

The Hole Was Located Where?

Many tasks are required when setting up a golf course, but none impact the game more than hole location and how well hole-changing duties are performed.

BY LARRY GILHULY



The focal point of every golf hole is the 4.25-inch-diameter hole on the green. When hole-changing duties are performed well and the hole is located in an area that will give fair results, golfers are more likely to enjoy their round and appreciate the course.

The game of golf truly encompasses every human emotion. During any round of golf, or even from one shot to the next, one can experience the highest of highs to the lowest of lows. From the emotional response of a well-struck golf shot that feels like butter to a dreaded hosel-induced shank, golf truly awakens our emotions. However, it is on the putting surface where things really get rolling, and this is not a reference to ball roll. For all of us, the focal point, the destination if you will, on any golf hole is the 4.25-inch-diameter hole on the putting green. Like it or not, this small area of every golf course largely determines one's feelings about a round of golf. Well-placed holes and the job per-

formed according to the textbook generally go unnoticed by many players, yet questionable hole locations or poorly performed hole-changing duties quickly evoke negative feelings about the entire maintenance program. Let's take a look at the creation of this very small target, how to get the best results, and common issues associated with the very important tasks of selecting hole locations and changing holes.

WHAT IS A HOLE?

[Rule 1-1](#) in the [Rules of Golf](#) states, "The Game of Golf consists of playing a ball with a club from the teeing ground into the hole by a stroke or successive strokes in accordance with

the Rules." The very first rule in the Rules of Golf identifies the focus of the game — to get that little white ball into that little round hole. In the definitions section, the Rules of Golf states, "The hole must be 4¼" inches (108 mm) in diameter and at least 4 inches (101.6 mm) deep. If a lining is used, it must be sunk at least 1 inch (25.4 mm) below the putting green surface, unless the nature of the soil makes it impracticable to do so; its outer diameter must not exceed 4¼" (108 mm)." There is no question that the hole on a putting green is the ultimate target for every golf hole on the course. Let's look in detail at the process of selecting hole locations and at a few issues associated with changing holes.

THE PROCESS OF SELECTING A HOLE LOCATION

In the Rules of Golf there are no directions for the exact placement of holes. There is no rule for how close holes should be to the edge of the green or for the amount of slope on or near the hole. However, the USGA does have a very good reference document titled "[How to Conduct a Competition](#)." On page 48, the following common-sense recommendations (not rules!) are given:

- It is recommended that generally the hole be located at least four paces from any edge of the putting green. If a bunker is close to the edge, or if the ground slopes away from the edge, the distance should be greater, especially if the shot is more than a pitch.

- An area two to three feet in radius around the hole should be as nearly level as possible and of uniform grade. In no case should holes be located in tricky places or on sharp slopes where a ball can gather speed. A player

above the hole should be able to stop the ball at the hole.

- Consider the condition of nearby turf, especially taking care to avoid old hole plugs that have not completely healed.

- Holes should be cut as nearly on the vertical as possible, not plumb with the contour of the putting green.

- There should be a balanced selection of hole locations for the entire course with respect to left, right, central, front, and back positions.

- The person who cuts the holes should make sure that the Rules of Golf are observed, especially the requirements that the hole not exceed 4.25 inches in outer diameter and that the hole-liner be sunk at least one inch below the putting green surface.

These six common-sense ideas are recommended for competition and special events; however, they can also be used for regular play. Let's briefly review each recommendation to determine if they apply to your golf facility during regular playing conditions or if minor changes may be needed.

1. Place the hole no closer than four paces from the edge of the green. For years this recommendation has been no closer than five paces from the edge of the green. For tournaments being played by low-handicap players, the four-pace recommendation makes sense. For regular play, the old standard of five paces makes more sense, if greens are of adequate size. This is especially true with ever-increasing green speeds. Keep in mind that faster green speeds will decrease the number of locations where holes can be placed. For smaller greens, the four-pace recommendation should be considered.

2. Have a radius of two to three feet around the hole that is relatively flat. Once again, faster green speeds will decrease the number of locations where holes can be placed. In his article "[Putting Green Speeds, Slopes, and 'Non-Conforming' Hole Locations](#)," golf course architect Jerry Lemons does a superb job demonstrating the relationship between these factors. His chart on page two shows that as green speed increases, so does the radius around the hole where the slope needs



Hole locations too close to steep slopes should be avoided if it is not possible to stop a ball near the hole when putting from above the hole.



Crooked flagsticks not only reflect poorly on the maintenance staff and the golf facility, but they may also prevent well-struck golf shots from dropping into the hole.



There are many different models of hole changers that are in accordance with the Rules of Golf in regard to hole size and depth.



