

Issue 29 | Fall 2016

# BY DESIGN



Excellence in Golf Design from the American Society of Golf Course Architects

## Fostering innovation

Also: Robert Trent Jones, Sr. • New ASGCA Associates • GPS Technologies • Bob Cupp



With a singular focus on irrigation since 1933, thousands of courses around the world have discovered the superior performance of Rain Bird. Learn more at [www.rainbird.com/golf](http://www.rainbird.com/golf).

# Weathering the storm with the Rain Bird® IC System.™

## That's intelligent.



### Industry-leading technology means superior robustness to lightning.

Rain Bird's IC System brings generations of experience and innovation in surge protection and ground system design to every installation to minimize damage and disruption from the inevitable. You never know when lightning will strike, but with Rain Bird, you will be ready.



# RAIN BIRD®

## Constant change

I began a recent note to my fellow ASGCA members with a quote from John F. Kennedy: "Change is the law of life. And those who look only to the past or present are certain to miss the future."

Change is a constant in the golf industry, whether it be refining the rules, rethinking our playing surfaces or reinventing the game. Continuing the theme of our Donald Ross Roundtable discussion at this year's ASGCA Annual Meeting, our cover story for this issue of *By Design* sees us asking leading figures in the industry about those changing factors that are driving innovation in golf, and how they shape their organizations to succeed. Turn to p. 12 to find out what they said.

Elsewhere in this issue, we reflect on the lives of two of ASGCA's finest names. Bob Cupp died in August and has been described by many as a 'renaissance man'—not just a golfer and golf course architect, but also a fine craftsman, writer and musician (p. 10). And in the first in a new series of profiles of the ASGCA founding members, we consider the life and work of the legendary Robert Trent Jones, Sr. (p. 18), who was instrumental in elevating the status of the profession of golf course architecture.

We also hear more about two architects who are beginning their journey with the ASGCA. David Johnson and Todd Schoeder (p. 22) have built strong portfolios of golf designs, and we are delighted to welcome them as ASGCA Associates.

I hope you enjoy the issue.



Greg Martin  
President  
American Society of Golf Course Architects

## BY DESIGN

Editor and Publisher: Toby Ingleton

Design: Bruce Graham

Editorial contributors: Patrick Burton, ASGCA Associate; Sean Dudley; Marc Whitney

ASGCA Staff: Chad Ritterbusch; Therese Suslick; Mike Shefky; Aileen Smith; Marc Whitney

Photography: Alex Ferro/Rio 2016; Dale Horchner; Dave Sansom; Gary Kellner/PGA of America; Getty Images; Marty Moore; NCGA/Joann Dost

Subscribe to *By Design* at [www.tudor-rose.co.uk/bydesign](http://www.tudor-rose.co.uk/bydesign)

© 2016 American Society of Golf Course Architects. All rights reserved. [www.asgca.org](http://www.asgca.org)

*By Design* is sponsored by:



## CONTENTS

### Digest 4

A round up of industry news, including a recent survey that reveals a significant fall in water use on U.S. golf courses.

### Bob Cupp 10

A remembrance of Bob Cupp, Past President and Fellow of ASGCA.

### Innovation 12

*By Design* asks golf industry leaders about the factors driving innovation, and how they go about fostering innovation in their businesses.

### GPS Technologies 18

Patrick Burton, ASGCA Associate, on GPS technologies in golf design.

### Robert Trent Jones, Sr. 20

As the Ryder Cup at Hazeltine National approaches, we profile the life and work of Robert Trent Jones, Sr.

### New associates 24

*By Design* learns more about two new ASGCA Associate members, David Johnson and Todd Schoeder.

### Five to finish 28

We pose our five questions to Greg Letsche, ASGCA, of Ernie Els Design.

## COVER



The 2016 Ryder Cup will be played at Hazeltine National, designed by ASGCA founding member Robert Trent Jones, Sr. Read more on page 18



## U.S. golf courses using less water

Photo: NCGA/Joann Dost



Photo: Marty Moore



ASGCA members have completed projects focused on reducing water use at courses throughout the United States, including (clockwise, from top left) Poppy Hills, Los Robles Greens, Charleston Springs and Birnham Wood

**G**olf course superintendents used 21.8 per cent less water overall, and just 1.44 percent of all irrigated water in the U.S., to maintain their courses in 2013 compared with usage in 2005.

This is according to survey data from the Golf Course Superintendents Association of America (GCSAA), which collected results from nearly 2,000 golf course superintendents. These were then analyzed by scientists at PACE Turf and the National Golf Foundation.

“This study shows us that the golf industry has been addressing water issues for some time and is realizing positive results,” said Wendy Gelernter, co-owner of PACE

Turf. “The numbers show that golf course superintendents across the country have reduced water consumption. There is always room for improvement, however; and I think we will see even less water being used and fewer acres being irrigated in the years ahead.”

Other findings include a 33 per cent increase in recycled water use, and greater water savings through turf reduction and technologies such as computer-controlled targeted irrigation systems and sensors that measure soil moisture.

The study also found that water usage was at its lowest in the northeastern part of the U.S. The highest was in the southeast and

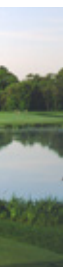
southwest of the country, where year-round play and turf growth is possible.

“The golf course superintendent profession is committed to science-based technologies and environmental stewardship,” said Rhett Evans, CEO of GCSAA. “We hope that this national study will demonstrate our commitment to efficient water management and inspire the industry to continue to lead in the future.”

Golf & Water: Case Studies in Water Stewardship is available as a free download at [www.asgca.org/free-publications](http://www.asgca.org/free-publications). Print copies of the book are available for purchase at Amazon.com, see <http://tinyurl.com/zpxsbgb>.







## Fought leads water reductions at Ironwood CC



John Fought, ASGCA, is leading a water reduction project at Ironwood CC in Palm Desert, California.

Courses in California are dealing with a drought and negotiating a number of state mandates. Ironwood CC is one of a number of courses in the state committed to removing areas of turf and surface water across the course.

More than 10 acres will be removed this year, and around 40 acres of irrigated turf and surface water will be removed over three years on the club's South Course.

## Interview

# A team effort

Construction work at Rockwood Park Golf Course in Fort Worth, Texas, is now in full swing. New tees, greens and bunkers have been added to the front nine, and now John Colligan, ASGCA, and his project team are switching their focus to the back nine.

## What have been the biggest challenges of the Rockwood project?

The biggest challenge has been Mother Nature. The 1938 John Bredemus design was very flat with no subsurface drainage and there was over 20 inches of rain during the first part of the summer, along with temperatures which were much cooler than normal. The cooler temperatures set back the turf farms which created a big demand when the grass was ready to harvest.

## How have you met these challenges?

Our contractor, Heritage Links, has brought on more manpower and the City of Fort Worth has added more funds for extra labor, an increased sprig rate and more sod. In addition, the city has been flexible with the opening date in order to give the superintendent, Bill Strum, more time to get the course ready. It has been a great team effort!



## What do you believe is the most interesting part of the project?

I feel that the most interesting part starts with the rerouting of the course. My associate, Trey Kemp, has created a routing which will hold its own against any course, public or private, in the Dallas and Fort Worth area and beyond. Trey has reversed the direction of several holes, and combined elements of par three and four holes to create a new par five hole. We located an aerial of the course from the early 1940s that allowed us to document the original Bredemus bunker style and inspired many of the quirky green shapes that we have added to the routing. We also created some of the most interestingly subtle green floors to be found anywhere.





# TURFONOMICS™

## Chapter 1

### **TORO® INFINITY® SERIES GOLF SPRINKLERS** **Countless Benefits. Infinite Possibilities.**

The opportunities are limitless with the new Toro INFINITY Series golf sprinkler. From immediate convenience, compatibility and labor savings to extra capacity for future technologies, INFINITY keeps you ahead of the game for decades to come.

**It's simple Turfonomics.**



[toro.com/infinity](http://toro.com/infinity)

#### **TOP LINE THINKING**

The new patented INFINITY® Series changes everything for the better: course quality, workload and most important, no interruption of play.

Calculate the money you'll save by cutting sprinkler maintenance from hours to minutes. And just think about how much better your course will look when you replace shovels with screwdrivers. No holes or piles of dirt to draw unwanted attention from players or the Greens Committee.

