

PROJECT PROFILE

Fidelity Investments Reflective Pool



Fidelity Investments Reflective Pool at a Glance

Location:

Westlake, TX

Building Use:

Office

Owner:

Fidelity Investments

Waterproofing Contractor:

Sunbelt Building Services LLC

Carlisle Coatings & Waterproofing Products:

- Sure-Seal® EPDM 60-mil Reinforced Membrane
- Sure-Seal Pressure-Sensitive (PS) Elastoform Flashing
- CCW-300HV Protection Fabric

Off the Roof and Into the Water Outside-the-box-thinking Leads to Novel EPDM Pond Liner

Mark Ostrander is a 32-year veteran of the restoration and waterproofing industry. The owner of Sunbelt Building Services takes pride in his company's unique ability to review any project and develop a workable, affordable solution. But even he had to think outside the box when asked to stop a 300-gallon-a-day leak from a rocky, irregularly shaped reflecting pool.

Located on the Westlake, Texas campus of Fidelity Investments, the river-rock-lined reflecting pool is a focal point on the 337-acre campus that features Texas stone facilities and native landscaping. But soon after it was installed, the focal point became a point of irritation.

"This five-year-old pond was losing 300 gallons of water a day," Ostrander said. "The problem was with the original plumbing. The sump pump was set too high and water kept running out."

To solve the problem, contractors determined the sump pump had to be reset and the pool had to be re-plumbed. Essentially it had to be re-built - a significant undertaking considering the pool basin was lined with 50-pound river rocks and bordered by thousands of pounds of sandstone slabs.

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As contractors worked to fix plumbing issues, Ostrander was considering options for relining the pool with a leak-proof waterproofing membrane. The product would have to meet six key criteria:

- Could it handle an overburden of heavy boulders?
- Could it be fully adhered and accommodate substrate movement?
- Could it be exposed to UV and chlorinated water?
- Could it conform to irregular surfaces?
- Would it leach into pool water and cause discoloration?
- Would it qualify for a leak-free warranty?

Specifications called for a hot-applied asphalt membrane, but after talking with manufacturers, Ostrander said the option was quickly rejected.

“After I talked to manufacturers about this unique application, I was concerned that petroleum-based products could produce oil sheen, so that was out,” he said. “Next we considered a cementitious water coating product, but I was concerned it would crack and lose its waterproofing ability when installed with a graded pool slab.”

Ostrander was running out of solutions when Donovan Heminokky, technical sales representative with Carlisle Coatings & Waterproofing (CCW) suggested using Sure-Seal® EPDM 60-mil Reinforced Membrane with Sure-Seal Pressure-Sensitive (PS) Elastoform Flashing.

Sure-Seal is a factory-fabricated EPDM-based elastomeric homogenous roof covering that can be used for a variety of waterproofing and flashing applications. Sure-Seal PS Elastoform is a fully adhered flexible flashing that cures in place for easy installation.

The CCW product combination met five of the key requirements. At issue was the leak warranty, which was not achievable with the pool’s fountain feature. Ostrander and Heminokky reached a compromise with a 10-year materials-only warranty and construction was scheduled.

Over the next few weeks, Ostrander’s crew removed sandstone and river rock overburdens and then hydro-blasted off the existing parge coating. Once surface voids were filled, they installed sheets of Sure-Seal EPDM 60-mil Reinforced Membrane, making sure to use Sure-Seal PS Elastoform Flashing on all transitions. The final waterproofing step was to cover the Sure-Seal EPDM with CCW-300HV Protection Fabric, a tough nonwoven polypropylene protection course designed specifically for use with EPDM membranes.

With the waterproofing complete, contractors reinstalled the sandstone and river rock overburdens and then filled the pool. Would it hold water this time? Yes it would, thanks to new plumbing, outside-the-box thinking and a unique application for a traditional roofing membrane.

“It went really well,” Ostrander said. “The membrane was easy to custom cut and prep was minimal. Most important, the general contractor was happy and the owner was happy.”

Is an EPDM pool liner a solution he would consider again? “Yes, in any place you can conceal the EPDM like this one with a stone overburden. Many rooftop pools require a waterproofing membrane under gunite as a secondary means of protection, so this would be a good solution. EPDM is also a good solution when fire codes don’t allow for a hot kettle on roofs. I’ll keep it in my toolbox.”

