

Jeffrey L. Cooke, PE



Nederveld Inc.
Phone: 800.222.1868
jcooke@nederveld.com

Forensic Engineering Experience

Structural Analysis/Design

Review appropriate documents, including project plans and specifications as it relates to the building structure for purposes of failure analysis and extent of resulting damages. In addition, being a licensed professional engineer, replacement designs are provided upon request. Examples of past work include failure analysis of collapsed structures (concrete, steel, wood, masonry) and various building components (windows, doors, glass, piping, roofing, exterior and interior cladding) as well as damage assessment of building structures after a fire.

Origin & Cause

Determine the source and responsible party or element related to water entry into a building, whether it be through the building envelope or caused within the building interior. Examples of past work include failure of roofing and wall cladding causing moisture entry, humidity and condensation related losses, and groundwater entry.

Inspection and Evaluation of Roofing Systems

This includes steep and low-sloped roofs as well as various types of roofing materials, including both common and unique roofing applications. Past work involved offering opinions and repairs related to installation deficiencies and storm-related damages, including for hail and wind.

Qualifications & Training

- Stopping Sexual Harassment at Work – Illinois Employees, Once & For All, December 2024
- Construction Site Safety for Structural Engineers, NCSEA, December 2024
- Ethical Issues in Failures and Forensic Engineering, NCSEA, November 2024
- Significant Changes to ASCE 7-22 Supplement #2: Chapter 5 - Flood Loads, NCSEA, September 2024
- Wind Loads on Irregular Buildings, NCSEA, September 2024
- Changes in ASCE- 7-22 Wind Load Provisions for Components and Cladding, NCSEA, September 2024
- Codes, Standards, and the Practicing Engineer: Seismic & Wind, NCSEA, September 2024
- Cantilever Column Systems, NCSEA, September 2024
- Seismic Design of Diaphragms – Latest Updates, NCSEA, September 2024
- Boston University Data Science Center, NCSEA, September 2024
- Brent Spence Bridge: Initial Strategies of a Mega Project, SEA00, September 2024
- Introducing the New ACI 323 Low Carbon Concrete Code, SEA00, September 2024
- More Things Your Fabricator Wishes You Knew About HSS, SEA00, September 2024
- Benefits of Building with Steel in Mid-Rise Construction, SEA00, September 2024
- Performance-Based Methods for a Rooftop Park, SEA00, September 2024
- Reviving the American Train Depot: Structural Restoration of the Guastavino Vaults at Michigan Central Station, SEA00, September 2024
- Designing Concrete with GFRP Reinforcing Bars, SEA00, September 2024
- Ohio's Registration Act and Professional Ethics for Professional Engineers & Surveyors, SEA00, September 2024
- 2024 Ohio Board of Building Standards Updates, SEA00, September 2024

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Last Modified: 1/22/25

Mr. Cooke has not been retained unless this Curriculum Vitae is accompanied by a signed letter of engagement.

