



EDUCATION

- University of Texas at El Paso
 - Bachelor of Science, Civil Engineering, 2000
 - Master of Science, Civil Engineering, 2005

PRACTICE AREAS

- Structural Design
- Failure Investigation
- Repair and Rehabilitation Design
- Structural Evaluation and Analysis

REGISTRATIONS

- NHI Course 130078 - Fracture Critical Inspection Techniques of Steel Bridges
- Professional Engineer in TX

PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- International Concrete Repair Institute (ICRI)
- Structural Engineers Association of Texas (SEAoT)

CONTACT

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EXPERIENCE

Since joining WJE in 2009, Gabriel Carrera has been involved in the investigation, evaluation, design, and rehabilitation of various structural projects. His project work experience includes concrete, steel, masonry, and wooden structures.

Prior to joining WJE, Mr. Carrera worked as a structural design engineer for a private consulting firm specializing in low to mid-rise commercial and residential buildings. As a research assistant in graduate school, he performed a dynamic characterization of a composite missile fin for Raytheon Missile Systems.

REPRESENTATIVE PROJECTS

Structural Design

- The Broadway - San Antonio, TX: Design of gravity, lateral, and shear resisting structural systems on twenty-one story luxury condominiums*
- Albert H. Ullrich Water Treatment Plant 160 MGD Expansion - Austin, TX: Design of multiple concrete water and chlorine retention structures*
- The Shore - Austin, TX: Design of gravity, lateral, and shear resisting structural systems on twenty-three-story luxury condominiums*
- La Frontera - Round Rock, TX: Advanced conceptual design of structural element modifications to combine adjoining buildings

Failure Investigation

- Kenny's Tile - Grandview, MO: Collapse investigation of composite floor system in warehouse
- Luminant Sandow Mine - Sandow, TX: Assessment of deteriorating multiplate culvert and redesign of replacement structure
- Johnny Carino's - Austin, TX: Failure investigation and repair of timber trusses

Repair and Rehabilitation Design

- ASB Hangar Building - Fort Bliss, TX: Foundation and superstructure distress analysis, redesign, and repair

- Darrell K. Royal-Texas Memorial Stadium - Austin, TX: Repair and rehabilitation of deteriorated concrete in stadium
- Lee County Courthouse - Giddings, TX: Design of foundation underpinning, balcony framing, and associated rebuild documents
- Palo Verde Water Reclamation Facility - Tonopah, AZ: Design of repair and rebuild documents for comprehensive concrete repair and maintenance plan
- Facility Maintenance Shop, Fort Sam Houston - San Antonio, TX: Assessment and repair design of foundation-related distress
- Chase Facility - San Antonio, TX: Assessment and repair design of foundation-related distress

Structural Evaluation and Analysis

- 3M Pipe Rack and Hoist Frame - Austin, TX: Assessment of corrosion related distress and conceptual repair recommendations
- University of Arkansas Medical School - Little Rock: Investigation of post-tensioned concrete slab distress
- Sam Houston State University - Huntsville, TX: Investigation of cracking in post-tensioned concrete pedestal and masonry walls
- 3rd Street Bridge - Austin, TX: Corbel failure investigation
- Seaholm Vault - Austin, TX: Vault structural evaluation and related load testing
- Turner-Roberts Recreation Center - Austin, TX: Load testing of concrete building
- IH-345 - Dallas, TX: Fracture-critical inspection of fatigue-critical bridge construction details
- University of Texas Southwest Medical Center - Dallas, TX: Condition assessment and evaluation of various cast-in-place and post-tensioned parking structures
- University of Arkansas Medical School - Little Rock: Assessment of post-tensioned concrete parking garage structure
- Port of Houston, Turning Basin Terminal - TX: Condition assessment and nondestructive evaluation of multiple concrete docks

**Indicates with other firms*