

Underground Storage Mitigates Flooding at Florida School

King Eng. Associates of Florida initially intended to use an arch-style flood mitigation structure for an underground storm water system installation at the the Henderson Hammock Charter School in Tampa, Fla. It was determined, however, that the arch system could not deliver the amount of retention space required within the allowed site footprint, so another option was needed. King Eng. then contacted Brentwood Industries distributor R. H. Moore.

Brentwood's StormTank modular underground storage system was recommended by R. H. Moore as the best option because of its high void space capability. The StormTank modular system boasts a 97% void space ratio. This allows for installations in projects where space is limited while still meeting or exceeding storage requirements. An additional benefit to the regulatory community was the cleanability of the StormTank module, as only the perimeter modules have side panels. Similar products require internal panels throughout the basin, limiting accessibility and rendering them difficult to clean. By contrast, StormTank modules are easy to access, clean and maintain.

Other benefits include lower aggregate requirements for top, side and back fill; ability to support HS-25 loads when installed with 24 in. of cover; low freight costs; and easy onsite assembly. All of these factors contribute to a lower overall cost per system than competing products, and made StormTank a good choice for King Eng. Associates, the contractor and the owner.

Successfully installed under the athletic field of the school in April 2012, the 17,000-cu-ft system permitted the necessary flood mitigation to meet regulatory needs



as well as the cost restraints of the project. During a large runoff event, the system design allows for flood waters to enter from a nearby wetland through a 12-in.-diameter pipe connected at a retaining wall, adjacent to the wetlands, directly into the sub-surface system. Runoff is then stored, limiting flooding of surrounding area, until the adjacent wetland begins to subside; then runoff is discharged at the same rate as the wetlands. This alternative met the needs of the designer, owner and regulatory agencies while providing a benefit for years to come. [SWS]

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