

PROJECT PROFILE

ACF R-Tank Underground

Detention

3737 O'Meara Drive

Houston, Texas



Design Team

Architect

Curry- Boureaux

Civil Engineer

KMS Engineering

Construction Team

General Contractor

Brookstone

Installation

TNT Consultants

47% Less Excavation

52% Smaller Footprint

40% Cost Savings

PROJECT PROFILE

ACF R-Tank Underground
Detention
Avondale House School
Houston, Texas



Owner: Avondale House
Architect: Curry-Boudreaux
Engineer: KMS Engineers
Contractor: Brookstone
Site Contractor: TNT Consultants
Detention Volume: 20,500 CF
Cost Per Cubic Foot: \$6.95
Completion: May 2008

Project Background

Avondale House is a Houston based non-profit school for autistic children. One reason they chose the R-Tank Underground Detention System is for the safety and wellbeing of their students. Surface ponds in Harris County claim the lives of six children per year on average. For areas with high concentrations of children playing, it is no wonder more and more developers and school districts are looking to underground detention to help alleviate the public safety risks and liabilities associated with surface ponds.

About Avondale House

Avondale House is a 501(c)(3) non-profit agency that provides a school, a day habilitation program and residential services for children and young adults with autism and other pervasive developmental disorders. Autism is a baffling and complex neurological disorder for which there is no singularly known cause and for which there is no cure. It is the fastest growing developmental disorder in the country.

The Business Case

As with all non-profits, money can be tight and revenue is often a result of donations. This is why it was imperative that Avondale House purchased an underground detention solution that wouldn't break the bank. Because of R-Tank's efficiency and strength, R-Tank will fit in a 50% smaller excavation than other systems and due to its vertical baffles, can support H-2O loading without the use of cement stabilized sand. The combination of reduced excavation due to efficiency and the reduction in the amount and the cost of backfill materials of other pipe and arch chamber systems, allowed this project see a \$50,000 cost savings in site excavation and backfill alone.

Excavation and Back Fill Cost Analysis

ITEM	UNIT	COST	PIPE SYSTEM		RAINTANK	
			QTY	COST	QTY	COST
EXCAVATION	CY	\$10	2203	\$22,030	1192	\$11,920
STRUCTURAL FILL	CY	\$30	1420	\$42,600	-	-
SAND FILL	CY	\$4	-	-	1736	\$1,736
TOTAL COST	CY			\$64,630		\$13,656



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About R-Tank

The R-Tank System is a modular storage system that can be used for detention, rainwater harvesting, or ground water recharge. The R-tank's modular design and compact footprint makes it ideal and cost effective for all types of applications.