Inside: David Tisherman on Design Restraint

WaterShapes

Design • Engineering • Construction

Volume 7
Number 8
August 2005
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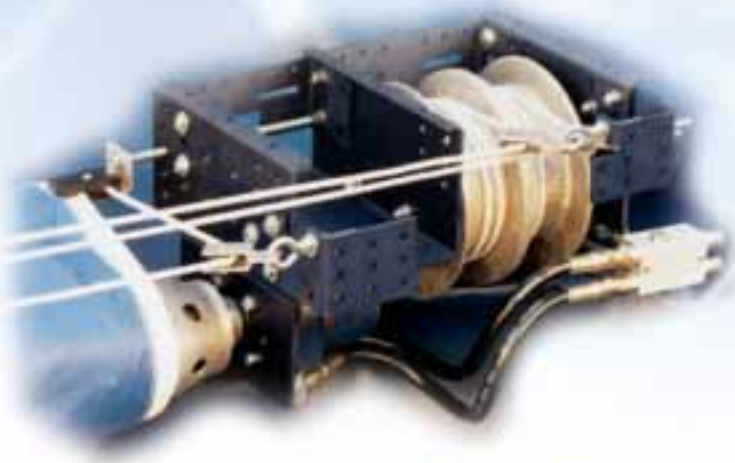

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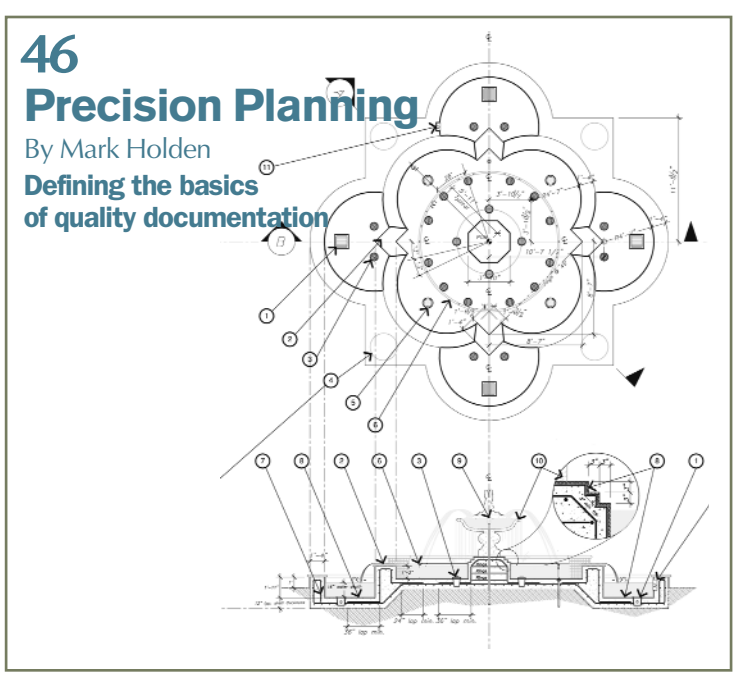

WATERSHAPES

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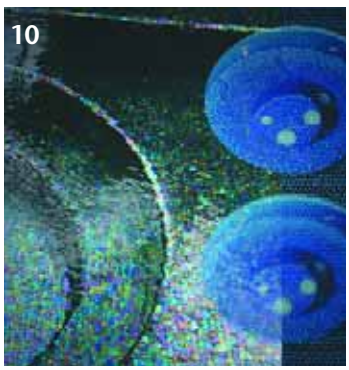

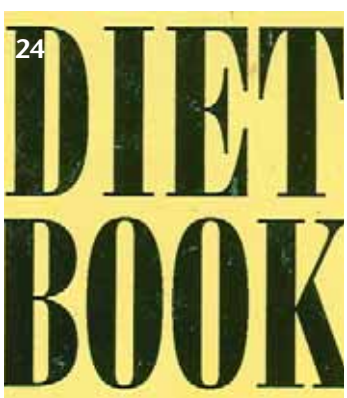

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On the cover:
Photo courtesy Anthony Archer-Wills, Copake Falls, N.Y.

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By Eric Herman

Badwater Blooms

As natural anomalies go, this year's rainfall in California has given us one for the record books.

By far, one of the most interesting outcomes of the deluges of 2005 is the explosion of life the storms engendered in the harshest desert environment in the United States – so bountiful, in fact, that a *lake* actually formed at the hottest, lowest and most forbidding place on the continent.

That place, known as Badwater, sits at the lowest depths of Death Valley – a spot 282 feet below sea level that is famous for summer temperatures often rising above 125 degrees. For those of you who've never been there, the experience of visiting Badwater in a normal year is like stepping into an alien world: The vistas typically consist of hundreds of square miles of barren salt flats punctuated by occasional formations of igneous rock.

I've come back to this area frequently since I was a kid, and I've acquired something of a taste for those desolate panoramas and strangely sculptural geological details. It's plainly a place where the availability of water spells the difference between survival and death in the withering heat.

On a trip to the desert this past spring (a journey inspired in this particular spring by my friend and frequent *WaterShapes* contributor Jeff Freeman), I ran into an astonishing surprise, courtesy of more rainfall than the state has experienced since they started recording such things in the 1880s. Instead of the typical lifeless rockscapes, I found fields of wildflowers stretching out for miles in every direction with the most vivid colors I've ever seen. The orgy of blossoms included the blue pendants of desert lupines, tiny purple chias clinging to ancient lava floes, golden California poppies hugging the hillsides as far as the eye could see and rows of bright, yellow daisies waving in the arid breeze.

Close observers of Death Valley's annual blooms claim this is the greatest in at least 100 years, and it was humbling to wander amid a riot of life whose very existence seemed a natural contradiction. More amazing still was the presence, deep in the heart of a place I'd long known as Badwater but in which most visitiors had never seen more than a puddle, of a lake fully 25 miles long and a couple feet deep.

Park rangers say there was water down there during the 1994-1995 El Nino storms, but the resulting pools were tiny by comparison and disappeared in rapid order. This year, the rains created a lake so huge that windsurfers and kayakers have been making pilgrimages to play on a lake that might not come back for another century or more. And the experts are saying there's enough sheer volume that even in Death Valley, the water may be there through the entire summer.

As time has passed, of course, Badwater's lake has been shrinking and the yellow, orange and blue flowers have faded – but the spring of 2005 is already the enduring stuff of legend. It's a profound reminder that as we observe nature, we are limited by time and our mortal life spans in perceiving the processes that surround us on all sides. When nature reveals cycles such as this one that span centuries, we are privileged to enjoy the expanded perspective such unpredictable phenomena may yield.

For my part, I'm particularly struck by water's role in this remarkable display of nature's power. Water truly is our most valued mineral – the one chemical compound capable of bringing so much life to a place so deservedly called Death Valley.

WATERSHAPES

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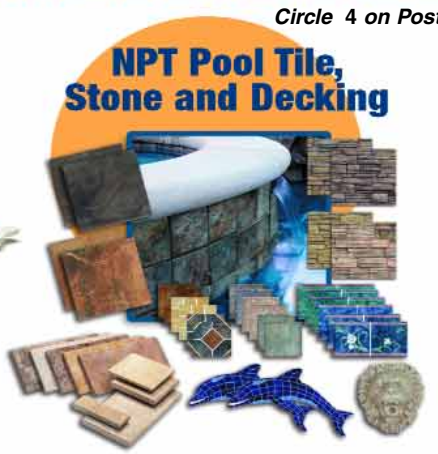

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August's Writers

Anthony Archer-Wills is a landscape artist, master watergardener and author based in Copake Falls, N.Y. Growing up close to a lake on his parents' farm in southern England, he was raised with a deep appreciation for water and nature – a respect he developed further at Summerfield's School, a campus abundant in springs, streams and ponds. He began his own aquatic nursery and pond-construction business in the early 1960s, work that resulted in the development of new approaches to the construction of ponds and streams using concrete and flexible liners. The Agricultural Training Board and British Association of Landscape Industries subsequently invited him to train landscape companies in techniques that are now included in textbooks and used throughout the world. Archer-Wills tackles projects around the world and has taught regularly at Chelsea Physic Garden, Inchbald School of Design, Plumpton College and Kew Gardens. He has also lectured at the New York Botanical Garden and at the universities of Miami, Cambridge, York and Durham as well as for the Association of Professional Landscape Designers and the Philosophical Society. Later this year, he will lecture on watergarden design at the Aqua Show in Las Vegas.

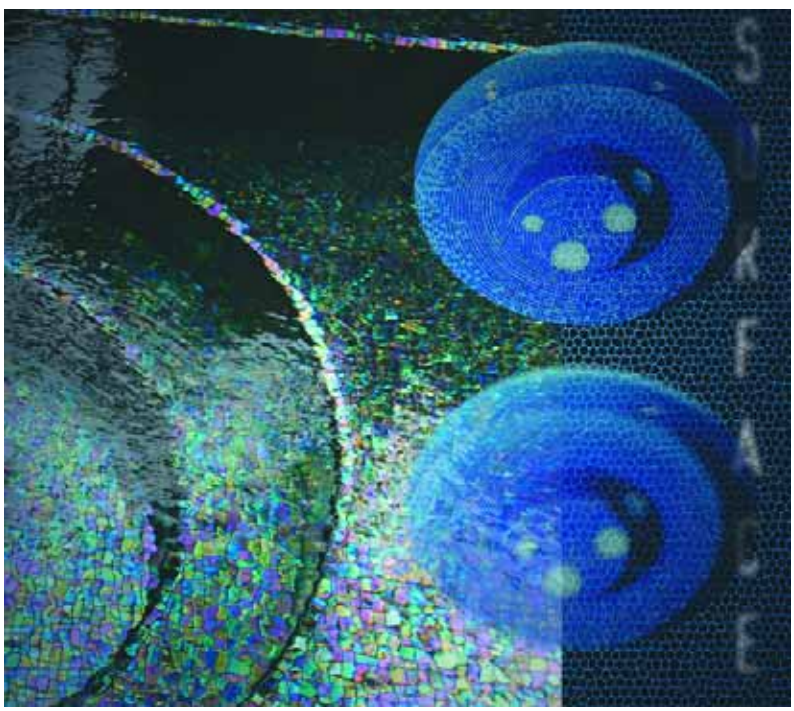
Mark Holden is a landscape architect, contractor, writer and educator specializing in water-

shapes and their environments. He has been designing and building watershapes for more than 15 years and currently owns several companies, including Fullerton, Calif.-based Holdenwater, which focuses his passion for water. His own businesses combine his interests in architecture and construction, and he believes firmly that it is important to restore the age of Master Builders and thereby elevate the standards in both trades. One way he furthers that goal is as an instructor for Genesis 3 Design Schools and also as an instructor in landscape architecture at California State Polytechnic University in Pomona and for Cal Poly's Italy Program. He can be reached at *mark@waterarchitecture.com.*

Paul Benedetti is founder and vice president of Aquatic Technology, a custom swimming pool design/build/service firm based in Morgan Hill, Calif. He began his work in the industry in 1991 as an independent service technician. He quickly moved into major repair and remodeling work, eventually transitioning into original designs and construction. He now builds extremely high-end residential pools for upscale clients in Northern California's Silicon Valley region, where he also offers his design services to architects and landscape architects. Benedetti's firm continues to service pools, including all of those he has built. He is an associate member of the Genesis 3 Design Group.

By Brian Van Bower

Surface Value



Value is measured and determined in a variety of ways.

When it comes to pools and spas, for example, I'd say that the straight-dollar value is only one of several yardsticks and that, for many clients, it's no longer the one that tops their lists. Instead, beauty, health benefits, artistic merit, pride of ownership and emotional appeal are more important than price tag for many of them – a wonderful trend, to my way of thinking.

These measures of value, of course, are highly subjective. Every client is a little bit different, and the relative value of non-monetary factors can be hard to define on an industry-wide basis. The best way I've found to understand this shift toward value-added details is to look at the materials that are now being selected for use with watershapes.

To demonstrate what I mean, let's look at a material that is perfectly indicative of the evolutionary process taking place in the way that clients and watershapers view their projects: *tile*.

beyond castles

For years, the all-tile pool has been the ultimate watershaping status symbol. Up until fairly recently, only a handful of these finishes were applied to watershape interiors by comparison to plaster and other options.

In fact, the very notion of lining an entire swimming pool with ceramic, porcelain or glass tile was so outrageous that even *suggesting* it was anathema to most of us in the industry. After all, when we thought back then of all-tile vessels, we'd think first and almost exclusively of the pools at Hearst Castle and jump to the conclusion that, even for our wealthiest clients, the all-tile option seemed extravagant at least and, at worst, totally decadent.

Up until recently, I drew gasps of disbelief from other watershapers when I'd tell them how many all-tile pools I'd designed or installed.

Personally, I moved past that sort of thinking a long time ago. And up until recently, I drew gasps of disbelief from other watershapers when I'd tell them how many all-tile pools I'd designed or installed. To them, the concept of selling a surface that could range from eight bucks a square foot up to $50 or more seemed downright unworkable.

Looking back, all I can say is, "How far we've come!" Just recently, I learned of two firms in Florida that work *only* with all-tile finishes. Even I was startled, after 20 years of pushing all-tile pools as my main proposition, to see these companies staking out this territory as their sole focus. It's powerful proof that an option that was once so exclusive as to be utterly prohibitive is now being successfully purveyed as a reliable, go-to material.

This trend can be attributed in part to overall advances in watershape design and to ready capital found among upper-middle-class and wealthy homeowners. More than that, however, the ascent of appreciation for all-tile finishes indicates that the value of watershapes is no longer entirely hitched to purely financial concerns.

There are also obvious practical advantages to all-tile finishes. First, they last virtually forever when applied properly, so, unlike plaster, won't ever require refinishing. Second, because tile is impervious to water and is smooth, it is a far friendlier surface than plaster or even pebbles when it comes to maintenance.

Certainly, those advantages haven't changed through the years, so practicality alone cannot explain the upsurge in the use of tile as a finish. To understand fully what's happened on the pool-surface front, we need to step back and look at a bit of history.

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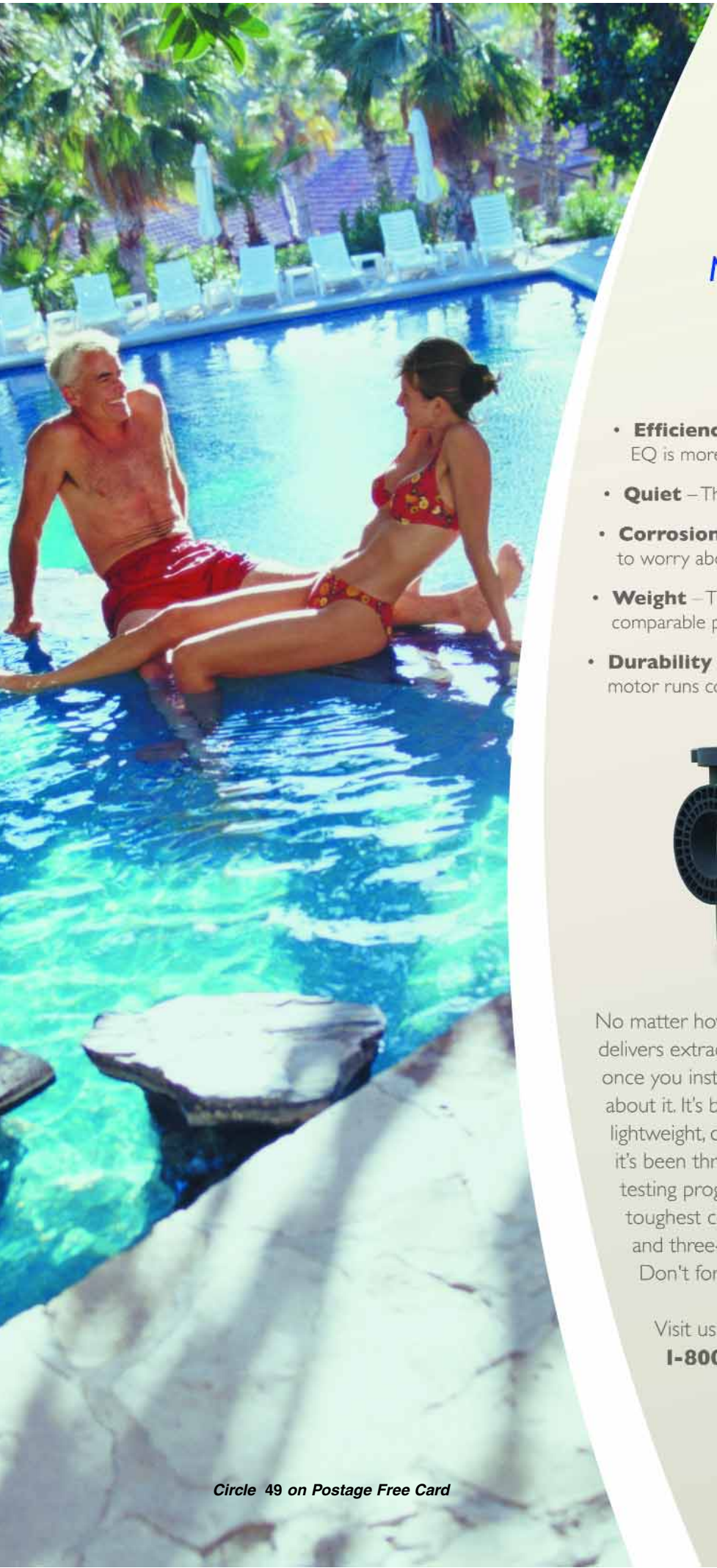

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plaster and pebbles

There was a time when white plaster (or Marcite, as it's known in Florida) was the undisputed first choice among pool and spa finishes. It's affordable and can, in its own way, be quite beautiful. For years, the only real alternative was painted concrete, which at first was also almost uniformly and unimaginatively white.

Things began to change in the early 1970s with the advent of colored plaster. All of sudden, the color palette for vessel interiors opened up, and once we started thinking in terms of color, a variety of stylistic advancements soon followed – including the naturalistic, lagoon-style pool.

The problem with plaster and painted surfaces is that, by nature, they are impermanent. To be sure, there have been real improvements in plaster technology in the form of admixtures that increase its service life and in understanding the factors that influence plaster's durability. (Kudos to plaster and admixture manufacturers and to groups such as the National Plasterers Council for their important work.)

