golf Corporation, was recently course general manager since October 1990. Each course was judged in 17 operational and maintenance categories. The named "Golf Course of the Year for 1991," by Golf Course, a Pomona track operated by Golfco. Mundle will assume the role of director of golf To contact Mundle and Asher or to get additional information on Middlefield, call 1-800-540-5550.

VIENNA, Va. — Billy Casper Golf Management, Inc. recently announced that April Brody has been promoted to director of operations. In her new post, Brody will be responsible for monitoring golf club activities such as sales, new memberships and golf rounds on a daily basis. In addition, Brody will compile demographic and market research needed to design club membership programs. She will also develop collateral materials for the club's golf and tennis outings, player development programs and membership solicitation campaigns.

Kris Woodard, owner and developer of Middlefield Village Golf Course in Cottage Grove, Ore., recently announced that Al Mundle will assume the role of director of marketing and instruction. Woodard also announced that Jerry Asher has been appointed Middlefield's director of golf. To contact Mundle and Asher or to get additional information on Middlefield, call 1-800-540-5550.

POMONA, Calif. — Mountain Meadows Golf Course, a Pomona track operated by American Golf Corporation, was recently named "Golf Course of the Year for 1991," by the Los Angeles County Parks and Recreation Department. The new award went to Mountain Meadows for scoring higher than other county-owned facilities over 12 monthly inspections. Each course was judged in 17 operational and maintenance categories.

AGC has operated Mountain Meadows since July 1989 and Greg Davis has been the course general manager since October 1990.

Golf course appraisers organize

A group of real estate appraisers and consultants have formed the Society of Golf Appraisers. SGA consists of real estate appraisers and consultants holding the MAI (Member of the Appraisal Institute) designation who have demonstrated a commitment to and competency in the valuation and analysis of golf facilities and related properties. SGA members have begun programs to initiate golf real estate databases, educational programs for members, identification of members to the golf industry, and standardization of data formats utilized by the golf real estate industry.

More information may be obtained by contacting any of the charter members listed below:

Lawrence Hirsh, Golf Property Analyst, Harrisburg, Pa.; Sam Hines, CB Commer-

April Brody

BRODY PROMOTED AT CASPER

Golf course

appraisers

organize

KUDOS FOR MOUNTAIN MEADOWS

POMONA, Calif. — Mountain Meadows Golf Course, a Pomona track operated by American Golf Corporation, was recently named "Golf Course of the Year for 1991," by the Los Angeles County Parks and Recreation Department. The new award went to Mountain Meadows for scoring higher than other county-owned facilities over 12 monthly inspections. Each course was judged in 17 operational and maintenance categories.

AGC has operated Mountain Meadows since July 1989 and Greg Davis has been the course general manager since October 1990.

HJM, Golf Digest join forces

HJM Corp., a private investment banking company specializing in golf course finance, and Golf Digest magazine have entered into an exclusive agreement under which HJM will produce and market demographic financial feasibility studies for golf facilities using Golf Digest's Data Base of Golf in America.

These proprietary studies provide accurate, first-stage analysis of the demand for golf facilities in every market in the United States and a comprehen-

Country club expenses

Country club income

GOLF COURSE NEWS
One-Minute
Continued from page 31
Blanchard claims they violated the sales agreement by copying and using client lists. He also claims his ex-partners are tapping into Golf University business for their own Golf Academy clientele at Carlsbad's Aviara Resort.
Blanchard is best known as co-author of "The One-Minute Manager," a motivational treatise selling 3 million copies in the U.S. For his golf students, Blanchard advocates techniques similar to those detailed in his book: goal setting, praising and reprimanding.

Appraisers
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HJM and Golf Digest join forces
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HJM and Golf Digest join forces

A manager's accessibility checklist

The Club Managers Association of America compiled the following list of suggestions on how its members can modify structures and services for maximum accessibility. While clubs are not required to provide assistance in the way of personal needs (eating, dressing, using the restroom), the CMAA has encouraged members to exceed the letter of the law.

Outdoor Facilities
- Parking — Provide a drop-off zone in front of the entrance and designate "handicapped parking only" spaces near every exit.
- Paths — Provide smooth paths for wheelchairs and staff to push members in wheelchairs.
- Ramps — Provide ramps cut into curbs and steps.
- Golf — As a special service, clubs could provide golf cars and wheelchairs specially designed for disabled players (contact Retec USA Inc. for more information: 716-662-6815).
- Events — Provide seating with easy access for disabled persons.

Indoor Facilities
- Doorways — Make sure doorways are at least 32 inches wide in order to allow wheelchairs to pass, and check to see that doors open easily.
- Stairways — Install ramps and elevators where possible.
- Carpeting — Install smooth, short-cut carpeting instead of plush for better wheelchair mobility.
- Equipment — Make sure public telephones are low enough to be used by a person in a wheelchair; consider installing phones usable by the speech or hearing impaired.
- Counters — Reception desks should be low enough for a wheelchair-bound person.
- Safety — Provide flashing fire alarms.

Dining
- Seating — Make sure the space between tables is at least 36 inches.
- Menus — The wait staff should be prepared to read a menu to the blind, and provide pad and pen for the speech or hearing-impaired.

