

## Platitudes on Golf Course Architecture

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In planning a golf course there are no fixed rules to which it is compulsory to conform, and the variety which results is one of the greatest charms of the game. But many of the good courses resemble one another to some extent in general characteristics, and it may, therefore, be permissible to regard these as ideals at which to aim in designing a new course, and as standards by which to judge an old one. At the same time, the nature of a locality or the amount of money available will very likely render it impossible, in many cases, to achieve the ideals now suggested, and it by no means follows that the courses constructed under such circumstances will fail to provide interest and pleasure.

1.—Consider the object of your course. Ease of access is vital for the business man. A moderate course near the city may be more useful than a super-course in the Sahara desert. But if your course is for rich men with plenty of leisure, or for week-end and holiday use, accessibility is quite so important.

2.—Obtain plenty of space. Many amusing courses have been planned on 100 acres or less, but it is better to have 130 acres, and still better to have 150 or 160. You can then have room to move about in, and sit about in, round the clubhouse. You can have a practice ground on which beginners can have lessons, without being hustled out of their senses. And you can have some large spaces between the holes, on which you can plant trees. You thus get the feeling of being in wild and open country, instead of in a small back garden, and your fairways need not resemble a number of parallel and rather narrow streets.

If you can afford the initial cost, get control of the land round your course. If its value increases, it is right that you, who have caused the increase, should obtain the benefit. If it is to be built over, it is desirable that you should have control of the manner of building, and of the garden architecture. In many cases you can obtain control cheaply before the course is started.

3.—Keep the parking space and caddies' shelter as much in the background as possible.

4.—If you have any planting to do, do it at the start. Trees take a long time to grow. It may be desirable to plant out the parking space and caddies' shelter, and to mask roads, unsightly buildings or railway embankments. It is also desirable to have trees near teeing grounds, and on any large, open space, provided that they will not block a desirable view. Trees cost little to plant, and very little to keep up. From a landscape point of view, you can get greater value from tree planting on a dull piece of land than from any other form of work.

5.—Have a practice putting green as near as possible to the first tee.

6.—Have two starting points, and let the second be the tenth tee if possible.

7.—The total length of your course may be anything from 6,000 to 6,500 yards. With heavy soil, which is liable to bake hard, you want more length than on light or sandy soil.

8.—As regards the length of individual holes, have from three to five short holes. Four is perhaps the best number. One of these should be

really short, 140 or 150 yards or so. If you are going to have a lake or pond, have it at a short hole if you can. The duffer is more likely to carry it with a teed ball, and playing with an iron club. But do not construct a lake artificially unless you can have a stream running through it and have got an architect who is really good at landscape work. Even, then, remember to guard against mosquitoes.

Have at least two drive-and-pitch holes. Do not have more than one three-shot hole, unless you have natural features which favors the construction of two. Holes of this length are usually the dullest on the course. It is by no means necessary to have even one.

If you have four short holes, three drives and pitches, and one three shotter, you have ten remaining holes. Let seven of these be two full-shots for the good player under normal conditions, and the other three be rather shorter than this.

It is not possible to give yard measurements which would be universally applicable, as the nature of the soil, the direction of the prevailing wind, and the gradients have to be taken into account.

9.—Remember that it is desirable to keep the holes under all conditions at the length planned, length being reckoned not in yards but in strokes played by a good player. This ideal is usually termed "preserving the values." There are two chief ways of doing this. You can water the fairways, if you have got enough money. If you can not water the whole of the fairways you can do a good deal by watering them for a length of 50 yards, commencing at 150 yards and ending at 200 yards from the tee. And you can have plenty of teeing-grounds at different ranges. This latter method should be universally adopted, and at the longer two-shot holes the maximum and minimum length should differ by at least 50 yards.

The difficulty of preserving values is most noticeable on heavy soils, where the run may be enormous in summer, and almost nil in the spring and fall. But even on sandy soils the run varies with the weather, and the wind has to be taken into account. Elasticity of teeing-grounds is satisfactory as regards wind, but only partially satisfactory as regards alteration in the run of the ball.

10.—Do not have two short holes, two drive-and-pitch holes, or two three-shot holes consecutively. And do not have more than two long two-shot holes consecutively. Aim at a good distribution of length.

11.—Aim at having a fairly easy start on both loops of 9 holes. Let the last few holes be more difficult.

12.—A great deal of golf is played late in the evening. Therefore, if you can get equally good golf in that way, have the majority of your holes running north and south. But remember that a good hole running east and west is better than a bad hole running in any direction.

13.—Aim at perfect visibility for the approach-shot. When he is within range of the hole, the player should see the surface of the green. But a blind approach-shot, although never to be introduced deliberately, is less of a drawback when the shot is to be played with a brassie onto a large green, and when this green can be exactly located by means of outstanding landmarks.

14.—The surface of a tee should be level. But a tee should not be raised above the level of the surrounding ground, unless to obtain improved visibility or drainage, or to avoid the evil consequences of a sharp rise immediately in front.

15.—Greens should usually either have a tendency to slope upwards from front to back, or should have a plane base. As regards undulations, (a) It should be possible to cut holes over 60 per cent of the surface of a green. (b) As a rule, it should not be necessary for the player to aim outside the circumference of the hole when trying to hole out at a distance of 2 feet 6 inches. (c) The ball should not gain momentum after leaving the head of the club, unless there is ample space in which to lose the additional momentum before reaching the hole.

When in doubt, make a green flatter rather than more undulating. On a green, height is very slight in comparison with length and breadth. An indulation which rises 2 feet above the general level of the putting surface is very pronounced, and yet it may be only 1/45 part of the length of the green, or less. It is partly for this reason that plastocene models, although nice toys, are almost valueless in practical construction.

Make the size of the green depend on the length and character of the shot which should be played up to it.

16.—Hazards should be visible. In general, they should not penalize to the extent of more than one stroke, provided that the stroke out of them is properly played. They should not be so severe as to discourage bold play. In placing hazards it is vital to keep the course navigable for the duffer. It is perfectly possible to do this, and yet to render it interesting and testing for the first-class player.

17.—Regard landscape considerations as of primary importance.

The unpleasantly didactic phrases used in this article have been adopted solely to save space. The points put forward are elementary, and are merely intended for use by beginners as a basis for criticism and endeavor.

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## Sub-Irrigated Greens at the St. Louis Country Club

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The chief problems that have confronted all green committees on golf courses located in the Mississippi Valley have come primarily from the variable conditions of moisture characteristic of this section. Courses in these states are not blessed by heavy dews and fogs, which contribute so much to the simplification of green keeping in some other parts of the country. Hence when sub-irrigation was agitated a decade or so ago as promising a solution of the moisture problem, it was eagerly seized upon and widely applied in these parts, particularly with respect to the construction of greens.

After adequate trial it is pertinent to ask, "Has sub-irrigation of putting greens fulfilled all of the hopes of green committees?"

The writer would not attempt to give a general answer, and such comments as are made have reference to experience with two courses near St. Louis, but mainly with reference to the St. Louis Country Club course.

When the St. Louis Country Club decided to move from its old home at Clayton, Missouri, in 1910, to its present location two miles west, the construction of the greens was considered a matter of importance equal to that of the clubhouse itself. All were agreed that they should be sub-irrigated. The course was laid by Mr. Charles B. Macdonald and the