



# TONY CHILDRESS

**Owner/President, P.E., S.E., Childress Engineering Services**  
**1701 N. Collins Blvd., Suite 3000, Richardson, Texas 75080, (214) 451-6630**

Tony is a leader in redefining the role of engineering in commercial and residential construction. He is the owner and founder of Childress Engineering Services, Inc., established in 1994. Some of Tony's project responsibilities include Structural, Architectural and Forensic Engineering, Construction Management and Consulting Services to Owners, Architects, General Contractors, Builders, Manufacturers, Insurance Companies and Attorneys.

## Summary of Qualifications

Over 25 years of extensive experience in research, design, management and consulting, including project engineering, design engineering and construction administration for commercial, residential, and industrial projects. Project experience includes, *but is not necessarily limited to*: office, retail, and institutional buildings.

- Design and structural analysis of aluminum and steel framing systems for exterior curtain wall and of various cladding components for exterior wall systems and skylights.
- Design of concrete and concrete embedment anchors, including post tension and rebar slabs on grade.
- Design of stone and granite slabs/panels, including steel strong-back systems.
- Design of steel and wood structures utilized in lightweight commercial and residential construction.
- Design of retaining wall systems for commercial and residential construction.
- Consultant for building owners, architects, manufacturers and contractors for design, analysis and inspections for new construction, as well as remedial construction.
- Consultant for problem prevention, identification and resolution of air and water infiltration, as well as structural system failure.
- Consultant on Storm Damage assessments.
- On-site testing and inspection of new and existing curtain wall systems, steel and wood structures, and concrete replacement.
- Expert Witness Testimony on engineering and construction legal matters.

## Areas of Expertise

### STRUCTURAL

Steel, Concrete, Masonry and Wood Structures, including:

- Foundations
- Retaining walls
- Inspection services
- System failure analysis
- Building code interpretation
- Expert witness testimony



## Areas of Expertise (Cont'd)

### CURTAINWALL

Design and analysis of various cladding components for exterior wall systems including but not limiting to:

- Glass and aluminum curtain walls
- Stone clad wall systems
- Brick and stucco systems
- Skylights

Other Areas of Curtainwall Expertise:

- Custom system design
- Unitized and stick system design
- Structural design
- Engineering design and blast mitigation
- Engineering design and hurricane impact analysis
- Expert witness testimony

### CONSULTING

Investigation of system failures in commercial and residential building construction; Building Code and ADA Code interpretation; Investigative services for exterior wall systems, roofing, waterproofing and structural system failures; Identification and resolution of non-compliance construction; Laboratory and field-testing of structural systems and exterior wall systems; Remedial construction documents; Remedial construction management services; and Expert Witness Testimony

Other areas of Consulting Expertise:

- Custom system design assistance
- Project phase consulting assistance
  - Schematic design
  - Design development
  - Construction documents
  - Specification writing
  - Mock-up testing
  - Construction administration
  - QAQC inspections and field testing
- Forensic services and expert witness testimony
- Main-frame structural evaluations
- Building envelope structural and roofing & waterproofing evaluation
- Specialty structures, including handrail, guardrail and structural glass floor systems
- Third party peer review
- Property condition assessments

### ARCHITECTURE

Tony manages a team of Architects at Childress Engineering that have the technical expertise and diversification of capabilities that puts them in a unique position to serve clients who have a variety of needs, including, *but not limited to*, the following:

- Architecture & interior services
- Construction documents
- Field investigation
- Presentation drawings
- Building code and ADA code interpretation
- Elevation inspection



## Education

Bachelor of Science in Civil Engineering/Structures Specialization  
Texas Tech University, Lubbock, Texas  
December 1987

## Professional Experience

1994 – Present  
Childress Engineering Services, Inc.  
Plano, Texas  
Owner/President

Founded Childress Engineering Services, Inc. in 1994. CES has successfully grown to employ over 100 people including registered engineers, CAD technicians, commercial and residential designers, field inspectors, consultants, architects and administrative personnel. In addition, the company has expanded to include three branch offices, earns annual revenue in excess of five million dollars and offers services to customers around the globe.

