ISSUE 60 // WINTER 2022

BY DESIGN

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

IN AT THE STEEP END

How do golf course architects cope with the challenges of extreme elevation change?

CRITICAL THINKER

ASGCA President Brit Stenson discusses his work around the globe and a focus on sustainability

ALSO:


IRRIGATION HAS
ALWAYS BEEN IN
YOUR HANDS.
NOW IT LITERALLY IS.
CIRRUSPRO™
See how you can **Be Fluid** with
the only mobile-first irrigation
system on the market.

RAIN BIRD®

Brit Stenson
President, ASGCA

A recurring theme

One theme that *By Design* unapologetically returns to time and time again is sustainability. Those who still think golf is inevitably bad for the environment are increasingly a minority, as stories of the many positive impacts of golfing landscapes continue to be told. We are becoming ever more efficient in our use of water and other applications, while at the same time our positive impacts include preserving green space, providing habitat for wildlife, protecting communities from flooding and even sequestering carbon.

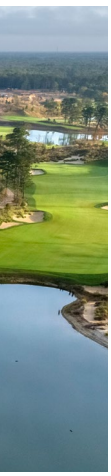
This issue, we return to the theme of sustainability several times, not least with news of the upcoming release of a new book from ASGCA Past President Forrest Richardson and Jeff Danner, ASGCA, which explores golf's footprint on the environment.

In our main feature about the challenges of elevation change, Brian Curley, ASGCA, emphasizes the importance of 'getting it right the first time,' to avoid using more resources than necessary and maximize the chance of economic sustainability. And on page 24 we profile the five projects selected for the latest iteration of the ASGCA's annual Environmental Excellence Awards Program.

I'm very glad to mark the start of my tenure as ASGCA President by highlighting the good that golf courses can bring, not just to the people who play upon them, but also to their surrounding communities and our natural environment.

I hope you enjoy the read.

CONTENTS



On the cover

The Balsam Mountain Preserve course in North Carolina, where Harrison Minchew, ASGCA, was part of ASGCA Fellow Arnold Palmer's design team. Read about this project and more on page 14. Photography courtesy of Balsam Mountain Preserve.

ISSUE 60 // WINTER 2022

Editor and Publisher
Toby Ingleton

Editorial contributors
Todd Quitno, ASGCA, Marc Whitney

Design
Bruce Graham, Libby Sidebotham, Dhanika Vansia

ASGCA Staff
Jeff Brauer, Chad Ritterbusch, Mike Shefky, Aileen Smith, Marc Whitney, Ann Woelfel

Subscribe to *By Design* at
www.tudor-rose.co.uk/bydesign

www.asgca.org

Coore and Crenshaw make New Zealand debut with Te Arai Links

Te Arai Links has opened its new South course, the first project in New Zealand for Ben Crenshaw and Bill Coore, ASGCA.

Construction on the course began in September 2020 and was completed a year later, followed by a year of growing-in.

"Our members and guests have been absolutely blown away by the South course," said Jim Rohrstaff, co-leader of the development alongside Ric Kayne, who also owns the nearby Tara Iti course.

"There really are 18 unique holes that are all great – each one is memorable from the first time you play. Two stretches that jump out are four-to-six and the closing holes on the back nine. The course is very wide off the tee, which makes it very playable for all skill levels. Also, the views are as good as any course in the world!" said Rohrstaff.

The Pacific Ocean can be seen from almost every hole on the course. "It is such a great layout and routing," said Rohrstaff. "It takes you away from the ocean after the first for a couple of holes and then the fourth tee reminds you that you will be playing along

Photo: Ricky Robinson

The seventeenth hole on the new Coore and Crenshaw-designed Te Arai Links South course in New Zealand

the Pacific Ocean the rest of the day. There is a great rhythm to the routing and the walk is so enjoyable. It is almost irrelevant what score you shoot; you just enjoy the day."

As well as the wide fairways – the par-five first for example stretches nearly 100 yards across – green complexes are also expansive. Rohrstaff warns however that hitting them does not automatically mean golfers will score well. "There are a lot of subtleties on the greens and many false edges that will lead your ball six to ten feet below the putting surface," he said. "It is a very linksy course that you can – and probably should – putt from anywhere within 30 yards of the green."

Par-three course for Promontory Club to open in summer 2023

Photo: Richardson | Danner

A new 18-hole par-three course designed by ASGCA Past President Forrest Richardson and Jeff Danner, ASGCA, for Promontory Club in Park City, Utah will open in summer 2023.

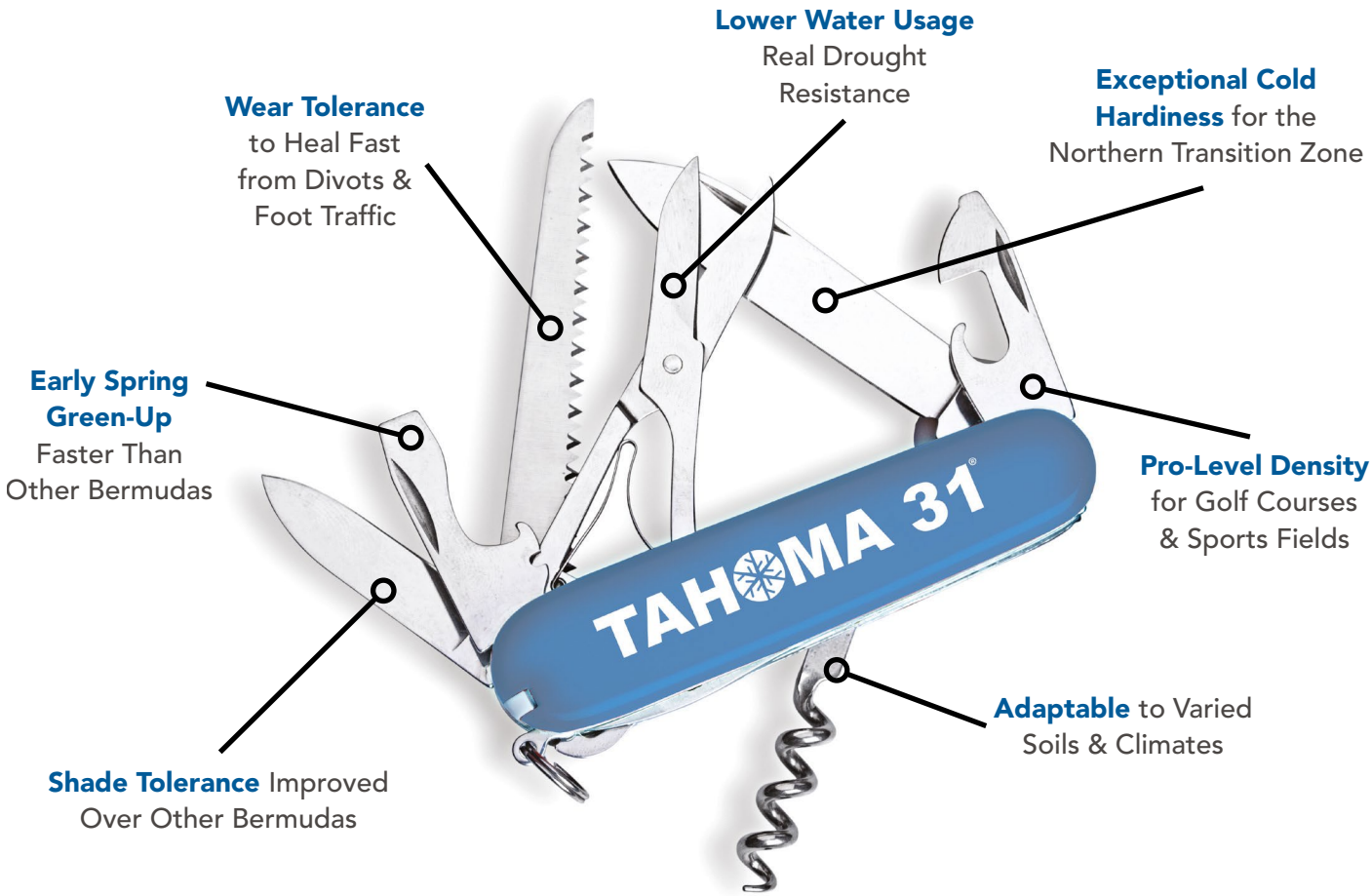
Classic template concepts have been used in the design, such as Redan, Biarritz and Punchbowl holes. The architects have included an island-green twelfth, with 'New Moon' and 'Ha-ha' concepts on the ninth and eleventh, respectively.

