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March 2001
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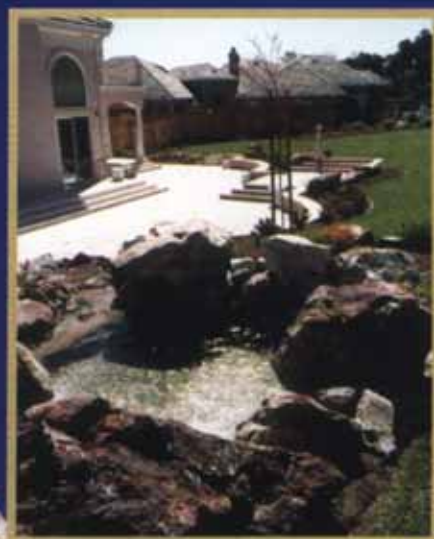
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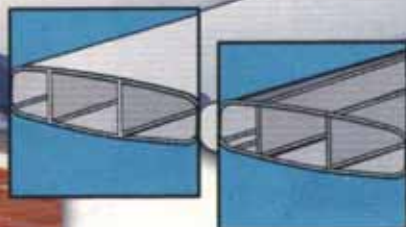


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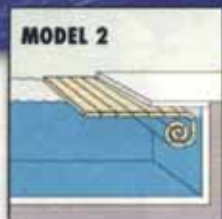


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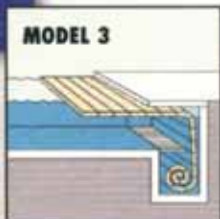
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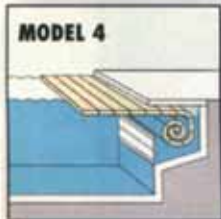
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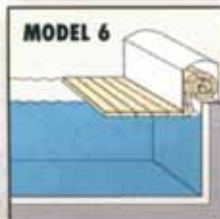
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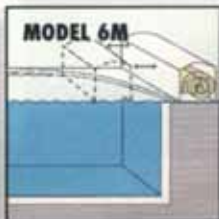
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On the cover:

Photo by Flynn Studio courtesy

Certified Pool Mechanics/Certified Enviroscares,
Bonita Springs, Fla.

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In Praise of Vision Casters

The key to progress in most industries is the presence of people who are able to see through to a better tomorrow. At *WaterShapes*, we've sought to create a forum for these forward-looking people — professionals who use their positive visions as guiding principles in all the work they do.

That's why, when people ask me what this publication is all about, I like to say "It's a magazine about *possibilities*."

When we started *WaterShapes* more than two years ago, we had a strong hunch that there were lots of people designing and building "contained, controlled water" who believed that the future held possibilities far greater than those embodied in the typical images embodied by the swimming pool, waterfeature and landscape-design trades. To be completely candid, however, we weren't *entirely* sure how many people we would find who were ready to share in what we sensed could be a rich, varied dialogue.

I'm thrilled to report that what we're hearing back from you indeed confirms that design, engineering and construction professionals across the country have enthusiastically joined the discussion. I can't tell you how many people have called to let us know that our authors and columnists are providing information critical to their pursuit of excellence in the watershaping trades.

Architect Randall Angell of Dallas put it beautifully in a recent letter: "It is important for members from every division of our industry to see that there are companies all over the country that put pride into their work and truly care about the customer. For this reason, I believe that you at *WaterShapes* are vision casters. Through this magazine, you have the opportunity to spawn a level of excellence never before witnessed in our industry. You have the ability to show what can be achieved when thought is put into each aspect of a project."

I agree with Angell on every point he makes, with one key exception: The "vision casters," as he puts it, are not those of us who work at the magazine; rather, it's you in the trade who've stepped forward to participate in the development of the magazine as your forum. And that applies as much to those of you who write for us as it does to those of you who take the time to consider, adopt, adapt and apply the ideas explored in our pages.

The level of participation in this forward-looking, high-minded dialogue is strong evidence of a trade that, as Angell writes in his letter, "has the passion to stretch the limits and reach beyond what has previously been done."

To that stirring assessment I say, "Bravo!" And to all vision casters in this trade, I say let's keep the conversations moving forward into a future built on a heightened sense of pride and an ever-broadening palette of possibilities!



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IN THIS ISSUE

MARCH'S WRITERS

Ken Alperstein is co-founder of Pinnacle Design, a golf-course architecture firm with offices in Palm Desert and San Diego, Calif. He is a 15-year veteran of the landscape-design industry and has specialized in golf course landscaping since 1989. Alperstein and his partners, Ron Gregory and Bill Kortsch, founded Pinnacle to serve the highly specialized golf course design industry. The company's portfolio includes high-end championship golf courses, clubhouses and grounds throughout the Western United States – including several courses rated in the top 100 in the United States by *Golf Digest* and *Golf* magazines.

Steven Knight is president of Certified Pool Mechanics/Certified Enviroscapes, a water-

shape design and construction firm based in Bonita Springs, Fla. A 23-year veteran of the swimming pool industry, he began his career in 1977 in Fort Myers, Fla., where he specialized in residential pools. In 1992, he acquired Certified Pool Mechanics, a maintenance firm, and immediately expanded the company's operations to encompass design and construction. Moving further into commercial and institutional work, Knight founded the company's Certified Enviroscapes division in 1996 to focus on highly specialized, themed designs and construction for amusement parks, museums and public aquariums.

Paul Benedetti is founder and vice president of Aquatic Technology, a custom swim-

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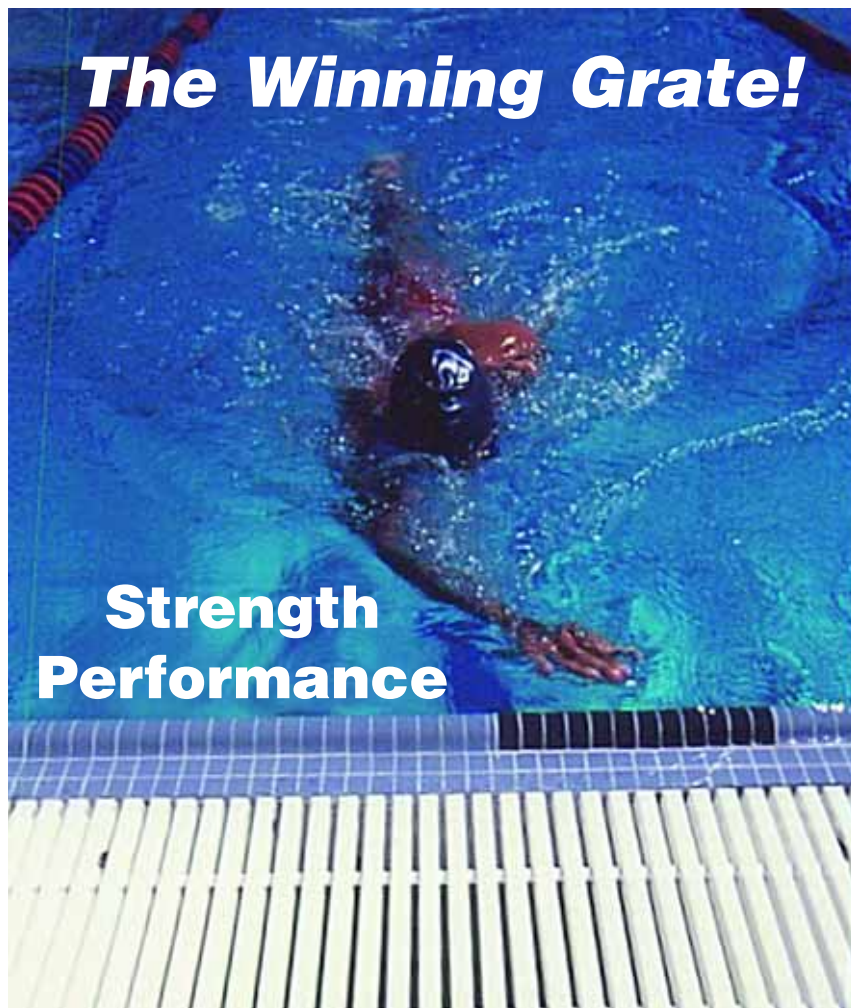
ming pool design/build/service firm based in Morgan Hill, Calif. He began his work in the industry in 1991 as an independent service technician. He quickly moved into major repair and remodeling work, eventually transitioning into original designs and construction. He now builds extremely high-end residential 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 a member of the Independent Pool & Spa Service Association and the National Spa & Pool Institute and is an associate member of the Genesis 3 Design Group.

Tom Moneta is president of Leisure Living Pools, a high-end custom swimming pool design and construction firm based in Frisco, Texas. He founded the company with his wife Joyce in 1980, with the goal of emphasizing overall backyard designs that include decks, arbors and fences in addition to watershapes. The company has been recognized both nationally and locally with a variety of design awards: In 1998, NSPI gave the company its Technical/ Engineering Achievement award. Moneta is currently a member of the national board for NSPI and is past chairman of its Builders Council. **Mike Farley** is a landscape architect with 20 years of experience and is currently one of Leisure Living Pools' design/project managers. After receiving his degree in landscape architecture from Texas Tech University, he began his career in California with a high-end landscape-design firm through which he became involved in several pool remodeling projects. He later joined Geremia Pools in Sacramento, Calif., where he worked for six years before joining Moneta's firm in 1998.

CORRECTION

An important second paragraph was omitted from the caption on page 46 of Kevin Fleming's article, "Unlocking the Future," in our January/February 2001 issue. The paragraph was to read:

"This particular project, created by our design partner Kirk Bianchi and built by Roger Soares of Hydroscares (Fountain Hills, Ariz.), is an example of the kinds of design concepts and features we want to bring to and apply in our own marketplace."



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Quality Don't Come Easy



By Brian Van Bower

During the past few years, I've come to the stark realization that there are too few quality craftspeople in most geographical areas of our country. And it's not just the watershaping trades: The same holds true for most areas of the greater construction industry as well.

That's why, when you're looking for people who can execute highly customized work and are willing to take chances and stretch what they do, it's definitely a seller's market out there. More than any other challenge I face in my own business, finding people who can consistently deliver on the promise of quality I make to my customers is becoming tougher as time goes by.

The hard reality is that, for many people in the trades, it's easier to do three ordinary jobs in a week than it is to do one challenging project over a month. I'm starting to think that this a new example of the age-old quality vs. quantity paradox. And frankly, it seems to me that coming down more often on the side of quantity is one of the things that threatens to doom our industry to mediocrity.

Not Just the Bucks

For the past couple of years, Lars Wiren (my partner in our construction company) and I repeatedly have asked ourselves why we're constantly running up against this lack of qualified craftspeople and have talked at length about how to deal with it.

As we've looked at this problem, it's become clear to us that the driving force here is *not*

The hard reality is that, for many people in the trades, it's easier to do three ordinary jobs in a week than it is to do one challenging project over a month.

money, as one might expect.

It would be easy to understand that a tile contractor, for example, would gravitate toward the more profitable course if he or she were *really* making more money doing three cheap jobs instead of one expensive project. By contrast, however, what we've found is that many craftspeople actually turn away from high-paying jobs with better margins in favor of far more competitive volume work that carries narrower margins and more headaches.

If it's not the money, what's driving the decision? I think it's familiarity and the desire of many people to stay within comfortable boundaries of operation. After all, why put yourself in a situation that forces you to learn? There's risk and even discomfort involved with stretching the limits of your own capabilities.

This complacency of craft is, I believe, further reinforced by the way we regard people who work with their hands in this country. In other places, particularly in Europe and parts of Asia, craftspeople are seen as artisans and enjoy prestige in their communities. They work hard to build their reputations for excellence, and the pride they have in their work shows in everything they do.

I don't mean to sound unpatriotic, but the cold truth is that we in the United States don't share this value system. In fact, a huge proportion of the craftspeople I know view the work they're doing with their hands as an activity that fills time as they wait to ascend to a job behind a desk. Few "ambitious" people in this country view activities such as plumbing, tile or stone work as lifetime pursuits that, in and of themselves, elevate practitioners to a position of respect.

That's a shame, in my opinion. It's too bad for the craftspeople them-

Continued on page 12



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selves, and it's too bad for the designers and builders of custom watershapes who would benefit from the presence of a class of tradespeople aspiring to become artists.

A Matter of Standards

Chances are good that similar problems exist in other branches of the con-

struction trades, but I come from the swimming pool industry and so I'll use it to illustrate the trouble that comes with a lack of pride in craft. It's rough reading, but I'm singling this sector out because it touches most closely on my business and is what I know best.

To put it bluntly, the swimming pool industry embodies this "complacency

of craft" in abundance, and nowhere so clearly as in the "standards" that have been promulgated by its trade associations and supposedly are to be applied in the field. Take the National Spa and Pool Institute's "Workmanship Standards," for example. It's what I call the "How much can I screw up and still get away with it?" standard.

