



Scott D. Coffman, P.E., SECB

Forensic & Structural Engineer

June 2019

Scott D. Coffman has over 35 years in structural wood design experience, predominately in engineered wood building components (trusses, I-joist, engineered wood beams), that includes engineering analysis, code compliance, product testing, field investigations, FRT lumber, construction related problems and product application and serviceability. His work involved a wide variety of institutional, light commercial and residential structures. Mr. Coffman has been responsible for diagnosing problems and designing repairs that include the coordination and monitoring of repair activities. Mr. Coffman has also investigated and testified regarding deficient construction, building envelop, and the performance of wood building products. Projects have included analysis of deficient construction cases including roofs, exterior walls, structural framing, balconies and building code review.

Education

- Bachelor of Science in Civil Engineering, Purdue University, 1980
- Numerous Structural Materials and Construction Seminars and Conferences.

Professional Organizations

- American Society of Civil Engineers (ACSE)
- Structural Engineering Institute (SEI)
- American Wood Construction (AWC)
- Structural Building Components Association (SBCA)

Professional Licenses & Certification

- Licensed Professional Engineer: Alabama, Florida, Georgia, Indiana, New Jersey, North Carolina, Ohio, South Carolina, and Virginia. Tennessee currently inactive.
- Structural Engineer Certification Board (SECB)

Previous Experience

- Motley Structural Design, LLC
Contract Engineering
2009-2012
- Christ Community Church
Executive Director 2009-2012
- Builders FirstSource
Director of Engineering
1993-2008
- TrusJoist MacMillan,
Regional Engineer
1981-1992

Principle Areas of Practice

- Engineered Wood Components (trusses, I-joist, Structural Composite Lumber) and Wood Framing that includes decks, stairs, and truss collapse
- Structural Analysis and Design
- Building Envelope
- Roof Systems
- Deficient Construction
- Contract Administration
- Personal Injury

Engineered Wood Components

- I-Joist, LVL/PSL/LSL, Glulam, and metal plate connected wood truss analysis and design; Eastern U.S.
- I-joist and wood truss manufacturing; OH, GA and SC.
- Investigation and assessment of wood truss, I-joist, and engineered lumber components systems; Eastern U.S.
- Investigate wood component roof and/or floor collapse; Eastern U.S.
- Investigate Fire Retardant Treatment (FRT) truss components throughout the U.S.
- Assessment of wood component fire or moisture damage; Eastern U.S.
- Pressure Treated PSL design; U.S.
- Member Truss Plate Institute ANSI/TPI 1 Standard Project Committee (2002, 2007)

Structural

- Investigate building structural integrity, concrete floors, walls and brick veneer damage caused by sinkhole; SC
- Structural analysis and design of residential, light commercial, and pool house buildings; SC
- Evaluate load path; U.S.
- Metal building foundation analysis and design; SC
- Post frame building analysis and design; SC
- Investigate numerous residential and light commercial structural framing and foundation systems to assess structural deficiencies; SC and NC
- Investigate deficient balcony railing construction on single and multi-family residential buildings; NC and SC
- Investigate wood deck/balcony/stair design and construction deficiencies; NC and SC

Structural (Continued)

- Low-slope (roof and balcony) investigations.
- Residential and light commercial structures damaged by insect infestation; SC
- Analysis and design of heavy timber trusses
- Structural analysis of existing wood roof framing to support photovoltaic systems; VA
- Investigate and evaluate concrete slabs and steel frames subjected to wildfire; TN

Building Envelope

- Brick veneer cladding installation deficiencies on residential and mixed use structures; SC
- Wood siding, vinyl siding, and stucco installation deficiencies on residential and multi-family structures; SC

Roof Systems

- Investigate roof installation on multi-family buildings; SC
- Investigate roof installation on residential structures including clay tile, metal panels, and membrane; SC

Deficient Construction

- Investigate various structural, building envelope, waterproofing, fire protection, and life-safety related deficiencies at residential developments; SC.
- Investigate various structural and building envelope related deficiencies at single family residence; SC.
- Evaluate various structural framing related deficiencies at residential development; SC

Deficient Construction (Continued)

- Investigate gypsum underlayment performance at residential development; SC
- Investigate wood flooring complaints for single family residences, SC and NC

Contract Administration

- Administration of contract, foundation anchor design; True Blue, Pawley's Island, SC
- Evaluate deficient walkway railing in eight (8) building multi-family complex. Develop repair scope, selection of qualified contractor, administration of contract; Bay View Golf, Myrtle Beach, SC