#### **BOTTOM LINE THINKING**

The new INFINITY® Series is built for expansion, not replacement — it's a truly sustainable investment that pays off in cost savings today and has extra capacity for new technologies in the future. With the patented SMART ACCESS® you can access all sprinkler components from the top, and adding new capabilities is just as easy, making the future a welcome change.



#### **REAL WORLD THINKING**

The benefits to course maintenance and quality are countless, but it's the professional benefits that really make the INFINITY® Series the smart choice. The latest innovation from TORO, INFINITY® lets you truly manage your work crews, budgets and course improvements now and in the future. That not only helps you keep your course looking and playing its best, it makes you look pretty good, too.



Learn more at:  
[toro.com/turfonomics](http://toro.com/turfonomics)



## Vietnam

## Schmidt-Curley creating new Vietnam course

Schmidt-Curley Design (ASGCA Past President Lee Schmidt and Brian Curley, ASGCA) has been hired to create a new 18-hole golf course near Ha Long Bay, Vietnam.

Working alongside FLC Group for the second time, the new course will be built on a mountainous site with views over Ha Long Bay, a UNESCO World Heritage site.

The site features significant elevation change, a number of rocky outcrops and mature native vegetation.

“We are very fortunate and honored to continue our maiden efforts into the Vietnam golf market with the FLC Group, a team with enormous vision that has its sights set on creating fantastic golf on world-class properties that will soon be at the forefront of the traveling golfer’s list of must-play destinations,” said Curley.

The course is expected to be completed by the end of 2016, with a scheduled opening in 2017.

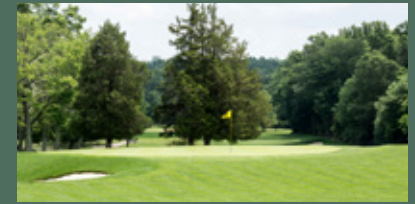


Schmidt-Curley's new course will overlook the Ha Long Bay UNESCO World Heritage site

### Wilczynski adding new holes at Indian Trails

Chris Wilczynski, ASGCA, is leading a project at Indian Trails Golf Course in Grand Rapids, Michigan, which will see the construction of five new holes. The Saline-based architect has drawn up plans that also include the creation of a new practice facility.

### East Orange project reaches completion



Stephen Kay, ASGCA, has completed an extensive project at East Orange Golf Club in New Jersey. “The goal of the renovation was to restore the old-fashioned charm of the golf course and make it appealing to players of all abilities,” said Kay. “We have recreated a player-friendly and aesthetically appealing golf course that is affordable and allows for a relatively brisk pace of play.”

## Olympic golf

## Golf makes successful Olympic return

Golf’s return to the Summer Olympics was met with wide acclaim, following gold medal wins for Justin Rose and Inbee Park.

*Sports Media Watch* reported that a 90-minute window of final round coverage on NBC and the Golf Channel recorded a 6.3 overnight rating, the second-highest rating for golf in 2016. Only April’s Masters tournament scored higher.

Two of the higher-profile absentees from the Olympic golf tournament, Rory McIlroy and Jordan Speith, were positive following the Games. “To see the crowds and see the turnout, I was glad to be somewhat proven wrong,”

said McIlroy. “The golf course was beautiful, and then the Olympic glory at the end of it,” Speith told *USA Today*.

The Olympic golf course, designed by Gil Hanse, ASGCA, was well received by players. “I think it exceeded everyone’s expectations,” said Canada’s Graham Delaet.

It also proved to be a wildlife haven, with carujas (owls) burrowing in the bunkers, capybaras (large rodents), snakes, small crocodiles and monkeys all spotted during play. The course achieved Golf Environment Organization (GEO) Certified Development status for its commitment to improving the

environment and golfing opportunities for local communities in Rio.

In a report by Alan Shipnuck on *Golf.com*, Marcio Galvao, the executive director of the Brazilian Golf Confederation, says the course will be “a vehicle for social inclusion.” The report explains that teenagers from the favela will be steered towards a caddie-training program and highlights the career opportunities created. “We have never seen Brazil so excited about golf,” continued Galvao. “A legacy has been created for us, and we intend to honor it.” The course will open to the public in October 2016.



# Meeting your challenges from every angle.

**EROSION CONTROL • VEGETATIVE ESTABLISHMENT • ROOTZONE DEVELOPMENT**



For any site condition you might face, we are here to meet that challenge. Nasty soil. Out-of-spec sands. Vertical embankments. Near-drought conditions. Monsoon rains. As the world's largest manufacturer of erosion control,

turf establishment and soil amendment products, Profile is backed by a team of experts and a global distribution network. You can count on ProfileGolf™ to bring the know-how anywhere in the world to deliver holistic, cost-effective solutions.

**Contact Us for On-Site Consultation and Soil Evaluation.**

[golf@profileproducts.com](mailto:golf@profileproducts.com) • [www.profilegolf.com](http://www.profilegolf.com) • 800.207.6457



*Solutions for your Environment™*



## Canada

## Carrick's new Lebovic course opens for play

A new 18-hole course designed by Carrick Design has opened for play in Aurora, Canada.

The firm has been involved with the creation of the Lebovic Golf Club since the mid-1990s, when the first set of plans for the design were drawn up. However, a series of delays meant that construction didn't end up getting underway until 2012.

"There are no creeks or anything like that running through the property, and something unique about the project was that we were not allowed to use any groundwater from the aquifer beneath the course, even though ironically it sits on one of largest underground aquifers in Ontario," ASGCA Past President Doug Carrick said.

Carrick described the site as 'compact,' with a number of environmental features that he and his team have worked to preserve. "The course has turned out very well, and the fact that it is fairly compact and walkable is a good feature," he said. "It's not overly long, and includes five par three holes and three par five holes."

Carrick and design associate Steve Vanderploeg worked to draw up the designs and oversaw the course taking shape. The project team's aim was to develop a somewhat traditional look.

"The course has square tees and small, relatively simple shaped bunkers—more like pot bunkers if you will," Carrick added. "They're not overly elaborate or big, which

should help some of the maintenance costs. The superintendent has done a fantastic job growing in the course, and it really is in great condition."



Carrick drew up the original plans for Lebovic GC in the mid-1990s

## Colorado

## Schaupeter designs new TPC Colorado course

Construction is in progress on a new TPC Colorado course near Berthoud, Colorado, a design from Art Schaupeter, ASGCA, a 1990 University of Colorado graduate. A grand opening is scheduled for 2018.

"The site features dramatic mountain views of the Front Range and in particular Long's Peak, as well as views across three large water bodies—McNeil, Welch and Lonetree reservoirs," said Schaupeter, adding that eight holes are positioned alongside these bodies of water.

"Holes 13, 14 and 15 will provide great challenges and great opportunities for the players as they consist of the longest par five hole, the longest par three hole and finally the shortest, most reachable par five hole on the course. Birdies, eagles, bogies and double bogies will all be in play on this stretch of holes."



TPC Colorado is the first new course to be built in the state this decade



# A renaissance man

By *Design* reflects on the life of Bob Cupp, a Past President and Fellow of ASGCA, who died Aug. 19, 2016

“Bob Cupp was a renaissance man,” says ASGCA President Greg Martin. “He was a poet and author, golf course architect and musician, he loved to tell tales and offer opinions. Bob was a famed golf course architect, mentor to many and friend to all. As a member and as ASGCA President, he provided lyrical perspective during some deeply challenging years.”

A published author, Cupp wrote *The Edict: A Novel from the Beginnings of Golf*, for Random House. He also co-authored *Golf's Grand Design*, a conversation on the history and evolution of golf course architecture and companion book to the PBS television show of the same name, with *Golf Digest* Architecture Senior Editor Ron Whitten.

An artist (Cupp illustrated baseball Hall of Famer Ted Williams' instructional book, *The Science of Hitting*), blacksmith, writer and musician, Cupp himself wrote that in recent years he continued “to draw and paint, play golf, build

furniture, sing, play the guitar and torture a cello.”

