# Building Stone Institute

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# ARVING

**Carved Creations** 

An Eye for Detail

Granite Opens a World of **Possibilities** 

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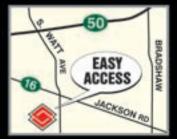


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#### 8 A Cut Above: The Art of Stone Carving

Carvers and sculptors who find the "inner being" of natural stone work their magic to add beauty and definition to homes, parks and structures. Author Mark Haverstock highlights some of the best and brightest artisans in the United States. Read about their passions and see photographs of some of their finest works.

#### 22 Carved Creations

Monuments, fountains and sculptures are just some of the creations that arise from natural stone. Here, see prime examples of art that adds a touch of class – and sometimes whimsy – to the great outdoors.

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Sit down with an expert stone carver who shares his perspectives on some of the questions we're most often asked here at Building Stone Magazine. Photo courtesy of Harold C. Vogel

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Stone: Blanco Limon. St. Regis Hotel and Resort, Monarch Beach, Calif.

> Photo courtesy of House of Stone





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# BuildingStone

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Considered by many to be one of the most versatile natural stones, aranite features many styles and colors, offering users strength and durability. In this article, explore some of the most advanced and distinctive uses of granite.

#### 64 Marmomacc Announces Winners: The International Architecture in Stone Award

An international jury convened in early March in Verona, Italy, to review major architectural projects in stone completed over the last two years. More than 40 projects were evaluated. Take a close up look at the winners here.



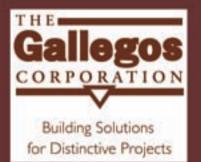
Photo courtesy of Laser Imaging & Design Inc.



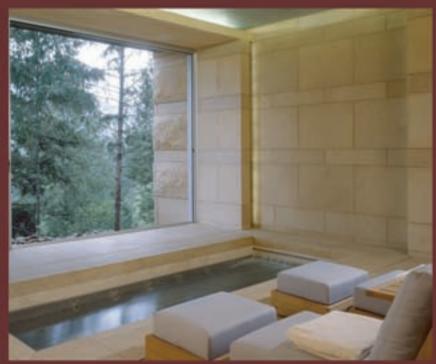


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### **BSI** Introduction

## Art for the Ages

Brenda Edwards TexaStone Quarries

HE OLDEST RECORDS of civilization and the oldest known works of representational art come to us from stone carvings. The carving of stone is an ancient activity where pieces of rough natural stone are shaped by the controlled removal of stone. Early examples of stone carving were the result of hitting or scratching a softer stone with a harder one or possibly the use of antlers or any object sharp enough to use as an abrasive. Today, pneumatic hammers, saws, drills and other modern technologies are used; however, the "good ole" hammer and chisel will never be replaced.

Carving stone into sculpture is an activity older than civilization itself. Stone is used as inspiration for some artists. Michelangelo claimed that his job was to free the human form trapped inside a block of stone. He certainly illustrated that with his statue of David. Some artists begin with an idea or form in their mind and find a stone to achieve their vision. Others choose the stone first, allowing the material to inspire them. In all cultures of the world, carving or sculpting has adapted and evolved throughout the ages.

In this issue of Building Stone, we are featuring from across the United States just a few of the many talented sculptors who use natural stone. It is obvious the creativity, the visions and the talent that each of these artists show in their works. I personally have had the pleasure of meeting most of the featured sculptors, and I am familiar with their works. I also have taken the journey up the mountain to Jemez Springs, N.M., to attend the carving workshop that is conducted each September. It takes complete dedication to "bang and clang" on stone all day long for weeks at a time.

Of course, whether you have been a longtime member or recently have joined the Building Stone Institute, you know the name Harold Vogel. His contribution in architectural, landscape, lettering and restoration sculpturing is unsurpassed. To show its appreciation for his contributions and dedication to the BSI, Harold was voted an Honorary Member in 2001. He is the only person to ever hold this position.

Throughout most of history, the purpose of creating sculpture has been to produce works of art that are as permanent as possible. The use of stone in carving over the years has provided many beautiful works of art - whether in architectural buildings, landscaping, a statue for a private home or a public monument. I can't imagine the world without sculptures.

Thanks to the talent of dedicated, modern-day stone carvers, the world will be able to marvel at and enjoy stone works for centuries to come.  $\blacklozenge$ 



6

#### **BSI NAMES EXECUTIVE VICE PRESIDENT**

Building Stone Institute (BSI), one of the country's oldest natural stone trade associations, recently announced the appointment of Margie Lechowicz as executive vice president.

As executive vice president, Lechowicz will serve as the BSI liaison promoting the organization's relationships with national, international, state and local organizations, and she will serve as a member of the Natural Stone Council Board of Directors. Lechowicz will oversee the execution of the goals, objectives, and priorities of BSI, and the allocation and distribution of resources toward those outcomes. She

will have direct oversight of issues related to the membership, legislative and technical committees while managing the budget and ensuring the financial integrity of the organization.

A native of Pittsburgh, Pa., Lechowicz brings to BSI more than 20 years of professional experience, most recently as the board/executive manager of the American Association of Diabetes Educators, Previously she served as executive director of Financial Institutions Insurance Association. Lechowicz holds a master's in public administration from Ohio State University, and a bachelor's in organizational communications and behavioral psychology from Carnegie Mellon University.



#### **BUILDING STONE INSTITUTE**

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#### A CUT ABOVE

# The Art of Stone Carving

By Mark Haverstock

**O** AN UNTRAINED EYE, STONE IS STONE. It takes a special talent to release a stone's inner being – whether it's an abstract of the human body, a fireplace mantle or a monument to those who served their country. Carvers and sculptors work their magic on a wide variety of stone to add beauty and definition to homes, parks and structures.

Building Stone Magazine highlights some of the best and brightest among these carvers and sculptors in the United States. These talented artists share with you their passions and creative thoughts about their inspiring art forms.

#### Alexandra Morosco Langley, Wash.

"Once I was exposed to sculpture, I could never get dirty enough," Morosco says. "I just really fell in love with the medium." She studied art and sculpture at California State University, worked as a representative for Trow and Holden – a leading manufacturer of fine carving tools – and continues to carve and promote stone carving through symposia and venues such as the Seattle Stonarium. A piece Morosco completed last year, "The Blood, the Bread and the Bones," incorporates several artistic outlets, including writing. "I actually started with a prose piece. The sculpture's imagery arrived through the vehicle of words," she explained. "Symbols evoked images in my mind's eye, then I translated that into a sculptural language of stone."

The piece consists of three different stones containing a figurative element, a symbolic abstract element and some elements of bronze.

"If I could choose one piece, this one probably best reflects that I work in a lot of mediums," she said. "I work in a very figurative, traditional style, but I also weave a lot of symbolism and complexities into my work that separate it from more traditional figurative sculpture. My work generally serves as a storyteller to some broader, conceptual meanings behind the figure." The primary figurative element at the top is made from southwest Catlinite (pipestone) followed by the center element carved from Indus limestone, which is native to Pakistan. The third element is

by Ard 3, and 100 boutes of 10

RIGHT: Ornamental desktop carved by Lou Beretta for David Allen Company, Raleigh, N.C. Winner of Pinnacle Award of Excellence for Interior Design 2003, Marble Institute of America.

OPPOSITE RIGHT: Texas Pink Granite megalith at Lyndon Baines Johnson Memorial Grove on the Potomac in Washington, D.C.



RIGHT AND OPPOSITE: Morosco's "The Blood, the Bread, and the Bones" carved from southwest Catlinite (pipestone), Indus limestone, and Texas limestone.

BELOW: Alexandra Morosco sandstone sculpture, "RHEA," 2006.

fact that limestone is made up of millions and millions of creatures from ancient sea beds."

"Sculpture parallels the work of the archaeologist," Morosco said. "We dig in the dirt, and we're always looking for the thing that feeds us – and stone sculpture is that primary thing for me."

#### Lou Beretta

#### Bedford, Ind.

Stone is in his blood. Carver and sculptor Lou Beretta can trace his heritage in the craft back to the mid-19th century in Carrara, Italy. The Berettas were originally a family of master stone setters and masons who eventually became carvers and sculptors of marble.

Beretta was raised around the stone industry in Bedford, Ind. "I had carvers living all around



#### The Blood, The Bread and The Bones

You are the bones ...

As archeologist reaches for discovery of the past And finds reason for the new we dig in the dirt and unearth what we are made of. A tapestry of structure and form woven from the seed and water of life. We nourish ourselves to build this tapestry. Eating bread, building bone. Blood, Bread, Bones. Mother passes blood to seed within and there grows bone. Mother created hone. The story is told in bones of exquisite shapes and elegant forms that continue to speak in their buried silence. A hushed story of the living. Blood, Bread, Bones.

You are the bones.

#### WHERE HAVE ALL THE CARVERS GONE?

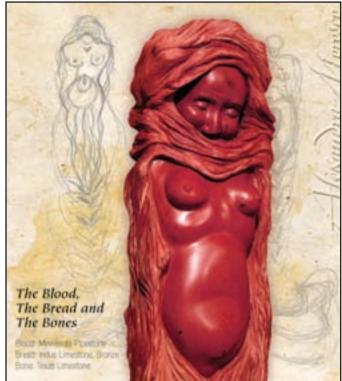
Carving stone is an activity older than civilization itself. Unfortunately, there are fewer younger people filling the ranks of today's stone carvers. "It's still not taught at most art schools," says New Mexico stone carver Carl Berney. But things have been changing, thanks to the stone carving community. Many carvers and sculptors are involved in workshops and courses designed to reach and educate the next generation of stone artists.

Stone carver Harold C. Vogel was concerned about the lack of artisans today who possess the necessary skills to maintain and restore the many buildings and monuments nationwide, especially those in our nation's capital. Thus, he worked with Northern Virginia Community College to establish a Stone Carving and Restoration Program.

Vermont's George Kurjanowicz has been involved in statewide educational programs, working as the carving instructor at the 2003 and 2004 Vermont Governor's Institutes on the Arts. Currently, he sits on the faculty at tStudio Place Arts in Barre, Vt., teaching stone carving with hand tools. The Vermont Granite Museum of Barre has also engaged Kurjanowicz as an instructor in its Stone Arts School, where he teaches the introductory course in pneumatic tools.

As managing director of the Southwest Carving Association, Carl Berney conducts an annual, week-long stone carving workshop in New Mexico's Jemez Mountains. The workshop focuses on instruction for beginners and intermediate carvers, as well as promotes camaraderie and dialogue among stone carvers worldwide.

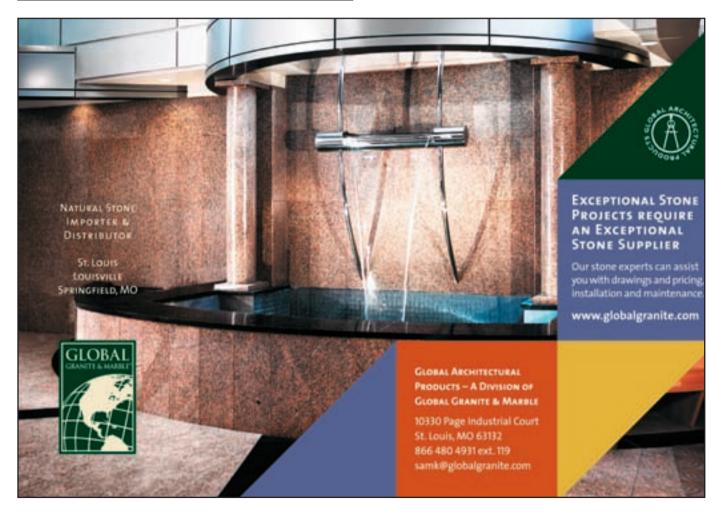
If stone carvers continue to pass along education and instruction, the art will continue to thrive.



me," he said. "Emery Miller had his home and carving shop behind us. Vasco Marchetti, who came from our family's home in Carrara, Italy, lived up the street." He always kept up with the stone business, working part-time for several mills and a private shop. But it wasn't until the 1990s that he actually went into the business full-time, having worked under the guidance of master carver Frank Arena.

Among Beretta's passions is designing and carving custom

fireplaces. "I did them in the mills originally, and I'd like to do more custom projects for clients," he said. Often, a client will have a specific idea in mind, but Beretta also keeps a collection of old books illustrating classic European design for inspiration. "Sometimes, I give [clients] one of the books that goes along with their plan and they get ideas," he explained, "but they usually have me change something to make it more personal. Other times, they



just turn me loose to come up with my own design."

The pictured fireplace design was custom-made from Indiana limestone for a residence in Bloomington. It was modeled after a design Beretta had done previously. "The clients looked at it and decided they liked that model, but they'd like me to add some to the design," Beretta said. "I took the basic elements from the originals, changing the florals and the leaf work, to produce a fireplace that was uniquely theirs."

Beretta's material of choice is limestone: Alabama limestone, Texas limestone, Indiana limestone and French limestone. He also works in marbles, including Georgia, Colorado and Vermont. He prefers to use "old-school" tools, such as chisels from Indiana or Europe in addition to pneumatic hammers.

#### Harold C. Vogel Front Royal, Va.

If it had not been for a twist of fate during his childhood, Harold C. Vogel may not have become the *steinmetzmeister* (master stone carver) he is today. He was born in Detroit, but his family moved back to their German homeland in the early 1930s. Vogel remained there through World War II and afterward entered a challenging stone carver apprenticeship at age 16.



RIGHT: Harold Vogel (foreground) uses a pneumatic hammer to carve Indiana Buff Limestone Presidential Seal at Gerald R. Ford Museum in Grand Rapids, Mich.