For all that, however, and in the name of establishing realistic client expectations, I still have to say that plaster maintains its best appearance for five to eight years. After that, its appearance and texture will begin

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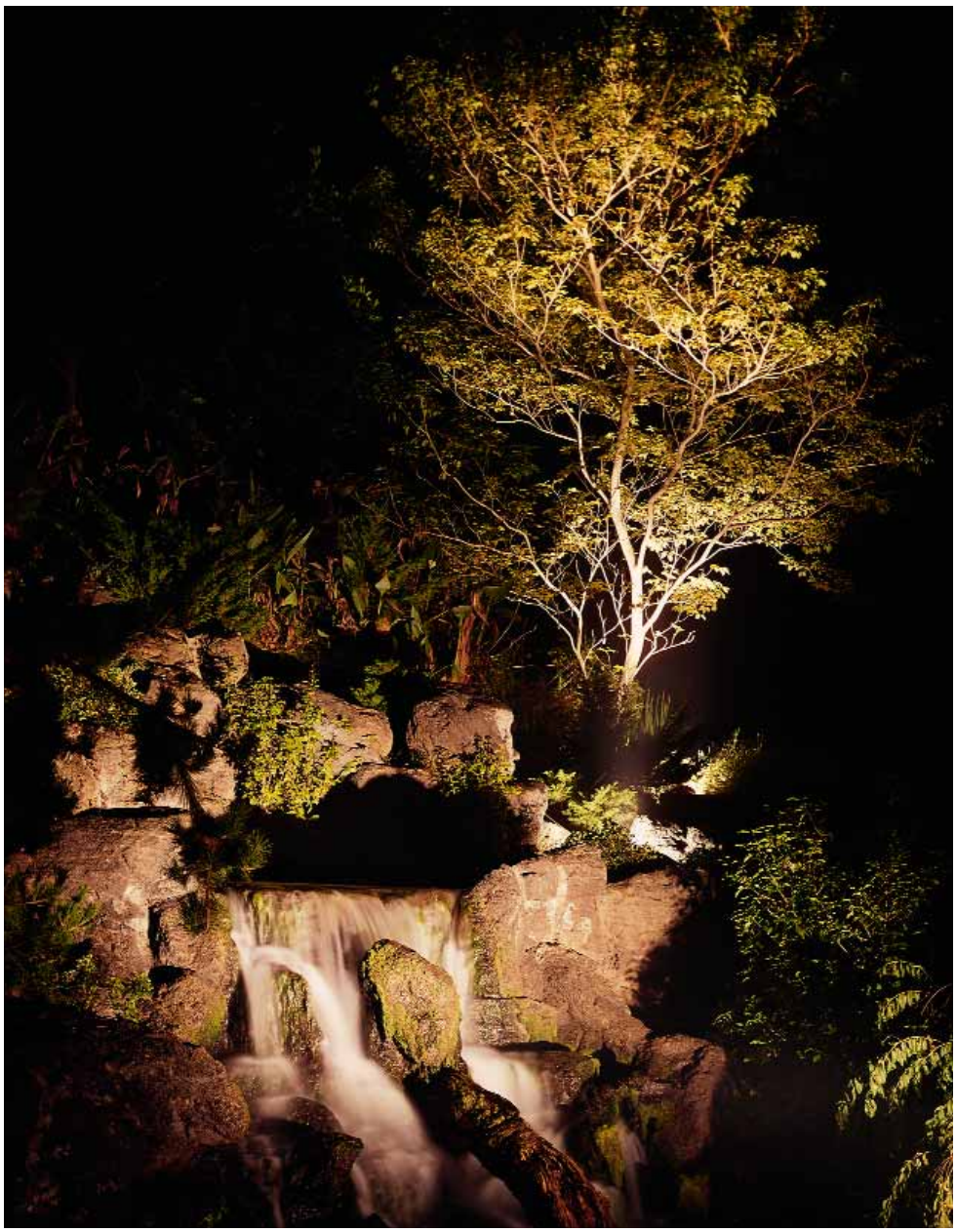

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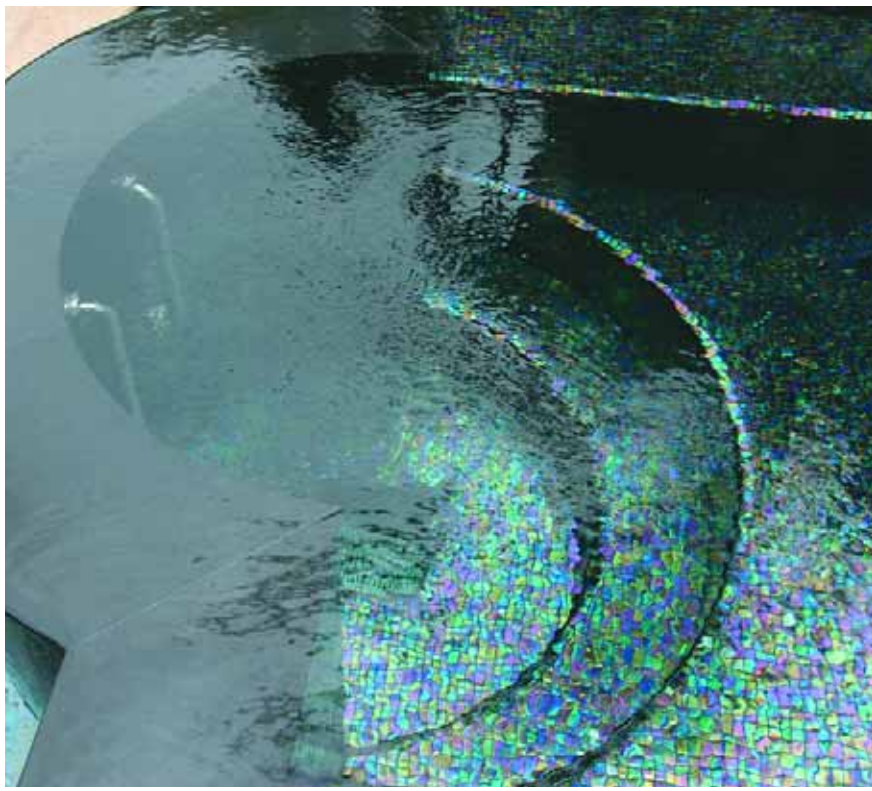
to change and it will eventually require replacement. Considered in the context of other surface options, it's easy to see how the initial affordability of plaster can be offset by the fact that it will require replacement.

The next great advance in pool and spa surfaces had to do with the introduction of exposed aggregates, particularly pebble finishes. These products work well in everything from naturalistic, lagoon-style designs to contemporary, highly architectural designs in which the presence of the natural pebbles helps to soften the look. Clients love the appearance and texture, and it's true that the pebble finishes are much more durable than plaster alternatives.

What's more, manufacturers of exposed-aggregate finishes have explosively expanded the color palette with countless standard and custom color mixes. Yes, these finishes cost more than plaster finishes – roughly double in most cases – but the heightened aesthetics and increased durability generally offset the expense for many homeowners.

And suppliers are continually working on these products, exploring and exploiting colored sands, polished aggregates and blends of materials that include components such as glass beads. The result is that, these days, fully two-thirds of my projects in-



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clude exposed-aggregate finishes. It's gotten to the point where I can recall installing only one plaster-finish pool in the past eight years.

bridging the gap

Among the best outcomes of this exposed-aggregate revolution has been the fact that it has caused us to consider pool and spa surfaces in a fresh light: Where the surface was doomed to degradation, durability is now attainable. Where colors were once subject to much variation, the rainbow of available colors and textures with exposed aggregates has added incredible design flexibility and a high degree of color certainty.

Perhaps most important as we return to our consideration of all-tile watershapes, the higher cost of exposed-aggregate relative to plaster finishes has essentially bridged the gap between plaster and tile and desensitized our clients to pricing. The result has been an irreversible increase in the demand for both beauty and durability on the part of the consumer, whatever the cost.

In other words, all of this evolution since the 1970s has set the stage for the practical emergence of all-tile finishes.

Even so, one of the questions I'm often asked is, "How do you get clients to accept the idea of an all-tile pool?" That's a good question, because tile is, after all, an expensive option – and it can get *really* expensive if some of the more customized options are pursued. The key, I say in response to these inquiries, is to *offer* it.

Fact is, these days there are so many spectacular tile products available that it seems to me a breach of professional responsibility to leave these finishes out of the discussion simply out of a fear to test the limits of a client's budget. And make no mistake, even for some high-end clients, the all-tile price tag can be intimidating, especially with some of the most expensive glass-tile products.

In presenting such options to my clients, I've long since learned that it's better to leave any specific discussion of cost out of the process until they've seen the range of available options I'll share with them.

With tile, for instance, I typically show them a variety of samples that cover a range of colors, sizes and tile types. I'll revisit some aesthetic goals we've previously established for the project, and then it's the clients' turn to size things up. Once they light on something they like, we talk about price – but at that point, the decision is almost always more emotional than financial.

This is partly about sales technique. More than that, however, it's about presenting materials choices that fit within established design parameters and guiding clients not necessarily to the most expensive option, but rather to the one that works best within their vision of the design – and mine.

satisfaction guaranteed

In a great many cases, I find that clients cue immediately into the beauty of the material and quickly see how use of the right finish can transform their water-

shape into a true work of art. Sure, there are times when the price is out of reach and they'll opt for something more modest – but generally the choice is among other tiles, not other finishes.

Once clients have locked in on the all-tile concept on an emotional level, the process is not unlike the one that leads to the purchase of an expensive car or a wonderful piece of furniture. In other words, there's nothing unusual about spending large sums of money for something beautiful, and what my presentation does is place the choice of a surface material in that elevated context.

They appreciate the durability, they intuit the value of serviceability, but at the heart of the all-tile decision is a desire for something that represents their love of beautiful things. With hundreds of all-tile pools under my belt, I can honestly say that not one of my clients has ever expressed regret about the decision to go with the finest finish available – and much the same can be said for the exposed-aggregate products I've specified.

I can't say the same thing about other finishes and surface materials: It's hard to communicate the joy of the fact that someday, relatively soon, the vessel will need to be drained, the original surface removed and a new one reapplied. With all-tile watershapes, all of that anxiety is left behind.

I can't count the number of times my clients have told me of the pride they've felt in showing off their pools to family and friends, or how they feel in seeing the sun shimmering across the finish.

Is tile for everyone? Certainly not. Furthermore, it's not the right choice for every design. But when it's the right call and the clients see the potential, what follows is an appreciation of the watershape as a work of art – and that, for me, is its own reward. WS

Brian Van Bower runs Aquatic Consultants, a design firm based in Miami, Fla., and is a co-founder of Genesis 3, A Design Group; dedicated to top-of-the-line performance in aquatic design and construction, this organization conducts schools for like-minded pool designers and builders. He can be reached at bvanbower@aol.com.

By Stephanie Rose

Emotional Imprints

Our most valuable skill as professionals is the power of observation: You can often tell more about a person by what you see of them and their environment than you can from anything they might tell you directly.

Please forgive me as I revisit themes from a couple of my past columns. One was written earlier this year on why we do what we do, while the other was published several years ago – back when I first began writing for *WaterShapes* – and was all about a subject dear to my heart: *roses*.

Recent events in my family have given me time and the need to sort through the past, and the experience has deepened my appreciation of gardens, their emotional power and how they come to reflect our clients and ourselves. I'd like to share this process of discovery to define what I see as the essence of what we all try to do as professionals – and encourage all of you to think of what we accomplish as both a noble and ennobling form of art.

Volumes have been written on the feelings gardens can and do evoke, of course, but the simple fact is that no two people will ever view a garden in exactly the same way. Be that as it may, I'd like to share my feelings about a specific garden that has very recently imprinted itself deeply on my heart.

personal space

A dozen years ago, my parents bought a home in a neighborhood near mine. It was an average-sized home, but the lot was large for the area.

They'd lived in it for about four years before deciding it was time to do something about the small-but-quaint pond, dilapidated pool and outdated garden – and gave me a call. Of course, working with one's family can be challenging at times, but we managed to select plants and install hardscape that fit their budget and gave them the park-like feeling that was part of the reason they'd purchased this particular home in the first place.

The garden was planted using relatively small plants, but in the years since it has grown into a lush, warm, inviting haven. As one might expect given the family name, the anchor of this particular garden has always been my mother's collection of roses. I haven't counted them lately, but I can tell you that you can't walk more than ten feet in any direction without coming across a rose bush somewhere on the half-acre lot.

Through the years, the garden has had its fair share of problems with difficult soil, spotty maintenance and pest problems, but the work I did eight years ago – coupled with my mother's constant nurturing – has held up well and was magically enhanced by the record rains this year in southern California. The roses are more prolific than ever, and all of the plants have grown together as a very natural, beautiful, cottage-style garden.

My mother passed away this year. Her illness was unexpected and made her life terribly difficult, but she was able to stay home where we were able to care for her constantly through her last four months. I can say without hesitation that no matter how much she suffered, she still enjoyed her garden and the flowers it yielded on a daily basis.

All of us who spent time with her during those months shared her enjoyment. We'd all take time to wander through the garden, and

PEM IN ACTION

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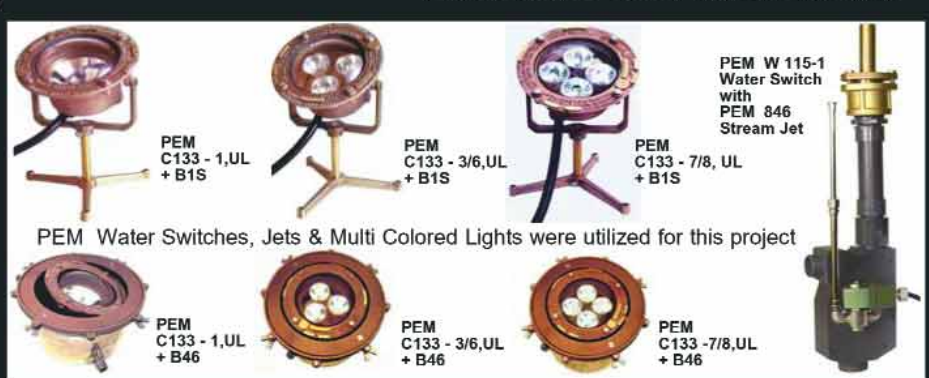

quite frequently one of us would come back into the house carrying a rose or some other flower or some observation about how great the garden looked or made us feel.

As I sat by her bedside, gazing out the window, I noticed that most of us would make our cell-phone calls while sitting out in the garden. It's a quiet, private space, but more than that, I think it gave each of us a sense of calm or warmth to sit there because all of us knew that it was an extension of mom and a reminder of how alive she was in our minds and hearts.

reflections

On Mother's Day this past May, my father asked that we spruce up the lower garden area (closest to the house) and fill all its containers with lots of color. Everyone pitched in to purchase, plant and care for the new additions, and all of us were inspired by the hope that she might be able to come outside to the garden and enjoy our efforts. Unfortunately, she never did.

Since her passing, I've had many conversations with friends, family, business associates and even strangers about my mother. In almost every exchange there is a consistent thread that weaves the discussions: my mother's love of flowers – and particularly roses.

She loved paintings of roses, enjoyed collecting china with rose patterns and had T-shirts with roses on them. Most of all, she loved her rose garden and, of course, the man who'd shared his last name with her 51 years earlier.

At her graveside service, we asked each mourner to place a flower on top of her casket to symbolize their respect for her and to acknowledge her love of nature and of flowers in particular. It was our way to personalize the ceremony while celebrating something that was a significant part of her life.

What I came away with is a deeper appreciation for what plants mean to some people and how we, as landscape and watershape professionals, have the opportunity (and maybe even the responsibility) to enhance our clients' lives by making their gardens and outdoor environments an extension of who they are – an extension that ultimately becomes a legacy.

By showing interest in who clients are and what is important to them, the result ultimately will be a landscape or watershape that better reflects who they are.

More significant, I came away convinced that we need to open our eyes to this potential and do what we can to honor our clients and who they truly are by reflecting their characters in their gardens.

Continued on page 22

WATER GARDEN CONTRACTOR BEWARE:

Long-Term Customer Satisfaction With Skimmer Performance Has Nothing To Do With Their Good Looks

Pond skimmers go in the ground surrounded by dirt. How they actually perform over time varies widely and is not understood or properly documented leading to misinformation in the water garden marketplace.

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Three False Claims That Potentially Will Result In Your Customers Long-Term Dissatisfaction & Costly Pond Failures.

1) **Skimmers with an adjustable opening (Weir) and one small filter mat, designed for the smallest opening will work properly.** Enlarging the Weir & pump will increase the amount of debris skimmed, requiring you to clean your filter mat more frequently.
2) **Running a pond skimmer without a filter mat is okay to do.** Malarkey! Would you continuously run your furnace without an air filter? This is a foolish way to use a skimmer which will lead to failure and extensive maintenance of the biological filter or any other connected filter and damage your pump.
3) **UV lights in a skimmer box is a good idea.** This design is flawed once you understand how biological filtration & UV lights work. UV lights work best when supplied with prefiltered water, so the UV light should be after the filters not before them. Secondly, forcing the water past small chambered UV lights restricts skimmer flow capabilities, so large pumps don't work as well as they do in skimmers designed for large flows.

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So look around your clients' homes. Observe the pictures, paintings, art objects or collectables that might "represent" them. Notice themes or items that seem important. Our most valuable skill as professionals is the power of observation: You can often tell more about a person by what you see of them and their environment than you can from anything they might tell you directly.

inquisitive

You should also ask questions. In my mother's case, it might have been obvious that she loved our last name. As I've related previously, however, I *didn't* like my last name growing up because it became a way for people to tease me. The situation will differ from person to person, of course, and not all names have such obvious meaning. The key is asking enough questions to get meaningful answers.

Ask about the things you see in paintings, prints and photos. Every one of those objects comes with a story: If someone has gone to the bother of displaying something, it probably has significance.

By the same token, you can't assume that just because it's displayed, that the object is something they want reflected in the backyard. I was once given a ceramic chicken with zebra stripes on it and now display it prominently on my kitchen table. It's no thing of beauty, but it has meaning for me and arrived with a card letting me know I was a "stylish chick." Without asking questions, someone might assume I had a thing for ceramic poultry and decide to incorporate a chicken coop into my home or garden – definitely not the right idea.

You can't see these inquiries as being intrusive: Asking detailed questions shows a client you are interested, that you care and that what you hear will somehow be reflected in the work you do for them.

I'm not suggesting that we pry into intimate details of our clients' lives, but by showing interest in who they are and what is important to them, the result ultimately will be a landscape or watershape that better reflects who they are. You might find out that someone close to them had a passion for a particular color, for example, or a type of stone or a style of architecture or painting – definitely things you can incorporate into a design.

As is true of most investigative processes, doing this sort of digging takes time and an open mind. Some of the thoughts and ideas that will flow through your imagination may not initially make sense, but I have to say that some of my favorite designs are those that have incorporated ideas I initially didn't appreciate. It's the exchange of ideas and the openness we share with one another that make our designs more creative and ultimately more fulfilling for us and our clients.

To be sure, what we do is work. But by personalizing it for our clients and essentially becoming part of their lives, we leave

behind not just a garden or watershape, but a body of work that not only represents us, but blends into peoples' lives in creative, thoughtful and even loving ways. To me, that's why I love doing what I do.

even the quirks

I'd like to leave you with a final (and distinctly lighter) thought: As people left my parents' house after my mother's funeral, many commented to me on how beautiful the garden looked and how much they know she loved it. This led to discussions of clever ways she'd come up with solutions for everyday garden problems – another means by which her garden became even more of an extension of who she was.

One solution in particular drew a lot of puzzled looks: I often thought my mom went a little overboard with some of her ideas, especially this one.

Throughout the garden, she'd hung silvery compact disks from strings. She'd heard somewhere that sunlight reflecting off the CDs would keep the crows away. Never one to care what anyone else thought, she hung them up and *didn't* skimp on quantity. As I sat by her bedside, particularly through what turned out to be her final week, I had to laugh every time I noticed one of the CDs spinning on its string: Never saw or heard a single crow. WS

Stephanie Rose runs Stephanie Rose Landscape Design in Encino, Calif. A specialist in residential garden design, her projects often include collaboration with custom pool builders. If you have a specific question about landscaping (or simply want to exchange ideas), e-mail her at sroseld@earthlink.net. She also can be seen on episodes of "The Surprise Gardener" on HGTV.

By David Tisherman

The Necessity of Restraint

The watershaping industry is like a teenager with a fresh driver's license: just because he or she knows *how* doesn't necessarily mean that he or she *should*.

Everywhere you turn these days, you see watershapers tackling projects that would have been unthinkable even a few years ago.

It wasn't that long ago that simply raising a spa seemed like a big challenge, but these days vanishing edges, perimeter overflows and other ambitious details have become relatively common. And it's not just technology: Watershapers are gravitating toward great materials, colors, hardscape, plants and amenities – signs of real growth and, for the most part, a very good thing.

With this broadening list of possibilities, however, have come some growing pains. The industry's like a teenager with a fresh driver's license: just because he or she knows *how* doesn't necessarily mean that he or she *should*! The consequence with watershapes is that, more and more these days, I see projects weighed down by all sorts of bells and whistles that are, from a design standpoint, completely inappropriate and, often, visually jarring.

kitchen-sink mentality

Consider the common case of clients with a smallish backyard, a substantial budget and an irresistible desire to do something really impressive despite the limited space.

In such situations, very often these days I run into complex, free-form bodies of water with a vanishing edge on one side, a perimeter-overflow system on another, a beach entry on a third, an artificial-rock grotto topped by a waterfall and a slide on a fourth – and then there's the raised spa, the fire pit and the outdoor kitchen.

The results aren't always awful, but far too often, the outcome of so inclusive a design program is visual clutter that generally has nothing to do with the style or architecture of the home or the nature of the setting.

Believe me, I love the concept of the backyard resort as much as the next person, and I certainly understand the desire to expand projects in the name of greater profitability. But when we overload a space at the expense of good design, we are almost certain to create a mess – one that fails to exploit the potential beauty and overall aesthetics that can grace just about any well-considered project.

Another example: In recent years, water-in-transit systems have taken hold in a big way. Where vanishing edges, raised perimeter overflows and deck-level slot edges once were rare, they're now found all over the place. In the right setting, these hydraulic wonders are just plain brilliant; use them inappropriately or in the wrong space, however, and all they do is amplify the inadequacies of poor design decisions.

Is it appropriate to install a crisp, angular, ultra-modern perimeter-overflow system alongside a Colonial-style home with a cottage-style garden? In a design sense, the answer is a deeply resonant "no." In the right setting with a suitably styled home, however, that same ultra-modern watershape might be the perfect call.

Continued on page 26

This seems obvious enough, and I would say that you do not have to be an accomplished designer to recognize that ultra-modern details set against soft, traditional backdrops conjure irresolvable visual discontinuities.

Frankly, I think it is our responsibility to guide our clients toward appropriate designs for given settings. And when I run into clients who absolutely insist on perpetrating what I see as an abomination, I'll walk away.

tool of the trade

Some will argue that beauty is in the eye of the beholder and that homeowners have an absolute right to determine the visual natures of their personal environments. Who are we, after all, to tell them what they want? My answer to that question is simple: If our only purpose is to give clients what they want, then there would be no need for design (or designers) at all.

In fact, there's much more to the process than simply following the clients' lead: The key is to work with them, extract information about what they want and then transform their rough ideas into a compelling design by taking the obvious and making it subtle, effective and beautiful.

Too many watershapers cave in to the notion that their clients are invariably right and should always be given what they want. The result is that way too many projects these days look as though the clients walked through some sort of watershaping retail store and picked their favorite effects off of a shelf – a fire pit here, a fountain there, a rock waterfall over there – without giving the slightest thought to visual continuity.