Restrooms
- Doorways — Make sure doorways are at least 32 inches wide.
- Stalls — Provide five feet in circular spaces and three feet in T-shaped space for proper wheelchair movement.
- Grab bars —Provide grab bars on both sides of the toilet.
- Sink — Provide 30 inches of open space for wheelchair access.
- Towels — Provide towel dispensers that are no more than 48 inches from the floor.
- Mirrors — Install full-length mirrors.

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CIRCLE 131

GOLF COURSE NEWS
Golf clubs set to comply with Americans with Disabilities Act

Continued from page 1

almost certainly be broadened in coming years, particularly with regard to capital improvements.

Private clubs under IRC 501(c) are exempt from the employer section. However, clubs which host public events and/or find their status questioned by state legislation should be prepared to comply. “Most of our members are already in compliance and doing the best they can,” explained Kathi Driggs, a spokesperson for the Club Managers Association of America. “A majority (60 percent) are not obligated to comply because many are tax-exempt, non-profit clubs. However, we have advised our members to look at ways to comply, if nothing else, for public relations purposes.”

According to the law, clubs will be responsible for providing “reasonable” accommodation of employees or qualified applicants with an impairment.

What constitutes an impairment? A substantial orthopedic, visual, speech or hearing disability; tuberculosis; HIV infection; cerebral palsy; epilepsy; muscular dystrophy; multiple sclerosis; cancer; heart disease; diabetes; mental retardation; emotional or mental illness.

As of July 26, covered employers will also be required to take steps to accommodate the disabled, such as:

• Evaluating the workplace for physical barriers that could be modified for a disabled employee.
• Considering the modification of work schedules and other office routines to accommodate disabled workers.
• Providing staff to assist such workers with reading and interpretation of necessary work papers.
• Auditing all testing and employee procedures to ensure any requirement that may disqualify a disabled employee is truly job-required.

The ADA also requires employers to focus pre-employment inquiries on the ability of the person to do the job; it prohibits asking about a person’s disability or medical history until after a job has been offered.

A few more things to remember:

• Ensure that no able employee is discriminated against in any way because of his or her relationship with someone who would qualify as covered under the ADA.

• If the club provides employee transportation to accommodate great travel distances, it is conceivable that provisions would also have to be made to accommodate disabled employees who wish to use such transportation.

• Medical exams may be required only after a job has been offered and subsequent rejections are allowable only if the impairment shown is job-related. An employer may not require an existing employee to take a medical exam unless the requirement is shown to be related to current job requirements.

In the case of a club employee who handles food and is known to have an infectious disease, a transfer to another work unit may be made — assuming no other accommodation is possible under the current job routine. This does not include HIV, which is a protected disability.

Those employees who formerly had a drug-related problem and are currently recovered cannot be discriminated against. However, anyone currently using controlled substances is not covered by the Act.

For more information about what the ADA requires, clubs can order the Technical Assistance Manual published by the Equal Employment Opportunity Commission. Call 1-800-669-EEOC.

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Look At These Advantages

- **FAST:** Does not lay the topdressing on top of the grass. No brushing is necessary.
- **SAVE:** With a light topdressing 10 greens can be done in less than 2 hours with only 3 passes for average green.
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Greens - Tees - Approaches

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This is the ideal machine to use for spiking. The new double 4" spiking blade does the job so smooth the golfer will never know you've been on the green. It will leave 400 spiking holes in a 3 foot width.
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**With Naiad, you can keep your turf green and irrigate less because...**

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The Naiad method is the easiest way to quench your turf’s thirst and encourage deep root growth.

Naiad allows water to easily infiltrate compacted soil structures and other hard-to-wet areas. Now you can deep water without waste. By increasing soil moisture content, your grounds crew will spend a lot less time treating localized dry spots.

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And, if your existing lakes are showing signs of leakage, it may be time to retrofit with Hypalon® or PVC membrane liners fabricated for both durability and cost effectiveness.

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Backers, skeptics assess mesh-grid technology

By Hal Phillips

Imagine, if you will, a bucket firmly packed with sandy soil. Turn the bucket over and stand atop the resulting "castle" of a dirt. Impossible, right?

Not necessarily. If the soil has been mixed with soil reinforcement meshing, the sandy soil will support your weight — or so say advocates of this fledging technology, designed to alleviate divot damage and increase load-bearing capability while resisting compaction. Its official monitor goes something like this randomly oriented, interlocking mesh, high-sand root zone system for mesh system, for short. And studies from Dr. James Beard and Samuel Silers at Texas A&M vouch for its performance in a wide range of golf course applications.

Mesh systems are fairly simple. Thousands of mesh rectangles (50mm by 100mm) are mixed into soil which occupies the upper four to six inches of a high-sand root zone. For their experimentation, Beard and Siers used Tilroy Bermudagrass. Assessments were conducted four times during each growing season starting in 1985.

"The evidence suggests that mesh elements have an interlocking, three-dimensional aspect that imparts a flexing action," wrote Beard and Siers in a paper presented at this year's GCSAA conference in New Orleans.

Mind you: This is not a one-piece, horizontal system superimposed directly.

Roll call


American Exodus Co., P.O. Box 20678, Arlington, Texas 76011; 817-840-1555.

Atlantic Construction Fabrics, Inc., 1818 A-Willis Road, Richmond, Va. 23227; 804-271-9071.

Belton Industries, 8113 Roswell Road, Atlanta, Ga. 30350; 800-325-4000.

BertTherm America, Inc., P.O. Box 9459, Moscow, Idaho 83843; 800-848-0498.