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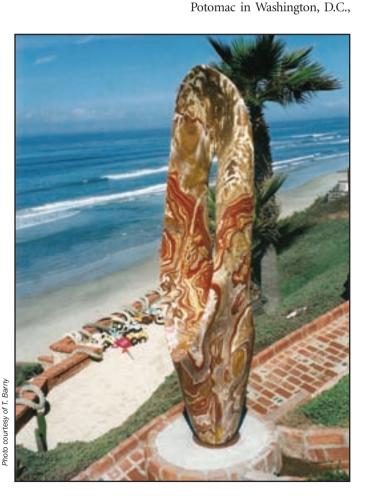
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RIGHT: Lady Bird Johnson and Harold Vogel at dedication of Lyndon Baines Johnson Memorial Grove on the Potomac in Washington, D.C.

BELOW: Displayed on a beach in Encinitas, Calif., this sculpture was carved by T. Barny from Utah Rhyolite.



Though Vogel has completed a variety of stone projects and restorations, he's probably best known for his work on public and government projects such as the Presidential Seal for the Gerald R. Ford Museum in Grand Rapids. Another notable project was the Lyndon Baines Johnson Memorial Grove on the



done in conjunction with landscape architect Meade Palmer. Both worked closely with Lady Bird Johnson on the design.

Vogel carved a wood sign at the entrance, as well as the monument that dominates the site. "Originally, Mrs. Johnson was thinking of a small piece of stone for the monument, maybe a few feet high, but I convinced her that it needed to be taller," Vogel said. "She also wanted to use some exposed stone from the LBJ Ranch, but quarried stone would be much more durable." The final piece chosen for the rough-hewn megalith stands 19 feet high and weighs in at 45 tons – fitting for a 6' 3" Texan who had a personality larger than life. Cold Spring Granite Company supplied the Texas pink granite from their Marble Falls quarry - not far from the LBJ Ranch.

In addition to the megalith, Vogel also carved four sets of quotations from the late president on granite pavestones near the foot of the monument. One reads, "I hope it may be said, a hundred years from now, that by working together we helped to make our country more just for all its People. ... At least it will be said that we tried."

Vogel is currently retired from stone carving and consulting, and

is the only honorary member of the Building Stone Institute.

#### T. Barny Healdsburg, Calif.

T. Barny, a graduate of the Rhode Island School of Design, has been creating sculpture professionally for more than 25 years in such diverse mediums as hot glass, neon gas, bronze, wood, water, steel and stone. His goal is to create intricate works that reflect the magic and wonder in our world – often provoking the response, "How does he do that?"

Barney's sculpture, "Mistral," was commissioned by a client in Encinitas, Calif. "I enjoy specific commissions because I love working with people and want to bring joy to their space, whether it's on their dining room table or in their garden,," he said. Barney started by choosing a piece of Utah Rhyolite. "I'm one of the few guys I know that's carving this for sculpture," he says. This particular variety of stone was chosen to match the house, which was constructed of redwood and brick.

Western Hills, Kanab, Utah, cut the block to 2 x 2 x 8 feet, and Barny began work on the piece during the Southwest Stone Carving Symposium. "Afterward, I brought it back to the studio. It took about a year to complete," he said. Installing the piece was a challenge. Workers lifted it by crane over the house to its final location facing the beach.

A Barny trademark is the mobius – a design he's created in several varieties of stone. "It's more of a Celtic knot, but we call it a mobius because it has one edge and surface," he explained. The pictured example is one Barny started while he was artist in residence at Arco Arte in Carrara, Italy.

From one foot-high tabletop sculpture to corporate monoliths, examples of his work appear in numerous public, corporate and private collections internationally.

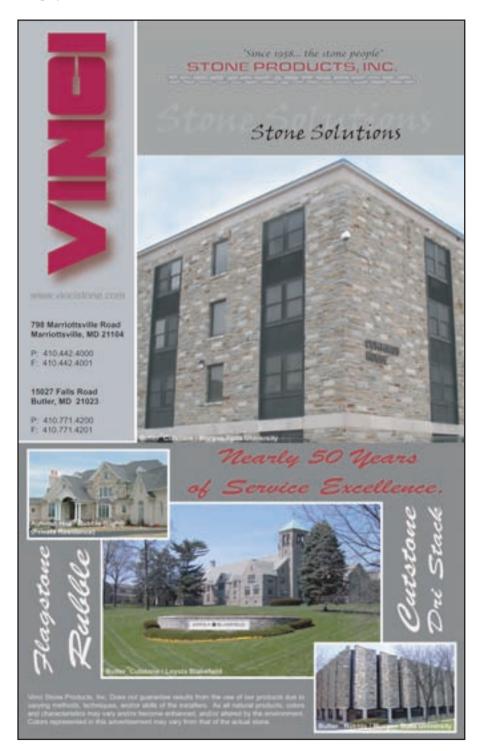
#### Nicholas Benson The John Stevens Shop, Newport, R.I.

The John Stevens Shop has a long and distinguished history dating back to the early 1700s. "We lay claim to being the oldest continuously operating [shop] on the same location in America," says Nicholas Benson, owner and creative director. The Stevens family owned the business for its first 221 years, until it was sold to Benson's grandfather, an internationally renowned calligrapher, in 1926.

The shop specializes in a few specific areas. "We do gravestone work, which is headstones, ledger stones and personal memorial work, and we get into large architectural inscription work that's done on existing structures," Benson said. "A part of our architectural work is tablets, those are add-ons to buildings."

What distinguishes The John Stevens Shop from production monument companies is the company's classical approach to carving lettering in stone. In this day and age of computer fonts, sandblasting and other forms of mechanical means for incising letters in stone, they produce nearly all work by hand. Lettering is generated with a broad edge brush just as it was done in Rome 2,000 years ago.

One of the company's most well-know projects is the World



ס



LEFT: George Kurjanowicz sitting on a Cold Spring Diamond Pink granite carving of his own design commissioned especially for the second annual St. Cloud, Minnesota Granite Festival.

War II Memorial in Washington, D.C.. Benson worked on it from beginning to end - two years of design work with the architect and the actual execution. "It's pretty much the benchmark for our style of architectural work," he says. "I designed a typeface specifically for the memorial rather than using an existing one. It was based on my telegraphic form rather than a typographic standard. I created the letter for three-dimensional use, to look good incised on the Kershaw granite used on that particular memorial."

Benson designed all the inscriptions for the particular locations and then made sandblast stencils that were used to hog out the material initially. "We decided to go with a U-cut letter rather than a V-cut letter because the U-cut just grabs a little more light and improves legibility," he said. A rough cut is left from the sandblasting, then the interior is finished by hand carving with a pneumatic hammer.

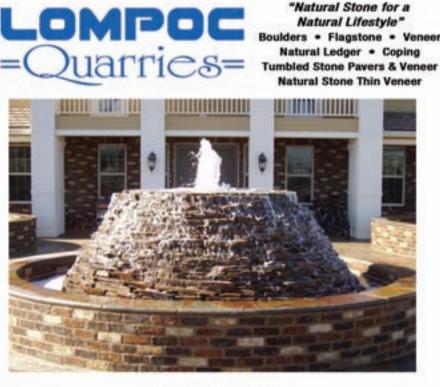
#### Carl Berney

Santa Fe, N.M.

According to Carl Berney, "I carve what the Muse sends me, and I carve what resonates with me personally. I tend toward the enduring themes of nature and humanity. I also look for shapes and forms that translate well into my medium, stone. Swirling, undulating and sensuous forms are what stone carvers dream about."

Berney takes different approaches to carving, depending on the project. "When I start a figurative piece, I generally

o courtesy of George Kurjanowicz



800-726-2292 28092 Forbes Rd + Laguna Niguel CA 92677-1288 www.lompocstone.com + email: stoneinfo@lompocstone.com know ahead of time what I'm going to do," he says. "If it's an abstract piece, I just take a piece of stone and start carving it until I see something emerge. Once the basic form has emerged, I refine it."

"Stretch," a domestic cat captured in alabaster, is typical of the feline forms Berney has carved. "Cats are so fluid," he says. "They are natural subjects for sculpture." Why this particular pose? "We have several cats here and they're always stretching like that. I thought it would make a neat sculpture." Berney also had the stone sculpture cast in bronze prior to its gallery debut.

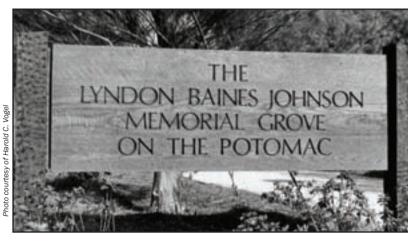
"I love working in stone," Berney said. "The shape and feel of it. It is so durable. It's a demanding medium, both physically and mentally, but it's exhilarating when you enter the stone and let it guide you to the final form."

#### George Kurjanowicz Barre, Vt.

George Kurjanowicz has been creating uncommon stone sculpture since 1975, including monumental and fine art pieces. He's also part of the sculptural community in Barre, Vt., known for its craftsmanship in marble – and more recently its community service.

The granite sculpture, an Aztec bench, was donated to the Barre City Elementary and Middle School. "We wanted to do something for the community, and construction of a new school here motivated us to get together to think of some kind of project to do," Kurjanowicz said. "I became involved in the

BELOW: Sign at entry of Lyndon Baines Johnson Memorial Grove on the Potomac in Washington, D.C., designed and carved by Harold Vogel.







ABOVE: Alexandra Morosco studies the in-progress Texas Limestone element of "The Blood, the Bread, and the Bones."

BELOW: "Stretch" carved by Carl Berney from Utah Apaloosa Alabaster.

organizational part of the project, but at the same time, being a sculptor, I wanted to make something too – simple to produce yet an aesthetic statement."

There was no budget, and local craftsmen and businesses donated all time and materials. Kurjanowicz secured two pieces of Barre Gray Granite from Rock of Ages (also located in Barre) for the project and tailored the design for ease of construction, so the pieces key into each other like a T. "It was

### CONNECTING PEOPLE WITH STONE

Do you have any questions about stone? If you're near Seattle, visit the Seattle Stonearium run by the Marenakos Rock Center.

According to Alexandra Morosco, who assisted in creating the venue, "The Stonearium was created as an experiential design place – anyone from homeowners to designers, architects and builders can come in and get 'connected' with stone as well as people who work with stone."

Creators wanted a place where people could come and experience what it feels like to be surrounded by stone, to see fine craftsmanship and to experience the possibilities. Visitors find just that. The building features a library with a fireplace where people can relax, drink wine and browse books about stone as well as portfolios from designers, artists, masons and landscapers.

The Stonearium has enough room to show off 16,000-pound Columbia River basalt columns, granite slabs and other impressive stone samples. The same goes for sculpture, which visitors can see up close through exhibits that change every few months.





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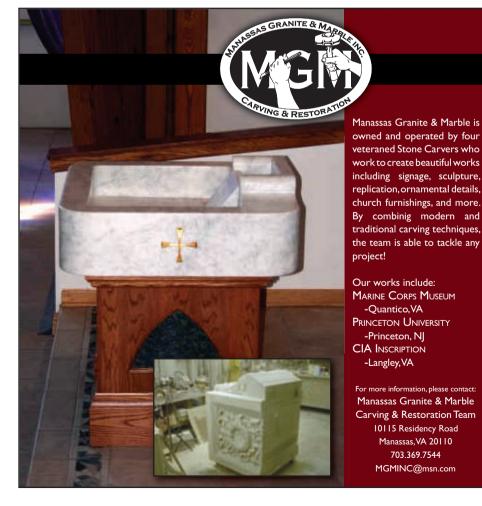


LEFT: Visitors viewed sculptures by Alexandra Morosco and photos by Andreas Kunert last fall at the Marenakos Stonearium Stonefest.

designed so all of the work could be done with a large diamond saw without any real hand work on the part of the people that did the sawing," he said. "I applied the surface to them and used a cup chisel to remove the sawed appearance."

Kurjanowicz was inspired by Mayan, Aztec and Inca, Mesoamerican designs for the children's playground project. "The actual carving work took me about a week, surfacing included," he said. "It's simply one level, the surface, with a sunk line which gives you the shadows where all the designs are located. It's simple, yet effective." He noted that all of these pieces were done on an athletic field next to the school.

The finished product is simple, functional and aesthetically pleasing. "I have always believed that less is more. My choice of materials has also led me in that direction," Kurjanowicz said. "Stone has a way of persuading one to be concise. I view my creativity as a path to be taken rather than an assemblage of random results - each piece leads me to the next. It both reinforces the correct design choices I have made, as well as eliminates the directions that do not serve me well." ♦



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# Carved Creations

By Stephanie Aurora Lewis

ARDENS, PARKS, TOWN CENTERS AND PLAZAS are important to a city's infrastructure. They create an environment that is suitable - and often even inspirational - for social interaction. The imagery of natural stone and its ability to endure in outdoor conditions for hundreds of years makes it an ideal material for these place-making features such as monuments, fountains, benches and sculptures. The stone carvers who create these sculpted pieces exhibit true handicraft as defined by William Morris during the Arts and Crafts Movement in England at the end of the 19th century.

#### **Outdoor Sculpture**

In Chicago, the Millennium Monument elegantly marks the end of tree-lined Wrigley Square lawn space in Millennium Park. Similar to Central Park in New York City, the lawn was designed as an inviting space for visitors to relax and to stroll along adjacent walking paths. The beautiful, 40foot-tall Peristyle monument is composed of Doric columns and includes inscriptions by the founders of Millennium Park in its base. Bybee Stone Company Inc. of Bloomington, Ind., carved the monument out of Indiana limestone.