- Frequently Misunderstood Wind Provisions, SEA00, September 2024
- Frequently Misunderstood Seismic Provisions, SEA00, September 2024
- LAPELS - CPD Webinar, Online, August 2024
- Champlain Towers South – WJE Collapse Investigation, SEA00, September 2023
- Post-Tensioned Concrete Constructability, SEA00, September 2023
- Review of Design Defects that Almost Led to Disasters, SEA00, September 2023
- Tilt-Up vs. Precast Walls: Aren't They the Same Thing?, SEA00, September 2023
- The AISC Design Guide 37: Hybrid Steel Frames with Wood Floors, SEA00, September 2023
- Engineering Ethics: Case Studies and a Primer on the Ethical Code, SEA00, September 2023
- LCA Tools for the Structural Engineer, SEA00, September 2023
- Diaphragms are More Than Just Deck and Fasteners, SEA00, September 2023
- From Rail Commuters to Autonomous Vehicles – Guastavino Vaulted Ceilings have you Covered, SEA00, September 2023
- Designing for Hot-Dip Galvanizing, SEA00, September 2023
- Ohio Board of Building Standards Updates, SEA00, September 2023
- LAPELS - Professional Ethics Webinar, Online, September 2023
- FRM Systems for Strengthening Existing Concrete & Masonry Structures, JGA Seminar, January 2023
- Florida Engineering Laws and Rules, Vector Solutions, December 2022
- Shoring and Load Transfer in Renovations of Existing Buildings, NCSEA, November 2022
- Pour Strips - Designing for Construction Productivity and Safety, NCSEA, November 2022
- The OSU Wexner Medical Center Inpatient Hospital, SEA00, September 2022
- Abandoned Mine Subsidence – The Man-Made Geohazard, SEA00, September 2022
- Snow Loads in ASCE 7-22 – What's New and Different?, SEA00, September 2022
- Design Build Perspectives Based on the Engineer's Role, SEA00, September 2022
- Making Sense of ACI 562, Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures – Why Now?, SEA00, September 2022
- Consider the Welsh Longbow in Your Next Restoration Project, SEA00, September 2022
- Serviceability Design for the Practicing Engineer, SEA00, September 2022
- Wind Loads on Non-Building Structures, SEA00, September 2022
- Engineered for Success: Designing Better Facades, SEA00, September 2022
- FM Global Loss Prevention and Structural Engineering Practices, SEA00, September 2022
- OBC, OH Licensure and Special Inspection Updates, SEA00, September 2022
- Retaining Wall Basics, SEA00, June 2022
- Structural Engineering Considerations for Mid-Rise, Light Wood Frame Buildings, NCSEA, June 2022
- IBC Significant Structural Changes - Part 1: Loads and Special Instructions, NCSEA, June 2022
- Design of Insulating Concrete Form Walls for High Winds, NCSEA, November 2021
- Floor Vibration Design Methods for Timber, Steel, and Concrete, NCSEA, October 2021
- Timber Engineering for Structural Engineer, NCSEA, October 2021
- Practitioner's Guide to Designing Buildings in Flood Zones, NCSEA, October 2021
- Allowable Stress Design vs Strength Design: A Masonry Cage Fight, NCSEA, September 2021
- Do's and Don'ts in Structural Steel Design, NCSEA, October 2021