In other words, we *do* have an active role to play in the process, and it is usually only through our design expertise and judgment that clients' desires are translated into settings of maximized beauty and elegance. And in a great many of these situations, achieving the greatest results requires us to exercise that most elusive of human qualities: *restraint!*

Those of you who know me or who have been reading this column for any length of time are well aware that I am a designer who is not short on ego. I consider myself an artist, and I've never been shy about discussing what it's taken me to achieve that status.

What some find ironic (and others don't recognize) is that many of my best designs are the simplest. This is why so many of my designs (and those best liked by other watershapers) are simple rectangles that don't feature vanishing edges or tricky edge details of any kind. Instead, my focus is on colors, materials, textures, joinery and how everything fits in the architectural environment.

I was trained to think this way. In studying design, you learn that some shapes – and particularly the rectangle – will translate beautifully into a variety of settings and harmonize with a range

of styles. Yes, I know how to build complex systems with free-form shapes and vanishing edges and beach entries and thermal ledges and waterfalls and grottos, but I will do so *only* when the situation calls for it.

Those situations that call for elaborate visuals are fewer in number, however, than are those in which an elegant shape adorned in an appropriate color palette and quality materials will make a far more beautiful and soothing statement. It's all about awareness of the needs of the surrounding architecture and the requirements of the setting – no more, no less.

stepping back

In every class I've ever taught about watershape design, at some point I'll say that a pool should not be the focal point of a design. For all of its remarkable qualities, the water is just an amorphous, transparent, formless, colorless, tasteless material, and what really matters is the setting, the overall visuals and how we choose to use the water's reflective (and aural) qualities to complement and enhance the overall picture.

I usually go on to point out that this perspective extends naturally from an understanding of balance, line, scale, proportion, spatial relationships, color and visual weight. In a great many settings, those principles will dictate a design that relies less on elaborate technology and more on an almost profound simplicity.

Let's refer to a pair of classics to illustrate: the pools at the Taj Mahal and the reflecting pool on the Capitol Mall in Washington, D.C. In both cases, we see large, rectangular reflecting pools that define and reflect the landscape adjacent to monumental structures. These reflecting bodies of water are large to suit the scale of the space, and that's impressive. But what's even more impressive than their scale is a perfect simplicity that amplifies and counterbalances the extraordinary structures reflected on their dark surfaces.

In both places, we see the reflective qualities of water used to their absolute maximum effects. The fully integrated spaces surrounding these watershapes are organized to bring people into the space and instill a sense of awe. And while the water is a defining component of the design, at the same time it's as minimal in form as one could possibly imagine.

Just imagine if either of those designs featured big piles of rock on the ends: The power and majesty and visual appeal of these magnificent settings would be dramatically diminished.

Another example: My good friend Paul Benedetti has just completed a project (profiled, as luck would have it, in this issue of *WaterShapes* on page 56) that he considers his finest to date. It features not only a perimeter-overflow thermal ledge, but also a sculpted vanishing edge and a spa that overflows on all four sides – with

everything held together by colors in a tight, rectilinear design.

I bring up this project because it's a perfect case study for the point I'm trying to make: If he'd placed this beautiful watershape behind a Cape Cod on a typical suburban street, the project would quite probably have been a visual disaster. As it is, however, the slick modern design harmonizes perfectly with an ultra-contemporary home and the expansive views its setting affords. The watershape's technical and visual sophistication is, in other words, a perfect fit.

second things first

Now that we've worked our way through some examples, let me refer again to that newly licensed teenager and my sense that the industry is going through a crisis of knowing how to do a couple things but not always knowing exactly *when* those things should be done.

I frequently run into watershapers who, for instance, have figured out how to do one thing or another very well and then seek to use that element – a vanishing edge, a beach entry, a fire effect, a particular combination of stone materials or something else that serves to distinguish their work from that of other watershapers – on every single project that comes their way.

I see this brashness and this limited creative range quite frequently, for instance, in watershapers' use of rock structures (real or artificial). These compositions can be quite elaborate and may even be impressive, but too often they are distinctly out of whack – piles of rock with a return line stuck in somewhere too close to the top.

Getting these structures right is all about scale, proportion and details such as planting pockets that help the rockwork transcend the ordinary. Yes, there are times when expertly designed rock waterfalls or grottos are just the call, especially in projects that capitalize on the presence of similar natural rock structures in or around the property. All too often, however, rockwork is included simply for the sake of using it – and the resulting heaps on pool decks are visual distractions at their best and eyesores at their worst.

In many cases, these things happen because there's a desire to extract as many dollars from a project as possible – a sales-first/design-second mentality that I see as the greatest impediment to our industry's ongoing success. I can't govern the actions of others, but I can argue that if you find yourself including features in watershape designs simply for the sake of up-selling the client, then you are not in the business of creating art or giving your client the most beautiful work possible.

I will say further that if you are among those who take this "retail" approach to watershaping and have the nerve to refer to yourself as a "designer," then I think you are misrepresenting the services you are providing. By contrast, when you

work to provide *quality* design for clients looking for something elegant and tasteful, you'll naturally step beyond "selling" and into a state of dynamic collaboration with them instead.

This means accepting the fact that the best design solutions may not be the most expensive. It also means considering that using beautiful materials in simple, elegant designs will quite often be a better alternative to cluttering a space with edges, waterfalls and elaborate expressions of all the cool things you know how to do.

If you need convincing on this point, look at the work of the acknowledged masters: Le Corbusier, Walter Gropius and his Bauhaus disciples or Frank Lloyd Wright and his successors, including John Lautner. Or consider Ricardo Legoretta, whose work with water in built spaces is the essence of elegant expressiveness. And don't forget brilliant landscape architects and garden designers, including the masters of *Katsura Rikyu* in Japan and contemporary geniuses such as Mia Lehrer, Shinichiro Abe, John Brookes, Anthony Archer-Wills and others whose respect for the materials they use consistently shows up in their wonderful exterior spaces.

There are plenty of renowned designers whose work you can use to pattern your own. All it takes is an open mind and recognition of the fact that there's no need to reinvent the wheel.

our place in the world

While I treasure this design heritage, I am also realistic enough to see that there are countercurrents that work against the principles of my design heroes.

Where my heroes' design influence tends to be subtle and intellectual, when we look around us we are all bombarded by the outrageous design sensibilities of Las Vegas, amusement parks and resort properties around the world. Sure, these complexes have their moments – what could be more spectacular or attractive than the dancing waters of Bellagio as gloriously executed by the folks at WET Design? – and there's no denying these

Design Sensibility

When provoked, I can go on quite a rant about designing vs. selling. The fastest way to trigger such an outburst is to throw this one at me: "Not including all the bells and whistles and going with everything my client wants me to include is like leaving money on the table."

That's a classic salesperson's attitude, and there's nothing specifically wrong with having it unless you also have the nerve to present yourself to your clients as a designer and artist. In my book, sales is one thing, design and presentation quite another.

Salespeople focus on what they can do to satisfy clients while pulling as much as they can into a project. If the watershape turns out well, that's great. If it doesn't, fine, the bottom line is still fully padded. A designer, by contrast, builds a career and reputation by focusing on collaboration in the development of spaces that are aesthetically and emotionally pleasing to their clients. If these tasks are done well, the designer is compensated on many levels in addition to the bottom line.

As a designer and artist, I'm not alone in recognizing that rocks, for example, have shapes and textures that must be considered; that drain covers come in colors more or less suited to use next to a chosen finish and have different-colored screws that can be used to attach them; or that grouting can be colored in numerous ways and given a texture that either matches or contrasts with surrounding materials.

The difference for me is that all of these details are part of my constant consciousness as a designer. I start my conversations with clients with an awareness of these details and their aesthetic potential, and I collaborate with those clients and never let go of the details until everything is as it should be.

It's a meeting of the minds, and, to me, an infinitely more satisfying, stimulating and creative process.

– D.T.

approaches can be fun in the right setting.

But ask yourself: Do these facilities, which so many of our clients have seen and enjoyed, represent the best possible design influences? The answer, I think, is "no."

The key difference I see between those who create amusement parks and those who create landscape and watershaping art is one of aesthetic value. The forwardness and commercialism of themed spaces is aimed at generating short-term excitement and the goal of extracting dollars from pockets. Sales-oriented watershapers capitalize on this interest by translating Vegas-style extravagance to backyards and can profit handsomely by adding blinking lights, arrays of jets and sound systems to their projects. But can the results be described as *appropriate* in any but the rarest cases?

By contrast, the work of artists, architects, watershapers and garden designers is aimed at creating beauty and a sublime sense of visual acceptance. Translating these ambitions to backyard scale is not only possible, but is much to be desired.

Look at it this way: Through the years, I've known a great many people who are repulsed by the garish environments of amusement parks, casinos and resorts. In that same time span, however, I've yet to meet a single person who is put off by the look of the craftsman-style homes designed and built by Greene and Greene.

My point is that tradition-based design – that is, our response to the weight of several thousand years of cultural heritage – will cut across a much wider band of tastes. I don't know anyone who'd want the columns of the Parthenon arrayed around his or her home, but certainly we can all agree that such structures are enduringly beautiful. I wonder if the same will be said 2,000 years from now of Disney's magic castles.

I'm not saying we should pay attention to classic design because it's culturally sophisticated (although that certainly can't hurt when it comes to working with sophisticated clients). Rather, my intention here is to convey the thought that, through the principles so ingeniously employed by the masters of our field, we are able to create work of remarkable and enduring beauty.

To me, that is far more important than the price tag of a project or how much of that tab I put in my pocket. I am in this business to help my clients and, with them, to pursue elegance and beauty. If that means leaving a vanishing edge, a fire element or a beach entry out of the design, then so be it.

That, in artistic terms, is what *restraint* is all about. WS

David Tisherman is the principal in two design/construction firms: David Tisherman's Visuals of Manhattan Beach, Calif., and Liquid Design of Cherry Hill, N.J. He is also co-founder and principal instructor for Genesis 3, A Design Group, which offers education aimed at top-of-the-line performance in aquatic design and construction.

AQUA SHOW & GENESIS 3

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You have to choose: The five courses all run concurrently during the Aqua Show for 20 full hours each – starting the day before the show with eight hours on Tuesday, November 15, and four hours each on the mornings of Wednesday, Thursday and Friday, November 16, 17 and 18. The cost for each course is $990 ($890 with registration before September 15, 2005), with all classroom materials included as part of the fee.

Don't miss out: Enrollment is strictly limited and will be available on a first-come first-served basis. For registration information, contact the Aqua Show office at (800) 536-3630 or visit www.aquashow.com.

The five courses described at right are part of an ongoing Education Revolution that includes a series of Construction Schools (premiering in October 2005) taught by recognized designers, engineers and builders including hydraulics expert **Steve Gutai**, tile artist **Scott Fleming**, control specialist **Tom Schoendienst**, watershaper **Paul Benedetti** and engineer **Ron Lacher**, P.E. There's also an expanded roster of seminars at the Aqua Show in November, including outstanding sessions led by landscape architect **Mia Lehrer**, lighting designer **Janet Lennox Moyer**, watergardener **Anthony Archer-Wills** and environmental artists **Ron** and **Suzanne Dirsmith**.

This level of education has been a long time coming for the watershaping trades and will be the key to establishing a new Society of Watershape Designers (SWD) in the months to come. We're also proud to note that these courses are accredited by IACET, AIA and ASLA.

GENESIS 3 DESIGN GROUP

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Basic Color Theory

What happens visually when you place green grass next to a border of red brick as opposed to one of blond stone? What surrounding colors make a watershape recede – or take center stage? This course offers a detailed exploration of color perception that starts with the color wheel and carries you through to individual experimentation and practical applications related to art, architecture and the dynamics of the colors found around water. *Instructor*: **Judith Corona,** a teacher and visual artist whose work has been exhibited in U.S. and European galleries and who is also a fellow of the Whitney Museum of American Art.

Elements of Design

Design is a specific educational discipline that is taught and can be learned – training that enables those who possess it to do extraordinary work for their clients. This course, which introduces participants to the principles of line, texture, shape, balance, proportion, scale, spatial relationships, color interaction and more, will begin developing your perceptual skills and creative awareness in ways that ultimately shape a true designer. *Instructor*: **Donald Gerds**, author of *Perspective: The Grid System* (now in its sixth edition) and an industrial designer with more than 30 years' teaching experience in eight countries.

Measured Perspective

The path to success in watershape design has to do with creating visual representations that let clients see and fully understand the potential harbored in their projects. This advanced course in perspective drawing and rendered elevations cultivates those specific communications skills, developing your competency with two-point perspective while focusing on scale, proportion, structured layouts, grid systems, tone, shadow and more. *Instructor*: **Lawrence Drasin**, an industrial designer who focuses on special-effect interiors and a long-time instructor recognized as Teacher of the Year at UCLA in 2002.

The Vocabulary of Architecture & Style

When you speak with prospects and clients, does your level of knowledge of art and architectural history position you to communicate with them in designing a watershape that meets expectations? Can you make your watershapes harmonize with styles found in their homes and the artworks they love? To stimulate that conversational and practical ability, this course surveys architectural history from ancient to modern, including Greek, Roman, Islamic, Renaissance and contemporary examples. *Instructor*: **Mark Holden**, landscape architect and guest instructor at California Polytechnic State University at Pomona and other educational institutions.

Understanding and Designing Fountains and Waterfeatures

Designing a fountain is about much more than sticking a pipe in the ground and watching what happens. Instead, it's about hydraulics and sound and light and control systems that take common head pressure and turn it into something magical. This program offers an intensive examination of the principles and technologies involved in making water flow in precisely controlled patterns to achieve defined and spectacular visual effects. *Instructors*: **Paul L'Heureux** and **Larry O'Hearn**, fountain designers and engineers with years of experience teaching designers and clients what can and can't be done with water in motion.

SCULPTING EDGES

BY ANTHONY ARCHER-WILLS

The art of crafting visually pleasing bodies of water is very much a matter of understanding and applying appropriate edge treatments, says master watergardener, author and teacher Anthony Archer-Wills. In the first of a sequence of articles on such topics, he shares the principles and techniques he uses to create watershapes that invite observers right to the water's edge, where they are rewarded with dynamic and carefully balanced vistas.

When we think about the challenge of literally "shaping" a body of water, we must start by thinking about edges.

The edge is the pond's DNA or blueprint. It tells us almost everything about the pond. Without being able to observe the edge, you can't discern whether it's a formal pond, lake or a sewage-treatment facility. It might be a beautiful waterfeature or an eyesore. The edges form our reference in defining the whole setting and are consequently of the utmost importance.

We find this defining-edge concept at work in nature's own beaches, riverbanks and lakeshores, and it is one that extends right through the heart of watergardening and all types of watershaping, whether architectural or naturalistic (or, as I commonly classify them, formal or informal). No matter the focus or intent of our designs, we must always consider what will be happening at the water's edge. This is the part that demands the most thought, skill, care and expenditure.

The subject of edges is so massive that it will be considered here and in articles to come. For purposes of this discussion, we'll limit our look to the use of edges in informal pond settings and situations in which we are attempting to create the impression that the body of water in question was originally created by nature.

THE INSIDE LINE

The importance of edges struck me when I first began noticing, more than 40 years ago, the absolutely dreadful concrete edges that rose above water that was supposed to look "natural." I cringe when I think about the feeble attempts people made to help things along by balancing rocks around the edge to try to disguise the concrete.

I still marvel that so many people actually thought those beautifully toweled concrete rims adorned with their necklaces of stone looked natural. If the rocks were too small, they were mortared into place, and even painting the entire pond with a waterproof green or black product did nothing to mitigate the impression of a row of rounded teeth set in cement gums.

If they were big, often the rocks were placed in such tortured, overhanging positions that they would later tumble into the water with the slightest disturbance – only to leave behind an even more disastrous gap-tooth effect.

Many of these horrors date to times before the advent of flexible liners. Indeed, when I began working on ponds in the 1960s, my ponds were built entirely from concrete and, for the first couple I built, reflected the common tooth-and-gum effect. Luckily, it soon dawned on me that by using purpose-built shallow ledges onto which I could place partially submerged rocks, the offending concrete edge would disappear.

This partial submerging was, believe it or not, a big design breakthrough at the time and did a lot to help avoid the telltale string-of-pearls effect we so strenuously sought to avoid.

For a time following that revelation, however, I knew that something in my approach was incomplete. Specifically, the

Once I liberated my thought processes from the conventional need to have rockwork follow lines established by the predetermined outer edges of concrete structures, my projects took on more natural appearances and the rocks themselves began to 'tell' me where they belonged. What happened beyond the edge became relatively insignificant: The key was focusing on the *inner* margin, where we shape the water's edge and deliberately, consciously define a space.

limitation was the necessity of conforming tightly to a precise concrete boundary laid out well before rock placement took place. Too often, I found that I could not work to such exact confines because the shapes and angles of the rocks wouldn't cooperate.

Depending on the rocks, I might end up with horrible, open-wedge shapes or have them overhang the ledge so much that they required additional support or valuable time spent cutting away their backs. I was, in short, still struggling to achieve the look I wanted and knew the quality of the rockwork still left a lot to be desired.

It was not before a considerable amount of effort had been expended that the breakthrough came. Ironically (or perhaps typically, for it is said that necessity is the mother of invention), this occurred while I was losing money on a job that involved three ponds set one above the other. I was taking so long in struggling to follow the edge while placing rocks in such a way that they would look natural that the entire project had become a time-eating nightmare.

After one particularly frustrating day, as I lay in my bath – which is, incidentally, where all my best ideas are born – it occurred to me I had it all backwards.

EDGY EPIPHANIES

It dawned on me in the midst of that fateful soak that the shape of the hole, which I had meticulously laid out on the ground so often in the past, was unimportant: Instead, it was the *inner* contour created by the edge treatments – the true visible edge – that was important. The shape behind the rocks with those beautiful edges I had so carefully plotted out was, in fact, something the viewer would never, ever see.

By this time, the age of liners had dawned and I asked myself what I was actually trying to achieve. The answer was a pond that would look completely natural, be waterproof and last for years. I further recognized that the pond liner was, in fact, a waterproof bag into which all the rocks, emergent and bog plants and various brick edges, stepping stones and structures would be set.

From that point onward, I decided to work with far simpler outer shapes – basic rectangles with rounded corners and extremely broad shelves around the edges – and ignore almost completely the shape of the outer edge with respect to aesthetics.

This in turn enabled me to place rocks with much more freedom, allowing their shapes to decide the critical inner boundary of the body of water. As I progressed along these lines, the rocks were able to "speak" to me and dictate their placement. Having eliminated the tight constraints of a preconceived concrete or "plastic" barrier, I was now free to follow the rocks' flowing shapes, grain and strata and compose them the way they demanded. At last, it was possible to emulate nature.

To this day, I work with liners (although the same principle absolutely applies with

concrete) and extend them a few feet behind the envisioned limit of the rockwork. Even then it is possible, when necessary, to win a little more space by excavating beyond the liner and adding a piece.

Once the inside was done, then and only then was it time to worry about the backs of the rocks by smoothing them over with mortar or protective fabric and bringing up the liner behind them. Concrete or sand is then used to protect the liner and hold it in place. After that, the remaining area may be backfilled with soil and landscaped. This method has enabled me to obscure the back of the rocks completely, thus making them look much bigger and, more important, partially burying them as they would appear in nature.

Ultimately, I had moved my attention from the shape of the excavation or *outer* edge and saw it as something that should now be invisible. At the same time, I developed a focus on the *inner* edge as defining the shape of the body of water itself. For my natural ponds, I had arrived, in a sense, at a point where I deconstructed the manmade lines and allowed nature to tell me how it wanted to reveal itself.

