



**ENGINEER: CIVIL/STRUCTURAL**

**NICHOLAS K. PONTILLO, P.E.**

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## **EDUCATION**

2000 **Bachelor of Science in Civil Engineering**  
University of Central Florida, Orlando, Florida

## **EXPERIENCE**

December 2011 to Present **Engineering Design & Testing Corp.**  
**Overland Park, Kansas**

*Consultant and Forensic Engineer (December 2011 - March 2018)*  
*District Engineering Manager (April 2018 - Present)*

For commercial, industrial and residential structures: assessment of hail and/or wind damage to roof coverings; scope of structural damage due to wind, fire, snow, vibrations, vehicle impacts, tree impacts; cause of moisture intrusion through building envelope and foundations; scope of foundation damage due to involuntary discharges of water, soil pressure and ground movement; evaluation of construction defects and building code compliance; failure analysis involving concrete, masonry, steel and wood structures; cost estimates; value of loss; laboratory and field testing of construction materials; damage segregation; infrared thermography.

August 2005 to November 2011 **Jones Edmunds & Associates**  
**Titusville, Florida**

*Structural Engineer and Project Manager*

Served as lead structural designer of new and renovated facilities at Kennedy Space Center, Cape Canaveral Air Force Station, MacDill Air Force Base, and Vandenberg Air Force Base. Managed government designs, studies and construction services projects to upgrade existing NASA and Army Corps of Engineering facilities. Projects included demolition of Launch Pad B fixed and rotating service structures, upgrades to Launch Pad B infrastructure, renovation of the Rotation Processing and Service Facility, repair of the solid rocket booster recovery landing wharf, an explosives ordnance disposal facility design, and roof replacement projects. Structural designs included new and rehabilitated concrete, masonry, and steel structures.

August 2002 to July 2005 **AECOM (formerly URS Corporation)**  
**Orlando, Florida**

*Bridge Engineer*

Designed bridges and highway structures for the Florida Department of Transportation. Projects involved design of new bridge superstructure and substructure, retaining walls, culverts, overhead signs, and widening of existing bridges. Major design projects included the Interstate 4 and State Road 408 interchange, the Interstate 4 and State Road 192 interchange, and Interstate 4 widening over Bonnet Creek and through downtown Orlando.

- June 2000  
to Jul 2002
- CDM Smith** (formerly *Camp Dresser & McKee, Inc.*)  
**Maitland, Florida**
- Structural Engineer*  
Designed water and wastewater facilities for municipalities in Florida, Georgia, and South Carolina. Facilities included concrete, steel, masonry, and aluminum structures designed to resist wind, seismic, and hydraulic loads in corrosive environments. Finite element software was used to analyze complex steel structures. Construction services, including shop drawing review and inspection, were provided.
- December 1998  
to August 1999
- University of Central Florida**  
**Orlando, Florida**
- Research Assistant*  
Assisted Dr. Haitham Al-Deek with research projects involving incident detection programs along the central corridor of Interstate 4 through Orlando, Florida.
- May 1998  
to July 1998
- Vecellio & Grogan, Inc.**  
**Beckley, West Virginia**
- Assistant Project Engineer*  
Performed roadway calculations, cost estimating, project accounting, and surveying involving construction of the Smart Road in Blacksburg, Virginia.

## **EXPERIENCE**

### ***Field Experience and Industrial Consulting Activity (partial list)***

#### **Moisture Intrusion — Midwest**

Cause of moisture intrusion into commercial and residential structures.

#### **Construction Defects — Midwest**

Evaluate commercial and residential structures for construction defects.

#### **Agricultural Facilities — Midwest**

Cause of grain bin wall buckling, displacement or collapse; examination of grain transportation towers and auger displacement; cause of damage to drying floor; determine scope of damage to concrete grain silo from grain dust explosion and subsequent fire; evaluate fabric-covered hoop structures for storm-related damage

#### **Catastrophe Activities — Midwest, Texas and Florida**

Evaluate commercial, industrial and residential structures for hail, wind, tornado and hurricane damage.

#### **Explosions — Midwest**

Determine scope of structural damage to commercial, industrial and residential structures resulting from explosions.

#### **Marinas and Boat Docks — Midwest**

Evaluate commercial marinas and residential boat docks for structural damage related to wind and waves.