It was after a brief career as a professional golfer that Cupp began designing golf courses. He worked with Jack Nicklaus, ASGCA Fellow, as a senior designer for more than 15 years before forming his own

“Bob was terrific at what he did and added so much pleasure to the game not only through his designs, but also with his fun-loving personality and charm

firm. Nicklaus says: “Bob was terrific at what he did and added so much pleasure to the game not only through his designs, but also with his fun-loving personality and charm. We hope that Bob will be remembered for all the great things he did, and how he lived his life, which in my opinion was very special.”

Cupp's courses have hosted more than 50 national and international championships and in 1992 *Golf World* recognized Cupp as its first-ever Golf Architect of the Year. His work over the years included joint projects with his son, Bobby, a golf course architect and builder.

Cupp's legacy includes a fine portfolio of golf course designs, “incredible ones,” says Whitten, “including Crosswater and Pumpkin Ridge in Oregon, Old Waverly in Mississippi, Liberty National in New Jersey, Indianwood New in Michigan, Beacon Hall and Mad River in Canada, and Marietta,





Bob Cupp designed Liberty National Golf Club (main pic) in Jersey City, New Jersey, a complex engineering project on a landfill site. The course hosted the PGA Tour in 2009 and 2013. Other notable designs include Marietta Country Club, near Atlanta (below)



Photos: © 2013-2016 Dave Sansom

Settindown Creek, Brookhaven and Hawks Ridge, all near Atlanta.”

He has also inspired many along the way. Billy Fuller, ASGCA, was previously the golf course superintendent at Augusta National. Cupp was instrumental in his journey to becoming a golf course architect: “He alone allowed me to realize that dream,” says Fuller. “He taught me one masterpiece at a time. I never tired of listening to and learning from his wisdom about golf and about life. As we traveled millions of miles together we covered every nook and cranny of our lives. We laughed and cried together through life’s ups and downs.”

Cupp was a mentor to many of today’s ASGCA members, imparting valued guidance and advice on their career journeys, which will ensure that his design philosophies will live on.

“To say that he was my mentor is accurate,” says Bill Bergin, ASGCA, “but it is also too limited. The lessons learned from Bob Cupp have fermented and ripened over the years

in ways I never could have imagined. Bob Cupp lived a big full life, and my life is fuller for having been guided by such a talented, generous man.”

“I had the fortune to work for Bob from 1989-97,” adds David Johnson, ASGCA Associate. “He was the ideal mentor, brilliant in his approach to golf course design. He was a tireless worker and seemed to excel at everything—athletically, artistically, musically, storytelling, woodworking and, of course, golf course design.”

Nathan Grace, ASGCA Associate, reflects on his first meeting with Cupp in 1994, while working as an assistant golf professional at Old Waverly in West Point, Mississippi. Cupp had designed the course in the late 1980s and was visiting to help get it ready for a USGA visit. On hearing of Grace’s desire to become an architect, Cupp responded “Good luck! It’s a tough business to get into.”

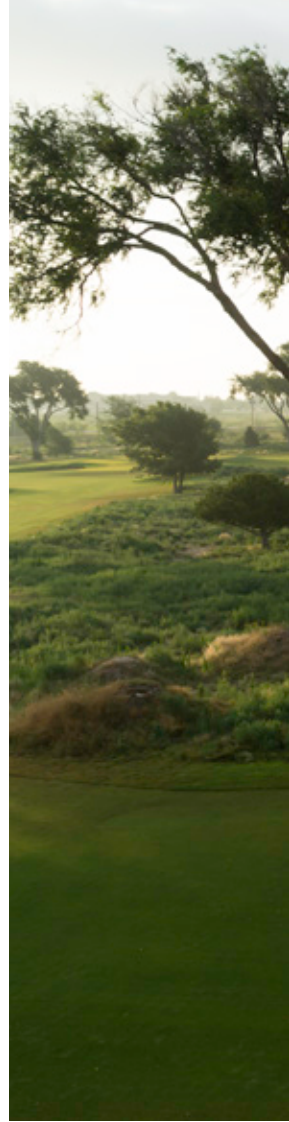
Initially somewhat knocked back, Grace describes how Cupp in fact went on to follow the progress of his career, providing encouragement and

guidance along the way, culminating in his nomination of Grace for ASGCA membership (read more at <https://lipouts.wordpress.com/>).

In recent correspondence with ASGCA Executive Director Chad Ritterbusch, Cupp described the ASGCA as “an important and meaningful part of my life.” He continued: “So many are close friends and it has been a very special privilege to observe our industry in such complete detail. It is clear we live parallel lives perhaps more closely than most want to admit and it seems to me that understanding this fact may be the single key to making our brotherhood as good as it can be. It’s about appreciating your competitors, not the converse. Knowing we fight most of the same battles, experience similar disappointments or euphoria and make our way with our individual talents in a spirit of good will should be the crux of our fellowship. In my estimation, we are well along in that accomplishment.” ●

# Thriving on change

The Donald Ross Roundtable meeting at the 2016 ASGCA Annual Meeting brought golf leaders together to discuss innovation. Toby Ingleton spoke with some of the participants to discover their views on the forces driving change in the industry, and how they are fostering innovation in their organizations



**A**ny parent of a teenager fully understands that the world is changing. Smart devices and social media play, to those brought up pre-Internet, what seems like an extraordinarily significant part in young people's lives. Everything is shared, from the trivial to the momentous.

In business, Internet-connected sensors can be attached to anything, generating mountains of data, from which information can be extracted that improves business processes and decision-making.

Such cultural change is already having an impact on golf, gradually for now, but it could be a groundswell as those who have been brought up in the connected world enter the workforce and become the driving force of the economy.

The impacts are uncertain, but what is clear is that the golf industry is more likely to thrive if it copes well with change. Golf's leading businesses recognize this, and are

working hard to understand the key drivers for change and to foster innovation in their organizations.

## New dynamics

The changing dynamics of family life—with activities increasingly prioritized towards the young—is clearly altering the thinking of golf businesses. “New household composition and changing lifestyles offer an opportunity for golf to regain some ground by becoming more inclusive in their offerings,” says Scott Lamont, principal at development planning and landscape architecture firm EDSA. “This means incorporating an improved variety of activities to complement golf offerings—from fitness, spa/wellness, and family activities to casual dining and community gathering places.

“Golf facilities need to be family oriented, offering activities that appeal to multiple age ranges and

abilities. Mom can enjoy a fitness class, Dad and a child may putt a few holes or practice on the range, while other family members might try a water activity and all meet back for lunch as a group.

“Part of the market's fluctuating preferences includes a move toward casual socialization and a workforce with a tighter timetable. With this in mind, facilities can reinvent their traditional 18-hole course with a shorter version that gives the ‘total golf experience’ without the usual time allotment. Make time spent on the course—whether that is an exec course, or practice on the range—thoroughly enjoyable from start to finish.”

Adapting to a changing market can be challenging. “I do not think baby boomers and traditionalists are going to push for the change we need to put golf in a growth mode again,” warns Dana Garmany, chairman and CEO of leading club operator Troon Golf.





“Personally, as a boomer, I embrace change and innovation, and we do all we can to be the tip of the spear promoting change. But we can’t do it alone, and I don’t see significant change coming until the 30-to-35 year olds of today start being the power base of our industry.”

### Enduring challenges

Some of the biggest drivers for change, however, are in areas where the golf industry has been working hard for some time.

Dana Lonn, managing director of the Center for Advanced Turf Technology at The Toro Company, says that for over ten years they have been working on innovation around three primary issues: water use efficiency, labor productivity and environment.

“There’s no doubt in my mind that water is the number one issue,” says Lonn. “Look at it on a global scale—there are seven billion people

on earth today, and that figure is rapidly growing. There is barely enough water today for the people that exist on earth. Where’s the high quality water going to go? It’ll go to the people, and the production of food for people. It has to. So there’s going to be ongoing pressure to use less, and also to use water that people can’t use.”

Lonn explains golf’s water issue through the analogy of a car’s fuel tank. “There are two pieces of information you use to decide when you are going to put fuel in your car: how close it is to running out, and how far you are going to go. You may be close to empty, but if you’re not going very far you don’t necessarily worry about it.”

His team’s efforts are therefore focused around allowing water in soil—the golf course’s fuel tank—to deplete more.

But, Lonn explains, if your fuel gauge is broken, you’ll keep the tank full.

## INNOVATION IN PRACTICE

### A community links

A municipal golf course operated by the city of Hobbs, New Mexico was operating inefficiently, facing rising expenses and falling player numbers.