Bridge Builders/Fox Lake Construction, Inc., 65 Hickory Gap Road, Franklin, N.C. 28734; 704-349-2705.

Contech Construction Products, Inc., 1001 Greene St., Middletown, Ohio 45044; 513-425-6900.

Erosion control manufacturers unite

Fifteen manufacturers of rolled erosion control products have organized the Erosion Control Technology Council to take the lead in establishing standards and use practices for the industry.

Jeff Rodencil of The Tensar Corp. in Morrow, Ga., was elected to a two-year term as ECTC chairman last September. Rodencil, erosion control product manager of Tensar, said there is "confusion in the marketplace" caused by "an explosion" of new products coupled with hundreds of designers and engineers who are specifying erosion control products with no general guidelines. "We want to get the government agencies involved," Rodencil said. "Now we have 50 states (drafting regulations). We want to take the best and standardize across the industry."

The first reports will be given in June by the ECTC's Testing and Evaluation Committee, Product Identification and Classification Committee and Market Information Committee.

Label restrictions in store for atrazine products

By Hal Phillips

The Environmental Protection Agency has accepted a voluntary proposal by Ciba-Geigy to add a number of label restrictions to atrazine products and to carry out additional water monitoring and educational initiatives on this herbicide.

The action was taken by Ciba-Geigy to reduce surface water contamination by atrazine, particularly in waters used for drinking. Three other EPA-registered manufacturers of atrazine products — Drexel Chemical Co., IPC, and Oxon Italia — will also augment their label restrictions.

Atrazine is one of the most widely used herbicides in the United States, according to the EPA, which believes an estimated 85-90 million pounds are applied annually. While its main use is the protection of corn and sorghum crops, atrazine is used in the Carolinas to kill weeds lurking in Bermuda grassways. "Some courses in the Southeast will elect to use atrazine in Bermuda fairways when the grass is dormant, normally in January, February and early March," said Patrick O'Brien, director of the USGA Greens Section, Southeastern Region. "It's used in areas where they don't overseed, but it's very tough on grasses."

Continued on page 38
WASHINGTON, D.C. — University professors, turfgrass specialists, and entomologists addressing recent environmental conference in the nation’s capital agreed the benefits associated with pesticide use far outweigh the risks.

The symposium, sponsored by Responsible Industry for a Sound Environment (RISE), was attended by congressional staff members and regulatory agency representatives who help craft safety and environmental laws. The conference focused on pesticide uses around buildings, turfgrass and for vegetation and right-of-way maintenance.

Fears about pesticides have led communities nationwide to pass ordinances restricting their use. Last year’s Supreme Court decision — allowing communities to pass pesticide laws which conflict with federal (EPA) statutes — has created “a nightmare for industry, consumers and local government,” said U.S. Rep. Charles Hatcher (D-Ga.), whose comments opened the March 26-27 conference.

Hatcher said the potential for “83,000 different sets of laws — or even 2,000 different laws — is almost impossible to administer.” Hatcher is chief sponsor of pending legislation that would place sole regulatory control back in the hands of state and federal governments.

Dr. Frank Dost, former professor at Oregon State University, said products regulation and registration is based on assessing the probability of risk. Despite all safeguards, he said, “Our desire to live in a risk-free society is unattainable. No chemical on earth is non-toxic.”

Other conference speakers included Dr. Tom Watschke, professor of turfgrass science at Penn State University, who said hardy turfgrass filters out pollutants in runoff water; and Dr. David Baker, water quality laboratory director for Hiedelberg College, who said hardy turf production have reduced the potential for pesticide contamination of drinking water.

James named to EPA committee

WASHINGTON, D.C. — Allen James, executive director of Responsible Industry for a Sound Environment (RISE), has been named to the Environmental Protection Agency’s Lawn Care Pesticide Advisory Committee, a 25-member group established to provide advice to EPA and other governmental agencies on policy and technical issues.

The new committee — comprising federal and state government policymakers, industry and business leaders, and consumer and environmental advocates — met for the first time May 12-13, in Annapolis, Md.

For every bag of 18-3-18 you buy, we’ll donate 50¢ to research on groundwater quality.

That’s why we’re donating 50¢ on every bag of Country Club® 18-3-18 to the GCSAA Scholarship & Research Fund, for research on groundwater quality.

Of course, there are other reasons to buy 18-3-18. Including its balanced, one-to-one nitrogen/potassium ratio. And homogeneous granules for

Introducing a fertilizer to help avoid a more serious water hazard.
Erosion control blankets

Continued from page 1 every day, he said.

New environmental laws have helped produce "remarkable growth" among erosion control material manufacturers the last few years, said Tim Lancaster, manager of technical services for North American Green in Evansville, Ind.

"Over the past five years the environmental field in general has just ballooned and we've ridden that ballooning," Lancaster said. "When environmentalists from as far away as Japan are attacking golf course projects, erosion control blankets are a godsend. One such project is Koolau Golf and Country Club on the island of Oahu, where blankets helped save the site from erosion when 134 inches of rain fell from November through May—20 inches during a single two-week period, and eight inches in one day. Developer Minami Group Inc. and architect Dick Nugent Associates of Chicago worked with course superintendent Sean Hoolehan to solve the problem, which was compounded by the silty clay volcanic soils that easily erode.

"Irrigation alone is enough to create erosion," Hoolehan said.

Lancaster said that during construction the irrigation was turned on to discover where the runoff would go. Then, after the fairways were sprayed with Bermudagrass and hydromulched, the crew laid the blanket along those paths.

