



Innovative Tile and Stone  
Installation Systems

## CityScape Water Feature Project Spotlight: August 2010



**LOCATION:**  
CityScape,  
Phoenix, AZ

**TILE CONTRACTOR:**  
Desert Mountain Tile & Marble  
Phoenix, AZ

**STONE SUPPLIER/FABRICATOR:**  
Yellow Mountain Stoneworks  
Seattle, WA

**LATICRETE DISTRIBUTOR:**  
Daltille Phoenix  
Phoenix, AZ



## LATICRETE Fortifies Complex Stone Water Feature at CityScape in Phoenix

By Eric Carson

Taken at face value the terms “single-source supplier” and “single-source responsibility” can be construed to mean the same thing. But in the high-stakes world of construction there can be a vast gap in definition. The key word here is “responsibility.”

LATICRETE, a globally proven leader in the manufacturing of system materials for the installation of tile and stone, removes the gray-area in this terminology with its industry-leading warranty programs. LATICRETE doesn’t just manufacture high-quality products — they take responsibility for the performance.

For all of these reasons, LATICRETE was specified for one highly unique water feature installation in Phoenix, Arizona. In fact, when Mark Chelak, vice president of Desert Mountain Tile & Marble, learned his company had been awarded the stone water feature installation it came with specific marching orders relative to the installation materials specification. The project mandated single-source responsibility, and Chelak knew on the spot where he could find that.

“We use LATICRETE exclusively for every project that we can,” said Chelak. “But in this case they were actually one of the few manufacturers that had all the products we needed. Even for a quirky project like this. LATICRETE makes it easy to stick with a single-source and its products and knowledge are without peer.”

In Phoenix, plans to revitalize downtown and zap some new energy into the Valley of the Sun focus on the sprawling CityScape multi-use development that dominates three blocks of its urban core. Anchored by premier office space inside the 26-story skyscraper at One East Washington, the \$900 million CityScape project is expected to infuse Phoenicians with a new-found urban lifestyle. The mixed-use scope includes Class A office space, retail shops and restaurants, hotels and well-appointed condos. The project also included several architectural landscape features to spruce up the exterior, including the East Mesa water feature for the Block 22 entrance at the corner of First Street and Washington.

The East Mesa granite water feature installation was anything but conventional from the beginning, requiring the expertise of the Jason Baca-led team of installers from Desert Mountain Tile & Marble. Impressively, Baca benefited from a pair of revolutionary LATICRETE® products and wrapped things up in a tidy 16 days. Being a water feature, the spec called for LATICRETE Hydro Ban™ to be applied for waterproofing and anti-fracture protection, but the crucial component for the CityScape project came in the form of LATAPOXY® 310 Stone Adhesive.

With unmatched bond strength, LATAPOXY 310 Stone Adhesive was specifically engineered for the spot-bonding of tile or stone on vertical substrates. The proven dependability of LATAPOXY 310 Stone Adhesive provides a permanent bond that will not deteriorate over time. And while not every granite segment was a vertical application, it was the adhesive’s superior bond strength the CityScape project required.

The water features design program consisted entirely of Pepper Brown Granite supplied and fabricated by Seattle-based Yellow Mountain Stoneworks. The design begins with a conical capstone at the top of a staircase that required some extra effort to set in place, and a second more elaborate feature that releases a constant stream of water down a chiseled-out runnel and briefly into a spillway. The water then empties into a ground-level granite pool some 22-steps later.

The CityScape project got off to an interesting start, providing Baca’s team with a few perilous moments before a single piece of granite was set. The conical or cone-shaped piece of granite at the top of the stairs provided the installers with an interesting set of circumstances to start the project.

When Yellow Mountain Stoneworks first got its hands on the granite, the block for the conical piece alone weighed an astronomical 21,000 pounds (9,525 kg). After this 10-ton block was fabricated it arrived in Arizona a slim and trim 13,500 pounds (6.5 tons). To position the piece onto its concrete pedestal most definitely required the help of a massive crane. The hair-raising minutes that followed described by Chelak



as “very unsettling, but cool,” saw the crane create a problem the stone would later fix itself. At first, the fully-extended crane came up about 6' (1.8 m) short of the distance it needed to make the drop, but in a pleasant turn of events the granite's weight forced the crane to deflect just enough for the stone to be lowered into position.

