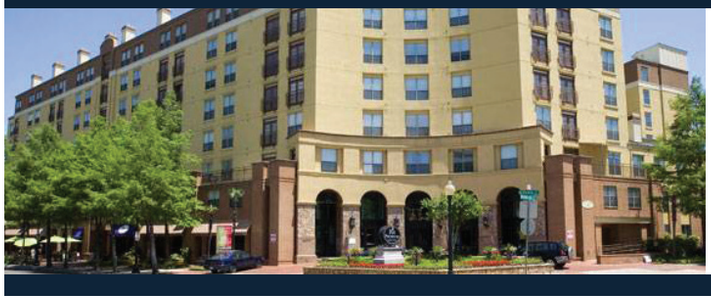
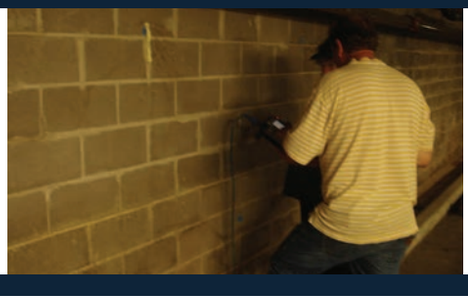
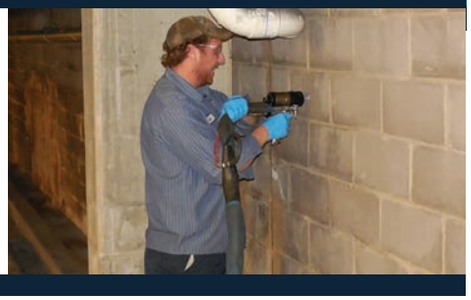
CASE STUDY

Erosion Threatens Parking Structure in Posh Downtown Dallas. Contractor Uses **TerraThane™** to Save the Structure and the Owner Millions of Dollars.

TERRATHANE™







PROBLEM

Erosion of the soil around in-ground parking garages causes major problems and can cost plenty to fix. A small case of erosion can quickly cause silt infiltration that overwhelms and clogs the drainage system, thus causing more and worse erosion until the entire structure is threatened.

Erosion around a three-story, in-ground parking garage in Dallas' "Uptown" area and home to some of the city's posh apartments, business addresses, shopping, hotels, restaurants and bars, created a large void in the soil surrounding the piers and gave the developer serious headaches.

Learn more at
www.TerraThane.com
or call
1-866-NSULATE
(1-866-678-5283)

SOLUTION

David Edens, president of Edens Structural Solutions, Bixby, OK, says his company studied the problem and, "Our solution was to use a TerraThane™ geotechnical foam system. It's simple to apply, expands and cures in place, and is an excellent water and air barrier."

They:

+ Drilled a shaft down along the piers and soldier piles and lagging, to survey the problem and found the water had gone through the block wall and carved out what appeared to be a five-foot cavity.
+ Chose NCFI's TerraThane™ geotechnical foam
+ Used boroscope, ground-penetrating radar, to help determine the overall void and cavity dimensions
+ Ran a 3/8-inch vinyl tube behind the block and dropped in the TerraThane™ polyurethane foam

RESULTS

Edens says, "TerraThane™ gives us four products in one." It fills in large and small voids running both vertical and horizontal in the cavity, serves as a water and air barrier so it will impede future water and silt infiltration, it's amazingly strong, and it's light, so it won't add any weight to the block wall. We were in and out in two months with minimal disruption of the parking. The

"TerraThane™ saved this one and the owners have asked us back for more work."

alternative would have been to shut the entire structure down for a year-and-a-half as they removed the entire block wall, dug out the lagging, installing 26 gauge panels, then backfilled the cavity with gravel. That might have cost upwards of $2 million or more, plus loss of parking revenue. TerraThane saved this one and the owners have asked us back for more work."

TERRATHANE™

50 YEARS OF FOAM

NCFI® POLYURETHANES

NCFI Polyurethanes
A Division of BMC
P.O. Box 1528
Mount Airy, NC 27030
www.TerraThane.com

Phone: 866.678.5283
Spray Equipment and Parts
Ordering Hotline: 866.812.7320
E-mail: moreinfo@ncfi.net
www.NCFI.com

NCFI TRENCH BREAK FOAM SYSTEM 24-023

DESCRIPTION

NCFI 24-023 is a two-component, water and HFC-245fa co-blown, polyurethane foam system designed for use as a void fill, trench-break material. NCFI 24-023 has been formulated to process at 2.0–2.2 pcf depending on lift thickness. 24-023 is designed to be built up in great lift thickness without scorch or splitting. NCFI 24-023 is not ASTM E-84 flame spread rated and is not to be used in applications governed by building codes. This product is also offered in a high altitude variation that will maintain the 2 pcf density when processed at high elevations.

DISTINGUISHING CHARACTERISTICS

+ Ease of Processing & Handling
+ Scorch Free Processing
+ Good Interlayer Adhesion

TYPICAL RESIN PROPERTIES

	24-023 R	24-023 A
Viscosity	580 cps	200 cps
Lbs./Gallon	9.0 lbs.	10.3 lbs.
Appearance	transparent, amber liquid	transparent, brown liquid
Shelf Life	6 months	6 months

MIX RATIO

	24-023 R	24-023 A
By Volume	100 parts	100 parts

TYPICAL REACTION PROPERTIES

	Hand Mix @ 50°F
Cream Time (sec)	5
Tack Free Time (sec)	22
Rise Time (sec)	90
Machine Tack Free Time @ 130°F (sec)	8

TYPICAL PHYSICAL PROPERTIES

Core Density, ASTM D-1622	2 pcf
Compressive Strength @ Max Load, ASTM D-1621	27 psi
Closed Cell Content, NCFI TM 300	>95%
Water Absorption, ASTM D-2842	<0.08 lbs/ft²
Resistance to Solvents	Excellent
Maximum Service Temp	180°F
28 day Dimensional Stability -20°F 200°F 158°F, 95% RH, ASTM D-2126	Vol. Change -0.1% -0.2% 1.2%

*The above values are average values obtained from laboratory experiments and should serve only as guidelines.

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