Danner routed the course to achieve gradual elevation changes. "We routed holes across a 300-acre hillside," he said. "Yet we have left plenty of natural open space around the layout so the player will feel 'away from it all' as they experience loops of six, nine, 12, 15 or all 18 holes." The finishing holes wind up a canyon, culminating with an eighteenth that cascades down the hillside and across a small mountain stream.

Richardson and Danner also have a new book, *The Sustainable Sport – How Golf's Five Million Acres Benefit the Planet*, due for release in 2023, providing a detailed look at golf's footprint on the environment.

TAHOMA 31®
BERMUDAGRASS

Like This, But in a Bermudagrass



Put this powerful tool to work on your next golf course project!
See us in Orlando at GCSAA Booth #817

SOD PRODUCTION SERVICES

Sod Production Services
18161 Sandy Point Road, Charles City, VA 23030
757.345.1120 | Tahoma31.com

@Tahoma31
@Tahoma31Bermudagrass
@Tahoma31Bermudagrass

Tahoma31 Bermudagrass was developed by the turfgrass experts at Oklahoma State University

Davis embraces landscape for Atlanta renovation

Tripp Davis, ASCGA, has overseen the renovation of the Riverside course at the Atlanta Athletic Club in Georgia, ahead of the club's 125th anniversary.

Davis had three primary goals for the renovation: update the course infrastructure to improve playing conditions; accentuate the terrain in a natural way; and enhance the playing interest and enjoyment for members and high-level players alike.

Photo: Dave Sansom Photography

Work on the course has included the rebuilding and repositioning of tees, greens and bunkers. Reshaping has developed surface and subsurface drainage, and a new state-of-the-art irrigation system has been installed.

Davis focused on tying the course into the land in a natural way, considering the style of the bunkers and fairway contouring, and how greens sit on the land. This involved rerouting holes three-to-five and twelve-to-fourteen.

"I wanted the visual perspective the golfer has while playing to be more interesting, which on this site meant getting the ground to flow with and embrace the overall landscape," said Davis. "With the great trees, the rolling land, distinct ridge lines, and the river, it is such a majestic site, and we wanted the golf course to look and feel like it is just a part of that."

Atkinson completes Red Rocks renovation

Kevin Atkinson, ASGCA, has completed a renovation of the golf course at Red Rocks Country Club near Denver, Colorado.

Atkinson, working with construction firm Landscapes Unlimited, sought to add more variety to the course. He rebuilt bunkers, tees and greens, completed work on irrigation and cart paths, and introduced a new 45,000-square-foot putting green near the clubhouse.

Photo: Dillon Richardson

At the sixth, now a short par three, Atkinson utilized a volcano green concept "to create more drama in elevation with the green perched up and hanging on the edge of the severe canyon," he said.

"Collaborating with Kevin and Red Rocks' team to reimagine the course layout, construction and infrastructure resulted in a stout golf experience," said Dave Linngren, a vice president at Landscapes Unlimited.

THE SPRINKLERS **WORLD-CLASS COURSES RELY ON.**

Toro® Irrigation Systems

The greenkeepers of the greatest golf courses on this planet trust in the skills of legendary toolmakers at Toro®. The INFINITY® and FLEX800™ Sprinkler Series are the masters of efficiency and reliability.

the home of golf® LICENSEE

TORO®

Join the conversation

@ToroGolf

Discover more at: **toro.com/golf**

Greg Martin renovates Settler's Hill

ASGCA Past President Greg Martin has completed a renovation of Settler's Hill Golf Course in Batavia, on the outskirts of Chicago.

The course was originally built in 1990 on a landfill site, and has since faced issues relating to settling, drainage and age. Martin prepared a primary plan for the renovation in 2015, which highlighted the need to address circulation and playability problems.

Photo: Greg Martin

The tenth hole at the renovated Settler's Hill Golf Course

"The plan proposed updating the golf course infrastructure, modernizing and expanding the irrigation system, a realignment of the layout to accommodate returning nines, adding a practice range, expanding the putting green, and incorporating a four-hole junior course," said Martin. "The final golf course offers wider fairways and approaches; fewer bunkers, with those remaining being deeper and more relevant; more tee surface; and larger greens that have more pinnable areas."

The club held a soft opening this fall, with an official event scheduled for spring 2023.

"The way I design golf courses and write are similar in that the first thing I do is put things down on paper"

Richard Mandell, ASGCA

In the latest podcast from *Golf Course Industry's* "Tartan Talks" series, Richard Mandell, ASGCA, discusses his new book, *Principles of Golf Architecture*.

"The way I design golf courses and write are similar in that the first thing I do is put things down on paper," says Mandell. "It's a stream of consciousness of lines or words."

Mandell's book covers the seven elements of design: line, space, shape, form, texture, color and scale; as well as eight principles of design: balance, rhythm, contrast, emphasis, movement, proportion, unity and variety.

"For each chapter, I define, in simple terms, what each element means," says Mandell. "I then think of how these elements apply to my work in golf course design.

"The seven elements of design are the book's first section, although I added another important element to the existing list: nature. The second half of the book is the principles. Once I got through the general design principles, I added lots of other fun chapters like randomness, quirk and mystery. It was fun to write about new principles"

Listen to the full "Tartan Talk" at golfcourseindustry.com.

Here are links to other recent "Tartan Talks," now featuring over 70 episodes:

- Brian Costello, ASGCA, shares what he has learned in his journeys as a golf course architect
- ASGCA Past President Don Knott provides insight into a host of topics, including his decades of travel

ASGCA Past President Jerry Matthews (1934–2022)

ASGCA Past President Jerry Matthews passed away in September on Mackinac Island in Michigan. He was 88.

