





# Historic stonework defines new residential design

Timeless material and thoughtful massing unite an upscale estate in one of Philadelphia's Main Line suburbs

BY HEATHER FIORE





"We looked to local material precedents as a means of finding examples that were enduring, classic and beautiful," said Michele L.W. Thackrah, principal at Archer & Buchanan Architecture, Ltd. in West Chester, PA. Photo courtesy of Tom Crane Photography

Positioned at the southeastern corner of Pennsylvania is Merion, also known as Merion Station. One of the many suburbs of Philadelphia, this quaint, unincorporated community features a range of traditionally designed homes, which have evolved over the years.

Many homes in the neighborhood mimic each other with similar styles and the use of indigenous stones — a theme that was followed for a newly constructed residence. The homeowners' request for a traditional home, which highlights elements of natural stone and brick, was satisfied with the help of a local architectural firm that specializes

in custom homes. "In looking at the context of the new building, we endeavored to understand the surrounding architecture and create a design that would fit well and engage," said Michele L.W. Thackrah, principal at Archer & Buchanan Architecture, Ltd. in West Chester, PA. "We looked to local material precedents as a means of finding examples that were enduring, classic and beautiful. In a few years, this house will be in many ways indistinguishable, age-wise, relative to the homes in the neighborhood."

With the intention of carrying the same formal presence as existing homes on the street, the design of the two-level home also

required a private backyard for children and entertaining. "Timeless, lasting materials such as limestone, slate, mica-schist (building stone) and copper, and thoughtful massing, allow for both characteristics to be expressed fully," said Thackrah.

#### **SOURCING LOCAL STONES**

Mica-schist, a rock composed of quartz and mica, was a natural choice for the architectural team because of its origin and composition. "Mica schist stone is plentiful, locally obtained and has been used on buildings in the region for centuries," said Thackrah of the common metamorphic rock, which clads the exterior of the home.

For an upscale home in a suburb of Philadelphia, local mica-schist building stone clads the exterior, which is complemented by limestone and accents of granite. Photo courtesy of Tom Crane Photography



Indiana limestone was selected as a relief from the rugged building stone on the exterior. Intricate carvings were constructed on different aspects such as the cornices.

"This stone is made distinctive in the way it is cut, set and pointed."

Closely related to gneiss, mica-schist has a smooth, yet slightly uneven surface, which is covered in metallic or black minerals, muscovite or biotite. To add some

variation to the randomly colored pieces of mica-schist on the exterior, they were blended with irregular-shaped pieces of granite, both of which were supplied locally; the mica-schist came from Media Quarry Co., Inc. in Media, PA.

Indiana limestone, which shapes the entry, portico, paving and courtyard, was also specified to complement areas of the exterior facade — supplied by Vickery Stone Co. in Havertown, PA. An ashlar pattern was implemented for all elements except the exterior facade. "The use of limestone was inspired by a well-known historic residence located nearby," Thackrah explained. "The Barnes Foundation, a classical structure designed in 1922 by Paul Philippe Cret for Dr. Albert C. Barnes, was faced in limestone. We decided that it would be ideal to use this same material to visually lighten and balance the design. It creates a grand, embracing gesture as the most formal expression of this home."

To accentuate the warmer tones of gray in the granite and beige hues of the limestone,  $\frac{5}{8}$ - and  $\frac{3}{4}$ -inch-thick semi-weathered pieces of gray-black slate from Camara Slate in Fair Haven, VT, were used to create the roof. "Slate roofing is a beautiful and lasting material that ages well, gaining a patina in just a few years," said Thackrah. "We selected a relatively dark gray Vermont slate with an interesting grain that has some movement in it and looks very good with the color range of the pointed stone."

