

BAYLOR SCOTT & WHITE – THE HEART HOSPITAL PLANO

PLANO, TEXAS



YEAR COMPLETED:

2018

OWNER:

The Heart Hospital -
Baylor Scott & White

CLIENT NAME:

e4h Architecture

RLG SERVICES:

Civil Engineering
Survey
Forensic Engineering
Structural Engineering

PROJECT DESCRIPTION /SCOPE:

Baylor Scott & White The Heart Hospital - Plano is ranked nationally as one of the best hospitals for cardiology and heart surgery, placing 16th on U.S. News & World Report's 2017-2018 "America's Best Hospitals" Guide. The 114-bed, free-standing, full-service hospital dedicated to heart and vascular care recently invested \$66 million to expand the campus' North Tower.

The expansion features a 165,000 sq foot expansion with three new operating suites, 28 private outpatient guest suites, a cardiopulmonary rehabilitation center, an office for the Baylor Research Institute and an education suite including a bio-skills lab, education rooms and a 200-seat auditorium for medical meetings and conferences. Additionally, the North Tower features an atrium-style first-floor lobby with café and expanded restaurant-style dining options. RLG Consulting Engineers provided civil, structural, surveying and strengthening engineering services for the expansion which was completed in June 2018. Renovations are scheduled to be completed in February 2019.

As a part of the expansion, a portion of the existing structure was demolished including the removal of a three-story 260-car parking garage, which was converted into a 5-story tower. Additionally, the demo included the existing kitchen/dining area with a curved sloping roof that extended into a section of the existing building that was not going to be demolished. The demolition area was adjacent to a medical lab and one of the operating rooms – both essential functions of the hospital that could not be closed for an extended period of time. To combat impacting operations of the medical lab or operating room, RLG worked closely with MEDCO Construction to facilitate a 9-step process for the demolition. This process helped shave 4 weeks off of the construction schedule, allowing the medical lab and operating room to reopen within 3 months.

The new structure is a one-way slab and beam pan system. The new addition and partial demolition required some strengthening of adjacent spans of the existing structure due to redistribution of the loads. RLG's team of structural engineers designed FRP strengthening to be installed, primarily in the crawlspace and completed the inspections for the installed FRP.

RLG’s team of civil engineers abandoned the existing onsite storm sewer site and designed a new redundant drainage system to be constructed under the proposed addition, coupled with the relocation of the campus’ utilities and drains. They played a key role in the reconstruction of the front hospital entry by providing paving and grading services. RLG also worked to secure a zoning amendment, replatting and site plan approval for this project. Due to the time constraints of this project – RLG expedited the site utility package and zoning amendments to keep the construction schedule on time.

RLG’s surveying team did the initial survey for the project as well as early construction staking. The construction staking was complicated by the shape of the original building and the partial demolition. The face of the existing building that the design team used to define the new addition was curved and planned to be demolished. RLG’s survey team was tasked with locating the corners of the new addition after a portion of the demolition had been completed.