Andy Staples, ASGCA, introduced the city to the innovative sustainable design philosophy of a ‘Community Links,’ whereby the golf course would be an asset for all residents, including non-golfers, and would use resources efficiently, particularly important in a region where water is precious.

In collaboration with the community and project partners, Staples greatly improved the existing golf course, while expanding the facility—Rockwind Community Links—to attract more kids and families. This included the integration of walking trails, picnic areas, expanded outdoor public-use space, revitalized beginner golf programs, and a First Tee junior golf program.

A new nine-hole par-three kids’ course was added, and the practice facility was expanded.

The new five-acre lake, designed to retain 14 million gallons of effluent water, is a feature of the public-use space near the clubhouse, benefiting the entire community, and enticing residents to take interest in the game.

*For more innovative golf projects, download the special edition of By Design devoted to the 2016 Design Excellence Recognition Program via [www.asgca.org/by-design](http://www.asgca.org/by-design).*





“The innovations need to be around doing the least—separating irrigation events as much as possible. How do I interact as much as I can with what nature is going to do? It’s a drive towards precision—so we have to measure rather than guess, using soil moisture sensors and weather forecasting models.”

Stuart Hackwell, international sales manager for golf at Rain Bird, echoes the point. “It means increased attention on how much and when to

water, and that requires better ‘data’ on soil conditions, irrigation timing and improved sprinkler efficiency.”

## Technology developments

Hackwell highlights the development of communication technologies as an enabler for products such as their MI Series Mobile Controller, which is Internet-based, app-like software that allows superintendents to manage all of their irrigation settings with a smartphone or tablet. “This became possible as cellular data communication speed improved and smartphones became popular.”

Lonn too recognizes the importance of advances in other industries. “There’s so much activity around autonomous driving, for example,” he says. “Every motor company is testing

it, as are the likes of Google.” The same technologies can be applied to automated mowing equipment. “If the automotive industry advances, we benefit from improvements in cost, reliability, and robustness.”

It’s clear that environmental issues are a significant area of focus for innovation. “We see a much greater harmony between golf and nature,” says Jeff Langner, brand manager at Profile Products, “utilizing more natural habitats and using fewer inputs to be a better steward of the environment on a golf course site.

“Architects are striving to create areas that provide greater benefits to the surrounding land; and doing things like utilizing native grasses and working with the natural contours of a course.

## INNOVATION IN PRACTICE

### Wise with water

At Olivas Links Golf Course in Ventura, California, Forrest Richardson, ASGCA, provided a design solution that enabled the club to reduce the amount of water it uses for irrigation, and introduced out-of-play landscape plantings that would most effectively tolerate its reclaimed water source.

The course became one of the first in the Western United States to be planted with salt-tolerant Paspalum, which thrives with higher salt content in irrigation water (as tends to be the case with reclaimed water) and is drought tolerant.

The re-routing resulted in a better diversity of holes of varying direction and nearly 40 percent less managed turf area.

*To read about more innovative golf projects relating to water use efficiency, download*

*Golf & Water: Case Studies in Water Stewardship for free at [www.asgca.org/free-publications](http://www.asgca.org/free-publications). Print copies of the book are available for purchase at Amazon.com, see <http://tinyurl.com/zpxsbgb>.*





“As a supplier to the industry, we have worked to create products that specifically improve native soils to offer a better growing environment for plants; we have products that can reduce fertilizer leaching, products that reduce erosion and sediment control, products that offer vegetation in lieu of using rock or concrete.

“Education on new technologies will open the door to some very innovative designs over the coming years,” adds Langner. “Architects are working hard to be viewed as environmental stewards and that is a trend we see overall with the golf industry—educating the marketplace on the myriad benefits that golf provides to the environment.”

Technology is crucial to golf’s efforts to improving environmental stewardship.

“The golf course industry is already at the cutting-edge of sustainability efforts with innovations in resource management increasing at a rapid pace,” says Lamont. “With water use and re-use, storm water and drainage management along with overall environmental sensitivity becoming an increasing concern, technology and data must be utilized as never before in order to make smart decisions.”

### **Fostering innovation**

So how do golf’s leading organizations foster innovation, shaping themselves to capitalize on new technologies and cope well with change?

Langner says: “We work closely with golf course architects, builders, and superintendents to identify issues and problems that they encounter during construction and renovation. When we identify these issues we work closely with our R&D and technical departments to be able to come up with potential solutions to these problems.

“We focus a lot of our efforts on lab testing, field trials, and test plots at our in-house research facility to make sure the product solutions are viable, unique, and important to the customers. We have many great technologies currently, but each

Often a super-cool idea comes from something as simple as a customer saying ‘I wish I could do this...’”

Hackwell explains that Rain Bird’s Temporary Station Adjust feature, which allows irrigation managers to adjust individual station run times for specified periods, before returning to the original setting, was one such result of a user suggestion. “It’s a simple and brilliant way to ensure that the system is optimized without making it difficult for the user. And now every Rain Bird system user installed during the past 20 years has that feature in their software.”

### **Corporate culture**

Leading golf businesses also work hard at building a culture of innovation. “We have advisory groups within our corporate and field structures where we have regular meetings on innovation. We also reward our associates for bringing forward ideas we can test,” says Garmany. “Our mantra is change is a good and positive thing and we should all work towards making our sport more fun.”

“At EDSA we have built our success on a foundation of proactive collaboration and ideation on a flat plane—fostering innovation begins

// Education on new technologies will open the door to some very innovative designs over the coming years

has the potential to be modified or improved in some way to provide even greater benefit to meeting the changing needs and demands of the golf industry.”

Hackwell agrees: “Our innovation comes primarily from customer feedback and input. While our team is out on the golf course with irrigation managers, they learn about situations that maintenance personnel are trying to manage and then feed that information back to our product development experts.

with fostering collaboration,” says Lamont. “Our founder Ed. Stone Jr. believed that learning was not top down, that you could ‘learn anything, from anyone.’ We have taken this sentiment of continuous, horizontal learning and collaboration and applied it firm-wide.

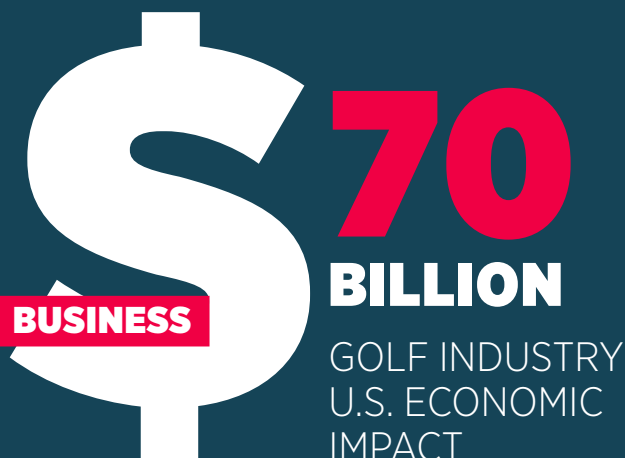
“One of EDSA’s strengths comes from our ability to draw innovation from all aspects of life—be it art, architecture or cultural tradition. Because of our global reach, travels and experience we are exposed to





# GOLF BY THE NUMBERS

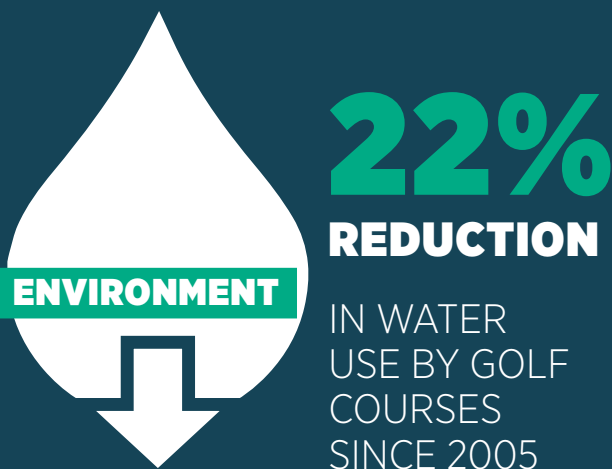
THE GAME OF GOLF REMAINS STRONG. AS THESE STATISTICS FROM ASGCA, GOLF 20/20 AND WE ARE GOLF ILLUSTRATE, MORE GOLFERS ARE PLAYING MORE OFTEN, AND LIKELY ON A COURSE TOUCHED BY AN ASGCA MEMBER.



