Probes Factors in Course Building Costs

By HAROLD D. PADDOCK

THE economy of golf construction is directly affiliated and inherently related to the design of the course in its application to the following contributing factors: character of soil; topography; water availability; possible power location; wood clearings; and highway accommodations.

The first essential in establishing a new course is to secure a desirable property adjacent to highway accessibility. A golf architect should approve the site. Many clubs have unfortunately made bad selections of land, often quite unsuited for economical construction.

Frequently property has been chosen with the price factor the determining element and the actual cost of development for golf never investigated. One may save fifty or a hundred dollars per acre, only to discover that to introduce golf they may have to spend twice that amount for clearing stone or trees and may have to employ a fertility program of considerable proportions, not to mention the consideration of water requirements, a factor of paramount importance.

After selecting the property the developer must decide, possibly in conjunction with suggestions of a golf advisor, this most important question: the amount of money available for golf construction purposes; for the question of costs in construction, primarily, are involved in the origination of the proposition.

Frequently the entire responsibility for the development of a proposed site to golf purposes is referred to a casually selected greenkeeper or professional, which at times may prove a grave mistake. Assuming he may have a conception of how a course should appear when completed has little bearing on his capabilities in attaining the desired results on a technical and economical basis. Promiscuous experimenting and inexperienced manipulation may aggregate costs to a bewildering degree and leave as a token a poorly conceived composition.

Obviously it is rather common for those so-called experts affiliated with golf to unhesitatingly project their personal opinion, regardless of how well founded, on any and every subject embraced in the curriculum of the pastime. To most of this ilk, O. B. Noer, Wendell Miller, B. R. Leach, Lyman Carrier, Donald Ross, et al., are but mere amateur operators.

Therefore, it is beyond understanding why, in the majority of instances, a committee or developer with several thousand dollars to spend will exclusively consider and act on the opinions of men who portray the fact they are unqualified to pass upon the intricacies of a golf installation, and, further, this observation does not only include many professionals and greenkeepers, but embraces the doctor, attorney, or what have you.

Then why question, by virtue of these conditions, the excessive expense and unsatisfactory results? They all contribute to "construction in relation to costs," due to continuous rebuilding and remodeling.

Most every regime on entering office immediately finds contrary influences at work, frequently generated by the so-called best player or new professional, in a keen endeavor to exploit personal brilliancy. He suggests a complete change of this, that and the other on the course, with the net result that the club ends with a "hodgepodge" that is usually a golf monstrosity and certainly will run up excessive maintenance costs.

Courses Built to Money Measure

One of the most important developments of recent years is the specialist known as the golf architect who by reason of his profession can introduce experience gained in numerous construction operations. An architect is not a luxury. Would you choose a carpenter to design and build a hundred thousand dollar office building because he did a fine little garage job for you?

The golf architect-engineer can design a course to accommodate his client's budget;

"Homeward the weary plowman plods his way and leaves the world to darkness and to me." That's still what some of the uninitiated might think of the greenkeeper at sundown, unmindful of the fact that the boy behind the scenes isn't a farmer, but an agriculturist, engineer, soil technologist, director of personnel, hydraulic and drainage expert, master mechanic, landscape artist and heaven knows what all else.

When the Westchester County greenkeepers homeward plod they dive into the p. m. uniforms, sweat, growl and wait another hour until Madame gets set, and then step out to a party like this, their third annual dinner dance.

i. e., in designing and building a golf course there need be no ignorant experimenting, for this profession today is equivalent to any type of architecture and engineering pertaining thereto.

You desire your property improved with a $30,000 building or perhaps the site lends itself to a $150,000 improvement; your architect designs in relation to clients' requirements, and the contractor builds according to specifications. By the same token, the golf engineer and architect can function precisely on the same basis.

In the face of the so-called expert's statement that it is impossible to design and construct a golf plant for less than $5,000 per hole, we can show him twenty or more layouts of eighteen holes that were designed and constructed (inclusive of water lines, pump and motor, bent greens, constructed tees, greens, traps, et al.) for $30,000, a nine-hole plant for $10,000, and a national tournament course at $60,000.