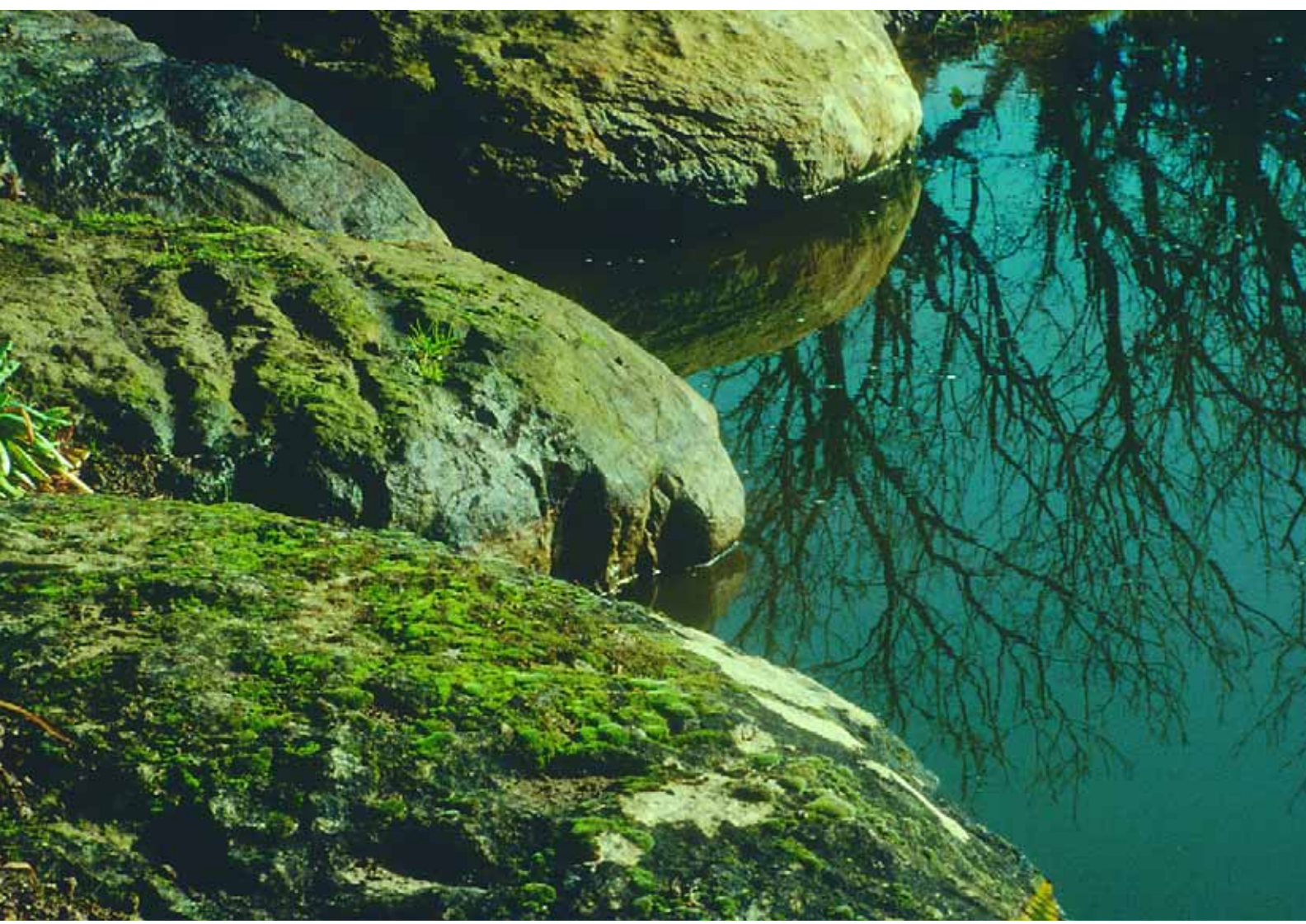
BEYOND THE ROCKS

Although the evolution in my thinking about edges began with rocks, there are many other edge types to consider. Each brings different construction techniques into play, but the general necessity of focusing on the inner edge never really changes.

At one time, for example, planting shelves had generally been constructed using concrete coping at the front of the shelf with a bank of soil behind – or by placing plastic or wooden planting crates on the shelf. Again, this resulted in a concrete rim, this time with a necklace of plants rather than one of rocks and the same appalling results.

Maneuvering around this visual problem, I began bringing the soil right up to the surface of the water and onto the concrete or the liner. Critics of this approach immediately jumped on the idea that this would invite wicking and great water loss over time, and while I've always agreed that wicking could be a problem, I've asserted that there are simple ways of mitigating it. Just placing gravel or clay soil over the rim, for example, will break the capillary action and create a barrier.

Not only does the soil hide the edge of the pond, but it also provides an ideal way



Once the edge assumes paramount design importance and the limits of the liner or concrete underpinnings become less consequential, the contours of the water's edge become much more organic and natural. They move forward and recede and undulate in easy response to the slopes and formations surrounding them and more readily take on the appearance of having been there for years.

of achieving a natural planting edge. It enables us to create a true transition from deep water through emergent, bog, moisture-loving and dry plants in turn – a gentle progression from hydric to xeric.

What really opened watergardening to its current spectrum of edge treatments, of course, was the advent of durable pond liners in the late 1960s and early '70s: Although satisfying results can be obtained with concrete structures, the flexibility and relatively low cost of liners gave us freedom to replicate nature much more literally; sculpt edges with a range of flexible details that are almost infinite in scope; and satisfy the urge to establish comfortable interminglings of plants, rock, soil, timber and turf.

There are always construction issues with liners, concrete or clay (or combinations among them) that will influence the aesthetic decisions we make, which is why when I talk to clients, the issue of edges is *never* an afterthought but is instead one of the absolutely critical details that must be considered right from the start.

The language I use when speaking with clients reflects the value I place on the edges. I speak, for instance, of "lawn to the water's edge," or "lavender to the water," or "gravel and shingle to the water's edge or into the water" or "timber and decking at the water's edge." We always discuss what they are going to see and how it is going to look when finished. Indeed, our discussions regarding the treatment of edges carry as much importance as considerations of eventual size and shape.

A RULE OF THREE

The primacy of the inside-edge treatment to the design scheme stands as one of the defining principles of my work. The next logical step is the consideration we give to the *combination* of edges.

Certainly, there are many situations (especially in formal settings) where we settle on a single edge treatment, but for informal settings, we are generally placed in a position of working out the relationships between different treatments. In my case, this study of the combination of edge treatments has become quite refined and has led to guidelines that I've found to be remarkably effective and enduring.

One of the foremost of these guidelines is that I always limit the number of edge treatments I use on any given watershape to three. Why three? Honestly, I don't know beyond the fact that it seems to work visually, but it probably doesn't hurt that three is something of a magic num-

THE WILD EDGE

You'll never create an exciting, broad spectrum of wetland plantings alongside a watershape with a simple row of planting baskets. Instead, you need a broad shelf with areas of soil or planting pockets – space that enables you to create bays and peninsulas for creative natural planting.

For inspiration, I suggest exploring nature, where you almost never see explosions of plant material in straight lines.

As was emphasized in the accompanying text, my work is all about considering the inside edge: The liner will be relatively straight and hidden somewhere back behind the plantings. Where you put the plants and rocks *inside* that liner is what literally defines the shape of the water.

In creating these undulating edges, I place tall plants on the promontories to enhance and emphasize the peninsular form. Lower plants populate the bays to enhance the sense of a natural inlet. This undulating high/low approach directs our eye and creates an impression of a naturally varied shoreline.

When using bold, emergent plants, it's important to think in terms of using plants in *sets*. Seldom in nature do we see a single specimen all by itself, so we need to think in terms of surpluses of each type of plant to accommodate the needs of the scene until the plants can spread and increase in numbers on their own. We also know that plants intermingle with each other, so in creating wild planting areas, we need to think in terms of bold groupings of plants that contrast with other plants types and shapes. Always look for good foliage contrasts.

These well-considered variations of shorelines and plant types are critical in creating areas that appear wild.

– A.A.-W.

The plants you use at the water's margins have much to do with the way the edge treatment functions. I like contrasting lawns with plants that have a vertical presence, but I also work with plants that will reach out over the water and help define the visual edge in an infinite variety of ways by cascading over rocks and softening overall appearances.

ber having to do with triangles, trinities and, of course, milking stools that don't rock when you sit on them.

If pressed, I'd say edge treatments are best in threes because they create a beautiful visual balance. Yes, one edge treatment can work and so can two if you give proper respect to contrasting elements. But if you go so far as to have four, I think things immediately start looking fussy and complicated.

The superabundance of treatments is not restful to the eye and causes the viewer to shift focus from texture to texture. Where a pond with three well-considered edges can look balanced and soothing, add just one more treatment and the work starts to look like an exhibit in a retail center where the proprietor is trying to display all the different options for his or her clients.

Moreover, even with just three choices, you get yourself involved in a huge set of permutations and combinations involving a range of materials and treatments from, say, grass, low plantings or gravel combined with wooden decking, stone or flowering plants – and on and on in sweeping variety. The rule of three, I believe, proves invaluable in giving balance and harmony to the selections you and your clients ultimately choose.

VIEW POINTS

Once you've determined *what* and *why*, of course, you need to decide on *where*.

In my own projects, I organize edge treatments with primary fo-

cal points in mind. These may include views from inside the home, perhaps through a set of dining-room windows, or outdoor prospects that bring the viewer close to the water's edge or keep them a few paces removed so they can enjoy a broader vista.

It may seem an obvious point, but when you consider these important viewpoints, you'll see that the edge treatment you use on the near side of the body of water must be one with a low visual profile. You also must consider that these key viewpoints quite often will be enjoyed by someone seated at a desk or table and that tall things should not be placed in the way.

This narrows your choices immediately to lawn, gravel, low plantings or some form of hardscape or decking. There is, after all, little point in building a pond and losing half the water surface from the chief viewing position. From a low angle, even one foot of grass can obscure fifty feet of water surface.

I am not saying, however, that one has to see the *entire* body of water from these viewpoints. On the contrary, I recommend that some portions of the pond should be hidden. It is always important to maintain some element of mystery and surprise and the unseen places that invite exploration. In smaller bodies of water, a most satisfactory way of punctuating the primary views is by using one of the taller edge treatments (a big rock or, more often, tall plantings) to obscure *part* of the view of the water.

This is why I use taller plantings on the sides of the pond and, behind the pond, plants with good reflective qualities, thereby fram-

One of my guiding principles is a rule of three: That's the largest number of edge treatments I'll use on any given project and reflects my experience in working with all the permutations and combinations of the available possibilities. Shown here, for example, is one pond edged in lawn, plants and stone deck – and another bound by timber decking, plants and lawn. The vocabulary doesn't have to be huge to encompass an infinite range of looks.

ing the view and drawing the eye across the water. Additional strategic plantings often will be used to draw attention to a distant view above and beyond the water. I find this particularly exciting in that when you deploy plantings or rocks to conceal and reveal views, you are now beginning to work at layering the close and distant vistas.

Some of my favorite combinations involve two low-lying edge treatments and only one vertically oriented treatment – lawn grass, timber decking and taller plantings, for example, or cobble, tall ornamental grasses and decking.

How you manage the transitions between these treatments will have everything to do with the way viewers approach the water's edge and the changing views they will experience from differing points of view. As an example, I might use gravel and a wooden deck in combination with an emergent plant such as iris or (one of my favorites) papyrus, a magically sculptural plant.

GUIDING SIGHT

With our decisions about the various combinations of edge treatments, essentially we are controlling where viewers indulge temptations or stop to relax – or where they are encouraged away from the water's edge.

As watershapers, we most certainly have that control and can guide viewers to approach from the best route and determine what they will see when they arrive. This means that, in many situations, we're thinking about the edges at the points of actual approach in a different way than we're thinking about edges that are meant strictly to be viewed from some distance.

There are times, of course, when the two functionalities may be combined. Perhaps there's a primary viewing point that features paving or gravel at the water's edge and, on the far side of the water, a large, flat rock. This rock will function as part of the longer view, but it also serves to invite people to follow a path around the pond so they can stand or recline on the rock.

The placement of that flat rock now becomes crucially significant because it not only defines part of a view, but also becomes a potential viewpoint itself.

In contrast, a view of a cobble or shingle beach edge may be visually pleasing and in harmony with other elements while providing a safe point of transit for creatures that may find their ways into the water. But cobble is *not* the most comfortable walking surface and will not be nearly as inviting to people as will the large, flat rock.

In other words, we must always consider how the edge treatment influences the decisions visitors will make as they move toward or around the water. Happily, some of these design decisions boil down to common sense: We know that people will tend to shun steep slopes and, unless one is something of a hooligan, will generally avoid traipsing into areas of tall ornamental grasses.

Thus, the edge treatments we choose dictate not only the views, but also the physical motions of the viewer. When one thinks of these things in this way, I believe working with edge treatments becomes both great fun and a matter of real professional responsibility and fulfillment.

THE HUMAN TOUCH

One of the most interesting aspects of edge treatments in informal watershapes is that, in many cases, we succeed most by deliberately revealing our hand in the process.

We can, in other words, actually make a manmade body of water appear more natural if a manmade element is imposed on it in one place. This prospect is particularly exciting if it helps achieve the illusion that the body of water was there first and that, at some later point, someone came along and built a structure in or around or over part of the water. This leaves us with the impression that at some point in the past, human beings needed to impose some sort of control over part of the perimeter.

I'm a fan of wooden decks that extend out over the water for that very reason. The ability to walk comfortably from dry

While I never use more than three edge treatments in a single project, I often use just two. As is seen here, combinations of lawns and plants provide ample variety, create distinct focal points and, most important, serve the purpose of inviting observers over for closer viewing. In these three cases, taller plants are placed on the far side at some distance from a primary viewpoint to direct the observer's interest.

It's paradoxical, but I've long noticed that one sure way to make a manmade body of water seem more natural is to include an obvious manmade structure at the water's edge. The impression this creates is that the water was always there and that, at some point, someone decided to impose on the natural space. The key, I think, is making certain that the materials you deploy can look old and settled, whether it's weathered stone, oxidized wood or an old teak boat.

land out over water produces an invigorating, sensuous feeling. When we give visitors an opportunity to walk out and peer down into the depths, they feel a part of the scene and can enjoy the excitement of watching fish and observing plants and aquatic creatures at close quarters.

The protruding deck also gives us this impression that a portion of the water's surface was expendable – reinforcing the idea that the water was there first and making the underlying body of water seem much larger.

I also love to use steps with shallow risers and broad inviting treads down to my waterfeatures, especially if they have inviting, curvilinear contours. With this hard landscaping approach, however, it is crucial to consider materials and textures in relation to the architecture and style of the property. The use of long-weathered stone that offers an impression of great age is incredibly appealing in these cases by virtue of giving the appearance of having been placed by a mason decades or even centuries ago. (This is a principle that applies just as significantly to formal or architectural ponds.)

Indeed, this sense of age is, to me, of near-paramount importance. It gives us the impression that we are in a space that has been influenced by the elements through time and has endured while gaining in visual character. It is true that these effects of age can be mimicked in some cases with faux materials, but for my part, I always try to locate old bricks, flagstones or large weathered rocks that I can use to construct these hard edges.

When we create manmade elements extending right to the water's edge or out over the water, we also increase available patio space. Even more significant, they give us an opportunity to contrast an architectural edge with planted areas that feature a riot of emergent plantings. This can generate the tremendously invigorating feeling of venturing into an area that is wild and untamed from the easy safety of a built structure.

MUCH TO CONSIDER

What I've described in this lengthy discussion really only scratches the surface of edge treatments, and I hope to return to this topic again.

One of the things that is exciting about edge treatments – and frustrating at the same time – is that it's an aspect of watergardening that cannot ever be fully explored, learned or even wholly considered, nor will the possibilities ever be exhausted. As with so many aspects of watershaping, the real dialogues about edges must exist within the context of the specific project and, of course, in relation to the point of view of the client.

I can say this without any fear at all of contradiction: The greater our vocabulary of these edge treatments, the greater is our ability to realize our clients' dreams and aspirations and fulfill our ambitions of being more adroit in our techniques. In the language of watershaping, we succeed by embracing the realization that it is the edge that makes our shapes.

A HARD EDGE

One of the most difficult edge treatments to achieve is the one where lawn grass grows right up to the water.

This requires what I call a "hard edge," which means that whether we see the actual edge of the pond or whether rocks or plantings obscure it, there is a hard, level and functional water's edge. Among other things, this edge protects the liner and enables us to create the brimming water that is so critical to convincing edge treatments.

This is why, regardless of the aesthetic effect, I will use a hard material (stone, brick or concrete) to create a hard, dead-level edge and then extend the liner beyond it. Remember that the water will only be as high as the lowest point on the rim of the liner.

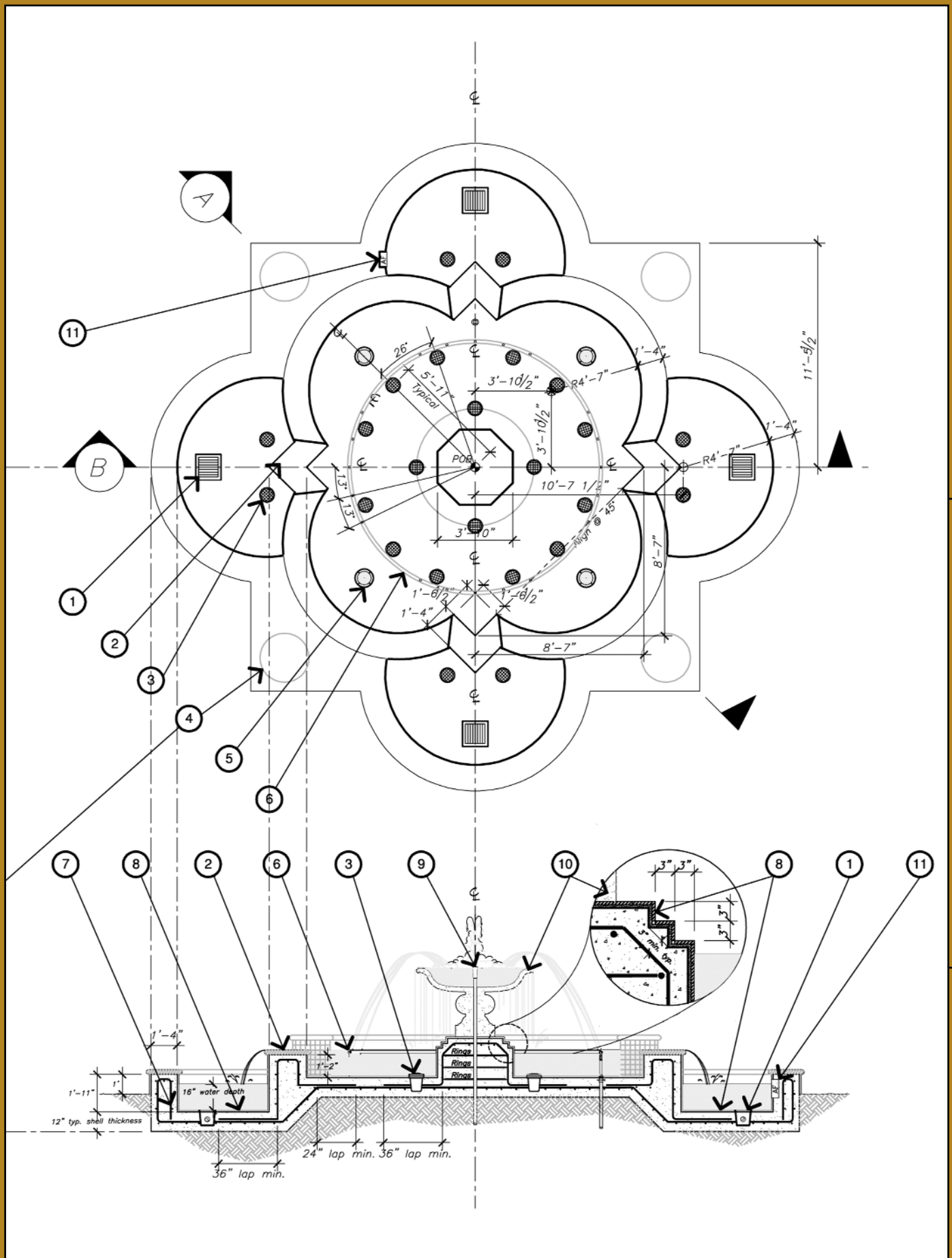
Considering the hard edge with grass – that is, a situation where the hard edge and visual edge are the same – I've found that if you use a solid material beneath the turf, the grass will die. So I do one of two things: If it's a concrete edge, I chamfer the concrete back away from the pond so the soil from the surrounding ground can come right to the edge.

The other way (which I prefer) involves setting up an edge using engineering brick – the kind with holes through it. This sort of edge is fully hydrated because the liner comes up behind it, and the grass roots are able to grow down into the water to drink from the pond.

When the water is brimming, the grass will grow right to the edge and actually form a nose over the inside edge of the brick. Conversely, if the water level is down a few inches, you'll see the brick edge under the lawn – and that's not too great a problem because the brick has a pleasant-enough appearance. This is an effect that can be used around the entire perimeter of a formal pond, and it can just as well be used for the edges of an informal pond where you want to have a knife edge with turf growing right to the water's surface.

The advantages of hard edges are several, including the fact that they prevent marshy areas of grass or, worse, places where the edge appears to be collapsing into the water. In addition, visitors can stand right on the brink without the fear of the edge collapsing: Even when the brick is completely obscured by the grass on the water, visitors will feel the secure ground beneath their feet and might even hang their toes over the edge and rock without worrying about sinking into the mire.

– A.A.-W.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36" lap min.

Precision Planning

By Mark Holden

Quality watershapes, says landscape architect, contractor and teacher Mark Holden, generally start with quality plans. That's why he's become such a strong advocate for increased detail and a more representative level of professionalism in the industry's construction documents. As he explains here, there are some basic, common features that should be present in plans for watershapes of all descriptions, types, shapes and sizes.

As the fields of landscape architecture and watershaping intermingle, the knowlege bases for each trade increasingly need to be shared across various design, engineering and construction disciplines.

That sharing, unfortunately, has been relatively slow to develop, which means that, as a designer and builder of custom high-end watershape and landscape projects, I am often frustrated by the lack of detail I find in plans and specifications generated on all levels of the trade. Although this deficiency flows freely from all sectors, the most frequent sources of inadequacy in watershape plans are landscape architects and designers, too many of whom offer information that is disturbingly vague and thoroughly lacking in detail.

