Lincoln Memorial Reflecting Pool
Washington, D.C.

The Challenge
• Stabilize the subgrade to minimize the settlement potential and subsequent damage to the new reflecting pool structure.
• Provide a concrete mix design that met the project specifications for durability, shrinkage, and watertightness.
• Provide a cost effective and efficient joint sealing product to ensure watertightness of the entire system at numerous construction joints.

Introduction
In 2010, funds from the American Recovery and Reinvestment Act made the $34 million renovation of the Lincoln Memorial reflecting pool possible. The reflecting pool was slightly redesigned to be shallower and more aesthetically pleasing. Most importantly rehabilitation addressed the water quality and watertightness issues. Thanks in part to the durable products provided by Sika, the Lincoln Memorial reflecting pool will continue to be a treasured national monument for generations to come.

History
The old reflecting pool, completed in 1924 and demolished in 2009, held 6.75 million gallons of water, much of which evaporated or continually leaked from the pool. The old reflecting pool was built with an asphalt and tile bottom on poorly supported soil consisting primarily of marshes. The unstable subgrade had deflected twelve inches over the past 90 years under the pressure exerted by the reflecting pool above. In 1980, a new concrete slab was poured over the existing slab, but the added weight simply worsened the soil settlement and subsequent structure leakage. The old reflecting pool could not circulate its often stagnant water and was drawing more than 30 million gallons of city potable water per year.

The Solution
The new reflecting pool is founded on 2,133 timber piles driven into the bedrock to provide more stable support. The concrete specifications called for a highly durable watertight concrete, with minimal shrinkage. Corman Construction Inc., the general contractor, decided to utilize a watertight concrete system provided by Sika Corporation in order to meet the project specifications. Concrete for this project was supplied by Aggregate Industries and in conjunction with Sika concrete admixtures, easily installed Sika Greenstreak hydrophilic joint sealing strip Hydrotite was used at all construction joints to provide a whole system solution for the reconstruction of the Lincoln Memorial reflecting pool. This system approach to watertight construction is referred to as Sika’s ‘Whitebox’.

In 2010, the massive reconstruction project shut down a large swath of the National Mall. During this period the new reflecting pool with new walking paths along each side and state of the art supporting infrastructure was built to accommodate millions who visit the site each year. The reflecting pool in front of the Lincoln Memorial on the National Mall reopened Friday August 31, 2012.