Therefore, the above serves to illustrate the contention there need be no supercilious guessing; a proficient golf architect-engineer can function according to the financial status of his client, and accurately.

A serious condition, however, has developed through the process of erroneous use of the title golf architect. Anyone of questionable experience can adopt this title and approach a prospective client on the flagrant basis of plagiarism with the attendant dissatisfaction generated through the process of experimentation and lack of fundamental knowledge. This not only distorts installation costs, but involves inferior quality of design and construction.

A national organization of golf architects and engineers might serve to eliminate this parasitical tendency.

To illustrate: A motorist passing a course during the process of construction observed tractors busily engaged completing a green adjacent to the road. Interested, he inquired of the foreman who was responsible for the work. Said foreman, after a moment's hesitation, replied that he was, adding that he always worked with his men for better efficiency.

The motorist, presenting his card, suggested a call at his office. The foreman called and, through misrepresentation, contracted on a percentage basis to design and build a course for the party in question.

This particular nine-hole course proved not only to be entirely out of proportion as to expense in relation to design and con-

struction, but the tractor foreman, having never been a golfer, executed a design in no way related to the accepted tenets of the game—no par-three holes, four par-five holes, and the client, not being a golfer, never appreciated what a serious situation he had until the course was open for play. Now the course will have to be rebuilt—an unfortunate experience with but one consolation, that it was not an eighteen-hole layout.

These statements are not motivated by a vindictive attitude; rather are they the result of observation and investigation.

Therefore, in selecting a golf architect consider the following: What precedent has he established? And by all means make an effort to review some of his operations, being careful to investigate design and construction in relation to costs. Does he know modern and scientific construction based on economy? Does he know maintenance? Does he even play golf? What is his information on soil character; drainage; fertility in relation to particular types of soil involved; irrigation; character of soil in relation to the proper types of grasses to e[redacted] soil erosio[redacted] flocculation[redacted] flected in every detail of the operation and construction in relation to costs.

The Construction Cost Problem

How close is it possible to come to standardized specifications and their immediate bearing upon construction costs?

Here we have a subject of wide variation and one apparently impossible to isolate to an even basis of construction cost comparison. Most necessarily the bidders are quoting on different completed operations and the uninformed client frequently is unaware of the existing circumstances. Wherein lies the major differentiation?

Simply this equation: No two golf architects will route a course in the same manner; therefore, we immediately face a constant series of variations.

Then, too, in practically every instance they submit bids only on their specific design. Consequently, how can one arrive at a final judgment equitably? The factors involved in each operation are at wide variance, and the basic motive may be impossible to fathom. One architect may design a course to fit the property, and another may concatenate the routing, following a preconceived plan with minimum regard to installation costs.

Herein, we believe, lies the fundamental reason for a proposed course set up by one

architect on a selected site, aggregating a cost of $50,000 for eighteen holes, and a fellow architect, on the same site, submitting a $150,000 operation.

The late Seth Raynor made a practice of modeling classic holes of notable courses for his ensemble, and cost of installation was of minor importance; consequently, in this instance grading is the dominating cost factor.

Therefore, we believe grading is the pivotal point on which swings the variation of construction costs.

The volume of material to be moved in grading and the distance to be hauled are the determining factors reflected in the ultimate cost of golf construction.

Have we Constants and Variables in considering cost factors?

CONSTANTS—

1. *Course Yardage*—We assume that in a major course routing the yardage may vary from 6,200 to 6,800 yards; however, this variation should occasion no particular untoward additional costs.

2. *Drainage*—Reviewing costs on twenty operations, $15,000 is the average; therefore, a thousand dollars more or less is of minor consequence, unless one were to eliminate the operation entirely.

