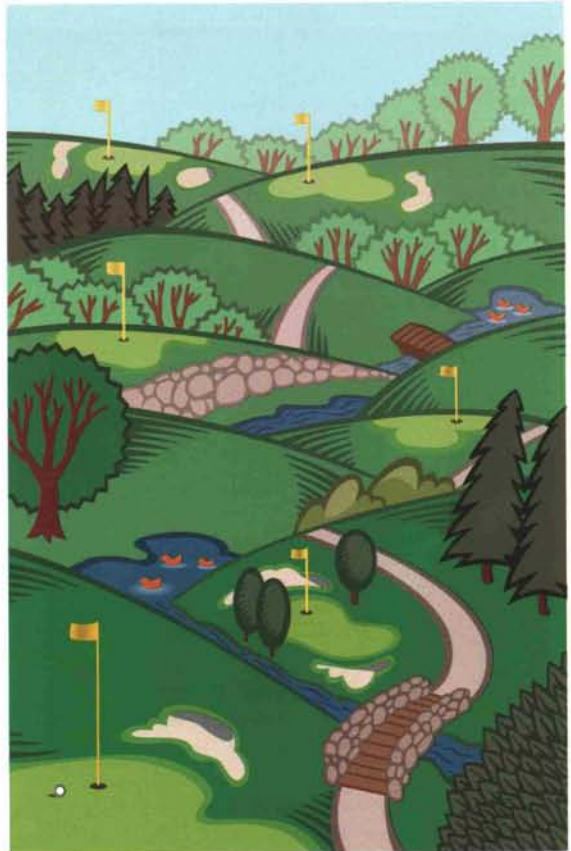


Restoring Classic Golf Courses



Golf courses are living, breathing entities. From the very minute construction concludes, the golf course will never be the same again as it is that minute. Weather, equipment, as well as maintenance procedures change the look of a golf course, although gradually over time. Many features have been lost on classic golf courses for this very reason. More drastic changes occur when committees or golf course superintendents make a number of small alterations to the course. Following many decades of tinkering, the original playing characteristics are lost, sometimes forever.

Some of the classic golf courses built during the early period of the 20th century were severely altered due to the Second World War.

Trees can have a major impact on how a golf course looks and plays. Even the most well-intended plantings can grow and become a hindrance to players and a detriment to quality turf with the tree robbing essential nutrients, light and water. Small trees that are clustered together in order to create a backdrop or screen an area from view or for protection will more than likely grow to become an unsafe and unsightly cluster requiring attention from future committees.

The economy can be a major factor in the maintenance of a golf course. Some of the classic golf courses built during the early period of the 20th century were severely altered due to the Second World War. Labor was tight with some courses utilizing whatever labor was available. Club managers, waiters or local farmers were some of the people that assisted in maintaining the golf course while regular staff members were involved with the war effort.

Financially, clubs were struggling just to stay above water. Golf courses that had heavy mortgages were forced into relinquishing their property when they were unable to make payments. Other clubs made modifications to their maintenance procedures. Bunkers were filled in with soil and seeded or just grew over so they would no longer require raking. Greens were recontoured in order to reduce the amount of area that required mowing. Fairway area shrank, as did the frequency of mowing. Overall, golf courses really struggled to maintain the property in some resemblance to a golf course.

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After World War II, many technological advances were brought to the forefront of the golf maintenance industry. New chemicals became tools for turf managers to combat weeds, disease and insects. Equipment advances created greater efficiency, allowing crews to accomplish in one day what may have previously taken a week or more. Bunkers were now raked with mechanized equipment; greens had riding mowers and large lumbering fairway machines breezed up and down fairways providing a faster cut than ever before. Along with these advances came increased expectations placed upon the golf course superintendent to produce even better conditions.

Underground irrigation systems provided water to not only greens and tees, but also, for the first time, fairways were now lush throughout the dry summer months. In order to accommodate single-row irrigation water distribution patterns, once expansive fairways were narrowed to allow water coverage. Fairway bunkers in many instances appeared awkwardly placed outside of the landing areas. Trees were planted along the perimeter of the newly reduced fairway lines, creating tight corridors for players to navigate off the tee.

