



Design Concepts of the 80's: How Do They Affect Maintenance?

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Multiple tees, "chocolate drops", cape and bay bunkers, "severe undulations"; contoured fairways, pot bunkers and strategic design - these and others are the popular design features for golf course architecture in the 1980's. What are the different considerations that a golf architect keeps in mind when designing such features? While there are certainly many different design criteria, among the most basic are the three simple objectives of balancing aesthetic appeal, playability and maintainability. Within every golf design there is a trade-off among these three simple objectives. As Geoffrey Cornish stated in the recent GCSAA/WGCSA Design Seminar, "Great architecture must, however, embrace all three; namely, the game of golf, eye appeal, and maintainability, and we think of these three broad considerations as the sides of an equilateral triangle, each with equal importance". The maintenance side of the triangle is certainly uppermost in the mind of the superintendent and will be the focus of this article.

Of the three basic architectural design styles-heroic, penal and strategic-strategic design is certainly the most popular design style for the 1980's. Simply put, strategic design offers different options to the golfer, requiring thinking and advance planning - i.e., a strategic plan by the golfer is essential. Strategic design is generally associated with shorter courses built on less property. It's also closely associated with multiple tees, the target concept and contoured fairways.

The contoured fairway concept is very popular today, and with good reason. It fits nicely with all sides of the triangle - it's aesthetically appealing, enhances playability, and permits a level of maintainability not heretofore possible. Lightweight mowing programs, increased mowing frequency, intense fairway aerification and overseeding programs are all increasingly popular due to the acreage reductions associated with contour mowing. The

small, lightweight, maneuverable mowers of the 1980's are ideally suited for contoured fairways - virtually gone are the heavy, poorly maneuverable mowers of the 60's and 70's. Any maintenance savings in lessened fertilizer or pesticide costs are easily offset by more intensive management in other areas - increased mowing time, increased aerification and overseeding, and possibly increased mowing frequency. However, contoured fairways and lightweight mowing fit nicely into the triangle because maintenance programs can be tailored for different specific situations.

Another feature of the golf course receiving increased attention is sand bunkers. Sand bunkers, when properly designed and maintained, are very beautiful. They always have required more than their share of hand labor and probably always will. But the "flash bunkers" of the 1960's with all their hand shoveling are gradually being replaced by the cape and bay bunkers of today. Cape and bay bunkers require mowing with hydrostatic drive mowers, such as the Ransomes Motor 180, to maintain their good looks. These mowers eliminate much of the hand mowing which is the inherent problem with this bunker style. Sand bunkers will always be a maintenance headache, no matter the style. But, for maintainability give us the cape and bay bunker anytime over the old flash bunker - a bit of hand mowing is definitely preferable to constant sand shoveling, especially as the rain washouts always seem to happen over the weekend.

Mounds on the golf course, either as greens backdrops or as framing for fairways, are very popular and among the most beautiful features on courses today. Here again though, maintainability must be taken into consideration - the "chocolate drop" mounds with their 1:1 slopes and 6-8' heights show little regard for either maintainability or playability. Mound slopes should be at least 2:1 or 3:1 to permit machine mow-

ability. Properly designed mounds take into consideration all three sides of the triangle - the game of golf, eye appeal and maintainability.

Greens of the 80's have changed dramatically from those of the 60's. They are generally smaller and much more undulating. Their smaller sizes permit easier maintenance, but severe undulations can make both maintenance and playability a nightmare. Then add to the formula bunkers placed at virtually green edge and it's then a very difficult situation. Compromise between eye appeal, playability, and maintainability is the answer. Good green design allows for distinct areas separated by undulations. Within these distinct areas should be plenty of good cupsetting area. Undulations over the entire green without regard for pin placements are a double whammy - a nightmare for the cupsetter and for the average golfer.

From the very beginning of remodeling and reconstruction, it's the responsibility of both the architect and the superintendent to insure that the new design fulfills all three facets of the triangle. In addition to being appealing and playable, it must be maintainable within the potential limits of the course budget. If your operating budget doesn't currently allow for adequate labor, will your next budget be expanded to permit proper maintenance of those new design features? If you are currently ill-equipped to maintain those new bunkers and mounds, will future budgets permit capital purchases to correct the situation? Always recognize that construction of new course features, whether they are relatively simple (mounds, tees, or bunkers) or very involved (new greens, completely contoured fairways, or rerouting of holes) will most likely change the maintenance requirements. Anticipate what changes will be necessary and plan for them. If you understand and plan for the proposed changes, you will be far ahead of the game. Then your new construction will be a joy for all involved - maintenance staff, club membership, golf professional, golf architect, and the golf course superintendent.