California features a fountain so stunning that the prince of Saudi Arabia once asked the designer and carver - Bakerfield's House of Stone Inc. - if the fountain could be disassembled and shipped to his country. Amazed at this request, House of Stone's owner Eric Dobbs advised the prince that the weight and size of the fountain (60 feet in circumference) would make air travel difficult and  $\frac{\pi}{5}$ expensive. Still persistent, the 💈 prince requested an actual cost § estimate for the fountain's trans-



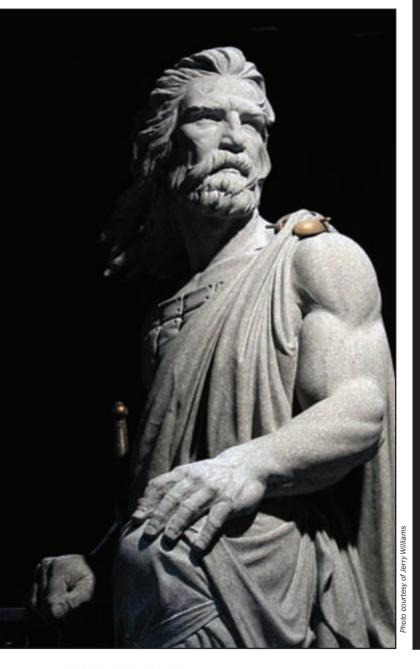
RIGHT: Stone: Lima. L'Auberge du Lac Hotel & Casino, Lake Charles, La.



BELOW: Large works, such as the detailed Highland Warrior, can pose big challenges for sculptors, but they are well worth the effort in the end.

port. When the figure came in at more than \$185,000, the prince decided instead to purchase the fountain's eight-page set of plans so that he could have it replicated in Saudi Arabia.

House of Stone also creates fountains for the bold Las Vegas strip – a place well known for outstanding outdoor sculpture. Dobbs states that a hand-carved fountain of natural stone, accented with a water and light show, is so visually stunning



#### **STONE CARVING: A THREATENED ART**

Since Modernism began to take root in the early 20th century, carving stone by hand slowly has been evolving into a lost art. Stone carving requires intense physical labor and dependence on apprenticeship programs, which could contribute to the decline in people entering the trade, says George Bybee of Bybee Stone Company Inc. Carving takes hard work, intelligence and a special human touch. Here are the stories of two American stone carvers who hope the handicraft won't become extinct.

#### SCOTT HALVERSON, ARCHITRAVE STONE CARVING

Scott Halverson of Architrave Stone Carving began his training in 1995 at a sculpture class through the Elisabet Ney Museum in Austin, Texas. He says he was like a "duck to water" as he began to carve his first piece. The professor of the class walked by and asked how long he had been carving. Much to the professor's surprise, Halverson shared he had only just begun that day.

Later, Halverson trained under French stone carvers in Minnesota, but he is generally a self-taught carver. He works out of a 1,400-square-foot workshop. Because he works solo, he takes on a tremendous amount of physical labor above and beyond the intellectual labor it takes to design, plan and engineer the stone. The vast majority of his work is done in limestone. He prefers to stay away from stone with high silica content, such as sandstone and granite, because those types of stone require the carver to wear a cumbersome respirator during the carving and finishing processes.

One of Halverson's impressive commissions was to replicate a limestone mantel for a mansion in St. Paul, Minn. He first took many photographs, and then started a series of drawings. Next, he engineered the pieces to attach to the wall with hidden fasteners. The final mantel was composed of 20 pieces and was well received by the client. Halverson enjoys the carving process because it requires patience and slow, meditative concentration. He gets into the artist "zone" and works slowly to unveil the image in his mind's eye.

#### **JERRY WILLIAMS, BARRE SCULPTURE STUDIOS**

American stone carvers face fierce competition from products such as cast stone and concrete moldings, as well as from carvers in other countries whose labor costs are often less than half those in the United States. Jerry Williams of Barre Sculpture Studios believes that his excellent customer service and the Internet are his two greatest tools to be a viable competitor. Williams trained under Frank Gaylord, the stone carver who created the Korean War Veterans Memorial in West Potomac Park in Washington, D.C. He has been carving for nearly 25 years.

Williams believes his design and carving method is one reason why he can maintain a high customer satisfaction rate and receive referrals for additional work. After designing on paper, he creates the sculpture out of clay at a  $\frac{1}{4}$ " scale or at a  $\frac{1}{2}$ " scale of the final piece. The clay sculpture then is covered and cast with Plaster of Paris. This scaled model then is either shown in-person to the prospective owner or through photographs for approval. Therefore, the client is assured of the final product before its completion. Furthermore, his apprentices use the plaster scaled models to guide their work. Barre Sculpture Studios takes only weeks to provide the final product, while imported sculptures that require shipping can take up to six months for delivery.

Very large products provide Williams with his biggest challenges. For example, the teddy bears he carved for installation at Teddy Bear Park in Stillwater, Minn., are enormous. The head of one teddy bear weighs six tons! Because of limited workshop space, these pieces are difficult to carve.

Williams' handicraft shows through stunningly in the Celtic Warriors he carved for a campground. The "Contemplative Warrior" is composed of South African Impala granite (a black stone) and the "Highland Warrior" was created from South African Blue Sable granite. RIGHT: Man-made natural stone sculptures are often a welcome addition to the great outdoors.

that it actually competes with the excitement of Las Vegas. House of Stone Inc. is completing much of the stone carving currently in progress for The Venetian Resort Hotel Casino.

#### Natural Stone for Outdoor Installations

Understanding natural stone is a science and an art. Robert Ripley of Carved Stone Creations from Kaukauna, Wis., extensively researches different qualities of natural stone and what happens to these natural stones when installed outdoors. He reports that the greatest amount of carved detail can be created with marble, a material



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Tri-State Stone<sup>®</sup> & Building Suppy, Inc. 8200 Seven Locks Road, Bethesda, Maryland 20817 U.S.A. 301-365-2100 BELOW: The stone for this fireplace is Bedford Limestone with a sanded finish and no sealant

BOTTOM: The fountain was created from Galaxy Green & Bianco Catalina Granite / polished and honed. Located at Lake Sandia subdivision, Krakow, Wis.



that can showcase subtleties of fabric and specific features, such as hair, on a sculpture. Granite, Ripley explains, has a tendency to chip off more easily during the carving process, making small details more difficult to highlight. Ripley describes the difference between carving in marble and granite like the difference between using clay and wet beach sand for a creation.

Marble is not often highly recommended for outdoor locations, however, because of the damage that can occur to the stone from freeze/thaw cycles. If marble is used outdoors, it needs to be sealed in the fall during the dry season so that moisture pen-

#### **CRAFTED BY HAND**

William Morris (1834-96) largely originated the Arts and Crafts movement based in England. He believed that all details in life should be influenced by art and carefully designed. To him, art was "the way in which man expresses joy in his work." To that end, he was a champion of true handicraft. Morris claimed the machine and its manufacturing byproducts were a means to kill art. In today's digital age, some people actually find comfort in art created truly by hand.







## The Tradition Continues... Old World Stone



Custom cut dimensional limestone and sandstone for restoration and new construction. www.oldworldstone.com 1-800-281-9615 RIGHT: Some sculptors believe art pieces are already in the stone and simply need to be released. Others choose natural stone with a specific work in mind.

BELOW: Stone sculptor Alexandra Morosco describes her work as figurative and traditional etration does not occur during the winter and spring seasons. Though it seems insignificant, moisture can penetrate into marble's microscopic veins and cause significant damage if it starts to expand during a freezing bout. Additionally, minerals in marble fade over time from ultraviolet rays breaking down their colors. When marble is used outdoors, it will weather and consequently show a patina quality – a color some find very beautiful.

Conversely, granite is an idyllic material for sculptures located outside; it will endure the elements twice as long as marble. Granite also is the most resistant to freeze/thaw cycles because its moisture absorption rate is between 1 percent and 3 percent. Further, the colors in granite will not





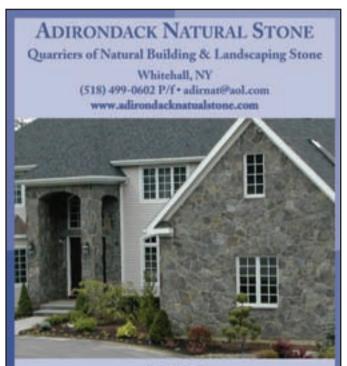


ABOVE: Art created from natural stone can offer something for every taste and style.

fade in ultraviolet light because its colors were "baked" into the stone during its formation through the lava process.

Jerry Williams, owner of Barre Sculpture Studios in Montpelier, Vt., states that certain considerations are necessary to protect granite when it is combined with elements such as electricity, water, and fire. Williams conceived, engineered and carved a breathtaking piece that combines granite and fire. One of Barre's clients requested a table that could be used for an annual father and son campout. The table would be used near a campfire. Williams proposed a sensational idea with the fire actually be located inside the table. The project is eight feet in diameter and made of Dakota Mahogany granite. The center has a custom-made iron fire pit with a bronze lid. The granite is insulated to protect the structural integrity of the stone from the heat of the fire.  $\blacklozenge$ 





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ABOVE: Presidential Seal at Gerald R. Ford Museum in Grand Rapids, Mich., carved from Indiana Buff Limestone.

RIGHT: Produced by Giallo Fantasia Granite, this piece was honed for a private residence in Delafield, Wis.

## FREQUENTLY ASKED QUESTIONS Stone Sculpting and Carving

By Jennie Farnsworth

**B**UILDING STONE MAGAZINE sat down with Jerry Williams of Barre Sculpture Studios to find out his perspective on some often-asked questions about stone sculpting. Here's what he told us.

#### QUESTION: Whatever happened to handcarved, ornamental features in stone exterior and interior architecture?

Ornamental features have fallen out of favor with most modern architects, partly because, in my opinion, their buildings are themselves considered sculpture and adding ornaments would be superfluous. Also, there is little regard for "old world" craftsmanship in today's buildings. Some day, CAD will be considered "old world."





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ABOVE: "Speranza," an example of T. Barny's trademark mobius sculptures.

Another possible reason is that carved work must be incorporated into the building plans, especially exterior stonework, so that the work can be done before the building is constructed. This complicates blueprints and may require models or other custom pattern work for duplication in stone. Making the carving integral to the structure cannot be an afterthought.

A third reason may be the lack of skilled professionals in the United States who can execute the design work and intricate carving. Skilled carvers are becoming difficult to find, as the market for their work is steadily disappearing. And China may not be the answer to this problem, as it seems to be for everything else.

RIGHT: Stone: Cedar Hill Creme, honed finish. Private residence.



Expense is always sited as a concern, but stone is relatively cheap compared to some of the materials modern architects use. Even with the added value of hand-sculptured details, it's still a bargain per square foot compared to materials like titanium, stainless steel, curved glass and some of the more exotic cast composites.



RIGHT: This sculpture, ManakiNekko, was carved from Indiana limestone



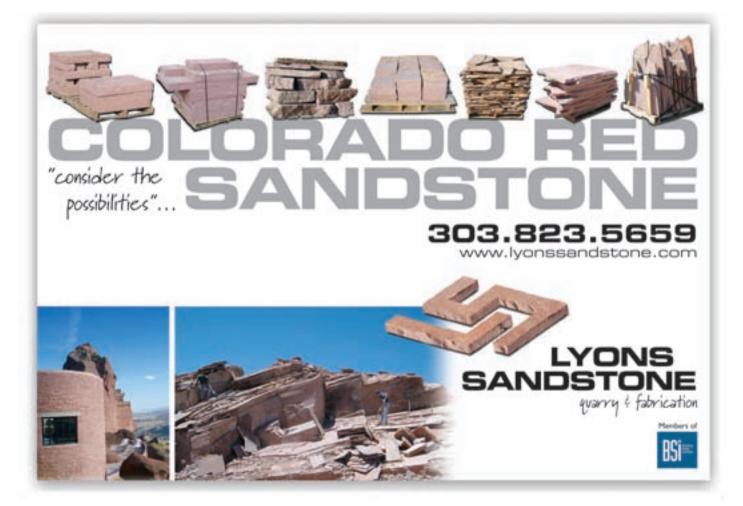
Photo courtesy of Carl Berney

Carved ornament and sculptured detailing may be out of the reach of most homeowners, but should be given a second look in the higher end construction projects.

#### QUESTION: How do I find a competent sculptor with experience in hand carving stone?

Some advertise in trade journals, but you'll have better luck on the Internet. Google granite, marble or stone sculpture and there will be thousands of listings. Most are "fine artists" who do work for gallery sales and commissioned work and will show examples of their work on their websites.

Some deal with "hardscapes" and natural stone construction, basically masons. But there are



some very creative masons. There won't be many examples of carved work on these sites.

With a little luck, an informed search will turn up a few likely candidates with the breadth of knowledge and expertise required for your project. Look at a variety of work. The styles, workmanship and professionalism will vary greatly and the best will have a good combination of all these traits.

### QUESTION: Where can I learn how to carve stone?

If you have a few years you can apprentice to a professional

BELOW: Stone sculptor Alexandra Morosco explains that often her work, such as this statue, serves to tell a story of broader meanings behind the figure.



challenge your way of thinking about natural stone.



