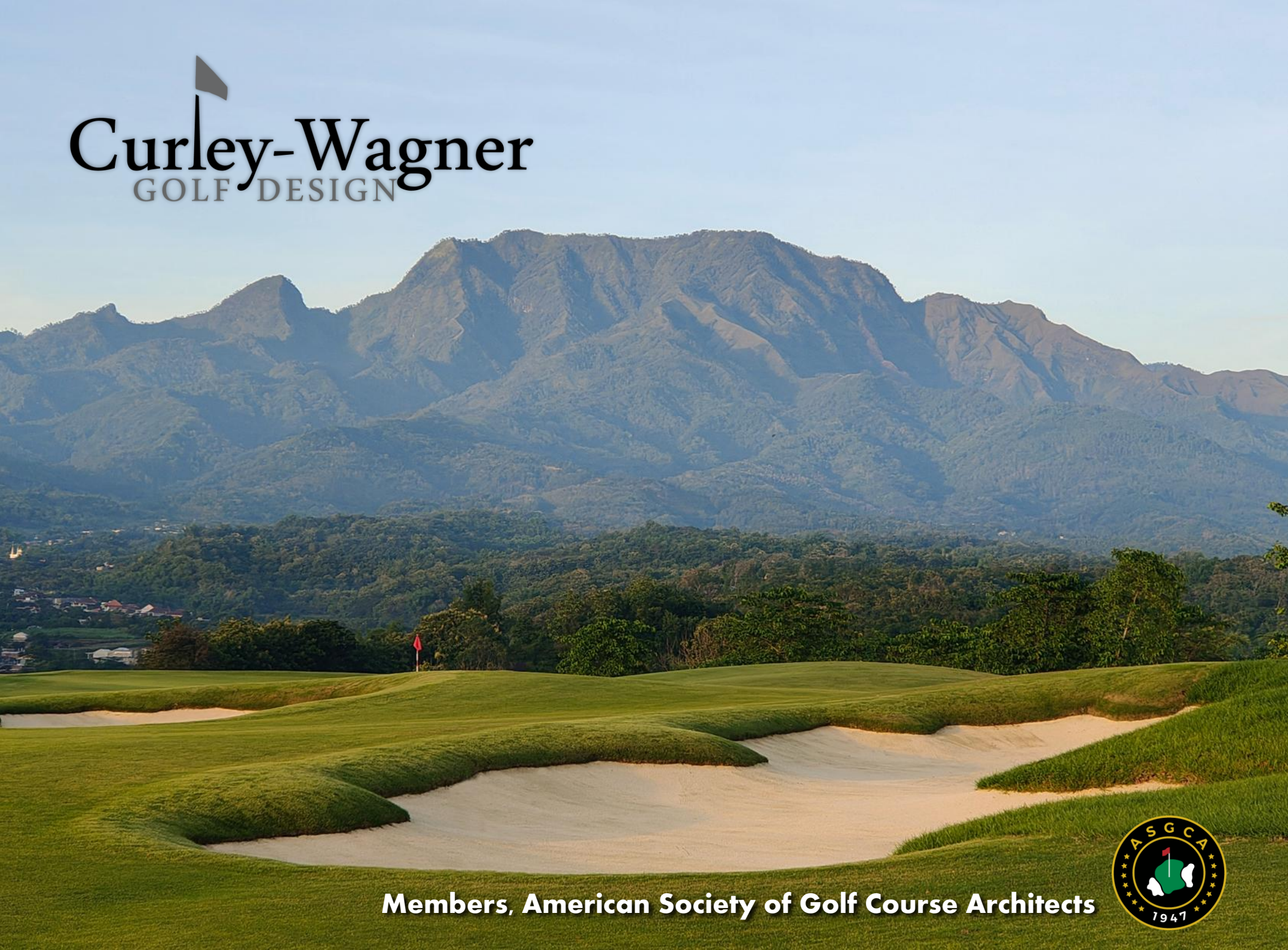
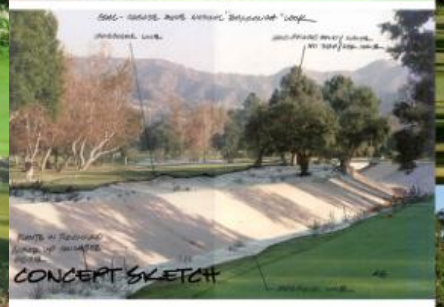

Curley-Wagner
GOLF DESIGN
Members, American Society of Golf Course Architects
ASGCA
1947

SERVICES

MASTER PLANNING

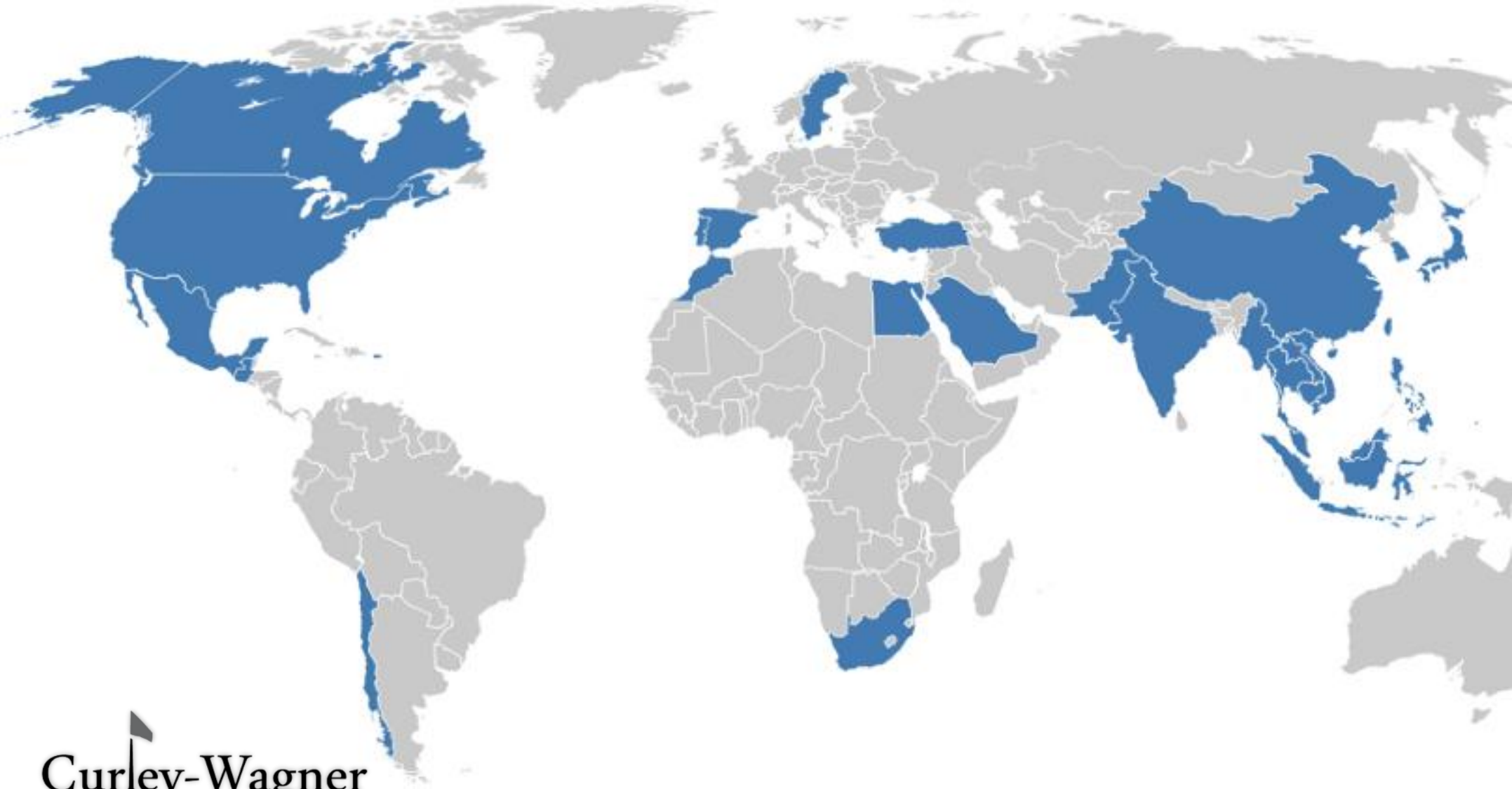
LANDSCAPE DESIGN



REMODELS | RENOVATIONS

160+ courses designed worldwide in over
25 countries with **40+** courses open for play in China