#### **Bridge Impacts — Midwest**

Evaluate scope of damage and cost of repairs for bridges impacted by vehicles.

#### **Fire Evaluations — Midwest**

Determine scope of fire-related structural damage to commercial and residential properties.

**Exterior Veneers — *Midwest***

Evaluate Exterior Insulation and Finish System (EIFS), stucco, brick, stone, vinyl, wood, metal and fiber-cement veneers for moisture intrusion and construction defects.

**Building Collapses — *Midwest***

Determine cause of collapses of brick- and steel-framed buildings.

**Foundations — *Midwest***

Evaluate commercial and residential structures and foundations for damage related to underground water discharges, soil desiccation, soil saturation, lateral earth pressure, and construction defects.

**Seismic — *Kansas and Oklahoma***

Evaluate commercial and residential structures for earthquake- and vibration-related damage.

**Retaining Wall Failure — *Kansas City, Missouri***

Evaluation of storm related damage to a retaining wall, retention pond and site grading.

**Handicap Ramp — *San Antonio, Texas***

Evaluate sidewalk ramp and curbs for code compliance in personal injury cases.

**Communication Tower Collapses — *Midwest***

Examine communication towers for cause and scope of damage, and evaluate replacement cost data.

**Roof Collapse — *Cedar Rapids, Iowa***

Determine cause of roof collapse at an industrial facility.

**Carport Damage — *Dallas, Texas***

Determine scope of ice damage to carports at 10+ apartment complexes.

**Scope of Damage from Crane Collapse — *Dallas, Texas***

Evaluate concrete parking structure for damage related to a tower crane collapse.

**REGISTRATIONS and CERTIFICATIONS**

Registered Professional Engineer in Arkansas (#15194)

Registered Professional Engineer in Colorado (#46238)

Registered Professional Engineer in Florida (#62511)

Registered Professional Engineer in Illinois (#06.065038)

Registered Professional Engineer in Iowa (#20937)

Registered Professional Engineer in Kansas (#22179)

Registered Professional Engineer in Minnesota (#53112)

Registered Professional Engineer in Missouri (#2012007667)

Registered Professional Engineer in Nebraska (#E-14091)

Registered Professional Engineer in Nevada (#028597)

Registered Professional Engineer in New Mexico (#25800)

Registered Professional Engineer in North Dakota (#PE-10807)

Registered Professional Engineer in Oklahoma (#25624)

Registered Professional Engineer in South Dakota (#11981)

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Registered Professional Engineer in Texas (#111848)

Registered Professional Engineer in Wisconsin (#44578)

National Council of Examiners for Engineering and Surveying (NCEES) (Record #47944)

### **PROFESSIONAL ORGANIZATIONS**

American Concrete Institute (ACI)

American Society of Civil Engineers (ASCE)

### **PRESENTATIONS**

*"Metal Roofing: Composition and Damage Assessment"*, EDT Engineering Conference, Columbia, SC, February 2013

*"Storm Damage to Roofs"*, Cincinnati Insurance Regional Meeting, Overland Park, KS, March 2018

*"No Tears Veneers – Keeping Water Out of Walls"*, EDT Engineering Conference, Charlotte, NC, February 2019

*"Residential Roof Adjustment Challenges"*, PLRB Central Regional Adjusters Conference, Minneapolis, MN, September 2019

### **CONTINUING EDUCATION**

2021 *66th Annual Structural Engineering Conference*, University of Kansas, March 4 and 5, 2021

*Blast-Related Damage Evaluation of Residential Structures*, EDT, February 9, 2021

*Rooftop Solar Arrays: A Civil/Structural Perspective*, EDT, February 9, 2021

*Hurricane Damage: Storm Surge vs Wind vs Wind-Driven Rain*, EDT, February 9, 2021

*Hailstone-Impact Damage to Asphalt Shingle Roof Coverings*, EDT, February 9, 2021

2020 *Marina Site Analysis*, SunCam, December 2, 2020

*Evaluation of Concrete Structures*, American Concrete Institute, December 2, 2020

*65th Annual Structural Engineering Conference*, The University of Kansas, March 5, 2020, Lawrence, Kansas

*Subsurface Evaluation and Foundation*, EDT, February 8, 2020, Savannah, Georgia

*Standard of Care Examined Through a Warehouse Roof Collapse*, EDT, February 7, 2020, Savannah, Georgia