Because while it might be fun to play over a water hazard, we don't want our groundwater becoming one.

Erosion control blankets

About 10 percent of the Koolau course area required erosion control blankets. The rest was hydromulched to cover and hold moisture.

Nugent said erosion control blankets are "absolutely" more important in this environment-conscious society with its growing number of new laws. "One of the major concerns in runoff," he said. "In Hawaii they (government agencies) were very concerned because we were upstream from a drinking water reservoir. We built a lot of water-retention basins. We dug pockets at the bottoms of our ravines and swales...

"But sod costs three times more expensive not to do it. The project would have been stopped by the government, saying we were contaminating a drinking water reservoir. How much is that worth?"

Nugent added that using blankets is plain "good soil conservation. Where topsoil is being stripped and replaced, it is always at a premium. You can get grass to grow on poor soil with lots of fertilizer. But then you're into a very intensive maintenance program getting grass to continue to grow in a hostile environment."

North American Green reported that after erosion control measures were applied at Koolau, nature proved the theory of establishing grass quickly. On the first fairway, where hydromulch provided the only protection, a two-by-200-foot gully was formed by rainfall and irrigation runoff, requiring expensive rework and reshaping.

On the second fairway, where blankets were used, no significant erosion occurred.

Starrett said: "Most erosion-control practices are geared around vegetation. Vegetation ultimately is what is going to help hold the soil together, so a lot of these products are temporary to make sure the soil is being held in place during germination period to establish a strong root system. "Temporary blankets are more common on golf courses. They are used to expedite germination, plus we have special netting to put over the blanket so you can mow right over it."

Starrett equated the blankets to a miniature greenhouse.

"It keeps out the sun, protects from highwind, breaks up heavy rain drops, and keeps soil temperatures steady," he said. "People see the quick growth and ask what kind of fertilizer we use. We don't use any."

Erosion control blankets can be degradable, biodegradable or non-degradable. Their cost runs from 50 cents to $4 per square yard.

Golf course builders mainly use single-net, quick-degrading straw blankets. Blankets can be bought already impregnated with seed ranging from wildflower to bentgrass.

The mats are made with a variety of materials from straw (which degrades in eight months) to coconut (which degrades in three years) to polypropylene and other materials that are non-degradable.

Starrett added that erosion control blankets are in the construction specifications of the U.S. Army Corps of Engineers, Federal Highway Department, Soil Conservation Service and about every state.

Even nutrient distribution.

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...bentgrass.

lead to death...
Opinions differ on capabilities of mesh reinforcement technology

Continued from page 35

layer similar to those used in sod production.

"One of the problems with the mesh element is confusing it with horizontal layers," said Sifers, a research associate at A&M. "These are random, which gives you the three-dimensional stability. And they're going to stay there. That's the key.

Beard and Sifers believe mesh systems have three immediate, practical golf course applications:

* Divot reduction and recovery — Beard and Sifers assert that mesh systems reduce divot size (particularly with regard to lateral tear), and the replaced divot grows back at twice the rate. The Beard/Sifers study maintains that mesh installation at Santa Anita Park resulted in "an eight- to ten-fold reduction in divoting from intense horse racing."

This is no fable, according to Samuel Stimmel, a former golf course superintendent who manages the Sports Turf Division at Kurtz Bros., an Ohio-based construction and soil mixing firm. Stimmel has used meshing in several different environments, including golf tees, cart paths and athletic fields. Not only does he stand by the bucket test, he's a divot-reduction believer.

"This material does provide a resistance to shearing," Stimmel said. "It also provides a better recovery rate because the three-dimensional structure maintains the crown of the plant. This stuff enables you to enhance stability without sacrificing infiltration."

Yet, not everyone is so sure.

"All mesh products provide marginal capacity to make turf wear more like fake turf, but it's incremental, fractionll," said Dr. Michael Hurdzan, president of Hurdzan Design Group. "When bent grass rips, bent grass rips."

"The best thing to do is build a driving range tee, half with the mesh and half without it. Then let people go at it for a while. That would show us something."

* Cart path alternatives — Beard and Sifers believe mesh installation provides enough soil stabilization to allow "green" cart paths. The mesh technology was developed (in Britain during the late 1960s) to strengthen soil in anticipation of civil construction projects. "Mesh-stabilized turf root zones could prove successful in supporting very heavy load pressures from emergency vehicles," wrote the team of Beard & Sifers, who noted that meshing also provides a more aesthetic alternative to blacktop.

Stimmel stands by this assessment, as well. "Usually, when you run traffic over turf, it makes the turf hard. But with the mesh, it's softer."

"It sounds good," he said. "But it's a claim, not a fact."

* Water retention — Though testing on this attribute has not proved conclusive, Sifers maintains that meshed areas hold moisture better than "untreated" turf.

"Our studies have shown that the moisture content is always a little higher in the meshed areas," said Sifers. "There's been better infiltration, better water retention with the mesh. That's our theory, anyway."

Sifers said these water conservation properties combined with a resistance to compaction have re-searchers curious about green applications. Sifers and his colleagues at A&M have laid mesh elements down in one half of a U.S.G.A.-spec putting surface. Results should be forthcoming this summer, said Sifers.

Until then, Hurdzan remains dubious. "It sounds good," he said. "But it's a claim, not a fact."