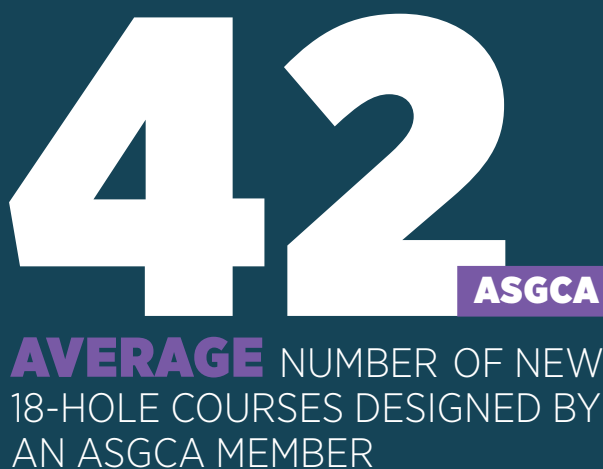
- 2 million – U.S. jobs with direct ties to golf
- \$3.9 billion – Annual amount raised by golf industry for charity (more than all other sports combined)
- 76% – Golf played on public courses



- 2 million – Those trying golf for the first time in 2015 (more than any year since 2002)
- 29% – Increase in number of youth golfers ages 6 to 17 in the past three years



- 65% – Golf course facilities who have upgraded irrigation systems in the past 10 years
- 77% – 18-hole U.S. golf facilities that have taken steps to conserve energy



- 96% – Advise clients on water quality/availability
- 93% – Help clients improve/expand practice areas
- 93% – Add tees to accommodate juniors, women & new players

DATA COURTESY OF

**WORLD GOLF**  
FOUNDATION

these daily inspirations and are actively discovering new things—technology, communication, process, design—and sharing them with each other without letting boundaries, titles, or status block the path to cutting-edge innovation.

“In addition to our culture of collaboration, discovery and continual learning, EDSA is on the vanguard of sustainability and performance-based design. Our Performance Metrics Approach helps us achieve thoughtful and innovative solutions while also improving our sustainability ‘IQ’. It is a framework that relies on frontend information to set measurable benchmarks.

“It comes down to each of us pushing the other to go above and beyond. We inspire and encourage

each other to constantly and consistently improve our craft,” continues Lamont.

Partnerships are important too, though it can be challenging to identify those with a shared vision. “The struggle is finding the early adopters,” says Lonn, “the people who are really willing to push the envelope and to experiment. Sometimes when you are early on that curve you try and fail. That’s hard, particularly in the private club world.

“For some of these technological innovations you’ve got to have a long timeframe in which to look at them. Hybrid vehicles are a good example—you have to be willing to make some kind of upfront investment and expect the payback to happen over time. That’s what’s necessary to foster innovation.” ●

*At its 2016 Annual Meeting, ASGCA hosted the second Donald Ross Roundtable meeting, gathering representatives from leading golf businesses to discuss and share knowledge around key drivers for change in the industry, and areas of focus for innovation. This article is one of a series of initiatives to emerge from that debate. Stay up-to-date with the discussion at [www.asgca.org](http://www.asgca.org).*

### INNOVATION IN PRACTICE

#### Delivering results

Independence Golf Club in Midlothian, Virginia, was faced with three problems—pace of play, playability and sustainability—all of which affected the bottom line. A new golf course design by Lester George, ASGCA, has addressed each of these issues.

Extensive tree and bush removal opened up views, bunkers were redesigned and repositioned to improve playability and paths were re-routed to improve the flow of golfers.

In addition, new wells were drilled to avoid the reliance on public potable drinking water, increasing water efficiency and sustainability.

The new design also made way for new facilities at the club, including a golf teaching academy and a clubhouse addition for events.

The changes have transformed Independence Golf Club into a popular, playable and profitable facility, yielding a revenue increase of \$3,000 per day.





# GPS for golf design

Golf course architects employ a range of sophisticated technologies to assist their work. Patrick Burton, ASGCA Associate, highlights how GPS is being used in golf design

There is no doubt we are in the midst of a technology boom. Within the last decade, we've witnessed considerable technological advancement. Most devices, whether used in our personal or business life, are now made to be extremely user friendly, meaning that you don't need to be a specialist to put them to good use. Smartphones, tablets, laptops, and even drones are part of golf course architect's toolbox—and we can now add GPS survey units to that list!

Mapping and land surveying dates back to the inception of our profession. Traditionally, such work has been carried out by allied professionals—land surveyors and engineers typically provide base mapping and as-built information upon which our designs are based, while construction personnel often provide as-built or in-progress construction data to help facilitate planning and field adjustments.

The production of accurate as-built survey data has traditionally required 'high-end' survey equipment which usually carries a steep investment—prohibitive for many—and a strong technical skillset. However, the

evolution of Global Positioning System (GPS) technology has resulted in survey-grade units that are affordable and easy to operate. Devices can now provide 1-3cm accuracy with a strong cell-network connection, and most can be linked to a tablet for easy operation. All survey data that is collected can be exported seamlessly into CAD programs, which opens up a host of additional services that architects can provide to clients, as follows:

## Base mapping

Accurate survey-grade units allow golf course architects to create base map information for clients when it is otherwise unavailable or out of date. When coupled with orthorectified imagery, these base maps can be ideal for initial planning and cost estimating. Additionally, the ability to capture detail of unique site features enables their enhancement and/or preservation.

## Topographic surveying

With so many courses in the U.S. having been built in the boom of the 1980s and 1990s, resurfacing greens

has become more common as these courses start to show age and wear. In resurfacing greens, a common practice is to soften contours to levels more appropriate for modern mowing heights and green speeds. Survey-grade GPS units allow for the creation of very accurate topography. When coupled with slope analysis maps, architects can work together with clubs to determine the best method and solution for altering green contours, while still preserving the fine details and nuances.

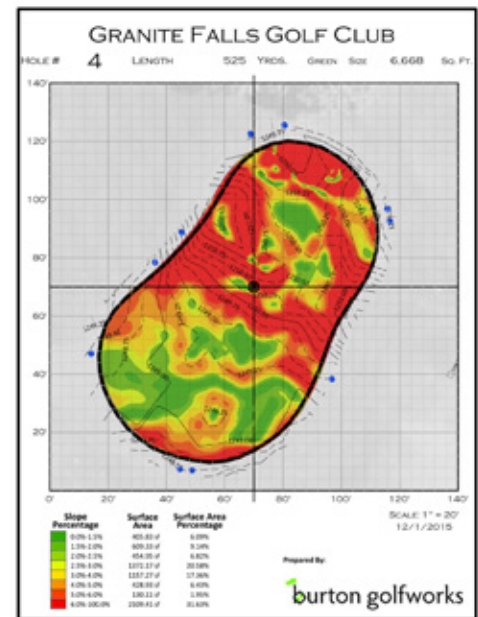
## Staking out and beta testing

Architects can now stake out proposed design elements without any uncertainty, and beta test them with their clients. Elements such as new tees, bunkers, hazards, fairway expansions and green alterations can be laid out well prior to producing construction documents. The process is not only beneficial to architects, but allows members and clients to become more connected with the proposed changes and gives the architect valuable feedback prior to fully committing to implementing the elements into the final design.





GPS survey units can help architects create detailed green mapping with very accurate topography and slope analysis



### Improved collaboration

When working on a project with irrigation designers, engineers, contractors and other consultants, having the ability for everyone to be working from the same survey datum allows individuals to integrate up-to-date information into their respective plans. This streamlines communication and the problem-solving process prior to and during construction.

### Field adjustments

During the construction process, change is inevitable. Immediately after documenting problem areas, the surveyed 'field solution' can be added to the plan and analyzed for further development and assurances that safety, functionality, and playability are not compromised.

### Construction documentation

Field observation services are commonplace for golf course architects, typically in the form of regular site inspections while the course is under construction, when the designer can work with field personnel and ensure the plans are being implemented properly. Accurate

survey equipment provides designers with the ability to monitor and track areas of disturbance and construction materials, and offer an enhanced management service for clients to ensure projects stay on budget.