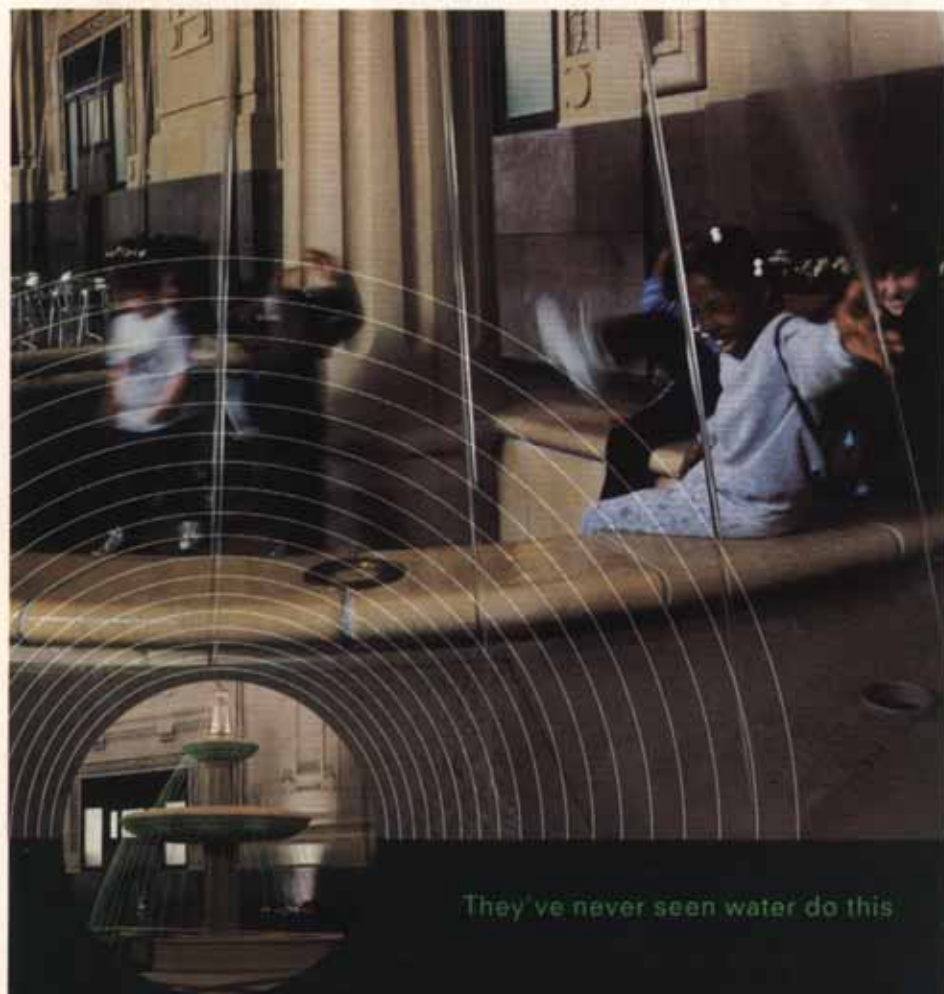
Not to harp on the point, but 'workmanship standards' in our country are designed to help the trades avoid litigation, not to build pride or prestige.

Yes, I'm certain similar documents exist in other construction sectors, and I'm certain this notion of "minimum standards" serves some purpose in a legal sense, but while these documents may effectively keep people out of court or may be used to defend lawsuits effectively, they do little or nothing to foster a standard of excellence among the trades participating in most watershaping projects.

Not to harp on the point, but "workmanship standards" in our country are designed to help the trades avoid litigation, not to build pride or prestige. So instead of quality-based industry standards, watershapers and custom contractors of all stripes adhere to what can only be called *informal* standards that radiate solely from the expectations of astute clients.

Many of these clients operate under the natural assumption that if they pay more, they'll get better quality in return. And as the world becomes smaller and clients and potential clients witness the caliber of work being performed in other countries and become more educated about what quality really means, a much sharper desire for true excellence will flow

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The ability or inability to meet those expectations has everything to do with whether or not these clients report positively on their experiences in acquiring watershapes to other potential clients. And it all comes back to having craftspeople on hand who can get the job done in a way that leaves the customer smiling.

Searching for Solutions

Regrettably, there's no quick, certain answer when it comes to this shortage of artisans working in our trade.

In my own business, my partner and I have often considered going overseas to recruit established artisans into our market. And that idea seems less and less far-fetched every time I travel

abroad and see the way people view skilled manual labor in other countries: It definitely re-ignites my interest in tapping into that pool of talent!

But a more viable answer on a market-wide basis throughout the country is to work toward adopting a value system that places greater emphasis on quality.

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Yes, wealthy clients can afford excellence and demand it, but there's really no reason the \$40,000 project should not be built to a higher standard.

Ultimately, that effort must begin with the "E" word – education. Too many trades in this country are learned strictly through on-the-job training. Indeed, we lack any sort of apprenticeship programs for most of the skills required specifically to build watershapes.

Failing a wholesale revamping of the way we look at craft work and the unlikely revival of the apprenticeship concept, I'd be all in favor of professional trade education and certification that targets artistry in watershaping skills from tiling and forming to plastering, lighting and more.

Another key to the quality issue is on-site project management. Fact is, even high-end builders working with known, good-quality subcontractors need to spend more time on site addressing specific issues of craft. That's the way my partner does it: Lars is out there every day, and if he doesn't like what he sees, he'll demand that the work be done over. In many cases, he'll jump right in and do the work himself alongside the craftspeople.

And lest anyone think that any movement toward greater quality in workmanship is a trickle-down thing that must necessarily begin on the high-end,

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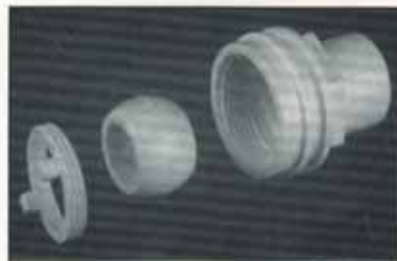
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let me counter that I think the true breeding ground for this change is in mid-range projects.

Yes, wealthy clients can afford excellence and demand it, but there's really no reason the \$40,000 project should not be built to a higher standard. These water-shapes may not have all the bells and whistles and fine details and materials of high-end projects, but they should have sound hydraulics, square and plumb forming, sound installation practices and even a modestly custom design.

In my own experience with mid-range pools, I've found that these customers can be sold on quality construction and quality materials. In fact, clients with a \$30,000 budget quite often will grow that budget when presented with ideas they like. On the flip side, I don't know too many people who would opt for inferior work for a nominally lower price.

What Do You Think?

To be sure, this whole picture is a frustrating one, and I'm the first to admit that I really don't know what the "answer" is. But I do know, in talking to watershapers and other contractors across the country, that this shortage of quality craftspeople is real. Time and time again I commiserate with colleagues who just can't find good people who are dedicated to maintaining high standards.

So, what do you think? I'd love to hear your views and how you ensure an adherence to quality on the job site. I'd also like to hear any thoughts you have on how we as an industry can develop a class of tradespeople who see the value in becoming artisans in their chosen crafts.

Send me an e-mail or a letter with any insights you have. Maybe we can work together to find a solution.

Brian Van Bower runs Aquatic Consultants and is a partner in Van Bower & Wren, a pool-construction firm in Miami. He is also 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.

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Setting Up a Ledge

By David Tisherman

For me, the simplicity and elegance of the International Style was just about the best thing going in 20th-century design. The followers of Walter Gropius in the Bauhaus movement held this simplicity – expressed as a cleanness of line, a uniformity of materials and the establishment of clear relationships among architectural planes – in absolutely the highest regard.

I always try to integrate these design principles into my own work – and one of the ways I do so is through the ledger detail we'll examine this time around. It's an expensive approach and can't be done with every project, but when my clients see the potential and get excited about the look, it's one of those touches that can make a great project into an extraordinary one.

Don't let appearances deceive you: This isn't simple to execute and involves an entirely different approach to setting up the walls, the bond beam and both the interior and exterior finishes. But once you get the construction details down, a whole new set of design possibilities will come into play in your work.

Down to Details

The project shown here features a dry-stacked ledger both inside and outside the pool.

We prepared the wall for this at the forming stage, setting up the forms in the usual way on top, but leaving a gap about six inches thick at the bottom (Figure 1). Steel was then doweled out into the void created by the framing and connected with a nose bar to give it the structural rigidity of a small, cantilevered footing or ledge.

Next, in the gunite stage, we shot the top of the beam and wall to the desired thickness and created a structural ledge at the base of the form that, once cut and cleaned, will support



the stack of ledger stones (Figure 2).

As is shown in Figure 3 (on page 20), the framing penetrates the ledge at intervals. It's important to set these vertical members up so they can be removed easily – and then dry-pack the voids.

This ledge is the key to the whole detail. Yes, you might put down some sort of footing or blocks and stack the stones (inde-

Continued on page 20



Figure 1



Figure 2

the pollution solution.

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Figure 3

The followers of Walter Gropius in the Bauhaus movement held this simplicity – expressed as a cleanness of line, a uniformity of materials and the establishment of clear relationships among architectural planes – in absolutely the highest regard.

pendent of the pool wall) on the outside wall as an afterthought, but then the problems begin (not the least of which is the fact that you can't do anything comparable on the *inside* of the pool that has any structural integrity at all).

The ledge seen here is *part* of the shell. If we'd set the stones on an isolated support such as a footing (as is typically found in ledger construction) and attached the stone itself to the wall, differential settlement will cause the stones

to move. Before long, cracks will develop in the coping material that bridges the wall (that is, the pool structure) and the isolated footing (on which the ledger stones sit).

This shelf approach works equally well inside and outside the wall, and this is where the simplicity I mentioned up front comes into the picture.

Where an ordinary pool might have decking of one material, a face veneer of another material, a coping of a third

material and a waterline treatment of yet another material, the aesthetics of this structure feature a seamless flow from the home and onto the deck and into the pool. This is simplicity itself.

Of course, there are practical issues involved. The steel crew must be instructed in how to set up the thickened walls and shelves so they work structurally; the forming crew needs to know how to set up the beam and

Continued on page 22

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Figure 4



Figure 5

shelves to minimize problems with the shoot; the plumber needs to be aware of the penetrations and the extensions required to move through the ledger; the inside wall needs at least three coats of Thoroseal (both gray and white) to prevent any moisture penetration to the outside wall; and, finally, the masonry crew must know how to dry stack the ledger stones in such a way that you don't see any filler or grout (Figures 4 and 5).

In Figure 4, notice that the ledger stones project over the ledge on the inside of the pool to allow for eventual application of a finish up to the bottom of the ledge.

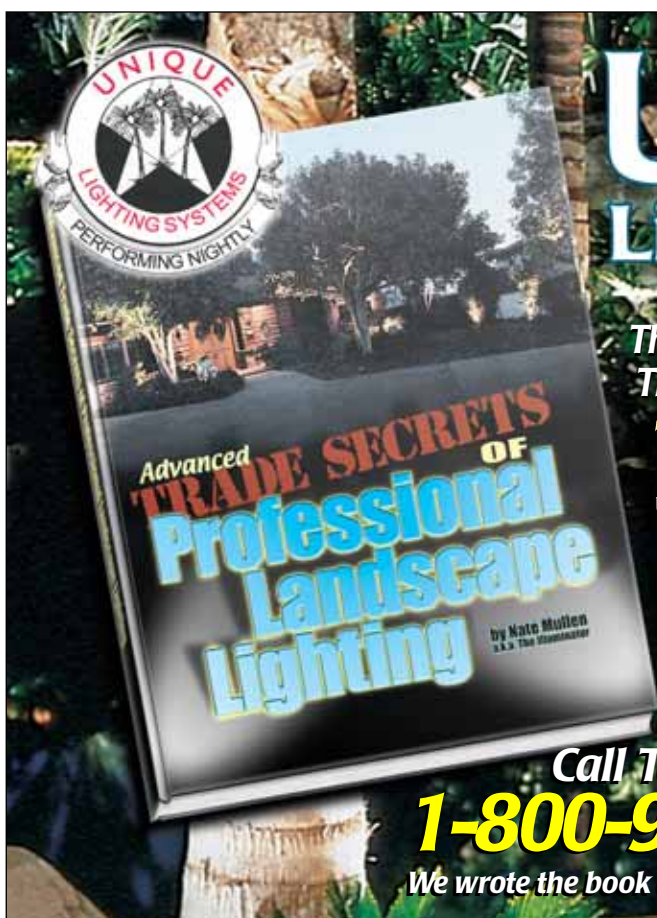
There are two ways to go here: It's possible to set things up so the stones are flush with the finish. Personally, however, I like to set things up so the stones extend an inch-and-a-half or so beyond the plane of the raw gunite (proportionate to the finish material that will be applied to

the inside of the pool). This slight overhang gives me a great shadow line.

By contrast, on the outside of the pool (Figure 5), the ledger is set up even with the outside line of the ledge.

When it comes together, an approach like this one minimizes the sort of "visual noise" against which the Bauhaus designers rebelled early in the 20th Century – and that's all to the good, as far as I'm concerned.

Continued on page 24



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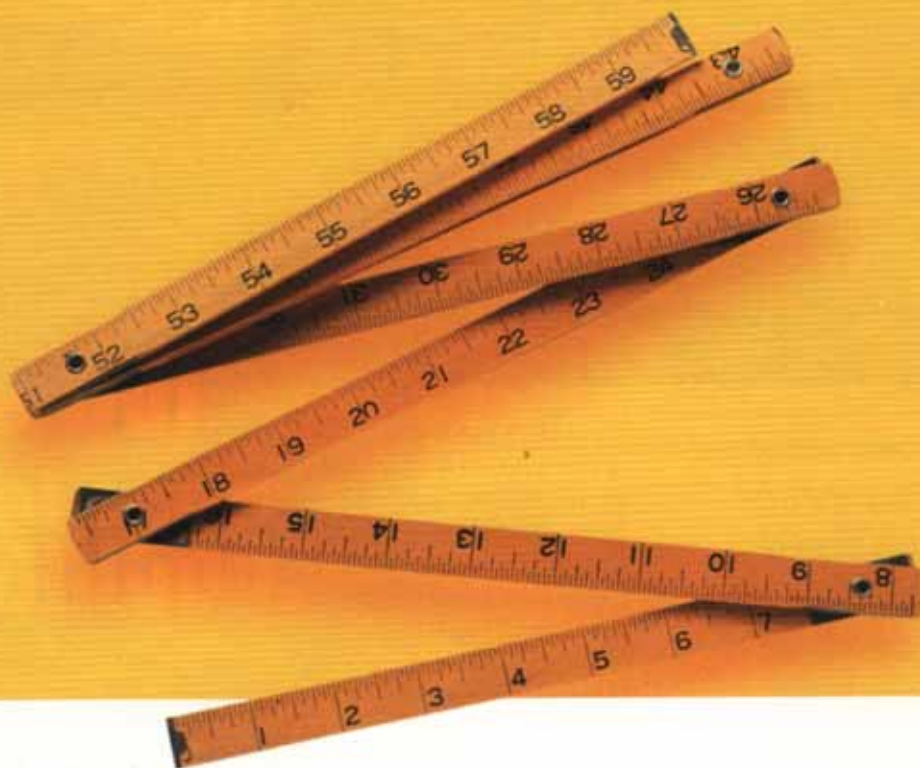
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Don't let appearances deceive you: This isn't simple to execute and involves an entirely different approach to setting up the walls, the bond beam and both the interior and exterior finishes.