In 2001, the touring golf professionals increased their driving average by six yards. This was the largest single increase in driving length in a one-year period in more than a 15-year span. Golfers have at their access equipment that is on the cutting edge of technology. Players at all levels are better-conditioned today. Stretching and strength training have developed athletes that have the ability to hit the ball further and more accurately than during any other time in history. Bunkering that was effective a very short time ago is rendered obsolete with the golf ball traveling beyond intended landing zones.

Unfortunately, all of these aforementioned items quietly chisel away at the original architectural design of the golf course. One day, while reviewing old pictures of the Club, a committee realizes the golf course does not resemble the one

that was designed 50 or more years ago. This is the pivotal decision-making point. While features are still somewhat intact, hopefully the Club will make the correct decision and hire a qualified golf course architect to guide the restoration work in order to bring the original course back to life as well as meet the expectations of the membership.

Many golf courses have begun this renaissance lately in order to return the course to a bygone era while providing modern standards of maintenance and the quality that has become expected in the area of turf-grass maintenance.

Skokie Country Club and Chicago Golf Club: Venerable Clubs With Rich Histories

Skokie Country Club in Glencoe is a Club with a storied past. Having hosted such events as the 1922 United States Open, 1983 United States Amateur Stroke Play and the 1998 United States Senior Amateur, Skokie has always been a championship golf course. Originally designed in 1904 by noted golf course architect Tom Bendelow, Skokie has been through a number of changes in the last 99 years. Renovations led by committees employing such architects as Donald Ross, William B. Langford, Theodore J. Moreau, Ken Killian, Dick Nugent and Rees Jones have changed the look that was originally designed

Initially, Donald Ross renovated Skokie in 1914, laying out many classic features. In 1938, Skokie sold part of its property on one side of the course and purchased more land on the other. This act necessitated the reconfiguration of the golf course. Langford and Moreau were enlisted to create eight new holes that would tie into the untouched 10 Ross holes. The Eighties were a period where Skokie wished to modernize the golf course for changes in the game that had occurred in the last couple of decades. Rees Jones repositioned bunkers, bringing them back into play and worked mounding for backdrops surrounding the green complexes.

Chicago Golf Club in Wheaton is the oldest 18-hole golf club in the country. Designed in 1893 by Charles Blair Macdonald, Chicago Golf Club opened for play in 1894. Golf was gaining popularity in the early 1900s with men and women taking to the sport as a way to enjoy the outdoors in a spirited game.

As with Skokie, Chicago Golf also hosted a number of events in the early part of the century, including the 1897 United States Open, 1897 United States Amateur, 1900 United States Open, 1903 Women's Amateur, 1905 United States Amateur, 1909 United States Amateur, 1911 United States Open, 1912 United States Amateur, 1928 Walker Cup Match and the 1979 United States Senior Amateur. The Walker Cup Matches will return to Chicago Golf August 13 and 14, 2005.

The idea of making substantial changes or improvements to the course dates back to 1913, when British designer H.S. Colt, who was in the Chicago area, was asked to review the course and make suggestions. He did so, and submitted a bill for \$511.56. The only change made at that time was to build a mound to the left of the first fairway and about halfway to the green.

By 1917, the Club was ready to make a substantial renovation to the course. Nothing could be done of course until after the war, and it was early in 1921 before work was done in earnest.

Per the recommendation of C.B. Macdonald, Seth Raynor would be sent to the Club to design and oversee the renovation. Raynor visited the course in March of that year and spent several days going over the ground. The golf course, with the exception of holes 1, 17 and 18, was rerouted. Green complexes were rebuilt with classic Raynor features such as the Road Hole on no. 2, the Biarritz on 3, Alps 5, Short Hole 10, Punch Bowl 12, Eden 13 and Cape 14.

