



Clumsy Contours

Story and Photographs
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Contributing Editor

ANALYSIS

"The golf architect should be made responsible for contours; for every detail in the construction of the course."

— George C. Thomas, *Golf Architecture In America*

Some of today's practicing architects scoff at the notion that design had a Golden Age in the 1920s, instead favoring the superior beauty and functionality of their own work.

Yet most golfers disagree, especially above-average golfers who cringe when hearing the letters TPC, a symbol of overbuilt, soulless architecture.

Many are unequivocal in their belief that the golf courses created by the Rosses, Thomases, MacKenzies and Tillinghasts of the world were strategic masterpieces, proving enjoyable to play on a repeated basis.

But these masters also constructed their courses beautifully and economically. What was their secret? Besides not having many of the modern means to move earth at will, they were adamant in their devotion to surface drainage.

The Design Perspective

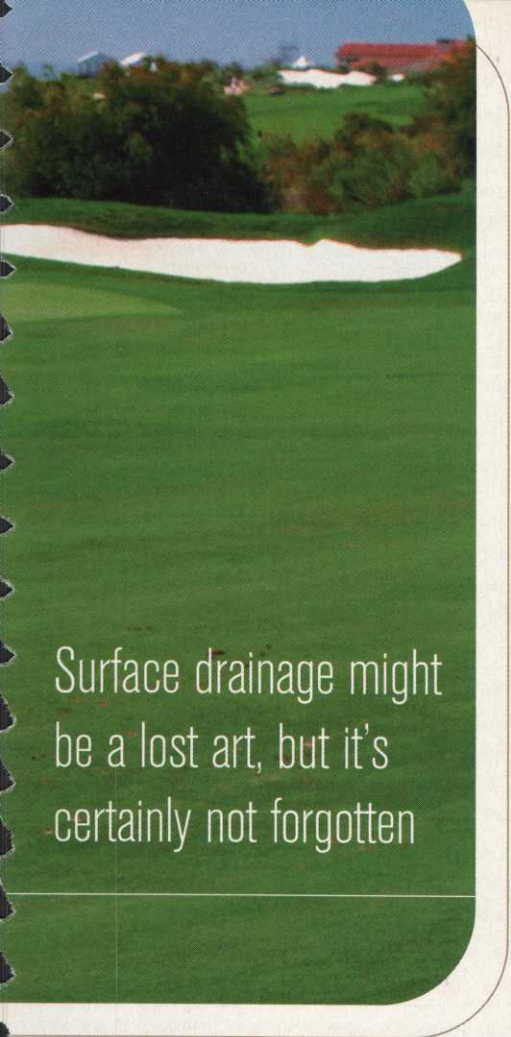
"Surface drainage is the most critical and effective type of drainage for greenswards and can be achieved in a number of ways."

— Cornish and Graves, *Golf Course Design*

When you walk an artfully designed course, it feels solid to the foot. Everything flows wonderfully, including the sometimes wild and obvious unnatural undulations. Even the uneven stances feel authentic. Nothing feels forced or manmade. Tees sit low to the ground. Holes are not protected by containment mounds. Fairways feature an almost imperceptible tilt. Signs of man's hand are masked tastefully.

This walk-in-the-park feel is due in part to the architect's adherence to existing contours and a willingness to allow the natural drainage to act just as it had before golf was introduced to the site.

But contrary to popular belief, not even a Golden Age site was ideal. Those wonderful tilts and swales and other function-driven touches were manmade.



Surface drainage might be a lost art, but it's certainly not forgotten

The true artists in golf architecture masked much-needed drainage via a system of tactfully graded slopes, swales, bumps and other ground movement so water fed into a clever series of waterways and ditches during extreme weather.

Modern architects continue to tackle drainage requirements, but the two eras approach the solution in different ways.

The desire for containment mounding surrounding fairways and greens, designed to send wayward balls back to the center of play, often handcuffs modern architects. This also has the unfortunate effect of sending all water back to the main play areas.

Add the challenge of trapping run-off so it won't contaminate natural bodies of water or wetlands, and subsurface drainage becomes a necessity.

There is no denying the importance of innovations in subsurface drainage, but catch basins, French drains and even the "USGA green" have become an all-too-frequent crux for the modern architect dealing with this strange

confluence of issues. For some, it's the result of trying to design from an office without understanding how containment mounds and other unnecessary ground movements affect the turf.

When you step onto a classically designed course, you rarely find the ground shaped out into symmetrical bowls, complete with little green grates and sloppy bottoms.

Nothing could be more unnatural than walking down a modern fairway littered with catch basins, or worse, just missing a green and requiring a free drop from a catch basin that is stopping water from moving to a location away from the green.

Imagine the great British Isles links, with little bumps and rises strewn about their fairways. Sometimes there are dunes on both sides of the holes, but not often. And even in those cases, water always has a place to go, and it's not always straight down.

The modern American design mentality has flipped those bumpy links fairways and created a series of valleys that never seem to drain.

