Frank S. Griffin, Jr., PE, LEED AP

Principal Consultant - Construction

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PROFILE

Mr. Griffin is a Principal Consultant in the Construction Group located in Dallas, Texas. Mr. Griffin is a Structural Engineer with over 25 years of experience including the structural design, analysis and forensic investigation of commercial, institutional, residential, municipal and industrial buildings, water and wastewater treatment facilities, flood control projects, retaining walls, and welded steel ground storage tanks. He has experience in performing failure investigations for a variety of construction materials, including concrete, steel and wood structures, and damages, including wind, hail, flood, soil movement, and vehicular impacts. He has extensive knowledge of evaluating building conditions and analyzing structural failures.

Key construction and construction-defect related strengths include the following:

- Cause and Origin
- Standard of Care
- Code Compliance
- Contract Review
- Building Envelope Analyses
- Extent of Damage / Repairability
- Design Deficiencies (Errors and Omissions)
- Oversight / Direction of Destructive Testing
- Construction Scheduling / Delays
- Construction Vibrations

Mr. Griffin is experienced in design, inspection, and evaluation of the following:

- Concrete Structures
- Wood Structures
- Concrete Masonry
- Conventional Stucco
- Windows
- Earthwork and Grading
- Underground Utilities
- Fire and Explosion Damage
- Roofing (Low-Pitched and Steep-Pitched)
- Structural Steel
- Water Intrusion and Water Loss Assessments
- EIFS (Exterior Insulation and Finishing Systems)
- Tilt Wall Panel Buildings
- Blast Type Explosions
- Site Drainage/Site Preparation
- Foundations

- *Industries:* Forensics, Construction Defects, Design Defects, Subrogation, Commercial, Education, Entertainment, Flood Control, Government, Healthcare, Heavy Civil, Industrial, Manufacturing, Mixed Use, Oil & Gas, Residential, Retail, Water and Wastewater (Civil/Structural-Related Design/Construction)

- *Computer Skills:* Windows, MS Office (Word, Excel, PowerPoint), Enercalc, LPILE, TEDDS, RetainPro, MatchCAD, Ramsteel, and PCA Software.

- *CAD/Design Packages:* RISA-3D, RISAFloor, and AutoCAD.

EDUCATION

Master of Engineering, Civil Engineering, 2002
The University of Texas at Arlington – Arlington, Texas

Bachelor of Science, Civil Engineering, 1995
Texas Tech University – Lubbock, Texas

LICENSES

Professional Engineer (PE):

- Kansas
- Louisiana
- New Mexico
- Oklahoma
- Texas
- Florida

CERTIFICATIONS

Leadership in Energy and Environmental Design Accredited Professional (LEED AP)

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- ASCE Structural Engineering Institute
- Engineers Without Borders—USA
- Structural Engineering Institute
- Structural Engineers Association of Texas
- Texas Tech University Civil and Environmental Engineering Academy

PROFESSIONAL BACKGROUND

October 2017 – Present: Envista Forensics – Dallas, TX
Project Engineer; Senior Project Engineer; Principal Consultant

February 2016 – September 2017: Pie Consulting & Engineering – McKinney, TX
Project Manager

September 2012 – September 2019: Texas Task Force 2 – Urban Search & Rescue – Dallas, TX
Structures Specialist (Volunteer Position)

June 2013 – February 2016: PT&C|LWG Forensic Consulting Services, P.A. – Arlington, TX
Project Engineer

March 2006 – June 2013: Halff Associates – Fort Worth, TX
Structural Engineer

September 2004 – February 2006: Jaster-Quintanilla Dallas, LLP – Dallas, TX
Senior Project Manager

May 2000 – September 2004: Freese and Nichols, Inc. – Fort Worth, TX
Structural Engineer

March 1997 – May 2000: Carter & Burgess, Inc. – Fort Worth, TX
Structural Engineer

January 1996 – March 1997: Tank Builders, Inc. – Euless, TX
Contract Administrator

REPRESENTATIVE FORENSIC EXPERIENCE

Hurricane Damage Assessments
Private Client – Houston, Texas

- Responsible for performing wind and water intrusion investigation of commercial property with three five-story structures to evaluate damages to roofing systems and other building components.

Private Client – Richmond, Texas

- Responsible for performing wind and water intrusion investigation of Pioneer Community Center that was under construction to evaluate damage to roofing systems and other building components.

Private Client – Port St. Joe, Florida

- Responsible for performing wind and storm surge damage investigation of condominium property with four two-story, CMU and wood-framed, multi-family residential structures to evaluate damage to roofing systems, wall cladding, and other building structural components.

