

THE HOCKADAY SCHOOL ATHLETIC FIELDS

Dallas, Texas



COMPLETION DATE

July 2023

CONSTRUCTION COST

\$35 million

SERVICES

Structural Engineering,
Civil Engineering, Survey

ARCHITECT

HOK

GENERAL CONTRACTOR

Moss + Associates

PROJECT DESCRIPTION

RLG provided Civil Engineering, Structural Engineering, and Survey Services for the 28-acre area allocated for the Hockaday Athletic Fields located in Dallas, Texas. Together with Moss + Associates, HOK, and Hillwood Urban, RLG completed this project in three years across three phases.

The initial phase involved relocating a private storm sewer to clear the site for future field improvements. In phase two, our Civil Engineering team designed 2300 linear feet of reinforced box culvert in order to relocate a drainage ditch on private property that originally bisected the site and routed public storm water. Coordination was required to determine the limits of the ditch that was classified as Waters of the United States (WOTUS) and could not be infilled. The project's final phase entailed the creation of the new athletic fields, a track, two concession buildings, an athletic storage facility, and a maintenance building.

The site's transformation brought numerous benefits and challenges. Removing the existing concrete parking lot in the middle of the site and the drainage ditch created a more appealing campus-like atmosphere but required significant effort to blend the site seamlessly. The grading process posed challenges because it required keeping the expansive fields relatively flat to accommodate grass and turf surfaces while ensuring proper draining was maintained. The project's complexity increased with subsurface drainage of the fields, a looped fire lane, the adjacent floodplain and addressing fire protection. Additionally, the team accommodated for future field expansion in the northeast corner of the parking lot, which added over 400 parking spaces for enhanced site functionality. After the design was nearly complete, the architect's decision to remove a wall between the fire lane and track lowered

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the site's grades by a foot and posed a challenge in regrading a large portion while ensuring drainage was maintained and paving complied with ADA standards.

This project was unique in that, although there were four small single-story buildings, a good part of the work was not what you'd consider traditional structural design. The RLG Structural Engineering team focused on site structures associated with athletic fields, such as foundations for light poles, throwing nets, scoreboards, bleachers, press boxes, batting cages, and more. What made this project innovative was the meticulous engineering applied to these seemingly simple site elements. The benefits of this approach were significant, as it ensured the client had well-designed foundations for all these structures, eliminating guesswork and potential safety concerns. However, the primary challenge was coordinating with numerous vendors and consultants for each site item, from throwing nets to dugouts, which required efficient communication and information gathering. The structural systems used for this project included structural steel, concrete masonry units (CMU), shear walls, spread footings, drilled piers, and slab on grade.

RLG Survey field crews conducted a topographic survey. This survey needed to be integrated with data collected from various surveys conducted over the years across multiple areas. The goal was to compile all this information to create a comprehensive site survey. This new survey performed was vital for tree mitigation when infilling the drainage ditch due to the large loss of trees. Our surveyors also assisted in staking the site during construction.