Chicago Golf's changes were very subtle. Following the renovation in 1922 up until today, no major reno-

vation had occurred. Through the aforementioned natural progressions, the course has changed from what it once was. The war changed many features on the golf course. Greens were reduced in size so they would be more manageable to maintain. Some bunkers deemed unnecessary were filled in and as Dutch Elm Disease devastated once stately elm trees on the property, other trees were added not only for replacement, but to act as backdrops and force players to alter shots.

Overall, the golf course is as close to untouched as you will find on an 81-year-old layout. Green committees and continuity of golf course superintendents have worked in the favor of preservation. However, the accumulation of many years of subtle changes added up to where action needed to be taken to return the luster that was created by Seth Raynor.

Skokie's Road to Restoration

By the late Nineties, Skokie realized that many changes to the golf course had been made not only through architecture, but by the way the course had been maintained. Reviewing numerous pictures that were taken of the course following the Ross renovation, the Club realized many things had changed, particularly the green size and bunkers.

Skokie began the restoration process late in the summer of 1998. The first step was to reclaim lost green area. Many greens had shrunk in size during World War II and from years of mowing with triplexes. The front areas of the greens were recaptured first. The turf being mowed at a lower height did not present as great of a challenge in order to achieve green height as the rough areas in the back sections of the greens.



The large-scale renovation was approved in the early part of 1999 when golf course architect Ron Prichard was hired to oversee the project. A turf nursery was created in 1999 from aerification plugs with L93 bentgrass mixed with the plugs in order to create turf that would blend with the existing greens. The nursery had a drainage system with six inches of greens mix on it encompassing an area of 18,000 square feet. Aerification was scheduled early that year. That way plugs could be collected from the greens and the nursery would be able to establish before the onset of winter.

The plan was to commence with the project while having as little impact upon golfers as possible. Fifteen holes would be open when three were closed. The first couple of weeks, activity was confined to holes 5 and 11 while they were being rebuilt. Following the rebuilding of these greens, routing became more of a challenge to get players around the course so they were still able to play 15 holes. As play dropped off, activity increased to where in the late fall of 2000, only nine holes were open.

The bunker project began in August of 2000. Wadsworth Construction was hired as the contractor to rebuild two greens and all of the bunkers, as well as level and square off the tee surfaces. Fairway contouring was performed with the assistance of Huber Ranch Sod Nursery, reinstating contours based upon a 1922 lithograph. All of the bunkers would be rebuilt on the golf course, entailing reshaping, new drainage and new sand. Initial preparation for the project began with spraying the turf surrounding the bunkers with Round Up two weeks prior to the construction date. The reason for this: old turf would be rototilled into the topsoil, saving the labor of having to strip it off the banks. The sand selected initially was one that the Club had used previously. Thelens sand did not meet the USGA specifications for bunker sand. However, prior experience offered the knowledge that it was much firmer as well as being the sand that had been used in the bunkers for

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years. After the first 19 bunkers were completed, it was observed that some would retain water for as much as three-quarters of the day. This was unacceptable for new construction with sufficient drainage systems installed.



The committee was contacted, informing them of the situation. They began to recheck the sand. Clay pots were set up with a gravel base and the bunker sand placed on top of it. The Thelens sand and Meyers FA9 were compared. The testing showed the Thelens sand was very slow to drain and became increasingly slower during the week. The other sand maintained consistent drainage. After the test, both sands were set up in a bunker side by side for evaluation by the committee. The sand was looked at both wet and dry while players hit shots out of both to determine which sand they would prefer. Although it was a little soft, the FA9 sand was selected. The sand in the 19 bunkers was changed to the newly selected sand before construction resumed on the rest of the course.

The bunkers went from being flashed and relatively shapeless to more of a traditional look with steep grass banks. The sod was a blend of bluegrass and fescue. Near the end of the project in 2000, the weather turned cold quickly. Realizing that winter would soon be setting in, four truck loads of sod were ordered. The order was cut and kept in cold storage at H&E Sod. Unfortunately, when it was delivered, the sod was frozen solid. In order to thaw the sod, it was brought into the heated area of the maintenance facility. Once thawed, it was transported to the remaining bunker banks and laid on frozen ground. Surprisingly, when spring arrived, the sod established amazingly well.