Multiple generations of Matthews have positively impacted golf in Michigan, including Jerry's father Bruce and nephew W. Bruce.

Jerry designed or renovated more than 200 courses, including the Lakes course at Michaywe, Timber Ridge Golf Course and Timberstone Golf Course. He was inducted into the Michigan Golf Hall of Fame in 2005.

Jerry passed away just 90 minutes after receiving a standing ovation as the guest of honor at The MGL Grand Golf Getaway. The event, hosted by Michigan Golf Live's Bill Hobson, took place at Mackinac Island's Grand Hotel, whose Jewel course was designed by Jerry.

Paul Albanese, ASGCA, who worked with Matthews for over 20 years, was at the event. "Jerry's never been one for the spotlight," he told Hobson on the Fore Golfers Network podcast. "But that night, the spotlight shone on him, and he was very proud.

"Jerry has three times as many golf courses in Michigan than anyone else – no one is ever going to catch him. He was proud of doing golf courses for the masses. Golf is huge in Michigan, and we need those good quality and affordable courses. He has loved this profession for 60 years. He allowed me and his other associates to explore design concepts… that's what a good mentor does."

Ray Hearn, ASGCA, who worked for Matthews between 1986-96, said: "Jerry was a minimalist. He taught me to respect the natural environment and find great golf holes, versus creating them.

"Some of my fondest memories of Jerry were at his fly-fishing cabin on a beautiful trout stream in northern Michigan. My best memory is sitting around the campfire with Jerry, Bruce Matthews III and Ron Whitten from *Golf Digest*, talking about great golf holes from around the US. He was a great guy and a lot of fun to be around."

Photo: Carter Sherline

Albanese and Matthews (centre) at Saskatoon GC in Michigan, one of Matthews' last projects

Belfair West course reopens after Fazio renovation

Photo: Troon

Belfair, a private community in Bluffton, South Carolina, has reopened its West course following a renovation by Tom Fazio, ASGCA.

The aim of the $5.8 million project was to improve the West's playability, aesthetics and drainage. Fazio designed the original layout in 1996, as well as the East course three years later.

All 63 bunkers have been redesigned and now feature new G-Angle sand. Fabric liners were also replaced with a new polymer-based Capillary Concrete liner system to improve water flow, playability and reduce maintenance.

"Tom Fazio took a beautiful canvas and created a Low Country masterpiece," said Chris Cento, president of Belfair.

All putting surfaces have been regrassed, and thirteen greens have been restored to their original size. Tees have also been expanded, with Fazio adding some new forward tees to offer rounds beginning at 3,800 yards.

Golf industry gears up for GCSAA Show

The annual GCSAA Conference and Trade Show, the world's largest golf course management event, is being held at Orange County Convention Center in Orlando, Florida, on 4-9 February 2023.

The show features more than 70 seminars, education sessions, interactive facility tours, as well as networking opportunities and access to golf course and facility management solutions.

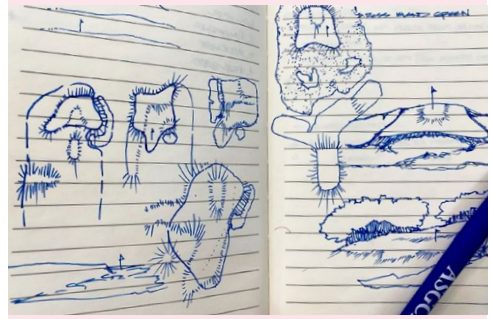
ASGCA is once again a Presenting Partner at the show, and among the speakers will be ASGCA Past Presidents Jan Bel Jan and Mike Hurdzan.

To register for the show, visit: www.gcsaaconference.com

SOCIAL UPDATE

LinkedIn
@gcamagazine

Bill Bergin, ASGCA, Duininck Golf and Better Billy Bunker are working on the Seth Raynor layout at Minnesota Valley.



Instagram
@thad.layton

The ink is flowing again after seeing a slew of great golf courses at the @asgca1947 Annual Meeting in Rhode Island.

Twitter
@golfnorby

We've wrapped up construction pm @GoldenValleyCC with the help of Brad Klein and Tillinghast historian Philip Young. Looking forward to seeing it mature in the spring.

Search ASGCA on the below channels for more posts:

In at the *steep* end

Not every golf course site is the gently undulating land considered ideal for golf. But when a golf course architect is presented with extreme elevation change, how do they approach the design? Richard Humphreys finds out more.

It is rare now for a golf course architect to be given a site that would be deemed as perfectly suited to golf: the gently undulating land that is not so flat that it can't be drained, while not so steep that golfers can't make their way around it without steep uphill climbs or shots that career along slopes and into trouble.

Golf's increasing popularity over the years has seen the game move from the famous links of the UK that were considered ideal golfing land to inland sites that may require more manipulation, and eventually regions like deserts and mountains where golf course architects had to acquire new skills to lay out a playable and enjoyable golf course.

An increasing focus on sustainability has required such skills to be developed further, as designers try to minimize their impact on the land while also maximizing the commercial viability of the project.

Highs and lows

Brian Curley, ASGCA, has dealt with challenging sites throughout his career, particularly in Asia, where he has worked for over 30 years. "The good news is that most golfers love elevation change," he says, "as long as they are not walking it!

"My job is to create a playable experience that does not beat the golfer up with relentless difficulty. That is why the dirt-move stage is so important – you need to be right first time because adjustments can become a lot of work and be expensive."

Curley follows a trusted formula. "You always treat the natural grade

Photo: Brian Curley, ASGCA

The seventeenth hole at Sun Hill in southern China, one of many mountain sites faced by Brian Curley, ASGCA

the same way," he says. "Modern earthmoving allows you to do crazy things, but you should always keep the concept that highs remain high, and lows remain low."

He says that the biggest issue with sites that have a lot of elevation change is that the slope continues beyond the site's boundaries. "The real difficulties are when boundaries are at the top of strong slopes," he says, explaining that the only way to turn a 25 percent slope at such a boundary into a 10 percent slope would be to create extremely harsh cut slopes that would look like cliff faces.

Curley believes that the key is to have a good understanding of the terrain and be willing to deviate from the norm. "Work the routings, look at options – such as reducing par and length – and focus on playability," he advises. "Do not be afraid of odd routings with back-to-back par threes, or other unusual sequences of holes."

At his Sun Hill design near Kunming in China, Curley had more than 250 meters of elevation change between the lower holes by Fuxian Lake to the upper holes on the mountainside. "Not a single 'natural' hole could be found," he says. "We had to create!" Major earthworking was required to create a good golf experience. "Many architects try to avoid moving dirt and the result is a course that is unplayable for most," says Curley, emphasizing the importance of commercial sustainability.

"I like to keep landing areas at a maximum cross-slope of 10 percent – anything more than that on firm

Photo: Brian Curley, ASGCA

Curley (pictured on site at Sun Hill) says it is important to get earthmoving right the first time, to avoid costly adjustments and create a playable and economically sustainable golf experience

conditions makes it difficult to stop a ball," he says, pointing out that catch bunkers can be helpful to keep balls in play.

