

RANDALL P. BERNHARDT, P.E., S.E.

Forensic Civil/Structural Engineer

randy@bernhardtforensics.com

636-485-3457

Mr. Bernhardt's qualifications have been gained through education, 33 years of design and construction experience, and over 10 years of forensic engineering experience involving litigation or insurance claims regarding:

- Building Structures and Building Envelopes
- Bridge and Industrial Structures
- Design Defects
- Construction Defects
- Building Code Requirements
- Damage from High Winds, Subsidence, Vehicle Impact, Fire Damage

Education

M.S., Civil Engineering, Kansas State University, 1986

B.S., Engineering, Southern Illinois University, 1980

Licensed Professional Engineer (P.E.)

Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Nebraska, Ohio, Oklahoma, Oregon, South Carolina, Texas, Wyoming

Licensed Structural Engineer (S.E.)

Illinois, Oregon, Nebraska, Georgia, Oklahoma

**Professional Affiliations/Honors
Structural Engineering Institute (ASCE), Fellow**

2020 W. Gene Corley Award

Past Treasurer, Board of Governors

Past Chair, BPAD Executive Com.

Past Chair, Design Practices Com.

Past Chair, Prof. Activities Com.

Past Chair, St. Louis Chapter

Member, SE Licensing Committee

Assoc Member, ASCE 7 Main Comm. and Snow and Rain Comm.

National Council of Structural Engineering Associations

Member, Committee on Licensing

Mr. Bernhardt provides professional forensic engineering consulting for insurance and litigation cases related to buildings and other structures.

Since 2013, Mr. Bernhardt has been active in investigations involving claims of structural damage and/or collapse from high winds and tornados; snow, hail, or rain; ponding on low-sloped roofs; explosions and fires; vehicle impact; vibrations; water intrusion through building envelopes; settlement and subsidence; and non-compliance with building code requirements. Additionally, he has investigated allegations of design and construction defects in traditional design-bid-build and design-build projects. His assignments have included investigations and repair design of wood, steel, masonry, and concrete structures.

Before 2013, Mr. Bernhardt worked for 33 years, gaining broad experience in the structural engineering investigation, design, and construction of various buildings and bridges. His project experience included designing and analyzing buildings, multi-span bridges, and other structures constructed of wood, pre-stressed concrete, reinforced concrete, masonry, and structural steel. Additionally, he has experience in the design of wastewater and water treatment structures consisting of tanks, buildings, foundations, and chambers.

(Cont'd)

American Society of Civil Engineers,
Fellow

Member, Forensic Engineering Invest
Com.

Vice Chair, Forensic Engineering Division
Executive Committee

**Structural Engineers Association of
Kansas and Missouri,** Member

Greater St. Louis Claims Association
President, Board Member

Southern Illinois University

2011 Outstanding Alumni Award, Civil
Engineering Department

Past Chair and Member, Civil

Engineering Professional Advisory Bd

**National Council of Examiners for
Engineering and Surveying**

Past Member, Structural Exam
Committee, 2007-2023

**Structural Engineering Licensing
Coalition**

Past Member, Past Chair Steering
Committee

International Code Council, Building
Safety Professional Member

Member, IBC-S Code Committee

American Concrete Institute, Member

Fenestration and Glazing Industry

Alliance, Certified Fenestration

Associate Professional

The Masonry Society, Member Veneer
Com., Construction Reqs Com., Corresp
Member Main Com., Gen Req Com.

American Institute of Steel

Construction, Member

ASTM, Member, Cementitious, Ceramic,
Concrete, and Masonry Materials Comm.

Positions Held

Bernhardt Forensic Engineering LLC

Founder, Manager, March 2020 to Present

Engineering Systems Inc., O'Fallon, MO

Senior Consultant, 2013 to 2020

OCCI, Fulton, MO

Chief Structural Engineer, 2012 to 2013

Burns & McDonnell Engineering Co., St. Louis, MO

Department Manager/Technical Lead and Chief Regional
Structural Engineer, 2001 to 2012

Hurst-Rosche Engineers, Inc., Marion, IL

Lead Structural and Civil Engineer, 1998 to 2001

Bernhardt Structural Engineering, Inc., Carbondale, IL

Founder, Chief Executive Officer, 1993 to 1998

**Bucher, Willis & Ratliff Consulting Engineering, Kansas
City, MO**

Project Engineer and Project Manager, 1980 to 1993

Areas of Specialization

Investigations:

Building and Bridge Collapse and Structural Failure
Structural Damage from Tornados, High Winds, Explosions,
Rain, Snow, and Fires