#### **A DEMANDING INSTALLATION**

To complete the installation, two different masons were contracted. With one's focus set on the mica-schist and granite, and another's on the limestone, both ensured the proper applications of materials in accordance with the design. "The architects called for a 'rough' or broken ashlar appearance with the mica-schist stone, which required meticulous cutting of the stone to maintain the horizontal overall impression of the stonework," said Robert Baer of Baer Brothers Masonry, Inc. in West Chester, PA, who led a team of six masons and two laborers. "The architect's desire with this project was not to make it look 'brand new,' the intention was to make



To accentuate the warmer tones of gray in the granite and beige hues of the limestone,  $\frac{5}{8}$ - and  $\frac{3}{4}$ -inch-thick semi-weathered pieces of gray-black slate from Camara Slate in Fair Haven, VT, were used to create the roof.

it look weathered and older. With that, the pointing of the stonework played an important role. The use of heavy aggregate sand was applied to give a weathered texture to the joint. The joint itself was a 'cut crown' that was then brushed over to knock it down a little — to get what we call a 'knocked down crown' joint."

Baer and his team worked for more than 10 months to help create the architect's

desired look with the blend of stones. "Baer Brothers has had extensive experience in making projects look much older than they are by applying certain techniques to the pointing of the projects," said Baer.

When setting the limestone, which took about six months, many meetings between the different trades and consultants were required to assure the original design could be installed and supported properly,

according to Thackrah. "We had originally designed portions of the second story to be a pebble-dash stucco finish," she explained. "During construction, the client requested that we research some alternate materials. Since the front entry had already been designed in limestone, it seemed the perfect solution to extend the material across the remaining facades. Detailing the stone to work structurally, decoratively



"In a few years, this house will be in many ways indistinguishable, age-wise, relative to the homes in the neighborhood," said Thackrah.

and seamlessly at that stage of construction required a coordinated effort between the builder, supplier, structural engineer and ourselves to meet those goals."

Since some of the limestone is located directly above wood framing, additional adjustments also needed to be made. "Typically, with limestone or any type of stone, it's supported by the foundation all the way up with masonry or stone," said Joe Manero, third-generation stone mason and owner of Joseph Manero & Sons, Inc. in Glenside, PA. "In this case, it was a conventionally framed home so there had to be additional items added to the structure of the home to support the limestone.

"There were areas of the house where nothing was below framing but wood, so we had to add all kinds of steel and some engineered lumber to be able to hold all of the stresses that the limestone was putting on it," he went on to say. "There were a lot of angles that were bolted back to and

through the framing. The engineering of it was very unconventional, as far as how everything was held back and held onto the actual structure. It was a lot of work, but great work. It's a beautiful home."

### THE FINAL PRODUCT

Throughout the process, full-size mock-ups of the mica-schist and granite blend were created onsite for all parties to review, which ultimately helped Thackrah and her team ensure the exterior coordinated with the design. "The lay, cut and pointing of the mica schist were a major focus for us," she said. "We spent a fair amount of time on site with the masons (supervising the installation)."

Between the design and installation, the residence took about two and a half years to complete. Although its style may imitate neighboring homes, the combination and careful placement of different stones certainly sets it apart from the others. "The stonework was inspired by local

architecture, but was detailed specifically for this home," said Thackrah. "While there is a material thread tying it to other homes in the area, its final expression is unique. We have received quite a positive response from the community." ■

#### Private Residence Merion, PA

**Architect:** Archer & Buchanan Architecture, Ltd.,  
West Chester, PA

**General Contractor:** B.J. Drueding Builders, Inc.,  
Wayne, PA

**Stone Installers:** Baer Brothers Masonry, Inc.,  
West Chester, PA; Joseph Manero & Sons,  
Inc., Glenside, PA; Gillespie Contracting, Inc.,  
Glenmoore, PA

**Stone Suppliers:** Media Quarry Co., Inc.,  
Media, PA (Mica-schist); Vickery Stone Co.,  
Havertown, PA (Indiana limestone); Camara  
Slate, Fair Haven, VT (slate)