- The Basics of Façade Access Equipment: Design and Testing, September 2021
- A Common Sense Approach to "Deferred Submittals & Delegated Design," September 2021
- Wind Load Effects on Canopy Systems, NCSEA, February 2021
- Special Inspection and Structural Observations, January 2021
- Florida Engineering Laws and Rules, RedVector, December 2020
- Ethical Decision Making for Engineers #3 (RV-10508), RedVector, December 2023
- Failure Prediction Model for Structural Glass Design, NCSEA, August 2020
- The 2020 Aluminum Design Manual, NCSEA August 2020
- Frequently Misunderstood Seismic Provisions, July 2020
- Communication & Design Professionals, AXA XL, July 2020
- Residency of Reinforced Hollow Structural Clay Unit Masonry Construction, NCSEA, June 2020
- Resilience and What it Means to the Structural Engineer, NCSEA, June 2020
- Rain Loads, The Forgotten Hazard, NCSEA, April 2020
- Masonry Movement Joints, NCSEA, April 2020
- Basics of Strut and Tie Modeling, NCSEA, April 2020
- ASCE 7-16 Wind Load Provisions – Changes Affecting the Current Design Practice, NCSEA, April 2020
- The Use of Geotechnical Reports by the Structural Engineer, NCSEA, April 2020
- Efficient Design of Long Span Composite Steel Deck Slabs, NCSEA, April 2020
- Serviceability Design for the Practicing Engineer, NCSEA, April 2020
- What your Fabricator Wishes you Knew about HSS, NCSEA, April 2020
- Lintels for Masonry Walls, NCSEA, April 2020
- 2019 Fall Concrete Education Seminar, ODOT, November 2019
- Using DDA Software for ACI 318 Design of Anchors, DeWalt, March 2019
- Ethics for Professionals, Red Vector, February 2019
- Florida Engineering Laws & Rules, Red Vector, February 2019
- HSS Truss Connections, The Ts, Ks and Ys Of It All, January 2019
- Louisiana Laws and Rules Quiz Results, LAPELS, January 2019
- Behavior and Design of Anchors in Concrete, SE University, August 2018
- Repair and Retrofit of Structural Members using Composite Strengthening Systems, Simpson Strong Tie, July 2018
- Project Quality and Inspection Requirements, SE University, July 2018
- Understanding Contract Basics: A Monograph, XL Catlin, June 2018
- Steel Deck Diaphragm Attachment, SE University, June 2018
- Hot Topics in the Concrete Industry, ACI, Columbus, Ohio, January 2018
- Selecting the Appropriate Seismic System for Your Steel Project, SE University, January 2018
- Post-Tensioned Concreted Analysis and Design, SE University, October 2017
- Annual Conference, SEAOC Columbus, Ohio, September 2017
- Buckling Restrained Braced Frames, SE University, July 2017
- XL Catlin Design Professional Liability Education Program: Liability IQ, XL Catlin, June 2017
- Transfer Forces - What Are They and Why Should I Care?, AISC, March 2017
- Everything You Wanted to Know About Diaphragms, AISC, March 2017
- Louisiana Professionalism and Ethics Quiz Results, LAPELS, February 2017
- Louisiana Laws and Rules Quiz Results, LAPELS, February 2017
- Continuous Load Transfer Armor Joints, PSCS, December 2016
- XL Catlin Design Professional Liability Education Program: Lessons in Professional Liability, XL Catlin, December 2016
- Effective Communication Skills for Workplace Conversations and Meetings, SE University, August 2016
- Project Management Bootcamp, PSMJ, June 2016

- Steel Joist Floor Systems Best Practices, AISC, April 2016
- Demystifying Connection Design and Transfer Forces, AISC, April 2016
- Florida Engineering Laws and Rules, Red Vector, April 2016
- Ethical Decision Making for Engineers #2, Red Vector, April 2016
- 2014 Florida Building Code Advanced 5th Edition: Structural Summary of Provisions - Internet, Red Vector, April 2016
- Checklists to Assist the Structural Engineer During Construction Administration, SE University, April 2016
- Ethics for Structural Engineers - Lessons in Negligence & Incompetence (Part I & II), SE University, February 2016
- Vibration of Reinforced Concrete Floor Systems - Part II, SE University, January 2016
- Vibration of Reinforced Concrete Floor Systems - Part 1, SE University, December 2015
- Clarifying Frequently Misunderstood Seismic Provisions, SE University, November 2015
- High Performance Precast and Carbon Fiber/Architectural Cladding/Environmental Product Declarations: Worthless or Priceless/Plant Tour, AIA, November 2015
- I-270/23 Interchange a.k.a. "The Trench," American Society of Civil Engineers Central Ohio Section, Columbus, Ohio, October 2015
- Understanding Load Paths, SE University, October 2015
- Software Default Settings and Effects on Structural Models (RAM Structural System), SE University, June 2015
- Constructability of Structural Steel Buildings, AISC, May 2015
- Mat Foundations and Soil Structure Interaction, SE University, May 2015
- Louisiana Professionalism and Ethics Quiz, Louisiana, May 2015
- Design of Masonry Structures, The Masonry Society, Cleveland, Ohio, May 2015
- Increasing Your Efficiency with Revit Structure: Understanding Visibility Options in Revit Structure 2015, SE University, April 2015
- Florida Engineers' Laws and Rules V.13, RedVector, February 2015
- Structural Forensic Engineering, HalfMoon Education Inc., November 2014
- Water Entry Prevention and Moisture Control in Buildings-Roofing Systems, Exterior Walls, Plaza Decks, Below-Grade Waterproofing, University of Wisconsin – Madison, October 2013
- Hot-Dip Galvanizing: Corrosion Protection, RedVector, September 2012
- Movement Joints in Brick Masonry, RedVector, September 2012
- Moisture Control in Brick Masonry, RedVector, September 2012
- Cost Estimating: Fundamentals, RedVector, August 2012
- Micropiles: Design, Part 1, August 2012
- Micropiles: Construction Techniques and Materials, RedVector, August 2012
- Micropiles: Introduction, Classifications & Applications, RedVector, August 2012
- Florida Engineers' Laws and Rules [V.08], RedVector, July 2012
- Proper Design and Application of Advanced Composites for Strengthening Structures, FYFE Co. LLC, June 2012
- Finite Element Analysis, RedVector, April 2012
- Reinforced Concrete Tilt-Up Panels, RedVector, April 2012
- The New 14th Edition Manual: Leverage Your Knowledge with the 2010 AISC Specification and the 14th Edition Steel Construction Manual, AISC Seminar, April 2012
- Significant Changes to the General Requirements for Determining Wind Loads of ASCE 7-10, American Society of Civil Engineers Webinar, March 2012
- Effective Communication of Connection Design, American Institute of Steel Construction Live Webinar, March 2012
- Best Practices for Managing AE Project Managers, Axium, February 2012

