

# ST. MARK'S SCHOOL OF TEXAS, WINN SCIENCE CENTER

DALLAS, TEXAS



## YEAR COMPLETED:

2018

## OWNER:

St. Mark's School of Texas

## ARCHITECT:

Robert A.M. Stern  
Architects (Design Firm)

GFF Architects  
(Associate Firm)

## CONSTRUCTOR:

Beck Construction

## RLG SERVICES:

Civil Engineering  
Structural Engineering  
Surveying

## PROJECT DESCRIPTION /SCOPE:

The St. Mark's School of Texas enlisted the help of RLG Consulting Engineers to provide civil, structural and surveying engineering services for the school's new 50,000 square foot Winn Science Center. The new building features a myriad of tools and classrooms offering students and teachers the assets needed to provide state-of-the-art science education for generations to come. The additions include a large atrium, an 80-seat theater-style planetarium, a 230-seat lecture hall, dedicated spaces for Lower School science, a makerspace and shop, greenhouse with three sections, outdoor learning area and labs for biotechnology, chemistry and more. RLG Consulting Engineers has proudly provided engineering services to St. Mark's for more than 25 years.

RLG's team of structural engineers provided structural design services for the Winn Science Center, renovations to the existing McDermott Green Building and additional site improvements around the campus.

The structural design of the planetarium floor and roof framing is one-of-a-kind. The roof framing over the planetarium is a dome structure with multiple step-backs that require a series of tension and compression rings to achieve the architectural design intent. Directly below the planetarium is a large lecture hall which required multiple column transfers and large floor framing spans.

Due to the building's unique architectural design, RLG was tasked with a high level of detailing and coordination between both the design architect (RAMSA) and the production architect (GFF).

RLG's team of civil engineers provided utility design services for storm water, water and sanitary sewers. In addition to providing grading, drainage and plan development services.

As a part of the new and improved outdoor learning space, RLG was tasked with the expansion of The Cecil and Ida Green Library. RLG's team of civil and structural engineers worked closely with the design team to ensure that the porch's improvements fit within existing site constraints while achieving the architectural design intent.

A unique design feature of this project is the use of structural turf, which allows the school to meet the required fire lane width for a proposed fire lane adjacent to the building, without having to sacrifice green space. The fire lane looks like landscaping but has the structural support needed for emergency vehicle access. RLG coordinated and received approval on this variance from the fire marshal for this product, application and configuration.

RLG's surveying department provided an Oncon electric easement, construction staking and several topographic and improvement surveys throughout construction.

The project opened in December 2018 and is pursuing LEED Silver Certification from the U.S. Green Building Council.