GLOBAL EXPERIENCE



Curley-Wagner
GOLF DESIGN

TOP 100 COURSES IN ASIA-PACIFIC 2023 / 24

RANK	COURSE NAME, LOCATION ARCHITECT, YEAR	AVERAGE SCORE
1	**ROYAL MELBOURNE (WEST)** BLACK ROCK, AUSTRALIA ALISTER MACKENZIE, 1926	98.25
2	**KINGSTON HEATH** CHELTENHAM, AUSTRALIA DAN SOUTAR, 1925; ALISTER MACKENZIE, 1926	92.17
3	**TARA ITI** TE ARAI, NEW ZEALAND TOM DOAK, 2015	91.09
4	**HIRONO** MIKI-CHI, JAPAN C.H. ALISON/CHOZU ITO, 1932; MARTIN EBERT, 2019	89.25
5	**BARNBOUGLE DUNES** BRIDPORT, AUSTRALIA TOM DOAK/MIKE CLAYTON, 2004	86.38
6	**KAWANA (FUJI)** ITO-SHI, JAPAN C.H. ALISON/KOMYO OHTANI/KINYA FUJITA, 1936	80.60
7	**TE ARAI (SOUTH)** TOMARATA, NEW ZEALAND BILL COORE/BEN CRENSHAW, 2022	77.50
8	**ROYAL MELBOURNE (EAST)** BLACK ROCK, AUSTRALIA ALEX RUSSELL/MICK MORCOM, 1932	77.26
9	**VICTORIA** CHELTENHAM, AUSTRALIA ALISTER MACKENZIE, 1927; OGILVY CLAYTON COCKING & MEAD, 2019	76.41
10	**NEW SOUTH WALES** LA PEROUSE, AUSTRALIA ALISTER MACKENZIE/ERIC APPERLY, 1947	76.29
11	**Cape Kidnappers** TE AWANGA, NEW ZEALAND TOM DOAK, 2004	76.25
12	**The Club at Nine Bridges** JEJU ISLAND, SOUTH KOREA RON FREAM/DAVID DALE, 2001	75.12
13	**Shanqin Bay** HAINAN, CHINA BILL COORE/BEN CRENSHAW, 2012	75.03
14	**South Cape Owners Club** NAMHAE-GUN, SOUTH KOREA KYLE PHILLIPS, 2013	74.97
15	**Cape Wickham** KING ISLAND, AUSTRALIA MIKE DEVRIES/DARIUS OLIVER, 2015	74.74
16	**Barnbougle Lost Farm** BRIDPORT, AUSTRALIA BILL COORE/BEN CRENSHAW, 2010	73.05
17	**Paraparaumu Beach** PARAPARAUMU BEACH, NEW ZEALAND ALEX RUSSELL, 1949	71.89
18	**Ellerston** HUNTER VALLEY, AUSTRALIA GREG NORMAN/BOB HARRISON, 2001	71.56
19	**Tokyo** SAYAMA CITY, JAPAN KOMYO OHTANI, 1940; GIL HANSE, 2018	71.10
20	**Royal Adelaide** ADELAIDE, AUSTRALIA H. RYMILL/C. GARDNER, 1906; ALISTER MACKENZIE, 1926	69.62
21	**Naruo** KAWANISHI, JAPAN JOE CRANE/HARRY CRANE/BERTIE CRANE, 1930; C.H. ALISON, 1931	69.37
22	**Peninsula Kingswood (North)** FRANKSTON, AUSTRALIA SLOAN MORPETH, 1965; OGILVY CLAYTON COCKING & MEAD, 2018	69.33
23	**Himalayan** POKHARA, NEPAL R.B. GURUNG, 1994	68.12
24	**St. Andrews Beach** ST. ANDREWS BEACH, AUSTRALIA TOM DOAK/MIKE CLAYTON, 2004	68.10
25	**The National (Moonah)** CAPE SCHANCK, AUSTRALIA GREG NORMAN/BOB HARRISON, 2000	66.46
26	**Yokohama (West)** YOKOHAMA, JAPAN TAKEO AIYAMA, 1958; BILL COORE/BEN CRENSHAW, 2016	66.36
27	**The National (Gunnamatta)** CAPE SCHANCK, AUSTRALIA THOMSON WOLVERIDGE & PERRETT, 2000; TOM DOAK, 2019	65.28
28	**Kasumigaseki (East)** KAWAGOE, JAPAN KINYA FUJITA/SHIRO AKABOSHI, 1929; TOM FAZIO/LOGAN FAZIO, 2016	62.35
29	**Newcastle** FERN BAY, AUSTRALIA FRED POPPLEWELL SR., 1915; ERIC APPERLY, 1932	61.00
30	**Lanhai Int'l (Yangtze Dunes)** CHONGMING ISLAND, CHINA JACK NICKLAUS, 2011; OGILVY CLAYTON COCKING & MEAD, 2018	60.50
31	**Metropolitan** SOUTH OAKLEIGH, AUSTRALIA J.B. MACKENZIE, 1908; DICK WILSON, 1960	60.45
32	**Ono** ONO, JAPAN OSAMU UEDA, 1961	60.20
33	**Hoiana Shores** QUANG NAM, VIETNAM ROBERT TRENT JONES JR., 2020	59.97
34	**Kauri Cliffs** MATAURI BAY, NEW ZEALAND DAVID HARMAN, 2000	59.68
35	**Abiko** ABIKO, JAPAN ROKURO & SHIRO AKABOSHI, 1931; BRIAN SILVA/KYE GOALBY, 2013	58.75
36	**Lake Karrinyup** KARRINYUP, AUSTRALIA ALEX RUSSELL, 1928; MIKE CLAYTON, 2007	57.08
37	**Whistling Rock (Temple/Cocoon)** CHUNCHEON, SOUTH KOREA TED ROBINSON JR., 2011; ERIC IVERSON, 2017	56.96
38	**Ayodhya** BOH TALO, THAILAND THOMSON & PERRETT, 2007; PITAK INTRAWITYANUNT, 2012	56.67
39	**Ocean Dunes** KING ISLAND, AUSTRALIA GRAEME GRANT, 2016	56.58
40	**Osaka** MISAKI, JAPAN OSAMU UEDA, 1937	56.43
41	**Woodlands** MORDIALLOC, AUSTRALIA J.D.H. SCOTT, 1919	55.71
42	**Mission Hills (Blackstone)** HAIKOU, CHINA BRIAN CURLEY, 2010	55.56
43	**Kooyonga** LOCKLEYS, AUSTRALIA HERBERT RYMILL, 1923; NEIL CRAFTER/PAUL MOGFORD, 2012	55.45
44	**Yarra Yarra** BENTLEIGH, AUSTRALIA ALEX RUSSELL, 1929; TOM DOAK, 2021	55.20
45	**Nikko** NIKKO, JAPAN SEIICHI INOUE, 1955; TAIZO KAWATA, 2001	55.00
46	**Peninsula Kingswood (South)** FRANKSTON, AUSTRALIA SLOAN MORPETH, 1965; OGILVY CLAYTON COCKING & MEAD, 2018	54.17
47	**Stonehill** SAM KHOK, THAILAND KYLE PHILLIPS, 2022	54.04
48	**Commonwealth** OAKLEIGH SOUTH, AUSTRALIA SAM BENNETT, 1921; CHARLES LANE, 1927; SLOAN MORPETH, 1938	53.65
49	**FLC Quang Binh (Forest Dunes)** HAI NINH, VIETNAM BRIAN CURLEY, 2018	53.54
50	**Pine Beach (Pine/Beach)** HAENAM, SOUTH KOREA G.R. BAIRD/DAVID DALE, 2009	53.33
51	**Ballyshear** TAMBON BANG BO, THAILAND GIL HANSE, 2022	53.00
52	**Titirangi** AUCKLAND, NEW ZEALAND ALISTER MACKENZIE, 1927	52.83
53	**Sentosa (Serapong)** SINGAPORE, SINGAPORE RONALD FREAM, 1982	52.52
54	**Kinloch** KINLOCH, NEW ZEALAND JACK NICKLAUS, 2007	52.50
55	**FLC Quy Nhon (Ocean-Nicklaus)** BINH DINH, VIETNAM JACK NICKLAUS, 2016	51.67
56	**Jack's Point** QUEENSTOWN, NEW ZEALAND JOHN DARBY, 2008	51.64
57	**The Bluffs Grand at Ho Tram** BA RIA-VUNG TAU, VIETNAM GREG NORMAN, 2010	51.59
58	**Barwon Heads** BARWON HEADS, AUSTRALIA VICTOR EAST, 1921; NEIL CRAFTER/PAUL MOGFORD, 2005	51.25
59	**BRG Da Nang (Nicklaus)** DA NANG, VIETNAM JACK NICKLAUS, 2020	50.58
60	**Royal Canberra** YARRALUMLA, AUSTRALIA JOHN HARRIS, 1961; OGILVY CLAYTON COCKING & MEAD, 2016	50.56
61	**Dunes at Shenzhou East** WANNING, CHINA TOM WEISKOPF/PHIL SMITH, 2012	50.18
62	**Grange (West)** GRANGE, AUSTRALIA HERBERT RYMILL, 1927; VERN MORCOM, 1965; MIKE CLAYTON, 2008	50.16
63	**Mission Hills (Hainan Lava Fields)** HAIKOU, HAINAN, CHINA BRIAN CURLEY, 2011	50.15
64	**Lake Malaren (Masters)** SHANGHAI, CHINA JACK NICKLAUS, 2011	50.12
65	**Jagorawi (Old)** GUNUNG PUTRI, INDONESIA THOMSON & WOLVERIDGE, 1979	49.99
66	**Shanghai Links** SHANGHAI, CHINA JACK NICKLAUS, 1999	49.93
67	**Koga** KOGA, JAPAN OSAMU UEDA, 1953; SHOICHI SUZUKI, 1996; KO TANIHIRA, 2005	49.87
68	**Oarai** OARAI, JAPAN SEIICHI INOUE, 1953	49.84
69	**Arrowtown** ARROWTOWN, NEW ZEALAND REG ROMANS/B.V. RIGHT, 1936; B.V. RIGHT, 1971	49.77
70	**Shimonoseki** AHIMONOSEKI, JAPAN OSAMU UEDA, 1956	49.68
71	**FLC Quang Binh (Ocean Dunes)** HAI NINH, VIETNAM BRIAN CURLEY, 2019	49.61
72	**Myotha National** SAGAING, MYANMAR LEE SCHMIDT/BRIAN CURLEY, 2018	49.55
73	**Stone Valley** HAI NINH, VIETNAM BRIAN CURLEY, 2018	49.15
74	**Jack Nicklaus GC** INCHEON, SOUTH KOREA JACK NICKLAUS, 2010	48.18
75	**The Lakes** EASTLAKES, AUSTRALIA VON HAGGE/BRUCE DEVLIN, 1968; MIKE CLAYTON, 2007	47.78
76	**Amata Spring** TAMBON NONG MAI DAENG, THAILAND LEE SCHMIDT/BRIAN CURLEY, 2005	47.73
77	**Victoria** DIGANA, SRI LANKA DONALD STEEL/MARTIN EBERT, 1999	47.50
78	**The National (Old)** CAPE SCHANCK, AUSTRALIA ROBERT TRENT JONES JR., 1988	47.11
79	**The Dunes** RYE, AUSTRALIA TONY CASHMORE, 1995	47.08
80	**Hokkaido Classic** ABIRA, JAPAN JACK NICKLAUS, 1991	47.00
81	**13th Beach (Beach)** BARWON HEADS, AUSTRALIA TONY CASHMORE, 2001	46.75
82	**Waverley** WAVERLEY, NEW ZEALAND ERNIE SOUTHERDEN, 1965	46.63
83	**Cathedral Lodge** THORNTON, AUSTRALIA GREG NORMAN, 2017	46.42
84	**Lonsdale Links** POINT LONSDALE, AUSTRALIA OGILVY COCKING & MEAD, 2020	46.27
85	**Kasumigaseki (West)** KAWAGOE, JAPAN KINYA FUJITA/SEIICHI INOUE, 1932; TAIZO KAWATA, 1994	46.25
86	**Saujana (Palm)** PETALING JAYA, MALAYSIA RON FREAM, 1986	46.01
87	**Laguna Lang Co** THUA THIEN HUE, VIETNAM NICK FALDO, 2013	45.71
88	**Haesley Nine Bridges** YEOJU-GUN, SOUTH KOREA DAVID DALE, 2009	45.59
89	**Dunes at Shenzhou West** WANNING, CHINA TOM WEISKOPF/PHIL SMITH, 2010	45.56
90	**Blue Canyon (Canyon)** TAMBON MAI KHAO, THAILAND YOSHIKAZU KATO, 1991	45.38
91	**Royal Hong Kong (Composite)** SHEUNG SHUI, CHINA EDEN: L.S. GREENHILL, 1931; JOHN HOPKINS/PETER THOMSON, 1968; NEW: JOHN HOPKINS/PETER THOMPSON/MICHAEL WOLVERIDGE, 1970	45.31
92	**Glenelg** NOVAR GARDENS, AUSTRALIA HERBERT RYMILL, 1927; VERN MORCOM, 1954; NEIL CRAFTER/BOB TUOHY, 1998	45.05
93	**Port Fairy** PORT FAIRY, AUSTRALIA MEMBERS, 1963; KEVIN HARTLEY, 1985; MIKE CLAYTON, 2002	44.98
94	**Nicklaus Club Beijing** BEIJING, CHINA JACK NICKLAUS, 2014	44.91
95	**Royal Queensland** BRISBANE, AUSTRALIA CARNEGIE CLARK, 1921; MIKE CLAYTON, 2005	44.88
96	**The Australian** ROSEBERY, AUSTRALIA JACK NICKLAUS, 1976, 2013	44.61
97	**Anyang** GUNPO-SI, SOUTH KOREA CHOHEI MIYAZAWA, 1968; ROBERT TRENT JONES, JR., 1997	44.27
98	**Joondalup (Quarry/Dune)** CONNOLLY, AUSTRALIA ROBERT TRENT JONES JR., 1985	43.93
99	**Siam (Old)** TAMBON PONG, THAILAND ICHISUKE IZUMI, 1971; LEE SCHMIDT, 2007	43.79
100	**Portsea** PORTSEA, AUSTRALIA JOCK YOUNG, 1926; SLOAN MORPETH/JACK HOWARD, 1960; MIKE CLAYTON, 2000	43.76