Curley tries to find as many areas of existing terrain that would make for suitable landing areas. "This is best accomplished by dealing with the elevation change from green to tee, not within the hole," he says. "I would rather have long green-to-tee connections and solid golf holes than holes forced into the site. Eighteen great holes with an occasional path connection is a very tolerable solution, especially in climates with extreme heat and humidity.

"Do not be afraid to take a cart to 'get started' or to get back to the clubhouse. In the case of Sun Hill, you take a cart under the road and up a hill to get to the first tee – this is no different than the fantastic Sand Hills in Nebraska, where you take a cart about three quarters of a mile from the clubhouse to the first tee."

> "Eighteen great holes with an occasional path connection is a very tolerable solution"

Getting creative

Harrison Minchew, ASGCA, also learnt how to deal with slope in Asia, during his time with Arnold Palmer Design Company under the mentorship of ASGCA Past President Ed Seay. "I was able to hone the skill of creative hole routing and mass grading on 15 projects in Japan and two very steep sites in Taiwan during the 1980s and 90s," he says.

Minchew has since applied that experience in the US, too. In the

The fourth and fifth holes at RainDance National in Colorado play 60 and 75 feet downhill respectively

early 2000s he was part of the Palmer design team at Balsam Mountain Preserve in North Carolina and more recently, under his own name and in collaboration with PGA Tour Champions pro Fred Funk, he completed RainDance National in Colorado's Front Range.

"RainDance has 225 feet of elevation change from the high point, located on the first fairway, down to the low point – the lake along the fifteenth," says Minchew, who also references the work of George Thomas at Riviera and Bel-Air in California as examples of creative design to cope with the challenge of elevation change.

"Golf architects have to use a combination of methods to create a great golf experience on sites that have significant elevation changes," says Minchew. "Routing holes to play along the slopes, avoiding holes that play directly down or up steep slopes and directing large cuts and fills to reduce an area's excessive slope are key to enable a golf architect to create playable and strategic holes, as well as beautiful vistas.

"To effectively combine creative routing and mass grading it is essential to have enough acreage," says Minchew. "Both RainDance and Balsam Mountain Preserve had ample space, which allowed me to avoid the steepest areas, and limit the amount of mass grading and the earthworks budget. I could route holes to meander parallel to slopes to minimize the elevation from tee to green, avoiding, as much as possible, playing directly down and up significant topography changes."

At RainDance, Minchew routed holes between the site's small canyons and down the slopes. "I was able to locate the longest holes playing more directly towards each nine's low point," he says. This has given rise to some extreme yardages too. The par-five thirteenth, which plays 120 feet downhill, is 778 yards. Clever routing has limited the uphill climbs, the steepest of which come

Photo: The Club at Devils Tower

The par-three twelfth at The Golf Club at Devils Tower plays over a cliff face

at the end of each nine; the ninth requiring a climb of 55 feet uphill and the eighteenth rising 60 feet.

Like Curley, Minchew also tries to ensure that much of a site's elevation is covered between holes. "From the seventeenth green to the eighteenth tee we go uphill 35 feet, and from eight to nine is around 40 feet," he says.

Maximizing views

"It's important to consider the site's natural features," says Kevin Atkinson, ASGCA, who has completed several projects where severe elevation change was a factor. "Distant views play a key role in the memorability of golf holes. Good holes are made great when you marry golf features with unbelievable scenery."

Atkinson recalls a project in the 2000s at The Golf Club at Devils Tower in Hulett, Wyoming. The original nine-hole layout was on a relatively flat piece of property, and Atkinson was asked to design a new nine on adjacent land with some extreme routing challenges.

"There were spots where you literally can't get from point A to B," he says. "There's around 40 feet of vertical rock ledge, so the site dictated that we work with what Mother Nature provided. In the Mountain West, the routing often comes together on how you can navigate around the site's natural features."

> "Sometimes the power of Mother Nature is what designers need to pay attention to the most"

The biggest climb is from the tenth green to the eleventh tee, which involved getting up a rock face to holes located on a plateau. "Once golfers are on top of the rimrock, we have holes 11 to 17 that are very walkable with some fantastic views along the rock ledges. For instance, the par-three twelfth plays over and along a 150-foot rock ledge with Belle Fourche River below," says Atkinson.

The dramatic closing hole on the Highlands course at McLemore

"It's a dramatic change and I like routing a course to flow on a site with big elevation change providing golfers with an adventure through the property. The challenge was getting back to the bottom of the site, however!"

Part of the solution was the dramatic eighteenth, with the tee shot going over 100 feet downhill. Atkinson is currently working at The Club at Ravenna in Littleton, Colorado, where there is almost 500 feet of elevation change. He is reducing bunkers to both ease the demands of maintenance while also letting the natural environment shine.

"The course features were just a bit too strong, and everything seemed a little too much," says Atkinson. "We're softening some of that out because the property and mountainous setting is so dramatic and beautiful. Sometimes the power of Mother Nature is what designers need to pay attention to the most. My advice is to complement the beauty of the site rather than forcing your own will on it."

Creating space

"We focus on trying to create space for less-than-perfect shots," says Bill Bergin, ASGCA, of his work at mountainous sites.

Bergin has recently completed renovations on the Highlands course at McLemore Club in Rising Fawn, Georgia, alongside ASGCA Past President Rees Jones, and at Highlands Falls in North Carolina.

The par-four sixth at McLemore features a 140 foot drop. "We dealt with a blind second shot over the crest of a sharp hill, extending the fairway by 50 yards and widening left to improve visibility," he says. "The drive is playable, lessening the severity of the second shot going over the slope. At the bottom of the hill, we widened the landing area on the left side and elevated the green for better visibility.

"At Highlands Falls, we cleared more space, softened grades, improved drainage and reduced the impact of bunkers."

Bergin says that on both courses the views and the natural beauty are the main attraction. This is typified by the new closing hole at McLemore, which runs along a rocky cliff edge. "There is an element of excitement that players enjoy on these severe, yet stunning properties."

Golf's renaissance man

A critical, creative thinker, ASGCA President Brit Stenson has traveled a self-made professional road. Marc Whitney explains.

"I was always pretty good at seeing an open door, walking through it and not looking back."

ASGCA President Brit Stenson has had a way of coming across open doors – and making the most of those opportunities – that would make Forrest Gump proud. From a community land planner to budding professional musician, from project manager on a golf construction project to 25 years designing golf courses around the world with some of the game's most recognizable names, Stenson has approached each opportunity with an unwavering energy and attention to making a positive difference.

When he stepped off the campus at the University of Virginia with a degree in city planning Stenson was unsure of the road ahead, besides being "drawn to environmental planning and land planning." While working as Assistant County Planner for Fauquier Country, Virginia, he could not shake a latent desire to play professional music.

Call to perform

"I quit my job – to my wife's chagrin – and played banjo professionally in a bluegrass band for three years," recalled Stenson. Some 20-25 times each month, Coup de Grass appeared on stages around Washington, D.C., and Maryland. They even produced, in 1978, an album, "Rhythm and Bluegrass," which can still be found on YouTube.