The future will bring many more possibilities. For example, GPS units and drones work well together for base mapping and producing topography, with surveyed control points provided from GPS units, and drone-produced photogrammetry which provides contour data. Precision design—based on similar principles to precision agriculture—will see the introduction of remote sensing data provided by GPS and drone technology being used to provide a detailed understanding of a golf course's agronomic processes, so informed decisions can be made about design changes to improve a golf course's overall efficiency utilizing natural resources. ●

*Consult your local ASGCA member to find out if a GPS survey may be beneficial to your golf project. Find a member at [www.asgca.org/members](http://www.asgca.org/members).*

### Three tips for GPS surveys

#### 1. Don't be intimidated

While the vernacular of surveying might be off-putting to some, the back end of collecting and processing surveys is all CAD based. If you know CAD, you can easily take advantage of GPS data.

#### 2. Know your accuracy

As the phrase goes: garbage in, garbage out. With so many different kinds of GPS survey units out there, it's essential to know what makes one more accurate than another, and to make sure there are checks and balances set up on your unit to ensure the integrity of the collected data.

#### 3. Know your limitations

Having the ability to survey base data, stakeout design features, as well as produce accurate topographic information is a game changer for golf course architects—but State Regulatory Statutes often mandate elements such as property lines and easements to be surveyed by a Registered Land Surveyor.





Photo: Getty Images

# Robert Trent Jones, Sr.

As the golf world focuses on the Ryder Cup at Hazeltine, designed by ASGCA Founding Member Robert Trent Jones, Sr., *By Design* looks at his career and legacy

“We should all stand up and applaud every time Trent enters the room,” said the late Ed Seay, a Past President of ASGCA and Arnold Palmer’s long-time design partner, “to thank him for putting golf course architects on the map.”

Robert Trent Jones, Sr. (1906-2000) was 41 when he helped to establish the ASGCA, by far the youngest of the 13 charter members of the Society. His energy, innovative design ideas and promotional skills elevated the profession of golf course architecture.

As a young boy, Jones moved from England to the United States with his family in 1911, where they settled in East Rochester, New York. He spent time as a caddy, became an outstanding amateur golfer and took up a position as golf professional at Sodus Bay Heights GC in Sodus Point, New York.

Five years on, and with the sponsorship of club President James Bashford, Jones enrolled at Cornell University, crafting a course that would prepare him for a career in golf course architecture.

In 1930, Jones teamed up with a fellow pioneering golf course architect, Canadian Stanley Thompson, and their firm had offices in Toronto and New York. But the partnership dissolved when the Depression stopped most new course activity. Then World War II followed.

“Suddenly, all the other architects that had preceded him were gone,” explains Robert Trent Jones, Jr. (Bobby), his eldest son. “He came on the scene as the world was recovering from the War, and democratized the game.

“It was perfect timing as America as a country suburbanized,” continues Bobby. “He had done public golf courses, like Green Lakes in New

York, and his instinct was to see the game in a new way.”

Jones’ idea was to build long tees—so that those new to the game, and older golfers, could play forward, while better players could go further back—and have wide fairways. “The golf course itself became much more open to all abilities,” says Bobby. “He had his famous phrase ‘hard par, easy bogey,’ so those who wanted to play golf socially would not be defeated by the course.

“Another enduring concept of my father’s was the introduction of large bodies of water. The Dunes [at Myrtle Beach, South Carolina] was the best example of it,” adds Bobby. “The 13th was radical at the time. There were no par five holes where you had to deal with water on all three shots. He also introduced his first island hole [in 1939, at Pottawatomie Park in St. Charles, Illinois], and another at Ponte Vedra Inn & Club in Florida.”

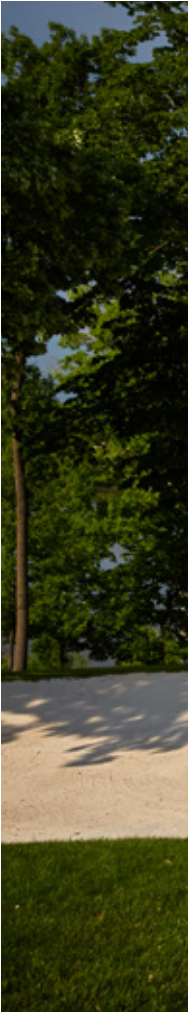




Photo: Gary Kellner/PGA of America

Hazeltine National in Chaska, Minnesota, host course for the 2016 Ryder Cup

By the mid-1960s Jones was the best known and most influential golf architect in the world. Working with his sons Bobby and Rees, and with Roger Rulewich, all three of whom went on to serve as ASGCA President, he designed more than 400 courses in 43 states and 23 countries, and remodeled many others.

The idea of preparing a purpose-built golf course for championships can also be largely attributed to Jones, beginning with his work at Oakland Hills in advance of the 1951 U.S. Open. He narrowed the fairways, added bunkers to squeeze landing zones and entrances to greens, and various other changes that ramped up the difficulty of the course. “He put championship golf on the map,” says Rees. “It made people aware of golf course architecture because the pros were so unhappy!”

But Jones’ work was vindicated when Ben Hogan won, with what he described as the greatest round of his

career on the hardest course he had ever played, saying: “I’m glad I brought this course—this monster—to its knees.” Jones went on to renovate multiple U.S. Open venues—including Baltusrol, Olympic, Oak Hill, Southern Hills and Winged Foot—becoming known as the ‘Open Doctor’.

few changes have been made to Dad’s original golf course.”

Rees also considers “the eleventh and sixteenth hole and all the things he did at Augusta” as examples of Jones’ finest work, noting his close friendship with celebrated amateur golfer Bobby Jones, a co-founder

“ He designed more than 400 courses in 43 states and 23 countries, and remodeled many others

But which golf courses represented the pinnacle of Jones’ achievements? In addition to his work at Oakland Hills, Rees Jones highlights the course at Peachtree Golf Club in Atlanta, which measured in excess of 7,200 yards when it opened in 1947. “Peachtree has stood the test of time,” says Rees. “Very

of Augusta National, who also collaborated with Jones at Peachtree.

Hazeltine National, which will host the 2016 Ryder Cup, was one of Jones’ original designs. It opened in 1962 and has to date hosted nine major tournaments—including men’s, women’s, senior and amateur





Photo: Dave Sansom

events. After a windy first round of the US Open in 1970, it too was subject to criticism from the pros, with Jack Nicklaus bemoaning blind shots and Dave Hill saying all it was missing was “80 acres of corn and a few cows”. Jones took it in his stride—he would perhaps have been more concerned if they hadn’t complained—but he did go on to make significant adjustments to his design in following years, notably including the straightening of doglegs. Rees considers his own subsequent work at Hazeltine to be simply finishing what his father had started, and would have done himself if the budget was available at the time.

Jones’ golf course portfolio has many other highlights, like Spyglass Hill in California, Mauna Kea in Hawaii, plus Sotogrande and Valderrama in southern Spain.

His grand finale was the RTJ Golf Trail in Alabama, alongside Roger Rulewich, ASGCA Past President. The multi-course development was an initiative of the state’s pension fund, designed to boost the Alabama economy. No golf development of such scale had been attempted

before. “We built 25 courses on a variety of sites and terrain around the State,” says Rulewich. “It was done in record time with no constraints on ideas and costs.”

Jones and his wife Ione were fixtures at ASGCA meetings, where Ione became the leader of the ladies group. All of the younger wives looked up to her, sophisticated and well-educated, yet very down-to-earth when it came to dealing with people. The Society presented Jones with a Distinguished Service Award in 1976 for his outstanding contributions to golf; the following year, the Society renamed this award for ASGCA founding father Donald Ross, effectively making Jones the first recipient of the prestigious Donald Ross Award.