We've all seen the blue patch on the overhead plan view – a grossly inadequate delineation of a significant design component if ever there was one. Contractors presented with such documentation are left to define specific details themselves and essentially are asked to build some version of that blue patch as they see fit.

First Things First

In my career, I've designed thousands of watershapes of all types and sizes and, through my experience in teaching college-level watershaping classes to landscape-architecture students, have influenced the design of countless others. Along the way, I have formulated basic sets of criteria I offer as standards for adequate design documentation.

Certainly, there are broad variations that influence every project, but experience tells me that watershape designs will flow much more fluidly in the construction stage if certain considerations are universally integrated into the design stage. I advocate this degree of standardization because watershaping is a varied set of disciplines practiced by people with incredibly diverse educational and professional backgrounds. The stakes are high enough that these variables leave too much to chance.

Until a standard emerges, the content of plans and specifications will be determined by the individual builder, with necessary nods to local building departments. That lax arrangement, in my view, leaves much to be desired. Conversely, establishing a set of standards that makes sense will benefit everyone – designers, engineers, contractors and clients alike.

Let's start with an obvious point: All plans and specs for watershapes should begin with a basic, functional descrip-

tion of the project at hand. Is it to be a bathing environment? If so, is there to be a spa, an interactive waterfeature and/or exercise equipment? If the design is for an ornamental feature, is it to contain fish and plants, or is it to be sanitized in a way that precludes their presence? Is this to be a commercial or residential project?

After these overriding, first-things-first questions are answered, we can clearly structure a design that fits the appropriate situation. My own firm asks these questions of designers almost every day to get them to transform their blue-patch visions into something that can be bid on and then built.

When quality plans are subsequently prepared and sent out for bid, the cost factors are much more definable – and little is left to the imagination. When those quality plans are subsequently built, the contractor has a fully illustrated roadmap to show to employees and subcontractors. It's a situation that lends itself to completion of quality watershapes that look and work as intended.

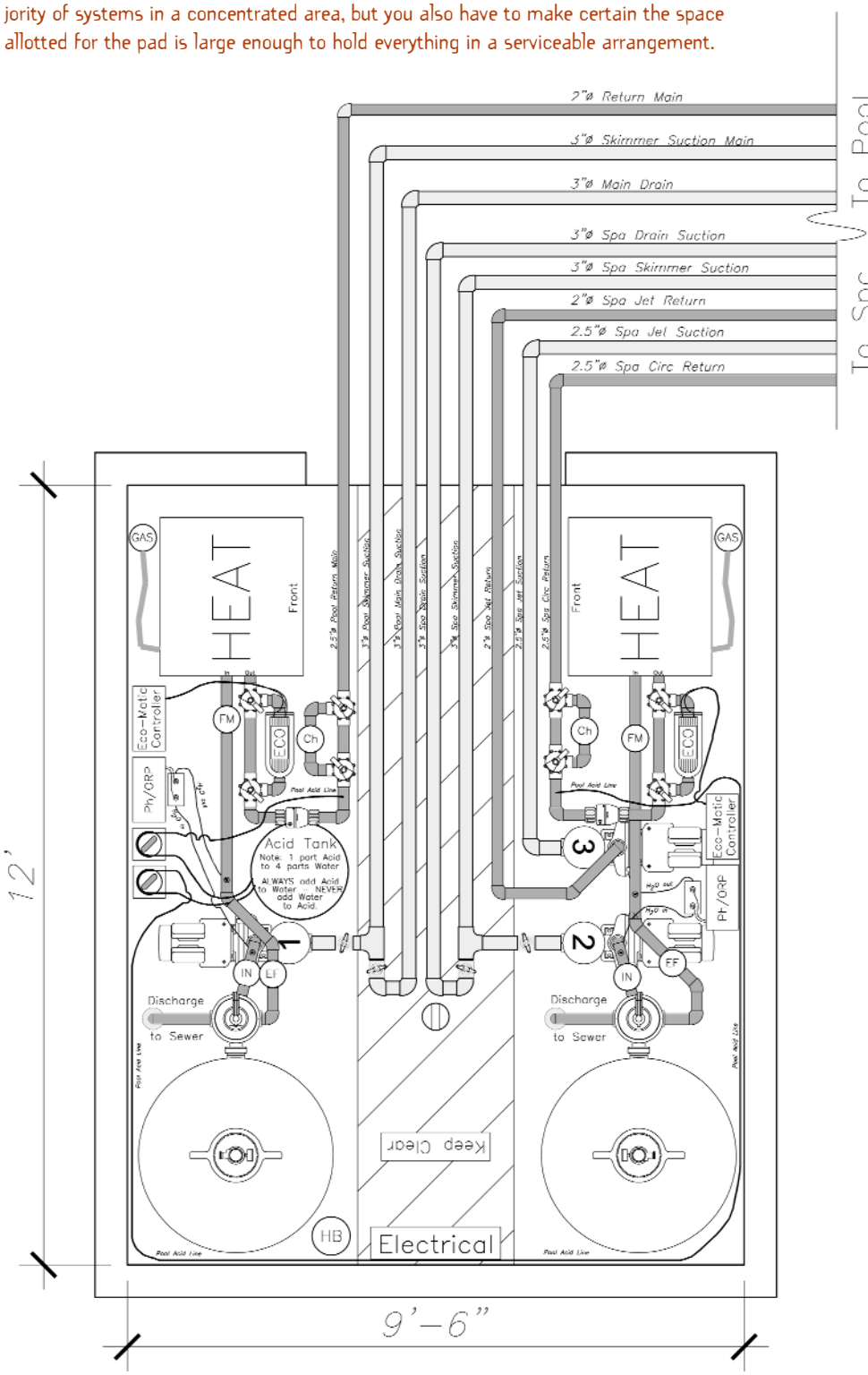
The lists below cover the essential elements that should be included in quality sets of plans. I recognize in offering the list that it's just a starting place: What's needed in addition is for everyone involved in the process of generating and following such plans to have a reasonable understanding of soils, materials, structures, equipment, hydraulics and the relationships among all those elements and more.

That would be the best of all possible worlds for watershaping. In the meantime, a focus on plan basics can work to everyone's benefit.

For Residential Pools & Spas:

s *Note equipment locations at correct size:* Too many times, we open sets of plans supposedly ready for bid that show a three-by-five-foot rectangle (too often just below an openable window) that crowds the legal setbacks. Such a pad might have held an equipment set in the 1960s, but most modern equipment configurations need a space 4 by 11 feet or more to accommodate heaters, pumps, filters, sanitizing systems, manifolds and controls.

A good set of plans offers a high level of detail and direction, as is seen in this schematic for a large project's equipment pad. This is an area where clarity and accuracy are particularly crucial: Not only do you need to account for the convergence of the majority of systems in a concentrated area, but you also have to make certain the space allotted for the pad is large enough to hold everything in a serviceable arrangement.



Pool Equipment Legend

Symbol	Item	Detail	Mfg./Model	Model #	Notes
	Pumps	G	Sta-Rite/Max-E-Pro	P6E6F-207L	1.5 HP
	Filters	N	Pentair/Triton II Sand	TR 140C-Almond	36", 7.06 sf, 105.9 GPM max, 50 PSI max
HEAT	Heaters	I	Raypak/RP2100	R-405B	399k btu, shall meet all state emissions regulations
	Pressure Gauges	X	n/a	n/a	Influent & effluent, 1 set per filter
	Chlorinator	M	Pentair/Rainbow In-line	3315H	Trichlor tablets
	Flow Meters	J	Blue-White	F-30200P	2" PVC, horiz., 40-150 GPM
	Check Valve	X	Flo	n/a	Spring, PVC, slip x slip
	Ball Valve	X	Spears, or equal	n/a	PVC, slip x slip
	MultiPort Valve	X	Pentair Pre-Plumbed	261055	2 in MPV For Sand Filter (SM 20-3)
	3 Port Valve	X	Jandy/NeverLube	4717	2"-2.5", Positive seal, 3 port
	Electrical Panel	X	Per electrical engineer	n/a	Per local code
	Salt System Control	X	ECO-Matic	ESC-48	0-75,000 gal, 3000 ppm salinity
	Salt System Cell	X	ECO-Matic	ESC-48	Self cleaning cell, max 10' from control
	Ph/ORP System Control	X	Rola-Chem/Analog(ORP/Ph)	553001	Acid pump & salt system control
	Peristaltic Acid Pump	X	Rola-Chem/Paradise Pro	RC25/53SC	0.1-12 GPD, 2000-65,000 gal.
	Sensor Probe Manifold	X	Rola-Chem/Std. Easy Kit	553003	wall mounted, valves, sensors & tubing

Spa Equipment Legend

Symbol	Item	Detail	Mfg./Model	Model #	Notes
	Circulation Pump	G	Sta-Rite/Max-E-Pro	P6E6F-207L	1.5 HP
	Jet Booster Pump	G	Sta-Rite/Max-E-Pro	P6E6G-208L	2HP
	Filters	N	Pentair/Triton II Sand	TR 140C-Almond	36", 7.06 sf, 105.9 GPM max, 50 PSI max
HEAT	Heaters	I	Raypak/RP2100	R-405B	399k btu, shall meet all state emissions regulations
	Pressure Gauges	X	n/a	n/a	Influent & effluent, 1 set per filter
	Chlorinator	M	Pentair/Rainbow In-line	3315H	Trichlor tablets
	Flow Meters	J	Blue-White	F-30200P	2" PVC, horiz., 40-150 GPM
	Check Valve	X	Flo	n/a	Spring, PVC, slip x slip
	Ball Valve	X	Spears, or equal	n/a	PVC, slip x slip
	MultiPort Valve	X	Pentair Pre-Plumbed	261055	2 in MPV For Sand Filter (SM 20-3)
	3 Port Valve	X	Jandy/NeverLube	4717	2"-2.5", Positive seal, 3 port
	Electrical Panel	X	Per electrical engineer	n/a	Per local code
	Salt System Control	X	ECO-Matic	ESC-48	0-75,000 gal, 3000 ppm salinity
	Salt System Cell	X	ECO-Matic	ESC-48 (incl.)	Self cleaning cell, max 10' from control
	Ph/ORP System Control	X	Rola-Chem/Analog(ORP/Ph)	553001	Acid pump & salt system control
	Peristaltic Acid Pump	X	Rola-Chem/Paradise Pro	RC25SC	0.1-1 GPD, 500-2,800 gal.
	Sensor Probe Manifold	X	Rola-Chem/Std. Easy Kit	553003	wall mounted, valves, sensors & tubing

Maintence & Safety Equipment

MAINTENCE: vacuum head w/ 50' hose, wall brush, hand leaf skimmer, 8' telescoping pole, test kit, DPD for chlorine.
SAFTEY EQUIPMENT: Shepards hook w/ 16' pole, life ring w/ line with a min. length of 40' or equal to widest point of pool, whichever is greater, a single clearly labeled "Emergency Shut-Off Switch" (which will turn off all filtration, jet and blower pumps), switch shall be readily accessible within the pool enclosure and shall be clearly visable from and mounted adjacent to spa.
SAFTEY SIGNS: Spa Rules, No Lifeguard on Duty, Maximum Capacity of Spa, Emergency Shut Off, Emergency Phone Numbers, Call 911, CPR/Artificial Respiration, No Diving Allowed, and a Spa Warning Sign which shall contain the following language: 1. Elederly persons, pregnant women, infants and those with health conditions requiring medical care should consult with a physician before entering a spa. 2. Unsupervised use by children under the age of 14 is prohibited. 3. Hot water immersion while under the influence of alcohol, narcotics, drugs, or medicines may lead to serious consequences and is not recommended. 4. do not use alone. 5. Long exposure may result in nausea, dizziness or fainting. - Spa warning sign to be mounted in a prominent location near entrance to Spa, all other signs to be mounted in a conspicuous location within spa area.
HANDICAP LIFT: Spectrum Products - Gallatin - with 2 anchors at each pool & spa.
DEPTH MARKERS: 4" high numerals of color contrasting with background, required at a) Maximum Depth b) Minimum Depth c) Each End d) Break in Slope e) Perimeter at Increments Not to Excede 25'. All depth markers shall be slip resistant tile.

CODES & AGENCIES:

California State Codes

CALIFORNIA BUILDING CODE (CBC 2001)
CALIFORNIA PLUMBING CODE (CPC 2001)
CALIFORNIA MECHANICAL CODE (CMC 2001)
CALIFORNIA ELECTRICAL CODE (CEC 2001)

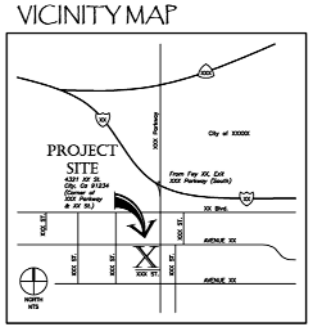
County/City Codes

County of L.A. Dept. of Health Services
City of L.A. Dept. of Building & Safety
County of Riverside Community Health Agency
County of Sacramento Env. Mgmt. Dept.

Testing Facilities

National Safety Foundation (NSF)
National Electrical Code (NEC)
Underwriters Laboratory (UL)
American National Standards Institute (ANSI)
U.S. Consumer Product Safety Comm. (CPSC)
National Swimming Pool Foundation (NSPF)

VICINITY MAP



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s *Indicate coping elevation and material:* What makes up the edge of the watershape? Is it stone, concrete or tile? Without this specific information, the shell cannot be formed or shot at the required elevations and dimensions. There's also the fact that the watershape is often the first project element built on site: Without proper grading and layout, every subsequent element will be knocked off the desired mark.

s *Clearly define the water's edge:* It used to be that we didn't have to worry too much about where the water stopped, but with the growing popularity of beach entries, there's a real need to define exactly where on the slope the water is supposed to stop. This should be the thickest line on the plan for many reasons, not least of which is the basic need to calculate volume accurately.

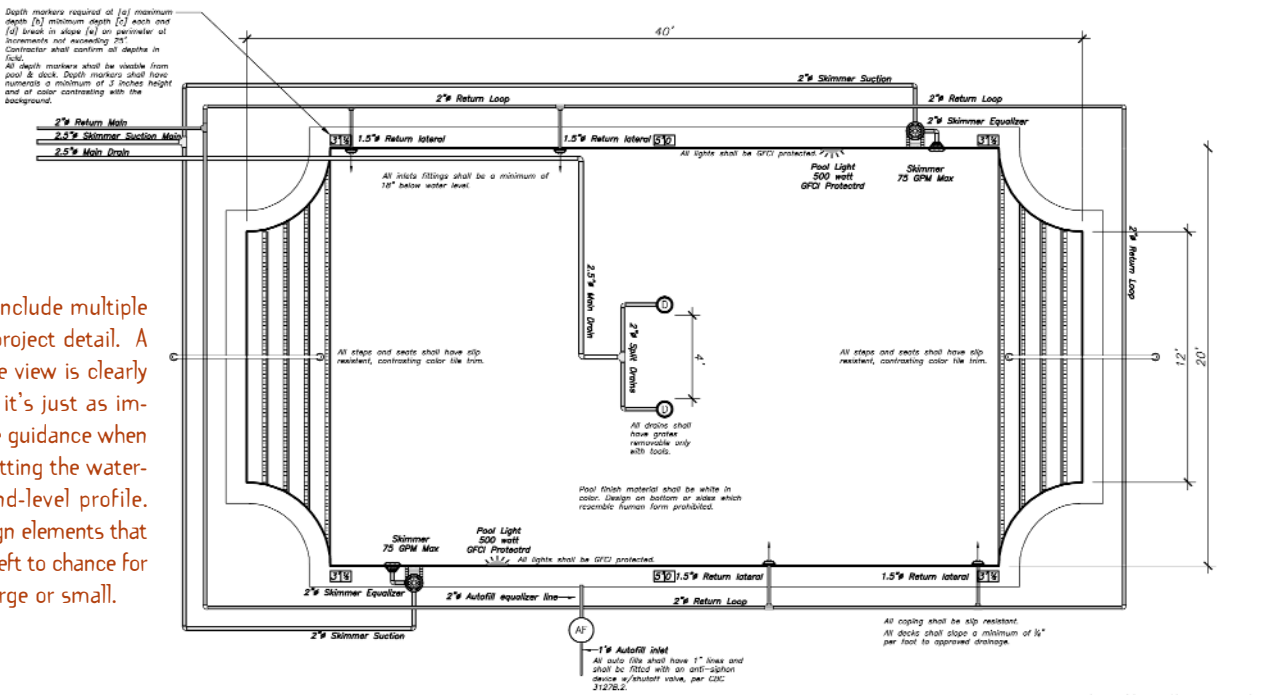
s *Note utility positions:* All plans must clearly define electric, gas, water and sewer access – information that should be developed during the initial site survey. Equipment locations are often selected in accordance with this information, and making the utilities all come together in one spot is often a considerable cost factor.

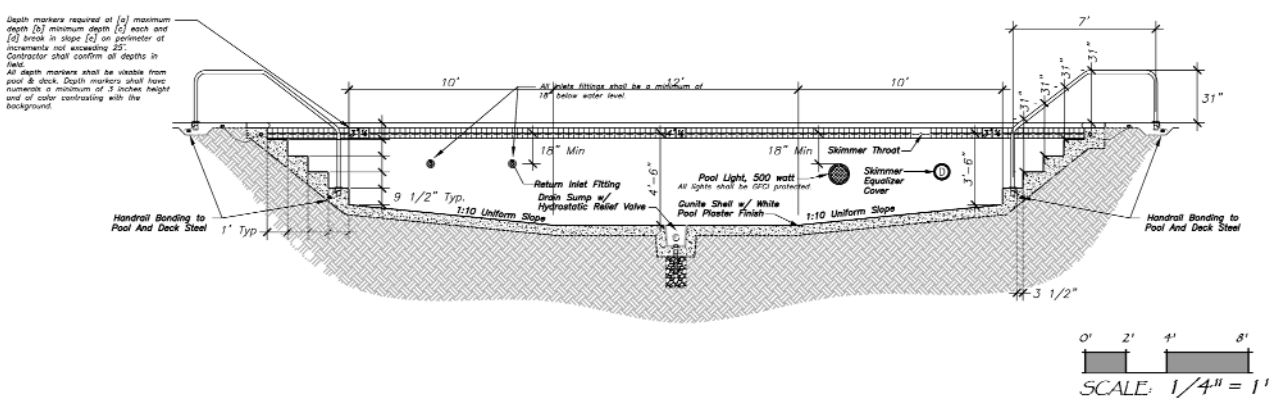
s *Consider fencing and gates:* The issue of fencing and gates – materials, heights and closing methods – is increasingly important to designers. In more and more areas, city building officials will not permit construction of bathing environments without a comprehensive fencing-system design. Indeed, building departments now require more information on this aspect of a project than any other because most now adhere to state codes.

s *Define finish material selections:* What are the finish materials (tile, plaster, pebble, stone?) to be used for every surface in and around the watershape? Too many times, designers *think* glass tile but never say anything and wind up with an inexpensive turquoise ceramic tile instead.

s *Produce depth profiles for the pool bottom:* These can be rough, but having this depth profile is essential in volume calculations and is obviously important when it comes to forming and building the shell. Some depth changes can be dangerous if they're too severe, so water-

Plans should include multiple views of any project detail. A good bird's-eye view is clearly essential, but it's just as important to give guidance when it comes to setting the watershape's ground-level profile. These are design elements that should not be left to chance for any project, large or small.





shapers must build to defined cross-sections in confirming how steep the floor of the bathing environment will be.

s *Specify step and bench locations:* How will bathers get in and out of the water? While they're in the water, where will they sit? This should be designed, as is the case with any seat-wall on a dry deck. Thinking about swim lanes as part of this process makes sense: You don't want lap swimmers colliding with steps or a bench.

s *Indicate lighting locations:* These days, a watershape's lighting system has to align with an architect's lighting plan, in which case pool or spa lights are thought of as just another fixture. Builders may end up selecting models and wattage, but locations are an essential design feature. These decisions also dictate where junction boxes will be located (and hidden, if that's an issue).

s *Note remote-panel locations in buildings:* If there are to be in-house controls, indicate where they are to go. A builder will often pick the wall closest to the equipment, which may save him or her some time but will forever inconvenience the homeowner.

s *Select the sanitizing system:* Will the pool be treated by trichlor, bromine, ozone or saltwater chlorination? The designer should choose the sanitizer as well as the system or systems that will be used to monitor and deliver chemicals to the water. This means the designer needs to be versed in the advantages and disadvantages of various sanitizing agents.

s *Confirm building codes for setbacks:* One call to the planning and building departments can tell a designer how close water can come to property lines. Plans that don't include this basic in-

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NPC Research Foundation

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In the Commercial Realm

When it comes to designing commercial watershapes – aquatic centers, competitive pools, waterparks, resort complexes – it's critical to recognize that plan requirements *far* exceed those developed for residential pools and spas or decorative watershapes.

Generally, there's a need to hire help in the form of an aquatic consultant who can prepare documents that conform to the strict requirements issued by county Health Departments. Public bathing environments, for example, are so complicated to design that only a few professionals have the expertise.