Finally, a modest suggestion: Those of you who are truly custom designers and builders may want to learn more about Gropius, the Bauhaus and their influence on the way your clients look at the world and perceive your work. You'll find that many of today's prospects are judging your ideas in a context far deeper than you have ever imagined!

David Tisherman operates David Tisherman's Visuals, a design and construction firm based in Manhattan Beach, Calif., with offices in Marlton, N.J. He is co-founder and principle instructor for Genesis 3, A Design Group, which offers education aimed at top-of-the-line performance in aquatic design and construction.

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Watershapers who work with high-end clients know that almost every project is unique — different circumstances, varied objectives and diverse hurdles. In taking on projects at this level, Tom Moneta and his staff of designer / project managers at Leisure Living Pools have found that combining a rich design vocabulary with a mastery of technical detail enables them to satisfy their clients' desires while maximizing the potential of their backyards.



Site-Specific Solutions

By Tom Moneta & Mike Farley

At our firm, we treat every project and every customer as if they're one of a kind – which in truth they are.

And we've been lucky in developing a high-end clientele that, on the whole, is looking for something special: They enable us to treat each project as an individual work of art; at the same time, they challenge us to stretch our own abilities and increase the variety of design solutions we bring to the drafting table.

In many cases, this requires something of a balancing act between what clients think they're after and the practicalities of the site itself, the architecture of adjoining structures and the views of surrounding areas. For that reason, each of our projects at Leisure Living Pools of Frisco, Texas (a suburb of Dallas), is managed from start to finish by a designer who takes ownership and responsibility for the outcome.

In this article, we'll look at three very different examples of projects (each one designed by landscape architect Mike Farley) where bringing all of these factors together in a single design required creativity in order to meet the specific challenges posed by each setting.

Reverse Ego

Before we get into the projects, there's an important point to cover – one that influences both the procedural realities and our overall design philosophy. It's a concept we call "reverse ego." What this means is that we go into a situation looking to assist in forming and executing the creative vision of the homeowners and/or their architect while applying the company's 20 years of design and construction experience to the process.

On a practical level, this means that most of the design decisions are made by a committee that consists of our designer/project manager, the clients and possibly their architect, landscape architect or designer. We have meetings and discussions with the key players at the outset of the design process – and at every step of the way when a decision is made that significantly influences the end product. This requires a hands-on approach from our designer from start to finish. We build close personal relationships and work hard to keep the lines of communication as open as possible.

At the design desk, reverse ego means that we focus on the circumstances of the site and the desires of the clients and make it all work together. In this way, no two of our watershapes are ever the same, and there's no way anyone can peg our company as having a certain, distinct "style." This quality of what we do is so pronounced that when some people look at our portfolio, they're often impressed to see that the same company has built pools that reflect so much stylistic diversity. For many clients, in fact, this range of possibilities comes as a pleasant (and appealing) surprise.

The fact that we work as part of a design team is not, however, to say that we don't offer our own ideas. In most cases, in fact, the final designs are based either in part or wholly on our creative suggestions. The key here – and the reason for our desire to make sure our own egos don't get in the way – is to develop ideas with our clients firmly in mind. In that sense, we get so deeply involved that we say that ours are the ideas our clients would have suggested if only they had our experience.

And sometimes, it turns out that our clients are surprised at how smart they really are!



An Artful Split

The Challenge: The first project we'll discuss was installed with a beautiful custom home built adjacent to a private golf course. The back of the house is about six feet below the level of the course, and the yard stretches a modest 63 feet from the back of the house to the property line. The six feet in height transitions (we consider this a mountainside here in the flatlands of Texas) were initially handled with one three-foot retaining wall at the fence line and another three-foot wall 30 feet in from the fence that basically split the yard in half.

The homeowners wanted something different – something that would really impress visitors as they explored the property. They also said they wanted to be able to see portions of the pool from two specific points within the home, one on each side. Their wish list also included a large waterfeature and large patio areas for entertaining.

Stylistically, they were after a natural feel with rocks and plantings – but not necessarily with a full-blown duplication of nature that they thought would seem unrealistic. Finally, they wanted to take advantage of the views of the neighboring golf course, which was basically invisible from inside the home because of the elevation change.

The Solution: In this case, we decided to use the six-foot change in elevation to full advantage. At the fence line, a rock waterfall now tumbles into a large, free-form pool that in turn spills into two lower pools via a split vanishing-edge design that flows toward the house (rather than away from it, as is the case with most vanishing edges).

This terraced design enabled us to raise the patios and walkways associated with the pool so that people standing or lounging next to the water would be able to see the golf course, thus expanding their views and giving the area a greater sense of openness. By splitting the vanishing edge and creating the two lower pools, we also were able to provide views from the two primary observation points within the home.

Turning the vanishing edge around in this way meant changing the usual approach to these edges, because we didn't want to confront our clients daily with a monotonously smooth, uniform sheet-flow. Instead, we broke the continuity of the edge with irregular rockwork to provide a more interesting waterfall effect coming towards the home. (In fact, you really only see the vanishing edge effect from the golf course.) The ragged flow into the two lower pools also reinforces the effect of the rock waterfall at the back of the upper pool.

Now from the two main interior observation points – one in the formal dining room, the other in the kitchen on the other end of the home – the upper pool appears to wrap around the house and move out of sight; in fact, you take in about half the space from each point, which invites the observer to move out into the space to walk the pathways and find out what's going on in the rest of the yard.

And there's much to take in: There are four separate patio areas around the pool on different levels, offering private areas for relaxing or conversation and offering a variety of viewpoints of the pools and their natural rockwork and landscaping.



Making Adjustments

We made a significant design change late in the project to one patio – the circular deck between the two lower pools.

In the original design, this deck was on the same level as the main pool, the thought being that it would provide a sort of central, raised viewpoint. As we spent more time on site, however, it became obvious that this deck would be far too prominent as originally designed – too abrupt a change in elevation between the house and the pool.

So we lowered it 18 inches to a point about halfway between the levels of the main upper pool and the lower catch basins.

–T.M.

A Secret Garden

The Challenge: Sometimes what your clients want and what makes sense for the site are entirely different things. This project offers an extreme example of this situation.

Here, the clients wanted two things in their small backyard: First, they were after a formal, architectural swimming pool to go with the geometric look and dramatic arched back window of their home – as well as decking and rockwork that would pick up the elegant whites and cream colors. Second, they wanted their backyard to include a woodsy, natural fishpond that would serve as sort of a meditation garden. And all of this, of course, had to fit in a 60-by-60-foot space.

To be honest, we weren't sure at first how we were going to pull this one off. But we proceeded to reverse our egos, accepted the fact that the clients had ideas we needed to accommodate and gave it our best shot.

The Solution: As we were considering how to put an architectural pool next to a naturalistic pond and make it all work together, it became obvious that we did have one thing in our favor: The line of sight from the focal-point arched window stretched at a perfect diagonal across the yard to the back corner. So we knew we could use the maximum distance to create two distinct exterior “rooms.”

Immediately, we knew that the pool would be in the foreground and that we'd somehow conceal the pond area and push it as far to the back as we could.

Our first design had a rectangular pool set diagonally in the yard. The space beyond the pool would be (somehow) disconnected from the pool and was to include the small pond in a garden setting. The clients didn't like what they saw: They wanted a bigger pond and weren't crazy about the basic rectangular shape of the pool. So we went back to the drawing board.

Before long, we'd come up with the current L-shaped pool design along with the raised spa/waterfeature structure on the far side. This new spa structure echoes the geometry of the pool and draws the eye toward the back of the pool by spilling into a small basin containing four vertical waterfeature jets. Sheet waterfalls in front of the waterfeature basin fall into the pool itself.

Once we hit on the basic pool/spa configuration, the rest began to fall into place. The circular planter in the foreground of the pool lines up with the raised spa structure. Directly behind that is a garden arch that separates the pool area from the pond beyond.

We used an arched pergola to echo the arched window on the home and also to provide a visual barrier directly behind the pool. (We've found that arches, pergolas and other, similar architectural transitions work well in situations where you want to separate areas, because they provide a distinct visual threshold that invites you to discover what's on the other side.) Low hedges planted on both sides of the arch further separate the pond from the pool, while the raised spa, arch and plantings conspire to hide the low-lying pond in the back.

The transition to the pond is eased by the arch and, as important, by the flagstone decking, which we extended into the pond area to intersect with a crown of natural rock that surrounds the far side of the pond. The modest two-foot waterfall is located in the very back corner of the space, filling it with gentle sounds. A stone bridge (reinforced by a steel plate below) lets observers cross the pond at its narrowest point.

There's not a lot of room around the pond, but we were able to provide space for plantings, narrow pathways and a bench.

Given the challenges of the site and the clients' desires, this project came together remarkably well: These two distinctly different areas comfortably coexist despite





A Daring Display

The Challenge: This project was built as part of the annual "Parade of Homes" event in Dallas. Each year, the local chapter of the National Association of Home Builders hires six to ten high-end architects and builders to create model homes in a selected neighborhood. When the work is finished, the public buys tickets for tours of the fully furnished and landscaped homes; all proceeds go to the Make-a-Wish Foundation.

The project seen here was part of the 2000 Parade of Homes. In September and October, more than 40,000 people came to take a look.

All of these projects are true examples of partnering: Everything is decided by committee in order to create environments that are

aesthetically consistent with the vision of the architect. In this case, the home has a Moroccan design motif with arches, tile roofs and lots of beautiful gold and cream colors throughout. This style, while common in other parts of the country, makes a bold statement in North Texas where it's seldom seen. We felt that this gave us an opportunity to do something truly different and exciting.

The challenge we faced was to echo this architectural style in the backyard, a steeply sloped slice of ground measuring a cramped 68-by-30 feet. The homebuilder wanted something spectacular in this small space, with strong views from several interior points.

The problem was that no one location in the house overlooked the entire yard. Another challenge came by way of the fact that the

Continued on page 34





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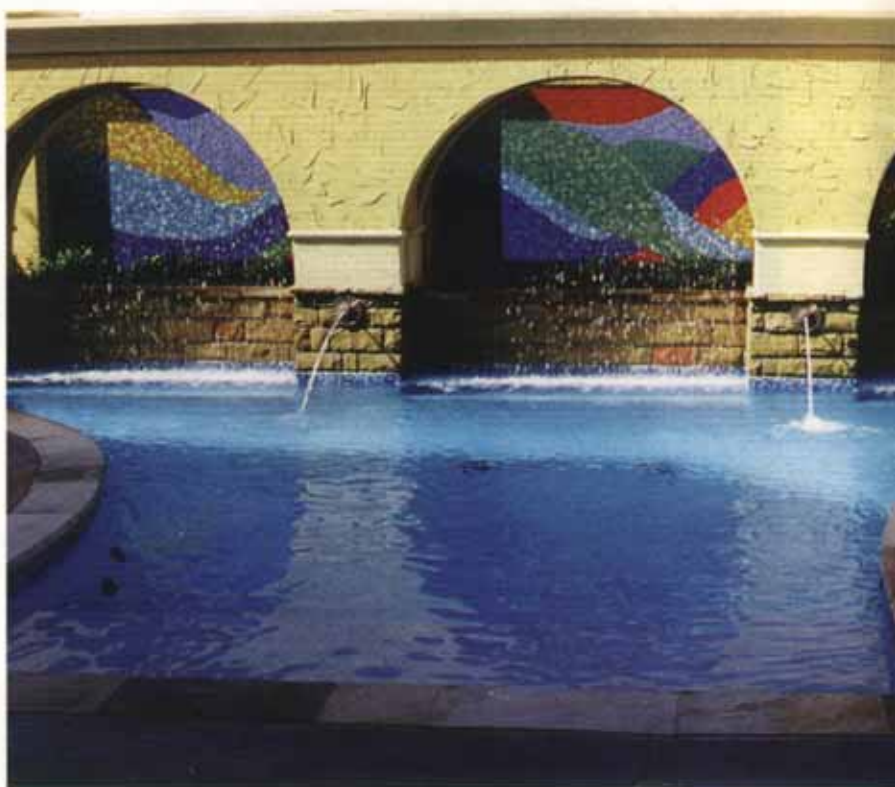
property was located just above an extremely busy street that needed to be concealed from view – and have its noise masked as well.

The Solution: The design we came up with involved a series of arches installed in front of a wall that effectively blocked out the view of the street. We started by building a retaining wall and raising the grade to level. Now the wall stands nine feet above the original grade – and a full twelve feet above the street on the other side. This creates an enclosed space inside which we created our Moroccan courtyard.

We used the sequence of three arches as a visual motif that could be seen from various points inside the home. During the design process, we became aware of the Florida Falls rainmaker fixtures (supplied by Polaris of San Marcos, Calif.) and decided to install them in our arches to add visual interest and blot out all but the loudest traffic noise.

In the recesses of the arches, we placed love seats where bathers could relax beneath or behind the sheeting droplets. Our original concept was to install tile backgrounds on the wall behind the two outer arches and to set up some sort of fire effect in the center arch.

The city's fire codes didn't allow for such a feature, so we



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went with tile mosaics and landscaping that worked across all three spaces. The landscaping was included to soften the transition between the property wall and the arches. It also contributed to the effect of looking through the arches to a landscape beyond—a landscape to be represented by the vivid tile mosaics.

At that time, a pair of local artists was making a small tiled table for the kitchen's dining nook. We liked the look, so we asked them to create a similar pattern using the same shapes and colors behind our arches. Although the three resulting panels are separate, they now seem to flow into one another.

On one side of the fan-shaped pool we installed a barbecue; on the other, we set an all-tile circular spa. Lush plantings were distributed throughout the space, and we installed an oversized wooden door next to the spa; this door leads to the carport but suggests that something far more interesting lies beyond.

This setting is so intimate that it's virtually impossible to capture the area in a single photograph. But as you move through the area, the effect of the gold stucco and landscaping—and especially of those three rainmaker arches with their beautiful tile backdrops—is really something to behold.



