

CONCRETE REPAIR

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2013 ICRI PROJECT AWARDS

**PROJECT OF THE YEAR:
REPAIR AND PREVENTATIVE
MAINTENANCE OF THE
EAST MONROE STREET
PARKING GARAGE**



INTERNATIONAL
CONCRETE REPAIR
INSTITUTE

Lee County Courthouse Foundation Stabilization and Structural Repairs

Giddings, TX

Submitted by Wiss, Janney, Elstner Associates, Inc.



Lee County Courthouse, located in Giddings, TX, was designed in the Romanesque Revival style and constructed in 1899. It was officially adopted as a Recorded Texas Historic Landmark in 1968. The Courthouse is constructed of load-bearing masonry with reinforced concrete floor slabs and steel attic and roof framing.

Throughout its history, the Courthouse has experienced numerous and ongoing problems related to differential foundation movement and associated distress cracking. In 1911, partial underpinning of the south and west foundations was implemented. Further repairs were completed in 1979 and from 2001 to 2004.

In 2008, cracks were noted in the plastered walls and load-bearing masonry. A geotechnical investigation confirmed that the majority of the distress was likely caused by the interaction of the underlying expansive clay soils that support the foundation. When the perimeter of the Courthouse was inundated with surface water due to poor drainage, the soil at the foundation edge heaved, whereas the central core remained stable. Stress cracking at the arched and perpendicular connecting masonry walls was a result of the movement and subsurface soil conditions.

To stabilize the perimeter foundation, a continuously reinforced, concrete, shallow spread footing was installed below the existing foundation. The existing storm-water drainage around the perimeter

of the Courthouse was revised to provide a slope of 2% away from the building. A perimeter trench was installed to capture surface water runoff and connect the roof downspouts. A French drain system was installed at the bottom of the existing footing; continuous around the perimeter of the Courthouse; and included new drain lines, filter fabric, gravel fill, and cleanouts. Furthermore, the subgrade waterproofing barrier was removed and replaced at the masonry walls below grade.

Lee County Courthouse

OWNER
Lee County
Giddings, TX

PROJECT ENGINEER/DESIGNER
Wiss, Janney, Elstner Associates, Inc.
Austin, TX

REPAIR CONTRACTOR
Structural Concrete Systems
Houston, TX

MATERIAL SUPPLIER/MANUFACTURER
Chan Partners Engineering, LLC (Civil Eng.)
Austin, TX

Award of Merit

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in recognition of the

**LEE COUNTY COURTHOUSE FOUNDATION
STABILIZATION AND STRUCTURAL REPAIRS**

Recognized for Excellence in the Repair of Historic Structures

November 14, 2013



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