Along with the bunkers, the no. 5 and 11 greens were rebuilt. All of the sod was removed so it could be utilized in the green expansions. Both of these greens had been previously rebuilt. The earlier rebuild of the no. 5 green resulted in a putting surface with limited hole locations. The no. 11 green had been rebuilt in 1991. Aside from having limited hole locations, the green pitched away from incoming shots. The Skokie membership was constantly frustrated with the shot-holding ability of the two putting surfaces.



Fairways that had become straight and lifeless were also restored utilizing old pictures. Once the original fairway lines were established, Huber Ranch Sod Nursery was contracted to bring equipment that would be able to strip the bluegrass quickly and lay bentgrass in the expanded fairway areas.

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Chicago Golf Club's 10-Year Endeavor

The renovation work at Chicago Golf Club began more than 10 years ago. It was long known, from review of old photographs and obvious areas that had evolved into rough on the back sides and fronts of the greens, that large areas of putting surfaces had been lost. Similar to what Skokie did, greens were enlarged by gradually lowering the cutting height on the areas in the fronts. Areas that had become rough were removed and sodded. Corners of the greens that were once square were returned to their original shape.



The Club began to get serious regarding the restoration in 2000. A list of golf course architects to oversee the restoration work was compiled for review. The criteria for selection was simple: the architect would advise the Club on a restoration plan that would return a look from approximately 1928. Tom Doak of Renaissance Golf was selected as the architect to offer oversight of the restoration.

Trees planted in locations that blocked vistas, created agronomic issues or acted as backdrops were reviewed. Green area was inspected for further enlargement possibilities. Bunkers that had been lost for various reasons were evaluated for effectiveness. And finally, misaligned tees would be reset in the direction of the landing area, leveled, return to traditional square corners and resodded.



The work was broken into phases that would take place over a four-year period. Outside contractors placed bids on the tee-leveling aspect of the project. Each of the three contractors that bid the job had very different prices, ranging from \$43,000 to \$105,000. The tee leveling, green expansion and bunker restoration were to be completed in-house, utilizing the maintenance staff and equipment.

Tree work took place over a three-winter period. This work was also bid by outside contractors. The decision was made to use a contractor for the tree work since the Club did not have the equipment required for the removals. Some of the smaller trees were relocated to the outer perimeter of the golf course.



Bunker restoration was relatively simple as bunkers that were either filled in or allowed to grow over still maintained their original shape. The outlines were painted and the bunker cavity was excavated. Seth Raynor, in his 1922 renovation, installed an extensive drainage system throughout the golf course, including all of the bunkers. Because of this, additional drainage was not required.



After the excavation, approximately seven inches of sand was placed within the bunker and compacted. The sand originally used in the bunkers was Reliable sand. That sand is no longer available. C9 sand, which most closely resembles the original sand, continues to be used in the bunkers. This sand drains relatively well and becomes very firm over time, although it is a little coarser than most bunker sands that are commonly used.



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The decision was made to level the tees utilizing in-house labor. The reason for this: in-house staff would have greater flexibility in the event of inclement weather. The other reason was there would be tighter control of material used and the scope of the work on the areas surrounding the tees.

The Club purchased a laser level from Southern Laser in the late fall of 2001. The tee-leveling was to commence in the fall of 2002. The Tuesday after Labor Day, the first tee, as well as the rough on the surrounding tee banks outward to approximately 25 feet, was stripped bare of sod. With the grader box attached to the back of a tractor and the laser set up, it was soon realized that there were eight inches of fall from one corner of the tee to the other. Upon completion of leveling, the tee surface was set perfectly flat. Depending on the severity of the existing tee surface, the surface could be leveled in a few hours.



Grading of the surrounding banks also took place. Areas that settled from where trees had been removed were filled with topsoil and brought up to grade. Central Sod Farms provided Penncross bentgrass sod in big rolls. Straight bluegrass sod was used on the banks and rough. In good weather, two tees a week could be completed.