2019 *Interdisciplinary Investigations*, EDT, February 9, 2019, Charlotte, NC

*No Tears Veneers – Keeping Water Out of Walls*, EDT, February 8, 2019, Charlotte, NC

*Toybox for Civils*, EDT, February 8, 2019, Charlotte, NC

2018 *63<sup>rd</sup> Annual Structural Engineering Conference*, The University of Kansas, March 1, 2018, Lawrence, Kansas

*Heat, Air and Moisture Components of Building Envelopes*, EDT, February 17, 2018, Orlando, Florida

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- Introduction to Wood Connection Analysis*, EDT, February 16, 2018, Orlando, Florida
- Metallurgy for the Non-Metallurgist and Its Use in Root Cause/Damage*, EDT, February 17, 2018, Orlando, Florida
- The EDT Approach to Design/Construction Defect*, EDT, February 16, 2018, Orlando, Florida
- 2017 *49th Annual Geotechnical Engineering Conference*, The University of Kansas, November 9, 2017, Lawrence, Kansas
- Engineering Analysis of Failure: Determination of Cause in a Legal Environment*, EDT, February 11, 2017, Albuquerque, New Mexico
- Smarter Ways to Use Excel for Engineering*, EDT, February 10, 2017, Albuquerque, New Mexico
- Large Loss Report Writing*, EDT, February 11, 2017, Albuquerque, New Mexico
- 2016 *49th Annual Geotechnical Engineering Conference*, The University of Kansas, November 10, 2016, Lawrence, Kansas
- 61st Annual Structural Engineering Conference*, The University of Kansas, March 3, 2016, Lawrence, Kansas
- A Primer Regarding Blast Loads on Structures*, EDT, February 5, 2016, Columbia, South Carolina
- Collection and Preservation of Evidence*, EDT, February 5, 2016, Columbia, South Carolina
- 2015 *Annual Kansas City Geotechnical Conference 2015*, ASCE, UMKC and AEG; April 23, 2015, Overland Park, Kansas
- Concrete Repair by Shotcrete Application*, American Concrete Institute, December 17, 2015
- Design Ex.: Buried Concrete Basement Wall*, American Concrete Institute, January 7, 2015
- Federal Rules of Civil Procedure, Rule 26-Expert Reports*, EDT, February 7, 2015, Franklin, Tennessee
- Introduction to the Concrete Repair Code (ACI562)*, American Concrete Institute, December 17, 2015
- Modern Data Management for Engineering Investigations – Acquisition, Storage and Access*, EDT, February 6, 2015, Franklin, Tennessee
- On Thin Ice – Building Failures During Winter*, EDT, February 6, 2015, Franklin, Tennessee
- Slabjacking*, American Concrete Institute, January 7, 2015
- 2014 *Introduction to Steel Connection Design and Failure Analysis*, EDT, February 7, 2014, Salt Lake City, Utah
- To Fall or Not to Fall: A Guide to the Investigation of Imminent Collapse*, EDT, February 7, 2014, Salt Lake City, Utah
- 2013 *Changes in the Wind Provisions of the ASCE 7 Standard*, EDT, February 8, 2013, Columbia, South Carolina
- Law of Construction Defects and Failures*, HalfMoon Education, Inc., October 3, 2013, Overland Park, Kansas
- 2012 *Introduction to Structural Design of Wood Buildings per the 2012 NDS*, Virginia Polytechnic Institute & State University, October 10-12, 2012, Blacksburg, Virginia
- Rope Assisted Roof Climbing Training*, EDT, January 16-17, 2012, Charlotte, North Carolina
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- 2011 *ACI/PCA 318-11 Building Code*, American Concrete Institute, November 1, 2011, Orlando, Florida
- 2008 *Structural Masonry Design*, Florida Masonry Apprenticeship & Educational Foundation, July 17, 2008, Orlando, Florida
- 2007 *Basic Corrosion Course*, NACE International, April 23-27, 2007, Orlando, Florida  
*Simplified Design of Reinforced Concrete Buildings Seminar*, American Concrete Institute, December 6, 2007, Atlanta, Georgia
- 2006 *Concrete Slabs on Ground*, American Concrete Institute, November 29, 2006, Jacksonville, Florida