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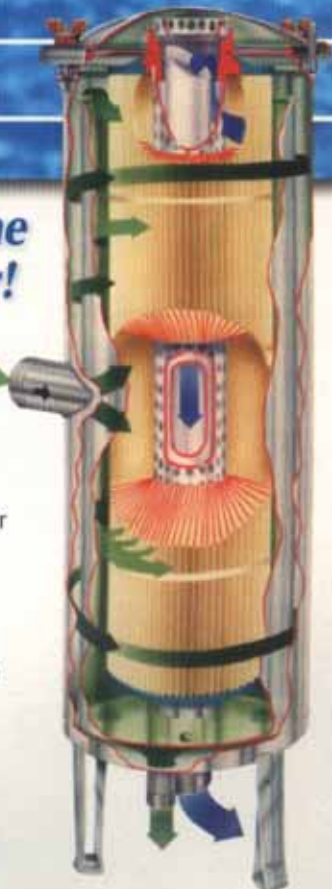
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Fun in the Sun

By Steven Knight

You won't find too many clients who can afford to install full-scale theme parks in their residential backyards, but that's exactly what builder Steven Knight ran into on this project. Indeed, this owner had the imagination (and the budget) to bring a host of childhood fantasies to life over his sprawling estate in Central Florida, and now the watershapes at Fox Trotter Ranch are a true monument to kids young and old.

I like a good challenge in my work, and I like to have fun making it happen. This project embodied the best of both experiences.

The project displayed on these pages was built for a wealthy client who lives on a working horse ranch in the rolling green countryside near Ocala, Fla. Our company, Certified Pool Mechanics/Certified Enviroscares, was up to the task. We build hundreds of highly customized watershapes each year for a variety of theme parks, resorts and high-end residences. Most have highly developed "themes," so we're accustomed to providing our clients with heavy doses of imagination and creativity.

The basic marching orders on this job were straightforward: The owner wanted a theme park on his property for his kids.

Fun was the name of the game, and imagination was the currency that got us in the front door. The result is a series of watershapes that combine various elements found in theme parks and resort hotels – but rarely seen in residential projects. We've worked on bigger projects with bigger budgets, but at \$1.6 million and counting, this is by far the largest private-residence project we've ever done.

The design needed to have "snap, crackle, pop." Let's take a tour of Fox Trotter Ranch and see what it takes to perform at that level of expectation.

POOLS OF FUN

The original project called for two primary pool areas: one for kids and one for bigger kids (including the adult variety). The client wanted slides, grottos, interactive water, beach entries, waterfalls, fog machines, lighting, rock structures, rain-makers and bridges, all built with as much creative detail as we could muster.

He told us he wanted us to "blow his mind," so that's what we tried to do. Right away, we decided to go with a "Swiss Family Robinson" theme, filling and surrounding the water with structures that suggested life in a jungle tree house.

The kiddie pool and its various interactive toys start with a 360-degree beach entry. About 50 feet across, the pool gradually slopes to a maximum depth of



Photos © Flynn Studio

Fun in the Sun

18 inches. In the center is a massive treehouse and a handcrafted, 18-foot alligator slide.

The whole affair is set beneath a 60-by-60-foot glass and aluminum enclosure with a retractable roof: When the sun shines, 16 massive panels slide back to allow the Florida sun to drench the area; when it's cold, the panels shut out the elements so the kids can still enjoy indoor play.

The central play structure was built in conjunction with Com-Pac Filtration of Jacksonville, Fla. They assembled the basic aluminum substructure and plumbing within the tree house.

The structure itself looks like a bamboo hut with adjoining bridges. The upright stand legs are seamed aluminum with a faux-bamboo finish on the outside. The walkways use eucalyptus wood planks that hold up beautifully to water with no protective finish at all. The overhead roofing is the real thing, too, made entirely of bamboo thatch material.

The entire structure is an interactive toy from end to end, beginning with the roof and rainmaker waterfeatures. Water literally pops up everywhere, spraying, squirting and spewing from a variety of nozzles and weirs on the bamboo uprights themselves. There are also faux-bamboo water cannons along with a mushroom-style sheeting waterfeature mounted on the tree house's platform, a tire swing rope and totem poles that spit streams of water – not to mention the big alligator waterslide, hand-sculpted by senior project manager Roger Nauman.

There's also a separate rock structure with a sheeting waterfall that's built for climbing and can be defended using a water cannon mounted in a faux-rock turret. (This rock structure also visually links the rock-work outdoors to the interior space of the kiddie area.)

There's even a new restroom – all wood-frame construction with split-faced bamboo walls and bamboo reeds on top. The doors, by the way, are labeled for "damsels" and "headhunters."

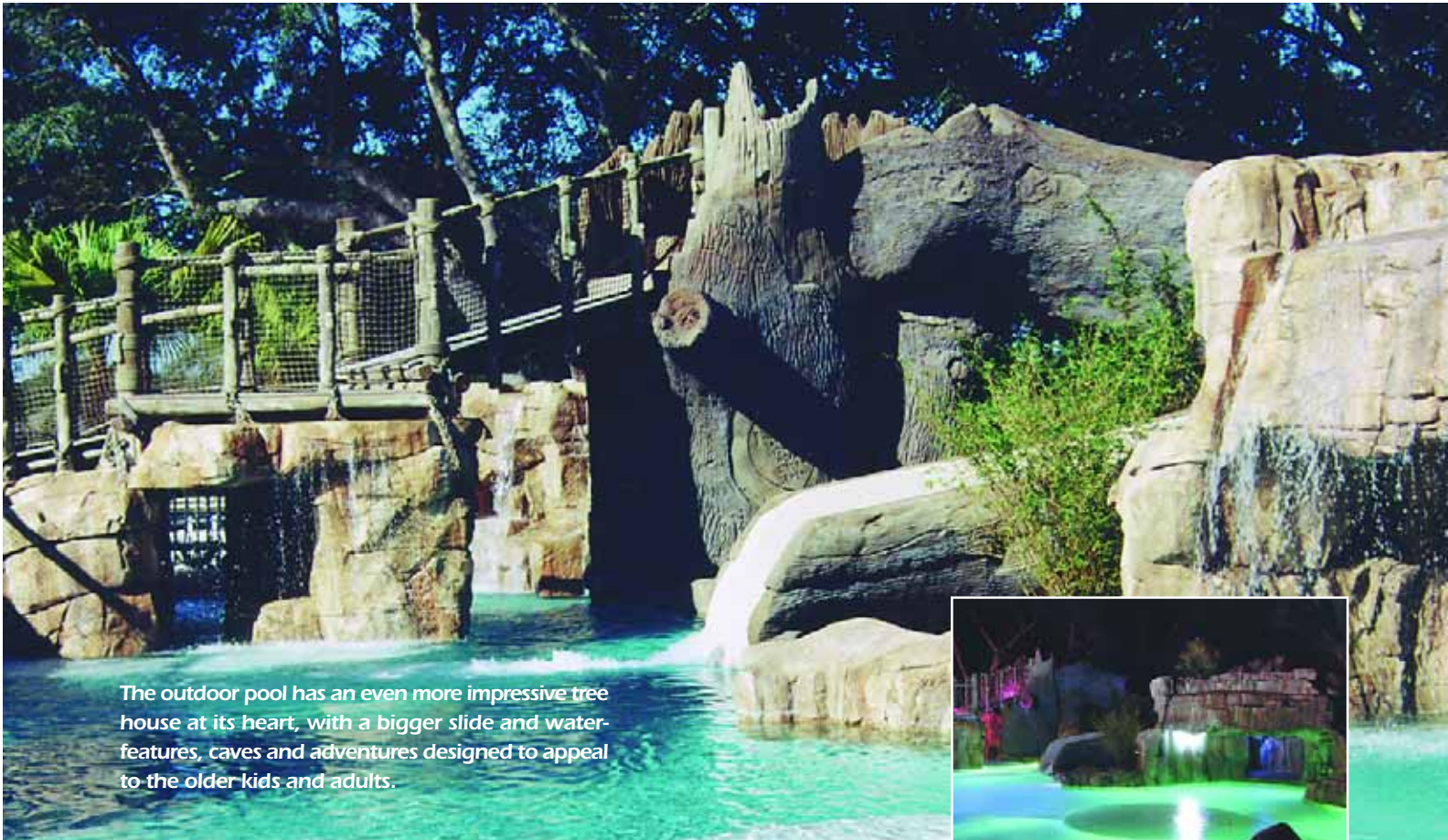
In all, the kiddie pool contains 23,000 gallons of water and circulates at about 2,000 gallons per minute – a feature designed in such a way that it could easily meet the demands placed on the sanitizing system by dozens of children playing at the same time. Indeed, the plumbing is all done to Florida commercial standards. Among other things, that means that all returns are gravity fed: There is no powered suction on the drains, thus preventing even the remote chance of suction-related injury.

THE GREAT OUTDOORS

The outside pool, a large free-form vessel, contains about 60,000 gallons of water also circulated at the



The centerpiece of the indoor pool is this tree house and outsized alligator slide. The enclosure and its retractable roof – along with plenty of interactive waterfeatures – make for guaranteed, every-day fun.



The outdoor pool has an even more impressive tree house at its heart, with a bigger slide and water-features, caves and adventures designed to appeal to the older kids and adults.



brisk rate of 2,000 gpm. It ranges from zero to nine feet in depth and is finished in gleaming white Hydrazzo supplied by Aquavations of Coral Gables, Fla.

The central structure in the pool is a second, larger tree house and slide that pick up the main theme of the indoor play area. Everything outside is made of either natural hand-placed material or hand-sculpted artificial rock and faux wood. The bridge to the tree-house structure is made of eucalyptus planks with hand-woven rope mesh. (To meet commercial safety codes, the mesh had to have stitching on four-inch centers.)

The tree slide is a full 60 feet in length and dumps bathers into the deep end of the pool. It features a prefabricated fiberglass trough surrounded by a hand-sculpted, hand-finished tree trunk. In designing the tree house and slide, Nauman configured the fallen trunk with the profile of a horse's head. It's a huge creative detail – but barely noticeable until someone points it out.

The rock structures outside are all meant to suggest a southwest/Arizona feel – all very rugged and masculine.

The grotto (located beneath the bridge) provides an interesting point of



This tunnel opens just outside the the kid-die-area enclosure and leads visitors to the outdoor pool complex. With fiberop-tics, a fogger and bubbling cauldrons along the way, this passage provides a dramatic transition between the two ar-eas and adds its own sense of adventure and fun to the overall experience.



entry into the pool: When walking from the kiddie pool toward the outside pool, you come to a set of steps that leads down into the water and through a tunnel in the rock structure. Inside this area, we created a spooky, haunted-cave effect with a fog machine and soft, fiberoptic lighting supplied by Fiberstars of Fremont, Calif. We also added some spa jets to give the water the turbulent appearance of a witch's cauldron – quite creepy.

There's also a second major rock structure on the far end of the pool near a beach/sunning area. A cave extends beneath the structure and includes a bench area positioned beneath another rainmaker fixture. The top of the structure contains planters for landscaping. Another rock waterfall is located adjacent to the elevated pathway leading to the top of the slide – a fine example of Nauman working to add visual interest and detail to the overall design.

The outside area is enhanced by a seven-foot spa positioned adjacent to the shallow end of the pool. Dozens of fiberoptic lighting fixtures are installed in and out of the pool, and the whole area looks absolutely amazing at night.

TAKING A RIDE

As we were working through the initial planning of the two swimming pools, the client decided to take us for a ride around his 135-acre property. Not far from the pool area was a wooden structure that served as a station for a half-scale diesel railroad, just like the kind you see at amusement parks. A beautiful faux-steam engine and two canopy cars ran along the 1-1/2 mile loop.

As we rode around the property, the customer asked us if we could do anything to make the train ride more interesting. Thus began the design and installation of four separate themed areas along the course of the "Foxtrotter Railroad."

The themed areas include a rock structure that serves as a hideout for two animatronic bandits who hold up the train; an African lake complete with alligators, elephants, giraffes, monkey and hippos; a Florida river complete with a panther, alligators and a beaver dam; and, finally, a massive faux-rock sandbox area where children can dig for fossils.

In all, the train ride has 20 moving figures and another 20 static ones. Nauman and I designed the animatronics system, which was manufactured by KX International of Apopka, Fla. The figures are run mostly by pneumatic power supplied from a central compressor station located near the center of the railroad loop. The compressor provides air pressure to substations located in each themed area, and a series of electrical relays and switches operate the various moving parts in each figure.

Continued on page 42

A brightly colored train carries family and guests to four themed areas scattered along a 1-1/2-mile loop around the property. Riders are accosted by bandits, visit an African lake, spend some time in a Florida swamp and have a chance to play Indiana Jones while digging for fossils. This combination of creativity, imagination and showmanship is what our watershaping work is all about.



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As you walk by, the 'gator surges toward you, opening its mouth and baring its teeth. There's also a cave that houses an authentic looking Florida panther. The stream itself stretches a full 200 feet in length.

Continued from page 40

The first stop on the ride is the bandit hideout, where two highly detailed figures rise from beneath a rock face to hold up the train. A synchronized soundtrack with music and voice-over narration plays through overhead speakers on the train.

The most ambitious of the four areas is the African lake, the second stop on the approximately half-hour tour. There we built a 5,000-square-foot lake that includes a 20-foot central island reached from the shore via a wooden bridge. An African-style hut serves as a

shady destination on the island, from which you get the best views of the animatronic elephants and alligators.

Next comes the Florida-themed location, starting with a concrete path along a faux-rock stream that passes a beaver dam – and a 12-foot alligator triggered by an optical sensor. As you walk by, the 'gator surges toward you, opening its mouth and baring its teeth. There's also a cave that houses an authentic looking Florida panther. The stream itself stretches a full 200 feet in length.

Finally, at Simon's Dig Site, kids have a

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chance to poke around in the sand in search of (fake) dinosaur fossils set into the rock structure beneath the sand. (There's no water at this stop.)

WORK IN PROGRESS

At this writing, our work at Foxtrotter Ranch is ongoing. At some point in the not-too-distant future, we'll wrap up our work with landscaping, lighting and a formal waterfeature to show off a beautiful stallion sculpture at the entrance to the property.

The area adjacent to the train station already features a merry-go-round and a faux rock wall for climbing; before we're through, we'll also be installing a row of "teepee-style" overnight lodgings for guests lucky enough to be invited for sleepovers at the ranch.