Pgs. 82–83: Gary Lisbon; Nate Gardner; Toku Miyamoto; Pgs. 84–85: Joann Dost; Nick Wall; Brian Curley; Previous page: Gary Lisbon

Curley-Wagner
GOLF DESIGN

DP WORLD TOUR

2026 HAINAN CLASSIC

Blackstone & Vintage Courses @ Mission Hills Haikou

Curley-Wagner GOLF DESIGN

MISSION HILLS – Blackstone Course (Haikou, China)

#42 Golf Magazine 2023 Top 100 Courses Asia-Pacific


LPGA
2026 LPGA HONDA CLASSIC
Curley-Wagner
GOLF DESIGN
SIAM COUNTRY CLUB – Old Course (Pattaya, Thailand)
#99 Golf Magazine 2023 Top 100 Courses Asia-Pacific

FLC QUY NHON – Ocean Course (Binh Dinh, Vietnam)

#55 Golf Magazine 2023 Top 100 Courses Asia-Pacific

Curley-Wagner
GOLF DESIGN

CHHUN ON GOLF RESORT – Lake Course
(Phnom Penh, Cambodia)

Curley-Wagner
GOLF DESIGN

DHOHO SURYA GOLF COURSE (Kediri, Indonesia)


Curley-Wagner
GOLF DESIGN
SHURA LINKS (Shura Island, Saudi Arabia)


Curley-Wagner
GOLF DESIGN
DRAGON'S LANDING at HANN RESERVE (New Clark City, Philippines)
Design Consultant for Nicklaus Design






INFINITE VARIETY
on widely varied
terrain & climates

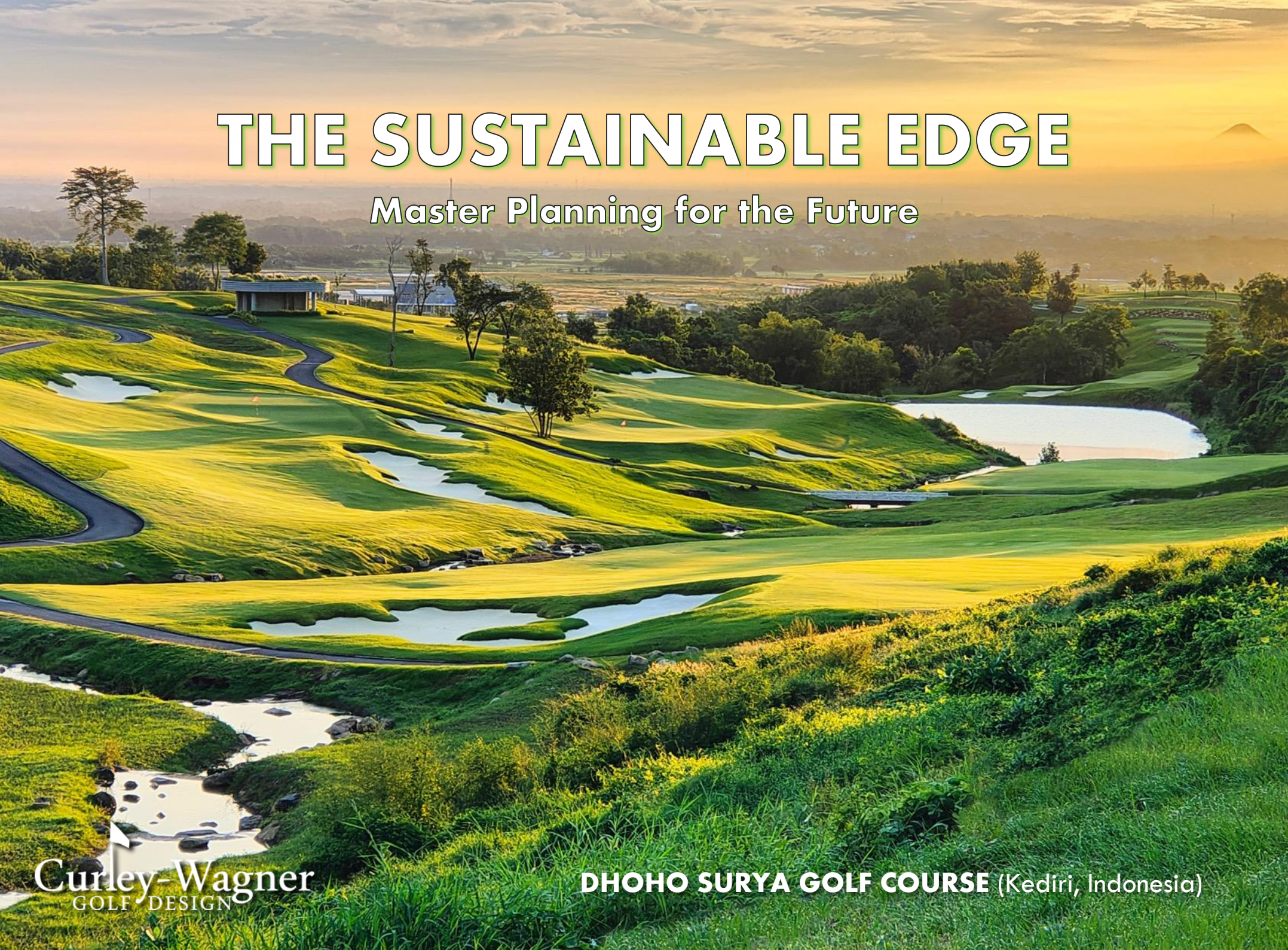

Curley-Wagner
golf design






THE SUSTAINABLE EDGE

Master Planning for the Future



Curley-Wagner GOLF DESIGN

DHOHO SURYA GOLF COURSE (Kediri, Indonesia)

IMPROVING PLAYABILITY, REDUCING INPUTS & EXTENDING LIFECYCLE THROUGH THOUGHTFUL MASTER PLANNING & RENOVATION

KEY POINTS:

- **Sustainability is not about doing less, it's about making smarter decisions in the planning phase and building a course that needs less**
- **Most existing courses are over-maintained and under performing**
- **Most courses aren’t struggling because of maintenance, they’re struggling due to aging infrastructure**
- **Legacy design + aging infrastructure = inefficiency**

RENOVATION IS THE FASTEST PATH TO:

- **Better playing conditions**
- **Lower inputs (water, labor, chemicals)**
- **Stronger long-term identity**

EXPECTED LIFE CYCLE OF A GOLF COURSE

how long should parts of the golf course last?