To secure the 13,500 pound capstone the Desert Mountain Tile & Marble team would largely rely on LATAPOXY® 310 Stone Adhesive, just with a slight twist. The adhesive was developed in tandem with the LATAPOXY 310 Cordless Mixer to speed up productivity by eliminating the time associated with mechanical anchoring. However, with the weight of the granite and the slope of the runnel on the second water feature, the specification also included stainless steel clips and dowels for security. In fact, the conical piece was shimmed up with stainless steel clips and Baca distributed “fist-size globs” of LATAPOXY 310 Stone Adhesive before it was set in place.

The runnel installation was no less interesting, as Baca and his team hand-crafted wood-plank runners on both sides of the structure to stand on and complete the work. With four crewmembers onboard at all times, the crew installed each granite segment measuring 8" x 24" (20 x 60 cm) with LATAPOXY 310 Stone Adhesive, stainless steel clips and dowels. The design called for one side to feature smooth, honed Pepper Brown Granite, while the other side was done split-faced with a thickness ranging from 8" to 12" (20 x 30 cm).

The spillway section was set with the same system but secured to a stainless steel I-beam and threaded rods, and the Desert Mountain Tile & Marble crew put the base curbing for the pool in with some innovation of its own. The specification included LATICRETE® 254 Platinum as the thin-set to install the granite over masonry at the bottom of East Mesa water feature. With the heavy, hard to maneuver granite curbing, Baca used the rapid-set version of LATAPOXY 310 Stone Adhesive in combination with LATICRETE 254 Platinum. The application of evenly spaced dollops of the rapid-set stone adhesive with a cure time between five to eight minutes effectively held the granite pieces in place while the premium multipurpose adhesive had time to cure.

“The curbing for the water trough called for a mud bed,” Baca said. “With LATICRETE 254 Platinum over the masonry, we used the rapid-set version of

LATAPOXY 310 Stone Adhesive for the cure time. We leveled the stone curbing and just used spots of the stone adhesive to freeze it in place while the thin-set cured.”

With the 10' x 10' (3 x 3 m) pool structure complete, Baca's crew applied two coats of LATICRETE Hydro Ban™ on the inside surface where the water empties for waterproofing and anti-fracture protection. LATICRETE Hydro Ban is a thin, liquid applied membrane that does not require the use of fabric\* in the field, coves or corners. With a remarkable cure time of just two hours\*\* before it can be flood tested, the use of LATICRETE Hydro Ban helped Baca finish up in 16 days – not 17.

Inside the pool, LATICRETE 254 Platinum was troweled over the cured waterproofing and anti-fracture membrane for the installation of 10" x 12" (25 x 30 cm) granite tiles cut down from the same Pepper Brown Granite. Set in a brick-stack pattern offset 3" (7.6 cm), the granite tiles were grouted with LATICRETE 1500 Sanded Grout in the color Mocha. The premium, factory-prepared LATICRETE grout is formulated from a blend of high-strength portland cement, graded aggregates, polymers and color-fast pigments to provide a dense, hard and durable grout joint.

To complete the East Mesa water feature at CityScape, installers sealed each joint with LATICRETE Latasil™ in Mocha to match the grout. LATICRETE Latasil is a high-performance, 100% silicone sealant formulated for exterior or interior applications.

In the end, despite a few harrowing moments, the Desert Mountain Tile & Marble team could stand back with pride and view the breathtaking East Mesa water feature. The expertise the crew displayed in challenging circumstances was helped along the way with the confidence provided by the LATICRETE products and warranty system. For its efforts, Desert Mountain Tile & Marble landed a second water feature project at CityScape just across the road. Once again, single-source responsibility is required for the installation materials, and once again LATICRETE has earned the specification. In the end, one good job deserves another.

\* See Data Sheets 663.0 and 663.5 for complete product information on LATICRETE® Hydro Ban™.  
\*\* LATICRETE Hydro Ban can be flood tested in 2 hours when cured at 70°F (21°C) or above 50 percent relative humidity. It can be flood tested in 24 hours when cured at 50 – 69°F (10 – 20.6°C) and up to 70 percent relative humidity. The time to flood test starts when the second coat has cured from a light sage green to a darker olive green color.