We're not certain when we'll be packing up and leaving the jobsite for good: It seems that every time we think we're getting close, the owner comes up with another set of new ideas.

Even with that small bit of uncertainty, this project so far has been a pure delight. It makes us keep thinking how great it would be if every one of our clients possessed and nurtured this uncluttered, child-like focus on fun: It's infectious, and it brings out the kid in everybody who visits the ranch.

Company Philosophy

We do things a different way at Certified Construction. We have more than 100 employees, all of them dedicated to extending the envelope of creativity and excitement when it comes to watershapes for resorts and theme parks.

We build elaborate projects all over the world and have grown every year in both the number and size of projects we tackle. The keys to success? We believe they are creativity and the willingness to take chances.

With that in mind, we devote tremendous resources to design and development and are *always* looking to incorporate new technologies into the mix. Often that means seeking expertise outside the company and working in cooperative and strategic alliances to solve technical problems and provide new features for our clients.

The project described in the accompanying article is an example of what can happen when you bring a full palette of creative options to the client – and are able to sell the sizzle. There's a great deal of showmanship and imagination that goes into our work; at the core is a basic understanding that all of the technical sophistication in the world isn't worth much if you can't appreciate the joy that can come from it!

– S.K.

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Strands of Light

Valued for their varying colors and ability to provide both point-source and band-lighting effects, fiberoptic lighting systems have been a popular choice in and around aquatic environments for many years. Their variety offers designers a most useful level of design flexibility, says watershaper Paul Benedetti, who shows what he means as he walks us through the installation of four different fiberoptic lighting systems on a single recent project.

By Paul Benedetti

I love the versatility of fiberoptic lighting: The technology works equally well in conjunction with landscaping or architectural features, and because there's no electrical current to worry about at the light fixtures themselves, they're a natural around water.

Better yet, you can use fiberoptics to create traditional point-light sources, or you can set them up as mellow bands of light over long stretches. I don't use fiberoptics on every job, but when the situation is right and the customer is willing, I'm eager to dig in and design a system that will wow them for years to come.

As is true with any lighting system, the main reason to use fiberoptics is safety: They convey information to those walking near a watershape after dark and help prevent accidents. But as we'll see, there's more to fiberoptic systems because of their ability to illuminate certain special watershape effects.

On the project seen here, for instance, we used fiberoptics for four distinct purposes: three point lights to provide sub-surface water illumination; a pair of bands to mark four steps

leading down to the pool deck; a pair of single point lights to add a special glow to a laminar-flow jet on the deck; and point lights to illuminate the spa and the pool's surge tank.

Developing a Plan

Fiberoptics is a flexible, accessible technology, and installation isn't particularly difficult. Yes, there are certain steps to which you must pay careful attention, but by and large, once you master the fundamentals, you'll find that it's pretty easy to make the most out of these systems.

On any fiberoptic job, we start with a site plan — that is, an overhead view of the watershape and all adjacent areas. We begin by establishing locations for the light fixtures and then where we think the illuminators should go. (The remotely installed illuminators provide the light source for the fiberoptic cables.)

It's important to note that keeping cable runs to a minimum



Figure 1

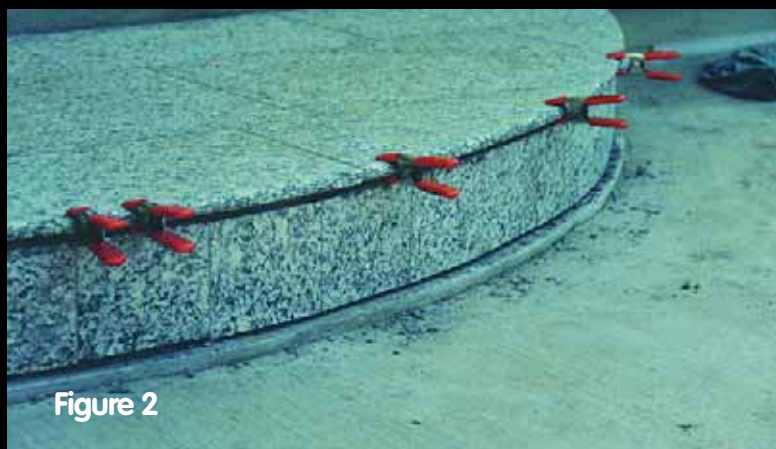


Figure 2

length is of key importance, because the intensity of light in the fiberoptic strands diminishes with distance, even in straight-line applications. This usually means that, for any given project, illuminator boxes will be installed at different locations around the perimeter.

In this case, for example, the illuminator for the pool lights was installed outdoors, up against the house, while the illuminator for the steps was installed in a utility closet inside the house. In addition, the illuminator for the spa and surge tank lights was installed at the equipment pad, while the illuminator for the laminar jets was installed in a flowerbed near the fence.

In what follows, I'll focus primarily on the steps and the in-pool lights: These are representative of most of the fiber-optics installed with watershapes. You'll also find brief discussions of the spa/surge tank and laminar jet lights in sidebars on pages 46 and 47, respectively.

In developing an approach to any fiberoptic system, I rely heavily on technical support from manufacturers. In this case, for example, I sent a copy of the site plan with all the relevant dimensions and had indicated where I was going to put all of the light fixtures and illuminators.

Why the need for help? Simple: The technical support staff takes my plan, calculates the distance of runs away from the illuminators and decides how many strands are needed per cable to yield a balanced, even light pattern. They also calculate light absorption due to surface materials and dark colors – things I'd rather not tackle myself.

On this job, for example, we had three runs between 48 and 65 feet from the illuminator to the pool lights that required a 125-fiber cable for each fixture. This gave us a total of 375 strands going back to the illuminator, which was fine, because the models we were using could handle up to 500 strands.

We used the Super Vision lighting system from Hayward Pool Products of Elizabeth, N.J., for this particular project. I've used all the major brands, however, and find that not only do they all work well, but also that technical support is good across the boards.

The Business End

The bands of light we installed on the granite steps near the pool came about to address a basic safety issue: Everyone on site quickly recognized that you couldn't clearly see the steps or get a sense of their depth at night.

In this case, we located the illuminator in the house and so had to core-drill through the foundation to pull the cable back to the illuminator over the shortest possible route. The cable used for band-light applications is different from the kind used for point-lighting effects in that it is designed to allow the light to escape along its length. Here, the outer casing is clear, exposing fibers that are woven in a braid or rope-like pattern around a reflective center core.

In this case, we used four cables of 42 strands each – one for each step – and ran them back to the illuminator. Using clamps, we glued the special track for the light in a space we'd left in the

granite tiles we used as facing (Figures 1 and 2 on page 45). One step alone required more than 100 feet of fiber due to its arced shape – even though the step is only 40 feet across if measured in a straight line.

Each cable was installed in a loop, with both ends polished and terminating at the illuminator. We did so because band lighting loses light along its run; running a loop ensures even light along the entire length of the fiber.

Here we come to one of those small yet significant details of the installation process that boils down to on-site supervision: In a hardscape like this one, you have to make sure your mason understands what you need and leaves enough space for the cable. (Note: The material seen here is flamed and honed Italian granite.)

As was just mentioned, cables of a different sort are used for fiberoptic point lighting: In this case, you leave the sheathing intact with the intent of delivering as much luminosity as possible at the fixture. To that purpose, both ends of the cable must be polished (which I'll discuss later), and the cable must be worked with and pulled carefully through conduits to avoid damage to the fiber bundles or individual fibers within those bundles.

For the in-pool lights, we punctured the shell with the conduit before the guniting was shot (Figures 3 and 4). The pipe was cut off flush after the guniting cured, at which point we pulled the cable through. This is definitely easier said than done, because the outer shell of the cable has a certain stickiness to it and is difficult to pull even through a lazy, sweeping turn. We used wire lube, however, which made things much, much easier.

The first key to success in laying out cable runs is, as we've mentioned, minimizing length. The second is to limit the number of turns. Where turns are necessary, they must be sweeping, which is why we work with flexible schedule 40 PVC tubing.

Back at the Box

The illuminator is the device that actually generates the light that is in turn transmitted by the fibers, either as a point fixture or along a cable band.

Each illuminator contains a lamp, a reflector, a color wheel and some associat-



Figure 3

Lighting Tight Spaces

At our company, we service all of the pools and spas we build. This means we're thinking about the service technician as we design and build each project.

On the job discussed in the accompanying text, we gave the service technician a hand by installing a fiberoptic fixture inside the surge tank so that he or she can see what's going on when it comes time to do some cleaning. (A typical pool light could not be used because of the constantly changing water level within the tank.)

This light is controlled by the same illuminator as the spa's light fixture.

– P.B.



Figure 4

ed electronics and wiring. The illuminators chosen for this job are fairly delicate devices with glass parabolic reflectors; they must be handled carefully to avoid damaging critical components. (Some reflectors are made of aluminum and are less fragile, but they don't put out as much light. I needed maximum output for this job.) The lights themselves are metal-halide halogen bulbs rated for 6,500 hours of operation.

These illuminators come with a burial box that is set below grade. All conduit runs are brought into the box and up into the illuminator housing. Once the conduits and box are in place, soil is packed around the box (Figures 5 and 6). The lamps and color-wheel motors generate a fair amount of heat, which means that all these boxes should be placed in areas with a good, cooling flow of air.

Installing the illuminator involves three types of wiring connections: the fiber cable, a power feed and a low-voltage control (Figure 7). The low-voltage control cable consists of 4-conductor, 18-gauge shielded wire that's run in its own conduit system – which in this case was linked with a computer control system supplied by Laars and Jandy Pool Products (Petaluma, Calif.) for the pool and the spa. Here, the illuminators run on 120-volt power hardwired to Jandy's relays and activated via the pool/spa controller.

Some illuminators on the market have separate power circuits operating the color wheel and the light. On the systems I used here, the light and color wheel share power circuits, but they can be turned on and off independently via an internal relay – an option I chose in this case. This allowed us to synchronize all the color wheels through a single controller.

This synchronization isn't standard, but it was what the customer wanted. So we worked with Super Vision and the technical staff at Jandy to develop the wiring scheme required to make all the lights and wheels operate together.

The way it works is all the wheels spin whether or not the bulbs are on. That way, even if one of the lighting systems is not being used, the wheel remains in synch with the rest of the system – and when the lights *do* come on, all of the colors change in unison.

Polishing the Ends

Beyond getting the cable to cooperate in being jammed through conduits, the one tricky step in all of this installation process is cutting and polishing both ends of all fiber cables. As mentioned above, for the band lighting it ensures even light distribution along the full length of the cable. For point source lighting, polishing maximizes light flowing into the cable at the illuminator and increases the light received at the lens. This all has the effect of maximizing the output lumens.

To start, we cut the cable to a rough length – plus three

Figure 5



Figure 6



Streams of Light

As mentioned in the companion story, we installed two laminar jets in the deck near the pool. The nozzles for this system were manufactured by Crystal Fountains of Concord, Ontario, Canada, and are made to include fiberoptic lights.

The effect is truly mesmerizing: The tight, arcing streams of water are lit from within and glow uniformly for a remarkable distance – a subtle and eye-catching effect.

The illuminator for the lights in these jets is located in a nearby flowerbed.

– P.B.

Figure 7



inches. Then we slice into the outer sheath with an X-Acto knife, peeling the skin back like a banana and cutting it away. It's very important not to slice or scrape the outer length of the fiber, so be careful!

At the illuminator end, we snap on a plastic ferrule to crimp and tightly bundle the fibers together. This ferrule fits into a bracket or reducing bushing in the light fixture itself (Figure 8). As needed, you may end up adding short, dummy fibers to tighten the bundle and pack the bushing as tightly as possible.

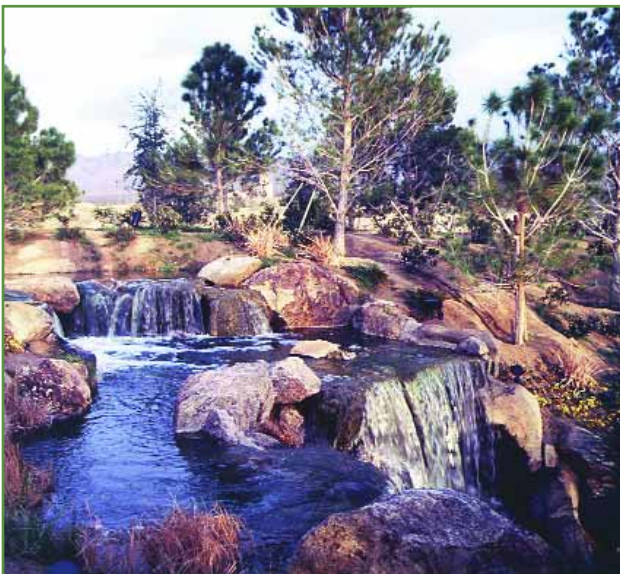
Cutting the cable is a two-person job: One holds the cable while the other slices the fibers with a hot knife.

This cut is extremely important: You must use even, downward pressure with the hot knife and avoid sawing back and forth. (A saw cut will create a gummy mess.) Be patient: It takes about 10 or 15 seconds to cut each bundle if you're doing it right. And if you've never cut fiberoptic cable before (other than accidentally), I suggest getting some scrap and practicing with it before you work on the real thing on the job. It's not hard, but it does require a special touch.

Figure 8



Figure 9



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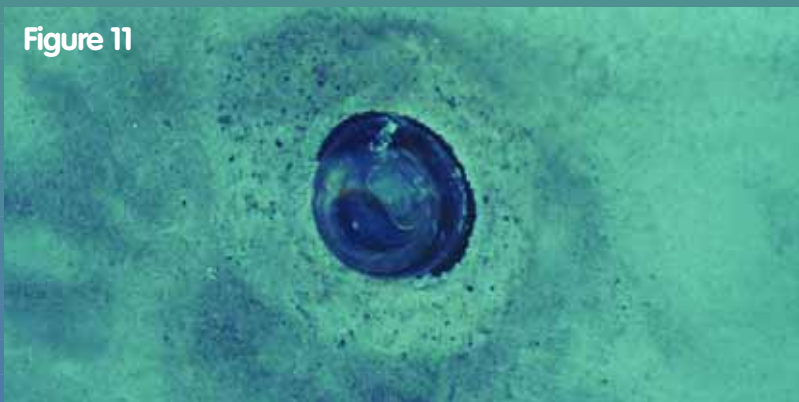
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Figure 10



Figure 11



Next we use a kit to polish the ends of a fiber. (According to one leading manufacturer, this process adds 10% to 15% to light output.) The polishing itself is simple: You work methodically through a series of wet and dry polishing steps, moving from coarse to fine and extra-fine grits.