No two golf courses are alike except for one thing: deferring replacement of key items can lead to greater expense in the future, as well as a drop in conditioning and player enjoyment. The following information represents a realistic time line for each item's longevity.

Component life spans can vary depending upon location of the golf course, quality of materials, original installation and past maintenance practices. The American Society of Golf Course Architects (ASGCA) encourages golf course leaders to work with an ASGCA member, superintendents and others to assess their course's components.

ITEM	YEARS
Greens (1)	15 - 30 years
Bunker Sand	5 - 7 years
Irrigation System *Irrigation Control System* *Pump Station*	10 - 30 years 10 - 15 years 15 - 20 years
Cart Paths - asphalt (2)	5 - 10 years (or longer)
Cart Paths - concrete	15 - 30 years (or longer)
Practice Range Tees	5 - 10 years
Tees	15 - 20 years
Corrugated Metal Pipes	15 - 30 years
Bunker Drainage Pipes (3)	5 - 10 years
Mulch	1 - 3 years
Grass (4)	Varies

NOTES: (1) Several factors can weigh into the decision to replace greens: accumulation of layers on the surface of the original construction, the desire to convert to new grasses and response to changes in the game from an architectural standpoint (like the interaction between greens speed and hole locations). **(2)** Assumes on-going maintenance beginning 1 - 2 years after installation. **(3)** Typically replaced because the sand is being changed—while the machinery is there to change sand, it's often a good time to replace the drainage pipes as well. **(4)** As new grasses enter the marketplace—for example, those that are more drought and disease tolerant—replanting may be appropriate, depending upon the site.

ASGCA thanks those at the USGA Greens Section, Golf Course Builders Association of America, Golf Course Superintendents Association of America and various suppliers for their assistance in compiling this information.

The materials on this chart have been reviewed the by the following Allied Associations of Golf.

SOURCE: AMERICAN SOCIETY OF GOLF COURSE ARCHITECTS

THE REALITY OF EXISTING COURSES

GREENS

- Poor attention to detail leads to putting surfaces shrinking, losing valuable pin areas tucked behind bunkers or hazards . . . impacting the strategy of golf holes
- Buildup of organics and top-dressing dams impacts playability
- Contamination resulting in inconsistent playing surfaces

DRAINAGE FAILURE

- Soft conditions impact playability and player enjoyment
- Could result in lost rounds and revenue

OUTDATED IRRIGATION SYSTEMS

- Lack isolated control, precision
- Lack uniform coverage resulting in inconsistent playing surfaces
- Inefficient water use
- Outdated systems don't manage water, they simply distribute it

VOLUNTEER TREE GROWTH

- Reduces width of fairways and green surrounds
- Reduces critical airflow, negatively impacting turf health
- Blocks visibility of important sightlines into design features
- Blocks visibility of important feature trees as well as other desirable vegetation that add color and contrast to the playing experience and overall aesthetics of the course

BUNKERS

- Drainage fails over time
- Cheap liners are rendered useless
- Bunker area shrinks due to poor maintenance habits
- Inconsistent sand depths are common, negatively impacting playability and player enjoyment
- Bunkers eventually become maintenance liabilities

KEY TAKEAWAY:

- Most issues are infrastructure problems disguised as maintenance problems

Curley-Wagner GOLF DESIGN

SHURA LINKS (Shura Island, Saudi Arabia)

THE SUSTAINABLE EDGE: DESIGNING FOR PERFORMANCE

PILLARS OF RENOVATION WORK

- **SURFACE PERFORMANCE**
- WATER MANAGEMENT
- PLAYABILITY + STRATEGY
- MAINTENANCE EFFICIENCY

OBJECTIVE: Firm, consistent, predictable playing surfaces

- Rebuild and improve greens and their character
- Expand/restore green sizes and recapture pinnable areas
- Improve surface drainage (add movement/pitch)
- Reshape and smooth transitions to improve playability (fairway -> approach -> green)

WHY IT MATTERS:

- Firm surfaces reduce water demand
- Healthier turf = fewer chemical inputs
- Consistency improves player experience immediately

KEY TAKEAWAY:

- If the surfaces work, everything else gets easier

Curley-Wagner GOLF DESIGN

CHHUN ON GOLF RESORT – Lake Course
(Phnom Penh, Cambodia)

THE SUSTAINABLE EDGE: DESIGNING FOR PERFORMANCE

PILLARS OF RENOVATION WORK

- SURFACE PERFORMANCE
- WATER MANAGEMENT
- PLAYABILITY + STRATEGY
- MAINTENANCE EFFICIENCY

OBJECTIVE: Control water, don't chase it

- Reshape fairways to shed water naturally
- Build a clear drainage hierarchy (surface -> collection -> storage)
- Capture and recycle water where possible
- Upgrade irrigation for precision, not just uniform coverage

WHY IT MATTERS:

- Less standing water = more playable days
- Reduced irrigation dependency
- More resilient turf in extreme weather

KEY TAKEAWAY:

- Water should move through the golf course, not sit in it

Curley-Wagner GOLF DESIGN

SUN HILLS GOLF CLUB (Yunnan, China)

THE SUSTAINABLE EDGE: DESIGNING FOR PERFORMANCE

PILLARS OF RENOVATION WORK

- SURFACE PERFORMANCE
- WATER MANAGEMENT
- **PLAYABILITY + STRATEGY**
- MAINTENANCE EFFICIENCY

OBJECTIVE: Reduce turf stress while improving golf

- Restore width and playing corridors
- Reposition/reduce bunkering to what matters
- Emphasize angles, options, and ground game
- Match design to how the course is played today

WHY IT MATTERS:

- Wider corridors = less wear, healthier turf, and improved playability
- Less forced carries – more inclusive play
- Strategic interest without maintenance burden

KEY TAKEAWAY:

- Thoughtful design shifts burden off maintenance

Curley-Wagner GOLF DESIGN

DALU DUNES (Inner Mongolia, China)

THE SUSTAINABLE EDGE: DESIGNING FOR PERFORMANCE

PILLARS OF RENOVATION WORK

- SURFACE PERFORMANCE
- WATER MANAGEMENT
- PLAYABILITY + STRATEGY
- MAINTENANCE EFFICIENCY

OBJECTIVE: Lower inputs without lowering standards

- Simplify bunker styles and edges using modern construction methods and materials
- Reduce maintained turf area where it doesn't impact play and substitute with drought tolerant native grasses/groundcovers
- Improve access and workflow (cart paths, routing, staging)
- Align design with budget and Superintendent's capabilities

WHY IT MATTERS:

- Reduced labor hours, lowering operations cost
- Lower long-term costs
- More consistent presentation with less effort

KEY TAKEAWAY:

- The goal isn't to maintain more, it's to maintain less, better

Curley-Wagner GOLF DESIGN

DRAGON'S LANDING at HANN RESERVE (New Clark City, Philippines)
Design Consultant for Nicklaus Design

CASE STUDY #1:

THE CLUB AT LAS CAMPANAS

SANTA FE

INTRODUCTION

THE CLUB AT LAS CAMPANAS SANTA FE

club background

Sitting at an elevation of nearly 7,000 feet, The Club at Las Campanas features two stunning Jack Nicklaus Signature Golf Courses just 10 miles from Santa Fe, the oldest capital city in North America with one of the country's largest art markets. With spectacular long views of the snowcapped Sangre de Christos and Jemez Mountains, the delightful immediate views of Pinon Pines, Juniper and fields of colorful wildflowers and native grasses dominate the high desert landscape of this 4,700-acre residential development created by The Lyle Anderson Company.

After successful partnerships at Desert Highlands and Desert Mountain in the 1980's, Lyle Anderson, the "Father of Desert Golf", and Jack Nicklaus teamed up once again to create two championship golf courses at The Club at Las Campanas. It was here on the previous site of Bob & Zannie Weil's Santa Fe Ranch that Jack Nicklaus made a momentous departure from concepts he had implemented on his previous golf courses and routed both golf courses at The Club at Las Campanas with a more sensitive and environmentally friendly approach towards preserving the natural character of this dramatic landscape. The result of this approach is two highly challenging championship layouts with the Sunrise Course, the Golden Bear's 100th career design, opening in 1993 and the second 18 Hole layout, the Sunset Course, opening in 2000.

Since opening, the Club has hosted the USGA Women's State Team Championship in 2017 and is consistently ranked in New Mexico's Top 5 Courses in various publications. From 2014-2022 the Club has been recognized as a Platinum Club of America for its 5 star world class facilities, which include a fantastic Practice Facility featuring access to PGA accredited Golf Professionals as well as a 19-acre Practice Facility with an expansive Driving Range, Short Game Area and a state of the art Performance Center. In addition to the Hacienda Clubhouse, golf courses and Practice Facility, the Las Campanas community features a 30,000 square foot Fitness, Tennis & Spa Center, an Equestrian Center, an indoor riding hall, large outdoor jumping rings and an all-purpose arena with access to expansive open space and trails. Given these incredible amenities, Las Campanas has been deservingly recognized as the premier luxury golf & residential community of Santa Fe.

master plan process

Since the opening of the Sunrise Course in 1993 and the Sunset Course in 2000, the Club has completed a myriad of golf course enhancement projects under the watchful eye of designers who had previously honed their craft under the tutelage of Jack Nicklaus. While much of that work may have been necessary and done well, the Club lacked a comprehensive long-term vision for the golf courses moving forward. In May of 2021, The Club at Las Campanas reached out to Nicklaus Design with an objective of developing a "Long-Term Master Plan".

In August of 2021, Senior Design Associate Jim Wagner visited the Club to review the Club's objectives and areas of concern with the Greens Committee Chairman, Gary Seger, and the Director of Agronomy, Tom Egelhoff. With an arsenal of photos and observations from this visit, Jim Wagner met with Jack Nicklaus in September of 2021 to review potential course improvement ideas. During this detailed discussion, Jack Nicklaus stressed the importance of working with the Club to make sure the Club's desired course improvements are addressed and implemented, but at a pace that is reasonable for the Club. In addition, this opportunity to review the golf courses in detail allowed Jack Nicklaus to make several other recommendations that fell in-line with the original objectives provided by the Club to Nicklaus Design. These recommendations were later discussed with the Club and many are included in the "Long-Term Master Plan".