About the time Stenson decided he no longer wanted to ride buses and live the life of a traveling musician, his interest in golf was rekindled. He had played on his college team, serving two years as team captain, but knew he could not compete at a professional level.

"Golf course architecture was something I always wanted to do but did not know how to get into," he said. "But I was taught in school how to look at property and understand drainage and soil and vegetation; things so important to golf course architects."

A turn to golf course architecture

One of those "open doors" appeared in 1979. Stenson headed

Stenson worked with many professional golfers during his team with IMG, including Vijay Singh on the Natadola Bay course

the planning department of a large architecture/engineering firm in Montgomery County, Maryland, when a series of events led him to working with the PGA Tour on their proposed TPC at Avenel, where Stenson was in charge of the community master plan.

Beman, Tim Finchem and David Postlethwait on that project led the Tour to move Stenson to Ponte Vedra to project manage other TPC facilities in Memphis, Charlotte and Dearborn. Eventually, PGA Tour commissioner Beman wanted Bobby Weed, ASGCA, who was also at

"Golf course architecture was something I always wanted to do"

The course was designed by Tom Clark, ASGCA, and after leading the approval process through a complicated state and county zoning obstacle course, Stenson was hired by the PGA Tour for the construction phase as project manager. Working with Deane

the Tour, and who had worked extensively with ASGCA Fellow Pete Dye, to design TPC courses in house. So, Stenson worked with Weed to design TPC courses in Las Vegas, Hartford, Connecticut and Tampa Bay. "It was a fabulous and valuable experience," he recalled.

New role with IMG

After five years, another door presented itself to Stenson. He learned from a fellow Virginia alum that International Management Group (IMG) was looking to hire to fill a new position, an in-house golf course architect to work on projects with some of their clients, including Nick Faldo, Mark O'Meara, Colin Montgomerie and (later) Annika Sorenstam.

"I met with IMG staff to discuss the position, and they asked me to write up what it would entail and what the job would look like," said Stenson. "Essentially, I wrote my own job description." After not hearing from IMG for three months, Stenson received a call asking him to start in just two weeks,

Stenson's latest work for IMG was the 27-hole Hilltop Valley course in Vietnam

and move his family from Ponte Vedra, Florida, to Cleveland.

Over the next 25 years, until 2016, Stenson traveled the globe. He designed courses with some of the game's greats in such far-flung locations as Vietnam and China, as well as closer-to-home spots in Canada, Utah and Ohio.

"We weren't always picky about site selection, and we had some very challenging sites to work with in Asia," said Stenson. "A lot of our mission was to find projects for our top pros. Routing a course that made the most of the site, even on a tough site, was the most rewarding part of each project for me; that and the overall grading plan is where I had the most personal design input. Then we would go with the bunker style and strategic philosophy of the pro golfer I was working with. Topography and routing were not the pros' strengths, but they knew what they liked and didn't like, and they understand strategy, and how golfers at all levels play the game."

> "Routing a course that made the most of the site, even on a tough site, was the most rewarding part of each project"

Having a plan does not mean it was always easy to work with touring pros.

"Perhaps the biggest challenge working with signature designers is time," said Stenson. "The clients all wanted golfers who were currently at the top of their games, which means they were busy playing tournaments, or exhibitions, or sponsor events. So, getting them on site at exactly the right time was often difficult. To get my work done, they often had to find time for me to go to their home or visit the course where they were competing to review plans."

One exception was working at Tuhaye Golf Club in Utah,

China, 2011

China, 2009

Canada, 2004

On site with Nick Faldo at The Rock in Ontario; Ian Woosnam (above) in Shenzhen; and Sergio Garcia (top left) in Qinhuangdao

with Mark O'Meara. "Mark had a home in Park City," recalled Stenson. "He made more site visits during construction than I did."

Focus on sustainability

"If you have a nice piece of land don't overpower it with ego," said Stenson. "My philosophy has also been to have the property tell me as much as possible; I'm a minimalist.

"And ASGCA members are keenly aware of the need to design and build for sustainability.

"Environmental, economic and social sustainability is at the core of advances in golf course design in recent years and is essential to the future of the game. We continue to move away from the wall-to-wall irrigated turf monoculture that requires massive amounts of water and chemicals. Minimalist design concepts and the creation of diverse landscapes and habitats using native plant materials, together with significant advances in agronomy and irrigation, will allow golf courses to thrive into the climate-challenged future.

"Sustainability is a tricky thing because it is globally so important, but the responses ASGCA members need to make are regional and often very local."

And with all those open doors Brit Stenson has walked through during his career, there is one he has made sure to not close entirely. He can still be found on occasion playing in a four-man string band in Cleveland, and as part of a duet at his winter home in South Carolina. ●

Hear Brit Stenson expand on these topics in an "ASGCA Insights" podcast at www.asgca.org/resources/podcasts

Keeping the green

By Design profiles the five golf course projects recognized in the 2022 ASGCA Environmental Excellence Awards.

Five golf course projects have been selected to receive ASGCA Environmental Excellence Awards in 2022. The program, presented by Ewing Irrigation & Landscape Supply, was introduced in 2019 to recognize innovative work being done at golf facilities to address their environmental needs.

Submissions are reviewed by a panel of golf industry and environmental leaders, including representatives of GEO Foundation, Golf Course Superintendents Association of America and National Golf Course Owners Association.

"Each of these projects is a testament to the positive impact golf can have on the environment," said ASGCA President Brit Stenson. "Congratulations to these facilities on their commitment to sustainability and the team effort to improve the environmental landscape."

Location: Brookline, Massachusetts
Golf course architect: Mark Mungeam, ASGCA

Brookline, also known as the Robert T Lynch Municipal Golf Course, was facing community and environmental challenges stemming from the fact that the land was originally bought by the town for use as a tree farm as proposed by Frederic Law Olmsted.

The recent golf course project aimed to marry the community's desire for open space with an improved golf course, in terms of strategy, drainage and conditioning. Key to the plan was the conservation of resources and reduction in course closures.

The project also sought to reduce the usage of fossil fuels and enhance the natural environment. This led to the addition of walking paths and the introduction of solar-powered robotic mowers. Also, open waterways on several holes were restored to improve drainage and reduce dependence on the town's potable water.

Photo: Evan Schiller

Location: Swainton, New Jersey
Golf course architects: Dana Fry, ASGCA, and ASGCA Past President Jason Straka

The Sand Barrens Golf Club, originally laid out by the Hurdzan & Fry design firm, was purchased by The Union League of Philadelphia in October 2017 and renamed Union League National. A 27-hole renovation master plan was developed by Fry-Straka. Work began in February 2018 and the new course opened in 2022.

The environment was central to the new design, which included the creation of expansive lakes and wetlands. Revegetation efforts are ongoing, and the golf course architects are collaborating with conservationists, naturalists and the U.S. Department of Agriculture. They conducted field trips throughout the New Jersey Pinelands National Reserve to study endemic plants and soil conditions. More than one million native plants have already been introduced to the course, half of which were transplanted, providing a habitat for local wildlife.