According to Stimmel, the meshing runs about $61.50 per pound, and proper application requires about 11 pounds per cubic meter of turf. Stimmel said the meshing worked out to an extra 80 cents per square foot of turf, using a four-inch profile.

However, these figures are not set in stone. "One of our continuing problems has been deciding how much to mix in," said Sifers.

Both Stimmel and Sifers understand there are dubious consumers out there, though Sifers doesn't understand why. "I think they need to have a little knowledge. There's plenty of documentation now," he said.

Hurdzan counters: "If this stuff is so great, why haven't people started using it?"

Stimmel understands the skepticism because, at one time, he was a skeptic.

"I had to point to drawbacks. It would have to be people's perceptions," he said. "People believe you've got to aerify twice a year, but with this stuff, you don't. And that's hard to swallow."

"I'm a former superintendent, and I was dubious at first. But after watching it perform, we were like, "Wait a minute..." And you just keep coming up with applications."

It's the better way to clean and dry golf balls.

What you're looking at is the leading edge of the tee towel technology. But that should come as no surprise. Because these green and tan beauties are the new CHIX® DeluxeTee Towels. They're made by Chicopee, the same people who have manufactured golf's most popular tee towels for more than 25 years. • Take a closer look and you'll see that they have a tough, ribbed texture that's so different.

it's patented. They clean balls quickly.

And they absorb a lot of moisture. • So how well do they work on the course? In a recent nationwide survey, CHIX Deluxe Tee Towels were preferred by eight out of 10 golf course superintendents. We think you'll like them, too. • But you'll never know for sure until you try them for yourself. • For complete information, simply contact your nearby Standard Golf distributor. And put your hands on the best tee towel in golf.

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Sod producers conference July 23-25

CHICAGO — Twenty-five years of development will be highlighted during the American Sod Producers Association Summer Convention and Field Days, scheduled for July 23-25 in Chicago.

The convention opens with educational programs — exploring what the next 25 years may hold — at the Fairmont Hotel. The ASPA Annual Business Meeting, including the election of 1992-93 officers, will be conducted later in the day, followed by the commemorative dinner/dance.

The following morning, the first of two field day programs will be held at Central Sod Farm in Naperville, Ill. Saturday is ASPA Tour Day, which will end with a luncheon.

The ASPA is an independent, international trade association representing some 870 turfgrass sod producers in the U.S., Canada and 21 additional countries. For further information on the ASPA and its summer convention, call 708-705-9898.

Environmental awareness campaign

Continued from page 35

Agri-Diagnostics’ larger campaign, co-sponsored by Ciba-Geigy, the manufacturer of plant protection products, including Exhibit biological larvicide, if superintendents purchase a case of Exhibit by Aug. 15, 1992, a donation will be made toward placement of the advertisement. The advertisement, entitled “Caring For The Earth,” will appear in selected golf publications. A promotional kit containing posters, copies of the advertisement and a press release will be sent to participating superintendents for use in club mailings and other promotions.

“Golfers may not be aware of the effort golf course superintendents put into meeting the twin challenges of keeping golf courses green and protecting the environment,” said Jim Donovan, manager of sales and marketing for Agri-Diagnostics. “Through this campaign, we hope to create public understanding and recognition of the scientific practices and technologies superintendents are applying to safeguard the environment.”

The Reveal Kit is a turf management system that uses immunoassay technology (a process proven effective in medical diagnostics) in a non-traditional way to detect the presence of three widespread turf diseases: brown spot, Pythium blight and dollar spot.

For more information on the campaign, call Donovan at 609-727-4858.

Label changes for atrazine

Continued from page 35

cleaning up winter annual weeds.

“It’s certainly not a major-use chemical, but it’s very popular in North Carolina, particularly the Charlotte area. It’s a good product.”

However, according to the U.S. Geological Survey, atrazine is also the most widely detected pesticide in water monitoring studies in the Midwest corn belt.

Some of the more pertinent label changes, which will be in place for the 1993 crop season, are as follows:

• An application set-back of 200 feet around all natural or impounded waters (reservoirs and lakes).

• A setback of 66 feet from the points where field runoff water enters perennial or intermittent streams and rivers. On highly erodible land, the 66-foot setback must be vegetated.

• All mixing and loading operations must have a 50-foot setback from intermittent streams, rivers, reservoirs, impounded and natural lakes, sink holes and all wells, drainage or abandoned.

According to O’Brien, the label changes are warranted because atrazine “tends to move in the soil.”

However, concerns surrounding golf course application of atrazine are limited, said Dr. B.J. Johnson, a research weed scientist at the University of Georgia.

“This could be a problem, but not as much with turf,” said Johnson. “There’s not quite so much runoff in a golf application. And besides, it’s a regional thing.”

Ciba-Geigy markets an atrazine-based herbicide under the product name, Aatrex. According to Steve Spain, Ciba-Geigy’s product manager for atrazine, the label changes focus on two areas.

“New label will result in a reduction in the total amount of atrazine used, and will address conditions which increase the chance of surface-water runoff from treated fields,” he said. “As a result of these efforts, we are more confident than ever that atrazine use, when managed properly, can continue to be a viable weed control option for growers without compromising water quality.”

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BioTherm introduces TurfTemp system

PETALUMA, Calif. — BioTherm Hydronic, Inc. now offers the new TurfTemp system to control soil media temperatures in golf greens.