Since his meeting with Jack Nicklaus, Jim Wagner has made two more site visits to review ongoing implementation of recommendations approved by the Club. During this time, Nicklaus Design has also carefully outlined each recommendation into a Master Plan format that is easy for Club Management and Members of The Club at Las Campanas to review and understand. While these Master Plans contain detailed descriptions for each hole and recommendation, it should be noted that the Master Plan will continue to evolve as time presses on and the golf courses evolve as well. While the Master Plan is subject to adjustments moving forward, Nicklaus Design will ensure that the Club approves of any adjustments prior to updating the Master Plan. As a final step of this Master Plan process, Nicklaus Design is pleased to provide the Club with the "Long-Term Master Plan" Booklet for the Sunrise Course.

long-term master plan implementation

The recommendations contained in the Long-Term Master Plan are extensive and will be implemented over numerous projects and phases. Some of the recommendations and tasks have already been completed, while others will be implemented over a longer period of time based on the availability of Club resources. The 2023 Sunrise Course Front 9 Greenside Bunker Renovation Project is a critical phase of the Master Plan work as the work that will be done in the Spring of 2023 will serve as wonderful benchmark of what to expect for future bunker renovation projects, creating a fresh look and a welcomed enthusiasm for future projects.

The Club will need to think strategically about phasing all future work. Besides capital, the Club will need to consider course closures while significant construction work, such as a bunker renovation, is being carried out. The Club should also consider completing projects like adding or removing tees when feasible and preferably in the earlier phases of Master Plan implementation as economic changes could possibly delay future phases of this type of work. Future bunker renovation work, turf reduction and native/DG conversions can be implemented at any time the Club wishes. As each task is completed, the Members will begin to see results and how the recommended work improves access into bunkers, improves playability and creates greater continuity and variety throughout the golfing experience. There are several other Scopes of Work noted in the Master Plan and those will be covered extensively in this "Long-Term Master Plan" booklet.

The challenging finishing holes of the Sunset & Sunrise Courses playing towards the east with the dramatic Sangre de Cristo Mountains offering spectacular distant views.

In September of 2021, Jim Wagner met with Jack Nicklaus to review site visit observations and objectives brought forth by The Club at Las Campanas.

COURSE ANALYSIS

THE CLUB AT LAS CAMPANAS SANTA FE

Prior to the creation of the Master Plan, it is critical for Nicklaus Design to perform a detailed analysis of the golf course and its features so that the objectives of the Club can be better understood. This course analysis phase is highly beneficial as we can begin to focus on areas of concern and their priority level, which will eventually help us determine where our recommendations can make the greatest impact while adhering to the Club's main objectives.

Golf course design can be very subjective, but in the end, our overall goal at The Club at Las Campanas is to preserve the integrity of the Jack Nicklaus Signature Design. We are not going to try and chase distance or make the golf course easier or more difficult. We are simply trying to preserve the challenge the layout provides while improving the overall presentation of its features and creating greater continuity and variety throughout the course in an effort to make the golf course more playable and enjoyable for golfers of all skill levels.

Finally, it is important to note that Nicklaus Design is not merely designing for us. Rather, the recommendations in this Master Plan are a direct response to the issues and priorities expressed by the Club and its representatives over the course of numerous site visits and discussions. In the end, it is our goal that the recommendations developed from our course analysis will help elevate the quality of golf at The Club at Las Campanas and provide long-term enjoyment to its current and future Members.

playing surfaces

The Sunrise Course was constructed in 1993 and features Pencross Bentgrass greens, fairways and tees with Bluegrass roughs. The greens are generally consistent in character, with a few greens slightly softer than others and some with slopes pitching away from the front edges that could be adjusted and softened to improve playability for Members. All fairways are sandcapped and rough areas are consistent with native soil.

green size preservation & tie-ins

The Director of Agronomy, Tom Egelhoff, and his team have done an excellent job reinstating several of the original green core shapes and sizes in recent years. It was stressed that green reduction is common with courses of similar age and it was reassuring to see proactive measures being taken to recapture the original green sizes. While there is still considerable work to be done to complete this program, the greens that have been completed have been done very well. In addition, the tie-ins around the perimeter of each green are excellent with very little evidence of top-dressing build up.

bunkers

The Sunrise Course bunkers feature a MacKenzie like bunker style with high sharp flashes and long fingers protruding into several bunker floors. When done well, the high flashes and long fingers create a dramatic visual appearance and defining character for the bunkers as a whole. From 2018-2020 the bunkers were reconstructed with a StaLok Bunker Liner System and ProTour Bunker Sand. ProTour Bunker Sand has a slightly off-white color and presents a welcomed contrast in comparison to the Sunset Course bunkers. Bunker ingress and egress is an issue for many bunkers on the Sunrise Course and these problematic bunkers will need to be addressed as we move forward.

In addition to the above, many of the bunkers are extremely large and it was evident that the Club prefers to reduce the amount of sand throughout the Sunrise Course. With a reduction in sand throughout the course being imminent, it provides an opportunity to reshape bunkers and improve the visual presentation of each golf hole that is impacted. As bunkers are reduced in size, the remaining areas can be converted into chipping hollows in rough or fairway/approach height and other areas away from play can be converted to native plant material. These improvements will surely add to the variety and visual appearance of the golf course, while also improving playability for the Members, particularly around green complexes.

forward tees

Over the course of Jim Wagner's site visits, Forward Tees were reviewed and are mainly acceptable to the club. Specifically, additional Forward Tees were discussed on Holes 1, 2, 5 & 11 while a sight line issue involving the Turquoise Tee on Hole 3 was also observed.

The greenside bunker on Sunrise Hole 8 illustrates a strong presence of sand with long protruding bunker fingers, creating a stunning contrast to the distant mountain views.

An excessive amount of sand is a notable concern for the golf course's playability and maintenance. This example is on Sunrise Hole 17 where a long bunker and its countless bunker fingers flank the entire left side of the fairway.

A ground level view of the bunker flanking the entire left side of the fairway on Sunrise Hole 17. While the bunkering offers a dramatic visual appearance, much of the bunker area is out of play and penalizes only the high handicap golfers, making the course more difficult for them.

GENERAL MASTER PLAN RECOMMENDATIONS

THE CLUB AT LAS CAMPANAS SANTA FE

Much of the content below has been covered in the "Course Analysis" section of this "Long-Term Master Plan" document. While that information is a good representation of what exists, it is important for the Club and its Members to have a better understanding of how it is implemented. The following is a brief summary of a few selected topics that serve as major focal points of the ongoing work and Master Plan being provided to The Club at Las Campanas.

green size preservation & tie-ins

As site visits are made moving forward, Nicklaus Design will be happy to assist the Director of Agronomy, Tom Egelhoff, in identifying any top-dress build up imperfections in rough areas surrounding the greens that we see as an impact on playability. In other words, any imperfection that could have a negative impact on ball movement after a well struck shot, should be addressed.

bunkers

A major program element of the Master Plan is bunker reduction. There is a massive amount of sand on several holes throughout the Sunrise Course and the Master Plan calls for a significant reduction in the size of many of them. While reducing sand is at the top of the priority list, other measures are being taken to raise bunker floors or lower bunker lead-ins to improve ingress and egress. This will not only provide your Members with improved access in and out of bunkers, but will also allow for maintenance equipment to enter and exit each bunker with greater ease.

As it is being recommended that every bunker is eventually reconstructed over long-term phasing, the Club should understand that the bunker renovations are an evolving task and as each phase of bunker reconstruction approaches, Nicklaus Design will work closely with the Director of Agronomy, Tom Egelhoff, to determine which bunkers are next and what the exact scope of work for each bunker is. After the scope of work is identified, Nicklaus Design will proceed with detailed Bunker Renovation Plans and Bid Documents, similar to what was provided recently for the Sunrise Course Front 9 Bunker Renovation. While much of the work that will be shown in the Bunker Renovation Plans is part of the Master Plan, additional recommendations will also be made due to the course evolving or small details only coming to surface at the time prior to each bunker renovation phase.

Although delaying bunker work due to today's high construction costs is more than reasonable, a plan of action must be put in place to make sure that bunker consistency is taken into consideration. While some bunkers might appear fine and have limited issues with ingress and egress, consistency in playability is still highly important. A greenside bunker built tomorrow and a greenside bunker built four years ago might play entirely different. By reconstructing the Sunrise bunkers within a year or so of one another it gives the Maintenance Team the best possible chance to present high quality bunker conditions for your Members on a daily basis. In addition, it is critical that sand depths are maintained properly throughout all bunkers and compacted regularly to the specified depth.

In addition to consistency in playability, the reshaping of each bunker and their immediate surrounds will eliminate imperfections in the surrounding tie-ins and movement while also allowing for each bunker to be reshaped with improved aesthetics or visual appearance in mind. Although bunkers need to be placed strategically, they also need to look beautiful. Each individual bunker should be considered a work of art and with many of today's modern courses being evaluated purely on the aesthetics of bunkers, each bunker reconstruction phase allows the Club with an opportunity to improve the visual presentation of the golf course so that its beauty can be preserved at a high level until it is time to reconstruct them again. Nicklaus Design looks forward to working with the Club to determine the best course of action for all bunkers on the Sunrise Course.

forward tees

New Forward Tee locations have been added to the Master Plan on Holes 1, 2, 5 & 11. These tee locations were discussed and agreed to by the Club and some have been implemented over the last year or so by the Maintenance Team. This work has been completed in consultation with Nicklaus Design, whether it be through plan work or field review and inspection. The Maintenance Team is doing a fantastic job getting the new tees shaped and constructed and it is our hope that the Members can enjoy these new tee locations and the improved playability and flexibility in yardages they offer.

native/dg areas

As noted in the Master Plan, the DG areas throughout the Sunrise Course are being converted to native plant material in most cases. Although Director of Golf, Tom Egelhoff, and his team will be implementing native plant material into the areas specified, we are also taking some time to go through the golf course on a hole by hole basis to re-identify each native area's limits. Over time, many of the native/dg area limits have lost their shape and relationship to the irrigation head layout. Over the last two site visits, many of the Sunrise Course native area limits have been re-identified in the field using marking paint. These new limits are part of an overall course beautification process and should be preserved in CAD format so they can be surveyed in the field and adjusted as needed in years to come. Preserving these limits is highly important towards achieving the best possible presentation of the golf course.