You might teach yourself the ins and outs of handicapped access, decking space, surface-material specifications, hydraulic requirements and flow rates, filtration, safety equipment, lighting requirements, HVAC systems, water treatment standards, signage, electrical safety, and a host of other elements. What you learn to apply in one town, however, might not be sufficient to pass muster in a town down the road.

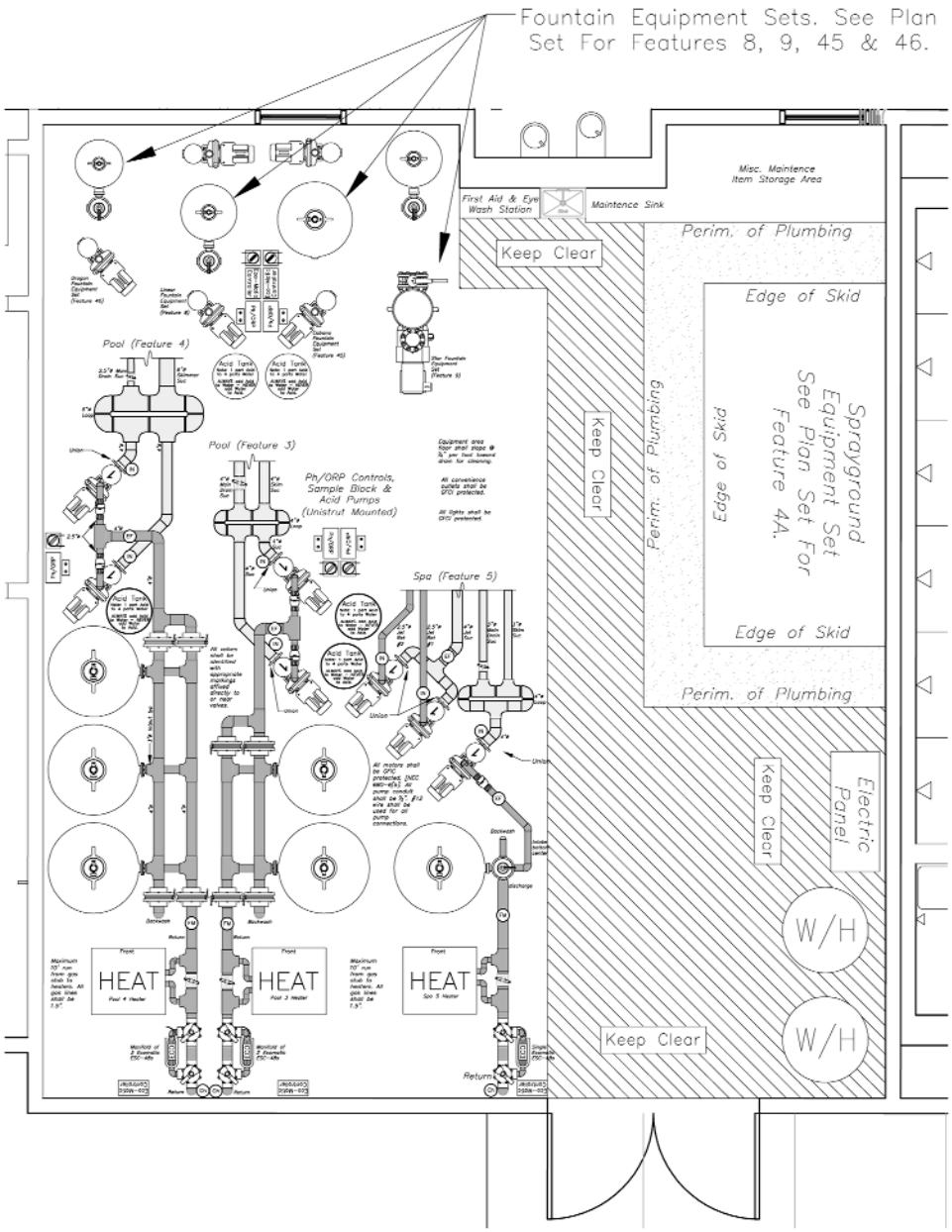
It's a specialized business, in other words, so the best approach usually involves hiring the local talent you need to get the job done with minimal disruption.

And there is often more to these projects than health-department requirements. For competitive facilities, for example, you must weigh collegiate or international standards for a range of issues *in addition to* dealing with local health and public safety officials.

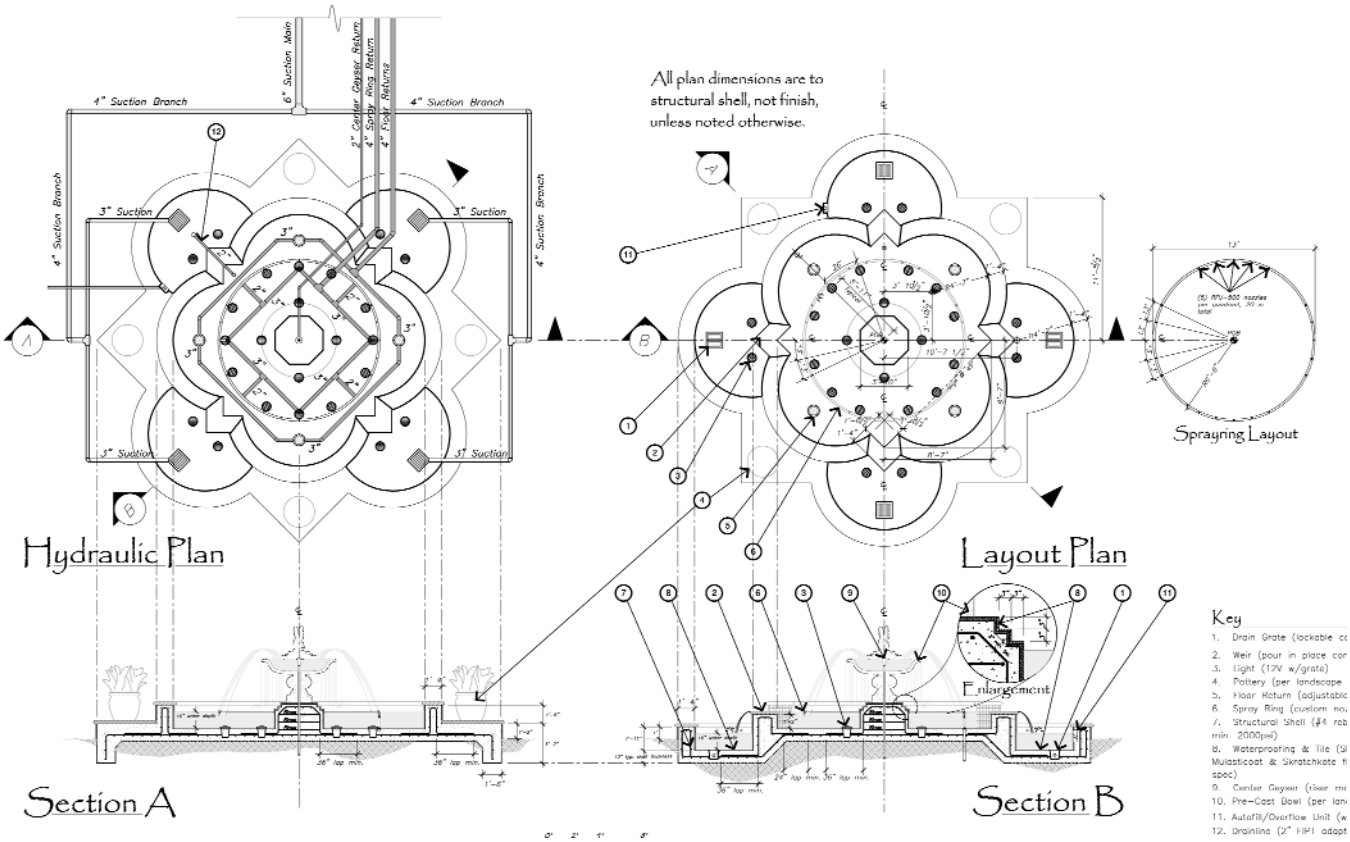
In our firm, we've spent many years researching and accumulating data that allow us to design commercial projects within a variety of public code structures. This is an amazingly restrictive design environment with little tolerance for new ideas and an obvious reluctance to grant variances. The upshot is that landscape architects, watershape designers and pool contractors will rarely have the ability and background to encompass everything without assistance of some kind or other.

This is an environment in which going it alone can be costly: In my own experience, I've run into a range of projects where inadequate, non-conforming plans have resulted in significant delays, big cost overruns and high volumes of change orders. Bottom line: If you're asked to design a public watershape, make no assumptions about the design requirements and seek help when and where you need it.

– M.H.



The complexity of commercial plans makes them the near-exclusive territory of experts who are familiar with the extensive documentation required to comply with strict local codes. Even a minor omission at the plan stage can hold up a project for weeks – again, not something you want to leave to chance.



The more intricate the watershape, the greater is the demand for detail in plans. This fountain, for example, requires both hydraulic and layout plans as well as enlargement of a key dimensional detail along with information on the spraying layout.

formation may well turn out to be illegal and are unlikely to be granted permits or pass inspections.

For Decorative Waterfeatures:

s *Note equipment locations at correct size:* As with pools and spas, equipment locations must be accurately and adequately specified. The key to plan clarity is an understanding of how big things can get. Indeed, many waterfeatures require larger equipment than pools because of the fast turnover rates required to run certain effects.

s *Indicate the coping elevation and material:* This is another concern that applies both ways – and it may be even more important with decorative waterfeatures, because they tend to be more coordinated with levels in the surrounding hardscape.

s *Define the depth of water flowing over weirs:* This may be the single most im-

Downstream Responsibility

Watershapes of just about any level of complexity cannot be built without detailed structural, mechanical and plumbing details.

Concrete structures must be engineered to accommodate prevailing soil conditions and require plan details that indicate steel schedules; concrete strength and dimensions; support structures such as footings, piles and grade beams; and structural support for associated design elements including grottos, shade structures, rockwork, interactive waterfeatures and more. Structural engineering is not an option: It is an absolute necessity.

One of the areas in which watershape contractors tend to take the greatest liberty is with plumbing. To ensure proper system performance, you must specify properly sized filters, pumps, motors, chemical feeders, skimmers, drains and fittings in plan details. Pipe sizes and configurations must also be clearly indicated, including plumbing loops, manifold configurations, check valves, Hartford loops, sewage and waste connections, surge tanks, collection troughs, water-leveling equipment and a host of other possible system features.

In the vast majority of cases, designers will need to retain the services of soils experts, structural engineers and plumbing/mechanical engineers in order to develop plans that can reliably be bid and built.

– M.H

portant piece of information in waterfeature design. Without knowing a desired depth of water that is meant to flow over the weir or edge – a half-inch, say, or one inch or three? – there is no way to determine the hydraulic system needed to drive the waterfeature. This is not an area for guesswork!

s *Determine the amount of water emanating from spouts:* Do you want a thin column of water or a foamy geyser? How high will the spray travel? If the water issues from a wall spout, how far out does it need to go, and how thick should the stream be? Along with flow-depth information for weirs, this is critical design information.

s *Define finish material selections:* As with pools and spas, the finish materials must be called out in the plan documents.

s *Specify light fixture location:* As a rule, lighting is more important to the aesthetics of decorative waterfeatures than is usually the case with pools and spas. Even greater detail is therefore required, including makes and models, specific locations and wiring requirements.

s *Define the water-treatment modality:* Is the waterfeature to be a biological system with fish and plants? If so, how will those fish and plants be kept alive and flourishing? If the system isn't to be biological, what sanitizing system will be used?

s *Project the extent of living populations:* If a system is to be biological, it is very important to know just how many plants and animals are to be sustained. Overburdened Koi ponds, for example, can produce so many toxins that the Koi will suffocate.

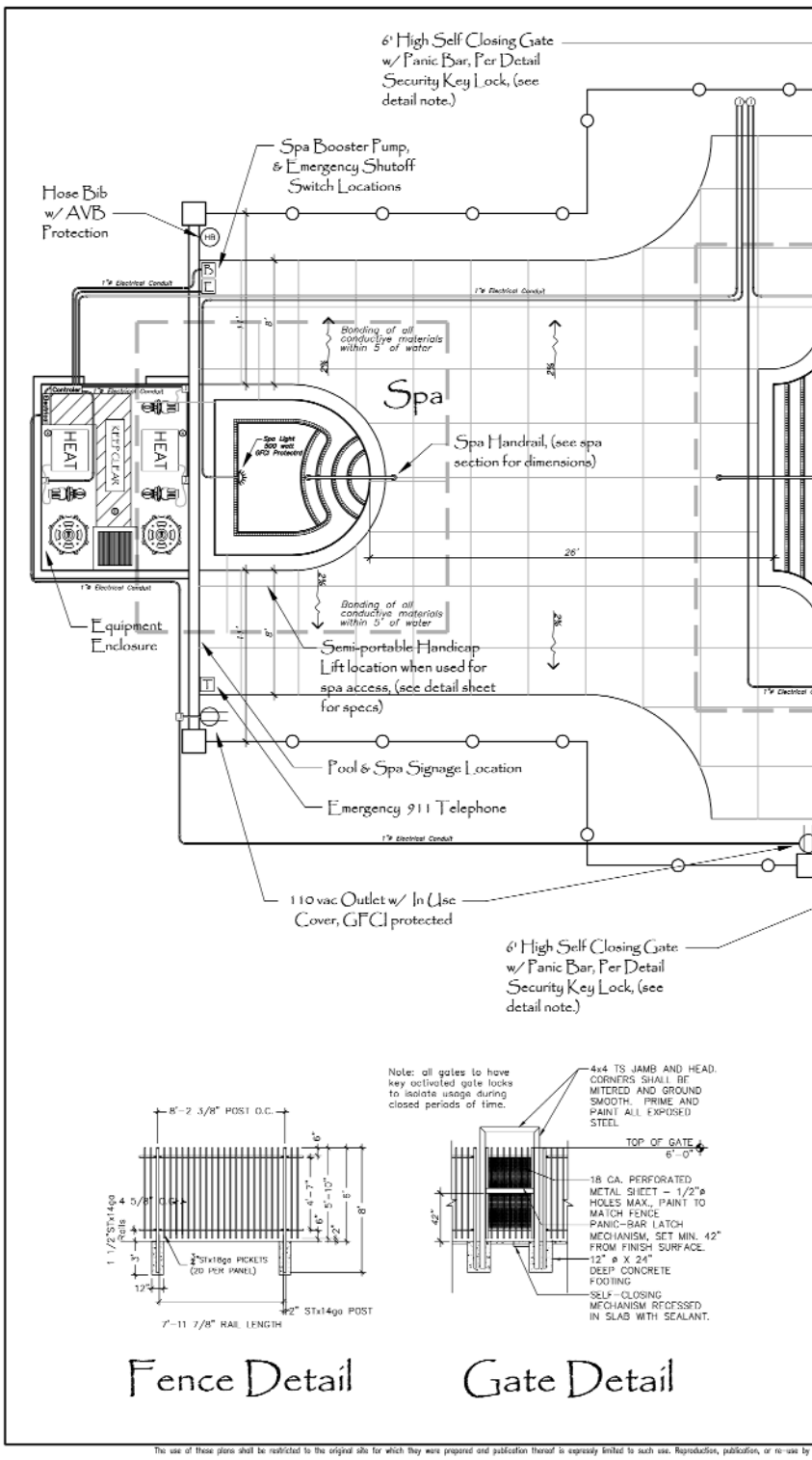
Exercises in Common Sense

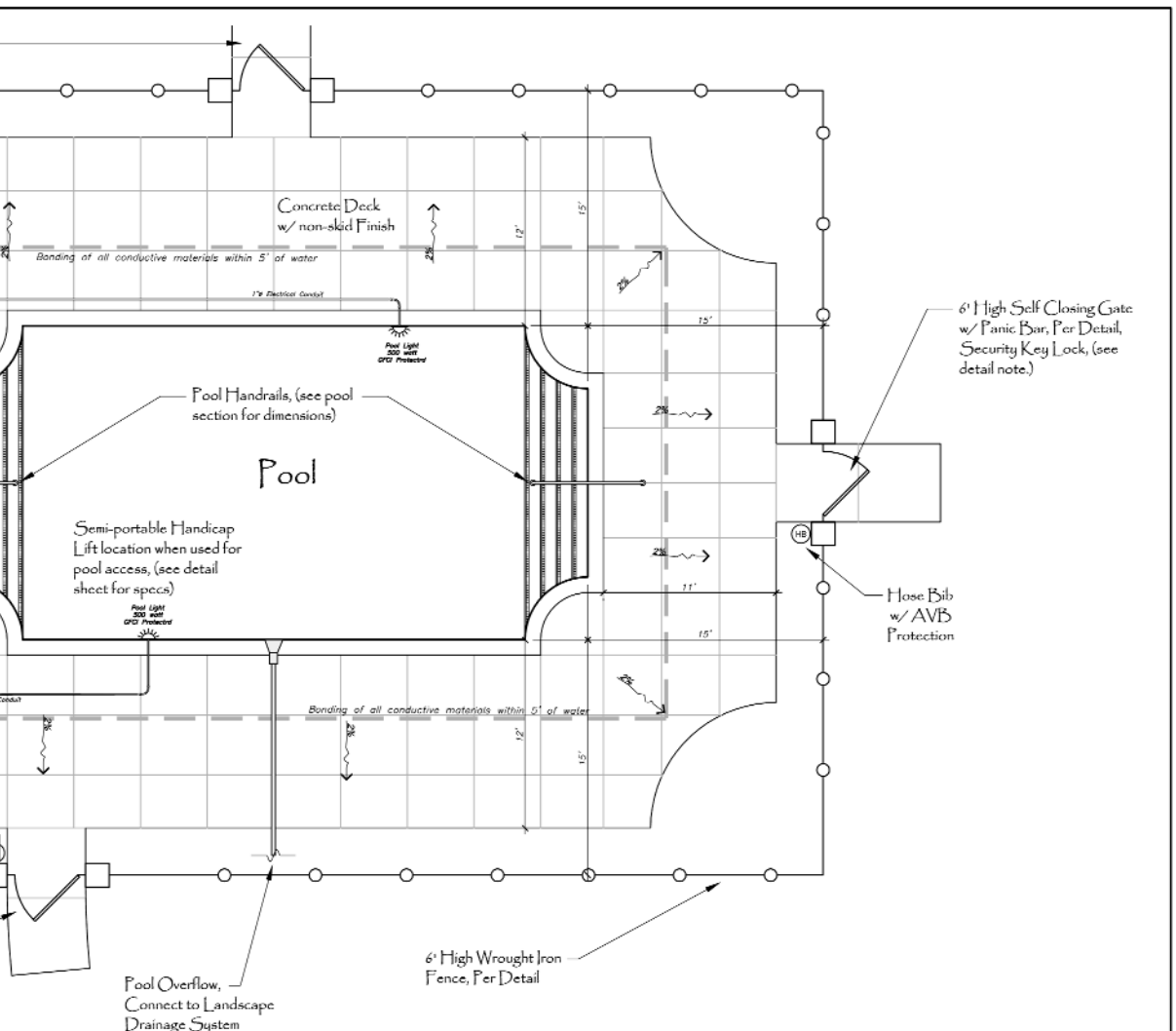
As evidenced by these basic lists, answers to most plan-related questions are matters of common sense. Despite that fact, however, the majority of plans that cross our desks are deficient in one or more of these areas.

To me, it's all about professionalism: At a minimum, plans for watershapes should provide what I've offered as a standard level of information – or they run the risk of missing the mark in one way or another.

In our business, we will not bid on projects based on assumptions and will not spend the often-protracted amounts of time required to straighten out all the details and get the answers to our fundamental questions. And it's not often the case of the designer knowing what's involved and simply failing to include the information: For the most part, designers of whom I've asked these questions clearly haven't considered these issues at all.

Clarity in plans is an asset to everyone involved in a project, from the designer through to the contractors and ultimately the client. I see rays of hope in a conviction that developing higher degrees of detail in plans is clearly within our collective grasp.





Maintence & Safety Equipment

MAINTENCE: vacuum head w/ 50' hose, wall brush, hand leaf skimmer, 8' telescoping pole, test kit, DPD for chlorine.
SAFTEY EQUIPMENT: Shepards hook w/ 16' pole, life ring w/ line with a min. length of 40' or equal to widest point of pool, whichever is greater, a single clearly labeled "Emergency Shut-Off Switch" (which will turn off all filtration, jet and blower pumps), switch shall be readily accessible within the pool enclosure and shall be clearly visable from and mounted adjacent to spa.
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HANDICAP LIFT: Spectrum Products – Gallatin – with 2 anchors at each pool & spa.
DEPTH MARKERS: 4" high numerals of color contrasting with background, required at a) Maximum Depth b) Minimum Depth c) Each End d) Break in Slope e) Perimeter at Increments Not to Exceed 25'. All depth markers shall be slip resistant tile.