Directly responsible for Business Operations and Engineering Management for five divisions: Structural, Curtainwall, Residential, Architectural, and Consulting. The Structural and Consulting Divisions provide services to architects, building owners, manufacturers and contractors on distinctive structural design and framing details for both commercial and residential projects. The Curtainwall Division is a National Curtainwall Consulting group specializing in Engineering Design, Failure Analysis, and On-site Testing and Inspection of Exterior facades. The Residential Division is a group specializing in the design of post tension slabs, pier and beam foundations, rebar foundations, wood and steel framing, retaining walls and other low rise structures. The Architectural Services Division provides architectural design for residential and commercial structures.

1988 – 1993 Architectural Wall Systems, Inc.  
Forney, Texas

### 1992-1993 Engineering Manager/Structural Engineer

Structural Engineer and Engineering Manager for a national curtainwall consulting group. Managed a total staff of 9 engineers and draftsmen. Engineering responsibilities included the design and analysis of various cladding components for exterior wall systems. Design requirement included: cross-section design of system components, verification of design capacities, and coordination of shop drawings to show proper installation methods, and calculations to verify the structural integrity of the system to meet local building code and architectural specifications.

### 1989-1992 Software Manager

Engineering Software Manager's responsibilities included the design, implementation, and marketing of specialized computer software.

### 1988-1992 Engineer-in-Training

Engineer-in-Training for a national curtainwall consulting group. Engineering responsibilities included the design and analysis of various cladding components for exterior wall systems. Design requirement included: cross-section design of system components, verification of design capacities, and coordination of shop drawings to show proper installation methods, and calculations to verify the structural integrity of the system to meet local building code and architectural specifications.



Due to the vast amount of projects worked on, job references are available on request.

**Selected Continuing  
Education Units**

ASCE - July, 1993, July, 1995, July, 1998  
14 Hours (July 19-23, 1993)  
40 Hours (September 11 – October 8, 1994)

**Seminars**

- Designing Aluminum Structures (June 13, 2003, March 5, 2010)
- Financial Management for P.E.'s (January 15, 2005)
- Foundations for Metal Building Systems (June 17, 2008)
- Design of Moment – Resisting Foundations for Pre-Engineered Buildings (June 19, 2008)
- Design of Wood Beams and Joists (July 8, 2008)
- Design of Wood Connections (November 12, 2009)
- Design of Wood Diaphragms and Shear Walls (May 18, 2010)
- Ethics (March 26, 2012)

**ACI**

- Concrete Slabs on Ground (November 7, 2002)

**ACME Brick Company**

- ThinWall Brick Fences (January 11, 2012)

**Auburn University**

- Structural Design of Spread Footings (March 8, 2007)
- Geotechnical Aspects of Shallow Foundations Design (March 8, 2007)
- Ethics and Professionalism (December 21, 2007)

**Building Officials Association of Texas**

- 1991 SBC Update (July 1993)
- Foundation Inspections (July 1993)
- Water Infiltration (July 1993)
- Wood Framing, Design & Inspection (July 1993)
- Handgrips & Handrails, Brick Veneer (July 1993)

**Builders Professional Institute / Building Officials Association of Texas**

- Foundation Design and Repair – Specifications for Masonry Structures (May 2005)
- Foundation Design and Repair Specifications (May 20, 2005), (May 22, 2006), (May 14, 2007), (May 19, 2008), (May 18, 2009), (May 24, 2010) and (May 23, 2011).

**Chance**

- Helical Anchor and Foundation Seminar – (September 30 – October 1, 2008)

**Foundation Repair Association, Inc.**

- Engineering Ethics (April 19, 2013)

**Goins, Underkofler, Crawford and Langdon**

- Design Professional Rights and Liability (June 8, 2005)

**HalfMoon**

- International Building Code (April 12, 2016)

**Informed**

- Florida Professional Engineer Update (October 18, 2004)
- Florida Professional Engineer Update (June 26, 2006)



**Selected Continuing  
Education Units  
(Cont'd)**

Kuraray America

- Advances in the Design of Laminated Glass (April 26, 2016)

Law & Rules for Professional Engineers of Indiana (August 8, 2012)

McKissock

- Ethics for Texas Engineers (February 23, 2009 & March 31, 2011)
- Professional Conduct of Ethics for Texas Engineers (March 31, 2011)
- Professional Conduct of Ethics for Texas Engineers (April 15, 2014)
- Florida Laws & Rules (May 22, 2014)

Murdough Center for Engineering Professionalism

- Engineering Ethics (March 30, 2007)

PDH Engineer

- Engineering Disasters – Kansas City Hyatt Catwalk Collapse (March 15, 2010)