It should also be noted that many of the existing DG areas appear quite isolated. When reviewing the DG areas in the field, it seemed as though the external and internal landscapes of the Sunrise Course lacked continuity and by converting the DG areas to native plant material, it allows for the external landscape to be brought down from the adjacent hillsides, across cart paths and into each golf hole. This once again contributes to the overall beautification and improved presentation of the Sunrise Course.

turf limits & reduction

As these native areas relate to new turf limits, the new irrigation system layout should respect the new limits identified on each hole's native areas throughout the Sunrise Course. These limits are in addition to the turf reduction areas highlighted on the Master Plan, many of which have already been identified in the field with Director of Agronomy, Tom Egelhoff.

This photo illustrates the construction process for the new tees being added throughout the Sunrise Course. Although this photo is from the Sunset Course, it is a good reflection of the process of identifying tee locations and elevations and the Maintenance Team bringing them to life through rough shaping, drainage installation and sand capping prior to a final float and grassing.

The Club at Las Campanas · Sunrise Course

1

PAR FOUR

EXISTING	PROPOSED
378	378
373	373
350	356
331	335
254	270

The 1st Hole is a wonderful start to the golfing experience with a tee shot playing into a fairway that slopes gently from left to right towards the arroyo along the right side of the golf hole. Some work around the PPG and 1st Tee to remove DG and replace it with turf will enhance the overall aesthetics in this area. As we move up the golf hole, a new Alternate Forward Tee will be added providing flexibility for the Blue Tee to move up, or the Turquoise Tee to move back depending on wind direction and firmness of fairways. The right side of the golf hole has been encroached by volunteer Juniper. With some selective tree removal, small gaps of visibility can be created up the right side of the golf hole and even into the green from the far right edge of the landing area. This line of play provides an ideal angle into the green taking the left greenside bunker out of play. The left greenside bunker will be reduced and reshaped to allow for increased trolley access between the bunker and arroyo.

NOTES:

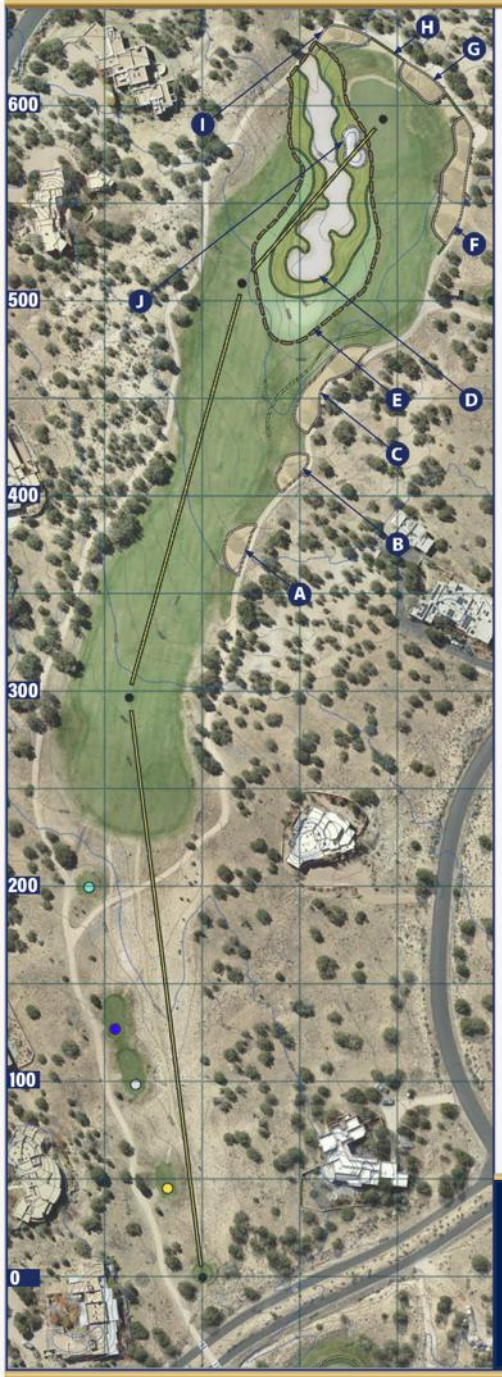
- **A** Remove DG adjacent to the Black, Gold, Silver & Blue Tee locations and add turf tying into cart path.
- **B** Remove DG on the northern side of the PPG and add turf tying into the cart path. This will create a band of turf from the PPG to Hole 1 Tees, improving the aesthetics of this area.
- **C** The remaining DG between the PPG and cart path adjacent to Hole 1 Tees, as well as the area left of Hole 1 Tees, should be converted to native plant material.
- **D** Add a 750 SF Alternate Forward Tee at 270 Yards. This proposed tee location sits adjacent to the arroyo. A small caddie walk will be developed off the main cart path to access the new tee.
- **E** Remove Junipers in select locations to improve visibility up the right side of the golf hole and landing area. This improved visibility should be preserved moving forward.
- **F** Convert DG area to native plant material short and left of the landing area along the cart path.
- **G** Preserve visibility into the green surrounds from the right edge of the fairway, which is an ideal approach angle into the green taking the left greenside bunker out of play.
- **H** Reduce and reshape the left greenside bunker to allow for greater trolley access between the arroyo and greenside bunker while preserving a strong defense of the back left pin. As part of this scope of work, a small portion of green and fairway turf will be removed so that tie-ins between the new left greenside bunker and green can be adjusted.

6

PAR FIVE

EXISTING	PROPOSED
589	597
542	552
489	501
462	474
401	407

The 2nd of the outward Par 5's is the downhill 6th Hole. Much of the work that will be done on this hole involves removing DG and replacing those areas with native plant material. This work is featured along the right side of the golf hole and behind the green, adjacent to the cart path. Some of this work also involves increasing turf access off the cart path behind the green. The 2nd landing area is where significant work will take place with the filling of the front bay of the large waste bunker. This will allow fairway height to be implemented right of the new waste bunker edge, connecting the left fairway to the approach short and right of the green. To preserve playability and consistency of all greenside bunkers, the bunker fronting the green will be reconstructed, improving ingress and egress as needed.



NOTES:

- **A** Convert DG area to native plant material.
- **B** Convert DG area to native plant material.
- **C** Convert DG area to native plant material.
- **D** Fill in the front bay of the large waste bunker crossing the 2nd landing area to allow for a fairway connection to be developed tying the left fairway pad into the approach area short and right of the green. As part of this scope of work, the waste bunker will be reshaped to enhance visual interest.
- **E** The eliminated portion of the waste bunker will be converted into fairway. This improvement reduces the penal nature of the existing waste bunker and improves access into the fairway pad short and right of the green.
- **F** Convert DG area to native plant material.
- **G** Convert DG area to native plant material.
- **H** Remove DG and increase turf access off cart path behind the green.
- **I** Convert DG area to native plant material.
- **J** The fronting greenside bunker will be reshaped to preserve consistent playability and drainage function amongst all greenside bunkers.

8

PAR THREE

EXISTING	PROPOSED
214	217
200	206
195	202
174	181
136	141

The Par 3 8th Hole offers another beautiful Par 3 on the outward 9 with an attractive greenside bunker guarding the right side of the green. The left side of the green features a feed-in off its front left and significant support containing shots into the back pin. The low off the middle left leaves a difficult recovery shot back into the green. Eliminating the front half of the right greenside bunker will undoubtedly have an impact on the aesthetics of the golf hole but will also help to improve the overall playability as well. The eliminated portion of the bunker will be converted into a chipping low in rough height and the remaining bunker area will be reduced and reshaped into two smaller bunkers. The left side of the hole requires the DG areas to be converted to native plant material, while turf access into the green will be increased along the cart path in three areas. The Juniper behind the green will be removed and Pinon trees will be added across the cart path to help reduce visibility of the Fitness Center.