Site Plan Legend

Symbol	Item	Detail	Mfg./Model	Model #	Notes
	Lights	B	Pentair/Amerilite	78456300	Refer to attached Plan for Specifications
Electric	Electrical Panel	X	n/a	n/a	per code
Control	Automated Control Panel	X	n/a	n/a	per code
T	Emergency Telephone	X	Per owner selection	n/a	For 911 Emergency Calls Only, weather-proof
E	Spa Emergency Switch	X	Intermatic/Emergency	PM600	DPST type, 20amp, 120/240
B	Spa Booster Switch	X	Intermatic/Auto Shut-Off	FF60MC	Springwound, waterproof cover, no hold
J	Electrical Junction Box	X	Eagle, or equal	n/a	Wall mounted when possible
	Pool Light Junction Box	X	Thermocraft/2 fixture	JBP57510	5 holes @ ½"x¾"x1"x1", w/bonding lug
	110 VAC Outlet	X	Eagle, or equal	n/a	GFCI protected, in-use weatherproof cover
	Electrical Conduit	X	Spears, or equal	n/a	1", Schedule 40, Grey
	Flexable Conduit	X	Spears, or equal	n/a	1", Flexable, Schedule 40, Grey
G	Gas Stub	X	n/a	n/a	Set per code, shut off, tracer wire
HB	Hose Bib	X	n/a	n/a	Brass, w/AVB backflow preventer
	Deck Drain	X	NDS, or equal	n/a	Per landscape plan
	Overflow Device	D	"Overflo"	n/a	Connects to 3" dia. styrene drainline
	Handicap Lift	O	Spectrum Aquatics/Gallatin	27336	Anchor for new #27450, Waterbox #200400
	Filter Backwash Sump	X	n/a	n/a	4" lines into sump to sewer, w/lid

0' 2' 4' 8'
SCALE: 1/4"=1'

MARK HOLDEN & HOLDEN WATER
Landscape architect #3116
contractor #754778
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Fullerton, CA 92832
T: 714-626-0333
F: 714-626-0626
waterarchitecture.com

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WATERSHAPES
McCloskey Communications inc.
Woodland Hills, CA

SHEET TITLE
Site Plan
Features - 10 & 11

STATUS
☒ Check Set
☐ Bid Set
☐ Build Set

REVISIONS
DATE | DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
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Thoroughness in laying out sets of plans for watershapes is simply good business practice. Their existence leaves little to chance on the job site; defines relationships and responsibilities in clear terms; and gives you as the designer an ability to ensure that the results are exactly as you've envisioned.

By Paul Benedetti

Transit Cubed

Inspired by the work of great architects, watershaper Paul Benedetti has created a masterpiece of his own in the form of a pool/spa composition that now graces a spectacular setting in the Santa Cruz Mountains of California. Using multiple water levels, reflective surfaces and water-in-transit effects, the design delivers straight-ahead contemporary aesthetics while encompassing a sublimely complicated set of geometric and hydraulic relationships.

As watershapers, we occasionally are given the opportunity to interact with modern architecture in ways that enable us to generate genuine works of art.

This trail linking some of today's most expressive architecture to the reflective and auditory potential of water has been blazed by great designers including John Lautner, Ricardo Legorreta and Luis Barragan. They and their followers have thoroughly explored the geometries, materials and spatial relationships that make up the modern architectural dialogue between structures and water – and the results have often been breathtaking.

Almost without exception, their success in these designs is a matter of context and the setting, and as one who has studied their projects for many years, I now have a clearer sense of the excitement they must have felt when things came together and everything about a project was just right.

For the project pictured in these pages, a hilltop setting, the contemporary architecture of the home and willing clients set the stage for what is probably my firm's best work to date. On the visual side, what you see is a set of rectilinear planes marked by subtle changes in elevation; a distribution of dark, reflective surfaces; and the action of water-in-transit effects that draw the viewer into the space. On the technical side, well, there's much more going on here than meets the eye.

Freedom to Create

As is true of many quality projects, this one began with terrific clients. The homeowners had a general idea of what they wanted, were able to afford the best we had to offer and, best of all, gave us absolute creative freedom – no budget constraints, no site limitations, no hard deadlines, no interference at all. We had the green light to do exactly what we wanted to do, our way and on our schedule.

The home is located on a hillside above Gilroy, Calif., in the Santa Cruz range. The site afforded spectacular vistas and a modern-style, rectilinear home reminiscent of those that were popular in the Palm Springs area of southern California a generation or two earlier. There are all sorts of crisp architectural details, including floor-to-ceiling glass panels that open to create amazing indoor/outdoor spaces.

By the time we became involved with the project, the clients had already commissioned a landscape architect to do the exterior design. The concept for the pool was interesting, but it featured a curved vanishing edge that looked out of place when set against the straight lines of the home. There were no curves anywhere in the architecture or anywhere in the exterior hardscape, so I argued that it made no sense to introduce a curved shape with the edge of the pool.

Happily, they agreed with me and set us loose to move in a different direction. I went back to the drawing board and designed a pool/spa composition made

up entirely of rectilinear shapes. We also repositioned the pool so that, when you enter the home, one of the first things you see is the pool and its vanishing edge.

We also focused on views to and across the water from other points within the house, including views across the spa to one side and the floating steps that would lead to it and, from the other side of the home, the diagonal views across a raised thermal shelf.

The design offers multiple levels of water in transit with everything ultimately flowing over the pool's main edge and into the catch basin just below. The raised thermal shelf is a 14-foot square, while the spa is a 12-foot square. For its part, the pool is 55 feet long, with varying widths averaging about 24 feet.

SIMPLICITY THROUGH COMPLEXITY

Each of these three water surfaces has a particular function in the overall design.

The thermal shelf, for example, serves a couple of purposes: It's a landing point for a trio of laminar jets mounted under the deck – a waterfeature that lends a subtle "white noise" effect to the space. The ledge also serves as an inviting place to lounge and relax in the shallow water, a function we facilitated by beveling the edges to let heads and shoulders rise comfortably above the water's four-inch depth.

The spa is located on the opposite corner of the pool from the thermal shelf, where it lets bathers soak up the vistas beyond while enjoying the warm water. As is the case with the thermal shelf, the spa's water shelf flows over the edge and down around its full perimeter.

One of our concerns had to do with the point where the gutter for the spa's outside edges opens into the pool: It's right near the pool's vanishing edge, and we thought the flow might cause ripples that would distort the flow over the edge. To eliminate that possibility, we lowered the

gutter to a point about an inch above the pool's waterline.

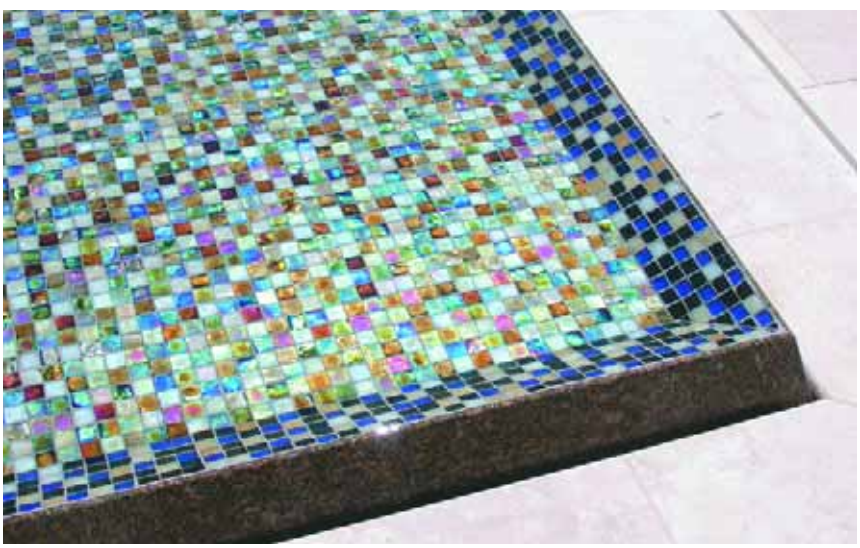
The spa's gutter is sloped at an extremely slight angle, so the flow, which represents only half the water falling over the spa's edge, has a minimal effect on the pool's surface and no effect at all on the pool's vanishing edge.

As another precaution to protect the pool's edge flow, we canted the pool's vanishing-edge wall back toward the pool rather than the other way around, which is our usual practice. Had we done it the usual way, the spa gutter would have emptied on the outside of the pool's vanishing edge, which would have distorted its flow at one end.

More important, slanting the weir away from the pool would effectively have meant dumping the spa's water directly into the catch basin, which would have eventually drained the pool and flooded the basin – a disaster for any vanishing-edge pool.

For all the words it has taken to describe the components of the watershape, it all has a very simple appearance, especially at first glance. The rectangular shape is distorted by the stair-step contour on the vanishing edge; the raised thermal ledge sits in the foreground with the raised spa diagonally opposite. The four-sided overflows from the shelf and the spa give the struc-

The watershapes were developed as an artistic and artful extension of the home, with crisp lines, graceful changes in elevation and a clearly sculptural quality. In executing the plan, we were acutely aware of the design importance of the water's reflective qualities, which made dead-calm water a hydraulic goal even with the various flows from level to level.



tures a monolithic, sculpted appearance, while the slot overflow beyond the floating steps gives the impression that the pool is about to overflow in just that one area.

It all *looks* simple – and was meant to do so. But when you look more closely, everything becomes quite a bit more complex.

DIGGING THE DETAILS

As a watershaper, I have to say that working out the details of a project such as this one is the fun part.

For both the spa and thermal ledge, for example, the water flows over the edges on two sides and directly into the pool. On the other two sides, however, it flows to a hidden gutter and seems to disappear into the decking. In both cases, we set up the gutters so the water drains into the pool right at the tile line. So unless you're in the pool looking back at the corners of the spa or the shelf, you can't easily see where the water from the gutter actually enters the pool.

The raised shallow shelf is particularly interesting: It has a uniform depth, but the tile pattern and water's tendency to bend light creates an optical illusion that the outer edge of the area flattens out under water. This makes observers wonder how the water stays on a surface that appears to be out of level.

Then there are the steps leading to the spa that seem to float on top of the water, and the gorgeous glass-tile finish that shimmers in the sunlight, especially on the shallow thermal shelf. And I love the laminar jets that arc into the shelf area, especially when it gets dark and the fiberoptic lighting behind the flow fills the area with a subtle glow.

For all its angular modernity, the design is also meant to be inviting. Long, broad steps lead from the deck into the pool, pro-

Placed directly adjacent to a main outdoor-living space, the thermal shelf serves as host to a big market umbrella or a display of dancing laminar jets, but it also offers bathers a comfortable place to keep cool under sunny skies, with a gloriously tiled interior contour that supports shoulders and heads comfortably above the water level.

SUBTLE Colors

The color palette for this job followed the lead of the structural and hydraulic designs in that it's simple and subtle, inspired by the house and influenced by the setting – yet reveals a wonderful complexity when you take a closer look.

We started with the soft grays and browns on the outside of the house as well as the pale hues of the limestone decking. We also worked with some blue touches on the outside of the home, incorporating them into our tile selections for the thermal shelf and spa.

The tile, which was manufactured by Oceanside Glasstile of Carlsbad, Calif., is a mix of amber, opalescent white (with a soft gold sheen), deep brown and dark Navy blue. As blended, it has a shimmering, iridescent quality when the sunlight hits it at the right angles and a colorful matte finish at other angles or when the sun is obscured by clouds. The fact that its appearance changes depending on the time of day, the sunlight and the viewing angle is one of the exciting aspects of the finished product.

The outside and top of the spa, the vertical walls of the thermal ledge and the outer surface of the edge wall are finished in a beautiful, speckled brown granite. The pool's interior is finished with medium-brown pebbles provided by Pebble Technology (Scottsdale, Ariz.); the spa's interior is a smaller-grained, smoothly polished version of pebbles of the same color. The overall effect is the appearance of a soft, green cast to the water – especially in the deep end.

– P.B.

Diagonally across the pool from the thermal shelf, the spa rises slightly higher above the plane of the pool – a position on the outside edge of the pool that affords bathers a spectacular view into the distance as well as a great spot for observing the architecture of the home and its surrounding decks, lawns and terraces.

The vanishing-edge treatment goes a long way toward integrating the look of the watershapes with details of the architecture, including the stair-stepped planes of the home's back wall and chimney as well as the ledger finish and the colors and textures of the deck and other exterior surfaces.

viding another space for lounging. The thermal shelf has a sleeve to hold a market umbrella and provide a bit of shade, and the pool's proximity to the home and its disappearing glass walls makes for special opportunities to lure people to the water's edge.

The stair-step shape of the pool's vanishing edge is borrowed from the planes of the roofline overlooking the pool area. We also adopted the tasteful dry-stacked ledger detailing of the home's columns and outside walls, picking up the same material on a portion of the outside wall of the vanishing edge's catch basin.

Finally, we carried the home's existing French limestone decks out to the pool. That same material extends into the house, further intertwining the interior and exterior spaces. At poolside, however, we had great difficulty sourcing an appropriate limestone coping, so we ended up using a travertine material that closely matches the decking in both color and texture.

CARE IN CONSTRUCTION

As one might expect, construction tolerances on this project were critical.

Taken as a whole, we installed 160 linear feet of vanishing edge on three levels. Because monolithic appearances were so important to visual success, we operated under the assumption that every single elevation had to be dead on. I think we made the grade: After checking and rechecking over and over again, we believe the structures are as close to perfect as the human eye can measure using a water level. This means we're able to wet the edge with an absolutely minimal return flow.

That notion was inadvertently put to the test when we mistakenly installed a 3/4-horsepower pump for the edge return (although the design actually called for a 3-horsepower pump). Amazingly, the undersized pump wetted every edge with a flow of no more than 65 or 70 gallons per minute.

Of course, we eventually installed the proper pump to handle bather surge, but

The floating steps add a wonderful finishing touch to the interplay of elevations, water surfaces and deck levels in the entire composition of watershapes. Set on a swim-out bench next to the spa, they offer easy access to hydrotherapy while adding to the impression that water is ready to overflow every edge – and flood the lawn beyond the spa.

this small misadventure showed us that our masonry crews had truly nailed the edge-leveling challenge.

Everything in the hydraulic design was keyed to the leveling of the pool's vanishing edge. We went through extensive iterations in CAD drawings, establishing that one level and then working backward to set the levels of the gutters and the edges for the thermal shelf and the spa.

For a long time, I was nearly alone in being able to visualize where all the water was flowing. This created some real challenges in the forming, steel and plumbing stages, especially as we worked around the thermal shelf and the spa. Although we occasionally needed to go back and rework a point or two, all the details ultimately came together without any major problems.

The intersections of various flows and materials and the shifts in planes in the watershapes' complex geometries forced us to think through every detail of our perimeter-overflow systems. For instance, we had to set the slots low to avoid adding turbulence that would disrupt the vanishing-edge detail; we also had to cant the vanishing-edge weir to the inside of the pool – something we don't usually do – so the spillway would flow into the pool rather than down the wall.

And let me tip my hat once again to our masons: All of the edges were created with a machined, bull-nosed, quarter-round granite. Amazingly, we didn't have to do *any* grinding or leveling once we'd laid the material.

FLUID DYNAMICS

For all the complexity of the hydraulic design, once all the water makes it to the main body of pool water, the entire system functions as a basic vanishing-edge system. There's no surge tank on the pool, meaning all bather surge is handled in the trough below the edge. That catch basin is 37 feet long, three feet deep and two feet wide, and a trio of three-inch suctions feed a four-inch trunk line.

The equipment is located to the left of the pool, down the slope just a bit. The big 20-by-6-foot pad features three cartridge filters, six pumps (for the spa, the vanishing edges, the pool cleaner, the filtration system and the laminar jets) and a control system, all of them from Jandy (Petaluma, Calif.) There's also a saltwater-chlorination system from AutoPilot (Fort Lauderdale, Fla.) and a corona-discharge ozone system from DEL Ozone (San Luis Obispo, Calif.). The laminar jet system was provided by Crystal Fountains (Toronto), with commercial-grade fiberoptics supplied by SuperVision (Orlando, Fla.).

A FLOATING Pathway

The floating steps leading to the spa required some precise design and construction detailing.

When we first designed the project, the homeowners weren't sure how they were going to landscape the area adjacent to the spa's end of the pool. Among other possibilities, they were considering raised planters, so we wanted to create access to the spa that avoided conflicts with whatever might develop.

I wanted to avoid the step-up detail that normally occurs at the waterline tile in order to soften the transition to the landscaping, so I raised the water level here to the level of the coping and installed a collection slot in front of the edge. This slot is at exactly the same level as the vanishing-edge weir, and water flowing into the slot moves beneath the spa and directly into the catch basin.

The clear choice was a path across the water. Even though the clients eventually opted for grass up to the water's edge, the floating steps became another of the project's compelling details.

To accommodate the pads, we installed a large swim-out bench fitted with pedestals that support the two-foot-square pads. The bench was tiled, and we carried that material up the pedestals, under the pads and up their sides. Against the tiled background, the supports visually disappear and the marble pads appear to float on the water.

– P.B.

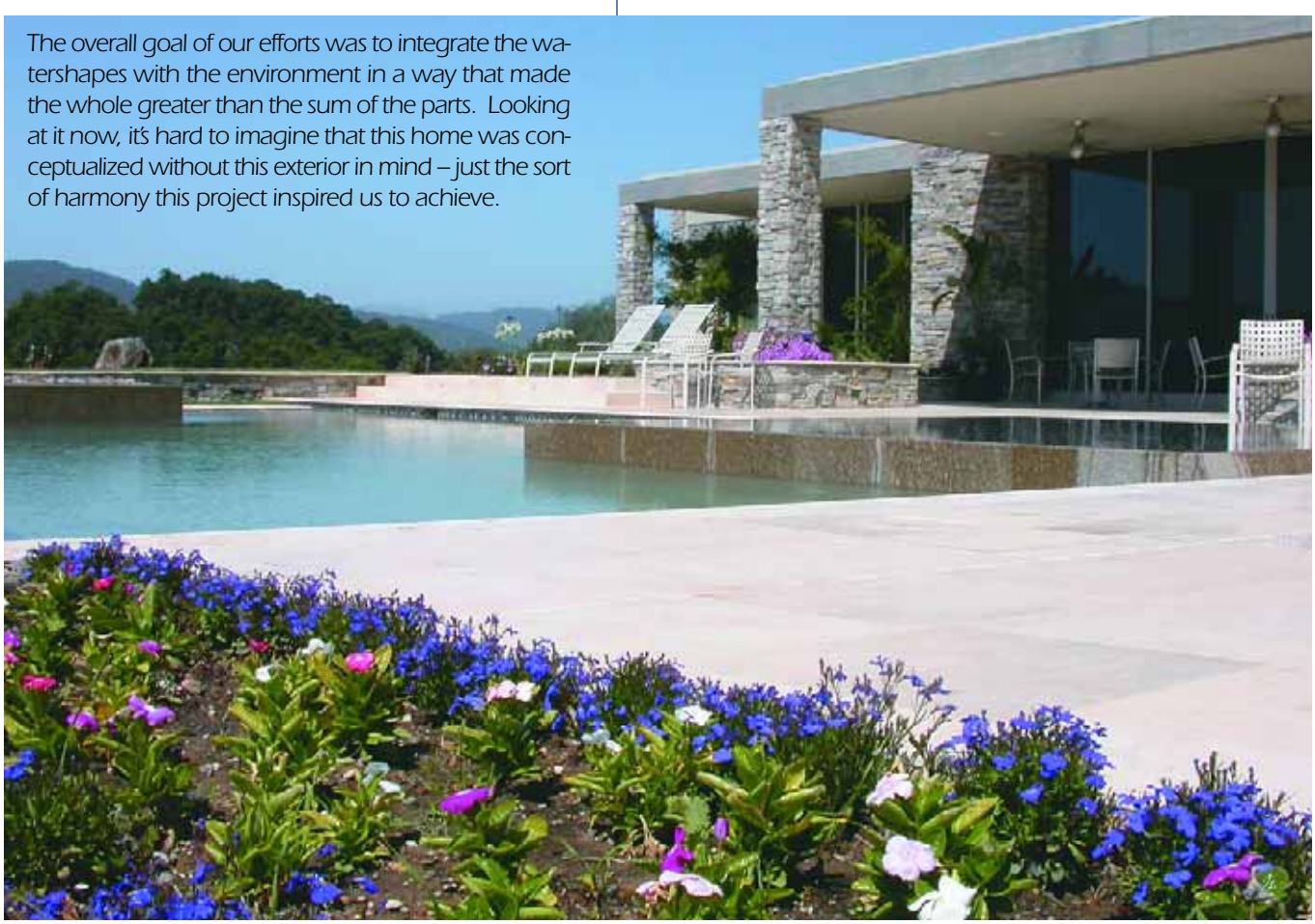
We developed a nice detail to make the spa-side control invisible, recessing a panel into a stone cubbyhole hidden in the coping by a small stone lid. We used the same approach with the conduit box and standpipe for the water-leveling system, now hidden beneath a small, removable coping stone, and used the same basic detail to hide the skimmer throats, the sources of the laminar jets and the deck's slot drains.

In a project filled with an amazing number of fine details, the text here covers only the highlights. But that's just as well, because the real point of this article – and the real beauty of the project – is the way that all of this complexity exists in service of a dramatic yet fundamentally simple artistic statement.

