



## Golf Course Construction *from the* Greenkeeper's Standpoint

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### CHAPTER I—Selecting The Site

EVERY community in the United States with the slightest degree of civic pride should have at least one fine golf club to which it can point with pride. While the development of a golf course requires money, where is there an investment which pays such fine dividends in health and happiness?

A perfect site is one upon which, at a minimum of expense for construction and maintenance, it is possible to develop a golf course sufficiently notable to attract prominent golfers from all parts of the world, to entice them to leave their own favorite links and journey miles and miles just for the privilege of swinging a few strokes over its charmed landscape.

In moulding the hills and valleys and the contours of the surface of the land, Mother Nature instilled into all of her handiwork an element of beauty. In imitating her work, man's greatest problem as in all the arts, is in the avoidance of artificiality. Natural completed golf courses, however, have never been discovered. No matter how perfect the site or how picturesque the scenery some conditioning is always necessary before the first golfer can tee off.

If wishing would create perfect golf courses, there would be many more of them. Vision

and cooperation are extremely necessary. Imagination is a very desirable asset in the promotion of country clubs but it is better judgment to be entirely practical in the selection of the site.

Fortunate is the club which has the foresight to organize before acquiring a site. The possibilities of developing a fine course usually are much better. However, as soon as it becomes known that any club is in the market for land, owners of property generally gather by legion and besiege the buying committee or officers, using all of their persuasive powers. Sometimes clubs are more influenced by high-pressure salesmanship than by facts. Then too, often details, such as terms, are permitted to obscure the real fundamentals.

While it is true that almost any tract of land from 120 to 180 acres in size can be transformed into a golf course if sufficient money is available, the cost of developing an unsatisfactory site—to say nothing of the cost of maintaining it—is prohibitive. However, if money is no object, then any piece of land may be utilized for a golf course. Seldom this is the case. In fact, the proportion of country clubs which suffer from a superabundance of funds is almost nil. Club treasurers,

who do not know how to spend the dues and revenues, may be numbered upon the fingers of an armless golfer.

### Two Dollars Wasted

**A**N authority on golf course architecture once asserted that two dollars are wasted in golf course development for every dollar wisely spent. Probably this is an underestimate rather than an exaggeration. Much of this waste is due to attempts to develop unsatisfactory sites.

In all cases a golf course represents an investment. The size of this investment can be appreciated best by those who pay the bills. The creation of the course is only the first item of expense. The cost of maintenance is a continuing expense. The property cannot be neglected or it will quickly deteriorate. Soil elements need constant replenishment and the care of grass requires considerable attention. So, that, in a very short time, the cost of maintenance will far exceed the original cost of construction.

Experience is a very expensive teacher. After attempting to develop unsuitable sites, clubs have received very sad lessons. In some cases the cost of remodeling the course to give it championship appeal more than exceeded the original cost of construction. In other cases the cost of maintenance was quite excessive and beyond the means of the treasury.

The controlling factor in an investment of this type is not the first cost but the ultimate cost. A variation of a few hundred dollars an acre is insignificant when the probable total is concerned. Such eventual cost can only be explained by some one who is actually competent to pass judgment on the facts.

### Ordinary Opinions Are Worthless

**T**HE wisest procedure considering not only cost but also results, is to observe several appealing sites and then obtain competent advice before making the final decision. Ordinary opinions are worthless. By a process of elimination the most satisfactory site can quickly be selected. Such advice can only be obtained from men who are familiar with both the construction and maintenance angles of golf course development. Because a contractor is able to estimate the cost of moving a certain number of cubic yards of dirt, does not qualify

him as a golf course architect; because a man is familiar with farming or horticulture problems, does not qualify him as a greenkeeper.

Raising turf is a specialty. It is possible for a greenkeeper to have a very poor knowledge of the cost of construction and it is possible for a golf course architect to have an inaccurate opinion of the cost of maintenance. However, the more competent the golf course architect, the more he knows about both subjects. To develop a course of even the most unpretentious type a golf course architect is necessary. The club, which makes use of his knowledge to the fullest extent, is wise. At no time can his advice be of more value than in the selection of the site or before the expenditure of any money.

While the ordinary architect can build the same type of house on almost any piece of property with very slight difference in cost, the golf course architect cannot create the same course upon any acreage for the same investment. The actual cost of the construction varies greatly and should be given due consideration. With one piece of land comparatively little excavating and filling in may be necessary while in another piece of property a prodigious amount of it may be absolutely essential.

Also, the cost of maintenance on different sites would vary greatly. Some land, which might seem very fertile to the ordinary observer, might not be suitable to the growing of turf at all. With definite information as to the probable cost of constructing and maintaining a golf course on a certain site, judgment may be used more freely. If the estimated cost is either excessive or beyond the means of those interested, it is often wiser to abandon the proposed site and seek a new one. If the property has already been acquired, this may seem like a hardship but it does not necessarily involve a loss. In any case, it is more economical to pocket a loss on an unsuitable site rather than to attempt to develop it.

