Renovating Golf Course Bunkers: Five Factors to Consider

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Much of the work which we are doing today involves renovating existing golf courses. Depending in part on the age of the course, the scope of these projects varies greatly from completely rebuilding putting greens or tees to improving fairway drainage and renovating bunkers. Since it would be impossible to adequately cover all types of renovation projects with such limited space, I've limited this particular article to identifying five important elements to consider when planning a bunker renovation project.

The Maintenance Budget
If the course is going to be a public golf course with a somewhat more limited budget, we'll try to create bunkers that are easier to maintain. We may still have elaborate capes and bays but the sand will probably be somewhat flatter in the bottom so that it can be maintained with a sand pro as opposed to requiring hand raking to pull the sand back up on the faces. Softer less rounded capes and grass faces can be maintained with more traditional rough mowers and sidewinder units. The more rounded capes and steeper grass faces may require mowing by hand or using string trimmers. If the course is private or a higher-end destination course with a more substantial maintenance budget, we might not only create more bunkers but they will likely be somewhat larger and more dramatic. This might mean the capes get more rounded, the sand gets flashed up higher and we might use a more expensive white sand such as that which is available from Ohio or Arkansas.

Placement and Visibility
In my opinion, it is critical that bunkers and, for that matter, all hazards be visible. I think that the golf holes which are the most memorable are the ones where the golfer can see everything unfold in front of them. We want the golfer to be able to see the entire hole or landing area when preparing to hit his shot so that he can make an informed decision on how to play it. For that reason, we would generally not put bunkers on the back side of a hill or behind a green where they can't be seen. However, with that said, there are times where we might propose a "catch" bunker or a "savior" bunker in that location. For instance, if there is water behind the green, we may put a bunker behind the green to gather a shot that might trickle off the green, rather than penalizing a player a full stroke for only slightly mis-clubbing.

In the fairway, we use cross bunkers, directional bunkers or framing bunkers to frame the hole, define the landing areas and to create strategy. Around the green, we use bunkers to guard the green and to create preferred angles of approach. Generally, greenside bunkers are a little deeper and a little more dramatic than fairway bunkers. How far we place the bunker from the putting surface is dependent in part upon the length of the hole, the size of the green, how difficult we want the hole to play and, again, the type of course we are working on.

Drainage and Erosion Control
There are a lot of ways to build bunkers but the one thing they all must have in order to function properly is drainage. Often times, if a course is contemplating a bunker renovation project, it is because its sand no longer drains properly and because the lies are inconsistent. It doesn't really matter whether you want more traditional bunkering with flat sand and grass faces or whether you want elaborate capes and bays with the sand flashed up high on the faces. They all need good drainage. This includes drainage in the bottom of the bunker to evacuate water as well as paying attention to how much water actually runs into the bunker from the surrounding area. Generally, what tends to happen over time is that bunker sand gets contaminated with silt which either washes in from the surrounding area or washes in from the exposed faces of the bunker. In time, that silt then tends to plug up the pores in the sand and the sand loses its ability to drain quickly. To minimize this, it is important that the

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area surrounding the bunker complex be
designed so that a minimal amount of
water is actually running into the bunker.
In part, we do this by adding small
mounds and features which help direct
the water or by creating swales around the
bunker.

How we finalize the grassing of the
bunker complex to control erosion and to
get the project back into play is again
dependent upon the budget and the over-
all character or style of the course.
Generally, we would either try to sod the
bunker surrounds or we would use seed
and an erosion control blanket. Sod is a bit
more expensive than seed but gives us an
almost immediate look of completion. If
the bunker faces and capes are going to be
maintained at 2 or 2 1/2’ height, then sod is
probably the best solution. However, if the
club is looking to maintain the capes in
fescue or at a taller cutting height, then
seed and blanket might be the best choice
so that we can be more selective about the
turf grass varieties.

The Sand

To some degree, which sand we
choose for a bunker renovation project is a
function of budget and, again, the type of
course which we are working for. What is
important is that the sand drains quickly
and that it sets up firm enough that balls
don’t plug. A little bit coarser sand with
some particles that are more angular
rather than round is generally best.
Depending on where you are in the coun-
try, there are some very good local bunker
sands where you might spend only $13 to
$15 a ton. You also usually have the
option of bringing in a USGA sand for $30
to $40 per ton. If the club has the money,
we might look at bringing in a premium
white sand which usually cost somewhere
in the $90 to $110 per ton range.

Disruption of Play

One of the most important issues to
consider is how to minimize the potential
for disruption to play during your renova-
tion project. In most cases, we prepare a
bunker renovation plan and then work
with the Club to determine how to com-
plete the project over a 3- to 5-year period
of time. We may decide to do a few holes
each year or we may decide to do all the
holes at one time. Fortunately, bunker
renovations are generally not so disrup-
tive that we can’t continue play during
construction. In the Midwest, the best
time for a bunker renovation project is
usually in July and August since the
chances of weather delays which might
prolong the project are reduced.
However, with tournament schedules and
with fewer golfers in the fall, most clubs
seem to opt for a September project sched-
ule. With a well-defined project scope and
a good contractor, we can make the neces-
sary changes and have the disturbed areas
regrassed quite quickly and be ready for
play by spring. The key is to start with an
overall plan on how to complete the proj-
ect and then use an experienced golf archi-
tect and an experienced golf course con-
tractor to insure that the project is compet-
et properly and on time.

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