We polish the fibers to increase light output and also to make certain no stray fibers extend past the reducer bushing to interfere with the motion of the color wheel. Then, for point-light fixtures, we move to the other end of the cable, repeating the process in setting up the cable at the fixture's centering disk (Figure 9).

At the fixture locations, we countersink the gunite around the fixture so that the pool finish can be packed in to prevent leakage. (It's important to keep water out of the conduit to avoid condensation on the fixture's lens.) The lens itself fits over the cable and is sealed by two O-rings that should be lubricated before the lens is installed (Figures 10 and 11).

That's it: Time to fill the pool and spa with water, turn on the lights and enjoy the glowing results.

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GREAT LENGTHS

From Pebble Beach to Augusta National, water and the game of golf share a storied history – and the relationship is growing even closer, says landscape architect and watershaper Ken Alperstein of Pinnacle Design. As new courses compete for major tournaments and real estate sales on adjoining properties, course architects are using streams, ponds and lakes to make aesthetic statements – and giving water-shapers a chance to work on the grandest scale.





Photo © Joann Dost



BY KEN ALPERSTEIN

Of all the sports,

there's none that relies more on the art of landscaping than golf. The contours of the land, the style, size and placement of plantings, the use of elaborate stonework and the installation of substantial bodies of water often define not only the competitive challenge of the game but the ambiance and character of the entire golfing experience.

This is especially true of championship golf courses, where designers seek ways to stretch the envelope in terms of the way the game is played and in the physical beauty of the courses themselves. In their search for true distinction, many have turned to the use of carefully designed and installed watershapes, both as water hazards and aesthetic accents. Indeed, even a quick survey of courses built in the past 20 years reveals that water has become an emblem of the modern game.

Building these bodies of water for top-flight golf courses is a unique challenge: Success requires working hard to make everything look as natural as possible on a very large scale – and making sure that golfers wearing spikes don't poke holes in your work as they play.

POINT OF DEPARTURE

At Pinnacle Design Co., our goal is to create natural watershapes and landscape environments on golf courses to complement and extend the vision of the developer and the golf-course architect. In most cases, that means building watershapes and landscapes that look as though they've been there forever and that the links just happened to have been cut around them.

These are extremely large projects by most anyone's reckoning. A typical championship golf course may include 60 to 100 acres of landscaping, while streams may measure a mile or more in total length and ponds or small lakes can be sized in terms of acres of surface area and hold millions of gallons of water.



Continued from page 51

The mechanical and material ends of things are outsized, too. Plumbing ranges from 6 to 24 inches in diameter, while the three-phase pumps we use run from 10 to 150 horsepower. And on a typical job, we may use as much as 2,500 tons of natural rock and tens of thousands of plants and trees in dozens of species.

Adding to the challenge is that no two courses are alike – nor are their designers and owners. Bringing practical realities into alignment with a designer's or developer's vision can be bracing at times, as can making everything work within ever-increasing environmental constraints. But through careful planning, competent construction and constant site supervision, we bring it all together.

In doing so, we have a simple touchstone: Given the overall design, we draw our primary inspiration from the site. From stone and plant selection to contouring the earthen substructures for streams and waterfalls, it's the site that dictates what will look natural and what won't.

As with so many collaborative efforts, however, this is all easier said than done.

During the design phase, we're given a site plan that shows spaces and corridors set aside for the water elements and landscaped areas. From that point on, we work closely with the architect and owner, but we know that how we establish the water-shapes and put *our* mark on them with respect to shape, elevations, flow rates, construction details and basic presentation will make all the difference in whether or not the water looks like it belongs there.

To be sure, this is something that works out more easily in some jobs than it does in others. When a project includes dramatic elevation changes, existing water and indigenous stone – and the available palette of plants affords us lots of choices – it's not all that difficult to bring interest, balance and variety to the site. On the flat, however, the challenge rises as we introduce elevation changes and use more subtle effects in the watershapes – making it all look beautiful without seeming completely out of place.

THE FUNDAMENTALS

The feature of our business that lets us succeed in an environment where, first,

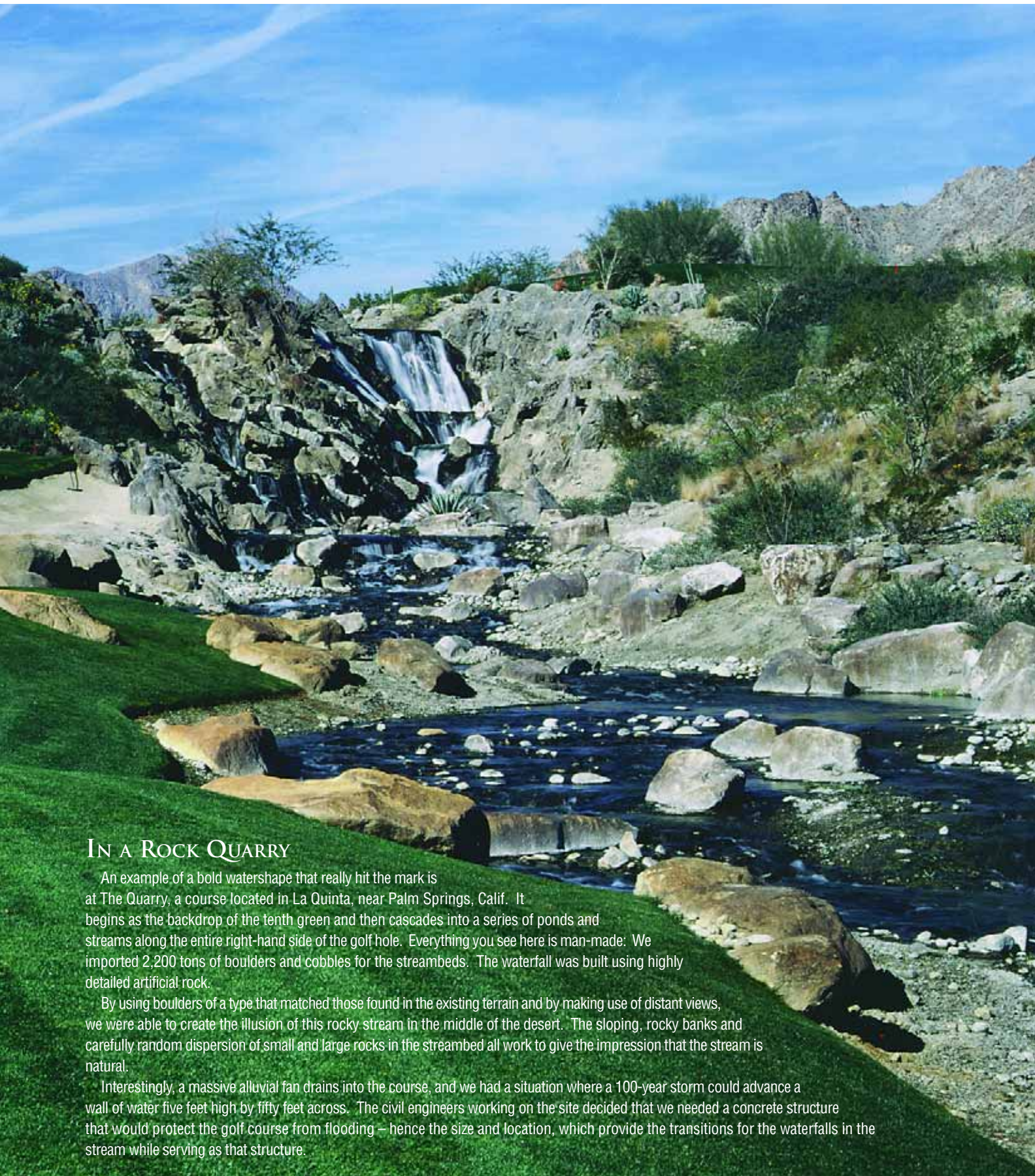
Continued on page 54

Photo by Tom Brewster



Photo by Frank Domin





IN A ROCK QUARRY

An example of a bold watershape that really hit the mark is at The Quarry, a course located in La Quinta, near Palm Springs, Calif. It begins as the backdrop of the tenth green and then cascades into a series of ponds and streams along the entire right-hand side of the golf hole. Everything you see here is man-made: We imported 2,200 tons of boulders and cobbles for the streambeds. The waterfall was built using highly detailed artificial rock.

By using boulders of a type that matched those found in the existing terrain and by making use of distant views, we were able to create the illusion of this rocky stream in the middle of the desert. The sloping, rocky banks and carefully random dispersion of small and large rocks in the streambed all work to give the impression that the stream is natural.

Interestingly, a massive alluvial fan drains into the course, and we had a situation where a 100-year storm could advance a wall of water five feet high by fifty feet across. The civil engineers working on the site decided that we needed a concrete structure that would protect the golf course from flooding – hence the size and location, which provide the transitions for the waterfalls in the stream while serving as that structure.



there's usually a basic plan we didn't have a hand in developing and, second, there's a site that's fundamentally different from the courses we've worked on before, is the fact that we use a consistent method in the design phase, boiling everything down to three keys:

❑ **Basic appearance:** What should the water look like? Do we want a meandering stream? Crashing whitewater? Do we want it to look as if it's moving through a marsh area or over boulders and cobbles? How will what we're thinking about doing fit within the context of the site? How believable is the system going to be?

❑ **Basic role:** At what points in the architect's plan does water exist to present a hazard to golfers? At what points does it retire into the background and exist strictly for beauty's sake? Have we considered all of the relevant focal points so that golfers can see the water and play over or around it accordingly? Have we accommodated the fact that water hazards are usually broad areas of still water that can be seen from key areas of play such as tees, landing areas and greens?

❑ **Basic environment:** Are we considering selection and placement of materials and formation of edges that are both beautiful and believable? Are we after a rocky stream, or is it going to have earthen banks with signs of natural erosion? What plantings will work best in these situations? What materials can we borrow from the surrounding environment? What do we need to import?

We spend a tremendous amount of time in the planning phase considering these questions, the principles behind them, the course architect's ideas and, especially, the site.

We do so because we know the decisions we make here will have a huge impact on what happens to the physical structures in and around the proposed watershapes. If, for example, we have course topography that includes significant hills with drainage channels entering the golf course, this may provide us with an opportunity to define bigger, more cascading types of streams. The site determines whether such a watershape works and belongs there.

By contrast, if we have a relatively flat site—in a desert, say—and the natural sur-

roundings show us that there isn't going to be much water present, then we'll approach things differently. Here we might go for slow, meandering streams, or narrower streams. Or we might think in terms of Japanese gardens and set things up so that water appears and disappears as you move through the environment. Or we might go bold, using flat bodies of water contrasting sharply with expanses of turf or the starkness of a desert setting.

Every step of the way, of course, we interact and consult with the developer, golf-course architect and hydraulic engineer to be sure that our own design ideas flow in with those of all the project's major players.

WORKING TO SCALE

Not much of what I've written so far is different from any substantial water-shaping project: the need to let the site guide you in your approach; the need to coordinate with others participating in the project; and the need to answer questions related to appearance, intended use and basic environment.

The first real distinction I see is the matter of *scale*.

Long before the earth-moving equipment moves in, we do lots of on-site surveying to measure and confirm the placement of our watershapes. If we spot problems, we bring them to the attention of the architect and the development team. Once everything is resolved, we bring in a team of contractors whom we know from past experience will get the job done.

The large scale dictates a higher-than-usual degree of coordination, and no matter how well we've designed and prepared for the project, we are only as good as the performance of the contractors doing the work. The key to overseeing and ensuring superior performance and a top-notch outcome is due diligence prior to selection of the contractor. That's why working with contractors we know is essential.

Another scale-related distinction is that we work to integrate multiple watershapes into an overall system. Most of the courses we work on have a large lake that serves as an irrigation reservoir. We'll look for ways to combine our major streams with the reservoir so that, as water is drawn off for irrigation and is replaced, the water in the stream is also



Photo by Ken Alperstein

Continued on page 56

WATERTIGHT MEANDERINGS

This is what we call a “meadow stream.” Located at the Primm Valley Golf Course in Primm, Calif., it’s on a site that had us come up with a highly detailed shoreline treatment where the liner and concrete are protected well below the earthen cover and turf line.

The result is very natural – so natural that few would ever suspect that a liner caked with concrete is what makes it all possible.





replaced. These streams help maintain the water quality by providing vital aeration to the water as it tumbles over rocks and boulders.

Once the pieces all come together, these water systems are relatively simple in function. We typically don't use filtration (when we do, it's a large bio-filter in the bottom of a lake), and generally we

have just single points of suction and return in the system.

There's really no skimming to speak of: In some lakes, the maintenance staff will manually remove material from the surface if it becomes excessive, but leaves and other surface material usually are left to sink and become part of the bio-mass at the bottom of the lake.

FIELD SUPERVISION

Another distinction that comes with working at this scale is the simple extent of the shaping and finishing work to be done over dozens of acres. Indeed, after the golf holes have been graded and the lay of the land has firmly been established, we'll spend a good share of our time in the field locating basic stream courses and the sizes and shapes of ponds and lakes.

By and large, once the overall, mass grading is complete, we know pretty well where the water is going and what it's going to look like. Now we move to the site itself and begin to worry the details. We start by over-excavating the streams and lake edges before contouring the primary earthen sub-structures to the desired shapes. We spend hour after hour with the shaper, painstakingly creating the sub-grades that will enable the stream to look natural. (The over-excavation provides us with ample space to backfill over the edges, hiding all the necessary man-made structures such as the liner and concrete that will come later.)

This process sets us up to build distinctive structures within the streams themselves, including cascades, deep pockets where the water pools, or eddies around rock outcroppings. We create depressions where large boulder and rock structures can be placed without giving the appearance that everything has been stacked on the surface. We also set up shallow areas where slow-moving water will meander through grasses – and golfers might even try to make a shot from a miserably wet lie.