PTI - Post-Tensioning Institute – Technical Conference

2007

- New Directions of PTI (May 7, 2007)
- Long Span Slab Design for High Rise Concrete Buildings (May 7, 2007)
- P/T Concrete in the Florida Market (May 7, 2007)
- Use of Post-Tensioning for Residential Slabs in Florida (May 7, 2007)
- Seismic Design/Upgrade with Post-Tensioned Walls (May 7, 2007)
- Testing Encapsulated Anchorages of Moisture (May 7, 2007)
- Strengthening of a Retail Store Parking Garage with Post-Tensioning (May 7, 2007)
- Inspection and Repair Techniques for End-Anchorages (May 7, 2007)
- Slab on Ground Committee (May 7, 2007)
- PT Slabs on Very Moist Ground (May 8, 2007)
- Precast Post-Tensioned Pavement for Bridge Approach Slabs (May 8, 2007)
- Design for Post Loads on Uniform Thickness Slabs (May 8, 2007)
- Multi-Family Housing with Post-Tensioning (May 8, 2007)

2009 – 2012

- Slab-on-Ground Structural Subcommittee (May 4, 2009, May 3, 2010, November 12, 2010, May 1, 2011, May 25, 2011, October 3, 2012)
- Slab-on-Ground Geotechnical Subcommittee (May 4, 2009, May 1, 2011, May 26, 2011, October 4, 2012)
- Slab-on-Ground Committee (May 4, 2009, October 4, 2012)

2013 – 2016

- Slab-on-Ground Structural Subcommittee (October 3, 2013, May 5, 2014, October 1, 2014, April 27, 2015, April 24, 2016, October 5, 2016)
- Slab-on-Ground Geotechnical Subcommittee (October 4, 2013, May 5, 2014, October 2, 2014, April 27, 2015, April 24, 2016, October 5, 2016)
- Slab-on-Ground Committee (October 4, 2013, May 6, 2014, October 2, 2014, April 25, 2016, October 6, 2016)

2017

- Slab-on-Ground Structural Subcommittee (May 1, 2017)
- Slab-on-Ground Geotechnical Subcommittee (May 1, 2017)
- Slab-on-Ground Committee (May 1, 2017)
- Slab-on-Ground Structural Subcommittee (October 6, 2017)
- Slab-on-Ground Geotechnical Subcommittee (October 6, 2017)



**Selected Continuing  
Education Units  
(Cont'd)**

- Slab-on-Ground Committee (October 6, 2017)

2018

- DC-10 TG-A, Structural (May 7, 2018)
- DC-10. Slab-on-Ground (May 7, 2018)
- The New Guide for Performance Evaluation of SOG Foundations (May 8, 2018)

Ram Jack

- Foundation Solutions Design & Analysis Workshop (February 5, 2008)

Sealants & Adhesives for Construction (March 30, 2012)

Siplast

- PMMA Liquid-Applied Roofing & Waterproofing Systems (August 10, 2015)

Southern Forest Products Association

- New Design Values for Southern Pine (April 30, 2013)

Texas Tech University

- Engineering for Extreme Winds (February 11, 2000)

Texas Tech University Civil Engineering Academy

- Engineering Ethics (April 3, 2004)

World of Concrete

January 2008, February 2009, February 2010

- How to Use Insulating Concrete Forms (January 21, 2008)
- Tilt-Up – It's a System (January 21, 2008)
- Concrete Basics Part III: Curing, Effects of Weather & Basic Troubleshooting (January 22, 2008)
- Troubleshooting Concrete Cracks (January 23, 2008)
- Causes of Masonry Failures (February 2, 2009)
- Self-Consolidating Concrete: The Real Story (February 2, 2009)
- Floor Flatness: Basics of F-Numbers (February 3, 2009)
- Foundation Walls – Design and Construction (February 4, 2009)
- Troubleshooting Masonry Part II – Leaky Walls (February 3, 2010)
- What You Need to Know About Testing and Evaluation (February 4, 2010)