NOTES:

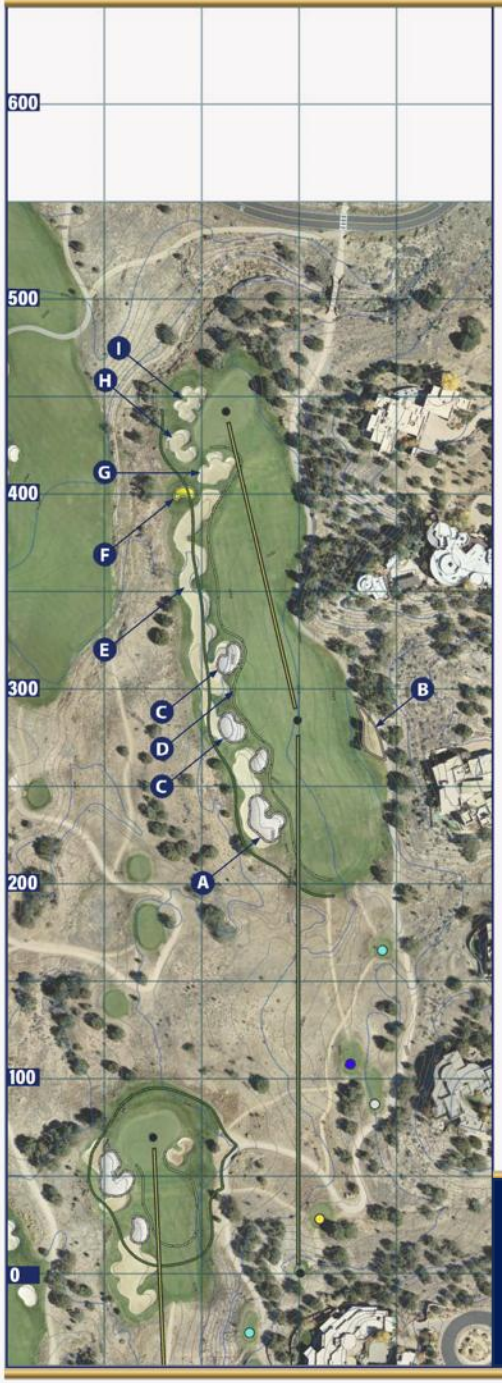
- **A** Eliminate the front half of the right fairway/greenside bunker, improving the playability of the golf hole. The area where the bunker will be eliminated will be reshaped, tied into its surrounds and converted into rough and native plant material.
- **B** The remaining bunker will be reduced and reshaped into two smaller bunkers, with access between them into the green.
- **C** Covert DG area to native plant material.
- **D** Increase turf access off cart path left of the green.
- **E** Covert DG area to native plant material.
- **F** Increase turf access off cart path left of the green.
- **G** Covert DG area to native plant material.
- **H** Increase turf access off cart path behind of the green.
- **I** Remove Juniper behind the green and add Pinon trees beyond cart path to help reduce visibility of the Fitness Center in the distance.

17

PAR FOUR

EXISTING	PROPOSED
447	446
418	419
358	364
339	342
288	289

A long expanse of sand flanks the left side of the fairway on this well bunkered Par 4. While the expansive bunkering presents well, it requires significant maintenance. With the bunkering being reduced to help with ease of maintenance, smaller bunkers will be reshaped in key locations to preserve the defense of the Tee Shot down the left side of the golf hole, which offers a good angle into the green. Moving closer to the green, the out of play far left bunker short and left of the green will be removed and converted to turf. The remainder of the greenside bunkers will be reconstructed for improved ingress and egress as well as consistency in playability of all greenside bunkers.



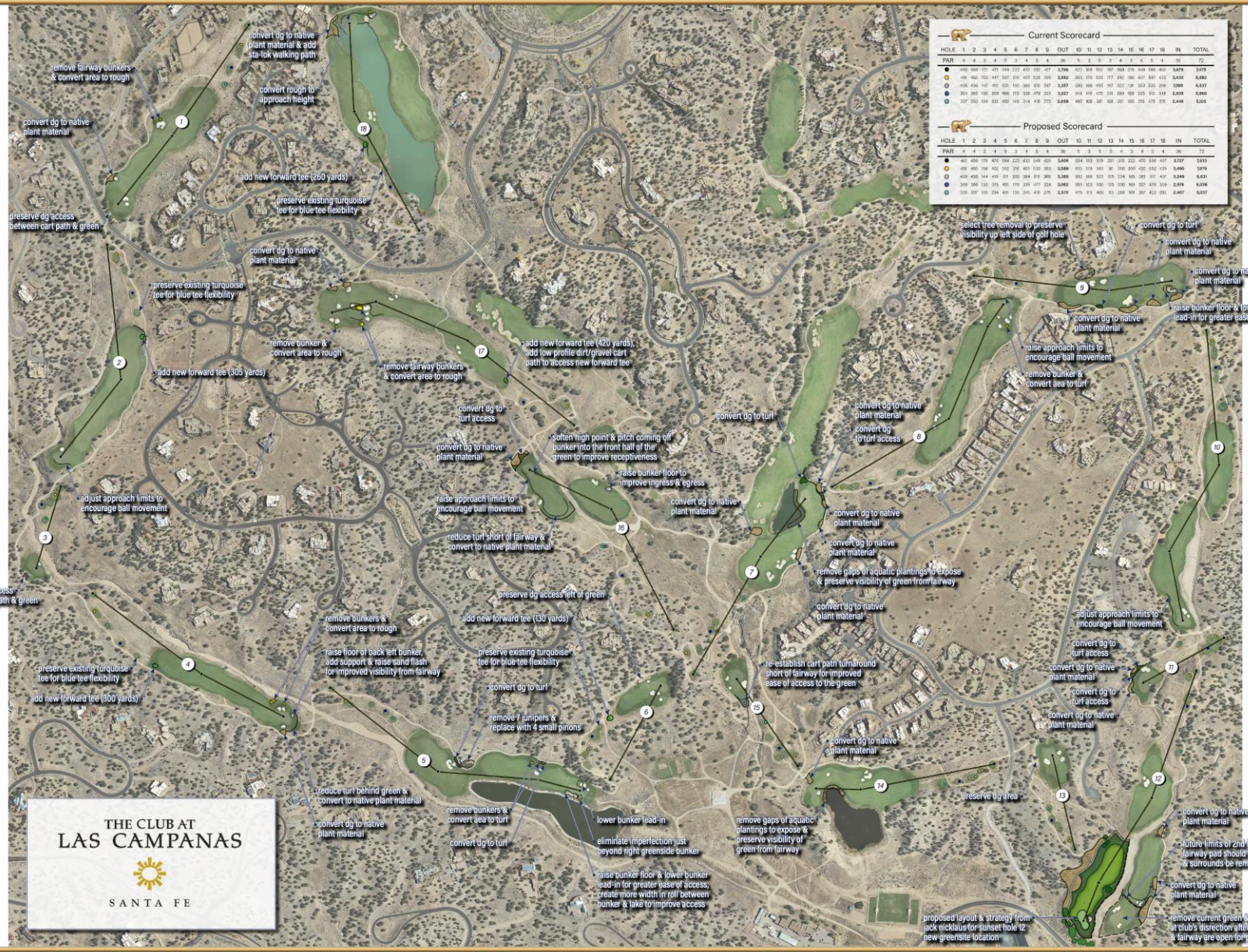
NOTES:

- **A** Reduce and reshape the first left fairway bunker into two smaller bunkers. The reshaped smaller bunkers are being preserved in key locations as it relates to the landing area. Area where bunkering is eliminated will be reshaped with soft movement and tie-ins to the existing native areas.
- **B** Convert DG to native plant material.
- **C** The existing and long second left fairway bunker will be reduced significantly leaving a new smaller bunker in its first bay and a second new bunker just beyond the landing area. These bunkers will preserve a strong defense of the hole along its left side.
- **D** Fairway limits will be adjusted based on revised bunker shaping.
- **E** The previous bunker areas will be filled in, reshaped and converted to rough and native plant material.
- **F** Remove bunker as it is out of play and merely aesthetic.
- **G** The front left greenside bunker will be reconstructed for improved ingress and egress as well as consistency in playability of all greenside bunkers.
- **H** The left greenside bunker will be reconstructed for improved ingress and egress as well as consistency in playability of all greenside bunkers.
- **I** The back left greenside bunker will be reconstructed for improved ingress and egress as well as consistency in playability of all greenside bunkers.

The Club at Las Campanas • Sunset Course

long-term master plan

santa fe, new mexico



12

PAR FIVE

EXISTING	PROPOSED
552	578
535	563
495	523
470	500
381	409

The downhill tee shot on the Par 5 12th presents very well while offering amazing long views beyond the greensite. Although the DG areas along the left side of the second landing area will be converted to native material, there is very little work required for the existing corridor. In response to the Club's wishes, the area to the north of the arroyo has been reviewed in the field by Jim Wagner and concept strategy was later developed by Jack Nicklaus. Based on Jack Nicklaus' input, a grading plan and bid document have been developed by Jim Wagner so that the club has an estimated cost to construct the project. The proposed redesign is an exciting concept that takes advantage of the existing terrain while preserving distant views to the north and west and should the club decide to proceed with the proposed redesign and later abandon the existing greensite, the required recommendations have been included as part of the Master Plan.

NOTES:

- **A** Convert DG area on the left side of fairway at the start of the 2nd landing area to native plant material.
- **B** Convert DG area on the left side of 2nd landing area to native plant material.
- **C** Convert DG area on the left side of 2nd landing area to native plant material.
- **D** Terminate existing fairway should the Club decide to remove the existing green and surrounds after the proposed fairway and green are grown-in and open for play.
- **E** Increase vegetated buffer to screen road and other undesirable views behind the proposed green.
- **F** To improve the 2nd half of the golf hole, relocate green and 2nd landing area to the right side of the existing arroyo. The proposed 2nd half of the golf hole will sit nicely into this natural setting and will be a terrific improvement to the golf course.

The strategy for the proposed redesign of Hole 12 was created and approved by Jack Nicklaus.

An illustrative sketch of the proposed redesign for the second half of Hole 12, as viewed from the 1st landing area.