While there is no rule on the matter, it is recommended to place holes at least four paces away from putting green edges for competitions and special events, and preferably five paces or more for daily play.



A little water during the hole-changing process goes a long way to avoid turf desiccation along hole edges, especially during hot and dry weather.



There is a "need to knead" the edges of the old hole plug back into the surrounding turf.

to be consistent and playable. This is a useful chart when identifying hole locations on your greens. Avoid tricky hole locations that make it impossible to stop a ball near the hole when playing from above the hole.

3. Avoid old hole plugs that have not recovered. This recommendation is for regular play. First, and from a playability standpoint, hole plugs often can be too high or low. Although fixable

by players according to the Rules of Golf, it is best to avoid them, if possible. Second, and more important, old hole plugs should be avoided because golfer foot traffic that focuses around a hole will slow recovery of the old hole plug. Keep in mind that concentrated traffic also compacts the soil. Returning to an area on a regular basis, and the soil compaction that results, will slowly impact turf health and impede

water movement into the soil. Regular rotation of holes is a critical priority for maintaining turf health when changing holes.

4. Cut holes as vertically as possible. This simple recommendation relates to balls that hit a flagstick and do not go into the hole. If the flagstick is straight, i.e., vertical, the maintenance staff cannot be blamed for the ball not dropping into the hole. If



Rolling PVC pipe over a freshly cut hole helps ensure a smooth playing surface.

crooked, it becomes a subject in the 19th hole.

5. Balance hole locations in regard to left, right, central, front, and back. This recommendation involves the rating of a golf course and its overall length. It is sometimes difficult to balance holes when greens are shaped irregularly or when slopes reduce hole locations in some portions of a green. Every golf facility is different in this regard, thus every green needs to be studied carefully with a plan to distribute traffic daily, weekly, and throughout the entire year.

Another issue that can occur with hole changing is placing holes in the same area on the same day of the week. Players that play the same day(s) each week will take notice if they frequently encounter the same course setup. The simple way to avoid this is to create multiple hole location cards. Each card takes into consideration the balance — front, middle, back, left, right, and center — and shape of the green. As an example, if a golf facility changes holes six times weekly and begins January 1, and they utilized 11 different hole location cards, it would take 78 days, i.e., until March 19, before the same hole locations will be in the same area for all 18 greens.

No matter how it is performed, hole changing should be balanced so as to maintain optimal turf performance and produce diversity in playability

6. Set the hole size and depth according to the Rules of Golf. This is very simple and self-explanatory. There are many different hole changers

and hole setters that provide the desired results as specified by the Rules of Golf.

SUCCESS IS IN THE DETAILS, SO AVOID THESE MISTAKES

By following the six aforementioned recommendations, there should be no problems or complaints with holes at your golf facility, because every hole will be located in a good location and cut properly. In reality, however, this is often not the case. Let's look at the most common issues that need to be avoided.

- **Old hole plugs that or too high, too low, or too dry.** The most common problems observed with old holes are plugs that are too high or too low. Plugs left too high are most problematic because they are prone to mower scalping. Regardless of whether hole plugs are set to high or too low, they become an eyesore and create an uneven putting surface. This is where the experience and attention to detail of the person responsible for changing holes really makes a difference. To avoid dry hole plugs, the use of water is critical to minimize drying on hole edges. Finally, pushing the plug perimeter next to the surrounding turf is critical to expedite recovery and



The end result of a sharply cut hole in accordance with the Rules of Golf is the ultimate goal. Paint is sometimes used to assist in visual clarity.

prevent excessive drying along the edges.

● **Be very aware of turf grain.** One of the great myths often uttered by various golf announcers is that grain on greens goes toward the setting sun or to the water. In most cases, the grain on a green follows the slope of the green. Thus, when plugs are replaced, the maintenance staff must be very aware of the turf's growth habit. This is not much of an issue with *Poa annua* because of its upright growth habit, but it is critically important on warm-season turfgrasses and bentgrass that have a more lateral growth habit and greater tendency to develop grain. In such cases, any plug set in the wrong direction will be more prone to scalping. If it is set too high, the combination of grain going in the wrong direction and plug height will result in a very long recovery period. For more information on aligning grain when changing holes, please view the webcast "[Don't Get Turned Around.](#)"

● **Crooked flagsticks.** Although this is seen less often, the need for a straight flagstick cannot be overemphasized. The flagstick must be vertical and not follow the contour or slope of the putting surface. As mentioned earlier, balls are less likely to drop into a hole if the flagstick is not perfectly vertical and centered in the hole. The flagstick should be equal in radius from all portions of the outside perimeter of the hole, and this is only possible if the flagstick is vertical. Those changing holes must be ever observant of this.