Learn more, challenge yourself, and open the door to inspiration. In 2005, Building Stone Institute began offering the Designer Education Series to provide a solid educational program to the design community. Whether it's a program in the National Cathedral in Washington, D.C. or the New York Botanical Gardens, DES has helped hundreds of designers become more fluent in the language of stone. These on-site programs allow you to earn continuing education credits and participate in valuable handson learning experiences. Call the BSI at (847) 695-0170 or visit www.BuildingStoneInstitute.org for current program dates, locations, and registration information.

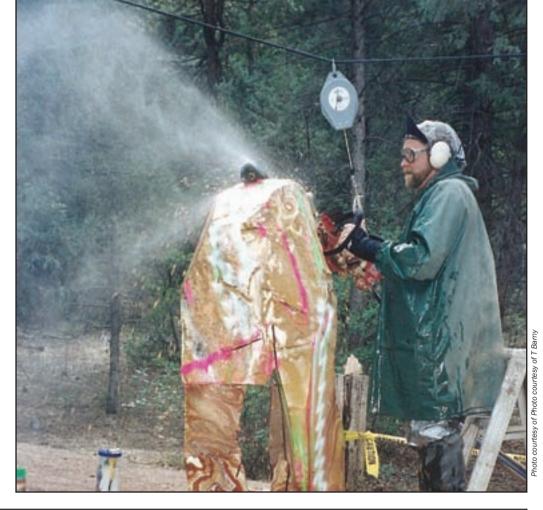
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The RSI Deviceser Education General in Lawled in part through the functional Ethnie Council

RIGHT: T. Barny uses diamond chain saw to cut Utah Rhyolite for "Mistral."

stone carver, but if you don't start making him money soon you won't last long. An average apprenticeship may last two to five years depending on how fast you pick things up, how much natural ability you have, and how much experience you can gain from your mentor.



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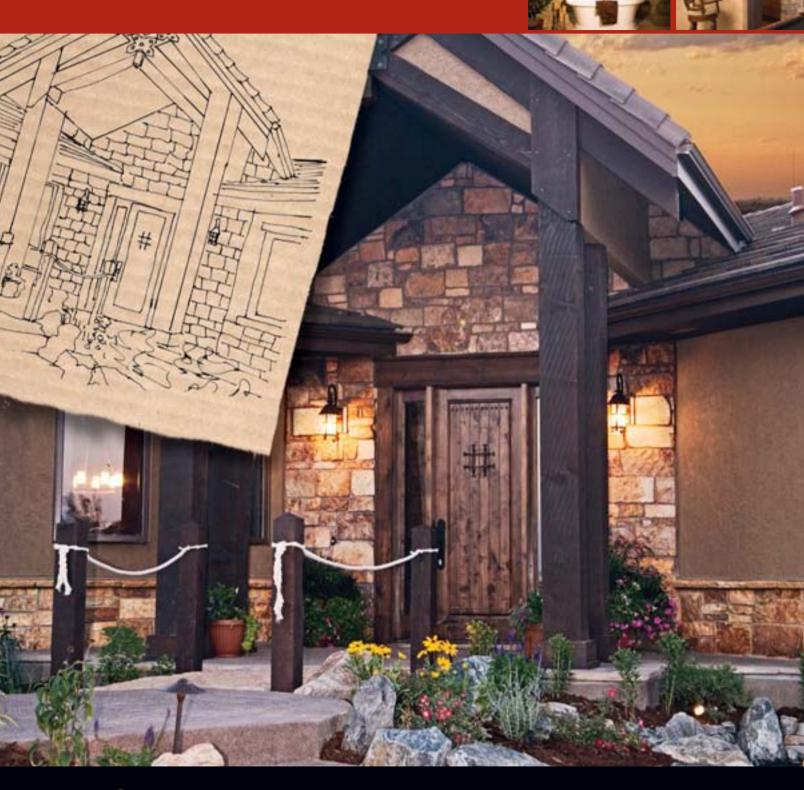
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ABOVE/BELOW: Workshops in stone sculpting can help aspiring artists learn to create everything from fanciful dragons to large-scale outdoor masterpieces.

If you don't have that much time and only need a specific skill set, many sculptors will do week long or two week workshops geared for intensive training in certain areas, like carving from the model, enlarging, or learning how to handle the tools of the trade. Again, an Internet search may provide the solution. Find a sculptor whose work impresses you and give him or her a phone call. Workshops provide some sculptors additional income when things are slow, but be prepared to pay for the time of a seasoned professional; it will be worth every penny.  $\blacklozenge$ 

### **CONTRIBUTOR:**

Jerry Williams, sculptor Barre Sculpture Studios. Email: skulpture@comcast.net Web: www.barresculpture.com



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# An Eye for Detail

## LASERS PROVIDE PHOTO-REALISTIC ENGRAVINGS IN NATURAL STONE



<sup>2</sup>hoto courtesy of Aquarius Laser Etching and Des

By Cory Sekine-Pettite

HE TECHNOLOGY for laser engraving (or laser etching as the process also is commonly known) has advanced exponentially from its humble beginnings in the 1980s and 1990s. No longer the underground tool of technologicallysavvy artists and trophy makers, laser etching machinery - and the design professionals who use them - have come a long way. Now, laser etching in natural stone through computer-controlled systems is a burgeoning market. From public and government projects to residential jobs, laser etching is a wonderful way to install a creative and personal element into your projects. This article discusses the various tools and equipment options available, how they work, and the amazing accomplishments in natural stone.

Among the leading North American manufacturers of laser etching machines are VyTek, Universal Laser Systems Inc., and CAM Tech International. There are different types of lasers available on the market, but the carbon dioxide gas (CO2) lasers are the most effective and widely used for laser etching in stone. "The CO2 laser is a very powerful type of laser. It has the power to permanently mark or engrave the surface of all kinds of natural and synthetic stone," said David Wilhite, marketing communications specialist for Universal Laser Systems in Scottsdale, Ariz. Examples include brick pavers, quarry tile, granite and slate, but black marble is by far the most popular stone because of the remarkable contrast it provides.

Generally, and for obvious reasons, these engraving machines are enclosed to prevent the beams from reflecting off any other surfaces and to prevent interaction with people. (They can burn!) For example, Universal's lasers are available with up to 400 watts of power. Of course, for most jobs, a designer wouldn't need that much "juice." Wilhite said that 30 to 35 watts would be more typical.

The way Universal's laser systems work, Wilhite explained, is by using a flat bed, "Z-axis" height motorized surface; the stone is placed on the work table. The laser is always in a fixed "Zheight" position, but it can move on the X-Y axis. "The way that works is: it has two operations. It either goes left to right and drops down one line at a time like an old, dot matrix printer [a raster operation] ... or it can follow a complex path [a vector operation], such as circles or stars, or whatever the computer tells it to do," he said, noting that his company manufactures both the laser systems and the lasers themselves - a feature unique in the industry.

The laser system's functions are computer-driven. Universal's laser engraving machines run on Windows-compatible software. The advantage here, Wilhite said, is that one does not have to learn proprietary software. For example, he uses AutoCAD, a program that most clients are familiar with and it puts them "in a comfort zone," he said. Another distinctive element Universal offers is a materialsbased print driver. All you have to do is tell the software what you want to engrave or "print" as well as the material thickness, and it will automatically adjust power settings according to material type.

NS

Software preference is a user comfort issue and can vary from manufacturer to manufacturer, he added, saying that one software system is not necessarily better than another.

So, who can benefit from using these magnificent machines? Fabricators, installers, quarriers, contractors, architects, designers and ABOVE: According to Laser Imaging & Design, the Middletown Veterans Memorial is the largest all-laser-etched memorial in the world. It stretches

more than 56 feet wide and stands

feet, these laser engravings on

Mineral Science and Engineering

**OPPOSITE LEFT:** At a total of 450 square

Pennsylvania Black Slate were created in

four sections, representing Penn State's

eight feet tall

departments.



LEFT: Artistic accessories, such as wall art, are a great way to incorporate laser-engraved stone into a home. And photo-realistic images, such as this waterfall, will have people turning their heads in amazement.

builders can incorporate laseretched features into their work.

With some laser etching systems capable of handling stone slabs as large as six feet by 10 feet and up to 20 inches thick, a true artistic renaissance is taking place within the design and building industries, and a few American companies are emerging as leaders of this movement. Laser Imaging & Design Inc. of Lebanon, Ohio, is one such company. Jim Smith, CEO, started the design firm after spending 10 years building his artistic muscles at a monument company in Lebanon. "I liked the idea of creating artwork in stone - something that is going to last much longer than something that is printed on a paper cup or put in a magazine that's going to be thrown in a trash can," he said.

Smith discovered the laser systems a few years before starting Laser Imaging & Design. He was intrigued immediately, but said the early systems were very slow and the results were not any better than what could be produced with hand etching. But the potential of the technology captivated him, so he watched the industry mature a bit before stepping out on his own. He even told his employer of his plans.

That company welcomed his idea, and even offered to be his first client. "I was afraid [my

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ages courtery of Laser Imaging & Design, Inc.



ABOVE: This one-of-a-kind, laserengraved and hand-painted mural is a tribute to Manuel Pacheco and all his dedicated efforts for the Integrated Learning Center Project on the University of Arizona campus. boss] was going to view me as a competitor in the beginning, but he said 'I'm actually willing to let you do all of our etchings if you're going to get this deep into [the technology]. If you prove yourself, we'll give you our entire account,''' Smith recalled. And although that monument business eventually was sold to a larger company, it is still Smith's largest client. "The granite that they move is phenomenal for a monument company," he said.

Currently, only about 10 percent of Smith's business is outside of the monument realm; Laser Imaging & Design has cut a niche for itself doing war memorials and other civic projects. Smith said he is usually so busy with monument work (1,300 different projects last year) that he hasn't marketed his services much in other fields. However, his new facility opened last December – features a showcase of possibilities of laser etching for residential and other applications. "We built our new building with a nice-sized showroom ... that has an actual full bathroom, full kitchen and a living room area to give people ideas of what could be done [with laser etching]," Smith said. "But we've been wholesale for so long that it has been a little bit of a struggle to tap that market. We're still trying to get out there

RIGHT: Laser engraving on granite for outdoor signs will hold up in the worst of conditions for decades to come. The durability is unmatched. RIGHT: Laser engraving on granite for



rior designers, and so forth."

One design firm already thriving in residential projects is Aquarius Laser Etching and Design of Woodland, Calif. Owner Hans Hartmann said laser etching can easily be incorporated into current design schemes or can be the inspiration for a new look. Kitchen backsplashes are a common place to feature laseretched stone, and a small way to





BELOW: Floor medallions are a popular way for homeowners to add laserengraved stone into their homes. This map motif (shown preinstalled) reflects the owner's love for Italy.

incorporate this artistic work if you're a little skittish. In kitchens, the granite can handle the heat and any cooking grease or other debris. Additionally, Hartmann said the etched stone doesn't require a special coating, and only pure stone cleaners are needed when cleaning up. Hartmann recommends Stone Tech Revitalizer.

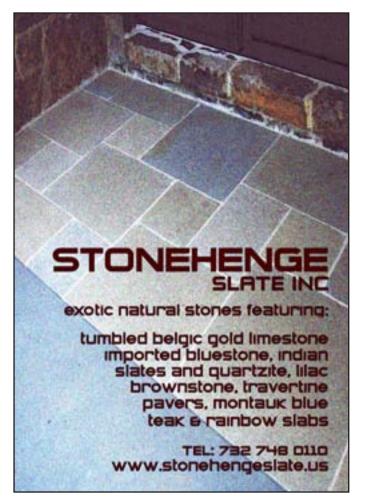
Another good use of laseretched stone in home design – particularly for the more adventurous – is floor medallions. And artistic tile accessories, as opposed to hanging a painting, for example, are becoming more common as well. Hartmann often displays at industry trade shows some of his work that depicts a waterfall scene. The attendees' reactions are always the same. "It's amazing how many people come up to us and ask 'Is that real water running over that?' That's how real it looks. ... When you see it in real life, even the splashes at the base of the rocks, you can almost hear it."

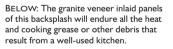


Photo-realism is the goal, after all, and the ultimate attraction for owners. Another company that has tapped the residential and commercial markets with its impressive laser etching is Etched By Design of Gilbert, Ariz. Coowner Scott West said a large percentage of his clients are residential and commercial builders. Some of his clients already know him because of his 21 years as a tile contractor and granite fabricator, but a majority of West's etching customers are new. "Our website has been our steam engine; it's everything to us," he said. Most clients find him, as opposed to other way around. "We're starting to get good recognition on a global scale," he added. Case in point: The Hard Days Night Hotel, which is scheduled to open later this year.

This Beatles-themed boutique hotel in Liverpool, England, will feature West's work on its exterior in the form of laseretched granite murals depicting a timeline of the Beatles' history.

West uses a CAM Tech laser etching system. He said the machine would etch four-foot by eight-foot stone pieces in one sitting, adding that as far as he knows, this is the largest laser etching machine in use in Arizona. The advances the industry has made just during the past five or six years have been tremendous, he said, from the quality of the machinery to the power of the lasers to the design software used. But the industry is still viewed as new, West added, saying that many potential clients are still afraid or apprehensive of the technology









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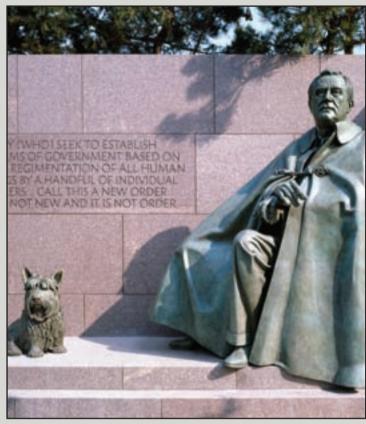
ABOVE: Universal's Professional Series of CO2 lasers provide an unbeatable combination of high power; three platform sizes; and an advanced, materials-based print driver.

and the laser etching process.