Not long after we finished our work on site, the home was featured in a local charity garden tour. I was delighted to hear that the watershape garnered more than its share of comments, with a great many of the visitors observing that the more you looked at the composition, the more there was to see.

From the very start and all the way through the finish detailing, achieving that level of aesthetic engagement was exactly what we were after. It's a source of pride for us – and an effort we hope is worthy of the great artists and architects whose work inspired us.

The beauty of the decking material we were working with inspired us to interrupt the expanses of stone as infrequently and minimally as possible. This led us to get creative with access to the spa-side controls, for example, and with the slots in the deck for the laminar jets.



The overall goal of our efforts was to integrate the watershapes with the environment in a way that made the whole greater than the sum of the parts. Looking at it now, it's hard to imagine that this home was conceptualized without this exterior in mind – just the sort of harmony this project inspired us to achieve.

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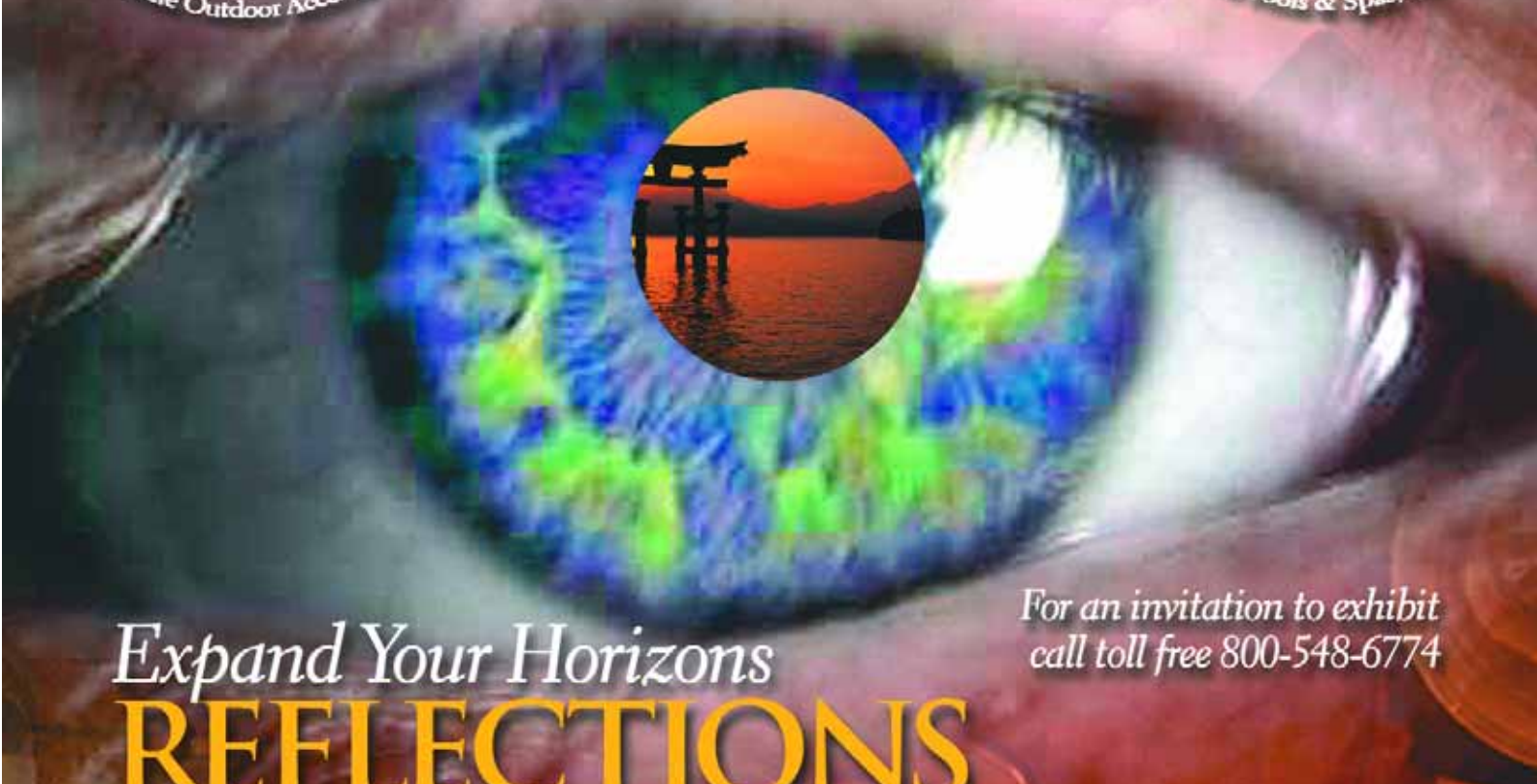

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REFLECTIONS IN A GOLDEN EYE

Of Interest

The following information has been provided to WaterShapes by product suppliers. To find out how to contact these companies, look for the Product Information Card located on page 66.

Watergarden Pumps

Circle 135 on Reader Service Card

CAL PUMP has introduced a line of watergarden pumps featuring clog-resistant filter enclosures with large, stable feet that suspend the pump for less maintenance and easier service. The pumps thoroughly aerate water passing through the pump for optimal pond health. They also feature thermal-protection switches, a 20-foot cord, a telescoping riser/diverter and a choice between two spray heads. **Cal Pump**, Valencia, CA.

Artificial-Rock Catalog

Circle 136 on Reader Service Card

REPLICATIONS UNLIMITED has released its 2005 Elite catalog. The 8-page, full-color booklet is filled with products for serious watergardening professionals and includes information on the company's Urestone line of lightweight, weather-resistant, color-stable, artificial-rock waterfalls, bubblers, self-contained fountains and streams as well as landscape and cover rocks. **Replications Unlimited**, St. Louis, MO.

Pool Forms

Circle 137 on Reader Service Card

SWIM-CRETE POOL PRODUCTS has published a catalog on its forms and accessories for pool construction. The 72-page, full-color booklet starts with information on what's involved in using the company's forming system, then goes on to cover forms for straight and radiused walls, corners, pilasters, swimouts and more. Steps, tools and pool/spa templates are also covered. **Swim-Crete Pool Products**, Shawnee, KS.

Chlorine-Gas Detector

Circle 138 on Reader Service Card

CHLORINATORS INC. offers a new and improved Regal Series 3000 gas detector to monitor concentrations of airborne chlorine. All units now include a single, unpowered, isolated 4-to-20 mA output circuit board on all single-sensor detectors as well as six 10-amp relay circuits consisting of DPDT danger relays, SPDT warning relays, a SPDT latch-alarm relay, and a SPDT horn/failure relay. **Chlorinators Inc.**, Stuart, FL.

Garden Pottery

Circle 139 on Reader Service Card

CERATOSA offers a full line of glazed and unglazed pottery for garden applications. The basic, unglazed terra cotta pots are available in ten configurations in a wide variety of heights and diameters and can be enhanced by firing with blue, green, yellow or red glazes in ultra-glossy, glossy or matte finishes. Progressive tints are also available for the classic urn, bowl, barrel and vase forms. **Ceratosa,** Totana, Murcia, Spain.

Solar-Powered Lights

Circle 140 on Reader Service Card

DYNAMIC ENTERPRISES GROUP has added the Mermaid light to its Solaragy line of outdoor-lighting products. The solar-powered statue requires no wiring, so it can be installed in seconds to dress up any setting. Designed purely for decorative applications rather than for area lighting, the luminaires are housed in highly detailed figurines carved to exacting standards. **Dynamic Enterprises Group,** Jacksonville, FL.

Pond Kits

Circle 141 on Reader Service Card

AQUASCAPE DESIGNS offers Signature Series pond kits featuring the company's new skimmer with an adjustable faceplate and a faux-rock lid as well as a new Biofalls filter design with a removable rock shelf. The kits come complete with everything needed to build and maintain a pond, including a water-treatment package, an underwater-lighting package and much more. **Aquascape Designs**, Batavia, IL.

Finish-Grinding Materials

Circle 142 on Reader Service Card

3M has introduced the Flexible Diamond Products line to handle a full range of grinding, sanding, buffing and polishing tasks. Designed for the specific needs of the pool and spa industry, the durable, flexible sandpapers offer superior cutting performance with hard-to-grind materials such as quartz, ceramics, pebbles and glass and are available in five grits and several common sheet configurations. **3M**, St. Paul, MN.

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RED GLASS TILE

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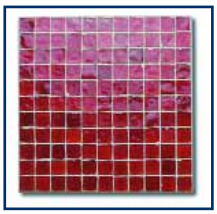


OCEANSIDE GLASSTILE has introduced Red #777 to its Tessera line of 1-inch mosaic glass tiles. The translucent red tile has a glossy finish and a gem-like color and is designed to provide the perfect tone-and-texture contrast to more subdued materials, including natural stone, cork and wood. The Tessera line also includes border treatments as well as a full range of trim pieces. **Oceanside Glasstile**, Carlsbad, CA.

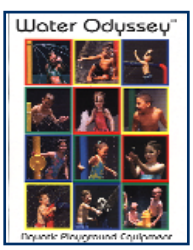
DECK-DRAIN SYSTEM

Circle 144 on Reader Service Card

QUAKER PLASTIC offers a 2-inch-square deck-drain system that is adaptable to standard 1-1/2-inch fittings. Available in black, gray, white or tan/sandstone to match most deck surfaces, the system allows for increased water flow. Its joints bond together the same way as do PVC pipes, and the system also comes with a double-taped top for extra peeling strength after the concrete is placed. **Quaker Plastic**, Mountville, PA.

WATERPLAY PRODUCTS

Circle 145 on Reader Service Card



THE FOUNTAIN PEOPLE have published a catalog on the Water Odyssey line of aquatic playground equipment. The 60-page, full-color booklet offers project profiles woven around information on base design, inground and aboveground play elements, controllers, activators, accessories, finishes and colors. Also featured are descriptions of the company's planning and design services. **The Fountain People**, San Marcos, TX.

SOLIDS-HANDLING PUMPS

Circle 146 on Reader Service Card

SAVIO ENGINEERING has introduced a new debris-tolerant, fish-safe line of Water Master solids-handling pumps. The latest addition to the line has an output of 5,000 gallons per minute, and other models are rated at 1,450, 2,050 and 3,600 gph. They can safely pass materials up to 1-1/2 inches in size and have an oil-free design that makes these pumps safe for fish and other wildlife. **Savio Engineering**, Santa Fe, NM.

Duplex Valve

Circle 147 on Reader Service Card

E-VALVE has introduced the Vac-Wash CrossFire duplex valve. Featuring an integrated backwashable strainer, the valve is designed to be installed with a pump (less its strainer basket) and a backwash filter (less its backwash-valve assembly) and simultaneously cleans both the filter and the strainer with a single valve operation that reverses the flow. The free-flowing valve is also fully automatable. **E-Valve,** Aurora, CO.

Garden Accessories

Circle 148 on Reader Service Card

GARDENDANCE offers a line of garden torches, outdoor lighting, birdfeeders, hand-blown-glass hummingbird feeders and a variety of other accessories for outdoor rooms. Products include artist-designed stoneware torches made for outdoor use. Individually sculpted and hand-glazed, these pieces are kiln-fired to 2,200 degrees to ensure durability and long-lasting color-fastness. **Gardendance**, Hillsborough, NC.

Lighted Spillway Pots

Circle 149 on Reader Service Card

FIBERSTARS has introduced Lighted Spillway Pots. Lightweight, durable and resistant to freezing conditions, the pots are easy to handle and have been designed for easy installation with a simple water supply and conduit for the fiber. They come with a bronze-like patina and bring an elegant spillway look to any pool or spa. The package includes 45 feet of 50-strand fiber and a lighted bubbler. **Fiberstars**, Fremont, CA.

Pool Timers

Circle 150 on Reader Service Card

ALLEN CONCEPTS offers the TightWatt line of energy-saving pool timers. The devices are programmed with algorithms that automatically adjust the timing twice each month, making pool systems run longer in the summer and less through the winter. Designed for efficiency and ease of use, they feature battery backups and serve as drop-in replacements for common pool timers. **Allen Concepts**, Chandler, AZ.

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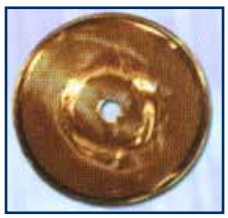
Brass Castings

Circle 151 on Reader Service Card



A & B ALUMINUM AND BRASS FOUNDRY offers a full line of brass castings for use in and around watershapes. Products include brass skimmer covers in 6-, 8- and 10-inch round configurations, square covers and grates in 5-, 8-, 10- and 12-inch configurations and round grates and drain covers in 6- and 8-inch forms. Trench-drain covers and fountainheads are also available. **A & B Aluminum and Brass Foundry**, Dallas, TX.

Natural Stone

Circle 152 on Reader Service Card

KRC ROCK offers a variety of natural-stone products, including landscape boulders, flag and building stones, aggregates, decorative crushed rock, river rock, decomposed granite and a range of specialty stones. Design and selection services for interior and exterior projects are available, as is a unique delivery and placement system that enables easy and artful handling of large boulders on site. **KRC Rock**, San Marcos, CA.

Stone-Aging Treatment

Circle 153 on Reader Service Card

HADDONSTONE USA has introduced New StoneAge, a formulation designed to give new stone an antique look. The product is mixed with water and painted on the surface of the stone to mimic the appearance of natural weathering. It comes in three colors – Antique Grey, Scorched Earth and Forest Green – that can be used separately or in combination to achieve additional colors. **Haddonstone USA**, Bellmawr, NJ.

Software Upgrade

Circle 154 on Reader Service Card

STRUCTURE STUDIOS offers an update for its Pool Studio software having to do with vanishing edges and use of raised or lowered elevations while eliminating many drawing constraints. The vanishing edges can have custom angles and either forward- or back-angled weirs, and there's an option that turns the water flow on or off. The package also includes numerous landscape-library additions. **Structure Studios**, Las Vegas, NV.

Water Vaults

Circle 155 on Reader Service Card

PONDSWEEP MANUFACTURING offers Endless Cascades, a waterfall vault that allows for creation of simultaneous streams and falls in varying directions from single units. Individual units can be combined to construct waterfalls of any size or shape with a limitless number of streams and directions. The vault also features a heavy-duty grate that will support statuary, stone or an overflowing vase. **PondSweep Manufacturing**, Yorkville, IL.

PVC Pool Lining

Circle 156 on Reader Service Card

RENOSYS offers a line of pool-construction and renovation products, including PVC Pool Shell, a 60-mil, reinforced-PVC membrane system used to line the interiors of existing swimming pools. This system, which may be used with new pools or in renovation projects, is watertight, low-maintenance and masks virtually any surface imperfection. Flooring, gutters and grates are also available. **RenoSys**, Indianapolis, IN.

Pool-Alarm System

Circle 157 on Reader Service Card

AQUASONUS has introduced a passive, sound-activated pool-alarm system that features speedy detection, accurate results, easy installation and trouble-free operation. Its hydrophone constantly listens to the sounds present in the pool; the computer monitor sounds the alarm immediately when a child falls into the water, but normal operations of pumps and filters will not trigger it. **AquaSonus**, Lowell, MA.

Slide Valve

Circle 158 on Reader Service Card

JANDY offers two-position backwash valves designed to connect directly to the side ports of sand and D.E. filters including the company's DEL 60 or DEL 48 filter models. Made with high-temperature thermoplastics, the valves have stainless steel hardware and an ergonomic handle and come in two models – one pre-plumbed with filter unions, the other without unions. Both have 2-by-2-1/2-inch ports. **Jandy (Water Pik Technologies)**, Petaluma, CA.

HOW GOOD DO YOU WANT TO BE?

Pool & Watershape Construction School
October 13-15, 2005

Baltimore, Maryland
Program Cost: $1,950

In keeping with our mission of advancing education on a global level, we are pleased to announce our new Genesis 3 Pool & Watershape Construction School as the latest component in our design-certification program. The new school's curriculum covers plan review, excavation, layout, soil and drainage, steel placement, plumbing, utilities, gunite, tile and coping, decks and drainage, remote controls, automation, plaster and start-up – with top-flight tradespeople, designers and engineers from the industry as instructors. The school will be held in cooperation with program sponsor Hachik Distributors in the Inner Harbor on the Baltimore Waterfront. Program cost includes accommodations for three nights, meals and course materials.

Hachik
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Level 1 Design School
October 19-23, 2005

Morro Bay, California
Program Cost: $3,500

Our flagship program focuses on introducing participants to the Genesis 3 philosophy and our practical approach to watershape design and construction. Sessions focus on drawing and presentation techniques, design principles, engineering details, vanishing-edge design and construction, hydraulics, the history of pools and fountains – and much more. Enrollment is limited to ensure personalized instruction, and all courses are taught by recognized industry experts. There's also a lifestyle component to the school, so participants are encouraged to bring a spouse or guest (additional cost: $950). Program cost includes accommodations for four nights, meals and all course materials.

Landscape Lighting Institute
December 10-16, 2005

Scottsdale, Arizona
Program Cost: $4,100

Come spend five days and nights with world-renowned lighting designer Janet Lennox Moyer and associates to learn all about the art of lighting exterior spaces. Structured to familiarize participants with what's needed to develop and achieve a number of lighting effects in their own projects, the intensive program will include technical information and an introduction to lighting-design concepts as well as design workshops and five nights of hands-on exploration of lighting techniques. The school will be held at the exclusive Hyatt Regency Scottsdale Resort & Spa at Gainey Ranch in the Sonoran Desert. Program cost includes accommodations for six nights, meals and course materials.

GENESIS 3 DESIGN GROUP

Founded by: David Tisherman, Skip Phillips and Brian Van Bower

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GENESIS 3 - THE INTERNATIONAL FORUM FOR CONTINUING EDUCATION FOR WATERSHAPE DESIGNERS

By Mike Farley

Just Weight

This is an unusual edition of "Book Notes."

Yes, it involves reading a book or two, and those books have had a positive effect on my work as a watershaper, but they're well off the path of our usual discussions of publications relating to design, construction or business philosophy. Instead, it's about taking care of our health, both inside and out.

To get the ball rolling, permit me to offer my personal perspective on the sensitive subject of the almighty waistline. I was extremely thin as a kid, could eat absolutely anything I wanted and stayed put with just 120 pounds on my six-foot-tall frame. We're talking *skinny*.

As I became older, of course, my metabolism changed and gradually my once-svelte form gave way to a super-sized version of my former self. It happened slowly – so slowly that I never really perceived much change other than the occasional increase in the size of pants I was buying.

It was about two years ago that I finally peaked at a robust 250 pounds. Even then, I wasn't much aware that I had an issue with my weight until I took a group of kids on a backpacking trip to Colorado. When I came home, my feet were so sore that I literally could not wear shoes for about two weeks. I wondered aloud about what the heck had happened to me when a friend pointed out that, between the 60-pound backpack and the spare luggage around the midsection, I was probably carrying more than 120 extra pounds up and down the mountain trails.

All at once, it dawned on me that I'd gotten *fat*.

Gaining weight with the passage of time is nothing unusual, of course, and I'd never had occasion to give it much thought – but it took me no time at all to decide that something had to be done, and *now*. This was where things began to get tricky and challenging: As we all know, old habits of poor diet and deficient exercise die hard. I really had to marshal all my mental and spiritual energy to drop the extra pounds.

This was about the time that many Americans had discovered the Atkins Diet. Lots of people I encountered seemed to be having luck with the program, so I picked up a book and went on the plan. Dr. Atkins' approach was (and is) controversial, so I want to make it clear that I'm not claiming to be an expert and that I'm neither recommending the Atkins approach or discouraging anyone from following its rules – or anyone else's rules, for that matter.

In other words, this column isn't a book review per se, but instead is my personal testimony to the fact that if you feel you are overweight, you can do yourself a world of good by going on some kind of diet and getting into some sort of exercise program. Atkins worked for me, but there are so many others out there that, I believe, the key is to find a program that works for you and just stick with it.

In my case, I've dropped 60 pounds – and only then did I fully realize how much the extra weight had been costing me with respect to energy and even mental acuity. The benefits to my personal and professional life have ranged across the board, and it feels wonderful to be able to run, hike and generally make my way through the world unencumbered.

In our work as watershapers, we all know that clients prefer to deal with people they perceive as being in control; it's also part of our culture (if not human nature) for people to want to work with reasonably attractive people. In the two years since I made this important change, I've noticed big differences in the way people respond to me, personally and professionally. Frankly, I think this is a shame, because it is so obviously superficial; having been heavy, I viscerally sympathize with the difficulties we face when we're heavier than we should be.

For those in our field who do a great deal of the physical labor themselves, there are legitimate issues involved in being fit and healthy enough to manage the workload. But there are greater emotional and physical concerns at stake in weight-related realities that go way beyond the workplace.

If you're like me and have found yourself at a point where the weight isn't where you'd like it to be, then I offer the heartfelt thought that doing something about it can yield benefits that go far beyond looking good in jeans. WS

Mike Farley is a landscape architect with more than 20 years of experience and is currently a designer/project manager for Gohlke Pools in Denton, Texas. A graduate of Genesis 3's Level I Design School, he holds a degree in landscape architecture from Texas Tech University and has worked as a watershaper in both California and Texas.

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