The catch basin has become an alternative to surface drainage, perhaps because it is easier to pencil them in at the office. It's much easier than directing (or allowing) shapers to gently mold the land by feel in hopes of moving water toward out-of-play locations.

And while many golfers might not notice fairways littered with unsightly and unnatural basins and grates, the eventual impression of the course seems manufactured and fake.

Man has spoiled what should have been a good walk.

Evolution of Drainage

"Whatever you do, don't slight drainage."

— Donald Ross

The days when architects slighted drainage ended long ago. Actually, they never really existed, contrary to popular belief.

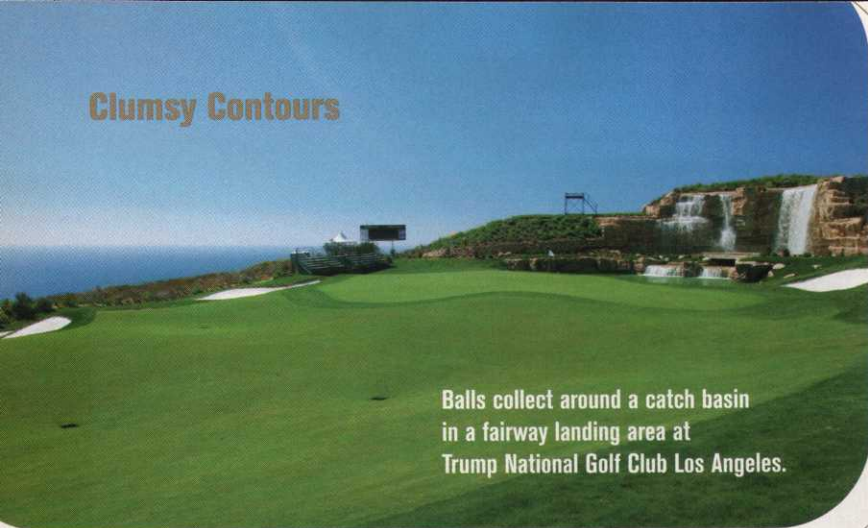
Yes, some would point out all of the drainage they've had to add to older courses, but as we've often learned through aerial photos, their original designs have been tampered with beyond belief.

Alterations have included the inevitable introduction of drainage problems caused by

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Balls collect around a catch basin in a fairway landing area at Trump National Golf Club Los Angeles.

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subsurface drainage proponents who ignored the surface-drainage ingenuity of their predecessors. It is often difficult to understand the modern disregard for surface drainage in favor of the immediate removal of water underground, especially considering the extreme cost and maintenance issues that accompany subsurface systems.

Again, this is not meant to minimize the great importance of catch basins and French drains, which have improved turf conditions

and prevented contaminated run-off from reaching wetlands or other waterways.

No, the mystery is why costly subsurface drainage is preferred in situations when surface drainage could have been preserved on sites or manufactured during construction to prepare the course for the long term.

"Surface run-off is the easiest and most rapid method of removing excess water during intensive or prolonged rains," writes James Beard in *Turf Management for Golf Courses*. "Surface drainage can be provided via slightly crowned fairways on flat areas and via a minimum slope of 2 to 3 percent on rolling terrain. These modest slopes should direct water into diversion swales and eventually into grass waterways. The waterway cross section must be designed to handle the anticipated water volume at a moderate velocity to minimize erosion potential. Contours on the fairways and primary roughs should be graded uniformly to avoid depressions where water can accumulate. Where depressions can't be avoided, catch basins and drain lines can

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be installed to remove the excess water, while dry wells or French drains are useful in small depressions."

The player's perspective

Confronted with a natural swale or ditch, the golfer attacks the feature with joy because nature has offered a challenge (even if it's actually one artfully created by man).

A lob wedge over a manmade turf bowl with a grate centered at the bottom just doesn't provide the same thrill.

The illusion of battling nature is the key to separating the timeless golf experience from the less satisfying and perceptibly manufactured design. There also isn't much charm in the uneven lie created by the catch basin wall or the free relief taken from the grate in the center line of a fairway.

The situation becomes more intolerable when greens are drained toward the fronting approach, where a catch basin awaits to slow down the run-up shot. The golfer should be

offended whether they considered a ground-game alternative or not because limiting his options in favor of function almost always will make the golfer yearn for an old-style design.

If you've ever wondered why a modern design just doesn't feel right, then take a second look at the way the designer chose to drain the course. Did he cleverly mimic what nature might have done during thousands of years to solve the problem, or did he mound up all around the hole and then stamp out a series of bowls to collect the water and send it underground to fester in a bed of gravel?

The difference might seem slight to some. But for those charged with growing the grass, those who funded construction and most of all, those who play it, subtle surface drainage makes all the difference.

Geoff Shackelford is the author of 10 books, consults on classic courses and co-designed Rustic Canyon Golf Course in Moorpark, Calif. He can be reached at GeoffShac@aol.com. ■

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cleverly mimic
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