The warm days in September allowed rapid establishment of the sod. The tees were reopened after three weeks. Work progressed until the weather changed in November. Eight holes were completed at that time. Tee-leveling will resume in September this year with the anticipated completion date of December 2003.



The final element of green expansion will occur later this year. A turf nursery started in 2001 was expanded this past fall to be used for the enlargement of greens. Plugs were collected and spread over the native-soil area that had been prepared as a nursery. Penn A4 bentgrass seed was introduced at the rate of 1 pound per 1,000 square feet to hold the sod together when it is ready to be relocated. As the turf nursery develops, many heavy topdressing applications are made in conjunction with the green height being lowered. When it comes time to harvest the sod, there is no native topsoil in the profile, only topdressing that matches with the material being used on the greens.



Working closely with photographs from 1928, greens number 9, 12, 14 and 18 will be enlarged in varying degrees, returning them to the size they once held. The no. 18 green will be expanded on each corner to the point where moving the irrigation piping and heads will be required so the piping is outside the expanded green area. Some areas of the no. 12 green will not be restored exactly as they were 75 years ago. The punch bowl aspect of the green had steep banks that would scalp with today's low mowing heights. The green will be brought as close as possible to the outside edge.

Endgame

The renovation at Skokie is complete, with the entire golf course being reopened for play in 2001. To summarize the scope of the project: two greens were rebuilt, all of the fairway area was reclaimed to near original size. All of the bunkers were rebuilt with the installation of drainage and new sand. And 51 tees were realigned, leveled, squared up and resodded. Overall, the membership was very pleased with the renovation. However, there was a learning curve in maintaining the newly renovated areas.

The grass banks were mowed higher in the beginning of the 2001 season so the turf would have a chance to establish. While being agronomically sound, this frustrated the golfer, who would have a ball roll through the bunker and disappear into the grass about 40% of the time. In order to make the banks more playable, the height was gradually lowered. Unfortunately, with the onset of the increased summer temperature, the turf on the bunker faces began to decline in some sections. Crater pits were created by mowing the blue/fescue sod while it was under stress. To repair the damaged spots, spading forks were used to poke holes and prep a seed bed. Straight fescue seed and Penn Mulch were applied to these weak sections and lightly watered until they began to establish. The banks were left long during this regrowth period. Presently, the banks are kept as dry as possible through the season and they

are not mowed during periods of high stress to avoid thinning. When widening fairways, it is recommended to utilize existing fairway sod from an area where it will not be noticed, either a par 3 or the beginning of a par 4. The bentgrass sod placed along the edges of the expanded fairways did not blend initially, whereas sod that had been brought in from another location on the course would have. The sod that was removed can then either be seeded or sodded. The two rebuilt greens were grown in the same fashion as the nursery, with aeration plugs and L93 bentgrass on USGA mix so they would visually match the other greens on the course.

The rejuvenation project at Chicago Golf Club is a work in progress. By not bringing in outside contractors, the challenge becomes a balancing act between maintenance and construction. Regular maintenance is performed during the first part of the morning. As the tasks are completed and people free up, they are assigned to the restoration work. There was a learning curve with the new equipment. Once the operator

became familiar how the laser level works, it did not take very long to perform the task of leveling. New sod on tee surfaces can be tricky as far as when to open the tee. The roots may be in the upper surface a few inches and the density of the top looks good, but the turf is very susceptible to damage from players' feet twisting. For small renovations, where the scope of work is manageable and the deadline for completion is flexible, in-house labor can save a lot of money, produce tighter quality control and take care of other issues that are uncovered. Tree removal has opened vistas across the 200-acre property that had not been experienced for a number of years. Backdrops no longer offer depth perception when hitting a shot into the green.

In conclusion, both courses benefited from their careful planning as well as the selection of a golf course architect. Proper review of old photographs is essential if the original design of the golf course is to be returned.



Careful planning and judicious selection of a golf course architect, combined with proper review of old photographs, are essential in returning a golf course to some semblance of its original design.

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