CASE STUDY #2:

WEST LAKE GOLF EST 1993
西 湖 高 尔 夫


WEST LAKE
GOLF EST 1993
西 湖 高 尔 夫
HOLE
4
PAR 4
450 Y
424 Y
399 Y
368 Y
327 Y

WEST LAKE GOLF EST 1993
西湖高尔夫


WEST LAKE
GOLF EST 1993
西 湖 高 尔 夫

WEST LAKE GOLF EST 1993

西湖高尔夫

RENOVATION PLAN OBJECTIVES 修缮设计图说明：

- LINE OF SIGHT CLEARING TO BE DETERMINED IN THE FIELD TO IMPROVE PRESENTATION OF EACH TEE SHOT.
- 现场需要根据实际情况进行景观选择性清场来打开发球台看到落点和果岭的视线。

- TEES TO BE RESHAPED AND RECONSTUCTED AS NEEDED. IN SOME CASES, TEES HAVE BEEN COMBINED AND INCREASED IN SIZE FOR EASE OF MAINTENANCE AND TO IMPROVE THE CONDITIONS OF TURF ON TEES.
- 发球台需要重新造型和建造。有些两个发球台合并为一个来扩大面积，方便日后养护和改善发球台的草坪条件。

- ADDITIONAL PROFESSIONAL TEES HAVE BEEN PROPOSED ON PLAN TO ADD NEARLY 200 YARDS OF LENGTH TO THE GOLF COURSE. THESE NEW TEES ARE SUBJECT TO REVIEW AND CHANGE IN THE FIELD.
- 图上有些区域增加了职业发球台，球场码数增加近200码。这些新发球台可以根据现场条件进行略微调整和变更。

- ALL POORLY DRAINING AREAS TO BE ADDRESSED IN THE FIELD TO IMPROVE THE DRAINAGE AND PLAYABILITY OF THE GOLF COURSE.
- 现场所有排水有问题的区域都要进行修缮，确保排水通畅，提升球场的可打性。

- ALL FAIRWAY BUNKERS ARE TO BE RESHAPED AND RECONSTRUCTED. THIS WILL ENHANCE THE AESTHETICS OF THE GOLF COURSE WHILE REDUCING DRAINAGE CONCERNS IN THE BUNKERS.
- 所有球道上的沙坑要进行重新造型和建造。这样既可以提升球场的美观性，又可以解决沙坑中不排水的问题。

- FAIRWAY BUNKERS HAVE BEEN REPOSITIONED IN TERMS OF YARDAGE AND LOCATION IN LANDING AREAS TO CHALLENGE THE DISTANCES ACHIEVED WITH MODERN TECHNOLOGY AND DRIVING DISTANCES.
- 球道上的沙坑有些位置有了变更，使其在距离上和位置上重新具有战术性，以挑战现代球杆科技和开球距离的提升。

- ADDITIONAL BUNKERS HAVE BEEN ADDED IN KEY AREAS TO STRENGTHEN STRATEGY ON CERTAIN HOLES.
- 一些关键区域增加了沙坑来增强球洞的战术性和挑战性。

- LANDING AREAS TO BE RESHAPED AS SHOWN ON PLAN TO ENHANCE MOVEMENT, IMPROVE VISIBILITY INTO BUNKERS AND TO REDUCE EXISTING DRAINAGE CONCERNS.
- 落球区如图所示进行须重新造型来增加起伏，并提供看到沙坑的视线，以及解决现在的积水问题。

- ALL GREENS ARE TO BE RESHAPED AND RECONSTRUCTED. DURING THIS PROCESS WE WILL ENHANCE THE EXISTING GREENS AND THEIR MOVEMENT BY ACCENTUATING THE SUBGRADE PRIOR TO RECONSTRUCTION. THIS WILL ALLOW US TO STRENGTHEN OR SOFTED FEATURES WHILE MAXIMIZING PINS AREAS TO CREATE A MORE CHALLENGING GOLFING EXPERIENCE THAT WILL ALSO EASE MAINTENANCE CONCERNS WITH TIE-INS TO GREENSIDE BUNKERS.
- 所有果岭重新造型和建造。同时果岭地表层要进行造型修复，增强起伏和打球战术，扩大洞杯区，并打造更具挑战性的打球体验及更易养护的果岭周边。

- OUR OBJECTIVE FOR THE GREENS IS TO PRESERVE JACK NICKLAUS' ORIGINAL DESIGN CONCEPTS WHILE ADJUSTING EACH GREEN TO ENHANCE PLAYIBILITY, STIMULATE CREATIVITY AND CHALLENGE PROFESSIONAL GOLFERS.
- 对于果岭，我们将尽可能还原杰克・尼克劳斯先生原来的设计理念，同时调整每个果岭使其具有更强的可打性，创造性来挑战职业高尔夫选手。

- ALL GREENSIDE BUNKERS ARE TO BE RESHAPED AND RECONSTRUCTED TO ACHIEVE DESIRABLE TIE-INS, IMPROVED DRAINAGE AND PLAYABILITY AS WELL AS ENHANCED AESTHETICS.
- 所有果岭边沙坑重新造型来实现完美衔接，同时修缮排水功能，提升可打性和审美性。

- ALL LAKE EDGES IN THE LINE OF PLAY ARE TO BE RESHAPED AND GRASSED WITH TURF DOWN TO NORMAL LAKE ELEVATIONS.
- 所有在打球线上的湖边坡须重新修缮造型，并实现铺草皮入水到常水位标高。

- LIGHT POLES IN THE LINE OF PLAY ARE TO BE REMOVED PER NICKLAUS DEISGN AND JOHN CARSON'S INSTRUCTION IN THE FIELD.
- 在打球线上的灯杆需根据尼克劳斯和John Carson的现场指示进行拆除。

- TREES ALONG THE INTERIOR EDGES OF WATER ON SEVERAL HOLES WILL BE REMOVED PER NICKLAUS DESIGN AND JOHN CARSON'S INSTRUCTION IN THE FIELD.
- 有几个球洞的湖边内侧的树木需要根据尼克劳斯和John Carson现场指示移走。

- EXISTING FAIRWAY AND ROUGH LIMITS HAVE BEEN ADJUSTED TO STRENGTHEN STRATEGY AND TIGHTEN UP THE LANDING AREAS AS WELL AS IMPROVING OVERALL AESTHETICS.
- 现有球道和长草区边线已进行调整来增强战术，并且落球区也变得更窄，以提升整体挑战性和美观性。

- THE PRACTICE RANGE HAS BEEN REDESIGNED. IN ADDITION, THE NORTHERN AND SOUTHERN SHORT GAME AREAS HAVE ALSO BEEN REDESIGNED TO OFFER YOUR MEMBERS AND GUESTS A MORE CHALLENGING AND MODERN PRACTICE FACILITY.
- 练习场重新进行设计。此外，练习场的两端都配备了短杆练习区，完全可以满足现代比赛需求和日常会员练习，整个设施提升后会更现代更有挑战性。

- ALL PROPOSED IMPROVEMENTS SHOWN ON PLAN WILL CREATE A MORE CHALLENGING EXPERIENCE FOR THE ASIA GAMES AND A MORE ENJOYABLE AND MEMORABLE PLAYING EXPERIENCE FOR YOUR MEMBERS AND GUESTS.
- 此次修缮的所有工作旨在为亚运会打造国际赛事挑战标准，并为会员和嘉宾打造更愉悦和更难忘的打球体验。

- ALL LANDSCAPE AREAS ARE TO BE ADDRESSED. LANDSCAPE AREAS SHOULD BE CLEANED OF ALL WEEDS AND GROUND COVER NEAR AREAS OF PLAY SHOULD BE IMPLEMENTED AND USED TO PROVIDE CONTINUITY IN THE LANDSCAPE THEME THROUGHOUT THE GOLFING EXPERIENCE.
- 所有景观区域需要统一进行修缮和处理。接近打球区的景观带的杂草应该全部进行清理并覆盖上保护地被松针和木屑，整个球场景观主题应该保持协调性和连贯性。


WEST LAKE
GOLF EST 1993
西 湖 高 尔 夫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CASE STUDY #3:

ROYAL PALM
YACHT & COUNTRY CLUB

Royal Palm Yacht & Country Club (Yards)

HOLE	1	2	3	4	5	6	7	8	9	OUT	10	11	12	13	14	15	16	17	18	IN	TOTALS
Black	425	405	430	535	360	200	345	175	555	3430	530	415	390	395	195	445	185	595	430	3580	7010
Gold	385	390	395	525	350	195	335	165	540	3280	520	400	380	385	190	430	180	585	420	3490	6770
Blue	375	370	380	500	330	180	310	150	515	3110	505	375	360	355	170	415	160	560	395	3295	6405
White	365	350	360	490	315	165	295	140	505	2985	480	355	340	345	160	400	150	535	370	3135	6120
Green	350	330	340	470	310	140	270	135	485	2830	470	340	325	335	140	345	130	515	335	2935	5765
Mix	320	280	310	455	300	130	260	135	470	2655	455	305	315	295	125	320	115	475	315	2720	5375
Red	295	270	300	440	290	120	250	125	460	2550	440	285	265	275	105	310	100	450	295	2525	5075
Orange	255	235	260	370	230	85	180	100	400	2115	350	250	225	220	89	280	75	410	260	2155	4270
PAR	4	4	4	5	4	3	4	3	5	36	5	4	4	4	3	4	3	5	4	36	72


ROYAL PALM
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TECHNOLOGY'S ROLE

MODERN IRRIGATION SYSTEMS HAVE CHANGED WHAT'S POSSIBLE . . . BUT ONLY IF THEY'RE USED INTENTIONALLY

KEY POINTS:

Precision control

- Target specific areas rather than blanket coverage
- Maintains firm approaches, defined edges and consistent green speeds

Monitoring

- Soil Moisture Meters provides real-time data on moisture, salinity and temperature
- Allows adjustments based on weather, usage and seasonal changes to avoid underwatering or overwatering
- This real-time data helps courses achieve uniformity and firmness across playing surfaces as well as consistent green speeds

Adaptability over time

- Courses evolve, turf matures, trees grow or are removed, and playing preferences shift
- Modern irrigation systems can be adjusted to maintain original design intent and respond to changing conditions

KEY TAKEAWAY

- A golf course is never static, and modern irrigation systems allow superintendents to manage water in a way that supports playability, improves efficiency, and helps maintain the original design intent over time

Curley-Wagner GOLF DESIGN

MYOTHA NATIONAL GOLF CLUB (Myotha, Myanmar)

SPECIAL THANKS TO:

&

Curley-Wagner
GOLF DESIGN