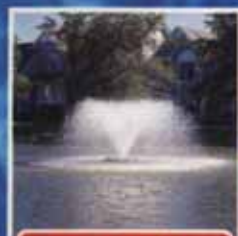
Every watershape we set up on a golf course has a minimum 20-mil PVC liner. The liner is used to ensure that the water – an expensive commodity on most sites – does not escape the confines of the streams and lakes.

Beneath the liner, we'll use a filter fabric on a rocky site to protect the PVC from damage from below (although if we've done a good job with our grading that's not usually an issue). The thing we do next that truly distinguishes what we do from regular stream- or pondcraft is that we top the liner with a three-inch layer of chicken-wire-reinforced concrete, thereby protecting the PVC from UV degradation, animal intrusions – and golfers traipsing into the water with their spikes. (We apply this

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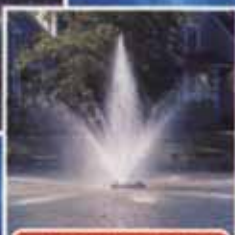
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FLAT-OUT GORGEOUS

This is one of those cases where we were confronted by a completely flat piece of desert when called on to create a series of lakes and waterfalls separating the ninth and eighteenth fairways of the Mission Hills North Golf Course in Rancho Mirage, Calif.

We had to work very hard on this job, both with the substructure and the placement of flat rocks and boulders to create variety within the falls.

Complicating matters for us was the fact that this watershape was to become the focal point in the middle of surroundings without a drop of water or a tree or shrub within eyeshot. So we focused on breaking up the flow, using weirs to create irregular patterns, drops and depths. Then we worked the edges with a mixture of rock and landscaping material – all sorts of variations within the confines of the watercourse.



coating only to the edges of lakes; the rest of the lake will receive at least one foot of soil over the liner.)

On top of the concrete, we pour what we call a "rock spoil," a mixture of rock material ranging from sand up to 3/4-inch rocks with a small percentage of rocks ranging from one to six inches. This coalesces as a sort of aggregate surface that

looks very natural. Then, in predetermined areas we call "bog plantings," we apply a layer of soil into which we plant a variety of plants, from grasses in extremely shallow areas to lilies in slightly deeper areas.

REACHING FOR NATURALISM

With the liners and concrete in place, we turn our attention to details of rock

and plant placement. This is the point in the project where working on site and closely supervising the work crews is essential. And of course, we do much more than monitor: A great deal of hands-on creativity comes into play when we're out in the field adjusting rocks and plants.

Rock placement in particular starts to become somewhat like playing chess. On the edges, we work hard to blur the boundary between the banks and the water. We'll vary the size and placement of rock material so there's a random, non-linear look. In the water, placement of rocks in the streambeds is extremely important as we vary rock sizes and shapes and create bends, various cascades and waterfalls. We work carefully to establish areas where water slows down and speeds up. We also use flat weirs and cascading areas to vary the sound and appearance of the water.

As designers, we study nature and spend lots of time observing the way streams move and the manner in which material is distributed in a natural watercourse. Nature is always full of surprises, and we try to make all of our streams look as natural as possible by varying the way the water moves and interacts with the rocks.

The rock material we use is site specific. In many cases, the area in which we're working has been heavily excavated, not just for the golf course but also for adjacent residential properties. Whenever possible, we'll take advantage of indigenous material to keep the cost of transporting down and also to give our rockwork the air of authenticity. If the need arises, of course, we won't hesitate to truck in hundreds or even thousands of tons of rock. When we do so, we take our time to select material that "looks" like it truly belongs.

There are also situations where we deliberately reveal the hand of man. If, for example, a slope requires a retaining structure, we may go with a stacked rock look that gives the impression that it was necessary to stabilize a bank in order to work with and around existing lakes or streams. We've also worked in some cases with structures such as stone bridges and various types of pathways built by other contractors. Here we may use repetitive stone

Continued on page 60

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Continued from page 58

elements that help blend the watershapes with the obviously man-made elements.

As I said above, every job is different and for all of our careful planning, we've learned that there are no "rules" to govern what we do.

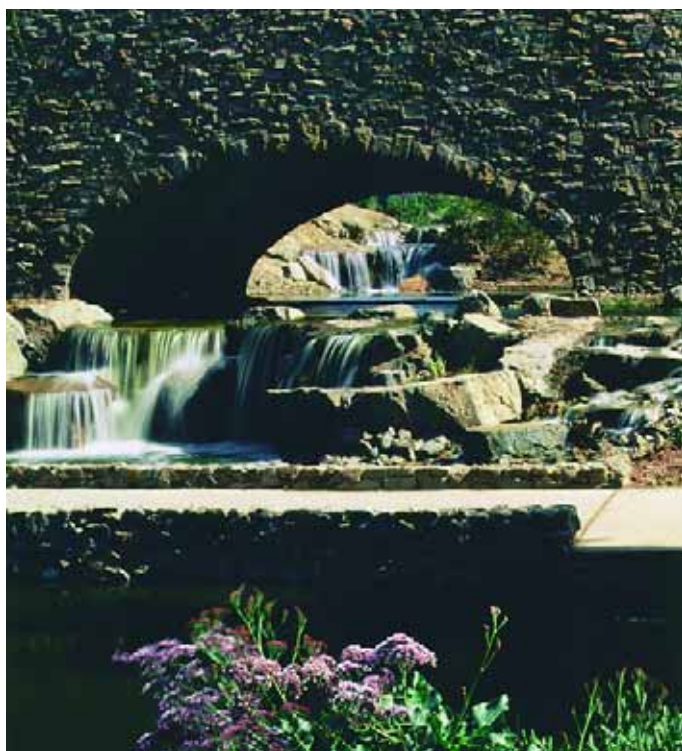
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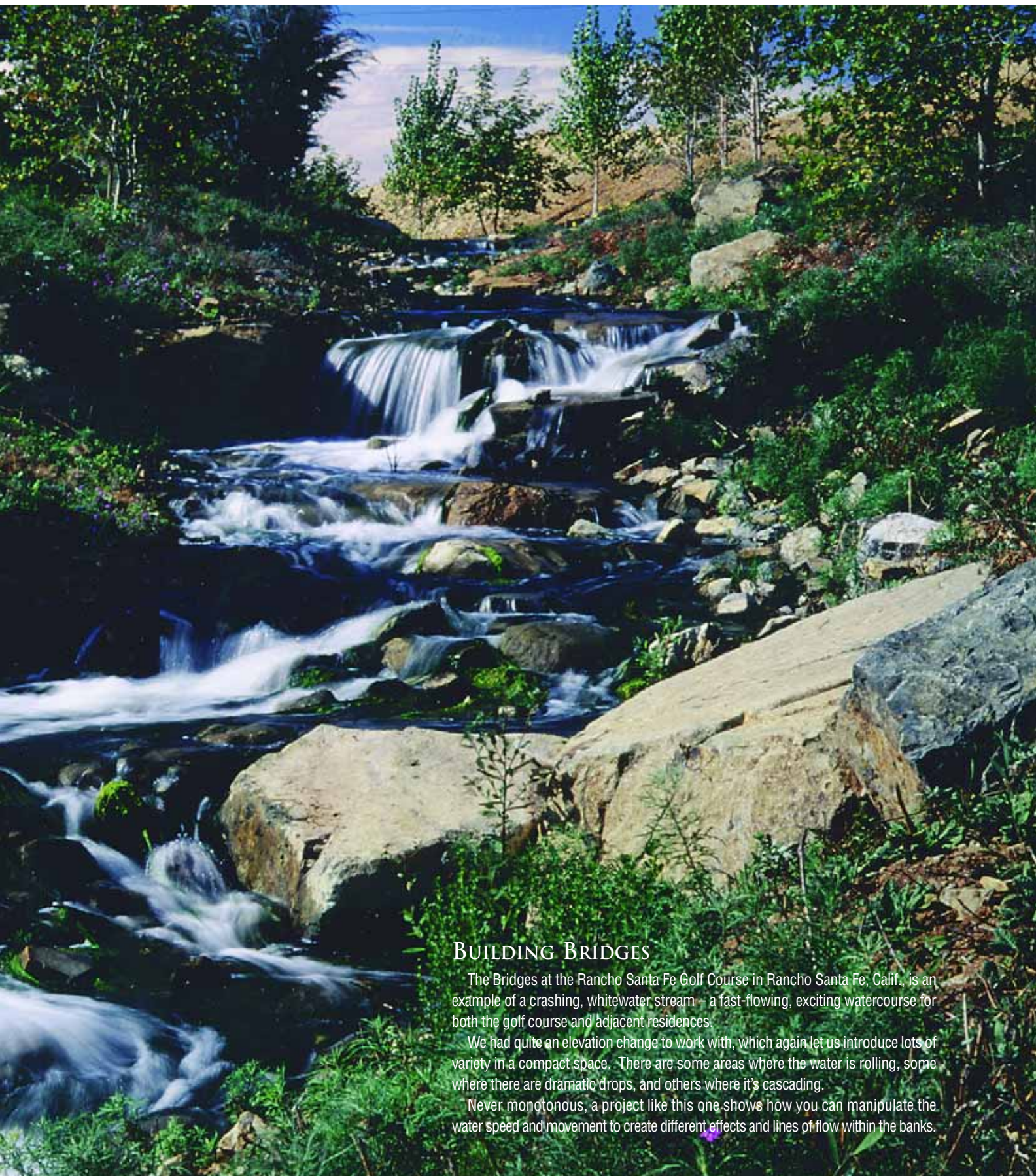
When the rocks and plantings are in place, we find that we're usually about 90 percent of the way toward completion. Now we settle in for a significant period of on-site adjustment – especially after the water's been added and we get to see just how all of our planning and field direction has panned out.

Often we'll find the action of the water will create erosion patterns that we didn't even think about; in some cases, we need to change courses in one area to avoid damaging another. We also work with the edges, making sure that everything looks as natural as possible and, more important, that the watercourses are not leaking outside their lined banks.

The final distinction in what we do when compared to most watershapers is the amount of time we spend in planning the aesthetics – and in following through to make sure everything's in place. Nothing is more satisfying at the end of the day than to sit back with the sense that what we've done truly belongs where we put it. The ultimate validation comes when golfers can't distinguish landscaping and water that was existing from that which was man-made.

And that's an important quality, because there are far too many golf courses that don't project an air of belonging. They just seem out of place. In our work, however, we do all we can to bring artful landscaping sensibilities to the work and create environments that are as much works of art as they are places where duffers shout "fore" and handicaps are either improved or forgotten.





BUILDING BRIDGES

The Bridges at the Rancho Santa Fe Golf Course in Rancho Santa Fe, Calif., is an example of a crashing, whitewater stream – a fast-flowing, exciting watercourse for both the golf course and adjacent residences.

We had quite an elevation change to work with, which again let us introduce lots of variety in a compact space. There are some areas where the water is rolling, some where there are dramatic drops, and others where it's cascading.

Never monotonous, a project like this one shows how you can manipulate the water speed and movement to create different effects and lines of flow within the banks.

NATURAL PEBBLE POOL FINISHES

Circle 100 on Reader Service Card



PREMIX/MARBLETITE announces the Beach Series, natural-stone pebble pool finishes that offer a superior finish, mirror nature and come with a lifetime warranty. The material is available in ten standard styles/colors: San Tropez, Maui, Tahiti, Laguna, St. Thomas, Daytona, Monaco, Newport, Aruba and St. Augustine. **Premix/Marbletite**, Pompano Beach, FL.

CONTROL SYSTEM FOR BACKYARD ENVIRONMENTS

Circle 102 on Reader Service Card



INNOVATIVE POOL PRODUCTS introduces Smart Touch, a system that allows for easy, direct control of pools, spas, waterfalls, outdoor lighting systems and other features of backyard environments – as well as in-home systems. Smart Touch LE controls up to three motors and three light-dimming modules;

Smart Touch LS can control up to seven relays, five valve actuators and three light-dimming modules. **Innovative Pool Products**, Orange, CA.

SEQUESTERING AGENT FOR START-UPS

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JACK'S MAGIC PRODUCTS offers Blue Stuff, a sequestering agent tailor-made for use in starting up pools and other watershapes with exposed-aggregate finishes. The product keeps the plaster dust very soluble and aids in removing it from the water. It is also extremely chlorine-tolerant and highly effective in water with heavy concentrations of copper. **Jack's Magic Products**, Clearwater, FL.



FORM FOR FIBEROPTIC TRACK

Circle 103 on Reader Service Card

MORTEX MFG. has introduced the Glow-Rite Lighting Form System for swimming pool and architectural applications. The form creates a slot for a fiberoptic track above a separate cover track and allows for easy radius turns. The fiberoptic line stays cleaner because the track is higher than the water line, and the approach can be used where a cove strip is impractical. **Mortex Mfg.**, Tucson, AZ.



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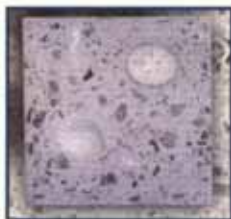
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PENTAIR/PUREX TRITON offers literature on its WhisperFlo line of high-performance pumps. Designed to circulate more water while using less energy and creating less noise, the pumps feature heavy-duty construction, standard 2-in. connections and a three-year warranty. The literature includes detailed information on design features and advantages as well as performance curves. **Pentair/Purex Triton**, Sanford, NC.

NATURAL SHELL-FOSSIL AGGREGATE

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SEASTONE GROUP offers an exterior decking and veneering product composed of natural shell-fossil aggregates and Portland cement.

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CATALOG ON OZONE SYSTEMS

Circle 106 on Reader Service Card



PROZONE INTERNATIONAL, a pioneer in the development of ozonation systems for pools and spas, offers a 16-page brochure about the company, its mission and the systems and accessories it manufactures for residential and commercial spas, pools and watershapes using both ultraviolet and corona-discharge technologies. **Prozone International**, Huntsville, AL.

CHEMICAL FEED PUMP FOR COMMERCIAL POOLS

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STA-RITE INDUSTRIES has added chemical feed pumps to its line of pool and spa products. Designed for commercial applications, the pumps can dose from a drop per minute to 150 gallons per day – and many increments in between. Using pH- and ORP-metering technology, the pumps accurately dose prescribed levels of chlorine or other water-treatment products to many types of watershapes. **Sta-Rite Industries**, Delavan, WI.

