



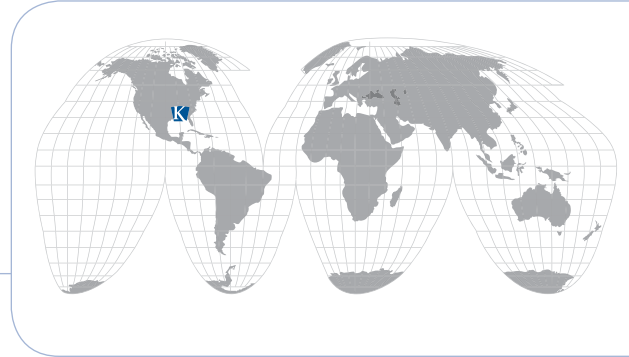
The Park at OWA

Main Pedestrian Bridge - Foley, AL

On the Gulf Coast of Alabama in the small city of Foley, one of the country's newest and largest entertainment attractions, The Park at OWA, has opened its doors. It is situated within a 520-acre planned sport, retail and entertainment complex on land purchased by the Poarch Band of Creek Indians, who are developing it in a public private partnership with the City of Foley.

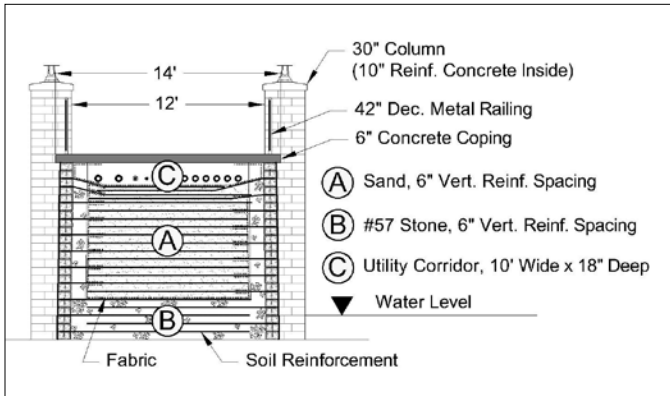
The park features an island on a 14-acre artificial lake that connects to the mainland with one vehicular and five pedestrian bridges. The main bridge acts as a "stage setter" to the island, giving visitors an aesthetically heightened approach thanks to its triple arches, arcing profile, and the charm of Old World stone walls. The bridge, supplied by Contech Engineered Solutions, is a triple cell 20' x 9'-2" BEBO® Bridge Concrete Arch System, 14' in length.

From the beginning the owner made it clear this particular bridge should be very pleasing to the eye. A form liner and other



Project:	<i>The Park at OWA</i>
Location:	<i>Foley, Alabama</i>
Owner:	<i>Foley Holding LLC - Poarch Band of Creek Indians</i>
Keystone Product:	<i>Stonegate® Country Manor®</i>
Licensed Manufacturer:	<i>Tremron Birmingham, AL</i>
Total Wall Area:	<i>3,642 sq. ft.</i>
Contractor:	<i>McInnis Construction</i>
Engineers:	<i>Keystone Engineering Dept.</i>





Soil reinforcement was connected to the outer Keystone walls every two courses vertically, or 12", and was ended before contact with the opposite wall. The installation was staggered one course, or 6". The final spacing between layers was 6" where layers overlapped.

Because the soil reinforcement was not connected to both outer walls and overlapped instead, the active earth pressure coefficient was used. If the soil reinforcement was connected to both outer walls, the at-rest earth pressure coefficient (assuming restrained movement) would be used instead. The at-rest earth pressure coefficient is about 50% higher than the active earth pressure coefficient. This would have required much stronger soil reinforcements.

options to create the decorative headwalls were considered, but the Keystone Retaining Wall look was ultimately selected. The client chose Keystone's Stonegate Country Manor system with its picturesque, weathered finish and three block sizes that can be installed randomly to create a more handcrafted appearance.

Design of the bridge walls was performed by Keystone's in-house engineering staff. In addition to product quality, the in-house engineering expertise designing complicated structural wall systems sets Keystone apart from other wall system producers. The outcome tends to be a more buildable and better-quality design, particularly if the project involves anything atypical.

Stonegate is a versatile product that can be installed as a gravity wall for wall heights of three feet or less. For this application, where the walls are 160 feet long and up to 17 feet in height, an engineered design using soil reinforcement, or geogrid, was required. To internally tie together the two outer walls, backfill and geogrid were layered. When geogrid is spaced evenly between layers of backfill, the backfill locks into the openings in the geogrid, providing friction and stability. As the weight of the backfill pushes against the wall, the geogrid counteracts that force and holds the wall up.

The site's coastal plain geography and its typical mix of soft sandy and organic soils meant the entire structure, including its three arches, required concrete pilings to ensure adequate support. Although the bridge primarily serves pedestrians, it has to be capable of accommodating maintenance and staff vehicles. The six sets of wall pillars are square, ten-inch reinforced concrete structures wrapped in Keystone Stonegate Country Manor units, creating 30-inch square columns topped by decorative light poles.

For more information on Stonegate Country Manor or other Keystone products, please visit www.keystonewalls.com or call 800-747-8971.