Personal Injury

- Wood truss collapse; Eastern US
- Investigation of slip and fall on farm ramp; SC.
- Investigate steel frame demolition injury at manufacturing facility; SC

Presentations and Publications

- *Design Solutions for Building Code Permitted Low-Slope Applications that Cause Ponding Water, 2019 RCI International Convention and Trade Show, March 2019**
- *Design Solutions for Building Code Permitted Low-Slope Applications that Cause Ponding Water, (Co-author) C+S Engineering, March 2019*
- *Addressing the Roof Truss Design Note: "Provide adequate drainage to prevent water ponding." (Co-author) Component Manufacturer Advertise, January 2019*

Presentations and Publications (Continued)

- *Errors in Substituting Dead Load for Live Load in Wood Design, Component Manufacturer Advertiser, October 2018*
- *Wood Truss Specification and Permanent Bracing Design, Structural Design Topics in Wood Construction (Virginia Tech) April 2018**
- *Designing Roofs and Balconies to Avoid Ponding, Structural Design Topics in Wood Construction (Virginia Tech) April 2018**
- *Low-Slope Roof and Deck Design Considerations, STRUCTURE Magazine, September 2017, Reprinted Wood Design Focus, Winter 2017*
- *¼ in 12 Design Slope and Water Drainage, STRUCTURE Magazine, August 2017, Reprinted Wood Design Focus, Winter 2017*
- *Designing for Damp Conditions. (Co-author) Structural Building Components, Sept/Oct 2016*
- *The Difficulty of Differing Deflection: (Co-author) Structural Building Components, June/July 2016*
- *Tending to Deflection: (Co-author) Structural Building Components, March 2016*
- *Load Path for CSE Structural Load Path seminar, November 2015**
- *Truss Industry Standard of Care Issues: Part 5 (Co-author) Structural Building Components, June/July 2015*
- *Truss Industry Standard of Care Issues: Part 4 (Co-author) Structural Building Components, April 2015*
- *Truss Industry Standard of Care Issues: Part 3 Truss Bearing (Co-author) Structural Building Components, March 2015*
- *Truss Industry Standard of Care Issues: Part 2 Truss Connections (Co-author) Structural Building Components, December 2014*

Presentations and Publications (Continued)

- Problems with Brick Veneer for Understanding Exterior Wall Failures & South Carolina Law Issues, SC, December 2013*
- *Practical Applications of TPI 1 for the Design Professional of Record*, NCSEA Webinar, July 2011*
- *Practical Application of TPI 1 for the Design Professional of Record*, SCSEA Conference, July 2010*
- *The Board Footage Myth Debunked*, Structural Building Components, August 2008
- *Lateral Load Capacity of Toe-Nailed Truss-To-Truss Girder Connections*, Structural Building Components, September 2006
- *Wall Girders*, Structural Building Components, March 2006

Depositions & Testimony

- Queens Harbor (plaintiff) – 2019 Deposition – CSE File No. 406.40 – Construction Defects, Roof Cover, Structural Framing, Building Envelope
- Cedar Bluff Court (plaintiff) – 2019 Deposition – CSE File No. 406.48 – Construction Defects, Structural Framing (exterior deck)
- Reeves vs. J&D Construction Co. Inc., Atlantic Building Components & Services, Inc., and Fox Investments, LLC (plaintiff) – 2019 Deposition – CSE File No. 205.32 – Structural framing, metal plate connected wood truss design
- Kerr vs. Living Stone (defense) – 2018 Arbitration – CSE File No. 318.05 – Structural framing, residential deck construction, wood flooring, building envelope, retaining wall, shower system

Depositions & Testimony (Continued)

- Collins Residence (plaintiff) – 2017 Deposition – CSE File No. 257.05 – Construction Defects, Structural Framing, metal plate wood truss design
- Young Residence (plaintiff) – 2017 Arbitration – CSE File No. 406.36 – Construction Defects, Roof Cover, Structural Framing, Site Erosion Control
- Waverly vs. Weiland (defense) – 2017 Trial – CSE File No. 370.03 – Structural Framing
- Magnolia Point (plaintiff) – 2015 Deposition – CSE File No. 405.31 – Construction Defects, Building Envelope, Structural Framing, Siding, Brick Veneer, Guardrails, Stairs
- St. Andrews (plaintiff) – 2014 Deposition – CSE File No. 201.11 – Construction Defects, Framing