Smith attributes some of this apprehension to a growing group of inexperienced operators trying to get into the laser etching business. Unsure whether this somewhat negative trend is the result of people chasing money, or because of over-marketing of the equipment, Smith is sure of one thing: "It really takes a designer and someone who has a lot of background in computers to run a proper laser etching business," he said. "It also takes someone who is very knowledgeable about stone. There are a lot of different black granites that when you line them up, they look comparable to each other, but they do not laser etch the same in any regard. There is a lot more to be learned than meets the eye with these systems."

Hartmann and Aquarius are undoubtedly doing it right. The company's slogan is: "Any image. Any size." For commercial projects, Aquarius tends to specialize in lobbies and entranceways. For example, Hartmann currently is

## **ETCHED STONE:** NATIONAL MONUMENTS



Above: FDR memorial

A recent book from the National Geographic Society and author Ryan Coonerty celebrates the many etched stone monuments found throughout the United States with a particular emphasis on inscriptions and sentiments. Coonerty describes these words as "lasting testimonies to what our nation was, is, or aspires to be."

The book, "Etched in Stone: Enduring Words from Our Nation's Monuments," features 50 of this country's best known monuments, separated into four categories: In Praise of Public Lives, featuring some of our greatest leaders and thinkers; Ordinary Heroes, featuring monuments to our soldiers; Bearing Witness, featuring monuments to our history that are meant to remind us and educate us about tragic events; and A More Perfect Union, featuring monuments that extol the best ideals and aspirations of the United States.

"What is most impressive about 'Etched in Stone' is to see how creative and elegiac the United States has been in memorializing its heritage. ... All the memorials ... live up to our nation's highest ideals. They are lasting tributes to the very best instincts we have as a nation: proper reflection for the vicissitudes of the past," writes historian Douglas Brinkley in the book's foreword.

Of course, being a National Geographic publication, "Etched in Stone" wouldn't be complete without an impressive collection of photographs. Well-known architecture photographer Carol M. Highsmith provides the stirring and inspirational images, which are crucial to Coonerty's tome.

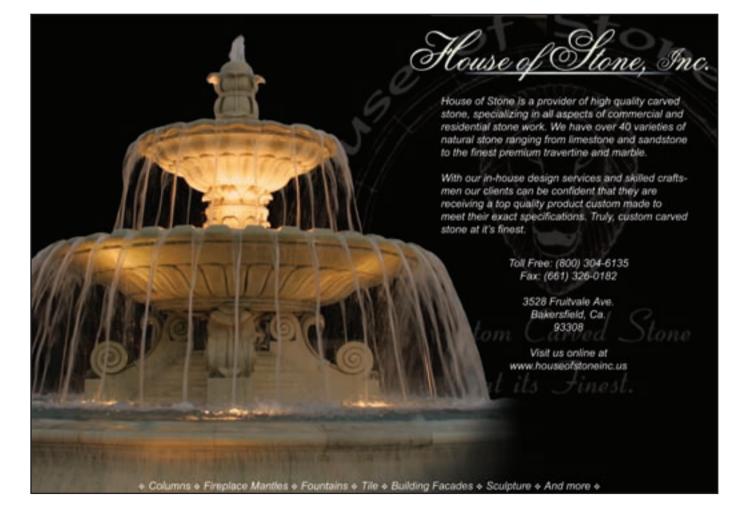
For more information on the book, visit www.nationalgeographic.com.



working on a project for the lobby of Pacific Life Insurance Company's new building. When completed, the project will feature four curved granite panels. "As far as I know, we're the only ones who bend granite," Hartmann said. "We developed our own system here."

Originally, when Pacific Life approached Hartmann with a design idea for a black granite mural that included a curved wall (11-foot radius), he proposed supplying two-foot sections of granite panels to give the company the curve they were after for the 16-foot-long mural. It wasn't until a few months later that an idea came to this former steel fabricator about how he might be able to bend the granite panels. So he started experimenting, including fabricating his own jigs for the

LEFT: Outdoor corporate or commercial signage is a common yet effective way to get a business noticed along busy streets. Not only do the laser-engraved granite or marble signs look great, but they are completely durable against the elements.



RIGHT: Sea creatures are a favorite subject matter for many home owners looking to add laser-engraved art into their homes. These black granite tiles provide the perfect backdrop on which to bring these whales to life.



Photo courtesy of Aquarius Laser Etching and Design

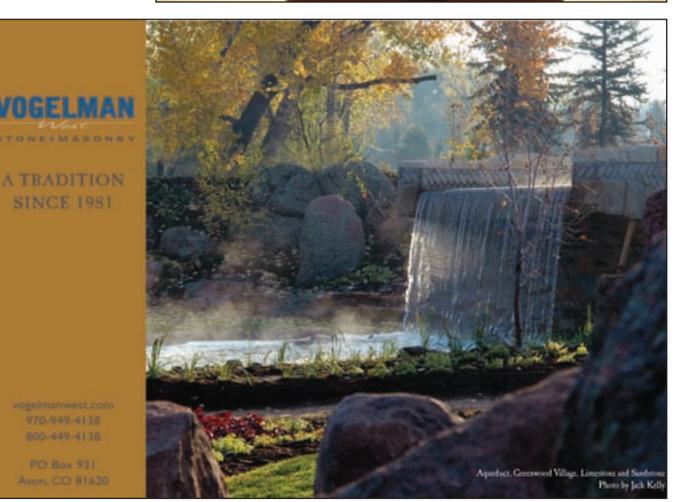
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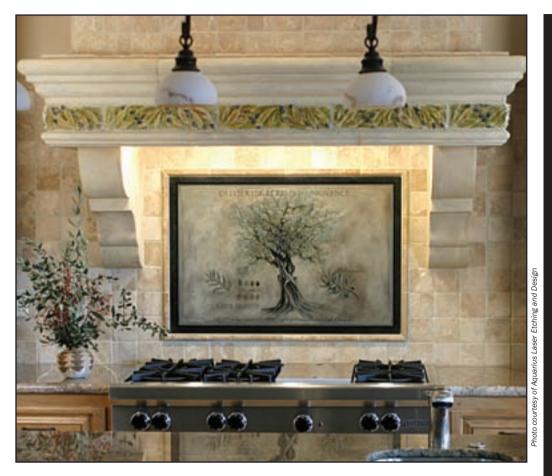
process. Hartmann estimates that the project will take 20,000 pounds to 30,000 pounds of force to bend the panels, but the process remains a closely guarded secret.

Aquarius' less complicated work includes many public art projects and memorials. For example, the company's ongoing war on terrorism memorial for the California Military Museum, which measure 20 feet long and eight feet tall.

Additionally, the company recently completed two projects for state universities. At the University of Arizona in Tucson, Aquarius produced what Hartmann said is the world's largest laser-etched mural. This tribute to past University President Manuel Pacheco measures 15 feet tall and 20 feet wide. This BELOW: Photorealistic laser engravings, such as this decorative art piece on 12inch granite tiles in the Valley Wide Dental office in Palmdale, Calif., make for quite a conversation piece. The owners chose this subject matter to commemorate an actual scuba diving experience.







ABOVE: This backsplash is the focal point of this Auburn, Calif., home, reflecting the owner's love for olive trees.

outdoor application consists of thin slab granite panels measuring 7 ½ feet tall each. "The colors that we used do not have UV inhibitors in them, so we applied a special coating – available on the market – to the surface," Hartmann said.

The other university project was produced for The Pennsylvania State University (Penn State). This indoor, spacethemed mural was installed in the Department of Mineral Sciences and Engineering Museum. It features Pennsylvania Black Slate tiles with a total measured dimension of 450 square feet (three sections at 7 ½ feet tall by 10 feet long, and one section at 7 ½ feet by 30 feet).

It took Aquarius about two months to complete the job. There were some problems to overcome, including the fact that some of the tiles were out of square and others were not uniform in size. "We had to take the bad ones and put them on the outside. ... Eventually, we got it and they were very happy with the outcome," Hartmann said.

Professionals in our industry tend to have a keen eye for detail. Thus, the remarkable detail and creativity possible through laser-etched stone should appeal to your sensibilities. The technology behind the equipment and the imagination of the artists creating the designs not only is impressive today, but surely will progress as the industry matures. Contact any of the companies mentioned in this article to find out how laseretched stone can be added to your repertoire.

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Photo courtesy of Dakota Granite

# Granite Opens a World of Possibilities

By Jodi Paper

NNUMERABLE TYPES OF NATURAL STONE exist in all parts of the world. Many of these stones are well suited to nearly any building project. Considered by many to be one of the most versatile natural stones, granite features many styles and colors, offering users strength and durability. "Next to the diamond," said Bill Ruoff, sales director of Dakota Granite Company in Milbank, S.D., "granite is the most durable natural material available for construction."

Although the company began in 1925 as a quarrier and manufacturer of Dakota mahogany monuments, Dakota Granite Company's repertoire has since grown to include everything from slabs to civic memorials to custom countertops. "We are quarriers and manufacturers, so we can build just about anything from large personal mausoleums to small wall plaques," said Ruoff. "We were privileged to build the memorial for the USS Cole, and we have done many war memorials for communities around the country through our network of memorial retailers." Other major projects include the new South Dakota Governor's mansion, projects in Texas and Tokyo, and a hospital in Malaysia.

Arnold Abatecola, president of A-stone Inc., located in Johnston, R.I., sees granite as having at least two distinctive qualities: "I think of granite as number one, being one of the hardest materials on earth," he said. "And, number two, the multitude of colors make it so easy to coordinate it with any job you

are trying to accomplish." Abatecola knows his way around natural stone, thanks to experience in the landscaping and masonry businesses since 1965.

For interior applications such as countertops, stairs, flooring and rails, as well as for exterior applications such as retaining walls, building and house veneers, steps, posts and curbing, granite is unmatched. Why? "Because of its durability and beauty," said Abatecola.

Peter Weis, vice president and project manager of W.R.Weis Company Inc., which specializes in all stone-work OPPOSITE LEFT: Lincoln Plaza in Texas is clad in Dakota Mahogany, a highly durable granite with black and orange variegation.

BELOW: W.R. Weis was contracted to install granite throughout AON plaza (formerly Amoco Plaza) in Chicago. Their work included all of the water features including the main fountain and several water walls.





ABOVE: W.R. Weis Company furnished and installed all of the stonework for the Hyatt Center in Chicago.

projects – from large commercial interiors and exteriors to plazas, parks and small tenant build-outs – agreed. "Granite is a very durable building material," he said. "No matter what it is used for, cladding or paving, or what color you choose: blue, black, white, et cetera."

W.R. Weis Company Inc. furnished and installed all of the stonework for the Hyatt Center in Chicago, a 48-story office tower. "Our work included all of the Virginia Mist granite, which was used for all of the interior and exterior wall cladding, paving, vanities and planters," Weis said.

"The one thing that is inherent about granite, that people cannot choose, is what the material represents." Weis continued. "It represents a sense of wealth and stability. These qualities will never change."

## Choosing a Type of Granite

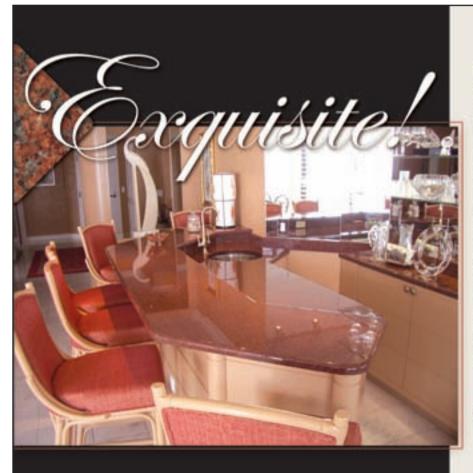
"Material is usually selected by the architect. The material test data will be reviewed by the engineer, and he will determine if the granite can be used as intended. For example, some gold granites generally produce lower strength values in testing than, say, a black," Weis explained.

Still, "most granites work well for both interior and exterior applications," said Ruoff, "including flooring, fireplaces, curbing, stairs, steps, and, of course, kitchen countertops. An added advantage is the variety of surfaces available – polished, honed, thermal, rock, tooled, stippled – it's pretty easy to customize a look."

And, this customization has come even further with the advent of granite switch plates. "With granite countertops and backsplashes becoming so popular in kitchens all across the United States, we noticed there were white switch plates in this beautiful new kitchen," said Jeff Oster, vice president of sales for Mirart Inc. in Pompano Beach, Fla. "The contrast made them stick out like a sore thumb, so we created matching granite switch plates to accent the beauty of the installation."

Mirart can use the actual granite from the client's kitchen - from the drop from a sink or the cooktop, for example - to create an exact match. Or, the switch plates can be made from Mirart's stone. "We start with full thickness of granite slab and cut down thin enough to make a switch plate," Oster said. "We then use diamond tools to make the appropriate cut-out and finish the plate to the customer's specification and ship. The process is pretty elaborate and takes approximately four weeks."

"Elegance, strength and quality are characteristics that many large corporations, financial institutions, and governments have recognized down through the ages," said Ruoff. "And [granite] is how they send a message about who and what they are."



This warm and inviting space was designed around a Wausau Red bartop. The uniqueness of this stone, its superb consistency – in grain and in color – is ideal for countertops, back-splashes, Island tops and furniture, such as dining tables, consoles and sideboards.