Modeled after the successful installation of the fifth green at Pebble Beach Golf Links in nearby Monterey, TurfTemp is now being promoted nationally to address the problems of grass dormancy caused by soil being too cold or too hot.

The TurfTemp System is an outgrowth of technology developed by BioTherm over the last 12 years for controlling climates in botanical gardens and greenhouses around the world. The green system utilizes a series of high performance tubes placed in the soil below cup depth. By circulating warm or chilled heat transfer fluid through these tubes, the system maintains the optimum soil mix temperature.

Settings are made at a special soil-stat located at the heat/chill module which is usually placed near the green. A grid of sensors in the green transmit information to the microprocessor-based control.

To determine the proper TurfTemp package, turf managers are asked to complete a survey on the green in question. Items on the survey include: desired soil temperature, typical winter wind speed, soil type, grass type, fuel type, and the approximate elevation in relation to sea level.

This data is then fed into a computer simulation modeling program that analyzes the information, picks the appropriate package, and breaks down the installation procedure by equipment required and cost of installation. The computerized sizing is a free.

For more information, call 707-762-6425.

Green Sentry fights oil damage

Jacobsen's new Green Sentry oil monitor protects delicate turf on greens and fairways from damage due to hot hydraulic fluid.

The device monitors the flow of oil in the hydraulic system. Should a loss of oil occur, the Green Sentry quickly detects the leak and sounds an alarm to notify the operator.

In addition, the Green Sentry gives the operator important feedback with a front mounted console. Lights on the console keep the operator informed of oil movement through the system.

The monitor is available for Jacobsen's Greens King IV triplex greens mower and LF-100 fairway mower. For more information, call 414-635-1251.

"Since fungus hit the course, even I work on Wednesdays."

Using Tee Time® granular fungicides in properly prescribed doses can go a long way to making your golf course fungus free. For prevention or eradication, make them part of a balanced program of fertilization, irrigation and soil management.

Green Sentries help keep track of short interval maintenance and longer hours of operation — up to 10,000 before rolling over automatically.

Turf Specialties offers core collector for Verti Drain

Turf Specialties Co. has introduced a patented core collector system for Verti Drain Deep Aerators.

Designed to fit model 105.145, the core collector is adaptable to other models on three-point lift.

The patented design is free floating with full bottom and sides. Most of the coring material ejects directly into the container without touching the turf. This process prevents top dressing the material back into the aeration holes. The results are open holes, ready for the sanding process.

The container is also equipped with hydraulic cylinders to rotate and empty material.

Contact Thomas St. Romain at 800-752-5189 for more information.

Energy Kinetics: Counting the minutes

NAPERVILLE, Ill. — Energy Kinetics Inc. offers an inexpensive solution to scheduling equipment maintenance — the EK-200 hour meter.

These meters work for electric or gas-powered vehicles, including golf carts, mowers and other grounds maintenance equipment. No longer do maintenance supervisors have to guess at the number of hours their vehicles and power equipment have been operated since they were last serviced.

The EK-200 hour meters keep track of these intervals. A single meter can be used to chart battery life or the time elapsed between oil/air filter changes. Twin meters can help keep track of short-interval maintenance and longer hours of operation — up to 10,000 before rolling over automatically.

They are electro-mechanical, automotive-quality instruments with three-year warranties. Sealed against dirt or moisture, these shock-proof units are permanently lubricated. They are U.L Recognized and quartz-accurate to within .02 percent. Circuitry is not affected by radio or other electronic interference, and it's overload protected, making it durable and reliable.

Available as a twin-meter unit — or as individual meters with or without brackets — the units are designed for retro fit and easy mount to fender walls. They are shock proof and resistant to fuels, lubricants, chemicals and solvents.

For more information, call 708-357-3770.
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CITY OF SAN JOSE TO ISSUE REQUESTS FOR QUALIFICATIONS
The Dept. of Recreation, Parks & Community Services for the City of San Jose, California, expects to issue a Request for Qualifications on or before July 1, 1992 regarding a potential golf course development within the City. A subsequent Request for Qualifications is expected to be issued for a second site within the buffer lands to the San Jose/Santa Clara Water Pollution Control Plant. Each site is approximately 170 acres. If you are interested in receiving a copy of either Request for Qualifications, please send a facsimile to Cay Denise Carn, Project Manager, at (408) 277-3155 at your earliest convenience, preferably by June 19, 1992.

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Golf Course News
June 1992 41
Free technical guide available to superintendents

Golf course superintendents may now receive a free copy of Rhone-Poulenc's Chipco Turf Problems and Solutions technical reference guide.

This illustrated, 36-page book helps turf professionals to first identify which weed, disease or insect pest is damaging their turf and then directs them to the best methods of cultural and chemical control available.

Superintendents may receive a copy by contacting their local Chipco distributor or Chipco sales representative, who will analyze their specific pest problems and complete the guide's one-page customer profile sheet. This information will be relayed to Rhone-Poulenc so the company can service customer needs more efficiently.

NGF offers four new golf publications

The National Golf Foundation has released several new publications. Lessons Learned from New Municipal Golf Courses in the United States - 1992 Edition is an annual baseline study describing the number, types and locations of facilities and many new details particularly significant for companies providing products and services for golf courses.

Golf Participation in the United States - 1992 Edition offers comprehensive information on the American golfer. Demographics include age, gender, income and occupation broken down by core, occasional, female and junior golfers, with rounds played.