Driven by a love of the sport, Robert Trent Jones, Sr. was instrumental in bringing golf to a far greater audience than could have been imagined before his time. He helped define the profession, and his influence will continue to shape golf design long in to the future. “Rees and I and Roger are still working,” says Bobby, “and if you look at the people who have worked for us, it’s a pretty big oak tree with a lot of acorns.” ●



Photo: Getty Images

Robert Trent Jones, Sr. at St Andrews, Scotland in 1990, flanked by sons Rees (left) and Bobby. Top image, Peachtree Golf Club in Atlanta, which has changed very little since Jones’ original design of 1947

## If you aren't following ASGCA on social media, here's some of what you're missing:



**ASGCA Home Offices**  
@ASGCA

John Fought, @asgca, helps Coachella Valley's Ironwood Country Club save water in a drought. <http://tinyurl.com/gvs6e66>



**greg martin**  
@gm\_mdgolf

Representing the @asgca at the Golf Course Builders Association of America annual meeting



**Jim Cervone ASGCA**  
@JimCervone

Gravel layer installed and mix going in on No.14 at Sewickley Heights Golf Club



**asgca1946**

Best way to tour Erin Hills? Stroll the grounds with course designers Dr. Michael Hurdzan, ASGCA, Ron Whitten, and Dana Fry, ASGCA. @usga @asgca1946



**ASGCA**

Gil Hanse, ASGCA: "Golf is a walking game. We shouldn't be promoting use of carts by showing cart paths on aerial shots from Rio. Once course is open to the public, limited cart use will be available for seniors & those with health concerns."



**ASGCA**

ASGCA mourns the passing of Past President Bob Cupp, ASGCA Fellow; author, artist, musician and renaissance man. <http://tinyurl.com/ze922ak>



**W. Bruce Matthews**  
@wbm\_III

I start my first day of Design & Construction class @ MSU today. The first student to give me an apple gets a 4.0 for the semester.



**Jerry Lemons**  
@golfarchitect

When visiting #Calgary rely on friends such as @asgca DCarrick and @IanAndrewGolf to guide you



**bergingolf**

More from yesterday at Pinetree CC. A nice reminder of the Transformation of this course. #14. #bergingolfdesigns #pinetreecountryclub #asgca



**Shawn Smith, ASGCA**  
@shawnsmithHF

#9 at Highland Meadows almost looks ready to play! Great Lakes & @Hmgcgrounnds doing an awesome job! @HillsForrest



**Nathan Crace, ASGCA**  
@lipouts

@asgca Tupelo CC fun fact: In 8 yrs working w/ @GCSAA super Jim Kwasinski, we've converted 30 acres of irr turf to native, saving \$30K/year



To stay up to date with the latest news and updates from ASGCA, visit the following pages:



[www.asgca.org](http://www.asgca.org)



[www.twitter.com/asgca](http://www.twitter.com/asgca)



[www.linkedin.com/company/american-society-of-golf-course-architects](http://www.linkedin.com/company/american-society-of-golf-course-architects)



[www.facebook.com/pages/ASGCA-American-Society-of-Golf-Course-Architects/117859318239338](http://www.facebook.com/pages/ASGCA-American-Society-of-Golf-Course-Architects/117859318239338)



[www.instagram.com/asgca1946](http://www.instagram.com/asgca1946)



# Welcoming new talent

*By Design* finds out more about two new ASGCA Associate Members, their inspirations, philosophies and projects

Every ASGCA member goes through a rigorous application process to prove they have the sound technical training and practical experience required to be recognized as a competent golf course architect.

At the 2016 ASGCA Annual Meeting in Washington, D.C., two new Associate Members—David Johnson, ASGCA Associate, of David Johnson Golf Design in Atlanta and Todd Schoeder, ASGCA Associate, of iCon Golf Studio in Broomfield, Colorado—were accepted into the Society.

Like many golf course architects, Johnson first began sketching golf holes in his youth. “My high school years were filled with playing golf, sketching real and imaginary golf holes, building short golf holes in my parents’ and neighbor’s yards and constructing clay models based on some of my hole sketches,” he says.

“I went to college at the University of Virginia and spent summers working on the golf course maintenance staff at Ford’s Colony CC in Williamsburg, Virginia. It was invaluable experience as I learned from the ground up (weed-eating, fly-mowing, changing cups, mowing greens, etc.) just how much effort and detail is involved in maintaining a golf course,” says Johnson.

Schoeder also started in maintenance, at an early age: “I began working on golf courses at 16,” he says. “While maintaining courses, I

would think about why certain design decisions were made and how I might have done things differently.

“I developed a plan to become a golf course architect that involved mastering the three critical elements—maintenance, construction and design.”

After six years in maintenance, Schoeder joined Wadsworth Golf Construction Company. “It taught me the craft of construction, how designed influenced construction, and vice versa. Every decision made on paper has a direct impact on the ground.”



“ My high school years were filled with playing golf, sketching real and imaginary golf holes

David Johnson, ASGCA Associate





Photo: Dale Hordimer

The third hole at Lodestone Golf Club in Maryland, designed by Todd Schoeder, ASGCA Associate, alongside Hale Irwin

He then obtained a Masters degree in landscape architecture from the University of Minnesota before moving into golf course design, under the mentorship of John Fought, ASGCA.

Schoeder cites Fought among his design influences, guiding him on shot making and overall course routing. He is also a keen student of Golden Age architects, with books by George Thomas, Robert Hunter and Alistair Mackenzie having inspired his work. He highlights Thomas's words in *Golf Architecture in America*: "The strategy of the golf course is the soul of the game. The spirit of golf is to dare a hazard, and by negotiating it reap a reward, while he who fears or declines the issue of the carry, has a longer or harder shot for his second; yet the player who avoids the unwise effort gains advantage over one who tries for more than in him lies, or who fails under the test."

Risk and reward is key for Johnson too. "One of the first things I learned in the Cupp organization was his definition of risk versus reward, with hazards placed to draw play towards them or over them, enticing the golfer to play as near to them as they dare, to be rewarded with an easier next shot. I believe this is the foundation for great golf course design, and fantastic holes like the 10th at Rivera and 13th at Augusta National are classic examples of this principle."

Johnson cites Bob Cupp as his major design influence. "By observing his work ethic, artistic talent and brilliant

use of strategy and angles I gained a solid understanding of all facets of golf course design. [Bob Cupp passed away shortly after this article was completed. See p. 10 for more on his work.]

Johnson's primary approach to design is that golf courses should, first and foremost, be fun to play. "Golf courses that are too difficult, with overabundant forced carries and extreme demands, simply frustrate the majority of golfers," he says. "My courses tend to offer more width, safer avenues of play, risk versus reward opportunities and stress strategy."



**Intense and sensitive analysis of the land dictates a style for each individual course we design**

Todd Schoeder, ASGCA Associate



Does Schoeder have a particular approach or philosophy to golf design? “Yes and no,” he says. “I like to work with the land first and foremost. If pinned down, I would say my approach is ‘classic-naturalist’.

“Intense and sensitive analysis of the land dictates a style for each individual course we design or remodel,” he continues. “Some parcels of land require little earth-moving as a result of their inherent natural beauty. More often today, new golf properties and the remodel of existing golf courses have fewer ‘God-given’ natural golf features and therefore require a more creative vision and physical shaping. In both scenarios, the existing landscape remains the foundation for our design.

“Even the simplest landscapes have unique features that may include a small mound or an unexpected view that can be highlighted to create a distinct and memorable golf

experience. If a site calls for it, we are not timid about moving and shaping the earth. We are also confident enough to leave it alone. The ultimate goal is to forge the best golf experience possible. Every constraint is a design opportunity we utilize to create memorable golf courses.”

For both architects, membership of the ASGCA represents an objective achieved: “A goal from early in my career was to become an ASGCA member,” says Johnson. “It is the pinnacle of the profession. If you look back at the founders of the organization and their impact on the landscape of golf courses in the United States and beyond, it is incredible.”

“Membership in the organization signifies that an architect is a dedicated and qualified professional golf course architect,” adds Schoeder. “Would you have a doctor operate on you without a medical license?



### PROJECT PROFILE

## Belmont Lake Golf Course, Rocky Mount, North Carolina

“Contrary to its name, Rocky Mount is neither rocky, nor mountainous,” says Johnson. “In fact, most of the region is very flat and often prone to flooding. Fortunately the Belmont Lake property offered more topographic variety with a nice mix of gently rolling land to supplement the flatter sections of former farmland. The site also featured the fantastic, 80 acre, Belmont Lake.

“My main goal for the course, though it may seem cliché, was to create a challenging and fair test of golf that would provide interest, variety and excitement to players of all abilities.