Private Client – Mexico Beach, Florida

- Responsible for performing wind and storm surge damage investigation of condominium properties, each with two four-story, concrete and steel-framed, multi-family residential structures to evaluate damage to roofing systems, wall cladding, and other building structural components.

Construction Defect
Private Client – Fort Worth, Texas

- Lead forensic consultant for the investigation of damage at a $41M multi-use commercial/residential property that experienced a sudden localized settlement of the five-level precast parking garage that was under construction. Directed geotechnical investigation, concrete coring, and laboratory testing to determine causation of damage to a reinforced concrete pier.

Private Client – Carrollton, Texas

- Investigated damage estimated at $1.3M multi-use commercial/residential property that experienced a sudden localized settlement of the foundation piers supporting a five-story office building that was under construction. Collaborated with geotechnical staff to determine cause of drop in foundation supporting exterior tiltwall panels.

Private Client – Carrollton, Texas

- Responsible for performing water intrusion damage investigation of Mustang Station Apartments (four-story structure comprised of 256 units) to evaluate water intrusion damage during construction from surface water/flooding, and through roofs and wall cladding.

REPRESENTATIVE DESIGN EXPERIENCE

Border Patrol Station
Halff Associates – Brownsville, Texas

- Structural Engineer for project comprised of three buildings considered to be a first phase of a seven to nine-building campus for the Immigration and Naturalization Service. The first three buildings contain approximately 80,000 sf of new floor space and consist of two single-story buildings and one 2-story building. The building structures are steel braced frames clad in concrete tiltwall panels. Foundations consist primarily of reinforced concrete grade beams supported on straight shaft piers.

Valley View Business Center
Halff Associates – Irving, Texas

- Structural Engineer for design of two new warehouse buildings. Warehouses were 140,000 sf and 400,000 sf, and design consisted of structural steel roof frame, rigid frame lateral system, load-bearing concrete tilt walls, and reinforced concrete spread footing foundations.

Wal-Mart, Inc. Regional Distribution Center Expansion/Conversion
Carter & Burgess – Buckeye, Arizona

- Lead Structural Engineer for metal building warehouse foundations for 400,000 sf expansion to convert a bulk storage warehouse into a regional distribution center. Designed superflat concrete slab-on-grade, reinforced concrete spread footing system, reinforced concrete dock walls, composite conveyor mezzanine platform, structural steel framing for offices, and CMU screen walls. Analyzed existing foundations for additional loading for attached expansion buildings and new conveyor mezzanine system. Included in the project scope were an aerosol storage building with precast fire wall, two new office buildings, and new shipping building, and a truck maintenance garage.

2.0 MGD Wastewater Treatment Plant Expansion
Halff Associates – Hidalgo, Texas

- Structural Engineer of Record for wastewater treatment plant expansion. Design included new reinforced concrete headworks structure, new reinforced concrete splitter box, new reinforced concrete sludge drying bed, and renovations to reinforced concrete aeration basins, tank pads, and parshall flume channel, for increasing capacity of existing facilites.

5.0 MG Clearwell
Freese & Nichols – Beaumont, Texas

- Lead Structural Engineer for 5 million gallon capacity reinforced concrete clearwell with attached high service/filter backwash pump station. Reinforced concrete design included slab-on-grade floor, two-way slab roof, exterior below-grade walls, and roof support columns.

Little Fossil Creek Flood Damage Reduction Project
Halff Associates – Haltom City, Texas

- Structural Engineer for flood damage reduction project on Little Fossil Creek for the U.S. Army Corps of Engineers (USACE) Fort Worth District. Designed in conformance with Civil Works Planning Documents and USACE guidelines, and included retaining walls, culverts and outdoor pavilion foundation associated with approximately 7,500 lf of channel improvements (7,500 lf of multi-purpose trail, access points, and picnic facilities).

The Shores Development
Halff Associates – South Padre Island, Texas

- Structural Engineer responsible for design of approximately 2,500 lf of anchored FRP bulkhead in new residential and commercial development along lagoon waterfront.

Brooke Army Medical Center Utility Tunnel
Halff Associates – Fort Sam Houston, Texas

- Structural Engineer for new reinforced concrete utility tunnel between SAMMC Consolidated Tower and Central Energy Plant at the North Campus. Tunnel is 513 feet in length with a vertical drop of 22 feet across its length, and inside clear dimensions of 15 feet in width and 15 feet in height. Site soils have extreme heave potential, and tunnel transitions at the building connections are designed to accommodate nine inches of differential movement.

PUBLICATIONS

- "Frozen Texas: Anticipating Construction Defects and Code Revisions After the State's Major Winter Storm," published by CLM Magazine, March 2021.

TESTIMONY EXPERIENCE

- Under separate cover