January 2012, February 2013, January 2014

- Troubleshooting Masonry Part I – Cracks & Movements (January 23, 2012)
- Concrete Repair II: Surface Preparation, Reinforcement Repair, Material Selection and Placement Techniques (January 23, 2012)
- How to Avoid & Fix Moisture Problems in Concrete Floors & Flooring (January 24, 2012)
- Building Reinforced Masonry: The Basics (January 25, 2012)
- Concrete Construction Management (2012, 2013)
- Concrete Basics I: Concrete Mixtures, Materials, & Fresh Properties (February 4, 2013)
- Masonry Repair & Restoration Techniques (February 4, 2013)
- So, You Have Low Concrete Compressive Strength – Now What? (February 5, 2013)
- Waterproofing Product Types & Systems (February 6, 2013)
- Troubleshooting Concrete Cracks: Understand & Minimize Cracking (January 20, 2014)
- Troubleshooting Moisture Problems in Concrete Floors (January 21, 2014)
- Concrete Mix Design I: Evaluation of Mixtures (January 22, 2014)



**Selected Continuing  
Education Units  
(Cont'd)**

- Concrete Shrinkage – Solutions to a Growing Problem (January 23, 2014)

February 2015, February 2016, January 2017

- Combining Engineering & Laboratory Methods to Troubleshoot Problems with Slabs (February 3, 2015)
- Concrete Repair Fundamentals II: Waterproofing and Corrosion Protection (February 4, 2015)
- Advanced Concrete Repair for Contractors & Engineers – Structural Distress, Assessment & Solutions (February 5, 2015)
- Combining Engineering & Laboratory Methods to Troubleshoot Problems with Slabs (February 3, 2016)
- Masonry Engineering 101: Designing Reinforced Masonry (February 3, 2016)
- Residential & Light Commercial Construction for Poured Concrete, ICF & Masonry Walls (January 17, 2017)
- Leadership & Management: Be Successful by Knowing the Difference (January 17, 2017)
- Shotcrete Technology: Advances, Research and Challenges in Using Shotcrete (January 18, 2017)
- Maintaining Structural Safety as Part of the Job Safety Analysis Process (January 18, 2017)
- Addressing Common Problems During & After Concrete Placement (January 19, 2017)
- Grouting of Masonry Walls – Materials, Methods, Inspection & Best Practices (January 19, 2017)

January 2018

- Masonry Cracks Prevention, Causes, Design Practices & Repair Methods (January 23, 2018)
- Solving Moisture Problems in Masonry Walls (January 23, 2018)
- Working with Engineers & Design Professionals in Concrete Repair (January 24, 2018)
- What is Wrong with My Concrete – Troubleshooting Concrete Quality (January 25, 2018)



## Licensures

Registered Professional Engineer, State of Texas, since 1992.

Licensed Professional Engineer in the following States:

Alabama  
Arizona  
Arkansas  
Colorado  
Connecticut  
Florida  
Georgia  
Illinois  
Indiana  
Iowa  
Kansas  
Kentucky  
Louisiana  
Maine  
Maryland  
Michigan  
Minnesota  
Mississippi  
Missouri  
Nebraska  
New Jersey  
New Mexico  
New York  
North Carolina  
Ohio  
Oklahoma  
Oregon  
Pennsylvania  
South Carolina  
Tennessee  
Texas  
Vermont  
Virginia  
Washington DC  
Wyoming

National Registration with the National Council of Examiners for Engineering and Surveying (#24220)





## Presentations and Seminars

The following, non-exclusive, presentations/seminars have been prepared and presented by Tony Childress annually to many companies and individuals in the construction community.

### Unlocking the Bible Behind the Engineering /Engineering Rules of Thumb – Structures and Curtainwalls

The above presentation series were provided to employees within various companies as follows, but not limited to: Harmon Contract (April 30, 1996, June 16, 1998); Vistawall Architectural Products (May 12, 1998, August 15, 2000, June 4, 2001); Viracon (September 28, 2001); Moduline (September 30, 2001).

### IRC Framing Review and Standard Construction Guidelines / Field Construction of Slabs on Grade

The above presentation series were provided to employees within various companies as follows, but not limited to: Legacy Homes (2005, 2006, and 2007); Standard Pacific Homes (2004, 2005 and 2006); Lennar Homes (2006, 2007 and 2008).