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RIGHT: This residence is located in North Dakota. The Dakota Mahogany used in the exterior cladding is an ashlar cut, which reveals the surface of the broken stone.

Photo courtesy of Dakota Granite

One project in which the message of strength and quality can't be missed is at the Mall of the Emirates in Dubai. The Mall of the Emirates is more than two miles long and accommodates approximately 50,000 people per day. In 2007, the mall is expected to receive in excess of 27 million visitors. With so much foot traffic, not any flooring material would do.

"Our options were carpet, concrete, or something hard enough to sustain that amount of activity," said the lead architect on the project, Andy Feola of F+A Architects in Pasadena, Calif. But since the mall – which might be considered more of a shopping resort and which houses a number of "districts," including high-end fashion "streets" and an indoor winter sports complex – is far from typical, the flooring itself needed to be extraordinary.

"After a lot of discussion and testing [of various materials], we decided on granite," Feola said. "Softer floor materials have a tendency to literally break down under pressure. When we got down to it, granite was the material to use."







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LEFT: At the Hyatt Center in Chicago, Virginia Mist granite was used for all of the interior and exterior wall cladding, paving, vanities and planters.

Twenty-six different kinds of granite were utilized to create the impressive floor. The granite was imported from all over the world. These imports include a honeycomb variety from Italy, Azure Blue from Brazil, and selections from North Africa and China, to name a few. After the granite was cut and polished in Portugal, it was shipped to Dubai for installation.

With so much floor space to cover, the architects had to come up with a plan. They decided to



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ABOVE: Water features such as this fountain are part of W.R. Weis' work in Chicago's AON plaza.

LOWER RIGHT: The 300,000 square feet of flooring in the Mall of the Emirates, located in Dubai, consists of 26 different granites from all over the world, including stone from Brazil, Italy, North Africa and China. section the floors by stone block. "We took each slab and cut it into a nine-piece pattern that we rotated ninety degrees [with each section]," Feola said. "This helped us avoid distinctive changes in the color of the granite and created a consistency throughout."

The mall, home to several hotels and an indoor ski area, is sectioned into "courts," including an entertainment, food, and fashion. "We designed a series of colorful granite medallions at each intersection, which change color from court to court," Feola explained. "The overall design is closest to a Moorish style, which finds its roots in the Mediterranean, heavily influenced by Moroccan, Spanish and Italian styles. The details and patterns are Arab influenced." The result is a truly global work of stone art, or "floor architecture," as Feola put it, that probably could not have been achieved without granite.

"Granite is just a fantastic material, and we can use it in so many ways," he said. "Water-cutting allows us to do many things with granite we would have been cautious about in the past. Now there is no limit to the type of cut we can get. We can achieve design goals in granite without having to sacrifice hardness or stone quality. Working on this project really opened our eyes to the possibilities. We couldn't have asked for anything better than granite."

Granite can easily be considered the epitome of natural stone; it is an extremely versatile material with a plethora of applications, colors and styles. Incorporating granite into any project, whether interior or exterior, as an accent or primary element, in a traditional or innovative treatment, or for large or small projects, opens up an entire world of solid possibilities.



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## MARMOMACC ANNOUNCES WINNERS OF THE 10TH EDITION OF **The International Architecture in Stone Award**

A NINTERNATIONAL JURY CONVENED in early March in Verona, Italy, to review major architectural projects in stone completed over the last two years. More than 40 projects were evaluated, and the winning projects were recently announced. Awards will be presented at a ceremony on Saturday, Oct. 6, during Marmomacc. The projects will also were featured in an exhibit at the fair.

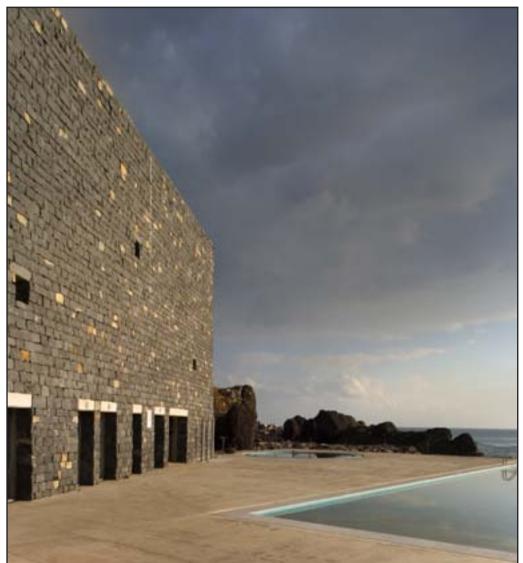
The Award was created by Veronafiere in 1987 to recognize significant architectural works in stone, as part of the trade fair company's efforts to promote "stone culture."

The winning projects for the 10th Edition – and the reasons they were selected by the jury – are:

### Piscinas do Atlantico

## (Paulo David, Madeira, Portugal, 2005; material: basalt)

David selects this volcanic stone, which has traditionally been used as a building material on the island of Madeira, to establish an



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intimate connection with the intense Atlantic Ocean landscape. This material selection also creates a sense of continuity and harmony with his previous project, la Casa das Mudas, also in basalt.

The *Piscinas* project consists of a large stone open-air "room" looking out on the ocean. It creates a connection between the features of the local landscape and urban spaces.

#### Marikloster

(Cistercian Monastery) (Jensen & Skodvin Arkitektkontor, Tautra Island, Trondheimsfjord, Norway, 2003-2006; architects Jan Olav Jansen and Børre Skodvin; material: Norwegian slate slabs)

In Trondheimsfjord, architects Jansen and Skodvin have managed to create a convincing form for this monastery: it is contemporary yet reflects universal values, giving it a timeless quality. Through simple forms and basic materials (wood and slate) they reflect the Cistercian Order's tradition, while providing a modern interpretation of timelessness. The result is a simple and universal architecture, which resists trends.

### Ampliación del Banco de España

## (Rafael Moneo, Madrid, Spain, 2006; material: granite)

Moneo's project, coming at a time when architects often seek protagonism through flashy designs, provokes through the simplicity and modesty with ABOVE: Marikloster (Cistercian Monastery) (Jensen & Skodvin Arkitektkontor, Tautra Island, Trondheimsfjord, Norway, 2003-2006; architects Jan Olav Jansen and Børre Skodvin; material: Norwegian slate slabs)

OPPOSITE LEFT: *Piscinas do Atlantico* (Paulo David, Madeira, Portugal, 2005; material: basalt) RIGHT: Ampliación del Banco de España (Rafael Moneo, Madrid, Spain, 2006; material: granite)

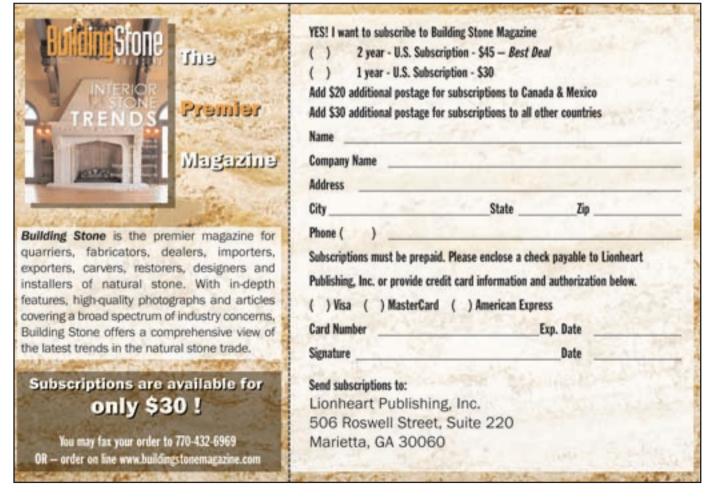


which it fits into Madrid's urban landscape. The surreal "nontrendiness" of the project, which completes the original 1800s edifice by subjugating itself to the original structure's main characteristics – particularly the molded stone in the façade – highlights the intellectual vigor of Moneo's work. His addition brings changes that fit in with and enrich the preexisting building without significantly altering it.

### Completamento della Muralla Nazarí

(Antonio Jiménez Torrecillas, Granada, Spain, 2003-2006; material: granite slabs)

A minimal and minimalist contribution to close a 40-meter breach, which dates from the late 1800s, in the ancient wall that connects the Alhambra to the





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Lt. Colonel Joseph Busik founded Delaware Quarries Inc. in February 1946. He had just returned home from flying B17s over Europe in World War II and purchased America's oldest operating quarry, which had opened in 1758. Prince-



ton University was one of Joe's first customers; Delaware Quarries supplied building stone veneer for its post-World War II buildings.

Today, Delaware Quarries is owned by J. Kevan Busik. Kevan was elected president of the Building Stone Institute (BSI) at its annual convention in 2000. A few years later, at the Institute's 84th annual convention, Kevan was named "Man of the Year." BSI members from around the world honored him for his principles, honor and integrity. Kevan and Joe are the only father and son BSI past presidents that were both elected Man of the Year.

Delaware Quarries owns and operates eight facilities and is headquartered in New Hope, Pa. The combination of these quarries has enabled the company to offer the largest selection of building and landscape stone in the industry.

For more information about Delaware Quarries, please visit www.delawarequarries.com













ABOVE: Memorial for the Fosse Ardeatine (Ardeatine Caves) Victims (M. Fiorentino (1918-1982), G. Perugini, N. Aprile, C. Calcaprina, A. Cardelli, Rome, Italy, 1944-1951; material: granite and Roman Tuff) Albaicin area. Jiménez Torrecillas uses fragments of local granite slabs to repair the hole, while successfully avoiding the impression that his contribution simply seeks to mimic the original wall.

### Remodeling of A Two-Family Home

(Beniamo Servino, Pozzovetere, Caserta, Italy, 2001-2006; material: local tuffaceous stone)

Servino's work is seen as an expression of cultural renewal that reflects values and characteristics related to a specific local identity. The simple Pozzovetere structure is an architectural work that highlights the importance of local history seen as the development of a specific regional culture.

### "AD MEMORIAM" PRIZE

### Memorial for the Fosse Ardeatine

(Ardeatine Caves) Victims (M. Fiorentino [1918-1982], G. Perugini, N. Aprile, C. Calcaprina, A. Cardelli, Rome, Italy, 1944-1951; material: granite and Roman Tuff)

The dramatic 1944 massacre at the Ardeatine caves, along the ancient Appian Way, seemed to





lend itself to a traditional memorial approach. Instead, the group led by Mario Fiorentino opted for strong imagery, full of finality and pathos: a large parallelepiped suspended, as a single "gravestone" for the 335 victims, surrounded by an imposing stone polygonal wall. The stone - the tuff in the outer walls and in those of the memorial, in the pavements, and in the remodeled tunnels, as well as the pointhammered granite of the graves - treated only with archaic simplicity, acquires an unusual expressiveness.

### VERNACULAR ARCHITECTURE PRIZE

#### Hill Region of Northern Verona Province

(Architecture in Lessinia Stone; materials: Lessinia Stone and Prun Stone)

The architecture of Lessinia is an exceptional collective work TOP: Completamento della Muralla Nazarí (Antonio Jiménez Torrecillas, Granada, Spain, 2003-2006; material: granite slabs)

ABOVE: Remodeling of A Two-Family Home (Beniamo Servino, Pozzovetere, Caserta, Italy, 2001-2006; material: local tuffaceous stone)

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BELOW: Hill Region of Northern Verona Province (Architecture in Lessinia Stone; materials: Lessinia Stone and Prun Stone)

BOTTOM: Modesto's Shed and Icehouse (Modesto Paggi (1843-1928), Roverè Veronese, Verona, Italy)



created thanks to a longstanding tradition of superior construction skills. It is unique and extraordinary in its total reliance on stone within such an ample territory. Local structures reflect a knowledgeable and creative use of lithic material, a sedimentary limestone characterized - in its white to pinkish "chipped" scaglia rossa veneta and pinkish to reddish rosso ammonitico versions – by the overlapping of regular and thin stone layers that are easy to separate thanks to even thinner layers of clay.

Using this stone, separated into "naturally" cut slabs, unknown chiselers and humble masons designed the architecture and landscape of vast areas of the Verona hills, in what today might be considered a vast collective work of Land Art, showcasing the expressive power of simple materials. Within the Lessinia area, special recognition goes to an exceptional structure:

## Modesto's Shed and Icehouse

### (Modesto Paggi [1843-1928], Roverè Veronese, Verona, Italy)

The "architect" Modesto Paggi, a farmer, built this small rural structure, which is connected to an icehouse, between the late 1800s and the early 20th century. The shed's walls rise through the overlaying of enormous stone slabs in a "knife" pattern. Paggi's approach exploits the concept of linear construction to connect the single stone monoliths. The structure's integration into the Lassinia area and surrounding countryside make it a poetic and memorable work.



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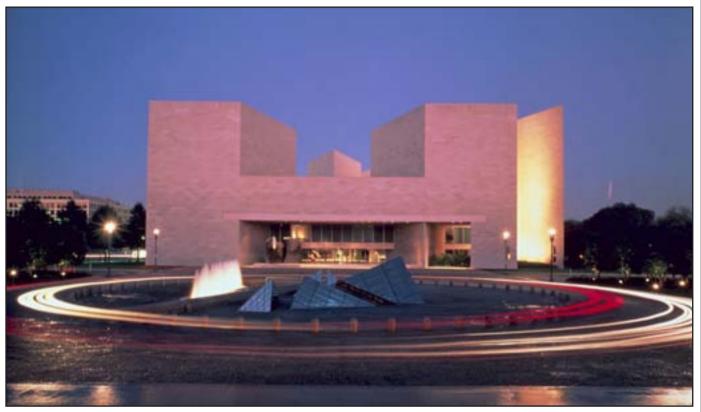


nanley wood

# Historical Feature

# Modern Icon on the Mall

By Christina B. Farnsworth



OTHING NEW IS BUILT on Washington, D.C.'s National Mall without challenge or controversy. Critics routinely complain that the Mall is full, yet praise new buildings. The East Building of the National Gallery of Art was no exception during its erection, but its public and private spaces, now almost 30 years old, are celebrated internationally as both construction marvel and sculpture.