“The Belmont Lake course is right there in front of you. There are very few forced carries. The fairways are very generous. The greens are nicely sized, with subtle contouring and are receptive to run-up shots. Most holes have bail-out areas for more conservative players or those wishing to play away from hazards. I am big fan of creating visual illusions to make holes appear more difficult than they are and keep the golfer off balance. The player must trust the yardage, not their eyes.

“While most of the holes flow through woodlands, there is a handful with few trees where wind plays a larger role. There is a nice balance of dogleg lefts, dogleg rights, straight holes, large greens, small greens, and a wonderful variety of yardages. The four par threes play in opposite directions, as do all of the par fives.”





The 12th hole at Farmstead Golf Links in Calabash, North Carolina, designed by David Johnson, ASGCA Associate

The same can be said for designing a golf course. ASGCA members are fully trained to carry out the complex task of designing and implementing golf courses—a delicate balance of art, design, engineering and technology.”

Schoeder and Johnson both emphasize the fraternal spirit of the organization. “It’s a brotherhood of collaboration, and the guarding force of golf design,” says Schoeder.

“I share a common passion with ASGCA members and want to continue to uphold the tradition of thoughtful and impactful design,” adds Johnson. “ASGCA members are some of the brightest, most creative minds in the game and I look forward to sharing experiences.” ●

*For more information on the process of becoming an ASGCA member, please visit [www.asgca.org/our-members](http://www.asgca.org/our-members) or call ASGCA on 262-786-5960.*

## PROJECT PROFILE

### Glacier Club, Durango, Colorado

“The site of this new 18-hole golf course in the San Juan Mountains of southwestern Colorado presented numerous challenges,” says Schoeder, lead designer with Hale Irwin, “including 600 feet of elevation change across the property, numerous wetlands and the necessity to blast 80,000 cubic yards of rock to open up playing corridors.

“The guiding force behind the Glacier Club is to let the land show through. The course’s greatest assets are the magnificent views, interesting topography and rock formations that form the design details for strategy and playability. Great care was taken to creatively utilize the existing features of the landscape to produce a layout that appears as though it has existed for generations, while at the same time respecting the history, traditions and strategies of the game of golf.

“All 18 holes are designed in the strategic school of thought; providing numerous options to play each hole, and a risk/reward adventure. The design and layout is player friendly for the entire family, yet challenging for the scratch golfer.

“The course tests every club in the bag and encourages a multitude of skills, including both a ground and aerial game. The routing and design features suggest the correct strategy to players in a fair and clearly perceptible manner—appropriate strategic advantages are the rewards the Glacier Club will present to players who ‘listen’ to the course and tailor their individual skills accordingly.”



Photo: Dale Horchner



Photo: Todd Schoeder





“I’ve seen young kids using range finders from 30, 40, 50 yards! We need to speed it up

## Greg Letsche, ASGCA

**G**reg Letsche, ASGCA, has been a professional golf course architect for more than 25 years. He joined Ernie Els Design as its senior design associate in 2005, having spent the previous 15 years in the same capacity with Jack Nicklaus, ASGCA Fellow. Beginning his career with the legendary Pete Dye, ASGCA Fellow, Letsche has been instrumental in the design of numerous courses worldwide. He received his Bachelor of Science in Agronomy from Ohio State University in 1980, and currently lives in Florida with his wife Jane and their two children Robert and Alexia.

### How is your game?

The nature of my work this past 20 or so years means that most of the time I’m on golf courses that aren’t finished! Opportunities to play have been few and far between. Things are picking up a bit of late, though. My children now play golf so I’m playing with them and enjoying that. I was a decent junior golfer and slowly I feel like my game is starting to come back to that kind of level.

### Which three people would make up your dream fourball?

If I’m picking players, I’m teeing it up with Ernie Els, Byron Nelson and Bobby Jones. But putting on my architect’s hat, it would be amazing to play with three true legends of

my trade—Donald Ross, Alister Mackenzie and Harry Colt. It would be fascinating to get an insight into their methodology and how they approached golf course design. I’d be all ears that day, trust me! Also, knowing how much traveling I have to do in my job, I would want to know how those guys did so many courses, and at such a high quality, without having a 747 on standby!

### What is your favorite hole in golf?

There are a bunch of contenders that spring to mind, but I think I have to give it to the 13th hole on the West Course at North Berwick, probably my favourite course in the world. That hole is known as ‘the pit’ and has a sand dune on the left side of the green and a three-foot high natural stone wall guarding the entire right side of the green. It’s quirky, but so cool. We actually took that as inspiration in one of our Ernie Els signature designs, the 14th hole at Anahita in Mauritius, where we used an existing dry-stone wall as a strategic hazard. It has the benefit of adding an interesting aesthetic component, which makes the hole memorable.

### If you could change or add one rule, what would it be?

I think I’d do something to speed up the pace of play. The game is just taking way too long at the professional level and it’s filtering

into the amateur game too. I’ve even seen young kids using range finders from 30, 40, 50 yards! We need to speed it up. You know, everyone’s lives are getting busier, we’re working longer hours and we also want to be able to spend time with our kids. A lot of people simply can’t fit golf into the equation, especially if it’s taking up the whole day.

### What project are you currently working on?

We’ve got some great projects on the go here at Ernie Els Design. Among them, the Wentworth West Course restoration is well into the final phase and I know everyone involved feels really excited about where we’ve got to with that. We’re currently reintroducing a lot of the fescues and the heather, creating what is essentially a very natural looking, modern interpretation of a Colt classic.

We have a new course on a beautiful, rugged stretch of coastline in Croatia. We’re also excited about a new facility on the outskirts of Hanoi, Vietnam, where we’re building an Els Performance Golf Academy and nine-hole golf course at Ecopark. That’s going to set a new benchmark in the region. We love the whole ethos of that project, trying to help golf grow in Vietnam and bring the game to a new audience, including kids in local schools. It’s something that Ernie is really passionate about. ●

## SPONSORS



*By Design* would not be possible without the support of its sponsors, who have played a key role in the publication of this magazine.



### Profile Products

Profile Products manufactures a comprehensive line of soil modification, erosion control and turf establishment products. Its experienced team takes a consultative approach with golf course architects, builders and superintendents to design and specify customized solutions for maintenance and construction.

Profile's team designs root zone mixes utilizing Profile Porous Ceramics to meet USGA guidelines. Its ceramics permanently modify the root zone to better conserve water and retain nutrients.

Profile's complete line of hydro-seeding products is the leading specified brand by golf course architects. Profile works with architects and project managers, establishing effective erosion control and vegetative establishment practices.

[www.profileproducts.com](http://www.profileproducts.com)



### Rain Bird Corporation

Since 1933, Rain Bird has built a reputation on delivering irrigation systems that combine performance with efficiency. Rain Bird leverages state-of-the-art technologies to innovate and develop products that apply water in the most effective and efficient manner possible.

From highly efficient sprinkler nozzles to cutting-edge control systems and pump stations, Rain Bird is widely recognized as the leader in golf course irrigation control system technology. We take the challenge of using water responsibly very seriously. That's why our over-arching philosophy, *The Intelligent Use of Water™*, guides everything we do. The revolutionary Integrated Control System™ provides innovation at a lower overall cost to golf courses enabling the user to maximize system efficiency and conserve water with a smaller environmental footprint.

For more information, please contact 1-800-RAINBIRD or visit:

[www.rainbird.com](http://www.rainbird.com)



### Toro

The Toro Company is proud of its legacy of quality and innovation. Customers around the world rely on Toro for high performing products that include precision fairway and rough mowers, greens mowers, compact utility loaders, commercial zero-turn mowers, bunker management machines, and water-efficient irrigation systems.

In 1921, Toro developed the first fairway mower and six years later shipped the company's first golf maintenance products overseas. Today Toro continues to lead the global market with best-in-class turf maintenance equipment and precision irrigation solutions. Approximately two-thirds of the top 100 courses in the world use Toro irrigation systems. The company also leads the way in environmental innovations, making products safer, cleaner and quieter whenever possible.

[www.toro.com](http://www.toro.com)



# ASGCA Leadership Partners



## *Supporting Education in the Golf Course Industry*

ASGCA thanks the following companies for their continued support of golf course development and renovation—helping ASGCA members do their jobs better, for the good of the game.

### Major Level Partners

---



### Merit Level Partners

---



### Sponsors

---