Golf Courses and Country Clubs: A Guide to Appraisal, Market Analysis, Development and Financing offers the developer or appraiser an expert's view of how to conduct appraisals on golf clubs and facilities. Such topics as highest and best-use analysis, cost approach, income approach and sales comparison approach are reviewed and examples given.

To order any NGF publication call 800-733-6006.

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Homestead approval
Continued from page 1

acording to course architect Bob Walker. But Kuras and Walker are confident the course will eventually be built.

“This project has met every standard of law. It has earned the support of the community. And, we look forward to proceeding,” Kuras said.

Michigan is the only state that issues federal wetlands permits because its laws are stricter than federal regulations. Other states rely on the U.S. Army Corps of Engineers. Opponents argue the EPA caved in to lobbying by Gov. Engler, who headed President Bush’s 1988 Michigan campaign. They also believe the federal agency acted illegally in approving the project and that authority to issue the permit now rests with the Army Corps.

The controversy has left some wondering whether Michigan can responsibly continue to administer those laws.

“Now there will be speculation whether developers can do so,” said Jack Berry, golf writer with The Detroit News. “None of the other courses in Michigan have riled things up to this extent.”

But the national office was satisfied.

“Here we established that the state has fully considered the relevant information and has determined that this project will not degrade water quality or aquatic resources,” EPA Assistant Administrator Lajuanna Wilshire said.

A top architect said state and federal regulators have turned a colder shoulder toward Michigan golf development since the Homestead debate began.

“Restictions have been getting tighter because they are more guarded than they used to be,” said Lansing-based architect Jerry Matthews, vice president of the American Society of Golf Course Architects. “They fear the Homestead project might take wetlands regulation out of the state’s hands...The DNR is talking about tightening up on golf courses.”

“Incidents like this are likely to happen again. It has made developers more aware of the time and effort they are likely to put in on a project,” added Jeff Rivard, executive director of the Golf Association of Michigan, representing 200 courses and 50,000 members.

Walker conceded some antagonism may remain and could make it tougher for a few architects and developers to get projects approved.

“But it will help many other people who have found it difficult to get good projects going,” he said. "It will make it easier because this project was approved from a scientific standpoint. It shows there is no environmental damage from golf courses.”

Walker said slight modifications moving holes away from more sensitive areas of the Crystal River were made during the design phase. Just 51 of the 80 acres were wetland filling, he said. Opponents claim the project will affect closer to two dozen wetland acres.

“It was no longer an environmental issue. It was a political issue. The 10,000 cubic yards it will take to fill the wetlands is a very minute amount,” Walker said.

The need for teamwork among developer, architect and regulatory agencies was the main lesson Walker said he took away from the Homestead experience.

"In retrospect, there isn't a single thing we could have done differently," Walker said. "Bob (Kuras) has been through the ringer with this. But he never gave up. Someone has to pave the way and he did it.”

Matthews agreed.

"It wouldn't have been Bob Kuras, it would have been someone else," he said.

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CALENDAR

June
4-6 — Club Industry East at New York. Contact Karen Reynolds-Feld at 800-541-7706.
19 — NGF seminar on Alternative Golf Facilities — The Development and Operation of Ranges and Non-regulation Golf Courses in Falls Church, Va. Contact 401-744-0006.
20 — Lefty 16th Annual Field Day in Martinsville, NJ. Contact 800-525-3900.

July
1 — Cornell Turfgrass Field Day at Pine Island, N.Y. Contact 914-343-1105.
7 — Focus on Wetland Plants seminar in Seattle. Contact 206-685-8003.
25-27 — American Association of Nurserymen Annual Convention and Nursery Industry Trade Show in Columbus, Ohio.
30 — Turfgrass Management for Athletic Fields, Golf Courses and Landscape Seminars in Stillwater, N.Y. Contact 518-783-1229.

August
3-4 — Georgia Golf Course Superintendents Association summer conference at Pine Mountain. Contact 404-789-4976.
5 — West Texas GCSA meeting in Canyon. Contact Pan Deeds at 806-544-8447.
4-6 — Turfgrass Field Diagnostic Course for Golf Course Managers at Cornell University in Ithaca, N.Y. Contact Joanna Guttadaurio at 507-255-1792.
17-19 — Golf East Expo in Orlando, Fla. Contact 800-443-8518.
22 — PGA of America's National Golf Day. Contact Julius Mason at 407-624-8444.

September
20-22 — NGF seminar on Public Private Joint Ventures in Golf Course Development in Newton, Mass. Contact Roger Yaffe at 401-744-6006.
23 — Oklahoma State University Turfgrass Field Day in Stillwater, Okla. Contact Dennis Martin at 405-744-5414.

October
3-6 — GOLF92 International Golf Trade Fair in Dusseldorf, Germany. Contact 312-781-5180.
4-6 — Marketing to Golf Facilities Seminar in Oak Brook, Ill. Contact Rebecca Quinnan, Golf Course News at 301-285-0600.

Continued on page 45
November
1-3 — Public Golf ’92 for Public Golf Facility Managers in Oak Brook, Ill. Contact Rebecca Quinlan, Golf Course News at 207-846-0660.
1-3 — Georgia Golf Course Superintendents Association annual meeting on St. Simons Island. Contact 404-769-8765.

* — For more information or to register, contact Betsy Evans, education coordinator, Golf Course Superintendents Association of America, at 800-472-7575 or 913-841-2240. The seminars are dependent upon the availability of the instructors, and are therefore subject to change. One-day seminars cost $100 for GCSAA members and $120 for non-members; two-day seminars cost $180 for members and $220 for non-members.

