

# Planning of Golf Course Features

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Generally speaking, there are two kinds of traffic on a golf course—first, that which relates to maintenance of the course; secondly, that created by play.

Except for the putting green, the first general grouping is today largely concerned with passage of equipment over the course. The second has traditionally been foot traffic until the recent development of vehicles used for transportation of the golfer and the increasing use of the hand-drawn cart for golf bags.

In the effort to regulate traffic over the course, it is obvious that concentration of traffic is to be avoided. This can be accomplished either by removal of traffic from critical areas or by distribution over as wide an area as possible of traffic that cannot be diverted. The purpose of this study is to consider the means by which the various types of traffic can best be diverted or distributed.

The first of our two groupings is quickly disposed of for the simple reason that, regardless of design or arrangement, equipment must pass over all turf surface for the purpose of maintenance. It is hardly possible to divert maintenance traffic. But there are several ways in which this traffic becomes concentrated due to lack of space or because design is not adapted to the equipment used.

Typical of this is the need to provide as much level space as possible for turning equipment, especially for green mowers, and the shaping of such features as bunkers and fairways to provide for mowing the course by the continuous passage of equipment without returning over an area just cov-

ered and with an opportunity to vary the pattern of mowing as much as possible. This is a practical problem and its solution must be found on the course.

From an architectural standpoint, there is no reason to make any sacrifice on this point; courses experiencing wear due to avoidable concentrated use of equipment should certainly consider changes in their present layout. Everything must be carefully planned with the bunkers, rough, etc., arranged to give the proper width of cut for the equipment used.

We now come to the second general division—traffic created by play. We may meet with some success in control of the path to be followed by maintenance employees, but there is no way to direct the path of the golfer, nor, for that matter, can the golfer himself always be wholly successful in the direction of his own route. We would be defeated should we attempt to establish an exact route for the golfer; we must depend largely upon subtle devices to entice him into following the path we wish him to pursue.

However, there are some aspects of play over which we can hope to exercise a little control. Although there is nothing we can do about the golfer relentlessly in pursuit of his ball, it is not necessary for the golfer's caddie and his equipment, like Ruth, to go every place that he goes. For example, only the caddie who is to attend the flagstick should be permitted on or near the green. All caddies should be trained to deliver the player's driver to him as he leaves the green and then to proceed down the fairway to some position from which they can best watch the flight of the ball. Only on

par 3 holes should there be any reason for caddies to add to the traffic problem around the tees. Keeping caddies away from tees has an added advantage in making tee seats available for the golfers.

### Routing Golf Carts

The routing of the golfer and his cart is more difficult. If the cart is for transportation of clubs only (for which hereafter we shall adopt the British term "trolley"), then the best we can hope to do is prohibit the use of trolleys on the surface of tees and greens. We should also attempt to educate the golfer to keep trolleys away from the green apron, but there is small hope of accomplishing much in this direction without signs and paths.

We have much the same problem when the golfer's cart is for his personal transportation (which we shall hereafter refer to as an electric cart, regardless of the fact that some may use gasoline.) Paths for electric carts should be built around tees and greens; these paths should be well marked with signs. On some courses electric carts have been so injurious to turf that either paths are provided for the entire course or carts are not permitted on fairways. This may be a good arrangement for the superintendent, but it would not seem to save many steps for the golfer.

There are, of course, means other than cart paths which can be used to control electric cart traffic. An artificial step or a steep slope may be introduced on the path to a tee to keep carts away. Slopes or wet areas should be eliminated to put areas into use which we want them to use.

Regardless of how we may feel about use of electric carts by those who would be benefited by the exercise they seek to avoid, we must recognize that the golfer is our customer and

that we should do our best to give him what he wants. The superintendent should only expect that golfers comply with reasonable regulations in the use of carts and that the maintenance budget be increased to allow for the added cost certain to result from their use.

At many courses it is a requirement that a caddie, if available, go with each electric cart. Under these circumstances a substantial improvement in the traffic problem can be made if the caddie is trained to drive the electric cart.

Thus, as play approaches the green, the two players leave the cart at the point where signs direct traffic away from the fairway; the caddie drives the cart to a point between the green and the next tee. The caddie then returns to the green with any clubs needed to complete the hole, such as a putter. While the players are on the green, the caddie places the other clubs in the bags on the cart and proceeds on foot down the next fairway to act as a forecaddie.

This practice pays a handsome bonus in saved time. The speed of play on a golf course is fixed by the time required to hole out around the green. Use of electric carts definitely slows up play around the green by the time required for the player to go to where the cart has been left, either to get a different club or to take the cart to the next tee. Thus, by working with the caddiemaster in training caddies, the superintendent can save needless wear on his turf, speed up play, and improve the service which the player receives from his caddie.

This about concludes the list of weapons available in the battle to reduce traffic by regulation. We come now to the subtle approach — an attempt to regulate the movement of the golfer by inducements. Here we are almost

exclusively concerned with the play around the green and the next tee. Through the fairway, traffic will be pretty well distributed by the inherent inaccuracy of the golfer. But sooner or later he will reach the green and, having holed out, will move on to the next tee. Since it is here that most severe maintenance problems are met, it is worthwhile giving careful consideration to this traffic area.

