



Once the landfill was removed, it had to be replaced with stone.

of which are intricate in both design and scope.

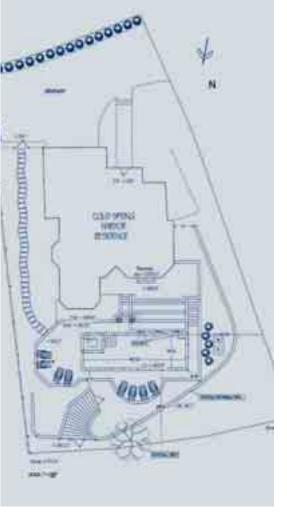
**Project Parameters:** The customer wanted to turn their small nondescript back yard overlooking Cold Spring Harbor into a useable and attractive outdoor living area. The site could fit a pool with the dimensions of approximately 13 feet by 40 feet.

The Challenges: The yard was too small, the grade change too severe and the access was too obstructed. To build a pool on this site, all the utilities (gas, water, electric and cable) would have to be re-routed. Further, all the drainage for the property, including a massive drywell adjacent to the pool, had to be dealt with. The icing on the project was the plateau where the pool was to be built. It was all landfill at least 11-14feet deep, held in place by a 14' retaining wall. At the base of the retaining wall the land dropped quickly away to the road below, which itself was sloped. Below that road were more houses.

Builder: The project was built by Haven Pools, Huntington, New York. Haven Pools was incorporated in 1968 by Karl Bonawandt and his wife, Muriel, and has been a gunite builder and service company exclusively for the past 40 years. The family-owned business is now run by son Craig, who worked summers at the firm through high school and college and joined

the company full time in 1975. Karl officially retired in 1985, but he still comes to work whenever he is in town. Craig's son Patrick has been with the business for seven years, upholding a tradition of excellence and preserving the uninterrupted flow of family leadership. Now a three-generation family business, Haven Pools builds an average of 30 gunite pools annually—most





Although the homeowners wanted a pool, they were very concerned about the unknown costs associated with the project.

Permitting Issues: Because of the road in the back of the house, the site of the pool was considered a front yard rather than a back yard, and the project needed a variance for a building permit. Haven Pools noted that this town was professional to deal with; the necessary variances were received within a few months.

**Products Used:** Haven Pools used Pentair products on this project. The in-floor cleaning system was a Quik Clean, manufactured by A & A, and the automatic cover was manufactured by Aquamatic.

Awards: The pool won the Outstanding Achievement in Design and Building—Bronze Award in NESPA's 2007 Design Awards Competition.

Builder's Comments. The homeowners had been told by other con-

tractors that their site was unbuildable. Craig Bonawandt believed a pool could be built, although it would be a logistically difficult job, and he told the homeowners that it would be difficult to price out the project until a design was completed.

"The first thing we needed to do was design the project—that was step 1. Step 2," said Bonawandt, "was to figure out how I was going to tackle it. We proceeded to create a design concept and to locate the pool on the site. There were many unknowns to doing this project. The homeowners, of course, did not want to move forward with a lot of unknown costs. I provided them with a financial plan for all of the unknown costs, including moving the utilities, the variables of the excavation, unstable soils, removal of fill and installation of bluestone gravel sub base and requisite hand labor."

Bonawandt said that when he bids a job like this, he begins by pricing it out









Other contractors had told the homeowners that the site was unbuildable, but Craig Bonawandt, Haven Pools, believed it could be done.

as if it were on a flat site with normal access. Then the additional site and structural requirements are added.

What frightened other builders away from this job? According to Bonawandt, the proposed location for the pool was a small, terraced lawn area. It was roughly six to seven feet lower than a walk-out basement to that area. There was a small set of steps going down to the terraced area. From there, things got complicated. Surrounding the lawn was a pre-existing retaining wall, which varied in height from 11 feet to 15 feet as it went around a curve. At the bottom of the retaining wall was another slope down to a street. The street had a slope as well. On the other side of the street were more houses on a downhill slope.

"When I was driving the track loader, pushing the dirt over the 18-foot cliff, I realized the task was not only difficult but a little scary, too," recalled Bonawandt. "We had to manage the runaway boulders and rocks because as we dug, anything close to round wanted to take off and roll down the hill. Any time there was a rock larger than a baseball, it would roll and once it got going it would keep rolling. We actually had to position a machine down in the road below to catch the rocks. Fortunately, it was not a heavily trafficked road."

Haven Pools started the project by excavating and installing the main retaining wall on the house side of the pool. The footing at the bottom of the wall was six feet below the bottom of the house footing, but just three feet away. This required Haven to work quickly to stabilize the area. The electric and water mains entered the house there and had to be re-routed around

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the new retaining wall. A concrete pump was used to place the concrete in the footings and the foundation walls.

"Before my client's house was built," said Bonawandt, "there was a driveway that came up from the lower street and went to another house. As we were excavating, we hit that old blacktop driveway. We dug down 11 feet at the shallow end to get to virgin soil. Once that was excavated, we needed to build it up again with stone. We got to the point where the machine could not get out of the hole any longer. So we had that machine pile the soil outside of the excavation and a second machine push it over the retaining wall to the area below where a third machine loaded it on a truck."

Was Haven Pools concerned about the strength of the retaining wall? "The existing retaining wall was constructed of a new concrete block system," explained Bonawandt. "We maintained an adequate distance from that wall to maintain its integrity. The original plan called for the pool to be a little longer and wider than it was actually built. It turns out that the retaining wall at its curve was not properly drawn on the property survey, so we had to change the dimensions of the pool somewhat."

One hundred and forty tons of bluestone gravel was installed to bring the excavation up to pre-gunite depths. Once the steel was in place, the pool was shot. It's a straightforward gunite pool with nothing unusual about its structure. What was unusual, said Bonawandt, was that once the gunite pool was shot, there was no room to get a machine onto the terrace again. All the remaining backfilling, excavation for terraces, retaining wall footings and grading were performed by hand. More than 70 tons of 12-inch concrete block, cement, mortar, natural veneer stone and travertine pavers were carried in by hand from the street below. Natural stone steps were installed all the way up the side of the house to the driveway above.

There is an open railing system for the terrace. The fence for New York State code compliance is down the hill. The equipment for the pool is behind the deep end with shrubs to hide it. The plumbing system is relatively conventional.

The net result was an exquisite pool, spa and outdoor living area equipped with an in floor cleaning system, chlorine generator, cascades in the retaining wall and a hydraulic automatic cover. The pool is nearly maintenance

free. The new terraces and walkways provide the homeowners with magnificent vistas of the harbor below while they enjoy a dip in the pool or a relaxing soak in the spa. According to Bonawandt, the homeowners were ecstatic with their new pool and spa. An added delight for the homeowners was that the project came in under budget in every respect.

