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PREVIEW AND GUIDE

The Stone Age

Illinois builder a modern-day "caveman"

By Barrett Kilmer

Jamie Ori is president of Rosebrook Pools in Libertyville, a leafy suburb north of Chicago. The company is currently working on two projects it designed, both heavy on natural stone work, if you'll pardon the pun.

One of these projects, in St. Charles, Ill., features as its centerpiece a gunite grotto encased in natural stone. The grotto can be accessed from inside the pool or from the patio on the other side, and both entrances are hidden by a waterfall that spills down from the top of the grotto into the pool.

"The owners really didn't have a budget," Ori says. "They kind of came to us with a couple of different things.

They would look at national magazines like *Luxury Pools* and all that, then they came to us and said, 'All right, we want this, that and this.'

"So they picked out a bunch of different items and we kind of put together a design based on all of their needs. And we pretty much hit it right on the money."

Rosebrook may have hit it on the money, but there was a lot of behind-the-scenes preparation before that mighty homerun swing.

PUTTING IT ON PAPER

Taking a customer's magazine clippings and vague notions of what a final project

might look like, then plotting that out with specifics requires a practiced hand. Make that a *team* of practiced hands.

"Once it was on paper it went into production and engineering, and we had to figure out how to put the thing into the ground," Ori explains. "It did take a lot of special engineering because of the weight of all the natural stone we used and the footings that we had to put in.

"Now, the grotto also includes a gunite slide that's also encased in stone. So we have two separate elements that we had to do special footings for, and special steel placement for, to make sure we don't have any



Rosebrook used flyaway weathered edge boulders for this grotto, which are lighter weight but don't sacrifice density.

problems in the future.”

Because the boulders were so large — anywhere from 3 by 3 feet to 5 by 4 feet — Rosebrook chose a quarried boulder that’s a little lighter than it appears, Ori says.

“The boulders are called flyaway weathered edge,” he says. “It kind of has a holey boulder look to it, but it’s a lot denser. So it’s porous and looks like it’d be soft, but it’s not.”

Rosebrook hired a structural engineer to help design a support structure to handle the huge payload of 180 tons of stone and 40,000 pounds of concrete the project called for.

“At no time do we ever play structural engineer or soil engineer or anything like that,” Ori says. “You have to speak with the proper professionals so that you don’t have any problems. Pool guys have a different way of doing things, obviously,

where they think they know what to do and they just kind of guess on footing sizes and things like that. And that’s the absolute *wrong* thing to do.”

This step, while commonsensical enough, is often skipped, even by high-end builders who are looking to keep an estimate low or who overestimate their ability to make the calculations in-house, according to Ori.

“We do repairs and rehabs every year from poor construction techniques. It’s really a lack of knowledge,” he says. “A lot of the pool industry, they’re more just



Rosebrook hired an engineer to help design the support structure.

pool guys and they don’t really understand some of the special details.

“Now, when you get into hydraulics and different engineering and payloads and things like that, you really have to know who to speak with and also take into consideration any budgetary factors, so you can get the thing built right and without any problems.

“But what I see most of the time is the builders don’t even take into consideration the proper framework to install these types of features and details.”

Ori adds that though he always hires a structural engineer for projects like this one, he’s been around long enough and has done enough similar work that he’s got a pretty solid idea about how to secure things. In other words, he can figure out how many footings are needed and where they’ll go, but relies on the engineer to spec the sizes of the footings, the size of the rebar and anything else he thinks is needed.

“We sit down with him and say, ‘Well, how about if we do it this way.’ The job can be done a couple of different ways

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clients. They can say, 'This is the look I'm really going for' and put this piece here and that piece there."

Placement involves more than just moving rocks around, however. Because the rocks will form a waterfall, workers have to consider how the water is going to travel over them and into the pool. This is hard to envision on paper, and just about as hard to envision while placing the stones on-site. They know how they want cascading water to look and sound, roughly at least, but can't know how it'll really come out until they see it

for real, Ori says.

"Once we get everything up, we run different tests with 55-gallon drums," he explains. "We fill them with water and we install different pumps to simulate what the waterfalls will look like."

Any changes that need to be made can be handled before the plasterers do their job on the pool and the patio is set.

"Otherwise, when we turn everything on, there's something they don't like about it and they're all upset," Ori says. "That's what we try to avoid. We try to go each step of the way with them involved and try to get everything run-

ning, especially with the waterfalls."

This is another step Ori says too many builders skip.

"When a client tells them, 'I want this, that and the other,' the guy goes out and builds it because he has something in mind that he thinks the client has in mind, and they never meet up," he says. "So, as long as you're with the client throughout the whole process, it's going to come out 110 percent correct every time.

"And the clients like that. That's the fun part of the project — the rocks and waterfalls and the stones. That's where the majority of the money for the project is going and that's what they really look forward to."

In addition to spilling the water over the waterfall for the client's approval, Ori and his staff bring decibel meters to the work site and test noise levels at different parts of the backyard. Maybe one part of the patio is loud, and the client wants another part to be quieter.