● **Hole locations found on slopes too severe for modern green speeds.**

This issue is viewed quite often on contoured putting surfaces that were designed and built for considerably lower green speeds, or green speeds that were common at the time the golf course (or greens) were constructed. Perhaps the best article on this topic is "[You've Gotta Know Your Limits.](#)" This article is as true today as it was 17 years ago. With modern green speed measurements often found above 10 feet (as determined using a USGA Stimpmeter®), it is extremely difficult to find enough hole locations that provide the following: "In no case should holes be located in tricky places or on sharp



Great care must be taken to properly align turf grain of old hole plugs with the surrounding turf. This is especially important for warm-season turfgrasses. When grain is not aligned, such as in this photo, scalping damage can occur.

slopes where a ball can gather speed. A player above the hole should be able to stop the ball at the hole."

● **Using the same areas too much or placing holes close to previously used plugs.** As a general rule, try to avoid old holes that have not healed by at least 10 feet when placing a new hole. This is advised for the purposes of both agronomics and playability.

● **Changing holes too often or not enough.** The frequency by which holes are changed is primarily a function of staff size, the amount of play,

and available budget. While many golf facilities have an adequate staff to change holes daily, some do not. Also, when play is minimal, do holes truly need to be changed every day? So long as hole edges are tidy and not damaged, there is little reason to change holes every day if only a handful of players are using the facility. Holes should still be observed daily and the edges cleaned, if needed. In reality, attention to the actual number of players can be considered more important than following a strict

calendar schedule, especially when labor and resources are limited.

When holes are not changed often enough, holes develop edges that are not sharp and often “collapse” into the hole. This situation is seen frequently on putting greens that have excessive organic material near the surface where sand topdressing has not provided a firm surface. The option in this case is to either use white paint or plastic liners. The better option is to provide the surfaces with regular applications of properly sized sand to evenly mix with organic material production. Sharper holes with crisp edges and improved hole integrity will result from following this fundamental program.

● **“Volcanoed” holes.** The final issue regarding holes that is frequently observed is the “volcanoed” hole syndrome. Players often believe it is the fault of the maintenance staff — for reasons such as poor technique in hole changing, lack of attention, or not using proper tools. This is rarely the case. In reality, it is players who cause this issue in two ways.

1. When a flagstick is removed from a hole that has been cut into a high-sand green, there is always a chance that sand particles will be on the end of the flagstick or in the hole liner. Any particle of sand can cause the flagstick to “stick” when attempting to pull it from the hole liner. Simply, the removal of the flagstick by each group of golfers

throughout the day can imperceptibly move the liner up and cause the edge of the hole to “volcano” upward. A ball without adequate speed can stop just shy of the hole, or veer right or left, when the edges of a hole are raised.

2. While raised hole edges are certainly noticeable when they exist, this is not the most common reason why holes “volcano.” Instead, it is much more common to view a change in direction of ball roll approximately six to 12 inches away from holes. It can happen early in the morning, but it is far more common later in the day after many more players have trafficked the greens. The reason? Players’ feet!

Players removing golf balls from the hole do not step on a hole’s edge, rather they keep some distance, usually half a foot or more, between their feet and the hole. When play volume is increased, the players’ feet subtly push the turf down and even slightly compact the soil with frequent and repeated steps. Keep in mind the firmer the putting surface, and the better the sand topdressing program, the less this occurs. When a ball is losing speed and it enters this area, its direction will be influenced. This results in the impression that the person setting the hole made a mistake. This has been reported on numerous occasions despite the hole changer using proper equipment and technique. It has even been observed that volcanoed holes

can be present even when using a board or special plate around the hole as well as a device used to roll and level the area after the hole has been set. So the next time your ball does not react as you wish near the hole, blame your fellow players and not the person setting the hole.

SUMMARY

Changing holes at a golf facility is the most critical job completed on a regular basis. It has significant impact on golfer satisfaction, pace of play, and how the course plays that day. Unfair or not, players’ perception of the maintenance staff is largely determined by hole locations and the quality of the hole-changing process. By following the six simple recommendations outlined in this article, as well as avoiding the most common mistakes, there is less chance of upsetting players and less negative discussion in the 19th hole. Now, if we could just find a way to never miss a three-foot putt without increasing the size of the hole!

LARRY GILHULY has visited golf facilities in the western U.S. on behalf of the USGA Green Section for nearly three decades. While he no longer sets holes on a regular basis, his experience with the process and game extends to over five decades. Like many, he still has trouble with those dreaded three-foot putts.



Placing a new hole too close to a recent hole location will adversely influence putting, and the concentrated foot traffic will slow recovery of the old hole plug.