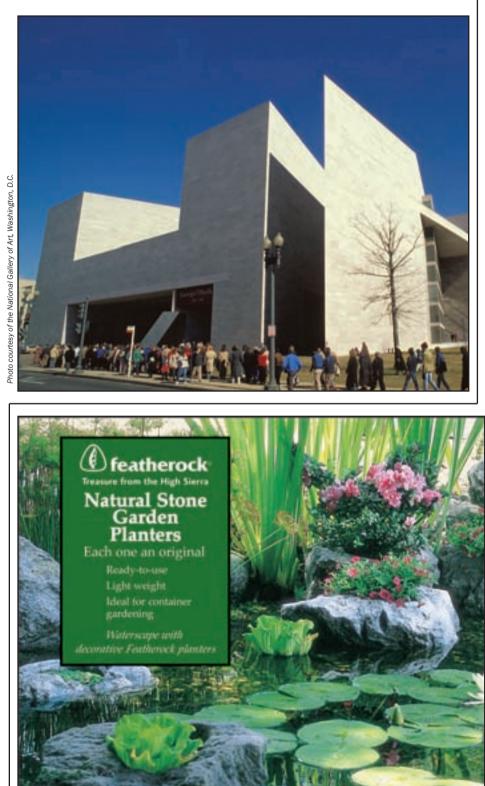
Just a year after the gallery's June 1, 1978 opening, the Building Stone Institute was among the first to honor the excellence of this now iconic structure with its 1979 Tucker Award. (The now biennial Tucker Awards themselves are 30 years old; the first award was given in 1977.) I. M. Pei designed the East Building; Leonard Jacobson was the gallery's lead architect from the firm now known as Pei Cobb Freed & Partners Architects LLP, New York.

Today, Pei's clean, contemporary building looks almost as startling and new as it did when first conceived in 1968, and yet it is uniquely warm and inviting.

The East Building's sense of complementing the original structure came completely from Pei's use of matching "lavender pink" Tennessee marble from the same quarry near Knoxville chosen for the original, neo-classic 1941 National Gallery designed by John Russell Pope (who also designed the two-time Tucker Award winning Jefferson Memorial). Even the coffered, cast-concrete interior ceilings use the dust of that marble to warm their otherwise cold color.

Photo courtesy of the National Gallery of Art, Washington, D.C.

ABOVE: View of the National Gallery of Art's East Building, 4th Street Entrance after dark from the West Building. RIGHT: Visitors line up to enter the National Gallery of Art East Building during the Georgia O'Keeffe 1887-1986 exhibition.



A street separates the two buildings, so Pei's firm designed an underground corridor to link the two structures; tetrahedral skylights light the space. The firm calls the cascading fountain that mesmerizes diners in the below-grade dining facilities a "chadar waterwall."

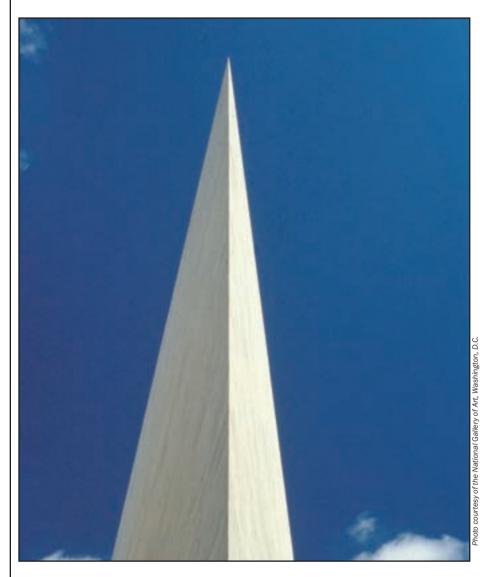
A surprising amount of the East Building - 154,000 square feet - is hidden from view underground. "The two-story, underground concourse connecting the old and new structures is engineered with waterproof friction joints. This eases any stresses while the four-block-long complex rises and sinks by millimeters each year," the museum's audio tour tells visitors.

The visible building is two triangles linked with a triangular atrium. The first triangle is public exhibit space; the other houses offices and research spaces. The National Gallery program for the building specified "a museum to house large travelling exhibitions and to provide the infrastructure and ceremonial spaces lacking in the early twentieth-century building, and also a separate study-center/office facility."

Pei Cobb Freed & Partners' website claims, "In plan, section and elevation, the interlocking volumes merge inseparably in a spatial dialogue of rigorous geometry, technical innovation and exacting craftsmanship." The result is a triumph of stone

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## Historical Feature



design and a perpetual exhibit; visitors just stop and stare. The 19-degree fin that has become the building's famous talisman flies 107 feet from ground to roofline. A whopping 16,000-square-foot triangular atrium, punctuated by Alexander Calder's high-flying mobile (one of the last commissions completed before his death), unifies the whole. And just in case the spectacular triangle shape isn't noticed right away, Pei applied lighter slabs of Tennessee marble to the exterior points to subtly bring them attention.

Exiting any of the 11 display areas brings visitors back through the atrium before entering any other exhibit area. The atrium roof is a "space-frame" covered in glass. A screen of aluminum rods modulates sunlight to prevent the bright atrium from overwhelming visitors' eyes as they adjust to the lower light levels needed in galleries to protect the nation's outstanding artworks.

Construction of the post-tensioned concrete building began in 1971. In addition to the atrium space, it contains 62,000 square feet of exhibition space and two auditoriums. The separate Visual Arts Study Center features a five-story, sky-lit reading room, six levels of library stacks (three are subterranean), offices and support spaces. And an immense subterranean space includes bathrooms, gift shops and multiple dining facilities for all tastes.

ABOVE: Possibly the sharpest corner of any building in the world, the East Building's signature "knife edge" cleaves the air at an angle of 19.5 degrees to a height of 116 feet.

RIGHT: The East Building's unique central space with its 16,000-square foot skylight, accented by the grand Calder mobile, is awe-inspiring.



Photo courtesy of the National Gallery of Art, Washington, D.C.



ABOVE: Another view of the East Building's impressive Calder mobile reveals one reason why thousands of visitors make the trek to visit the National Gallery of Art each year. Alexander Calder, *Untitled*, 1976, Gift of the Collectors Committe. Exhibit spaces vary from the 10-foot-high ground floor gallery to the Tower Galleries accessed by spiral stairs and featuring 35-foot ceilings. In most rooms, curators can adjust ceiling height and manipulate skylights to mix appropriate levels of natural and artificial illumination. The building's audio tour script explains, "Any wall in the East Building not clad in lavender pink stone is temporary, similar to movie or stage sets."

The 8.8-acre trapezoidal site presented many construction challenges, including expansive soils. The existing National Gallery's main building, based on architectural cues from ancient temple architecture, was supported on pylons. According to the audio tour, Pei's East Building rests "on the underlying mud of the Mall."

Its six-foot-thick reinforced concrete foundation, according to the building tour guide, "was poured in one continuous flow so that the basement is a water-tight unit that floats like a gigantic ship's hull."

Perhaps its triangles and foundation suggest that the building remains a national ship of art clad in shimmering marble. ◆

### NATIONAL GALLERY OF ART EAST BUILDING FACTS:

- Planning began in 1968.
- Construction began in 1971 and was completed in 1978.
- Winner of the 1979 Building Stone Institute's Tucker Award.
- Uses "lavender pink" marble from Tennessee.
- 150,000 square feet of the building is underground.
- Features 16,000-square-foot triangular atrium highlighted with marble slabs.

#### Natural Stone Council Forms Advisory Council

The Natural Stone Council (NSC), a collaborative organization representing the stone industry's business and trade associations, announced the formation of the Sustainability Advisory Council to assist the NSC Committee on Sustainability.

Based on a market survey and input from the advisory council, the committee will partner with researchers and industry experts to substantiate the environmental benefits of building with natural stone. Green building is a significant development in the construction industry, and the NSC feels strongly that being at the forefront of this movement will benefit the natural stone industry as a whole.

The Sustainability Advisory Council is comprised of five top "green" architects with an intimate knowledge of natural stone and its uses in building and landscaping: Malcolm Holzman, FAIA, Holzman Moss Architecture; Mark Rodgers, AIA, AUA, University of Denver; Mark Kalin, FAIA, FCSI, LEED AP, Kalin Associates Specifications Consultants; Todd Bronk, EDAW Inc.; and Tom Liebel, AIA, LEED AP, Mark, Thomas Architects.

The most widely used system for green building is Leadership in Energy & Environmental Design or LEED. The U.S Green Building Council (USGBC) established LEED 10 years ago. The system defines standards for environmentally responsible, healthier and more profitable structures based on a point system for new construction and major renovation. Today, only natural stone that is sourced locally or qualifies as material reuse can contribute to LEED points, which is why many believe more needs to be done to promote natural stone as a sustainable building material. The NSC has joined the USGBC as one of more than 7,000 member organizations.

The advisory council will work to assist the Committee on Sustainability with the goal of positioning stone as the preferred material in sustainable building. The NSC will evaluate and research the findings to support and increase natural stone's contribution to LEED certification points and other green building standards. Some examples of "green" testing opportunities include life cycle assessment, life cycle cost and measuring best practices in quarrying, fabrication, and reclamation activities in the stone industries operations.

Members of the NSC Committee on Sustainability include John Mattke and Kathy Spanier of Cold Spring Granite, Quade Weaver of Texastone Quarries, Dan Ouellette and Bill Eubank of Luck Stone Corp., Alex Bachrach of *Stone World* magazine, and Garen Distelhorst of Marble Institute of America.

#### Stonework SymposiumHeld in Spain

The Stone Foundation in association with Artifex Balear presented International Stonework Symposium 2007, Sept. 24-29, in Mallorca, Spain.

This seventh annual gathering of the stone "tribe," was the first one to take place outside the United States. The event reinforced the internationality of this community of artisans, artists, architects, designers, contractors, suppliers and others involved with stonework.

Artifex Balear, a school of stonemasonry on the island of Mallorca and the co-host of this event, extended a warm welcome to stonework enthusiasts coming from the United States, Canada, Ireland and the United Kingdom. Kindred enthusiasts from France, Spain, Italy, Greece, Switzerland, Germany, Russia, Japan, Australia and other locations joined visitors.

As with all Stone Foundation symposiums, interesting and informative presentations and demonstrations by experts in several aspects of stonework were presented. Other highlights included lively discourse and hands-on activities.

This year's weeklong event focused heavily on the craft of dry stone masonry. Other areas explored were: the vernacular architecture of Spain; the Basque provinces and Portugal; the stonework of the Balearic Islands, Mallorca, Minorca, Japan, India, Israel, New York City and others; plus the principles of Stereotomy and the evolution of the medieval stonemasons' guild into its present-day form in France, *les Compagnons du Devoir*. Mallorca has long been a geographical nexus of the western Mediterranean region. Four thousand years of history, written skillfully in stone, awaits visitors. For more information, visit

www.stoneworkfoundation.org.

#### VersaTac Granite Tactile Indicator

The original buildings at Newman College were built from 1916 to 1918 and were designed by architect Walter Burley Griffin; they are believed to be some of his best work. The innovative stonework includes a reinforced concrete dome – one of the largest domes of its type at the time. The stone's smooth surfaces and a rough base blend to an unusual and organic form, which harmonizes with the landscape.

When architect Paul Morgan was commissioned to design a renovation of this masterpiece, he could not find a suitable, tactile ground surface indicator product that fit its style and grandeur – until Eigen Stones' managing director Michael Lim was contacted.

Morgan's architects were astounded when Lim showed them the modulized tactile indicator sample – VersaTac, which is made from natural granite. With the support of the company's overseas' granite quarries and manufacturing factories, Eigen was able to produce a tailor-made modulized granite tactile indicator with the right color coordination for Newman College's building and the luminance contrast as requested by the AS/NZS 1428.4 standards. The outcome of this combination pleased both the architect and the client.

#### Stone Xpression Inc. Becomes Distributor

Stone Xpression Inc. confirmed its establishment as the premier distributor of the Rolling Rock Building Stone Inc. family of natural stone brands for California and the West Coast. Integrated in its distribution are all building stone, thin veneer and landscape varieties of natural, genuine stone. This includes the RealStone Veneer brand of thin stone veneer and all Greystone Quarries Inc. product lines.

Warehouse facilities have been secured in Ripon, in Northern California. Expansion

potential is nearly unlimited with two other major warehouse facilities nearby and coastto-coast warehousing available.

All products will be sold through authorized dealers and sub-distributors. Stone Xpression Inc. does not conduct business with the public through direct sales to contractors and homeowners. This will assign dealers the opportunity to comfortably pull inventory from a warehouse that is exclusively for them.