"When you're out there and you're pumping water through this thing and you've got 15 55-gallon drums of water and you're walking around the pool with a decibel meter, the client really realizes where the money that they spent is going," he says. "They can see that, hey, this company has done this before. It really assures them that they're getting the best-quality product they can afford."

ROLL WITH THE CHANGES

After the 55-gallon test and some decibel metering, the St. Charles clients did indeed order up some changes. One thing they noticed was that the sheet of water wasn't as wide as they had envisioned, according to Ori.

"They wanted it to cover up the entrance to the grotto," Ori says. "They also wanted water on both sides of the grotto hitting some more of the rock work. So, we just made the sheet a little bigger.

"There are always adjustments, and we expect that, especially when you're dealing with a high-end client. You've got to realize that things are going to change, almost on a daily basis, and that's what kind of separates builders who deal with these clients from the average builder.

"You've got to foresee those problems, and be able to adjust for them." ~

Behind The Curtain

The grotto and waterfall that tops it are the stars of this St. Charles, Ill., project, but the clients budgeted plenty for the unseen inside and the spa contained therein.

"Inside we have a continuous bench that goes all the way around, and obviously lighting to light it up," says Jamie Ori, president of the Libertyville, Ill.-based builder. "There's a natural-stone table in there so they can put drinks and what-have-you on top.

"Then, we finished it with a textured concrete to make it look like natural stone."

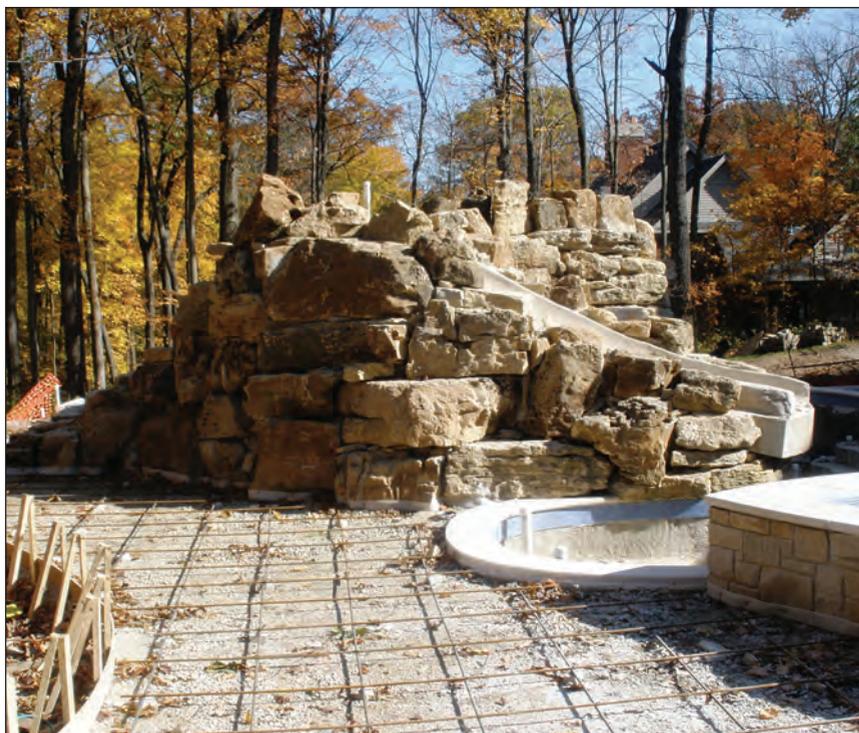
The ceiling is covered with fiber-optic lighting designed to create a feeling of being outside. (Wealthy people can afford to build indoor structures then rig them to make it look like they're outside. Cool!)

"Also on the inside we did all glass tile and created a ledge right at neck height that is kind of like a curb, so they can lay back and look up at the ceiling and have a nice, rounded glass edge to sit back on," Ori adds.

The project also features a hidden slide, which is made of gunite and encased, like the grotto itself, in natural stone. It's coated with a smooth sealer to facilitate sliding, and is rigged with a variable-speed pump so users can control the flow of water.

"For the entire pool, we used eight pumps and two variable-speed pumps," Ori explains. "The pipe sizes range from 3-inch to 8-inch PVC. It's kind of a wooded area, so we chose a place for the equipment maybe 80 or 100 feet away from the pool. It's screened with different plant materials, and we put up some trellis." —B.K.





Rosebrook built a gunite slide, encased in natural stone, on top of the grotto.

to make it right.

“And we’ll take into consideration other things about the job. So when we sit down with the structural engineer and go over all of this, it’s a joint effort designing the actual integrity of the whole thing.”

PIECE BY PIECE

All the heavy boulders Rosebrook brought in for the job were secured to the gunite with steel dowels and epoxies. As each of these boulders was placed, Rosebrook masons carefully chipped away at them to make sure they fit properly. Here’s where things get fun and the client gets his or her hands pretty deep into the project, Ori says.

“We love when the clients are out there watching us, and they say, ‘Turn this, move that this way.’ It’s really a joint effort.

“It’s a piece of art that, conceptually on a piece of paper looks great, but once you’re in the field and you’ve got the materials there, it’s really a lot of cooperation from our staff and the

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