

# **GEOSYSTEMS**

#### PROJECT ENGINEER:

D. Chris Wilbourn, PE, SE, CFM Chief Engineer, City of North Little Rock, AR

**CONTRACTOR:** Diamond Construction, North Little Rock, AR

MATERIAL SUPPLIER: Darragh Company, Little Rock, AR

# **GEOTERRA®** Construction Mats

Baptist Health

## **Portable Mats Allow Quick Access** for Ballpark Sinkhole Repair at Dickey Stephens Park

ASTERDAN

#### **LOCATION:** Little Rock, Arkansas

#### FLOODING, DRAINAGE SYSTEM LEAD TO SINKHOLES

A combination of recent flooding and the park's drainage system led to multiple sinkholes in right, left, and center field at Dickey Stephens Park in North Little Rock. Dickey Stephens Ball Park is home to the AA minor league Arkansas Travelers, an Anaheim Angels farm team.

According to Dr. Jeffrey Connelly, Earth Sciences Department at UALR, the location of the ballpark near the Arkansas River sits below street level leading to more than normal ground water underneath.

#### THE CITY PREPARED FOR EXPECTED REPAIR

The French drainage system installed underneath the field pumps the water out. Unfortunately, soil, silt and sand were also being washed into the drainage system and pumped out from underneath the field, leaving voids that created sink holes.

This had been a recurring problem over the past seven years, finally precipitating a repair with funds earmarked for the project.

Information excerpted from Jordan Bontke, KATV-Little Rock







Engineers and officials survey the progress of the sinkhole repair. GEOTERRA Mats are installed to allow heavy vehicle and equipment access in and around the repair site.



#### SINKHOLE REPAIR:

A 35-foot diameter sinkhole in the city park's outfield was created by the field's drainage system. The repair involved installing new pipes, new aggregate, and a high strength geotextile fabric around the pipes to keep soil out.











"The GEOTERRA product has met and exceeded my expectations."

> D. Chris Wilbourn, PE, SE, CFM NLR Chief Engineer

#### **HEAVY DUTY PERFORMANCE**

According to the Project Engineer, D. Chris Wilbourn, the GEOTERRA mats worked well for this project. Track hoes, front end loaders, concrete trucks, and haul trucks all operated on the GEOTERRA mat surface continuously for over a month's time. Over 250 haul trucks carrying 16 to 18 cubic yards of material per truck accessed the mats.

A high strength HP270 geotextile fabric was placed under the GEOTERRA mats for extra soil bridging as the soils on site were very soft due to recent heavy rains.

### MATS ARE REMOVED, STORED FOR FUTURE USE

About half of the GEOTERRA mat sections were removed and moved to storage for reuse on later projects. Diamond Construction, the contractor using the GEOTERRA mats, was impressed with its performance.





GEOTERRA MATS: Connected with strong Padloc<sup>®</sup> locking devices, GEOTERRA mats can be configured to any site requirement.





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