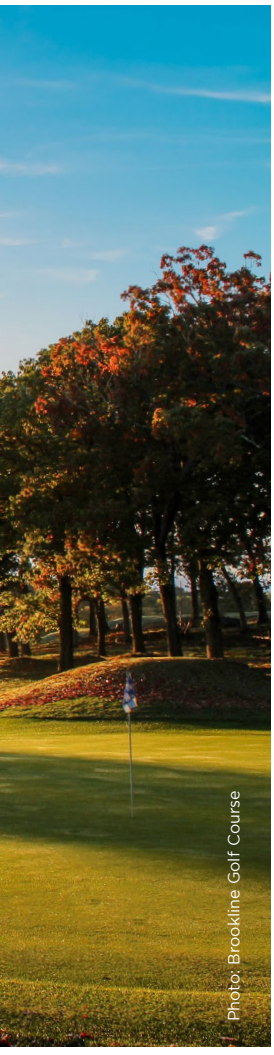


Photo: Brookline Golf Course

COMO GOLF COURSE

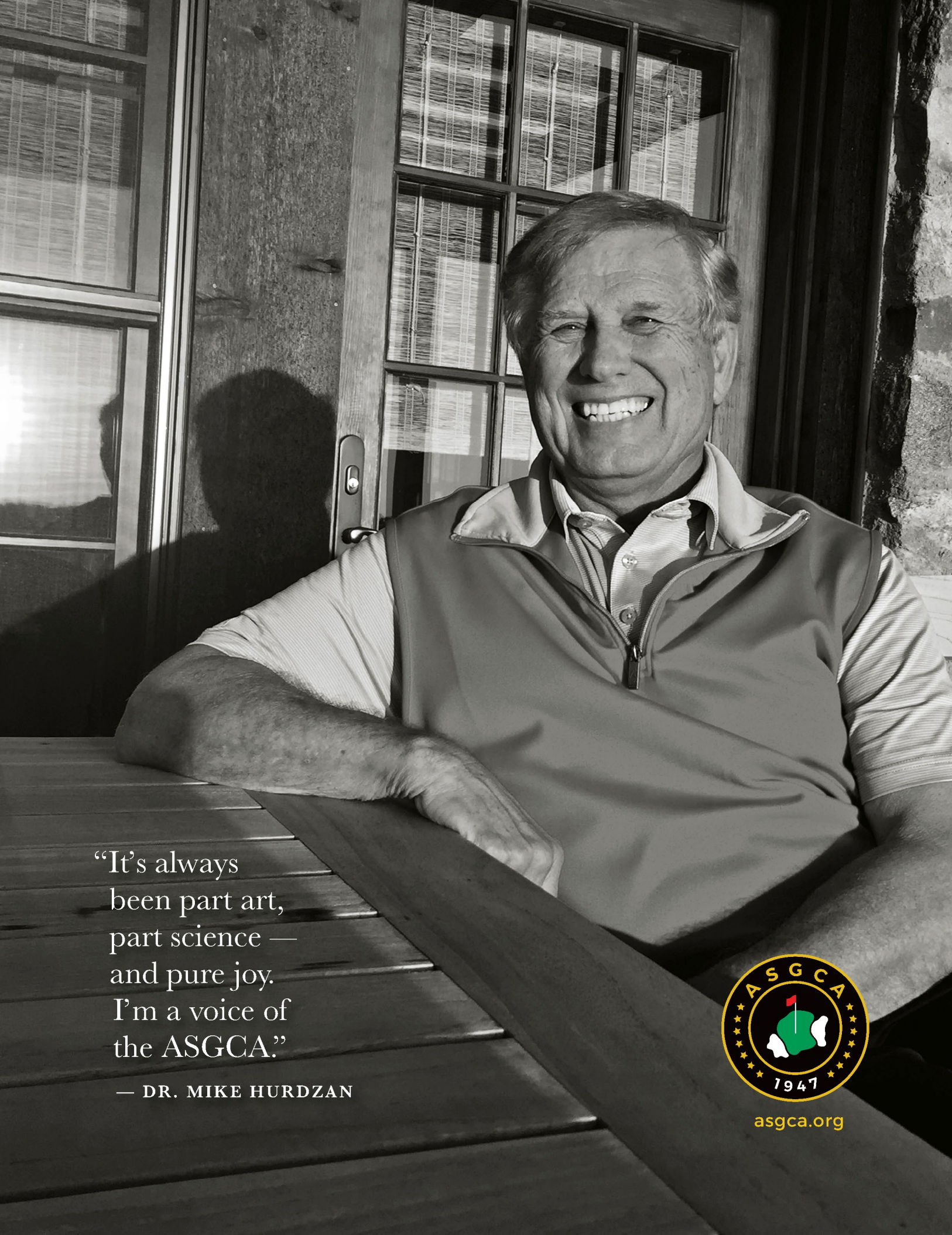
Photo: Kevin Norby, ASGCA

Location: St. Paul, Minnesota
Golf course architect: Kevin Norby, ASGCA

Kevin Norby's project at Como focused on three holes and the creation of a new stormwater basin to capture and clean 11 million gallons of runoff from surrounding roads, parking areas and paths, preventing an estimated 55 pounds of phosphorus from entering Como Lake each year.

Near the seventh hole, an existing storm sewer pipe captures runoff from 63 acres of land upstream from the golf course – the runoff water now fills a new stormwater basin. Any excess water flows into a series of six-foot-diameter perforated pipes buried below the fairway.

Between holes three and eleven, water from 150 acres of land within the cities of St. Paul, Roseville and Falcon Heights drains into an existing stormwater pond. A new iron-enhanced sand filter was constructed along the eastern edge of the pond to remove dissolved phosphorus. A smart control system has also been installed at the pond's overflow outlet to help regulate the level of the pond and to optimize the effects of the iron-enhanced sand filter.


"It's always
been part art,
part science —
and pure joy.
I'm a voice of
the ASGCA."
— DR. MIKE HURDZAN
ASGCA
1947
asgca.org

LAS PIEDRAS

Photo: Thad Layton, ASGCA

Location: Punta del Este, Uruguay
Golf course architect: Thad Layton, ASGCA

Limited access to fresh water was the biggest obstacle for the Las Piedras project – the well output would not meet the demands of a golf course. Therefore, construction was limited to less than 10 percent of the overall site area to protect its ecological diversity, with the design team only building tees, bunkers and greens. This approach preserved the existing soil and maintained the rumple and drainage characteristics of the existing topography. Native fescues and wildflowers were safeguarded to reduce maintained turf areas. While the course requires an irrigation system to sustain the greens, fairway irrigation is rarely used.

Almost all the site's trees and scrub areas were saved and worked into the golf course's strategy. Wetlands and drainage areas were kept intact, providing uninterrupted corridors for wildlife to enter and exit the site.

COLUMBIA GOLF COURSE

Photo: Kevin Norby, ASGCA

Location: Columbia, Minnesota
Golf course architect: Kevin Norby, ASGCA

The main goals of the recent project at Columbia Golf Course relate to the Northeast Watershed, which drains runoff from 2,150 acres of northeast Minneapolis into the Mississippi River, and how to reduce urban flooding and nutrient runoff. At the same time, his work would improve turf quality, playability and maintenance on the golf course.