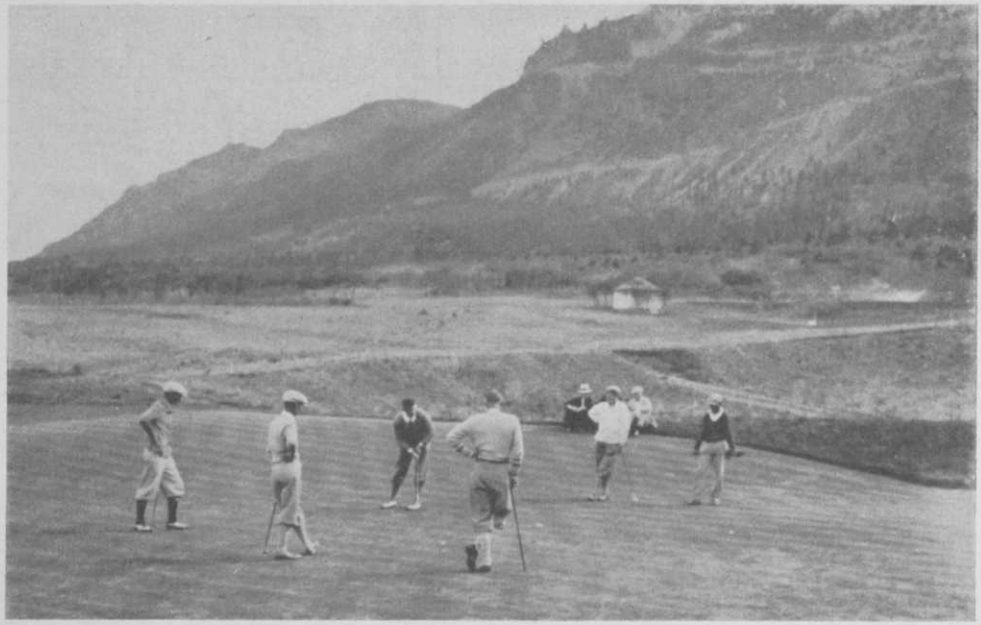
3. *Irrigation*—Eliminating the possible fairway irrigation, the quantity and size of pipe required to deliver 20 G. P. M. at each green would not vary costs appreciably. The only consideration of moment here would be the quality of pipe employed. We have a choice of five grades of pipe, approximating about 20 per cent variation in costs, as follows: Black Steel, Galvanized Steel, Black Iron, Galvanized Iron and (over 3-inch size) Cast Iron.

There would be an additional cost if buried below frost line, and in the event of calking, a Barber-Green machine would have to be used for cutting bell holes.

4. *Pump and Motor*—This averages deep-well or reservoir equipment.

5. *Fertility*—This item on courses of merit averages about the same.

6. *Seeding*—The fairway areas average the same. The only question would be the pounds per acre specifications. Some plant at the rate of 100 lbs., 150 lbs. and 200 lbs. on a $30,000 maximum course expenditure. This, then, would be an item of serious consideration, as would be the type of seed employed. However, the proportional difference on amount and cost of seed between a $30,000 and $130,000 course is of no serious consequence.



At Broadmoor, Colorado Springs, where this year's Trans-Mississippi was played, one of the country's big jobs of building a course on imported soil was done.

7. *Greens Seeding or Planting*—Average about the same regardless of total cost involved.

8. *Preparing for Planting*—The actual farm methods employed cost the same.

VARIABLES—

1. *Clearing*—The amount of woods to clear and type of trees. The amount of stone and gravel may have a considerable bearing on ultimate costs.

2. *Top-soil*—Frequently, where stone has been moved or great sand areas are involved, considerable expense has been engaged in moving top-soil.

3. *Water*—Dam construction for the impounding of water for irrigation or scenic effects often requires considerable investment.

4. *Soil-erosion*—Terracing or revetting to aid in soil erosion control may affect the final costs to a major degree.

5. *Grading*—Finally we have, as the item of major consequence, grading—an item requiring mature consideration. The cost of grading tees, traps and greens, to say nothing of the possibilities of fairway and ravine fills, is the great expense problem and one definitely affiliated with the individual design of the architect employed.