#### Ernst & Young Entrepreneur of the Year Regional Winner

M S International Inc., a leading nationwide distributor of natural stone, announced today that its CEO, Manu Shah, received the Ernst & Young Entrepreneur of the Year 2007 Regional Award in the Distribution category. The award recognizes outstanding entrepreneurs who are building and leading dynamic, innovative and growing businesses. An independent panel of judges selected Shah, and the award was presented at an Ernst & Young Entrepreneur of the Year gala event at the Hyatt Regency in Irvine, Calif.

In accepting the award, Shah commented, "I am delighted to be presented with this award. My wife and I started this company from the basement of our home over 30 years ago. We could never have imagined the growth and potential of natural stone. This is a humbling experience and proof that the U.S. remains the land of opportunity."

Shah noted that "this award is truly a reflection of the ingenuity, hard work and consistent innovation of the entire MSI team, which includes dedicated employees, our suppliers in over 33 countries and devoted customers across the world. We continue to look forward to bringing growth, innovation, and efficiency to the natural stone industry."

As an Orange County award winner, Shah is now eligible for consideration in the Ernst & Young Entrepreneur of the Year 2007 national program. Award winners in several national categories, as well as the overall national Ernst & Young Entrepreneur of the Year award winner, will be announced at the annual awards gala in Palm Springs, Calif., on Nov. 17. The overall national Entrepreneur of the Year award recipient is then considered for the world event held in Monte Carlo.

#### New Educational Newsletter for Architects

Devonian Stone of New York Inc., a sandstone mining and fabrication company in upstate New York, is announcing the launch of its new monthly e-newsletter titled "Glacier Blue Architectural Topics & News," geared toward providing information of particular interest to architects.

The company's president, Robert Bellospirito, is a Registered Provider with the AIA and is enthusiastic about sharing his knowledge of various aspects of the stone and construction industries. Among other things, each issue of the e-newsletter features an "architectural topic of the month," covering areas such as pedestal pavers, the differences between Devonian stone and limestone, and cleaning and sealing. A different architectural firm is featured in each issue, and architects are encouraged to suggest topics to be covered in upcoming issues.

Those interested in signing up to receive the newsletter may do so by visiting the company's website at www.devonianstone.com.

#### Marmomacc: The Annual Global Meeting of Stone, Technology and Design

Marmomacc 2007, held Oct. 4-7, features 1,500 exhibitors from more than 50 countries, as well as a "Marble, Architecture and Design" program.

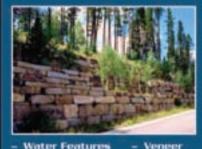
An exhibition of new stone architecture in Spain, sponsored by the Spanish Institute of Foreign Trade (ICEX) and the Spanish Natural Stone Federation, highlights major stone projects of the last 10 years by leading Spanish architects, including Alberto Campo Baeza and Rafael Moneo.

The teaming of architect/designers and Marmomacc exhibitors, "Marmomacc Meets Design," emphasizes the "lightness" of stone in decorative objects and furnishings. Prototypes

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are on display and highlighted on a map distributed to Marmomacc visitors.

In addition, Marmomacc 2007 hosts the ninth edition of its continuing education course for architects. Thirty architects from the United States, Canada, the U.K., India, South Africa and Australia spend four days studying the importance of stone in modern design.

Marmomacc is the leading international trade fair for stone materials and machinery. The show attracts more than 60,000 trade visitors from 120 countries.

"Marmomacc is the best trade show for stone in the world, bar none," says Robert Campo from Rock of Ages (Graniteville, Vt.). "We've been exhibiting at Marmomacc for seven years, and the show really allows us to reach our target and gives us good customer turnover." It is the ideal place to see, in a few busy days, the latest stone-related machinery and technologies, to directly source stone for commercial projects, and to view the full spectrum of stone materials available for residential applications.

#### MIA Accreditation Program Picks Up Pace

Three more companies have joined NBC Solid Surfaces of Springfield, Vt., as Marble Institute of America (MIA) Accredited Natural Stone Fabricators. Radtke Tile and Marble of Carson City, N.V.; Solidtops of Easton, Md.; and Great Lakes Granite and Marble of Redford, Mich., have all earned the distinction after successfully completing the demanding three phase procedure which includes individual exams and on-site inspections.

"Professional accreditation is extremely beneficial in our industry and worth the effort," stated Fred Radtke, owner of Radtke Tile and Marble. "In the marketplace, differentiation is paramount. We understand the competitive edge accreditation brings to our marketing strategy."

"Qualifying companies have one year to pass the exam and another year to complete the site visit, although so far, everyone has finished everything in one year," stated Garen Distelhorst, MIA's accreditation program manager. He added, "Currently, over one hundred firms are in various stages of completing the process."

The route to becoming accredited consists of three equally-weighted phases. Phase one requires the completion of a lengthy application, which ensures that the company is in compliance with the 10 standards of accreditation as laid out by the MIA Accreditation Task Force. The second phase consists of a 200 question examination, testing the applicant's knowledge and use of materials, installation, fabrication, restoration, care and maintenance, administration, legal/contracts, jobsite and shop safety. The final phase is a comprehensive site visit, which includes a review of the facility, documents and one or more installation inspections.

In addition to these requirements, residential natural stone fabricators must first have completed 200 projects in the last three years.

Commercial accreditation is broken into two categories: Commercial A, for companies conducting high-rise and large scale commercial work and Commercial B, for firms handling smaller-scale, commercial stone installations such as hotel lobbies, bank lobbies and low-rise interior/exterior cladding.

Natural stone companies wishing to apply for the Accredited Natural Stone Fabricators designation by the Marble Institute of America can do so at www.marble-institute.com/accreditation and scroll to the bottom of the page and click: Application Request Form.

#### Natural Stone Stands the Test of Time in National Association of Home Builders' Study

The Natural Stone Council (NSC), a collaborative organization representing the stone industry's business and trade associations, announced that stone has once again been recognized as one of the most durable materials used in home building. In a study released by the National Association of Home Builders (NAHB) and Bank of America (BOA) Home Equity titled "Study of the Life Expectancies of Home Components," stone used for countertops, flooring and exteriors was found to endure as long as the house itself.

The study was conducted in the summer of 2006 and polled a wide range of experts in the building materials industry with the goal of determining the life expectancy of home components such as roofs, toilets, faucets, flooring, decks and countertops. BOA sponsored the study because home owners want to "better understand how to preserve value in their most important financial asset" – their home, according to David Rupp, BOA Home Equity executive.

The ancient pyramids and our national monuments are a testament to the strength of natural stone. For homeowners, stone is a building choice that maximizes reliability without compromising style. The NAHB/BOA study revealed that natural stone countertops, which are "less expensive than a few years ago and gaining in popularity", would last a lifetime in a home. The study also found that flooring in marble, granite and slate would last 100 years when well taken care of. As for exteriors, slate roofs had a 50-year life expectancy as compared with fiber cement, asphalt shingle or wood shake roofs that last 20-30 years. Natural stone on the outside of a home as siding or decorative accessories "will last as long as the house," according to the results.

"Genuine stone is the true embodiment of form and function," said Mark Fernandes, chairman of the NSC. "In addition to its unparalleled durability, the vast amount of colors and textures available makes each piece of stone a unique work of art. Natural stone is an undeniably smart choice for homeowners."

#### Park Splitters Now 30-Percent Stronger

Park Industries has updated the design of the industry-leading HYDRASPLIT stone splitters.

"With the new CNC manufacturing capabilities we've invested in, we were able to make some significant improvements to the manufacturing and design of our HYDRASPLIT splitters," comments Dean Casad, architectural division manager. "We've taken everything we've learned about splitting stone over the last 54 years, added in new CNC manufacturing capabilities, and are excited to announce some significant enhancements to our HYDRASPLIT line."

Jack Rhode, saw product line manager explains, "We've increased the distance between the uprights and top head bearings, which improves stability and provides easier stone access. In addition, the thickness of the chisel guide bar increased 50 percent, which improves the splitters' rigidity and durability." There's more. The chisel guide bars are CNC machined after welding to achieve smoother and more reliable chisel function and are welded at an angle to increase rigidity and improve stone clearance. Also, the new HYDRASPLIT models have better shock absorption as a result of the heavy-duty steel tubing, which the replaced steel plate uprights on previous models.

"The heavy-duty construction design improvements and use of new materials have resulted in a 30-percent strength and rigidity improvement over previous models," Rhode said. "And, we've installed a new hydraulic system, which is more flexible, longer lasting and is easier to maintain." HYDRASPLIT chisels also can be set to the stone without moving the top head, resulting in faster cycle time in consistent stone heights.

#### Natural Stone Council Develops Plan to Promote Sustainable Practices for Industry

The Natural Stone Council (NSC), a collaborative organization representing business and trade associations that promote stone under the Genuine Stone brand, today announced the partnership of their Committee on Sustainability with the University of Tennessee's Center for Clean Products. The alliance is charged with researching and promoting the ways that natural stone can contribute to the green building movement.

The NTSC's "Green Committee," as they are known to many in the industry, met with Jack Geibig, director of the University of Tennessee's Center for Clean Products in Washington, D.C., in June. Geibig and his team of environmental engineers proposed a comprehensive, multi-year sustainability plan that includes background research, the development of product-specific environmental fact sheets and data supporting Life Cycle Assessment, and benchmarking of industry envi-



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ronmental practices as well as communication of this information to both the stone industry and the design community.

Currently, the committee and research team are in the early phases of conducting onsite reviews of the environmental impacts of natural stone quarrying and fabrication processes. From these reviews, a data collection tool will be developed to gather information from as many stone quarries and fabricators as possible. This information will help establish the baseline environmental footprint of the stone industry and form the building blocks for creating life cycle data and developing life cycle assessments of Genuine Stone compared to other building materials.

"Because stone is such an important material in a number of key building product classes, it is crucial for the natural stone industry to be able to characterize the life cycle impacts of its products in order to meet the evolving demands of the green building marketplace," said NSC Committee on Sustainability Chairman John Mattke. "In order to do this, we are developing and pursuing a plan to promote the identification and adoption of sustainable practices throughout the industry."

By the end of 2008, the NSC Committee and the Center for Clean Products plans to have accomplished the following:

- Completed the benchmarking process for key manufacturing and quarrying operations during the production of natural stone products
- Identified stone industry best practices
- Established effective communications and outreach efforts both to internal and external groups
- Developed and distributed life cycle inventory datasets for key materials and operations
- Created environmental specification sheets for several natural stone materials.

For more information on what the NSC Committee on Sustainability is doing to promote Genuine Stone as a green building product or for information on the green building movement in general, visit www.genuinestone.org. ◆

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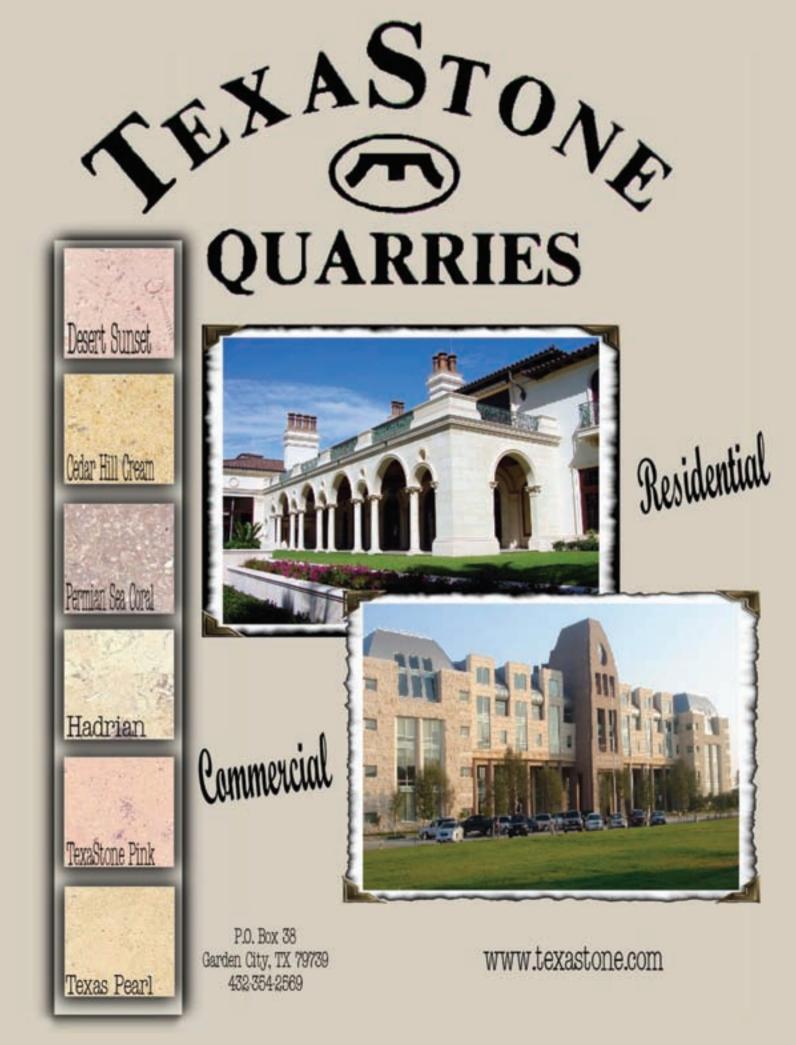
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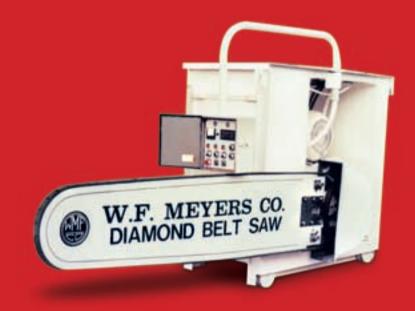
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