Norby collaborated with the city of Minneapolis, the Mississippi Watershed Management Organization, and the Minneapolis Park and Recreation Board on the construction of a new large-capacity storm sewer system.

To create space for a new infiltration basin and hydro-dynamic separator, the par-four fourteenth was converted into a 160-yard par three and the par-four fifteenth was realigned. Landing areas were also repositioned to improve drainage and allow the irrigation system to be updated. On the east side of the course, a small pond was enlarged to improve drainage and increase stormwater storage.

Memories from the Ocean State

A selection of images from the 2022 ASGCA Annual Meeting, held in Providence, Rhode Island.

New ASGCA President Brit Stenson preparing for a musical interlude

ASGCA Past President Erik Larsen checking out previous winners of the golf trophies

ASGCA's Executive Committee members Mark Mungeam, Jason Straka, Brit Stenson, Mike Benkusky and Brian Costello

Toro's John Lawrence receiving the Donald Ross Award from ASGCA Past President Jason Straka

ASGCA Fellow Mike Hurdzan pictured with the 2022-23 Wadsworth scholars Sydney Holt and Matt MacGillivray

Need for speed

Todd Quitno, ASGCA, considers what is important to golf course architects when designing putting surfaces.

Todd Quitno, ASGCA

Todd Quitno, ASGCA, is a golf course architect with over 25 years of design experience and is the principal of Quitno Golf Designs.

Hello, my name is Todd Quitno, I am a golf course architect… and I am a *hypocrite*.

First, a declaration: I *love* fast greens. As a middling amateur golfer (with a handicap of eight), I'm not always the best at playing them, heck I'm even prone to three or four putts multiple times in a round when the greens are blazing. But when rolling it well, I find nothing more rewarding than judging a screaming-fast lag putt or pounding the back of the cup with an aggressive five-footer that I barely tap. It feels really good when you pull it off!

But here's where the hypocrisy hits me hard; as an architect, I *despise* fast greens, and I think excessive speed spoils the game.

I'm not alone in this mental ping pong, as I learned at the recent American Society of Golf Course Architects Annual Meeting in Rhode Island with nearly a hundred fellow ASGCA members (and a few guests from Europe). This year's topic: Anything and everything greens.

Our discussion kicked off with a quote from revered Golden Age architect Harry Colt: "In no case should a green be contoured so that a ball runs away from the putter like a swine possessed by the devil."

This does not exactly refer to green *speed*, but what Colt was indicating is that excessiveness in a green – slope or speed – can impact the quality of a hole or the entire course, and, more importantly, the experience of playing it.

This became one of the fundamental tenets of our group discussion, bolstered by some very unscientific flash polling of the attendees: asking questions about greens and what architects prioritize when designing putting surfaces. The results presented were varied and interesting.

Besides functionality, pinnable area was a top priority for over 80 percent of the architects polled. Further probing revealed most strive for at least two-thirds of a green surface being pinnable, but less than half of those polled indicated likely green speed as a top design priority, despite unanimous (verbal) agreement that slope and pace have a direct impact on pinability. Not exactly a cry for help when it comes to speed.

Photo: Todd Quitno, ASGCA

There is a trade-off between green speed and contour. If greens are excessively fast, then interesting features, like this Biarritz swale at Pioneer Pointe in Verona, Wisconsin, will be impractical, or will not play as intended

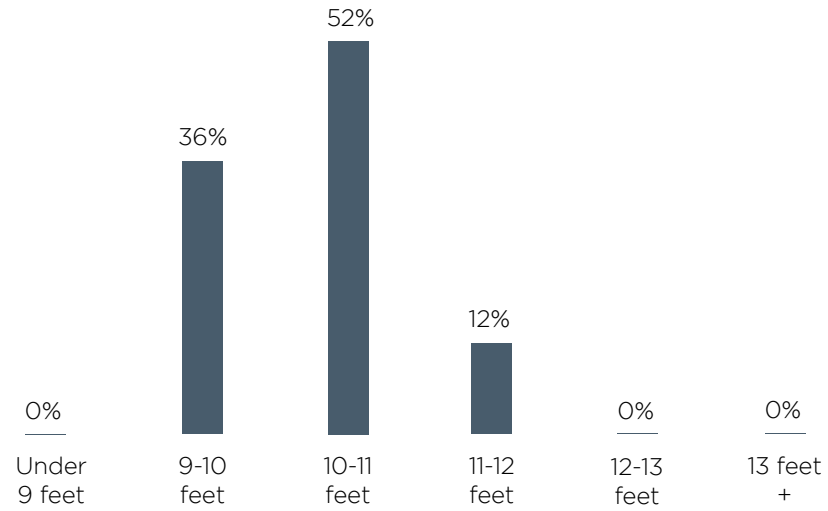
I agree at face value, but additional live polling and small group discussion spent dissecting the topic revealed a bit more concern: More than 88 percent of those polled believe the ideal green speed is a Stimp of 11 feet or less), and speed has the most significant impact on ball run-out. Most architects in attendance indicated they would like to design to this ideal, but the decision is often directed by committees and superintendents, with the latter often directed by the former. The architects also agreed that educating clubs on the challenges of excessive speed is difficult given committee turnover and constant concern of keeping up with the competition.

"As an architect, I despise fast greens, and I think excessive speed spoils the game"

What exactly is the problem with ultra-fast greens?

Any superintendent knows that more manicured always means more inputs. Less leaf head means more potential exposure to tissue damage, more energy needed to

Primary considerations for green design
An unofficial poll shows designers favor greens measuring 9 to 11 feet on the Stimpmeter



USGA Stimpmeter readings, 1977
Top US clubs' green speeds from 45 years ago are much lower than the typical 12'5" of today

Augusta National	7'11"
Congressional	6'4"
Cypress Point	7'8"
Harbour Town	5'1"
Medinah	7'8"
Merion	6'4"
Oakland Hills	8'5"
Oakmont	9'8"
Pine Valley	7'4"
Pinehurst #2	6'10"
San Francisco	7'2"
Shinnecock Hills	7'2"
Winged Foot	7'5"

create substantial rooting, and more susceptibility to stresses (water, drought, heat, disease, etc). Sure, bentgrass can handle short, but cutting heights less than a tenth of an inch is borderline grass homicide.

That's just one side of the issue. How has speed impacted architecture, especially when it comes to pinning interest, diversity, and strategic setup? The above table, and the final table on page 33, shows how Stimpmeter readings have increased by decade.

The data may be a bit conservative, specifically for the current decade. Many superintendents report they're asked to maintain at 13-plus-feet daily, employing mowing heights under a tenth of an inch and incorporating rolling to further increase speeds. The golf courses ASGCA members played in Rhode Island were every bit of 12 feet of Stimp, and more like 13 feet at two of the venues (an estimate). Our group reported numerous putts running off the front of the greens, four-jacks and other crazy putting woes. Playing in a 25mph wind added to the challenge, but the fast surfaces undeniably impacted pace of play and shot values.