Collision Damage of Buildings and Bridges

Construction and Demolition Defects

Design Defects in Structural Projects involving Steel,
Concrete, Masonry or Wood

Fire Damage of Structures

Vibration Damage

Building Code Investigations

Evaluation of Deteriorated Concrete, Wood, and Masonry

Evaluation of Corroded Structural Steel

Building Envelope, Building Veneers, Water Intrusion

Slips, Trips, and Falls related to stairs or sidewalks

Design:

Building Rehabilitation Investigation and Design

Evaluation, Analysis, and Design of Steel, Concrete, Wood,
and Masonry Structures

Reinforced Concrete Foundation Analysis and Design

Bridge Analysis and Design

Seismic Analysis

Publications/Presentations

Professional Engineers' Refresher Course: Missouri Society of Professional Engineers, **R.P. Bernhardt**, presented at St. Charles Community College, St. Peters, MO 2007-2018

"Silver Lake Dam Retaining Wall Failure and Repair," **R.P. Bernhardt**, Burns & McDonnell, Chesterfield, MO 2011

"Introduction to Concrete Repair," **R.P. Bernhardt**, presented at Southern Illinois University, Carbondale, IL, 2011

Structural Basics Seminar, **R.P. Bernhardt**, presented at OCCI Engineering and Construction, Fulton, MO, June – August 2012

"Investigations and Recommendations based on the May 22, 2011, Joplin, Missouri Tornado", **R.P. Bernhardt**, as Contributor, Structural Engineers Association of Kansas and Missouri, May 2012

"Investigations and Recommendations based on the May 22, 2011, Joplin, Missouri Tornado", **R.P. Bernhardt**, Co-Presented at the National Council of Structural Engineers Association, Annual Conference in St. Louis, October 2012. Also, presented at the Structural Engineering Institute Day in St. Louis, October 2012

"Task Management Tools for the Structural Engineer," **R.P. Bernhardt**, presented at ASCE/SEI, 2014

"Structural Damage and Repair Requirements and their Effect on Claims and Litigation," **R.P. Bernhardt**, presented at Western Loss Association, Chicago, IL, April 2015

"Analysis of Design Standards and Recommended Practices for Agricultural Storage Bins," **R.P. Bernhardt**, Co-Author and Co-Presented at 7th ASCE Forensic Engineering Congress, November 2015

"Hyatt Regency Skywalk Collapse Remembered," **R.P. Bernhardt**, Structure Magazine, August 2016

"Hyatt Regency Skywalk Collapse Remembered," **R.P. Bernhardt**, presented at Geo-Structures Confluence, St. Louis, MO, November 2016, Structural Engineers Association of Idaho, Boise, May 2017; Central Fabricators Association, Kansas City, MO, October 2017; 8th ASCE Forensic Congress, Austin, TX, November 2018

"Examining the Role of the Forensic Structural Engineer," **R.P. Bernhardt**, presented at Shelter Insurance, Columbia, Missouri, January 2018

"Understanding the Causes of Structural Failures," **R.P. Bernhardt**, presented at Shelter Insurance, January 2018; presented at Sandberg- Phoenix, September 2019; presented at Indiana Defense Council, November 2019

"Understanding the Structural Forensic Engineering Process," **R. P. Bernhardt**, presented at Shelter Insurance, January 2018

"Guidelines for Failure Investigations," Second Edition, **R.P. Bernhardt**, Chapter Author, American Society of Civil Engineers, 2018; presented workshop at 9th ASCE Forensic Congress, 2021.

"Failure of Three Retaining Walls," **R.P. Bernhardt**, presented at ASCE Forensic Congress, Austin, TX, November 2019

"Vision for the Future of SE Licensure," **R.P. Bernhardt**, contributor, Structural Engineering Licensure Coalition, 2020

Presentation on the Guidelines for Failure Investigation, Second Edition, Volume 2, **R.P. Bernhardt**, chapter author, editor. 2022 Structures Congress in Atlanta, April 2022

“Florida International University Pedestrian Bridge Collapse – Analysis of the NTSB Report Recommendations,” **R.P. Bernhardt**, committee member, ASCE Task Committee on the Investigation of the Florida International University Bridge Collapse, ASCE, 2023

“Has Anybody Checked Your Work? Quality Reviews in Structural Design”. **R.P. Bernhardt**, presenter and moderator. 2023 Structures Congress in New Orleans, May 2023.

“Immerse Yourself in Forensic Expert Investigations and Testimony.” **R.P. Bernhardt**, presenter. 2023 Structures Congress in New Orleans, May 2023.

“Evaluation of the Failure of Adhered Thin-Brick Veneer,” presented at the 10th ASCE Forensic Congress, November 2024.

“Static Load Test of a Baluster-supported Wood Guardrail,” presented at the 10th ASCE Forensic Congress, November 2024.