- General Structural Engineering Design Considerations, The Paul J. Ford University, Paul J. Ford and Company Structural Engineers, January 2012
- Retaining Wall Design – Part 2, RedVector, January 2012
- Retaining Wall Design – Part 1, RedVector, January 2012
- Team Building III: The Role of the Team Leader, RedVector, December 2011
- Team Building I: Team Member Roles, RedVector, December 2011
- Building Value and Efficiency With Concrete, Concrete Reinforcing Steel Institute, September 2011
- The Basics of a Good Service Agreement, The Paul J. Ford University, Paul J. Ford and Company Structural Engineers, December 2011
- HSS Construction Design/Dos and Don'ts of Steel Construction, AISC Seminar, November 2011
- Concrete Repair, BASF Building Systems, September 2011
- Design for Stability Using the 2010 AISC Specification, American Institute of Steel Construction Live Webinar, July 2011
- Construction Contract Law – Advanced, RedVector, July 2011
- Driven Piles: Static Analysis – Pile Groups, RedVector, July 2011
- Basic Wind Loads ASCE 7-19, RedVector, July 2011
- Ram Jack Foundation Solutions Design & Analysis Workshop, Ram Jack Foundation Solutions, April 2011
- Driven Piles: Static Analysis – Single Piles, RedVector, January 2011
- Driven Piles: Introduction to Static Analysis Methods, RedVector, January 2011
- Driven Piles: Pile Type and Selection, RedVector, January 2011
- Driven Piles: Subsurface Exploration and Testing, RedVector, January 2011
- Florida Engineers' Laws and Rules [V.08], RedVector, January 2011
- Building Pathology: Freeze-Thaw Cycling, RedVector, January 2011
- Building Pathology: Columns and Walls, RedVector, January 2011
- Building Pathology: An Introduction, RedVector, November 2010
- Building Pathology: Members and Connections, RedVector, November 2010
- Building Pathology: Foundations, RedVector, November 2010
- Geopier Rammed Aggregate Piers, Geopier Foundation Company, September 2010
- Concrete 1: Evaluation and Causes of Damage, RedVector, June 2010
- Building Pathology: Parapets & Decks, RedVector, June 2010
- Concrete Fundamentals II – Concrete Slab On Grade, RedVector, June 2010
- Concrete Fundamentals: An Introduction, RedVector, June 2010
- Concrete 2: Repair Planning and Preparation, RedVector, June 2010
- Simpson Strong-Tie Workshop, Simpson Strong-Tie, June 2010
- Concrete 3: Methods, Materials, and Maintenance, RedVector, December 2009
- Basic Wind Loads II – The Law and Implementation, RedVector, December 2009
- Basic Wind Loads I: ASCE 7-05 Revealed, RedVector, December 2009
- Brittle Fracture for Steel Structures, RedVector, December 2009
- Autodesk Revit Structure 2010, Autodesk Authorized Training Course, September 2009
- Ram Jack Foundation Solutions Design & Analysis Workshop, Ram Jack Foundation Solutions, April 2009
- Masonry Design: Structural Masonry, RedVector, December 2008
- Prestressed Concrete – Hollow Core, RedVector, December 2008
- Florida Engineers' Laws and Rules [V.07], RedVector, December 2008
- Ohio Law of Construction Defects and Failures, HalfMoon LLC, September 2008
- AISC Seismic Design – Updates and Resources for the 21st Century, AISC Seminar, March 2008
- Creep Behavior of Adhesive Anchoring Systems, Hilti, Inc., November 2007
- Connector Workshop, Simpson Strong-Tie, May 2007