I have seen technological evidence of a green at a top club where the surface contours have reportedly remained intact since their inception. The ezLocator software program was used to illustrate how the viable pinning locations have changed as speeds have increased over time, rendering some dynamic pin locations unusable. Many architecture 'aficionados' revere these old clubs for having preserved and/or restored their strategic value over time, but can we honestly say strategy hasn't changed when speed has so obviously altered the way these greens are set up and played?

So… what to do about this pace phenomenon? Quite honestly, no one is exactly sure, though there

were a few things agreed upon by the architects. Unlike the equipment and ball debate, which is a matter mostly of regulating technology, green speed does have a finite limit because it involves a living organism. At some point in the future, if not already, we will reach the limits of the plant to be cut any shorter without grave damage occurring.

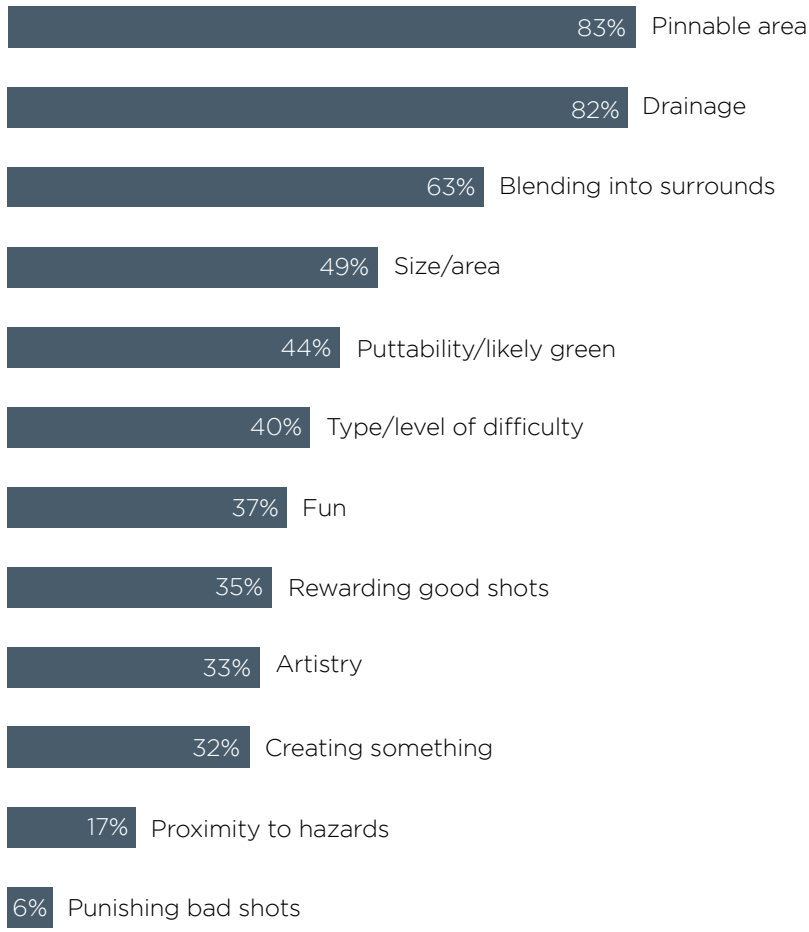
The conversation needs to continue and be led by the architects and the superintendents who design and manage the game, but just as importantly by educated club official, especially from the upper echelon of clubs who have so much influence on the way golf is perceived and consumed.

I, however, will continue to be a certified hypocrite. Having spent the better part of the last decade mapping greens and rebuilding numerous putting surfaces, excessive green speed has helped pay the bills. And I still love the thrill of navigating short, tight bentgrass surfaces whenever I get the chance. But I also realize that speed can kill, especially when it comes to architectural creativity. This means I will continue encouraging clients to consider more reasonable mowing heights, opening more opportunities to create fun, dynamic surfaces that explore a great variety of slopes.

And, if they want to mow them down every once in a while, to let the ball really glide, then have at it. I mean, who are we to judge?! ●

Designers select their top five considerations for when they design a green complex

Golf course architects prioritize pinability, drainage and how a green blends into its surrounds



Green speeds by decade

Advances in technology see greens become increasingly faster

	Max slope	Mow height	Typical speed
1910s	10%	?	4′
1920-40s	8%*	0.375-0.5″	5′
1950-60s	5-6%	0.33″	6′
1970-80s	3-4%	0.25″	7′6″
1980-90s	2.5-3%	0.20″	8′5″
2000s-2010s	2.25-2.8%	0.15″	9′5″
2020s	1.5-2.5%	0.10″	12′5″+

Phonm Penh City, Cambodia

Brian Curley, ASGCA

Image: Brian Curley, ASGCA

The twelfth hole on the forthcoming West course for a new club in Phnom Penh City, Cambodia, is a par three that will play over native vegetation, four bunkers and is bordered by palm trees to the left of the green. The layout will feature a rugged and natural design centered around large expanses of sand, dotted with islands of native grasses and groves of date trees, in contrast with the more formal East course that is also being built for the club.

"The West will be highlighted with a strong variety of holes with massive sandy waste lows and the occasional landform that sometimes blinds tee shots to the wrong side of the wide fairway," said Brian Curley, ASGCA, who has designed both courses.

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

Tahoma 31® Bermudagrass

Developed by the turfgrass experts at Oklahoma State University, Tahoma 31 Bermudagrass pushes the geographic boundaries of bermudagrass into the northernmost reaches of the Transition Zone. Highly cold tolerant, the name "Tahoma" comes from the Native American word that means "frozen water," and the grass lives up to its name. Golf courses as far north as Chillicothe Country Club in Ohio (fairways and tees), and Liberty National in Jersey City, NJ, (driving range tee), benefit from Tahoma 31's ability to stand up to cold winters yet thrive in hot summer temperatures. Tahoma 31 creates a sustainable and maintainable golf course with dramatically lower disease pressures compared to cool-season grasses. A tight, dense turf generally mowed as low as ¼ to ½-inch for excellent playability, with notable wear tolerance to heal quickly from divot damage, and strong drought tolerance to save water, its deep blue-green color offers stunning visual contrast for golf course design.

www.tahoma31.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 1919, Toro provided a motorized fairway mower to the Minikahda Club, in Minneapolis, Minnesota, to replace horse-drawn equipment. By mounting five individual reel mowers onto the front of a farm tractor, Toro developed the Toro Standard Golf Machine and helped create the motorized golf course equipment industry. 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

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

LANDSCAPES UNLIMITED

RAIN BIRD

TORO

TROON

// MERIT LEVEL PARTNERS

ATLAS TURF INTERNATIONAL

Better Billy Bunker Method™ Durable · Linerless · Guaranteed

IVI-GOLF

PEACOCK LEWIS

www.peacockandlewis.com

Turf Drainage Co. of America, Inc.

// SPONSORS

CMF GLOBAL

EWING Irrigation & Landscape Supply

HERITAGE LINKS A Division of Lexicon, Inc.

Hunter

wadsworth GOLF CONSTRUCTION COMPANY

WATERTRONICS