### Montalvo and Ramirez Law Group (October 26, 2002) – The Construction Investigator

### Humphreys & Partners Architects, LP (June 27, 2007) – Engineering Rules of Thumb – Structures and Curtainwalls

### HC Beck / Beck Group – Beck University (September 5, 2007) – Building Envelope Construction – Curtainwalls, Windows, Glass, EIFS, Masonry, Granite, Marble, Roofing and Waterproofing

### Post-Tension Institute (PTI) Convention (May 5, 2008) – SlabTek, the Next Revolution in Post-Tensioning Technology for the Slab-on-Grade Industry

- The Building Enclosure Council of Greater Detroit (April 9, 2009) – Curtainwalls 101/ Understanding of Systems and Performance

### Post-Tension Institute (PTI) Convention (May 7, 2018)

- The New Guide for Performance Evaluation of SOG Foundations (May 8, 2018)

### HC Beck / Beck Group – Beck University (April 22, 2010) – Curtainwall 101 for Architects – Building Envelope Issues - Curtainwalls, Windows, Glass, EIFS, Masonry, Granite, Marble, Roofing and Waterproofing

### Defense Research Institute (DRI) Construction on Law Seminar (September 22, 2010) – Knowledge is Power, An Engineer's Perspective

### The Ultimate Seminar for Public Adjusters / Merlin Law Group (April 7, 2010) – The Roof Investigation

### Builders Professional Institute (BPI) Construction Seminars

- Foundation Design and Repair – Specifications for Masonry Structures (May 20, 2005)
- Foundation Design and Repair Specifications (May 20, 2005), (May 22, 2006), (May 14, 2007), (May 19, 2008), (May 18, 2009), (May 24, 2010) and (May 23, 2011).
- Foundation Design (May 20, 2013)
- Geotech Engineering Practice (May 22, 2013)
- Residential Storm Shelter (May 22, 2015)
- Residential Foundation Design, Failure and Repair (May 22, 2017)



## Presentations and Seminars (Cont'd)

### Home Builders Association of Greater Dallas

- Building a Better House (February 22, 2012, February 13, 2013)

### HalfMoon Seminar

- Wood Frame Fundamentals for Residential & Small Construction Bldgs. (March 14, 2013)
- Steel Frame Fundamentals for Residential & Small Construction Buildings (March 14, 2013, April 28, 2015)□
- Building Code History & Development (April 12, 2016)
- Structural Design Loads under the ASCE 7 Standard (April 12, 2018)

### GANA

- BEC Conference (March 18 – 20, 2013)
- BEC Conference (February 11, 2016)

Foundation Repair Association (April 23, 2013) – Foundation Design & Maintenance

Foundation Performance Association (June 12, 2013) – Best Practices in Pavement Recycling & Soil

International Facility Management Association (April 17, 2014) – Dallas Theological Seminary – Swiss Tower Façade Renovation

### Lessons from the Field

The above presentation series was provided to employees within various companies as follows, but not limited to: MYCON General Contractors (August 27, 2014); McCarthy Building Companies, Inc. (September 12, 2014); Austin Commercial (September 24, 2014); Whiting-Turner Contracting Company (October 9, 2014); Turner Construction Company (November 11, 2014).



## Select Publications

- Engineering Rules of Thumb – Texas Homebuilder Magazine – November/December 2007
- Safe and Sound: Understanding the DoD’s UFC when Designing for Blast Hazard Mitigation - Contributing Author – Architects’ Guide to Glass & Metal Magazine - November/December 2009
- The Importance of a Roof Management Program - Contributing Author – Units Magazine – January 2010

## Professional Affiliations

National Society of Professional Engineers (N.S.P.E.)  
American Society of Professional Engineers (A.S.P.E.)  
Texas Society of Professional Engineers (T.S.P.E.)  
American Council of Engineering Companies (A.C.E.C.)  
Post Tension Institute (P.T.I.)  
Home Builders Association (H.B.A.)  
American Concrete Institute (A.C.I.)  
Building Official Code Administrators Institute (B.O.C.A.I.)  
National Conference of States on Building Codes and Standards (N.C.S.B.C.S.)

## Honors/Activities

Nominated and inducted into the Texas Tech Univ. Civil Engineering Academy  
Secretary / Treasurer for Texas Tech Civil Engineering Academy for 2005  
Vice-Chairman for Texas Tech Civil Engineering Academy for 2006  
Chairman for Texas Tech Civil Engineering Academy for 2007  
President of Prince of Peace Booster Club (2011-2012)  
Secretary of John Paul II High School Hockey Booster Club  
Facility Board Advisor at Prince of Peace Catholic Church (2004-2012)  
Appointed by PTI as a member of the DC-10A Structural Subcommittee  
DC-10 Slab-on-Ground (July 30, 2009)  
Director/CEO/Chairman of AIO2, a non-profit organization  
Appointed by PTI as Committee Chairman of DC-10 Slab-on-Ground (2017)