- Essential Business Skills for Professional Land Surveyors and Engineers, Professional Land Surveyors of Ohio, November 2006
- Methods to Determine the Most Accurate Site Class, H.C. Nutting Company, August 2006
- Structural Engineers Association of Ohio, September 2007 Conference
- Wood Framed Well Connected Structures, Simpson Strong-Tie Co., February 2005
- Software for Concrete Masonry – Walls & Lintels, International Masonry Institute, June 2003
- Construction Materials Seminar, Bowser Morner, Inc., January 2003
Post graduate coursework related to Structural Engineering, Ohio State University, Columbus, OH, August 2002
- Fundamentals of Connection Design, AISC Seminar, April 2002
- Structural Condition Assessment of Existing Structures, American Society of Civil Engineers, November 2001
- Practical Design of Cold Formed Steel Structures, Light Gauge Steel Engineers Association, May 2001

Education

Bachelors of Science Civil Engineering
Ohio State University, Columbus, OH
March 2001

Associates of Applied Science, Drafting and Design
Central Ohio Technical College, Newark, OH
June 1996

Licenses & Certifications

PE – Professional Engineer
Licensed by the State of Michigan - Number 55452
Licensed by the State of Ohio - Number E-70378
Licensed by the State of Pennsylvania - Number PE075672
Licensed by the State of Virginia - Number 044909
Licensed by the State of West Virginia - Number 17812
Licensed by the State of Maryland - Number 36839
Licensed by the State of Kentucky - Number 25610
Licensed by the State of Tennessee - Number 112378
Licensed by the State of North Carolina - Number 034287
Licensed by the State of South Carolina - Number 27063
Licensed by the State of Louisiana - Number 37515
Licensed by the State of Florida - Number 68099

Employment History

Forensic Engineer
Nederveld, Grand Rapids, MI
2018 – Present
2013 – 2015

Duties include forensic analysis relating to structural and cause and origin investigations, building pathology, structural analyses, calculations and plan of repair design.

Project Manager
Jezerinac Geers and Associates, Inc.
Dublin, OH
2015 – Present

Duties include performing structural analysis and design building components utilizing structural steel, concrete, light gage cold formed steel, wood and masonry for new construction, renovation and building additions ranging in size from less than 1,000 square feet to over 150,000 square feet.

Department Manager/ Project Manager
Paul J. Ford and Company, Structural Engineers
Columbus, OH
2000 – 2013

Duties include performing structural analysis and design building components utilizing structural steel, concrete, light gage cold formed steel, wood and masonry for new construction, renovation and building additions ranging in size from less than 1,000 square feet to over 300,000 square feet.

Project Manager
Retail Design Group (WD Partners)
1996 – 1999

Duties include producing architectural construction documentation for various national retail clientele. Performed site investigations and field measurements of potential store locations for various national retail clientele.

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