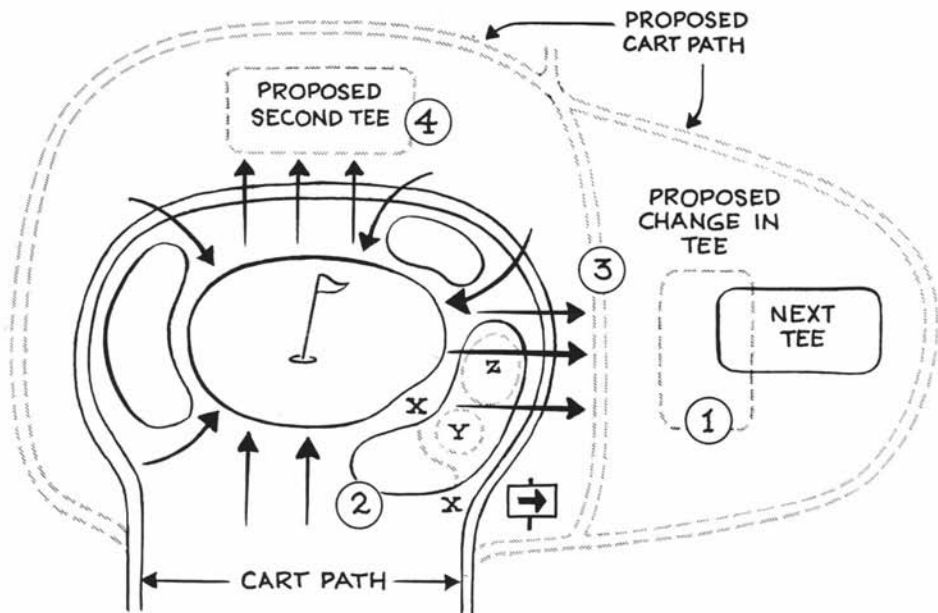
The drawing is a plan of an imaginary green and tee. Probably no architect would ever build a green like this, but it has been designed not for play but rather to illustrate in one example all the various so-called inducements we are going to discuss.

This green is pretty well surrounded with bunkers. A cart path is very conveniently located between the green

and the next tee. If there is any good cupping surface on the right part of the green or if the apron there is in good condition, it could only be because there is very little play on this course. The concentration of traffic here is so extreme that it seems silly to imagine that a hole like this would ever be built.

There are four features of this hole which concentrate the traffic on one area. The average golf hole would probably have only one of these four features, but the elimination of even one can help materially to lighten the traffic burden.

First, consider the shape and relative location of the tee and the green. Both are rectangular and located on a common axis. This means that both tee and green carry the maximum possible traffic. It would be much better



**Solid Line: Original Plan**

*Dotted Line: Proposed Changes*



if the two axes were parallel in order to obtain a better distribution of traffic between them (No. 1 in diagram).

Next, consider the beautiful big bunker on the right front corner. It means misery for the small area of turf beyond. By cutting the bunker off at the dotted line X-X, building a little mound at Y and a grass hollow at Z, a great deal of expensive bunker maintenance is eliminated; the whole side of the green is opened up for traffic, and the playing characteristics of the hole are improved. As for playing characteristics, bunkers around a green perform two functions—to penalize the poorly played shot and to frame the hole and serve as an aid in estimating distance. Neither function is affected by the proposed change. As far as play around the green is concerned, a chip shot from a hollow is just as difficult for the expert as an explosion shot from a bunker. (No. 2).

#### Locating Cart Paths

Third, let us consider the location of the electric cart path. It is creating traffic over an area between the green and the tee that already carries its full share (No. 3). The electric cart can travel much more quickly than a golfer can walk. Why try to provide a short cut for carts? After all, a cart path is easier to maintain than a compacted fairway.

The best path is around the far side of the tee, with the stopping place for carts back of the green, where the traffic problem is not serious. This has the added advantage of placing the cart in a position which will bring the golfers off the green most quickly and will therefore open up the green sooner for players following. Also, some traffic will be saved if there are two cart paths around the green instead of one. Thus, the golfer whose ball is on the left side of the green will not have

to cross the entire green from the cart path on the other side.

Finally, the use of a second tee for the next hole can help in distribution of traffic (No. 4). This can be a front tee or a ladies tee, and if possible it should be located along a second side of the green and at a point where there will be no bunker between green and tee.

Now the flow of traffic in and out is in a fairly reasonable pattern for even distribution, made possible by some rather simple changes.

One final weapon available to the superintendent in his battle to control traffic is the location of equipment which relates to play. Obviously, the hole can be moved around on the green to give relief to the areas which show signs of wear. However, in doing this some consideration should be given to the golfer. All 18 holes should not be placed on either the front or the back of the greens on the same day.

A sense of balance must be maintained in placing tee markers, with consideration to the playing length of the course for handicap purposes. The relative location of flagstick and tee markers can be varied to give quite a variation in the traffic pattern.

Ball-washers can be moved about either to provide a varied path for traffic or to divert it from a well-worn area. If a path to the tee has been developed, it can be closed off by putting the tee bench across it or in a more permanent fashion. The opening of an attractive vista can be used to shift traffic into a more desirable pattern.

There is not really much to all this except the exercise of good common sense. The superintendent should not hesitate to ask for the cooperation of the caddie-master and to recommend structural changes that would be helpful.