Continued from page 44
By Terry Buchen

Golf course superintendents have taken maintenance of sand-filled bunkers to new heights in the 1990s to provide better playing conditions and to make them even more pleasing esthetically.

The ultimate objectives for most sand bunkers are:
• to eliminate hand shoveling of the sand back onto the bunker faces after a significant rainfall;
• to have the bunkers drain fast enough so that players will not encounter casual water;
• to have good and rapid drainage; eliminate the fine particles floating to the surface from the sand/native soil because of puddles of casual water standing for a long period of time; and
• to eliminate using wetting agents to make the sand drain faster, i.e. have the bunker sand bone dry by mid-morning after any type of irrigation the night before.

The water in a series of bunkers in a heavy thunderstorm area does not have to drain more than five feet to any tile line and no more than two feet on a steep slope. Adjustments obviously can be made for other parts of the country and for the severity of the slopes on any individual golf course bunker.

The ALONZI METHOD
Bob Alonzi, superintendent at Winged Foot Golf Club in Galena, Ohio, developed a unique way to restore bunker banks and faces and noses.

He uses a biodegradable burlap bag he discovered in Connecticut, filled with a heavy clay-type soil. After the soil-filled bags are in place and back-filled with a similar native soil, sod can be lain over the bags. This makes it much easier to freely establish the bunker shape as the architect designed it.

The sod system can penetrate the burlap bags, making for easy rooting. The burlap will decompose easily. It is important to bring the new sod over the rounded edge of the burlap bag. After establishment, the sod can be irrigated. The bag size should be larger than 15 by 24 inches for handling ease.

Alonzi’s home work has restored bunkers to their original Tillinghast design.

NEW CONSTRUCTION
A relatively new practice during initial golf course construction is to add bunker sand before seeding. This usually is accomplished by adding the bunker drainage system, adding the bunker sand and spreading to the desired depth, then immediately sodding completely around the bunker while carefully hand-watering so as not to disturb the seed bed adjacent to the bunker and also not to wash any soil from the sod onto the sand surface.

When coordinating between contractor and superintendent, it works well.

On greenside bunkers, there usually is a two-inch lip, facing the green only, so a player can not putt out of it, whereas on the rest of the bunker the sand is raked equal to the top of the lip. On fairway bunkers, the sand is raked to the top of the lips so players have a fair shot, especially on the back side of a bunker.

When sand accumulates on top of the turf from frequent sand shots, many superintendents use an air compressor or high-pressure water hose to blow the sand back into the bunker.

The ultimate method for superintendents is to have the bunkers drain fast enough so players can put out of the bunker. The water in a series of bunkers in a heavy thunderstorm area does not have to drain more than five feet to any tile line and no more than two feet on a steep slope. Adjustments obviously can be made for other parts of the country and for the severity of the slopes on any individual golf course bunker.

A notebook of advice on sand bunkers
Following are some recommendations on maintaining sand bunkers:
• Remove the cultivator bar from the mechanical rake, as it can cause the native soil to mix with the sand when the sand level is too shallow. Also, for playability consider modifying the mechanical rake by use of metal leaf rakes which rake the top surface without “fluffing” the sand. Rake the slopes and edges by hand with a metal leaf rake.

• Most “new” bunker sand takes 90 to 120 days to settle properly. Where appropriate, consider adding sand in the off season to allow it to settle with the least player inconvenience.

• To help the settling process, use a mechanical engine-powered Vibragator machine, wheel tracking with a utility vehicle, letting a hose and sprinkler run frequently inside the bunker, etc.

• Have your bunker sand tested. Contact the USEGA Green Section regional office to learn of bunker sands used at other clubs. This will help provide the proper particle size, shape, color and playability.

• The best playing sand has angular-shaped particles.

• Many superintendents have taken three or four bunker sand samples, sectioned off a bunker, and added each sand separately for players to hit out of them. This provides player reaction and support.

• Take the periodic readings sand depth. Grade stations positioned on five-foot centers check consistency.

• On greenside bunkers, there usually is a two-inch lip, facing the green only, so a player can not put out of it, whereas on the rest of the bunker the sand is raked equal to the top of the lip. On fairway bunkers, the sand is raked to the top of the lips so players have a fair shot, especially on the back side of a bunker.

• When sand accumulates on top of the turf from frequent sand shots, many superintendents use an air compressor or high-pressure water hose to blow the sand back into the bunker.

• Sand accumulates on top of the turf in the direction of play and makes a top dressing, which is “very annoying to the player.” Many superintendents strip the sod from the top of the bunker, remove the accumulated bunker sand, then reseed the top to “put the bunker shape back, as the architect/designer intended it to play.”

This usually happens on older, established courses after years of use. Other superintendents strip the turf level each year provides a dramatic visual and playability effect.

Bob Alonzi, superintendent at Winged Foot Golf Club in Mamaroneck, N.Y., has developed a unique way to restore bunker banks and faces and noses.

He uses a biodegradable burlap bag he discovered in Connecticut, filled with a heavy clay-type soil. After the soil-filled bags are in place and back-filled with a similar native soil, sod can be lain over the bags. This makes it much easier to freely establish the bunker shape as the architect designed it.

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Alonzi’s home work has restored bunkers to their original Tillinghast design.
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