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OF INTEREST

CARVED CONCRETE STRUCTURES

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CENTERLINE PRODUCTIONS markets the Creative Seating Series, a collection developed by sculptor Kia Ricchi for use as practical (but highly aesthetic) seating elements for gardens and around pools. Trees and coral reefs and more serve as models for her work, which features welded steel and reinforced concrete shaped, tinted and etched to enhance a realistic appearance. **Centerline Productions**, St. Cloud, FL.



TRANSPARENT CONCRETE STAINS

Circle 109 on Reader Service Card

DUCKBACK PRODUCTS offers Mason's Select Transparent Concrete Stain, a decorative and protective coating designed to take advantage of the natural variations in color, texture and porosity of concrete surfaces. Available in ten factory-designed (and intermixable) colors, the stains accent those variations with the same sort of multi-hued appearances found in many natural-stone surfaces. **Duckback Products**, Chico, CA.



CAST-CONCRETE AND TILE PRODUCTS

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WAUSAU TILE has published a New Product Guide, a 16-page booklet designed to introduce builders to its line of cast-concrete park and garden fixtures, pre-cast concrete pavers and other decking systems, including terrazzo tile and pre-cast terrazzo accessories. **Wausau Tile**, Wausau, WI.



BULLET FLOOD LANDSCAPE LIGHTING

Circle 111 on Reader Service Card

RAB ELECTRIC has introduced the HB101, a new landscape floodlight with a bullet design and a large glare shield for more effective light control. The durable, weather-proof, die-cast fixture comes in four powder-coat finishes: black, white, verde green and architectural bronze and accepts a (maximum) 150-watt PAR 38 lamp. **RAB Electric**, Northvale, NJ.



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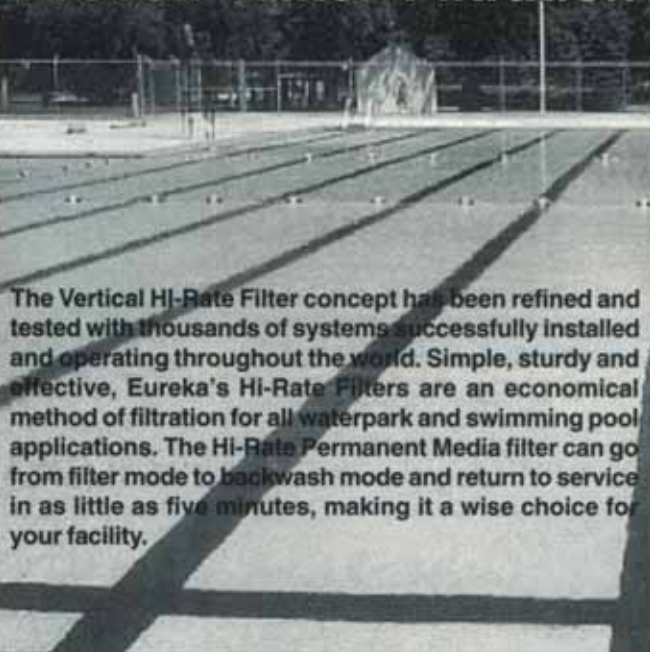
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GUIDE TO BACKWASH VALVES

Circle 112 on Reader Service Card



PRAHER VALVES has published a Selection Guide to its Superstar line of backwash valves. The 12-page brochure includes technical specifications, wiring plans and dimensional drawings for five different models available in 1-1/2, 2- and 3-inch configurations. The brochure also offers information on the technology behind the company's valves and control systems. **Praher Valves**, Barrie, Ontario, Canada.



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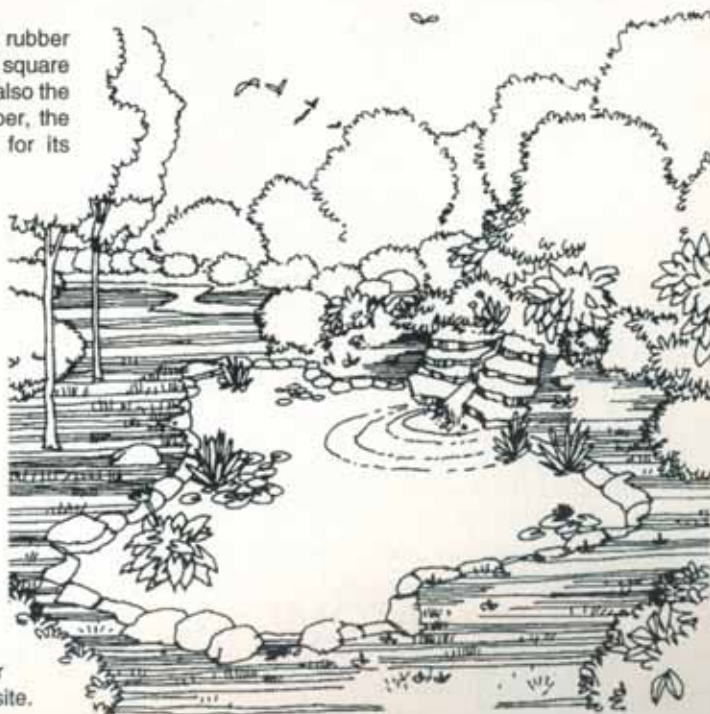
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COMMERCIAL CONSTRUCTION SERVICES

Circle 113 on Reader Service Card



PADDOCK POOL EQUIPMENT offers a brochure highlighting its capabilities in commercial pool outfitting and construction. Included is information on the company's circulation and filtration systems, play features, deck equipment, movable bulkheads, movable floors and more. Services offered include design, budgeting, specification and construction coordination. **Paddock Pool Equipment**, Rock Hill, SC.

ELECTRONIC SANITIZING SYSTEM

Circle 114 on Reader Service Card



ENVIRONMENTAL POOL SYSTEMS offers Pool Thing, a chlorine-generating system that kills bacteria, algae and microorganisms in pool water charged with a self-regenerating supply of common rock salt. The system, which mounts easily to a pool's return line and features a seven-year warranty, works by passing a 7-V current between titanium and precious-metal-coated plates to generate chlorine. **Environmental Pool Systems**, Scottsdale, AZ.

DECK-DRAIN SYSTEMS

Circle 115 on Reader Service Card



QUAKER PLASTIC PRODUCTS manufactures the Drain-A-Way System II for pool decks. The heavy PVC components come in 8-ft lengths, are designed to minimize floating in concrete, adapt to all standard 1-1/2-in. plastic fittings and reportedly transport up to 17% more water than other systems. The units also act as expansion/contraction joints and as a screed for concrete finishing. **Quaker Plastic Products**, Mountville, PA.

OUTDOOR LIGHTING SYSTEMS

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DABMAR offers a complete range of low-voltage outdoor lighting fixtures and accessories. The landscape lighting line includes directional lights, bollards and post lighting in addition to brass underwater fixtures for use in fountains and waterfeatures. Also included are systems for spot, tree and step lighting. **Dabmar**, Oxnard, CA.



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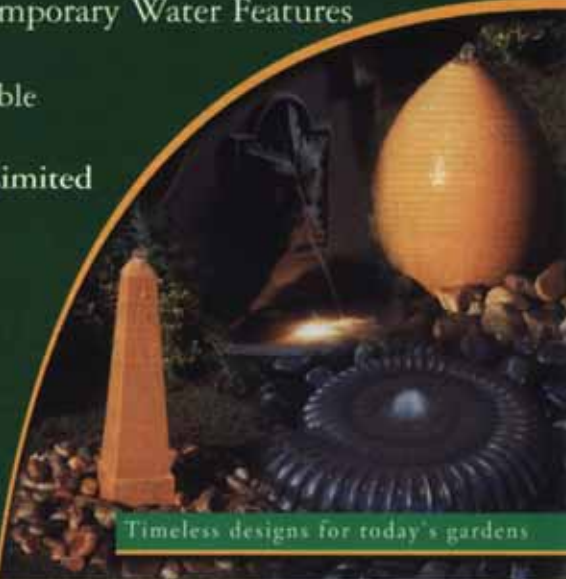
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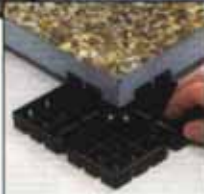


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It's hard to compromise and scale back sometimes, but it's often wiser to guide clients to redirect their budgets for a better outcome than deal with the consequences of maintenance-related failures down the line.

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pruning trees, shaping plants, cultivating the soil, pulling weeds – the list can go on for pages depending upon the unique nature of a garden. In a nutshell, these unperformed tasks are the things that cause clients to look out into their gardens and say, "My gardener is worthless."

Most of your clients will probably look at these three key functions and start eliminating what they can – the "I can do withouts." It's your job to keep them from dodging any of these responsibilities: *Their garden depends upon it!* By saying they can do without any of these three maintenance requirements, they're sentencing their garden to an unpleasant life of struggle and underachievement.

I may sound overly dramatic here, but I've seen this cycle over and over again. One yard I worked on where we had a "sky's the limit" budget will serve as an excellent example. We placed many 36-inch-box trees, one rare 48-inch-box pine, some very expensive Japanese maples and a host of other unique plantings. The homeowner hired one of the best gardeners in the area, paying him to come twice a week with the expectation that he would take care of "what needed to be taken care of."

We completed the yard two years ago and have since done minor fill-ins where plants weren't doing well. In all that time, I've repeatedly tried to convince the homeowner that she needed

to hire someone to do specialty maintenance, and she's finally seeing the impact of not hiring someone for that purpose.

Her shrubs are already very woody and produce fewer leaves than they would otherwise. Although a proper irrigation system was installed initially, no one has maintained it – and some plants have died from drowning while others have died of thirst. Lack of fertilizing has caused stunted growth in most of the plants, and overall, the yard looks strained and not well kept – despite the fact that it has a proper irrigation system and twice-weekly maintenance.

All in all, she's probably lost about half of her initial investment in plants

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as a result of improper maintenance. Hindsight may be 20/20, but that really doesn't help when your client has invested a lot of money in a garden!

Persuasive Powers

So what do you say right from the beginning to help your clients understand the importance of these three maintenance functions? I use one simple phrase: "Think of maintenance as insurance." In other words, persuade them that they need to insure their investment in their plants.

By installing the proper irrigation system, I tell them, you insure your plants will be properly watered. By hiring someone to do regular weekly maintenance – someone who at least does a good weekly job with the mow, blow and go – you insure that the basic design and structure of the yard will be maintained. By hiring someone to do specialty maintenance, you insure that the details are taken care of – details

that can make or break a garden.

If someone tells you they don't want to spend the money on any one of these three elements, you either need to convince them otherwise – or be willing to take responsibility for the fact that the garden won't do a good job of representing your work. After all, no client will blame the irrigation system, and few will lay much blame on the gardener or the specialty maintenance crew. Ultimately – and I know this from experience – you as the designer will catch the blame. And that translates into lost referrals.

I might go so far as to say that if you can't convince your clients of the importance of maintenance, you should pass on the job – or find an alternative. For example, if your clients have a limited budget and keep saying they *promise* they'll put the lawn sprinkler out every day and move it around for full coverage, you might suggest that they forget replacing the lawn for now. They could put that money into an irrigation sys-

tem and a 50 lb. bag of fertilizer that will perk up the collection of greenery that now barely passes for a lawn.

It's hard to compromise and scale back sometimes, but it's often wiser to guide clients to redirect their budgets for a better outcome than deal with the consequences of maintenance-related failures down the line.

The point is, if you succumb to the uneducated financial fears of your clients, it will only backfire on you and affect your business. If your jobs don't look good, it translates to lost referrals, a bad reputation and who knows what else. By contrast, if you develop a reputation for paying attention to details, you might become known as a pain in the neck – but your designs will look great and your clients will ultimately be happy with your work.

I have had many a client who couldn't stand the thought of hearing my maintenance speech one more time, but came back to me a year or two later



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Continued from page 23

and said, "You were right." We could all use one of those comments every once in a while!

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 this season in six new episodes of "The Surprise Gardener," airing Tuesday evenings on HGTV.

We regret to report that continued health concerns have returned columnist Jim McNicol to the sidelines once again. We wish him a speedy recovery and a quick return to the pages of WaterShapes with Things Electric

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Maintaining Investments

By Stephanie Rose

When I meet with clients for the first time, we talk a lot about what style, design, color and other elements appeal to them. We also talk about whether they want a low-maintenance garden, or whether they want to put a lot of their own work into a high-maintenance yard.

Consistently, however, I find that people do not even remotely understand what I mean by “maintenance.” I hear things like, “I don’t need a sprinkler clock,” or, more truthfully, “I don’t want to spend the money on a sprinkler clock” – and I immediately realize that I have someone on my hands who needs *educating*.

What Is Maintenance?

As a landscape designer, I also listen to lots of clients who see maintenance as the job performed by their overpriced “mow, blow and go” gardener who, they say, does “absolutely nothing.” But they’re thinking of just one of maintenance’s three key elements:

❑ **Irrigation.** Every properly landscaped yard must begin with a proper irrigation system. This means installing enough heads to cover the area adequately and enough valves so that no one area is overloaded. This also means considering exposure of the various areas and the types of plants that will be installed in each. Furthermore, someone needs to check periodically to be sure the system is in proper working order (in other words, someone needs to make certain the heads haven’t shifted and are watering the car instead of the lawn).



I might go so far as to say that if you can’t convince your clients of the importance of maintenance, you should pass on the job – or find an alternative.

❑ **Weekly maintenance service.** Most people have problems with their gardener, but I have to say that the majority of gardens are well tended by the weekly mow, blow and go service. With few exceptions, most of these workers are underpaid and simply don’t have the time to do anything more for a yard. (Even though I tend to complain about them, I have a lot of empathy for gardeners. If you figure out how much they get paid per hour to work on yards, it’s amazing they’re able to keep doing this for a living.)

❑ **Specialty maintenance.** Everyone thinks they’ll do this themselves – fertilizing, dead-heading flowers, thinning out woody shrubs,

Continued on page 71

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