



OAK RIDGE ENDODONTICS

UNDERGROUND DETENTION

STORMWATER MANAGEMENT

UNDERGROUND DETENTION ON A CONSTRAINED SITE

THE CHALLENGE

The Oak Ridge Endodontics development in Oak Ridge, Tennessee, required a stormwater detention solution capable of meeting strict municipal runoff standards while fitting beneath a compact commercial footprint. Designed by Mark V Graham Engineering Consultants, LLC and constructed by George Bros Excavating, the project demanded a system that combined regulatory compliance, design adaptability, construction efficiency, and needed to provide long-term structural reliability without disrupting daily operations.

From the outset, the project site imposed limitations that complicated traditional stormwater design approaches. Pre-existing utilities crossed the property, restricting available space and limiting excavation flexibility, while the compact layout required careful coordination among multiple trades working simultaneously. During grading activities, an existing fifty four inch storm line was discovered at a higher elevation than anticipated, introducing a late stage design challenge that had the potential to significantly impact schedule and cost. Any selected detention system needed to accommodate these constraints without requiring extensive redesign or costly rework.



LIGHTWEIGHT, FLEXIBLE UNDERGROUND STORAGE



THE SOLUTION

The R-Tank Underground Detention System paired with Fabco StormRings was selected to meet these stringent requirements, delivering high volumetric efficiency within a tight footprint while ensuring durability under HS-20 traffic loading.

Pre-assembled R-Tanks were supplied by Jen-Hill and delivered directly to the site, where George Bros Excavating positioned them into excavations. This direct placement approach minimized equipment needs, reduced labor, and maintained productivity across other trades. The modular design of the R-Tank allowed rapid reconfiguration to accommodate the elevation of the storm line while maintaining compliance and avoiding budget overruns. Upstream Fabco StormRings provided pretreatment, reducing sediment migration and long-term maintenance needs.



THE RESULTS

The Oak Ridge project illustrates how modular, space-efficient stormwater solutions, delivered by Jen-Hill and expertly installed on site, can navigate complex constraints while providing long-term performance. Flexible system geometry, paired pretreatment, and rapid installation make R-Tank a scalable, future-focused solution for commercial developments seeking regulatory compliance, operational efficiency, and resilient site performance.



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