### What is a Good Site?

**W**HAT is a good golf course site? This is a perplexing question if the expense is left out of the picture. One definition of a satisfactory site is, any land of sufficient acreage,

upon which anyone with enough vision can create a pleasant golf course.

The game of golf, as all know, originated across the sea and it is to England and Scotland that golf will always owe a debt of gratitude. The links of Britain have been the scene of more championship contests than any other area of similar size in the world. Within a district scarcely larger than New England, fine courses are scattered with profusion. Such names as St. Andrews, Muirfield, Prestiwick, Sandwich, Westward Ho, Hoylake and Deal are laden with golfing history. These notable courses are all by the seashore.

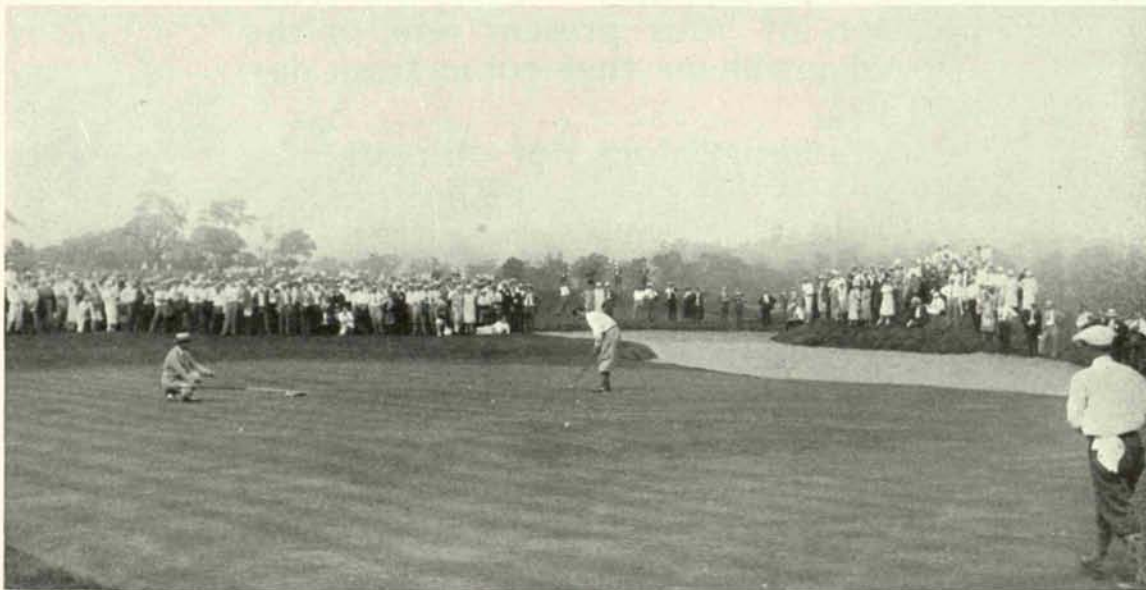
Seaside courses, swept by varying breezes, fascinate the golfer because they test his skill. The shifting winds enlarge the sporting element of chance. Many a championship has been decided by a puff of wind. There is a certain lure about the sea which causes busy men to listen to the waves, forget their troubles and turn to golf.

Naturally, the first fine courses in this country were patterned after those abroad. National Golf Links and Lido Country Club, Long Island, Pebble Beach and Cypress Point, California, and Olympic Golf Club, San Francisco are all seashore courses. These are all close to the beaches and high tide comes within a com-

paratively short distance. The Sea View Country Club has a fine course at Atlantic City and Boca Raton Country Club has another masterpiece at Del Rey, Florida. The bluffs at Palo Verde and Lajolla, California, also contain fine courses.

The real problem in the development of seaside courses has been to properly condition the soil. Sand, which forms the basis for beach property, is generally quite deficient in the necessary humus. Thus, soil bacteria must be supplied before turf can be grown satisfactorily. The land usually is covered with top soil which makes conditioning expensive.

The popularity of golf increased by such prodigious bounds, however, that the possibility of creating satisfactory courses inland was soon considered. Topography selected for the first links away from the shore was of a gentle rolling nature. Fine examples of such types of courses are Olympia Fields Country Club, Matteson, Illinois; Merion Cricket Country Club, Ardmore, Pennsylvania; Braeburn Country Club, Braeburn, Massachusetts; and the Minikahda Club, Minneapolis. Owing to existence of natural contours of the ground, which not only formed perplexing hazards and bunkers but also assisted drainage, the problem of construction was much simplified.



THE 14TH GREEN AT THE OAKMONT COUNTRY CLUB

*This picture was taken during the National Amateur Championship which was played at Pittsburgh in 1925. Roland MacKenzie of Washington is putting*